

To: T. H. Huffman

From: D. C. Skokna
Date: September 22, 1988

Subject: ABERDEEN MONTHLY PROGRESS REPORT
AUGUST, 1988

Interoffice
Communication

VISTA

There were one first aid and one recordable (MTO) cases reported during the month. As of 8/31, the plant's employees have worked 3,345 days or 4,369,280 manhours since the last lost time injury.

SARA 313 COMMUNICATIONS

On 8/16, an Open House was held for members of the medical community. Informational pamphlets were mailed to residents of the Aberdeen area.

Key Statistical Information

	<u>Month</u>	<u>Y.T.D.</u>
PVC Production, MM Lbs.	39.2	415.7
Reactor Stream Factor, %	95.2	89.7
Resin Quality, % Prime	95.0	
VCM Efficiency, Lbs./Lb	1.0148	1.0146
Compound Production, MM Lbs.	6.7	80.6
Compound Quality, % Prime	98.0	
Dry Blend Production, MM Lbs.	5.0	57.4
Dry Blend Quality, % Prime	99.1	
Plasticizer Production, MM Lbs.	1.2	18.1
Plasticizer Quality, % Prime	91.7	
Energy Use (CMA Reduction, %)	52.1	51.9
Fixed Cost Variance, \$M	(203.6)	25.0
Variable Cost Efficiency Variance, \$M	29.0	650.7
Variable Cost Price Variance, \$M	(3,231.4)	(23,314.3)
Variable Cost Variance, \$M	(3,202.4)	(22,663.6)

Downtime in the vinyl unit was primarily caused by recovery system conflicts and rinsing the chem wash tank.

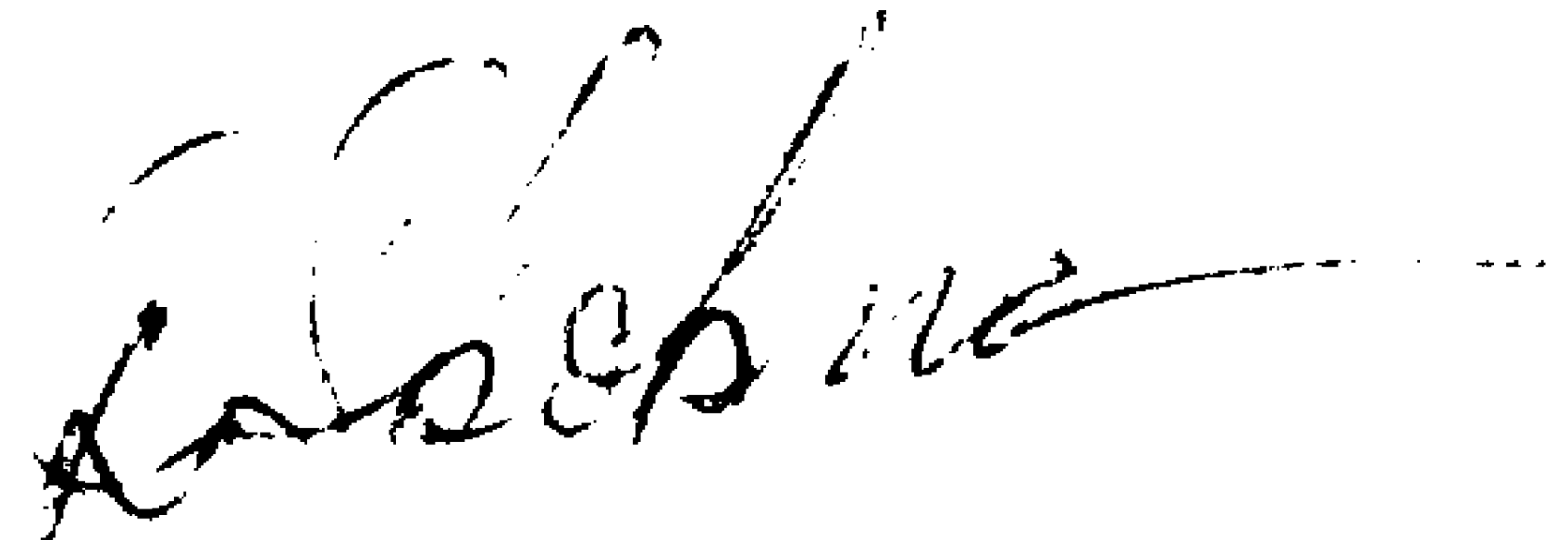
In the compound unit, Line I operated 30 days, Line III operated 31 days, and Line V operated 23 days.

Fixed costs were unfavorable due to moving expenses, overtime costs to operate Line V, and several large maintenance projects.

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QMP

- ° Donnelly and Lamar (compound customers who supply the auto industry) were visited. Donnelly emphasized that we need to follow Ford's Q-101 quality system. Ford was also visited to learn more about their Q-101 system.
- ° Natural teams met in all departments.
- ° Plans for a "Quality Appreciation Day" were set - the date is 10-13-88. This event will recognize all plant employees' efforts in the quality improvement process.



D. C. Skokna
Plant Superintendent

tls

<u>DISTRIBUTION</u>	<u>COVER LETTER</u>	<u>ENTIRE REPORT</u>	<u>COVER LETTER AND QMP</u>
<u>HOUSTON:</u>	J. D. BURNS	X	
	R. E. LEHMKUHL		X
	R. T. FERRELL	X	
	T. H. HUFFMAN		X
	C. J. MATSON		X
	D. F. HARMAN		X
	H. R. FLAMMER		X
	R. R. SMITH		X
	K. J. EGGERS		X
	D. H. SANDERS		X
<u>PONCA CITY:</u>	S. E. MCGUIRE		X
	R. L. POE	X	
	H. J. HALL		X
	C. M. STARKS		X
<u>OKLAHOMA CITY:</u>	H. G. GARRISON		X
<u>LAKE CHARLES VCM PLANT</u>	R. A. CONRAD		X
<u>LAKE CHARLES CHEMICAL PLANT:</u>	J. FRIEND		Safety Section and X
<u>LAKE CHARLES LAB PLANT:</u>	J. W. WARE	X	
<u>BALTIMORE:</u>	L. R. BAUER	X	
<u>HAMMOND:</u>	J. B. MAHER	X	
<u>BLANE POLYMERS:</u>	C. R. MILLER		X
<u>PREMIERE POLYMERS:</u>	P. L. FOOTE		X
<u>ABERDEEN:</u>	RWS/DCS (FILE COPY), PJK, DWH, TFL, JEB, VEM, HGC, JEL, REP, RBN, SAFETY		

PLANT FIXED COSTS - D. C. Skokna

<u>Major Category</u>	<u>Variance vs. Budget</u>	
	<u>August, 1988, \$M</u>	
	<u>August</u>	<u>YTD</u>
Payroll and Benefits	(42.5)	(246.5)
MM&C	(75.2)	65.7
T&I	9.5	110.6
Miscellaneous	(95.4)	95.2
	<u>(203.6)</u>	<u>25.0</u>

Payroll and Benefits - The unfavorable variance was caused by overtime operation on Line V and higher than budget benefit charges.

MM&C - Several extraordinary projects were completed during the month, causing the unfavorable variance. The largest was reactor condenser replacement. (\$41.8M)

Miscellaneous

- ° Moving, Home Assistance - (\$82.8M). Several major moves were cleared or accrued. Also, a \$10.3M accounting error (J. Ware's Move) will be corrected next month.
- ° Outside Professional Services - (\$17.1M). Costs associated with SARA 313 work caused this category to be above budget.

SAFETY - B. L. Trego

<u>Occupational Injuries</u>	<u>July</u>	<u>Fiscal Y.T.D. 1988</u>	<u>Fiscal Y.T.D 1987</u>
First Aid	1	10	16
OSHA Recordable	<u>1</u>	<u>5</u>	<u>8</u>
Total Injuries	2	15	24
Number of Restricted Workday Cases	0	0	2
Number of Lost Workday Cases	0	0	0

Injuries by Department

Vinyl Operations	1	4	4
Compound Operations	1	3	1
Maintenance	0	7	13
Laboratory	0	1	2
Receiving/Warehouse	0	0	3
Office	<u>0</u>	<u>0</u>	<u>1</u>
Totals	2	15	24

Injuries by Type

Cuts and Abrasions	1	7	11
Eye Injuries	0	0	3
Burns	0	4	6
Bruises	0	2	1
Strains/Sprains	1	1	3
Stings	0	0	0
Other	<u>0</u>	<u>1</u>	<u>0</u>
Totals	2	15	24

Non-Occupational Injuries

Lost Workday Cases	1	12	9
Days Lost	65	253	80

Safety Record

Last lost time injury 7/5/79
 Days since - 3,345
 Manhours since - 4,369,280

On August 31, 1988, the employees at the Aberdeen Plant completed 3,345 days with no lost time injury.

Topics for the plant safety meetings during the month included: Burn Prevention, Nitrogen Handling Safety, Safety Awareness, Use of Personal Protective Equipment, Injury Prevention Performance Review, and Maintenance Weekly Safety and Job Reviews.

