

File

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To: R. D. Gamblin

From: J. W. Ware
Date: February 18, 1985

Interoffice
Communication

Subject: ABERDEEN MONTHLY PROGRESS REPORT
JANUARY, 1985

VISTA

One medical treatment case and three first aid cases were reported in January. As of January 31, 1985, the plant had operated 2,036 days without a lost-time injury.

PVC resin production for January was a record 37.9MM pounds. The previous monthly production record was set in July of 1983 at 37.5MM pounds. Major downtime taken in the reactor area involved agitator seal repairs on 500, 600, 700, 742 and 743, cooling water jacket repairs on 742 and 743, and replacement of 745 agitator motor. Resin production year-to-date totaled 141.4M pounds. The VCM efficiency for the month was 1.01469 pounds VCM per pound of PVC versus a 1.00500 standard. Year-to-date VCM efficiency was 1.00467.

Compound production was 4.1MM pounds for January and 13.2MM pounds year-to-date. Used #7 rotors were installed in the Line III FCM during January and test runs were performed by the Fusion Task Force to produce compounds with low fusion delay. During the test runs products for several customers (including AT&T) were produced at the desired low stock temperatures and rates over 5000 pounds per hour with only minor operating problems. All quality parameters, including fusion delay, were found to be acceptable for material produced with the new rotors. Quality performance for flexible compounds was 1.9% off-grade of which 100% was due to mill scrap. "BC" production was 0.2%.

Dry blend production for January was 4.7MM pounds and 15.0MM pounds year-to-date. Production limitations resulted primarily from product changes and intermittent master batching associated with rigid profile products. Quality performance for the month was 99.9% customer grade.

The plasticizer unit operated twenty-two days in January to produce 1.3MM pounds. Year-to-date plasticizer production was 4.8MM pounds.

Total energy consumption for January was 123.352 MMM BTUs. The energy consumption per pound of product was 2575 BTUs resulting in an adjusted CMA reduction of 53.8%.

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The total plant variable cost variance for January was \$1013.6M favorable, resulting from an overall favorable price variance of \$862.0M and a net favorable efficiency variance of \$156.6M. VCM pricing contributed \$717.4M to the favorable price variance. The fixed cost variance for the month was \$73.3M favorable.

JW Ware

J. W. Ware

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- JF, JWW, DWH, PJK, CRS, RAF, AHS,
JRW, WFH, RAM, REP, VEM, VLT, CWT

SAFETY - A. H. Sather

<u>Occupational Injuries</u>	<u>January</u>	<u>Fiscal 1985 Y.T.D.</u>	<u>Calendar 1985 Y.T.D.</u>
First Aid Cases	3	7	4
Total OSHA Recordable Cases	<u>1</u>	<u>3</u>	<u>0</u>
Total Injuries	4	10	4
Number of Restricted Workday Cases	0	1	0
(RWC Rate)	(0.0)	(1.22)	(0.0)
Number of Lost Workday Cases	0	0	0
(LWC Rate)	(0.0)	(0.0)	(0.0)

Injuries by Department

Vinyl Operations	1	2	0
Compound Operations	1	1	0
Maintenance	2	6	4
Laboratory	0	0	0
Receiving and Warehouse	0	0	0
Office	0	1	0

Injuries by Type

Cuts and Abrasions	2	4	3
Eye Injuries	0	1	0
Burns	0	0	0
Bruises	1	2	0
Strains and Sprains	1	4	0
Stings	0	0	1
Other	1	1	0

Non-Occupational Injuries

Lost Workday Cases	1	6	0
Days Lost	43	216	0

On January 14, 1985, a General Mechanic "A" reported a back muscle strain that was a result of work on the installation of the number seven rotors on the FCM on Compound Line III. The injury occurred when the injured and a fellow employee had to use a prybar on the rotor support system to clear an obstacle on the FCM table.

As of January 31, 1985, the plant operated a total of 2,036 days or 2,589,525 manhours without a disabling injury.

Safety Meetings

Topics covered in plant safety meeting included: 1984 Compound Safety Performance Review, Annual First Aid Training, Injury Reporting, Fall Protection, Steam Traps - Safety and Operation, and VCM Exposure.

SAFETY - Continued

Employee Safety Action Requests

<u>Calendar Year</u>	<u>Total Submitted Y.T.D.</u>	<u>Completions</u>	
		<u>Current Year</u>	<u>Previous Year</u>
1984	55	46	20
1985	2	0	0

Health

Activity for the month was limited to routine dosimetry.

Routine Dosimetry

	<		>	
	<u>Number</u>	<u>PEL Percent</u>	<u>Number</u>	<u>PEL Percent</u>
VCM	89	93.7	6	6.3
Lead	12	92.3	1	7.7
Total Particulates	9	100.0	0	0.0

Three of the VCM overexposures were without respiratory protection. All others were with benefit of respiratory protection.

Safety

The Vinyl and Yard Departments operated with one first aid injury in January. The injury involved a puncture wound from a piece of wire on a valve handle.

Shift safety meeting topics for the month included "First Aid Training" and discussion of recent injuries and near-miss incidents in the Vinyl Department.

<u>Production</u>	<u>January</u>	<u>Y.T.D. (Fiscal 1985)</u>
1. Production, MM Lbs.	37.9	141.4
2. Daily Production, M Lbs./C.D.	1221.7	1149.0
3. Total Charges	873.0	3400.0
4. Charges, Reactor Batches/C.D.	28.2	27.6
5. Reactor Stream Factor	91.0	91.1
6. Dryer Rate, Average Lbs./Hr.	12768.0	10623.0
7. Dryer Stream Factor	49.8	57.7
8. Accounting Days	31.0	123.0

Production

Vinyl Department production for January was a record 37.9MM pounds which was 102% of the Business Area's targeted production level of 37.0MM pounds. The new record of 37.9MM pounds outpaced the previous monthly production record of 37.5MM pounds set in July, 1983.

Reactors

Major mechanical downtime during the month resulted from the following:

1. Agitator seal replacement on 500, 600, 700, 742 and 743.
2. Cooling water jacket repairs on 742 and 743.
3. Agitator motor replacement on 745.
4. Old module dump Sweco repair.

The agitator seal failure on 700 was the direct result of an associated bearing failure. A majority of the remaining failures have been attributed to freeze-up of the seal flush systems during cold weather conditions. Appropriate revisions to improve winterization of the seal flush systems have been accomplished. Valve change-out and repairs accounted for a stream factor penalty of 1.0% during January.

Operational downtime occurred as follows:

<u>Cause</u>	<u>Stream Factor Penalty</u>
Recovery system scheduling conflicts	3.0%
No place to dump	1.0%

VINYL - Continued

Dryers

Production was essentially reactor limited during the month. Downtime in the dryer area occurred as follows:

<u>Cause</u>	<u>Stream Factor Penalty</u>
Energy conservation	44.3%
Dryer cleaning	1.2%
Centrifuge pluggage	0.6%
Activator problems	1.5%
Mechanical problems	1.6%

Product Quality Summary

<u>Resin Type</u>	<u>Prime</u>	<u>"BC"</u>	<u>"H"</u>	<u>% of Total Production</u>
5265	2,298,229	-	-	6.1
5305	2,806,864	-	-	7.4
5385	25,269,342	-	-	66.7
5425	6,199,069	-	-	16.4
5465	1,211,080	-	-	3.2
Sifter Overflow	-	-	73,884	0.2
Pond Resin	-	-	12,800	-
Total	37,784,584	-	86,684	100.0

Quality performance for January was 99.8% customer grade with 0.2% "H" grade production.

A total of four railcars were shipped as "B" grade during the month which represented 2.6% of the 153 total resin hopper cars shipped.

<u>Ship Date</u>	<u>Car No.</u>	<u>Customer</u>	<u>Product</u>	<u>Reason</u>
1/08/85	PTLX 41627	Wexford	Resifted Sifter Overflow	Quality
1/11/85	PLCX 43850	Wexford	Pond Resin	Quality
1/11/85	VIPX 45792	Osterman	Resifted Sifter Overflow	Quality
1/18/85	PLCX 43743	Vulcan	Resifted Sifter Overflow	Quality

The vinyl area received 20 short lead time emergency-type orders comprising 7.1% of the 280 Aberdeen resin shipments in January.