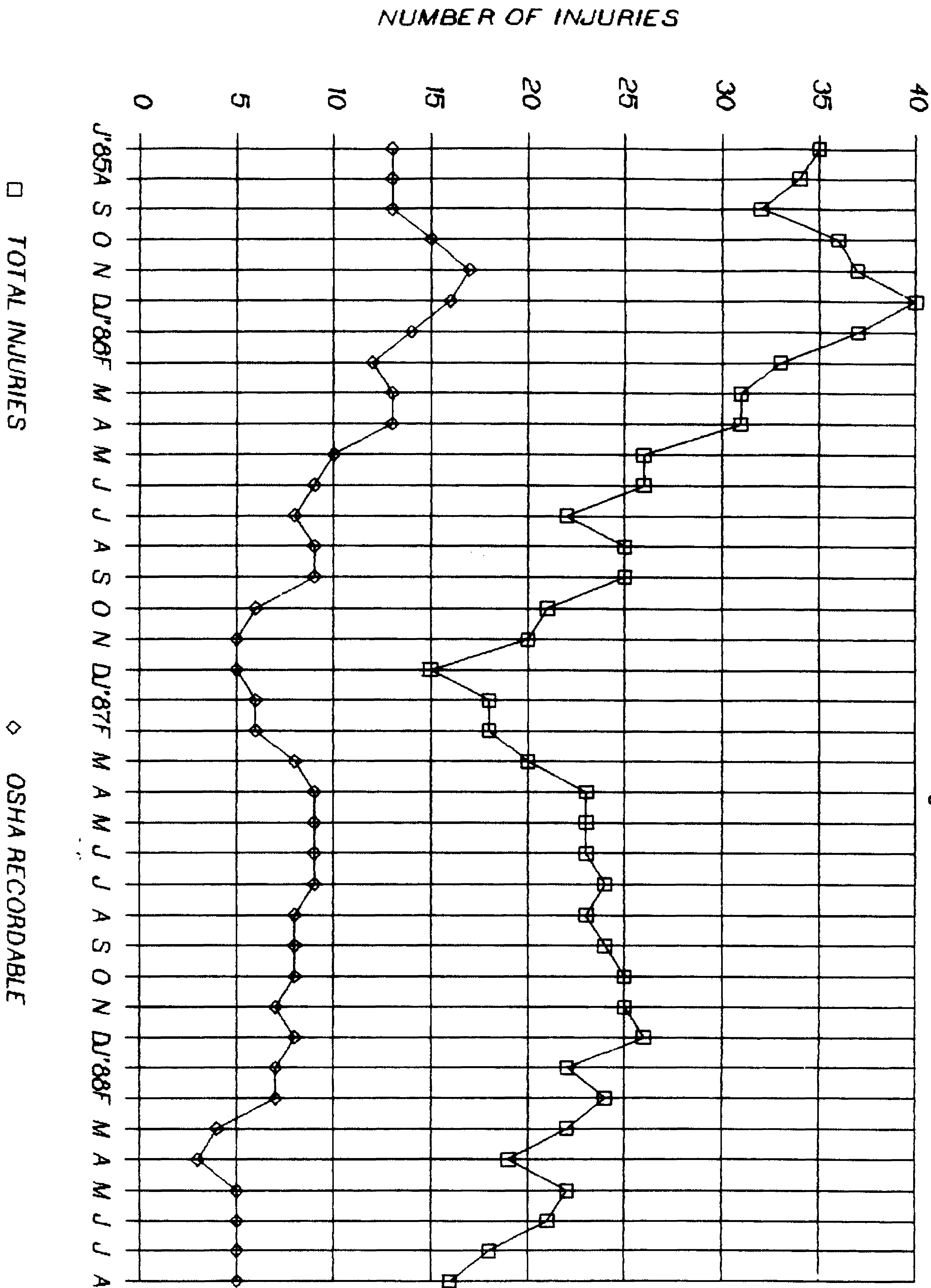
SAFETY - Continued

<u>Chemical</u>	<u>PEL</u>		<u>PEL</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	73	100.0	0	0.0
Lead	10		1	
Total Particulates	3		0	

The single lead over exposure was with benefit of respiratory protection.

ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



QUALITY DEVELOPMENT - D. W. Hollis

Attended a meeting with R & D, purchasing and manufacturing personnel to determine important items to be discussed during the tin stabilizer audits scheduled in October.

Visited customers Donnelly and Lamar to determine their quality needs for the future. Donnelly emphasized following the Ford program. Visited a Ford representative and gained better understanding of their program.

Planning a "Quality Appreciation Day" to recognize the plant employees' efforts in the quality improvement process. Awards will be presented to teams that have completed their projects.

Two Plant Manager natural team meetings were held to plan the Quality Appreciation Day and to determine a process that this team needs to improve in the Aberdeen plant.

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

Safety

There was one medical treatment injury in Vinyl this month. An "A" Operator sprained his knee while inspecting the fluid bed dryer.

The monthly safety meeting topic was a review of this years accident record and prevention of accidents. Shift safety meetings to discuss recent accidents and proper handling of tote bins were also held.

Quality Management Process

The Department Natural Team met four times during August to coordinate daily activities and to continue the Quality Implementation Plan.

The Quality Implementation Plan was also reviewed with all Vinyl and Yard employees at the monthly safety meeting. The quality video "Everything Can Be Improved" was shown.

There are three active employee involvement teams in the department. All three teams met during the month. The V-11 dust team is designing dryer equipment modifications to reduce dusting. The Plasticizer Unloading Team is finalizing their formal presentation of recommendations to plant management. The 5265/5305 Contamination Team is investigating modified polivic addition to reduce reactor wall scale. Also, additional equipment and railcar washing are being tested.

<u>Production</u>	<u>July</u>	<u>Y.T.D. (Fiscal 88)</u>
1. Production, MM lbs	39.2	415.7
2. Daily production rate, M lbs/c.d.	1263.8	1237.1
3. Total charges	934	9857
4. Charges, reactor batches/c.d.	30.1	29.3
5. Reactor stream factor	95.2	89.7
6. Dryer rate, average lbs/hr	9313	9387
7. Dryer stream factor	70.7	68.8
8. Accounting days	31	336

Reactors

The reactor stream factor for August was 95.2%. Downtime in the reactor area occurred as follows:

1. Operational Downtime: Accounted for 88.3% of the total and was due to recovery scheduling conflicts, downtime to rinse the chem wash tank, waiting on particle size data before charging, new module rinse/charge conflicts, no place to dump, holding reactors to test Isonox 132 as an emergency kill, and power outages.

VINYL - ContinuedReactors - continued

2. Maintenance repair/revision downtime: Accounted for 11.7% of the total and was due to hydroblasting and drilling the condenser on D700, changing the agitator seal on D743, replacing the fluid drive coupling on D745, repairing the F-50 charge line in the old unit, new unit compressor repairs, and miscellaneous valve repairs.

Dryers

The dryer stream factor for August was 70.7%. Downtime in the dryers occurred as follows:

1. Reactor limited production: Accounted for 80.3% of the total. Dryers were shut down when possible for energy conservation.
2. Operational downtime: Accounted for 8.5% of the total and was due to centrifuge plugging, dryer cleaning, activator transfer problems, checking dust collector socks and sifter screens for leaks, flame outs, transfer line pluggage, and power outages.
3. Maintenance repair/revision downtime: Accounted for 11.2% of the total and was due to activator repairs, centrifuge repairs on several dryers, replacement of #4 centrifuge motor, repairs to the #7 trunion rollers, replacing #7 gear box, replacing #4 exhaust motor, screener maintenance, and fluid bed leak repairs.

Product Quality Summary

<u>Resin Type</u>	<u>Prime</u>	<u>"B"</u>	<u>"H"</u>	<u>% of Total Production</u>
5265	2,837,632			7.2
5305	5,384,197	-	-	13.7
5385	14,864,055	-	-	37.9
5415	14,142,651	-	-	36.1
5465	-	-	-	0.0
Debox	-	1,204,140	-	3.1
Off-Grade	-	572,460	-	1.5
Sifter Overflow	-	-	64,975	0.2
Pond Resin	-	-	107,300	0.3
Total	37,228,535	1,776,600	172,275	100.0

VINYL - ContinuedMonthly Variable Cost Performance

Variable costs for the month were unfavorable at \$2338.0M resulting from an unfavorable price variance of \$2253.5M and an unfavorable efficiency variance of \$84.5M. Resin variable cost for August, 1988, was 26.659 versus budget of 20.691 cents per pound.

The unfavorable price variance was due to VCM pricing at \$2285.9M unfavorable.

VCM efficiency for the month was 1.01475 pounds per pound of PVC produced versus the budget at 1.00756 pound per pound. This resulted in a unfavorable variance of \$52.1M. The major causes of the VCM efficiency are related to railcar scale differences and accounting of resin used by Compound/Dryblend. Alcotex had an unfavorable variance of \$15.1M. The Variance is due to increased 5415 production and the poor quality of the Alcotex used this month.

Energy Performance

Plant energy performance for August, 1988, was 2830.4 BTU/pound.

General

The resin raw material in the 744 account was valued at \$277.8M

Isonox 132 was tested as an emergency kill this month, but is not efficient enough for this use.

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

Safety

The Compound Department worked without injury in August.

The August monthly safety meeting topic concerned a review of plant accidents.

Quality Management Process

The Compound Department's Operations Superintendent Natural Team met in August. The meeting included all the compound shift supervisors. Topics included; color charting for dryblend and plasticizer, alcohol residual charts for P-1, and the decision that in the future, all operating procedures for Compound will be written by the shift supervisors and/or operators.

The compound Shift Supervisor Natural Teams all met in August.

<u>Compound Production</u>	<u>Operating Days</u>	<u>Production (M Pounds)</u>		
		<u>Month</u>	<u>Average Operating Day Rate</u>	<u>Fiscal Y.T.D.</u>
Line I	30	2159	72	24879
Line III	31	3520	114	42025
Line V	23	1032	45	13666
Total		6711		80570

Line I operated thirty days in August at an average rate of 72M pounds per day. Major items affecting production efficiency were: product changes, 106 hours; dicer problems and maintenance, 28 hrs; resin weigh-up problems, 10 hrs; and transfer line pluggage, 7 hrs. Line I was scheduled down one day to complete the new screener system tie-in and start-up.

Line III operated thirty-one days in August at an average rate of 114M pounds per day. Major items affecting production were: product changes, 72 hours; quality problem 37 hours; and miscellaneous maintenance, 8 hrs.

Line V operated 23 days in August at an average rate of 45M pounds per day. Major items affecting production efficiency were: product changes, 39 hours; hot oil pump problems and maintenance, 26 hrs; maintenance on intensive cooler, 8 hrs; pelletizer problems and maintenance, 7 hrs.

COMPOUND - continued

Quality performance for flexible compounds for August was 2.0% off-grade of which 98.9% was due to mill scrap. "BC" production was 1.6%.

The raw material requirement for flexible compounds was 1.00082 pounds of raw material per pound of compound versus a 1.01196 standard (YTD is 1.00820).

The variable cost variance for compound was \$477.8M unfavorable with \$440.4M unfavorable due to price and \$37.4M favorable due to efficiency. The efficiency variance due to product mix was \$71.4M favorable.

The only major raw material efficiency variances was Jayflex 366 plasticizer at \$130.4M unfavorable. This is a new raw material that was not budgeted for fiscal 1988.

Total compound inventory increased 406.9M pounds in August to 9.45MM pounds.

<u>Dry Blend</u>	<u>Month</u>	<u>Average Operating-Day Rate</u>	<u>Fiscal Y.T.D.</u>
Production, M Pounds	4998	161	57379
Operating Days	31	-	322

Dry blend operated 31 days in August at an average rate of 161M pounds per day. Production included 80172C WHT 110, 80273G WHT 110, 90172D WHT 110, RP100 WHT 142, RP421 WHT 110, RP460 WHT 110, A10-001 BGE 347, 186-139 WHT 111, 269-66 BGE 346, 269-151 WHT 145, 317-166 WHT 144, 378-06 WHT 141, 378-80 WHT 112 and 378-83 NAT 100.

Dry Blend production was hindered by: product changes, 38 hrs; Univox problems, 34 hrs; Quality problems, 24 hrs; Welex problems and maintenance, 13 hrs; cleaning and maintenance of Gump screeners, 10 hrs; and waiting on blender transfers, 5 hrs.

Quality performance for the month of August was 99.1% customer grade.

The raw material requirement for dry blend was 1.00612 pounds of raw material per pound of dry blend versus a standard of 1.00491 (YTD is 1.00606).

The variable cost variance for dry blend was \$381.4M unfavorable with \$459.3M unfavorable due to price and \$77.9M favorable due to efficiency. The efficiency variance due to product mix was \$118.1M favorable. The only major raw material efficiency variances were Supercoat filler at \$10.3M favorable and titanium dioxide at \$25.3M unfavorable. Year-to-date variance for titanium dioxide is \$38M favorable.

COMPOUND - continued

<u>Plasticizer</u>	<u>Month</u>	<u>Average Operating-Day Rate</u>	<u>Fiscal Y.T.D.</u>
Production, M Pounds	1373	55	19425
Operating Days	25	-	327

Plasticizer operated twenty five days in August at an average rate of 55M pounds per day. Production included 610P and 108P. The Plasticizer unit lost considerable production during August due to failure of the inert gas system and one reactor agitator drive.

VRP production totaled 110M pounds (9.0%).

The raw material requirement for plasticizer was 1.03647 pounds of raw materials per pound of plasticizer versus a 1.10084 standard (Y.T.D. is 1.09213).

The variable cost variance for plasticizer was \$51.4M unfavorable with \$90.7M unfavorable due to price and \$39.3M favorable due to efficiency. The major raw material efficiency variances were Alfol 610 alcohol at \$14.6M unfavorable and phthalic anhydride at \$21.8M unfavorable. Year-to-date Phthalic anyhdride variance is \$66M favorable.

The efficiency variance due to product mix was \$1.2M favorable.

Energy

	<u>Usage (BTU/Lb.)</u>	
	<u>Actual</u>	<u>Standard</u>
Compound	1849.4	1758.0
Dry Blend	761.2	720.0
Plasticizer	2030.1	1550.6

MECHANICAL DEPARTMENT - T. F. Lyon

MAINTENANCE - D. A. Miller, J. B. Hegwood

Safety

For the month there was one first aid injury recorded. A general mechanic bruised his knee while working in the Dry Blend basement.

The monthly safety meeting topic was a review of this years safety performance and a presentation of the Quality Implementation Plan.

Quality Management Process

The Quality Implementation plan was reviewed with all mechanical department employees during the month.

Training

Four mechanics and the Maintenance engineer spent 5 days in Carbon Steel pipe welding training.

Vinyl

The 903 recovery compressor was removed due to a seal leak and the shaft was repaired.

The fluid coupling for the 745 reactor agitator failed and was replaced.

The Chem wash pump in the old unit was replaced and the spare pump was overhauled.

The following mechanical seals were changed during the month:

- North blowdown tank pump seal in the New Unit
- 743 reactor agitator seal
- North VCM transfer pump seal
- 903 compressor, inboard and outboard seals
- "A" compressor, outboard seal

The following major valves were changed during the month:

- 744 main dump valve
- 700 slurry dump valve
- 500 slurry dump valve
- 700 chem wash return valve
- Old Unit slurry dump control valve

The condenser on 700 reactor was drilled and the shell was hydroblasted.

MECHANICAL DEPARTMENT - continued

Dryer Area

The pond resin centrifuge for #1 dryer was removed and is in the process of being rebuilt.

The fluid bed dryer pick heater was repaired and a steam check valve upstream replaced.

The #1 dryer rotary valve was changed out and overhauled.

The high pressure seal water pump for the dryer building was rebuilt.

The fluid bed dryer south kason rotary valve was changed out and the spare valve was overhauled.

The North East trunion roller on #7 dryer was changed out.

Compound, Dry Blend, Plasticizer

The diverter valve to 490/475 series silos was pulled and rebuilt.

The vacuum system blower was pulled, cleaned and rebuilt.

The East mill in the Quality Control lab was replaced with a spare and the old mill overhauled.

The following work was accomplished in the Compound area:

- Line I was shutdown for two days so that some general maintenance could be performed. Several stem leaks were repaired and the oil in all gearboxes and mills was changed. The input shaft seal on "A" blender gearbox was replaced and the seals on the Stuart Bolling mixer were replaced.
- The lid on Line III "A" blender was replaced.
- The Line V intensive cooler blades were tightened and the seal in the single screw hot oil system pump was replaced.

The following work was accomplished in the Dry Blend area:

- The lid was regasketed on "D" blender
- The sprockets and chains were changed out on blenders "B", "C", and "D".

The following items were accomplished in the Plasticizer Unit:

- The gear box and agitator shaft on R-1 reactor was rebuilt and the seal was replaced.
- The rupture disks on R-4 reactor were replaced.

MECHANICAL DEPARTMENT - continued

- The suction gas heat exchanger was replaced and the gas after cooler was cleaned on the inert gas machine. The spare inert gas compressor was also installed.

Utilities

Number 3 boiler was shutdown for inspection after discovering a hot spot on the north side. Some refractory damage had occurred which allowed the hot spot to develop. The Boiler was entered and repaired. Approximately ten square feet of the wall was replaced.

Number 1 water well pump motor failed and was pulled out for repairs and returned for service.

Repair work to the Bio disk system was started and is nearly complete except for regenerating of the Bio-mass.

MECHANICAL ENGINEERING - R. E. PolkAFE F786/F557 - Resin Quality Improvement

Concrete and mechanical work is complete except for final process tie-ins. These are scheduled to be completed during the upcoming module outages scheduled for the week of 9-19. I&E work is 99% complete and system checkout is in progress. Both reactor modules are scheduled to start-up using the new suspending agent systems at the conclusion of the reactor outages.

AFE A538 - Reactor Condenser Revisions

The retubed condenser for D-400 has been received. Installation has been delayed until mid-late October due to resin demand.

AFE D608 - Dryblend Orbitran Replacement

Construction is complete and the unit operational. Minor punchlist items and as-built drawing documentation are in progress. Completion is planned for 11-1. Maintenance training on the new scale systems has been arranged for early October.

AFE D638 - Boilerhouse MCC Replacement

All pre-shutdown work has been completed. The MCC will be energized during the week of 9-19 in coordination with a plant steam outage. Project completion is planned for early November.

AFE F598 - Line I Screeners

Installation of the system is complete except for the new transfer system piping. This has been delayed due to poor delivery dates for material. The new screener was successfully started-up using the old transfer piping. It will be operated in this manner until early October.

AFE A678 - Dryblend Transfer System Improvements

Installation is complete including punchlist items. The project will be closed to field charges in September.

AFE F587 - Laboratory Addition

Installation is complete including punchlist items. The project will be closed to field charges in September.

AFE D707 - VCM Unloading Fire Protection

Installation is complete including punchlist items. The project will be closed to field charges in September.

MECHANICAL ENGINEERING - continued

AFE D628 - Compound Resin Supply Valves

Installation is complete including punchlist items. The project will be closed to field charges in September.

AFE D648 - 745 BME Addition System Modifications

Mechanical installation is complete and the system is operational. Punchlist items are in progress and will be complete by 10-1.

AFE A658 - Additional 5415 Production In The Old Module

All scope items are complete except for the installation of the bag filter on the fluid bed dryer. Installation is planned for the week of 9-19 in conjunction with the reactor module outages.

AFE A698 - Roof Upgrade Phase III

Coating of the main office building and V-11 dryer building roofs is complete. Installation of the new membrane roof for the compound/dryblend area is in progress and scheduled for completion by mid-September. The V-11 recovery building and the administrative services roofs are planned for completion by 11-1.

AFE A728 - Recovery System Compressor

The compressor has been placed on order with delivery scheduled for mid-November.

AFE C558 - Dry Calcium Stearate Addition

Installation of the feeders and transfer piping is essentially complete. I/E installation is planned to commence by mid-September with completion by 11-1.

AFE C738 - Plasticizer reactor Condenser

The condenser has been placed on order with delivery scheduled for 1-1.

AFE C748 - Resin Railcar Cleaning System

Design is 20% complete and in progress. Quotes have been requested on the transfer system. Design is scheduled for completion by 10-15 and installation complete by 2-1.

MECHANICAL ENGINEERING - Continued

AFE D618 - Vinyl Valve Limit Switches Phase III

Installation is in progress in both reactor modules. A total of 18 of the 77 valves have been modified to date. Modification of valves in the new reactor module will be coordinated with the 9-19 outage.

MISCELLANEOUS ITEMS

Printing of the new VCM/chem wash piping specifications has been completed. It will be issued to the plant in early September.

Development of specifications for reactor bolted joints is in progress. Completion is planned for 10-1.

Capital expenditures for the year are \$2.8MM ex-RQIP projects which is 97% of the target for the year.

PROCESS ENGINEERING - V. E. Messick

Resin Quality Improvement Project

Flushing and commissioning of all equipment and piping in the new Suspending Agents/Kill make-up module were completed. Test batches of Methocel solutions were made and centrifuged. Operator Training classes will be held in early September. Start-up of the unit is scheduled for mid-September.

Low Molecular Wt. Resin Expansion

Initiator heat release data is being gathered by PED. Field information is being given on an "as needed" basis.