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VINYL - Continued

Monthly Variable Cost Performance

Variable costs for the month were favorable \$787.9M with \$794.9M due to price and (\$7.0M) due to efficiency. Resin variable cost for the month was 18.802 ¢/lb. vs. the budgeted 20.887 ¢/lb.

The \$794.9M favorable price variance was primarily attributed to lower than budgeted pricing for VCM \$717.4M, lower than budgeted pricing for Lupersol 223 initiator \$22.0M, and lower than budgeted pricing in the utilities area \$30.5M.

The (\$7.0M) unfavorable efficiency variance can be mainly attributed to an unfavorable variance in VCM efficiency (\$64.6M). Actual silo level measurements could not be made during end of month inventory period due to hazardous weather conditions. Estimates were used which understated resin production and therefore overstated VCM consumption.

VCM efficiency for the month was 1.01469 lbs. VCM/lb. PVC vs. the budgeted 1.00500 lbs. VCM/lb. PVC Y.T.D. efficiency was 1.00467.

Y.T.D. variable cost efficiency variances in the Vinyl Department totaled \$252.1M favorable.

Energy Performance/Progress

1. Plant energy consumption was 2575 BTU/lb.
2. A total of seventy-eight steam leaks, two air leaks, and thirty-three steam trap repairs were made during the month.

General

1. Packaging for the month totaled 576,884 pounds.
2. Resin raw material in the 744 account totaled \$223.4M at month end.

COMPOUND - P. J. Kober/S. B. Vick

<u>Compound Production</u>	<u>Month</u>	<u>M Lbs./Day</u>	<u>Y.T.D.</u>
Line I, M Pounds	1714	63	4937
Line III, M Pounds	2355	100	8239
Total, M Pounds	4069	-	13176
Accounting Days	31	-	123

Line I operated 27.3 days during January at an average rate of 63M pounds per day. Major items affecting production efficiency were product changes 48.8 hours, charging delays 13.8 hours, Banbury seal changes 8.8 hours, dicing delays 7.8 hours, and blender conveyor bucket repairs 7.3 hours. Only one experimental compound, 0113-60, a reformulated version of 48562, was produced during the month on Line I.

Line III operated 23.5 days during January at an average rate of 100M pounds per day. Line III production was hindered by product changes 55.0 hours, #7 rotor installation 48.0 hours, Fusion Task Force trials 48.0 hours, and blender charging delays 6.0 hours. Experimental work on Line III during the month was conducted by the Fusion Task Force. The fusion study test runs were made on several products in an effort to achieve low fusion delay compound for several customers. Two products were produced for AT&T, 4986-90 and V0124-70; both products were successfully produced at stock temperatures below 320°F. and at average rates over 5000 pounds per hour. Other products produced during the tests included 18031 C1 B1 for CK Plastics, 34642 Nat. for Teledyne, 35851 Nat. for Universal and 38931 Nat. for Woods Wire. On all the products, the desired stock temperature was achieved at normal rates with only minor operating problems. Quality as tested by the plant laboratory was acceptable by current parameters on all products. In addition, the fusion delay as measured by the PRS in Ponca City on the AT&T compounds was found to be acceptable.

Quality performance for flexible compounds was 1.9% off-grade of which 100% was due to mill scrap. "BC" production was 0.2%.

The raw material requirement for flexible compounds was 1.01043 pounds of raw material per pound of compound versus a 1.01172 standard. (Y.T.D. is 1.01085).

The variable cost variance for compound was \$24.6M favorable with (\$4.3M) due to price and \$28.9M due to efficiency. The variance due to product mix was \$19.9M. There were no major efficiency variances for the month. Total compound inventory decreased 0.44MM pounds from 7.29MM pounds to 6.85MM pounds.

<u>Dry Blend</u>	<u>Month</u>	<u>M Lbs./Day</u>	<u>Y.T.D.</u>
Production, M Pounds	4677	159	14976
Accounting Days	31	-	123

Dry blend operated 29.5 days during January at an average rate of 159M pounds per day. Production included 80273G, 90171, 90172B, XTRALIFE, RP-200, RP-200-T, 5426-129B, 140-115, 140-116, 140-117, 140-44, 140-57, 140-105, and 100-128.

COMPOUND - Continued

Dry Blend - continued

Dry blend production was hindered by product changes 47.3 hours, turnhead replacement 33.3 hours, cooling blender delays 21.0 hours, quality control delays 15.5 hours, orbitran repairs 5.3 hours, resin availability 5.25 hours, and product blower belt replacement 5.0 hours. Quality performance for the month was 99.9% customer grade.

The raw material requirement for dry blend was 1.00241 pounds of raw material per pound of dry blend versus a standard of 1.00491. (Y.T.D. is 1.00306).

The variable cost variance for dry blend was \$125.5M favorable with \$3.4M due to price and \$122.1M due to efficiency. The variance due to mix was \$121.3M. There were no major efficiency variances for the month.

<u>Plasticizer</u>	<u>Month</u>	<u>M Lbs./Day</u>	<u>Y.T.D.</u>
Production, M Pounds	1251	57	4784
Accounting Days	31	-	123

Plasticizer operated 22 days during January at an average rate of 57M pounds per day. Production included 610P, 810P and 108P.

VRP production totaled 133.9M pounds (11.6%).

The raw material requirement for plasticizer was 1.10220 pounds of raw materials per pound of plasticizer versus a 1.10827 standard. (Y.T.D. is 1.08066).

The variable cost variance for plasticizer was \$75.6M favorable with \$68.0M due to price and \$7.6M due to efficiency. Major price variances were Alfol 610 \$30.5M and Phthalic Anhydride \$36.3M. There were no major efficiency variances for the month. The variance due to product mix was (\$5.6M).

Energy

	<u>Usage (BTU/Lb.)</u>	
	<u>Actual</u>	<u>Standard</u>
Compound	1817.6	1927.3
Dry Blend	684.8	760.0
Plasticizer	1644.6	1642.1

MAINTENANCE - C. R. Snowden

Vinyl

Reactors

There were four reactor seal failures in this period. In the old module, seals were replaced on D-500, D-600 and D-700 reactors. In the new module, the 743 reactor seal was replaced. Seal systems were upset in both modules from freezing conditions in this period.

The agitator drive motor was pulled and sent out for repair on the 745 reactor. Reactor jackets were repaired on the 742 and 743 reactors.

Major Valves

Major valves repaired or replaced in this period were the rinse valves on D-400, 500 and 600 reactors... five valves, 743 sewer valve, D-400 major dump valve and a suction valve on "B" vacuum pump.

Pumps and Compressors

Two pumps seals were replaced. The seals replaced were on the scrubber pump on the fluid bed dryer and the east slurry pump in the new module.

Miscellaneous

Major repairs and projects completed in the Vinyl dryer areas were to replace the inlet cone in the #8 exhaust fan, rebuild the #5 air sweep and to remove the test Bird unit from spot #4 and to reinstall the #4 Bird unit.

Several Corken compressors were rebuilt to control packing leaks. A high percentage of the maintenance manpower was used in this period repairing, tracing, insulating, working with operations on piping problems and on twenty-four hour coverage as required by weather conditions.

Instrument and Electrical

Major work done during the month included modification to the new unit reactor rinse system and centrate heat recovery system. Also, changes were made to the gas regulators for numbers 4, 5, and 6 rotary dryers. Three motors were repaired during the month (Sweco exhauster, 407 blend tank slurry pump and HPSW pump).

Compound, Dry Blend, Plasticizer Silo Storage

Line III was scheduled down to install #7 test rotors. The liners were also replaced in the hopper section at this time as were seals on the FCM unit.

MAINTENANCE - Continued

Compound, Dry Blend, Plasticizer, Silo Storage - continued

Major repairs to Compound Line I were to replace the Banbury seals and to rebuild a spare blender gearbox.

Dicer blade changes and repairs continue as high maintenance cost items on both compound lines.

Repairs were made to two roll doors in the compound area and a safety item to install a ramp over a transfer line on the compound roof was completed.

The dry blend unit was scheduled down to rebuild the turn head unit and to replace a section of the cooling water header to the cooling blenders.

The bowl and blade were replaced on the #1 Welex unit.

Repairs in the plasticizer unit were to change pump seals at tank 101 and 102 pumps and replace a seal and bearing in the north N2 blower. Two tubes were plugged in the R-4 condenser.