Dry Blend Orbitran Replacement

Univox Operator Training is now complete. Configuration revisions and debugging were also done in August. Some additional minor software revisions are being planned.

Plasticizer Improvements

Samples of waste-water produced by the plasticizer unit have been sent to R & D for analysis. Test-runs continue in the unit.

Alternate Compressor Installation

The class "A" design for this project was issued for review. This project will install a Siemens compressor for testing as an alternative to Nash compressors.

Continuous Hardness Meter

The class "A" design for this project was issued for review. This design will provide continuous monitoring and alarm capabilities for boiler feedwater hardness.

Boiler Feedwater Treatment

The revised class "A" design for this project was issued. This design provides bulk storage for boiler feedwater treatment chemicals.

Capital Budget

The 1989 Capital Budget was prepared and issued.

HUMAN RESOURCE REPORT

PERSONNEL - J. E. Beall

EMPLOYMENT

David A. Moore, New Hire
Bruce L. Trego, New Hire

PROMOTIONS/TRANSFERS

William Earnest promoted from Compound Utility to Compound Operator.
Keith Fogg promoted and transferred to Safety Director LCCP.
Bernard Garth promoted from Compound Operator to Plasticizer Operator.
Steve Hillman promoted from Compound Operations Engineer to Senior Process Engineer.
Michael Johnson promoted from Compound Utility to Compound Operator.
George Phillips promoted from Compound Utility to Compound Operator.
Willie Rowe promoted from Compound Operator to Compounder.
Gary Sanders from General Helper to Compound Utility.
Pat Wells promoted from Compound Production Scheduler to Stores Supervisor.

RETIREMENTS

None

TERMINATIONS/RESIGNATIONS

Fred Davis
Deborah L. Tollison

TO/FROM LEAVE OF ABSENCE

None

Aberdeen, Mississippi

AUGUST, 1988
MONTHLY PERSONNEL REPORT

Salaried Employees 76*
Hourly Employees 170
Total Employees 246

Minority Employees #, %
Salaried 7 9%
Hourly 67 39%
Total 74 30%

Employees (Hourly)

New Employees 0
Terminations 0

Hourly Min. Hired 0
% Min. Hired 0
Hourly Min. Term. 0
% Min. Term. 0

<u>DEPARTMENTS</u>	<u>PAR</u>	<u># EMPLOYEES</u>	<u>MIN. EMP.</u>	<u>% MIN.</u>	<u>NEW HIRES</u>	<u>YTD</u>	<u>TERM.</u>	<u>YTD</u>	<u>TURNOVER</u>	<u>YTD</u>
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>16</u>	<u>7</u>	<u>44</u>	<u>0</u>	<u>8</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Maintenance	<u>40</u>	<u>38</u>	<u>9</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>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>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>32</u>	<u>32</u>	<u>10</u>	<u>31</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 35

APPLICANT BREAKDOWN:

Minority 0 % Minority 0
Female 0 % Female 0

Hires (Hourly):

Month 0 Year to Date 8

Terminations (Hourly):

Month 1 Year to Date 4

Overall Turnover .6%

Projected Annual Turnover 3.5%

* Includes 1 temporary employee and 2 Co-op Engineers.

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	1636.00	144.75	-----	8.84	0	.00	.00	.00 2.01
YARD	1477.25	249.75	-----	16.91	15	.00	1.02	1.02 3.72
MAINTENANCE	5943.25	1086.25	-----	18.28	190	2.29	.91	3.20 1.61
LAB	4236.50	608.00	-----	14.35	342	6.99	1.08	8.07 5.78
COMPOUND	8055.50	1409.50	-----	17.50	616	6.42	1.23	7.65 3.68
VINYL	7282.75	797.75	-----	10.95	50	.00	.69	.69 3.57
PLASTICIZER	856.25	61.00	-----	7.12	28	2.80	.47	3.27 2.32
UTILITY BOILER	792.00	84.50	-----	10.67	0	.00	.00	.00 .00
GENERAL PLANT	833.50	83.00	-----	9.96	127	15.24	.00	15.24 1.65
TOTAL	31113.00	4524.50	-----	14.54	1368	3.54	.86	4.40 3.29

(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 - D. A. Moore

I. Plant Operations

Total energy consumption for August was 127.315 MMM BTUs. Energy consumption decreased to 2448 BTU/lb. from 2570 BTU/lb. in July. An adjusted CMA reduction of 52.1% was obtained for the month. The adjusted CMA reduction for fiscal 1988 is 51.9%.

II. Plant Energy Conservation Program

Maintenance

There were eighteen energy related items completed in August. Seventeen of these items were steam leak repairs. The remaining one was a steam trap repairs.

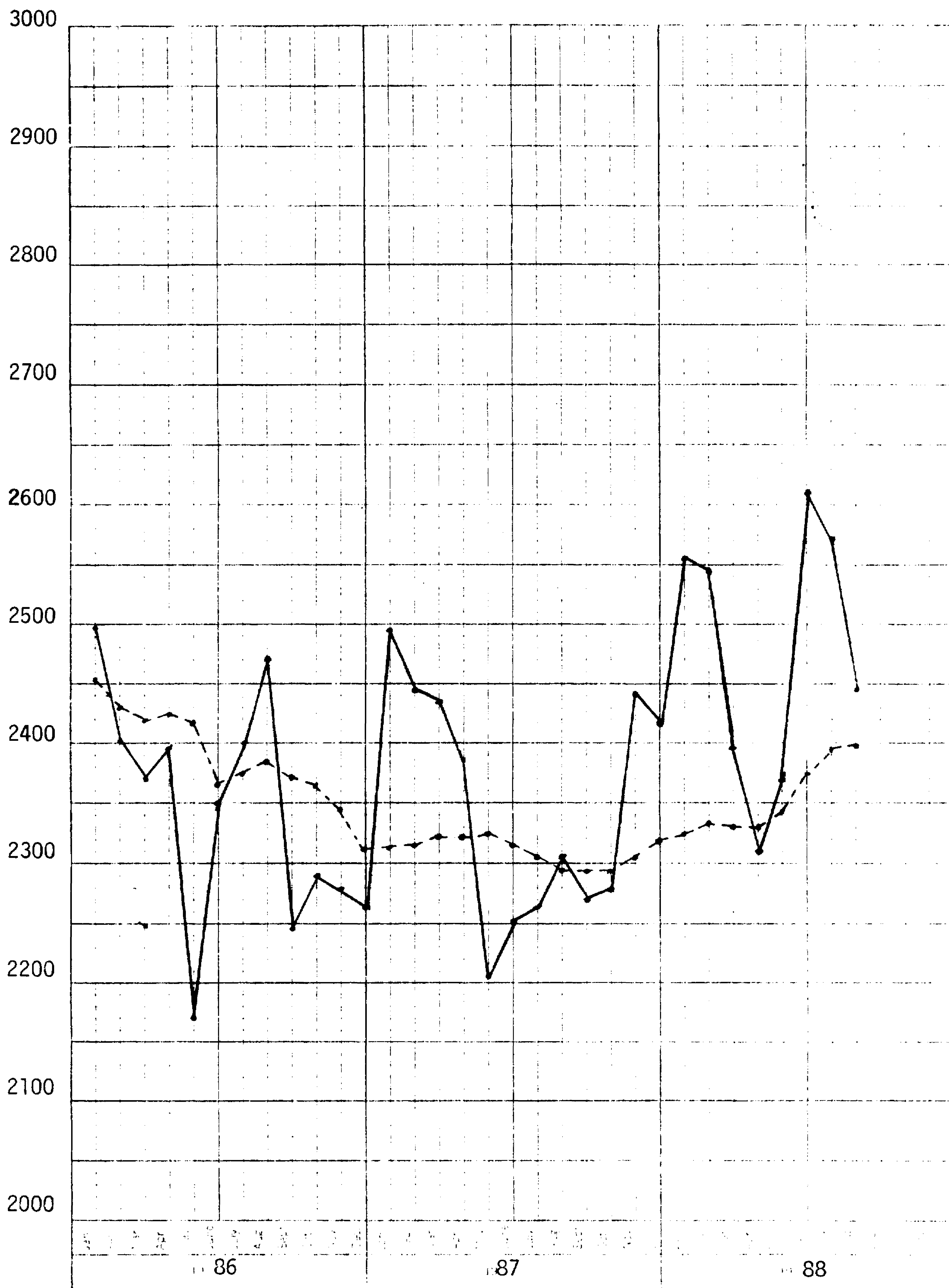
III. Boiler Operation

<u>Boilers</u>	<u>Combustion Efficiency %</u>	
	<u>Aug, 1988</u>	<u>Aug, 1987</u>
No. 1	83.5	83.4
No. 2	(2)	(1)
No. 3	83.3	83.3

Note: (1) Boiler number two was not used during the month.

(2) Boiler number two was operated one day during the month.

Figure 1
ENERGY USAGE



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

ENERGY CONSERVATION DATA

	<u>1988</u>	<u>1987</u>
<u>Month</u>	<u>August</u>	<u>August</u>
<u>Production, MM Lbs.</u>		
Resin	39.1	32.3
Dry Blend	5.0	4.7
Compound	6.7	5.6
Plasticizer	1.2	1.7
TOTAL	52.0	44.3
<u>Natural Gas</u>		
Consumption, MSCF	64.971	50.271
Conversion, BTU/SCF	1020	1020
Energy Consumption, MMM BTU	66270	51,276
Energy Consumption, BTU/lb.	1274	1157
<u>Electricity</u>		
Consumption, MM KWH	6.104	5.0828
Conversion, BTU/KWH	10000	10000
Energy Consumption, MMM BTU	61044	50,828
Energy Consumption, BTU/lb.	1174	1147
<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.	2448	2304
Energy Consumption, MMM BTU		
Actual Unadjusted	127.315	102.104
Actual Adjusted	105.454	81.933
1972 Base Period	220.431	185.916
<u>CMA Reduction (%)</u>		
Adjusted	52.1	55.9
Unadjusted	42.2	45.0
Fiscal 1988 Year-to-Date	51.9% Adjusted	
Performance	42.2% Unadjusted	

ENVIRONMENTAL - F. G. Jeanson

Water

All wastewater discharge parameters were within NPDES limits in August.

Simiannual Bioassay testing was completed in August. No toxicity was found by the test. The test was conducted by TAI Environmentatl Sciences Inc. of Mobile, AL.

Waste Management

August Waste Shipments included:

- ° First load of Lead and Antimony contaminated bags to the hazardous waste landfill
- ° Two loads of Separater oil to Stauffer
- ° One load of reactor culls to Sun Polymers

Visited alternate source for empty 55 gallon drums - Buckner Barrel in Birmingham, AL.

Misc.

Trained in Houston with environmental and legal departments.

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.	757	9	81	42	379	17	152	8.0	9.4	7.5
	Max.	882	11	116	52	550	18	175	8.7	15.9	7.7
June -	Ave.	611	7	56	33	263	15	122	7.9	1.2	7.6
	Max.	722	11	85	48	373	23	174	8.8	2.6	8.0
Aug. -	Ave.	642	4	32	35	272	11	83	7.2	.75	7.5
	Max.	697	6	50	54	410	14	114	7.6	.84	7.8
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. ColemanA. Safety

The Laboratory operated injury-free this month. The safety meeting topic was a film on burns, "It Happened to Me, It Could Happen to You."

B. Customer RelationsCustomer Contacts

8/2-B. J. Harrison made a technical service call at Vinyl Building Products to discuss a burning/streaking problem with 290-61 WHT 121.

8/31-H. G. Coleman visited Klockner to discuss contamination and graininess of 5305.

Requests for Corrective Action

There were no RCA's received in August.

Customer Problem Reports

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
8/8/88	U-Brand -Upper Sandusky, OH	90172D	Dryblend line scale

STATUS: No resolution; typical line scale.

8/8/88	Poly-Tex -Oakmont, PA	269-185 WHT144	Rubber balls from Gump.
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STATUS: Post-Gump screens installed. RESOLVED

8/19/88	Flexible Technologies -Abbeville, SC	17121WTR CLR	Contamination-resin "Lumps"
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STATUS: Problem isolated to several boxes; rest of run looks good.

8/24/88	Donnelly Corp. -Midland, MI	48451 BLK	Stringers
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STATUS: Typical stringer problem that got by quality control.

Customer Problem Reports - continued

<u>Date</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
8/29/88	Klockner -Gordonsville, VA	5305	Contamination in 3 compartments of 2 R/C's

STATUS: Downgrade 2¢/lb; team formed to address Klockner quality issues.

Waivers Issued

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Essex	5415	Bulk Density	1 RC
Essex	5415	Particle Size	1 HT
PVC Compounders	5415	Static Flow	1 HT
Southwire	5415	Bulk Density	1 RC

C. RVCN Summary

RVCN 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 August, 1988.

	<u>Reactor Slurries</u>	<u>Dryer</u>	
		<u>5265</u>	<u>5305</u>
Number of Samples	932	25	73
Average, RVCN	147	0.7	0.7

RVCN of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of August, 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	43	121	26	65	0	21	0	27
Average RVCN, ppm	0.1	0.1	0.1	0.0		0.0		0.1

D. Resin Process Capabilities

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>
Bulk Density	1.07	0.33	0.82	0.38
Inherent Viscosity	0.44	0.78	0.50	0.60
"L" Color Value	4.33	6.33	6.67	6.83
"A" Color Value	2.83	7.00	—	—
"B" Color Value	2.00	1.83	2.33	2.67
% on Pan (vs. 2% max.)	4.22	3.25	2.13	3.00 (0.50)

D. Resin Process Capabilities - continued

	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5415</u>
% thru 140M	0.76	1.02	1.23	2.46
Drytime	—	—	0.83	1.00
Mets I.R. (vs. 95% of Control)	—	—	—	0.73 (0.37)
Hard Particles (% > 10)	—	—	1.5	0

E. Compound Quality Summary

	<u>Adjustments</u> <u>M Lbs. (%)</u>	<u>Rejections</u> <u>M Lbs. (%)</u>
Hardness	48.0 (0.72)	— —
Specific Gravity	7.0 (0.10)	— —
Color/Clarity	29.0 (0.43)	53.7 (0.80)
Hard Particles	— —	384.6 (5.73)
Cross Contamination	— —	9.7 (0.14)
Dicing	— —	18.6 (0.28)
Streamers	— —	1.5 (0.02)
Metal Contamination	— —	7.5 (0.11)
Total	84.0 (1.25)	475.6 (7.09)

F. Dry Blend Quality Summary

	<u>Rejections</u> <u>M Lbs. (%)</u>
Color	32.1 (0.64)
Color/Rheometry	9.8 (0.20)
40 Mesh	2.6 (0.05)
Partial Box	1.7 (0.03)
Torque	2.8 (0.06)
Total	49.0 (0.98)

G. Quality Management Process

1. The quarterly REACT meeting was held in Oklahoma City on August 17.
2. Compound test results on two control compounds (38401 and 35031), which began in July, continued this month. SPC charts are being generated on hardness, specific gravity, hard particles, oven temperature, and mill temperature. Control limits are given below:

LABORATORY - continued

<u>Compound SPC Testing</u>	<u>n</u>	<u>X</u>	<u>3σ</u>
38401 - Hardness	61	80.1	0.78
Spec. Gravity	61	1.377	0.009
Hard Particles (20")	61	22.4	8.3
35031 - Hardness	61	49.0	0.70
Spec. Gravity	61	1.37	0.012
Hard Particles	61	5.1	2.7
15' Over Temperature	All readings 204°C		
Mill Temperature	61	323.9	6.0

LABORATORY - Continued

3. 5415 Control Resin (Lot 04169) Testing

	<u>n</u>	<u>$\bar{X}$</u>	<u>$3\hat{\sigma}$</u>
Moisture	62	0.166	.030
Dry Time	33	4.98	.39
Particle Size - 60M	45	1.94	.61
- 80M	45	28.33	4.15
- 100M	62	33.92	1.89
- 120M	62	21.48	2.61
- 140M	62	7.59	1.57
- 200M	62	5.27	1.64
Pan	62	1.23	.54
Bulk Density	31	.5053	.0064
Color - L	61	100.614	.269
A	61	-0.111	.351
B	61	2.167	.775
Flow Time	31	7.59	1.29
Hard Particles, 7 Min.	62	4.89	3.05
Inherent Viscosity	26	1.0111	.0129

H. Miscellaneous

1. NSF performed an unannounced inspection of our dry blend operation on August 11. The only point for which we were cited was lack of semi-annual cell class testing. A program has since been established to accomplish this testing.
2. D. S. Cox wrote entry programs for the compound/dry blend database project. The system will be initiated in September.
3. Brian Harrison completed an analysis of 290-61 WHT 121 for Vinyl Building Products. No problems were found.
4. Two production runs using the prill form of Sunolite 160 were successful.
5. Blendex 28443 (KM-653 substitute) was trialed in 317-204 WHT 110. The performance was good except for a small number of rubbery clumps in the Gump overs.
6. Brian Harrison completed color matches for Omega Plastics, Intek (2), Superior Rubber, Corelmex, Conducel, BRIntek, and Comm/Scope.
7. The lab performed an experimental design on the effects of glycerol monostearate and impact modifier on torque rheometry and blown film quality of a rigid 5305 formulation for Klockner. Both ingredients affected rheometry; neither affected blown film quality.
8. Brian Harrison attended a technical meeting at Americhen on 8/23 to discuss colorants for FLX at Premier.

SAMPLE SHIPMENTS**JUNE 1988****RESIN**

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
8/15/88	5385-3S	5 X 1 lb.	Crane Plastics
8/29/88	5385	50 lbs.	Carlew

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
8/03/88	48451 BLK	1500 lbs.	Excel Industries
8/05/88	35852 NAT	150 lbs.	Prestolite Wire Corp.
8/10/88	17462 GRY 545	50 lbs.	Tubular Protection of America
8/12/88	38601 NAT	1500 lbs.	Pacific Electriccord
8/16/88	44461 BLK	50 lbs.	Quintex
8/18/88	35852 NAT	50 lbs.	Chicago Magnet Wire
8/18/88	15072 NAT	100 lbs.	Vytron

OTHER

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
8/17/88	VRP Plasticizer	1 gal.	Dexter Plastics

SHIPMENTS BY PRODUCT - M LBS.

AUGUST 1988

FISCAL
YEAR-TO-DATE

RESIN	28,712	320,264
PLASTICIZER	492	7,288
DRYBLEND	5,093	56,497
COMPOUND	6,431	76,119

TOTAL	40,728	460,168
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NUMBER OF SHIPMENTS BY MODE:

	RAILCAR	VISTA BULK	TRUCK VAN	TRAILER ON A FLAT CAR	COMMON CARRIER	CUSTOMER PICK-UP	CONTAINER	TOTAL
RESIN-Bulk	121	60			3	87		271
Package			2	2	7	7		18
Export								
PLAST.-Bulk	2	3						5
Package								
DRYBLEND-Bulk	23	4				7		34
Package			10		8	1		19
Export							2	2
COMPOUND-Bulk	12	4						16
Package			48	1	29	34		112
Export					1		2	3
TOTAL AUGUST	158	71	60	3	48	136	4	480
OCT. 1987	182	62	56	2	51	145	1	499
NOV. 1987	173	72	50	1	61	142		499
DEC. 1987	154	88	38	1	85	161	1	528
JAN. 1988	155	88	45	5	77	139	3	512
FEB. 1988	178	97	50	2	68	168		563
MAR. 1988	211	46	37	2	82	160		538
APR. 1988	170	63	44	1	58	141	6	483
MAY 1988	159	61	51		62	149	1	483
JUNE 1988	141	65	50	2	71	134		463
JULY 1988	152	66	46	3	48	154	5	474