Instrumentation and electrical activities mainly consisted of the replacement of motors on the #3 well, #8 air compressor and on the compound cooling tower. Assistance was also provided for the Line III Fusion Delay Task Force.

Utilities and Services

A major effort was made in this period to keep the plant running and prevent freeze problems. Additional manpower was scheduled on problem days. The plant went on propane fuel for sixteen hours on 1/20-21/85. PM inspection and chemical cleaning of the inerts and catalyst freezer unit was completed.

The automotive PM program remains on schedule. We have experienced the normal problems with batteries and starting equipment in cold conditions.

The pump supplying oil to the trackmobile clutch failed and was replaced on an emergency basis by the area supplier.

Training

All of the mechanics and several from the mechanical engineering group attended an in-plant training session covering steam traps, how they work and how to check for proper operation. This training was conducted by the local service representative for Armstrong Traps.

MECHANICAL ENGINEERING - R. E. Polk

Design

Design is in progress on the following projects:

- Dry Blend Improvements Phase II
- Line I Modernization
- Rotary Dryer Optimization

AFE Activity

Plasticizer Modernization Phase I - K. S. Allen

The jacketed piping and insulation is complete to the tie-in points. Tie-ins will be made during a plasticizer shutdown. All instrumentation has been calibrated and electrical installation is 98% complete.

Normal Kill Solution Addition System - K. S. Allen

Initial project checkout was made for the old reactor module. A modified "liquid-full" method of charging the kill solution was developed and approved. Turnover documentation is complete and issued for approval.

Line I Modernization - K. S. Allen/C. Coym

The final drawing package from SO&A is being reviewed by the plant and Houston. GED is revising the definitive estimate to include current local labor rates. The rates will be provided by the plant before February 15. Confirmation of the Banbury rebuild estimate is in progress and scheduled for completion in February.

Centrate Heat Tank Exhaust Fan - K. S. Allen

Long lead time items have been ordered and received. Drafting is scheduled for completion mid-February. Construction is scheduled for completion by mid-April.

Dry Blend Improvements Phase II - J. L. White

Electrical and mechanical contracts have been awarded. Pre-shutdown work is scheduled to begin on February 11. Final equipment relocations and tie-ins are planned for the week of March 4.

Automatic Bagger Air Compressor - K. S. Allen

Design is scheduled for completion by mid-February. Construction is scheduled for completion by mid-March.

MECHANICAL ENGINEERING - Continued

AFE Activity - continued

Ring Seal Water Filter Replacement - J. L. White

Design is complete and being reviewed. All material has been placed on order.

Rotary Dryer Optimization - J. L. White

A pre-construction review meeting was held and comments incorporated into the design. The contract for insulation work on dryers 4, 5, and 6 has been awarded. Work will begin in mid-February. The screw feeder for #6 dryer has been placed on order with delivery planned for late April.

MECHANICAL ENGINEERING - R. E. Polk

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ABERDEEN AUTHORIZATIONS REPORT

<u>AUTH. NO.</u>	<u>CAPITAL DESCRIPTION</u>	<u>DATE APPROVED</u>	<u>AUTH. AFE AMT.</u>	<u>EXPENDED TO DATE</u>	<u>COMMITTED TO DATE</u>	<u>FINAL TOTAL EST. COST COMP.</u>	<u>UNDER (OVER) AUTH. AMT.</u>	<u>EST. COMP. DATE</u>	<u>EST. CLOS. DATE</u>	<u>REMARKS</u>
9630	Water Stripping	04/03/80	810,000	813,977	814,065	815,000	(5,000)	06/84	04/85	Closed to field charges.
9730	Comp. Line III Debottlenecking	10/16/80	1,350,000	574,539	585,919	705,000	645,000	12/85	02/85	Construction on hold.
9740	Mod. To Make Profile D.B.	10/27/80	200,000	202,313	201,768	203,000	(3,000)	08/84	04/85	Closed to field charges.
9760	Emergency AMS Kill System	11/15/80	335,000	282,229	282,136	285,000	50,000	09/84	05/85	Closed to field charges.
9770	Reactor Pressure Relief Mod.	11/25/80	560,000	462,639	465,436	560,000	0	09/84	04/85	Closed to field charges.
9591	Sifter Overflow Reclaim Sys.	03/20/81	200,000	131,484	133,095	131,000	69,000	09/84	04/85	Closed to field charges.
9651	Safety Equipment	06/08/81	106,000	108,880	109,545	109,500	(3,500)	02/84	04/85	Closed to field charges.
9661	Waste Water Treatment Rev.	06/19/81	560,000	561,123	573,097	573,000	(13,000)	04/84	04/85	Closed to field charges.
9731	Normal Kill Solution Addn. Sys.	09/01/81	93,000	97,312	97,983	98,000	(5,000)	03/85	05/85	Revisions in progress.
9751	Fire Protection Phase IV	10/07/81	160,000	144,327	148,881	149,000	11,000	07/84	05/85	Closed to field charges.
9771	Recovery System Revisions	10/21/81	402,000	404,245	403,783	404,000	(2,000)	10/84	05/85	Closed to field charges.
9791	Compound Line I Modernization	11/24/81	1,800,000	280,110	438,146	1,800,000	0	09/86	12/86	Engineering in progress.
9851	VCM Pump Pressure Relief	12/09/81	58,000	11,846	11,846	58,000	0	09/85	12/85	Project on hold.
B5E2	Plast. Area Cond. Collection	05/05/82	55,000	28,656	32,947	55,000	0	06/84	04/85	Closed to field charges
D5H2	Bulk Storage & Handling of CTA	09/29/82	160,000	31,509	31,509	160,000	0	10/84	04/85	Closed to field charges.
B5K2	Energy Mon. Instrumentation	11/22/82	80,000	86,855	89,441	89,000	(9,000)	07/84	04/85	Closed to field charges.
A5L2	Plast. Modernization-Phase I	12/14/82	240,000	200,907	218,118	240,000	0	09/84	04/85	Construction in progress.
A5M2	Dry Blend Improvements	12/16/82	41,000	44,013	43,845	44,000	(3,000)	09/84	04/85	Closed to field charges.
A5N2	Improved Dry Blend Screening	12/16/82	74,000	76,971	76,971	77,000	(3,000)	09/84	04/85	Revisions complete.
D5B3	Safety Shower Revisions	03/08/83	50,000	59,703	60,086	50,000	0	04/84	05/85	Closed to field charges.
B5D3	Recovery System Revisions	04/08/83	147,000	143,648	146,990	147,000	0	12/84	05/85	Closed to field charges.
D5E3	Vinyl Reactor Interlock Rev.	04/22/83	44,000	37,312	37,576	44,000	0	09/85	12/85	Revisions in progress.
D5H3	V-11 Roof Replacement	05/18/83	221,000	230,890	230,890	230,000	(9,000)	03/84	05/85	Closed to field charges.
H5K3	Dryer Centrifuge Conveyor Assy.	06/16/83	47,000	49,150	49,150	49,000	(2,000)	04/84	05/85	Closed to field charges.
C5G3	Instrument Air Dryer	06/02/83	90,000	90,685	91,291	91,000	(1,000)	02/84	05/85	Engineering in progress.
A5L3	Plasticizer Modernization-Ph II	09/28/83	20,000	20,577	20,577	21,000	(577)	03/84	05/85	Closed to field charges.
D5M3	Remote Operating Valves & Inst.	10/07/83	130,000	57,944	64,163	130,000	0	09/85	12/85	Engineering in progress.
D5P3	VCM Exposure Reduction	12/02/83	100,000	13,096	13,096	100,000	0	12/85	03/85	Closed to field charges.
C5N3	Imp. Compliance With EPA VCM Std	11/30/83	103,000	0	0	103,000	0	09/85	12/85	Engineering scheduled.
A5Q3	Dry Blend Improvements-Phase II	12/08/83	200,000	74,434	91,405	200,000	0	03/85	05/85	Engineering in progress.
C5R3	Bulk Storage & Handling of AMS	12/08/83	75,000	0	0	75,000	0	05/85	08/85	Closed to field charges.
H5A4	Miscellaneous AFE	01/26/84	200,000	174,919	177,017	175,000	25,000	12/84	03/85	35 projects approved.
C5B4	Plant Sewer Revisions	01/26/84	180,000	186,509	187,373	187,000	(7,000)	12/84	03/85	Closed to field charges.

ABERDEEN AUTHORIZATIONS REPORT

<u>AUTH. NO.</u>	<u>CAPITAL DESCRIPTION</u>	<u>DATE APPROVED</u>	<u>AUTH. AFE AMT.</u>	<u>EXPENDED TO DATE</u>	<u>COMMITTED TO DATE</u>	<u>FINAL TOTAL EST. COST COMP.</u>	<u>UNDER (OVER) AUTH. AMT.</u>	<u>EST. COMP. DATE</u>	<u>EST. CLOS. DATE</u>	<u>REMARKS</u>
H5G4	Miscellaneous AFE	06/06/84	195,000	109,978	126,454	110,000	95,000	12/84	05/85	14 Projects approved.
H5F4	Fluid Bed Dryer Heating Panel Bundles	05/18/84	210,000	198,083	198,274	210,000	0	12/84	05/85	Engineering in progress.
H5E4	Dryer Centrifuge Conveyor Assemblies	03/20/84	150,000	0	0	150,000	0	12/86	03/87	Engineering scheduled.

PROCESS ENGINEERING - R. A. Frohreich

A. Underwriters Insurance Review

Process designs were completed on several items recommended by the plant's insurance carrier.

B. Line I Modernization

A meeting was held to discuss the operation sequencing and interlocking requirements for the Line I project. Representatives from the plant operating and engineering groups and GED personnel were present.

C. Stormwater Run-Off Revisions

A class "A" design is being prepared to redirect stormwater run-off south of the plasticizer operating area.

D. Plasticizer Catch Tank Pump Replacement

Economics were run to evaluate the payout of replacing the existing canned pumps with standard centrifugal pumps. The canned pumps have experienced a high frequency of maintenance. Assistance was given to the mechanical engineering group in selecting a new pump for this service.

E. Chem Wash Exposure Investigation

Process Engineering assisted in an investigation to evaluate chem wash (caustic) exposure hazards on the vinyl reactors when maintenance is needed on the equipment.

F. Reactor Rinse Optimization

Process Engineering is surveying all vinyl reactors on a routine frequency to ensure reactor cleanliness is being maintained.

G. Chem Wash Return Modification

A process design to decrease chem wash cycle time was prepared and given to the mechanical engineering group for estimating.

H. Colloid Filtering

A cartridge filter was installed in the new reactor module colloid transfer line. Performance of the filter is being evaluated.

PERSONNEL - R. A. MILLER

EMPLOYMENT

Satish K. Gianchandani, Electrical Engineer
Virginia A. Belk, part-time Plant Nurse
Earnestine Carter, recalled to General Helper

TRANSFER/PROMOTION

Kathaleen Johnson, from Adm. Services, Aberdeen, to S&T, Houston, TX
Helen Pruitt, from Lab Supervisor to Security Guard, due to reduction in force
James Walker, from Drafter to Security Guard, due to reduction in force
Ed Mize, from Electrician "A" to Gen. Mechanic "A", due to reduction in force
John D. Hull, from Electrician "A" to Gen. Mechanic "A", due to reduction in force
Lee R. Howell, from Gen. Mechanic "A" to Yard Operator "B", due to reduction in force
Charles W. Holcomb, from Gen. Mechanic "A" to Lab Trainee, due to reduction in force
Kenneth Killian, from Storekeeper "A" to Compound Utility, due to reduction in force
Thomas R. Staten, from Gen. Mechanic "A" to Compound Utility, due to reduction in force
Norman Clay, from Warehouse Worker "A" to Compound Utility, due to reduction in force
Bernard Garth, from Yard Operator "B" to Compound Utility, due to reduction in force
Jimmy Ashley, from Building Attendent to Compound Utility, due to reduction in force
Jerry Crosby, from Gen. Mechanic "A" to Compound Utility, due to reduction in force
Larry Frye, from Gen. Mechanic "A" to Compound Utility, due to reduction in force
Verneta Blanchard, from Utility to General Helper, due to reduction in force
Gary Funderburk, from Utility to General Helper, due to reduction in force
D. W. Clark, from Utility to General Helper, due to reduction in force
William Davis, from Utility to General Helper, due to reduction in force
Ralph D. Flippo, from Utility to General Helper, due to reduction in force
Dave Gathings, Jr., from Utility to General Helper, due to reduction in force
Homer Awtrey, from Utility to General Helper, due to reduction in force
Jerry Jenkins, from Lab Trainee to General Helper, due to reduction in force
Foster Fields, from Utility to "A" Operator, due to reduction in force
Jerry Jenkins, from General Helper to Compound Utility

RETIREMENT

S. Howard Hill, Normal Retirement

TERMINATIONS

Curtis Lloyd, co-op returning to school
Ricky Puckett, reduction in force
O. Joe Knight, reduction in force
Dennis Knight, reduction in force
Virginia A. Belk, reduction in force
Charles E. Davis, reduction in force
Coy Flynn, reduction in force
Michael Skinner, reduction in force
Needham Stahl, reduction in force
Earnestine Carter, reduction in force

PERSONNEL - R. A. MILLER
(continued)

TERMINATIONS (continued)

Albert Gunn, reduction in force
Paul Cogsdell, reduction in force
Richard Metcalf, reduction in force
Will Malone, reduction in force
Daniel Loftin, reduction in force
G. Freddy Phillips, reduction in force
Richard Jones, Reduction in force
William Earnest, reduction in force
Reginald Evans, reduction in force
Roland Covington, reduction in force
Jimmy Ashley, resigned

TO/FROM LEAVE OF ABSENCE

NONE

CONOCO CHEMICALS
Aberdeen, Mississippi

A

January, 1985

MONTHLY PERSONNEL REPORT

Salaried Employees 67*

Hourly Employees 156

Total Employees 223

Employees (Hourly)

New Employees 0

Terminations 1**

Minority Employees # %

Salaried 8 12

Hourly 64 41

Total 72 32

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	16	14	7	50	0	0	0	0	0	0
Gen. Plant	11	12	6	50	0	0	0	0	0	0
Maintenance	53	39	7	18	0	0	0	0	0	0
Laboratory	22	22	5	23	0	0	0	0	0	0
Compound	41	33	25	76	0	0	1	1	3%	3%
Vinyl	36	32	13	41	0	0	0	0	0	0
Plasticizer	4	4	1	25	0	0	0	0	0	0

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 1 Year to Date 1

Overall Turnover .6%

Projected Annual Turnover 7%

* Includes one temporary part-time employee

** Employee resigned

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	Phy. Y.T.U.
WAREHOUSE	2551.75	223.25	24.00	9.69	58	1.57	.80	2.27	7.21
MAINTENANCE	6123.25	914.25	8.00	15.06	431	4.18	2.86	7.04	3.34
LAB	4031.75	368.00	91.25	11.39	112	.89	1.89	2.78	7.50
COMPOUND	6606.00	285.50	200.00	7.35	322	2.85	2.03	4.87	3.59
VINYL	6623.00	1015.25	180.00	18.05	294	2.54	1.90	4.44	8.41
PLASTICIZER	768.00	17.50	24.00	5.40	16	0	2.08	2.08	.87
UTILITY BOILER	743.00	169.50	24.00	26.04	1	0	.13	.13	.14
GENERAL PLANT	843.50	3.00	0	.36	5	0	.59	.59	.55
TOTAL	28290.25	2996.25	551.25	12.54	1239	2.43	1.95	4.38	5.21

(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 - S. C. Hillman

I. Plant Operations

Total energy consumption for January was 123.352 MMM BTUs. Energy consumption increased to 2575 BTU/lb. from 2491 BTU/lb. in December. An adjusted CMA reduction of 53.8% was obtained for the month. The CMA values for fiscal 1985 are 54.5% adjusted and 39.8% unadjusted.

II. Plant Energy Conservation Program

A. Maintenance

There were one hundred seventeen energy related items completed in January. Seventy-eight steam leaks were repaired and thirty-three steam trap repairs were made. Also, two air leak repairs and four energy related insulation repairs or improvements were made.

B. Steam Trap Survey

The survey for the vinyl area identified ten steam trap items for repair.