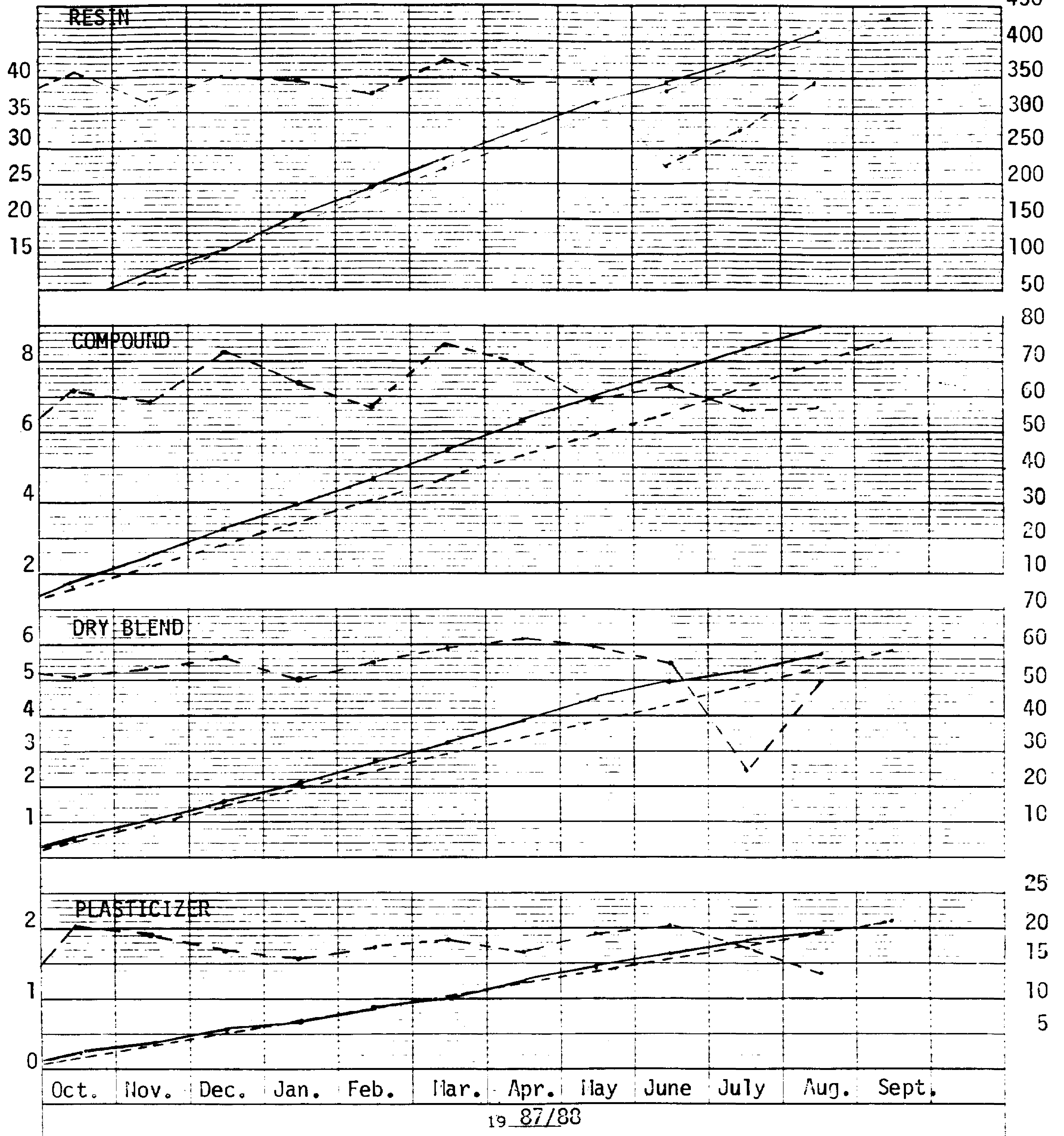
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ABERDEEN PLANT PRODUCTION

10/01/87 - 09/30/88

MM POUNDS
MONTHLY

MM POUNDS
CUMULATIVE



----- Budget
 Actual
 _____ Cumulative

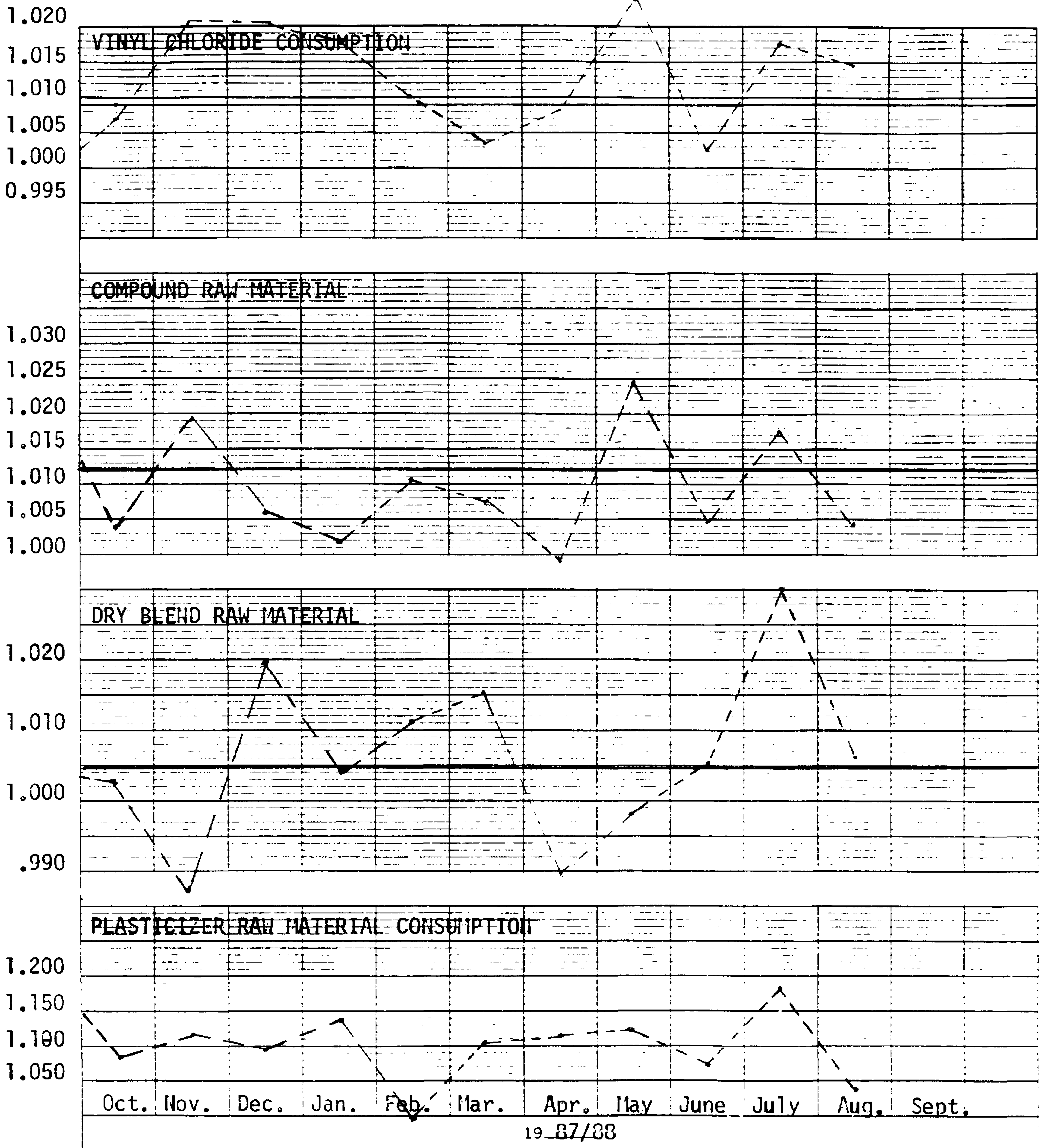
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ABERDEEN PLANT EFFICIENCY

A

10/01/87 - 09/30/88

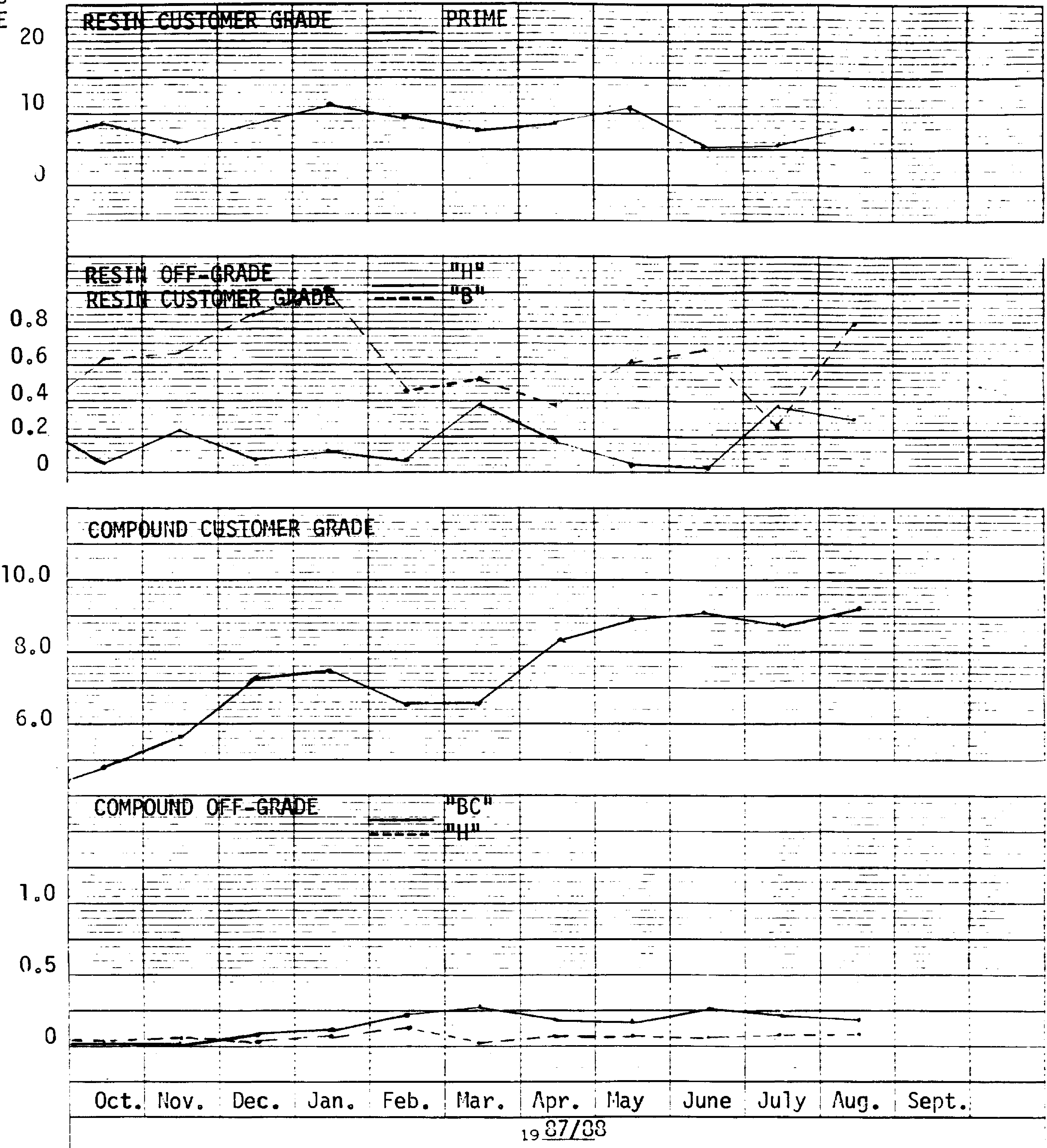
POUNDS OF RAW MATERIAL/POUNDS OF PRODUCT