ENERGY CONSERVATION DATA

	<u>1985</u>	<u>1984</u>
<u>Month</u>	<u>January</u>	<u>January</u>
<u>Production, MM Lbs.</u>		
Resin	37.9	32.8
Dry Blend	4.7	3.5
Compound	4.1	4.7
Plasticizer	1.3	1.0
TOTAL	48.0	42.0
<u>Natural Gas</u>		
Consumption, MSCF	68158	69557
Conversion, BTU/SCF	1020	1020
Energy Consumption, MMM BTU	69.522	70.948
Energy Consumption, BTU/lb.	1451	1690
<u>Electricity</u>		
Consumption, MM KWH	5.2497	5.2902
Conversion, BTU/KWH	1000	1000
Energy Consumption, MMM BTU	52.497	52.902
Energy Consumption, BTU/lb.	1096	1260
<u>Propane</u>		
Consumption, M Gal.	14.489	0
Conversion, BTU/Gal.	92000	92000
Energy Consumption, MMM BTU	1.333	0
Energy Consumption, BTU/lb.	28	0
<u>Total</u>		
Energy Consumption, MMM BTU	123.352	123.850
Energy Consumption, BTU/lb.	2575	2950
<u>CMA Reduction (%)</u>		
Adjusted	53.8	44.8
Unadjusted	39.3	31.1
Fiscal 1985 Year-to-Date	54.5% Adjusted	
Performance	39.8% Unadjusted	
<u>Boiler Combustion Efficiency (1)</u>		

NOTE:

(1) Combustion efficiencies were not calculated for January due to the boiler excess oxygen analyzer being out of service.

ENVIRONMENTAL - V. E. Messick

Water

All wastewater parameters were within NPDES permit limitations during January.

Consent Decree

The first draft of responses to questions on relief valve discharges is nearing completion. Work is continuing on the rest of the responses to the Section 114 questions.

Revised Vinyl Chloride Standard

The proposed revisions to the vinyl chloride standard have been reviewed. Evaluation of the impact on the plant is in progress. Comments to be given to the EPA are being prepared.

TABLE I

WATER COMPLIANCE WITH
NPDES PERMIT PARAMETERS

	Flow GPM	BOD		COD		Sus. Solids		Diss. O ₂	NH ₃ LB./DY	ph
		PPM	LB./DY.	PPM	LB./DY.	PPM	LB./DY.			
Jan. - Ave.	941	13	158	30	352	13	156	8.4	1.7	7.7
Max.	1189	22	298	36	474	16	190	10.4	3.7	7.9
Feb. - Ave.										
Max.										
Mar. - Ave.										
Max.										
Apr. - Ave.										
Max.										
May - Ave.										
Max.										
June - Ave.										
Max.										
July - Ave.										
Max.										
Aug. - Ave.										
Max.										
Sept. - Ave.										
Max.										
Oct. - Ave.										
Max.										
Nov. - Ave.										
Max.										
Dec. - Ave.										
Max.										
NPDES Permit Limits - December 1 through April 30										
Ave.	-	32	431	-	1462	-	674	> 7.0	13	6.0-8.5
Max.	-	43	800	-	2713	-	1396		28	
NPDES Permit Limits - May 1 through November 30										
Ave.	-	26	357	-	1212	-	674	> 7.0	13	6.0-8.5
Max.	-	40	744	-	2523	-	1396		28	

LABORATORY - J. R. Williams

RCAs Entered During January

AJP 1-9-85 Thermo Compound 5385-3S Hard Particles

Waivers Received

<u>Customer</u>	<u>Product</u>	<u>Reason</u>	<u>No.</u>
Carlton	5385-3	Contamination	2 RC
Charlotte Pipe	5265	Particle Size	1 RC
Columbia Plastics	5385-3	Particle Size	2 HT
Compression Polymers	5426-129B	Fusion Torque	1 RC
H&W Plastics	5385-3S	Bulk Density	2 HT
Intex	5305	Particle Size & Viscosity	1 RC
ITT Grinnel	5265	Viscosity	1 RC
Southwire	5425	Particle Size	1 HT
Tyler Pipe	5265	Particle Size	1 RC
United Tech	5465	Viscosity	1 RC

Quality Control Testing

Resin

Regular Samples - 380
Total Batches Tested - 865
Bag Blends - 13
Bulk Shipments - 291 (Railcars - 167; Trucks - 124)

Dry Blend

Blenders Produced - 675
Blenders Tested - 429
Blenders Adjusted - 2.2%
Bulk Shipments - 41 (Railcars - 20; Trucks - 21)

Compound

Blenders Produced - 677
Blenders Adjusted - 0.6%
Bulk Shipments - 9 (Railcars - 9; Trucks - 0)

LABORATORY - Continued

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 VCM during the month of January, 1985.

	Reactor Slurries	Drier	
		<u>5265</u>	<u>5305</u>
Number of Samples	891	36	49
Average ppm, VCM	233	13.6	3.1

RVCM of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of January.

<u>Product</u>	<u>5265</u>	<u>5305</u>	<u>5385</u>	<u>5425</u>	<u>5465</u>
No. of Samples	47	55	110	28	6
Average ppm	9.3	2.0	1.4	0.2	0.1

Administrative Services-W, F. Higginbotham

<u>Shipment by Product - M/lbs.</u>	<u>Jan. 1985</u>	<u>Year-to Date</u>
Resin	32,629	242,160
Plasticizer	429	2,332
Dry Blend	3,983	15,870
Compound	4,520	15,331
Total	41,561	275,693

Number of Shipments by Mode:

	<u>R/C</u>	<u>O.T. Bulk</u>	<u>O.T Van</u>	<u>TOFC</u>	<u>C.C.</u>	<u>CPU</u>	<u>Total</u>
Resin - Bulk	138	46			8	60	252
Package			3		1	1	5
Export	13	4					17
Plasticizer	2	1			2		5
Dry Blend - Bulk	11	18				3	32
- Package			8	2	2		12
- Export	3		2		1		6
Compound - Bulk	7						7
- Package			49	8	4	18	79
- Export	2						2
	<u>176</u>	<u>69</u>	<u>62</u>	<u>10</u>	<u>18</u>	<u>82</u>	<u>417</u>

ICG- 176
BN- 0

Number of Shipment by Month-Year-to Date :

	<u>R/C</u>	<u>Bulk</u>	<u>Van</u>	<u>TOFC</u>	<u>C.C.</u>	<u>CPU</u>	<u>Total</u>
JANUARY	176	69	62	10	18	82	417

ADMINISTRATIVE SERVICES - continued

Material Handling Report

	<u>M/Lbs.</u>	<u>T/L</u>
Packaged Resin from Production	460	11
Packaged Compound, Dry Blend from Prod.	3033	76
Transferred from Main to Prairie	324	22
Transferred from Prairie to Prairie	-	-
Transferred from Prairie to Main	200	4
Reverse Transfer Resin to Plant	178	4
Reverse Transfer Cmpd. to Plant	131	3
Shipment from Warehouses	3959	99
Special Packaging	-	-
	<u>8785</u>	<u>219</u>

Off-Grade In Storage

<u>Material</u>	<u>M/Lbs.</u>	<u>T/L</u>
Sifter Overflow	63	2
Resin "BC"	24	1
Resin "H"	-	-
Mill Scraps	31	1
Compound "BC"	162	4
Compound "H"	47	1
Vacuum, Dust Collector, Vent Dust	60	1
Dry Blend "O. G."	<u>112</u>	<u>3</u>
	<u>499</u>	<u>13</u>

Volumes - Month 8.8

- Y.T.D. 8.8

ADMINISTRATIVE SERVICES - continued

Aberdeen Warehouse

<u>Location</u>	<u>Total M Sq. Ft.</u>	<u>Contents</u>	<u>Estimated MM Pounds</u>		
			<u>On Floor</u>	<u>Open</u>	<u>Total</u>
Main-East	48	Cmpd. Bags 3.3			
		Cmpd. Boxes 2.8	6.1	1.4	7.5
Prairie 12-1	12	Dry Blend .1	.1	1.4	1.5
12-2	22	Compound 1.2	1.2	2.3	3.5
12-3	21	Dry Blend .7	.7	2.8	3.5
12-4	22	Resin .2	.2	3.3	3.5
12-5	21	Vacuum Dust .1			
		Mill Scrap .1			
		Sifter Overflow .1			
		Cmpd. O.G. .2			
		Dry Blend O.G.	.5	2.0	2.5
12-6	21	Compound-Hold			
		Resin-Hold .4			
		D.B. - Hold .2			
		Raw Material .4	1.0	2.5	3.5
12-7	21	Resin			
		Compound .2	.2	3.2	3.5
12-8	21	Maintenance Storage			3.5
		Plugged Aisle		3.5	3.5
TOTAL 209			10.0	22.5	32.5