ABERDEEN PLANT INVENTORIES

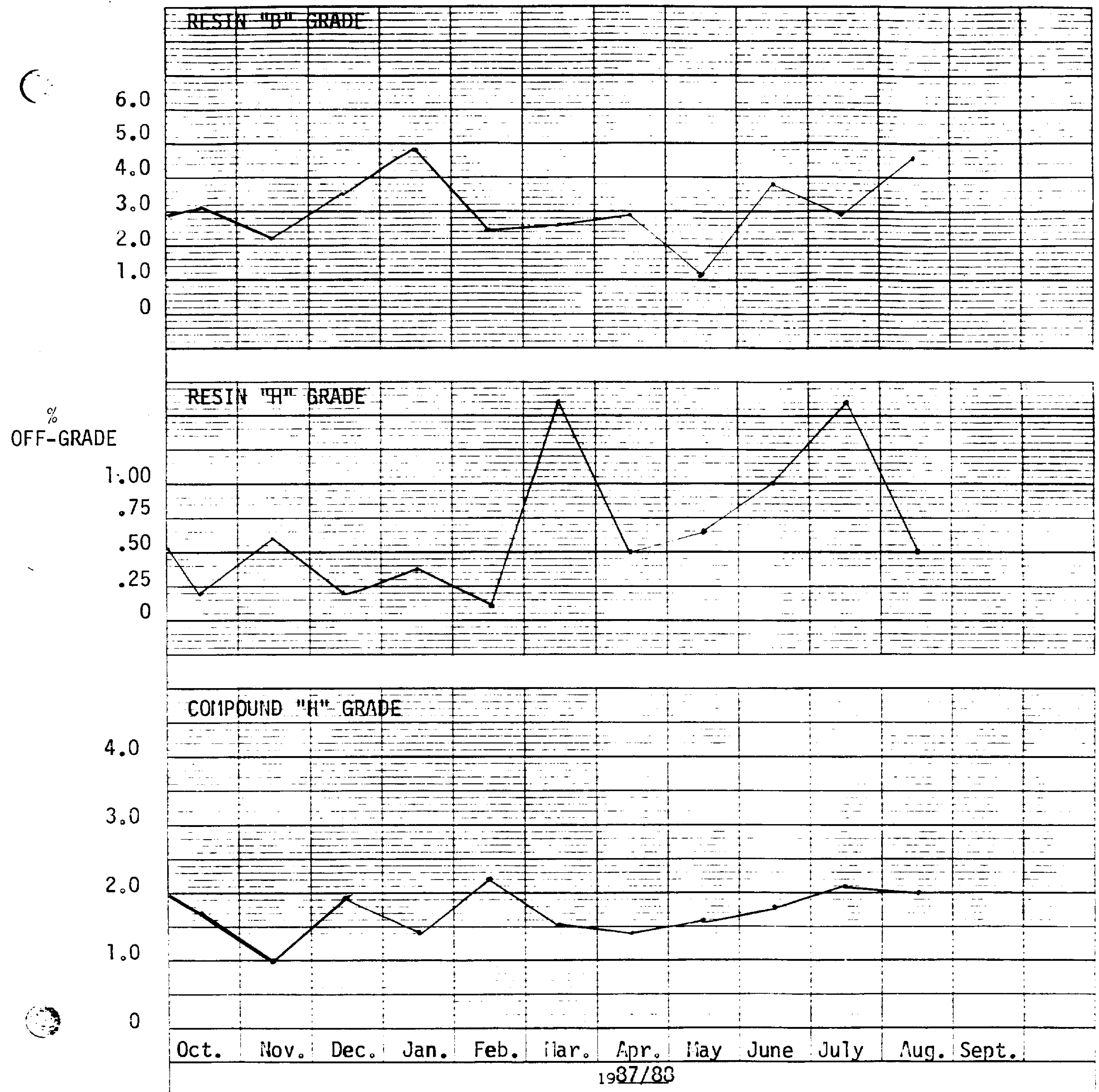
10/01/87 - 09/30/88

MM
POUNDS
PRIME



ABERDEEN PLANT QUALITY PERFORMANCE

10/01/87 - 09/30/88



SAMPLE SHIPMENTS

A

SEPTEMBER 1988

RESIN

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/16/88	5415	50 lbs.	Gencorp Polymers
9/23/88	Sifter Overflow	2 lbs.	H. Heller Co.

COMPOUND

<u>Ship Date</u>	<u>Product</u>	<u>Amount</u>	<u>Customer</u>
9/06/88	16851 CB 50	200 lbs.	Donnelly Corp.
	27251 BLK	200 lbs.	
9/08/88	34311 NAT	200 lbs.	Superior Optics
	34501 NAT	200 lbs.	
9/09/88	38551 NAT	50 lbs.	BRIntec Corp.
9/09/88	14331 CB 50	50 lbs.	Proto Mold
9/14/88	240-147D NAT (BC)	5 lbs.	Ron Walker
	39012 BGE 11	1 lb.	
9/22/88	87-006A BLK	1500 lbs.	Communication Cable
9/26/88	48451 BLK	1500 lbs.	Dott Manufacturing
9/28/88	151-150A WHT	300 lbs.	ITW Corporation
	151-150B WHT	300 lbs.	
	151-150C WHT	300 lbs.	
	151-150D WHT	300 lbs.	
	151-150E BLK	2500 lbs.	
9/28/88	852 NAT	2 lbs.	Blane Polymers
	87-006A NAT	2 lbs.	
9/28/88	240-147D NAT (BC)	50 lbs.	Ron Walker
9/29/88	240-128B GRY	100 lbs.	Carlton (Via Premier)
9/30/88	17121 WAT CL	5 lbs.	Vista - Ponca City
	18031 CB 50	5 lbs.	

VAB.0001190811

SHIPMENTS BY PRODUCT - M LBS.

Sept. 1988

FISCAL
YEAR-TO-DATE

RESIN	26,394	346,658
PLASTICIZER	650	7,938
DRYBLEND	5,786	62,283
COMPOUND	6,947	83,066

TOTAL	39,777	499,945
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NUMBER OF SHIPMENTS BY MODE:

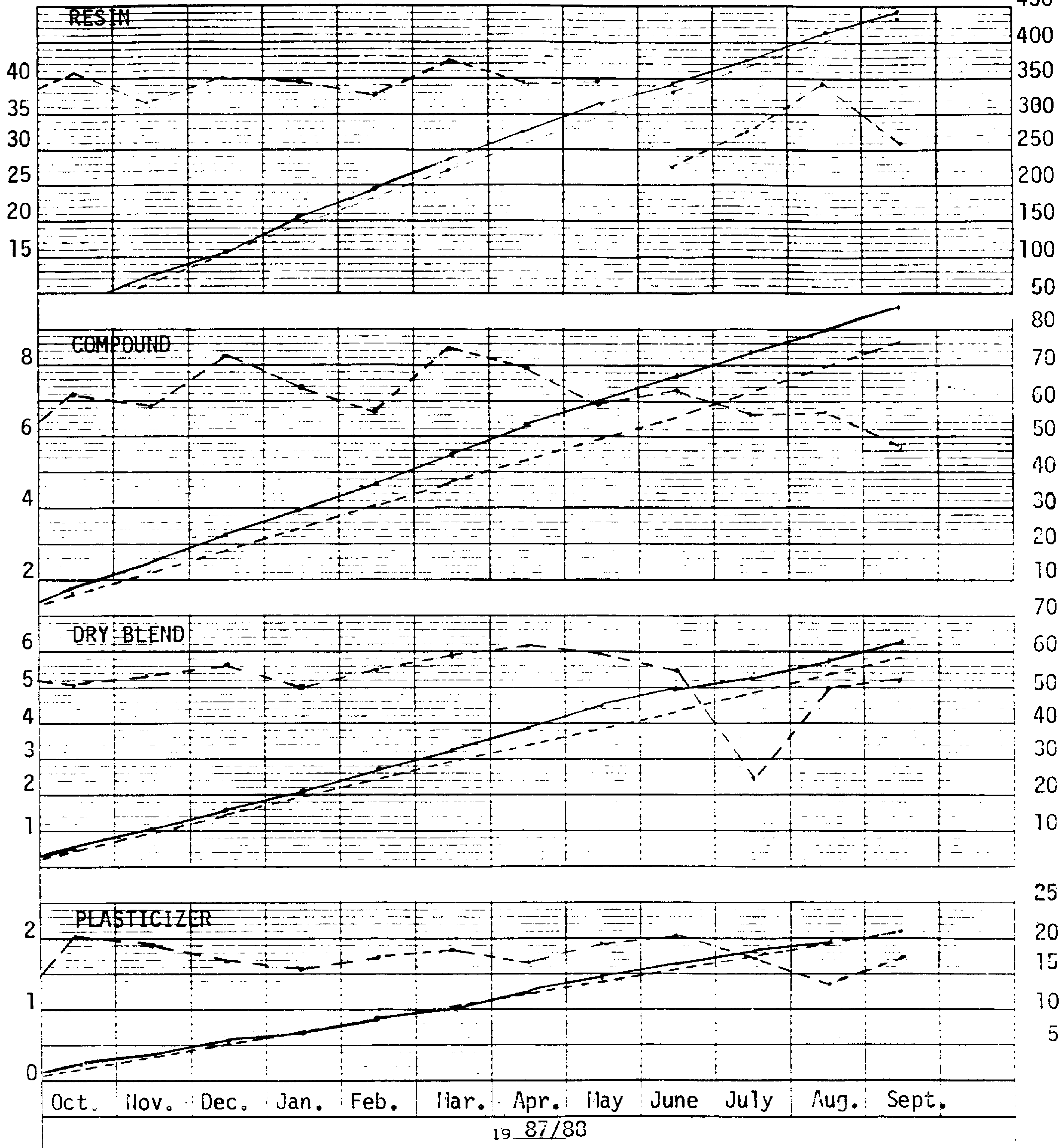
	RAILCAR	VISTA BULK	TRUCK VAN	TRAILER ON A FLAT CAR	COMMON CARRIER	CUSTOMER PICK-UP	CONTAINER	TOTAL
RESIN-Bulk	121	38			2	63		224
Package			1		3	8		12
Export								
PLAST.-Bulk	3	3			1			7
Package								
DRYBLEND-Bulk	27	13				6		46
Package			5		15			20
Export								
COMPOUND-Bulk	11	4						15
Package			43		40	46		129
Export			2		2			4
TOTAL SEPT.	162	58	51		63	123		457
OCT. 1987	182	62	56	2	51	145	1	499
NOV. 1987	173	72	50	1	61	142		499
DEC. 1987	154	88	38	1	85	161	1	528
JAN. 1988	155	88	45	5	77	139	3	512
FEB. 1988	178	97	50	2	68	168		563
MAR. 1988	211	46	37	2	82	160		538
APR. 1988	170	63	44	1	58	141	6	483
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JUNE 1988	141	65	50	2	71	134		463
JULY 1988	152	66	46	3	48	154	5	474
AUG. 1988	158	71	60	3	48	136	4	480