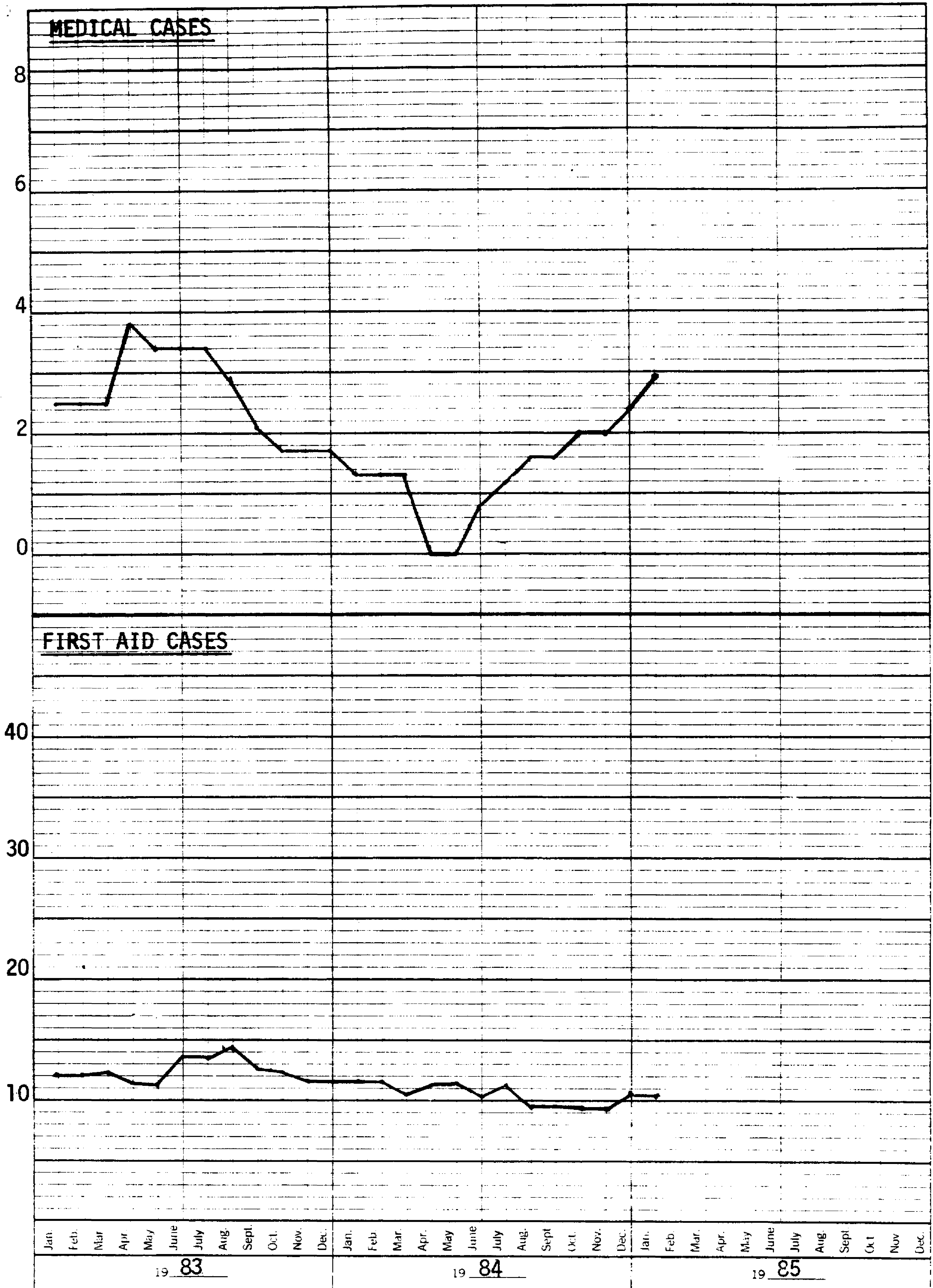
ABERDEEN CHEMICAL PLANT

INJURY PERFORMANCE

46 3290

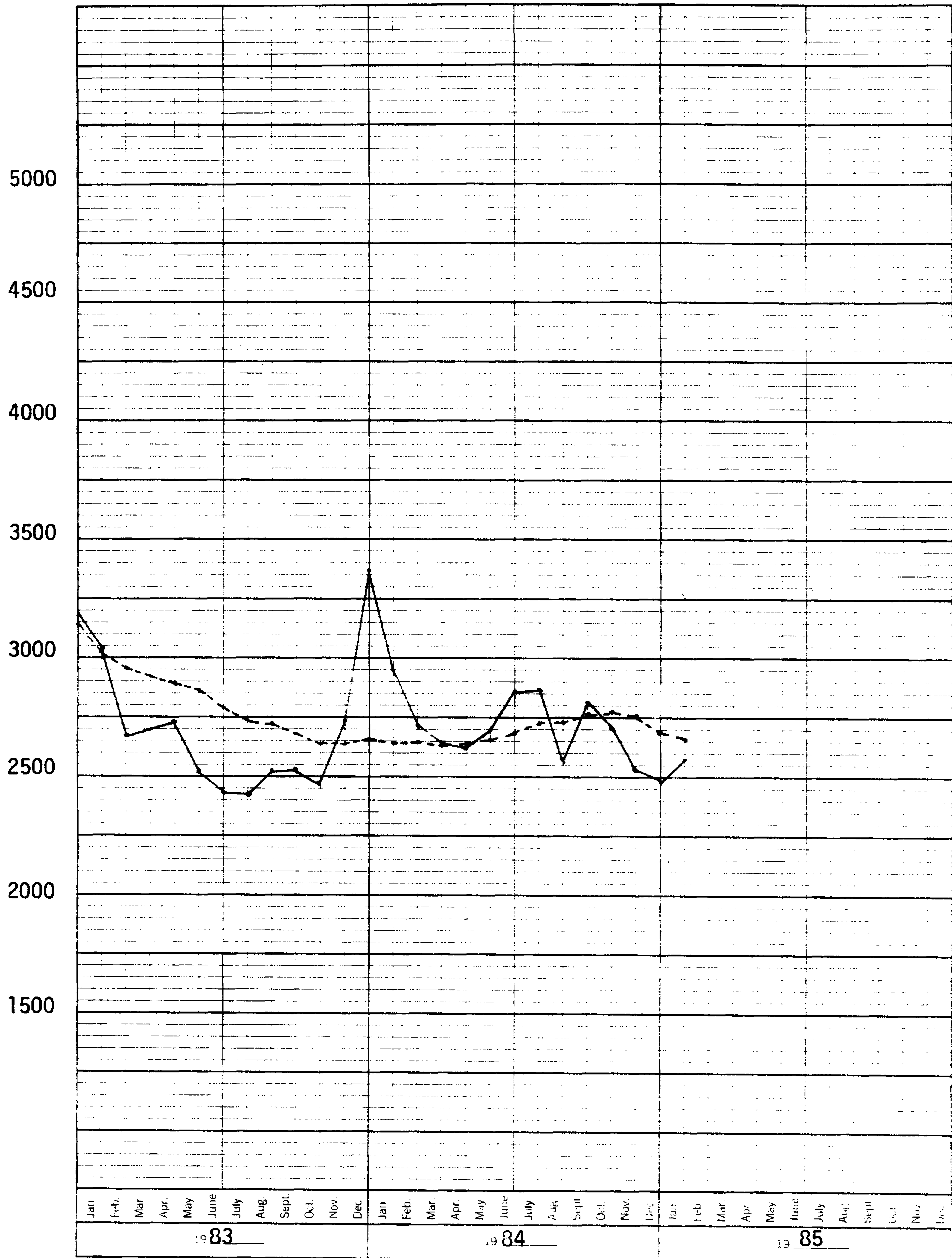
K&E 3 YEARS BY MONTHS X 100 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

INJURY FREQUENCY X 100



Frequency = $\frac{12 \text{ MONTH ROLLING AVERAGE OF INJURIES (FA or MC)}}{\text{TOTAL EMPLOYEES}}$

ENERGY USAGE



Monthly

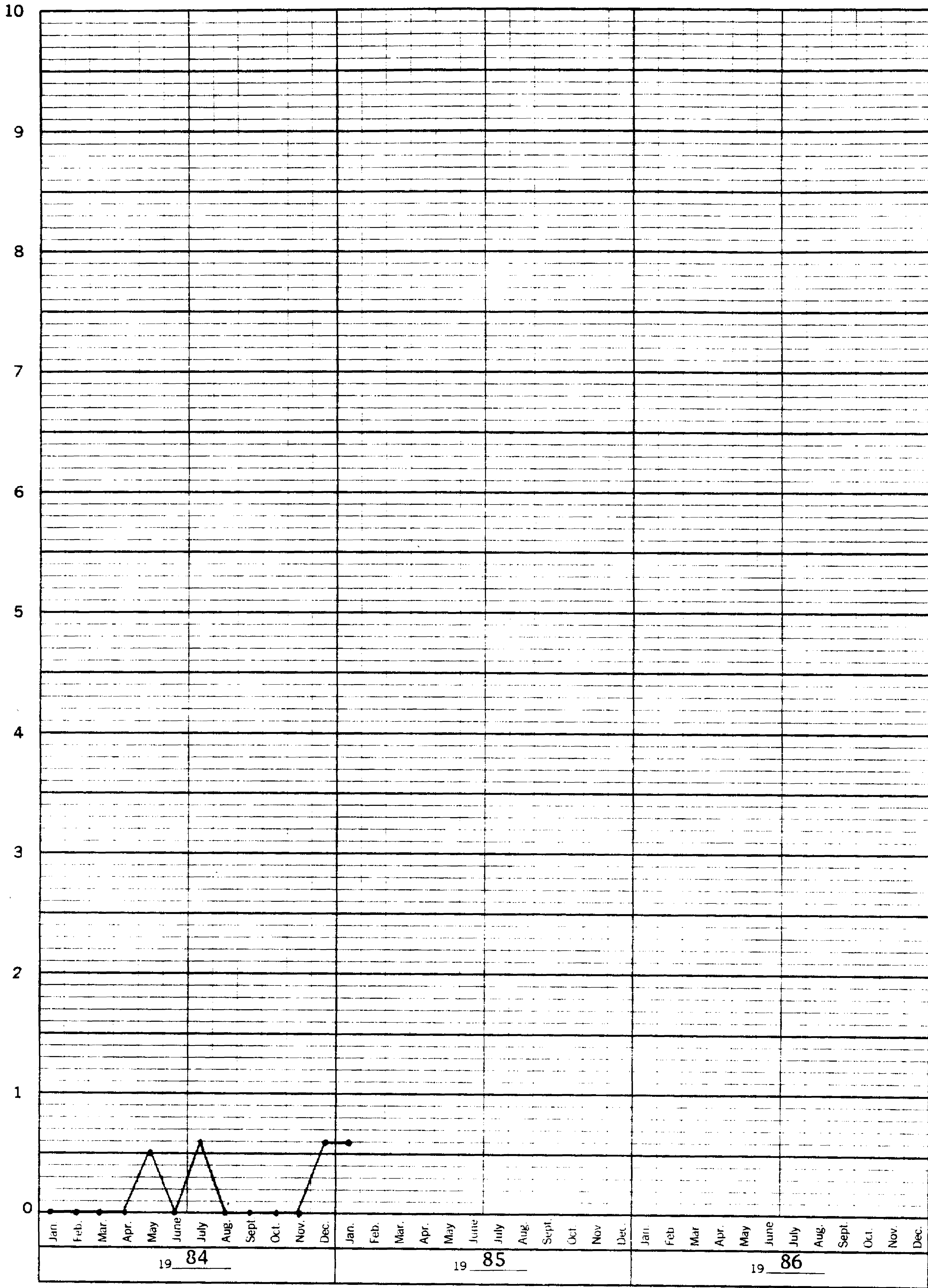
-----12-Month Moving Avg.