ABERDEEN PLANT PRODUCTION

10/01/87 - 09/30/88

MM POUNDS
MONTHLY

MM POUNDS
CUMULATIVE

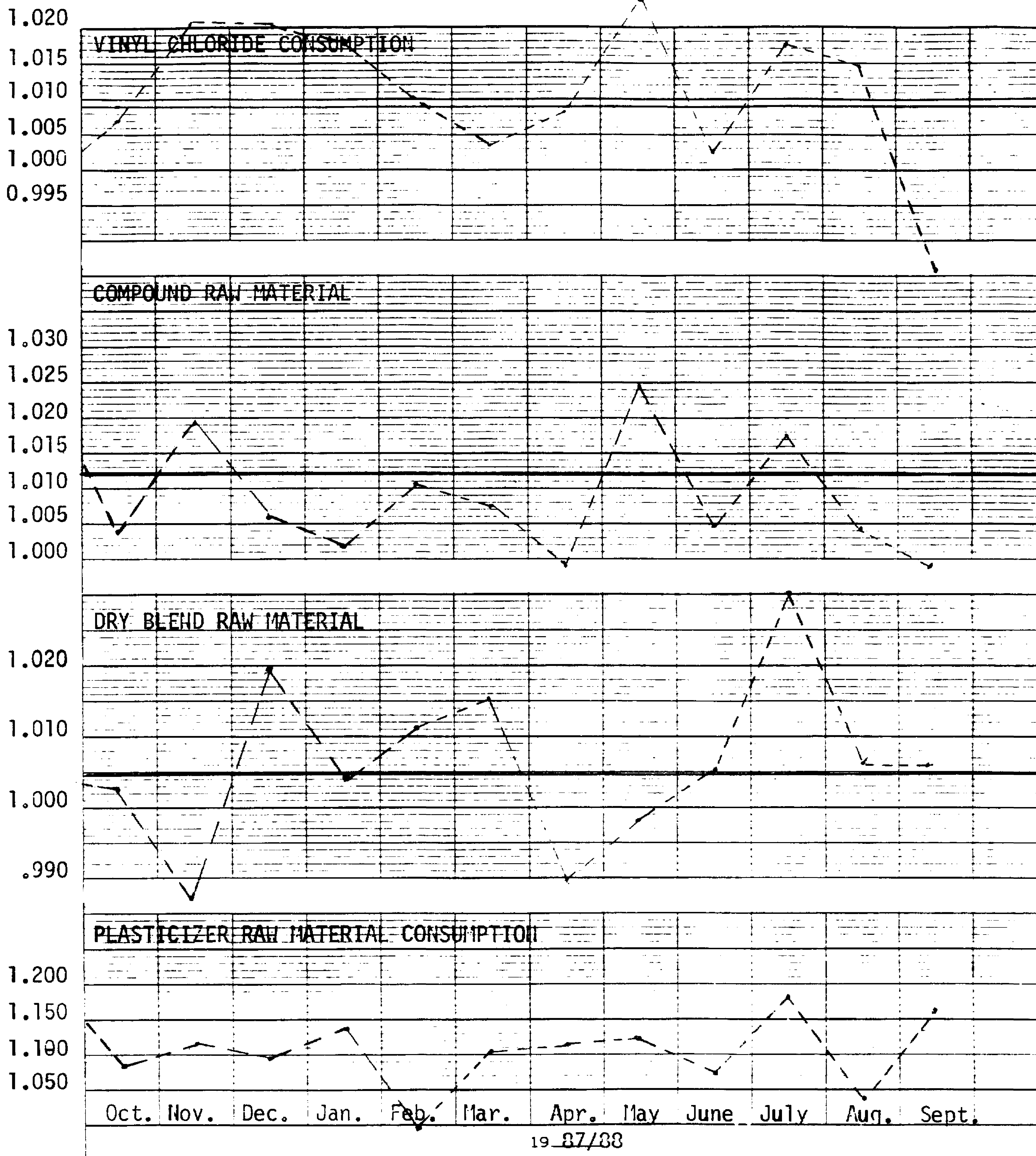


----- Budget
 Actual
 _____ Cumulative

ABERDEEN PLANT EFFICIENCY

10/01/87 - 09/30/88

POUNDS OF RAW MATERIAL/POUNDS OF PRODUCT

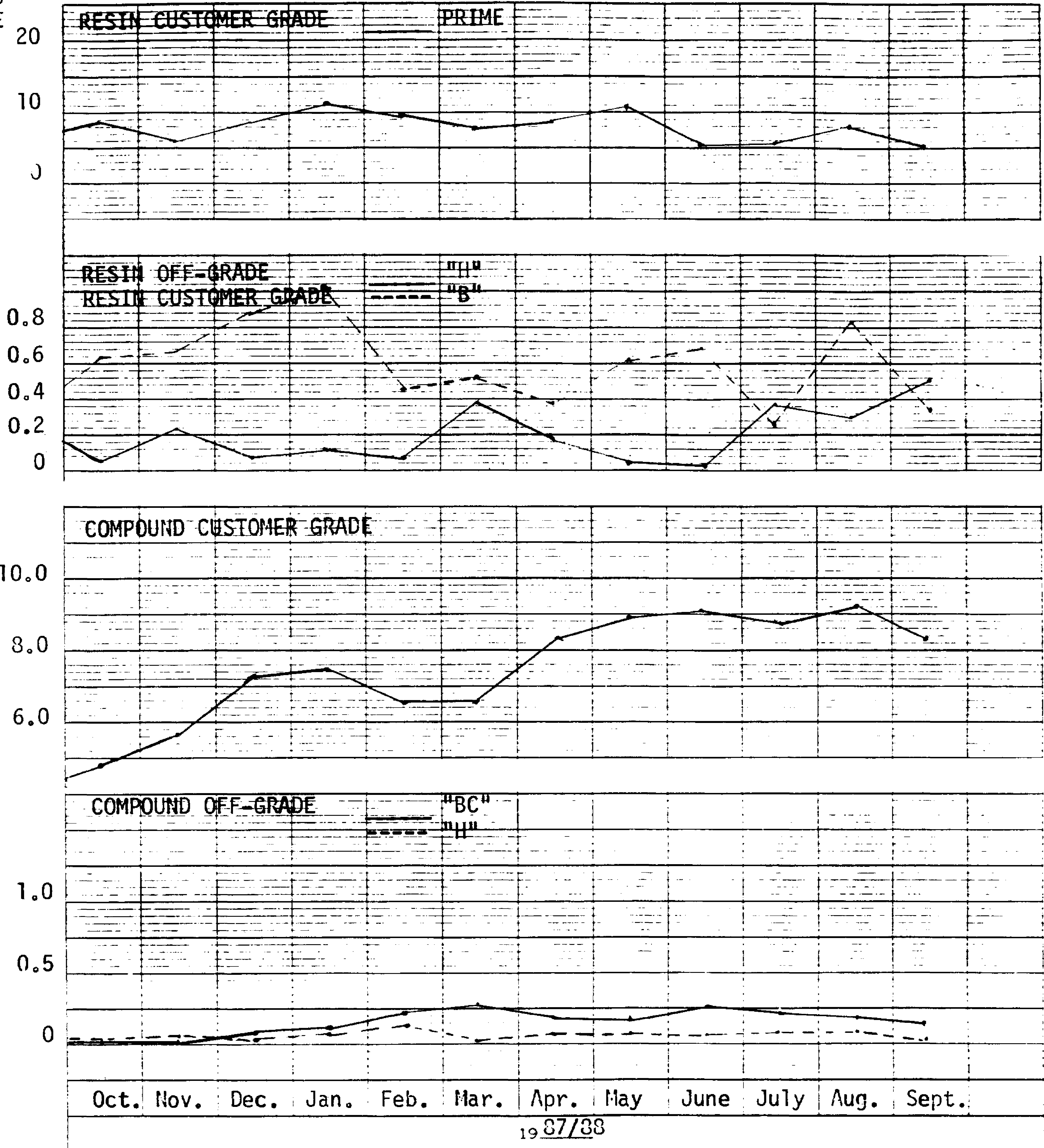


ABERDEEN PLANT INVENTORIES

A

10/01/87 - 09/30/88

MM
POUNDS
PRIME



ABERDEEN PLANT QUALITY PERFORMANCE

A

10/01/87 - 09/30/88