MONTHLY HOURLY TURNOVER

46 3290

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

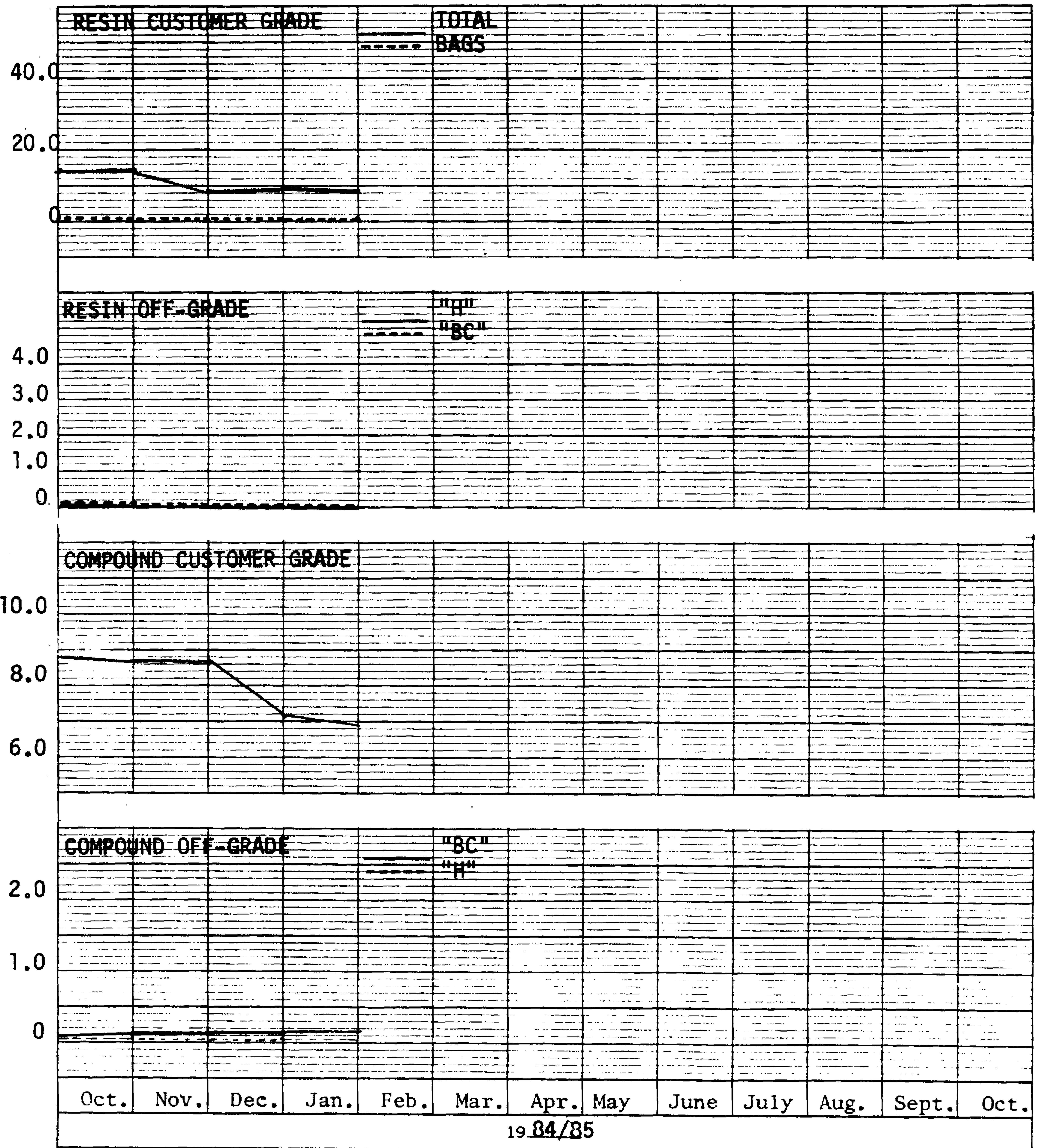
%



ABERDEEN PLANT INVENTORIES

10/1/84 - 10/1/85

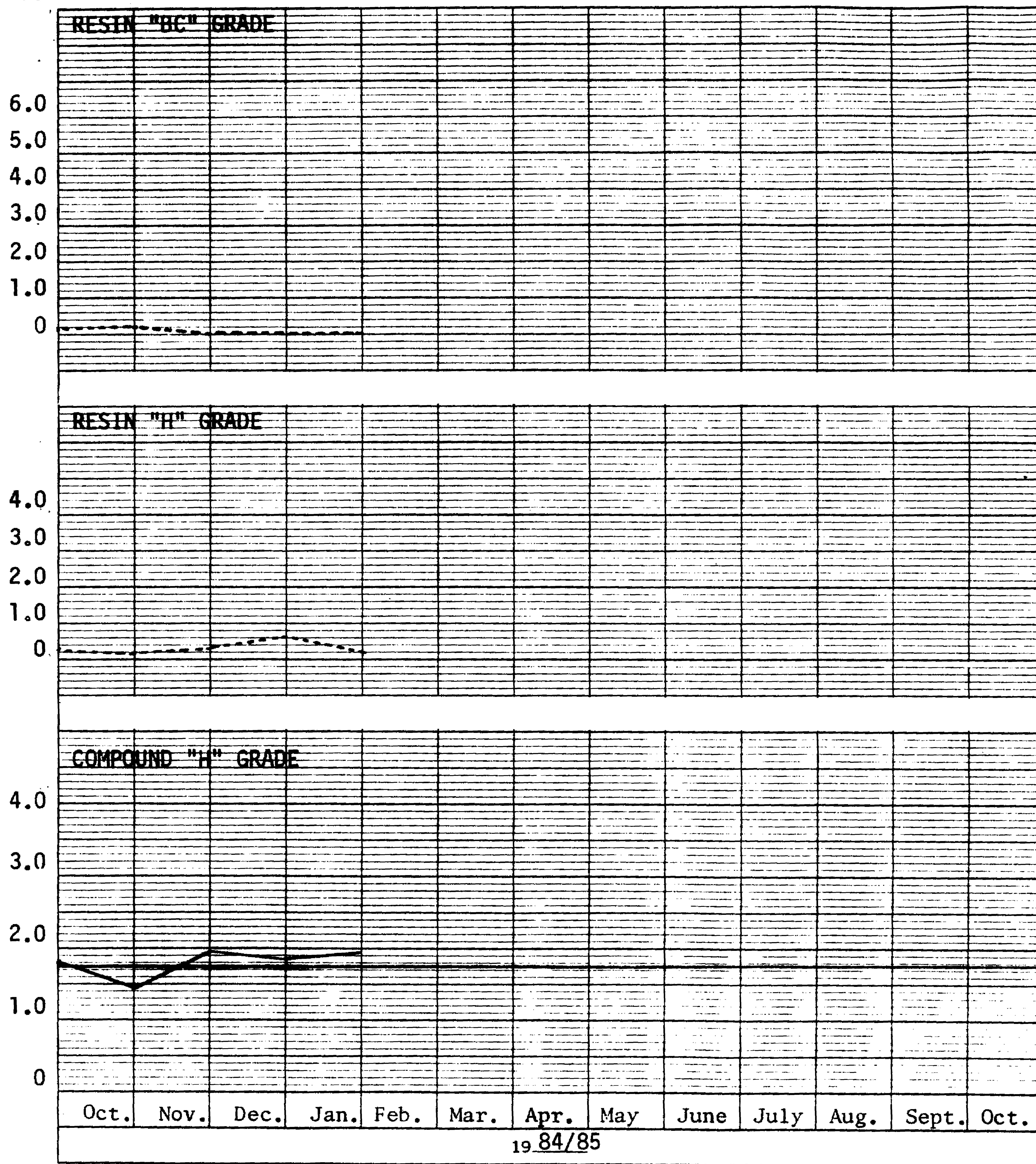
MM
POUNDS



ABERDEEN PLANT QUALITY PERFORMANCE

10/1/84 - 10/1/85

%
OFF-GRADE

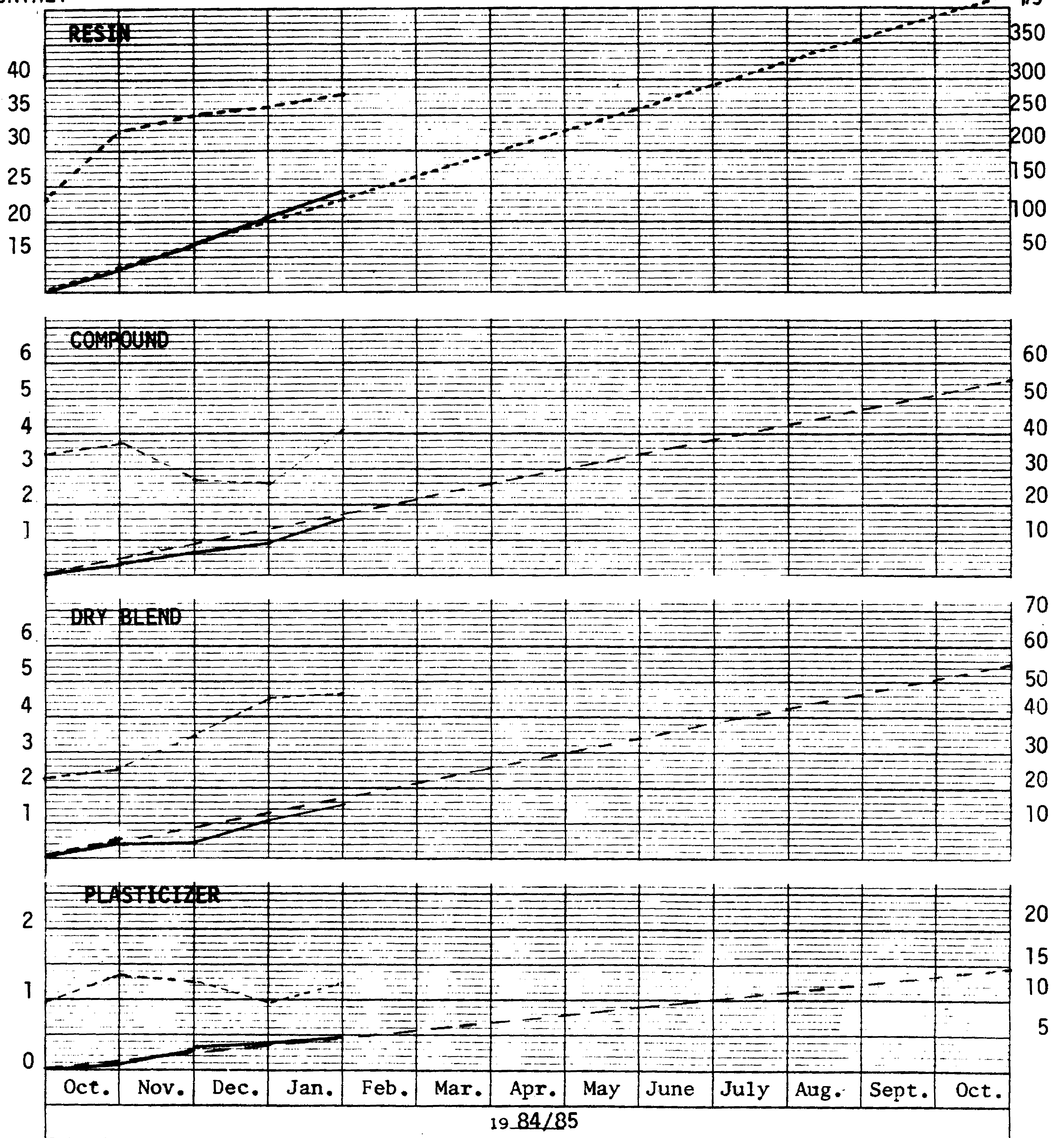


ABERDEEN PLANT PRODUCTION

10/1/84 - 10/1/85

MM POUNDS
MONTHLY

MM POUNDS
CUMULATIVE



----- Budget
 - - - - Actual
 _____ Cumulative

ABERDEEN PLANT EFFICIENCY

10/1/84 - 10/1/85

POUNDS OF RAW MATERIAL/POUND OF PRODUCT

