

SAFETY - A. H. Sather

<u>Occupational Injuries</u>	<u>September</u>	<u>1981 Year-to-Date</u>	<u>1980 Year-to-Date</u>
First Aid	2	28*	38
Medical Case	0	3	14
Restricted Workday Case	0	0	2
Restricted Workdays	0	0	23
Lost Time	0	0	0

Injuries By Department

Vinyl Operations	1	5	12
Compound Operations	0	7	15
Maintenance	1	16	23
Laboratory	0	1	3
Receiving and Warehouse	0	1	0
Office	0	1	1

Injuries By Type

Cuts and Abrasions	1	14	27
Eye Injuries	0	2	4
Burns	1	12	6
Bruises	0	2	11
Strains and Sprains	0	2	4
Other	0	2	4

* An incident which occurred during August was reclassified as a first aid injury.

As of September 30, 1981, the plant operated a total of 818 days or 1,077,311 manhours without a disabling injury.

Safety Meetings

The topic for August Safety Meetings was Fire Safety. The "magic of fire" was shown and discussed. Also, special emphasis was placed on preparing winter home heating systems for use. This was done in preparation for Fire Prevention Week, October 4 - 10, 1981.

Injury Investigation

A. H. Sather acted as chair person for the investigation of the disabling injury which occurred on August 21, 1981 in the Lake Charles Chemical Plant.

Back School

Final preparations were made for Health Education Systems, San Francisco, CA to conduct a back injury prevention school in the Aberdeen Chemical Plant during October.

SAFETY - (CONTINUED)

Conferences

A. H. Sather attended the Corporate Safety Meeting in Fort Lauderdale, Florida September 28 through October 1, 1981.

J. V. Uptain attended a hearing conservation seminar in Jackson, MS on September 24, 1981.

Health

Activity for the reporting period was limited to routine dosimetry. The results and overexposure explanations are shown below.

<u>Chemical</u>	<u>PEL</u>		<u>PEL</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
VCM	86	92	7	8
Lead	5	100	0	0
Antimony	4	100	0	0
Total Particulates	4	100	0	0

Overexposures

A total of seven (7) overexposures occurred, five of which occurred with benefit of respirators. The two (2) remaining overexposures occurred to a vinyl shift supervisor and an "A" reactor operator with no specific cause identified. One of the overexposures with benefit of respirator occurred to a mechanic who was cleaning VCM lines during a unit shutdown. The remaining overexposures occurred to reactor "A" and chief operators who drained a knockout tank in the new unit, replacing a reactor lenape manhead "O" ring and checking a vacuum pump, and clearing a plug in the recovery system.

VINYL - P. E. Markey

	<u>September</u>	<u>Y.T.D.</u>
1. Production, MM Lbs.	21.2	220.2
2. Daily Production Rate, M Lbs./C.D.	706	807
3. Total Charges	520	5453
4. Charges, Reactor Batches/C.D.	17.3	20.0
5. Reactor Stream Factor, %	76.6	85.6
6. Dryer Rate, Average Lbs./Hr.	5297	5675
7. Dryer Stream Factor, %	79.4	84.6
8. Accounting Days	30	273

Vinyl production for September was 21.2 MM pounds or 89.5% of budget. The production volume was 118% of the Business Area designated target of 18.0 MM pounds. Reactor and dryer stream factors were 76.6 and 79.4, respectively. Planned unit shutdowns for inventory control purposes accounted for the vast majority of the downtime. Empty product hopper car availability became a critical factor early in the month. Adjusted unit stream factors removing the impact of planned outage were 92.5% and 97.0% for the reactors and dryers, respectively.

Reactors

1. The major item affecting production in the reactor areas was a planned shutdown of the old reactor module 9/23 through the balance of the month for inventory control purposes. The reactor stream factor penalty associated with this outage was 13.5%.
2. Discretionary downtime was taken to install reactor relief valves on all the old module reactors. This completed the reactor relief valve installation program and now all of Aberdeen's reactors are equipped with reactor relief valves for improved EPA compliance. The resulting stream factor penalty was 2.4%.
3. A reactor agitator seal change on D-300 reactor resulted in a 1.7% reactor stream factor penalty.
4. Condenser cleanings on 743 and 744 reactors resulted in a 1.6% stream factor penalty.
5. VCM charge line pluggage in the old module resulted in a 0.8% reactor stream factor penalty.
6. Resin carry-over into the old module recovery system resulted in a 1.0% reactor stream factor penalty.
7. A number of smaller penalties comprised the balance of reactor downtime.

VINYL - (CONTINUED)

Dryers

The vinyl unit was essentially reactor limited the entire month as described above.

In order to maximize cost efficient operation some product lines were converted to single initiator usage and initiator loadings were reduced as possible on other products. This resulted in extended polymerization times but saved over \$21 M in initiator consumption. Maintenance costs were also reduced by discretionary reduction in overtime callouts on both reactor and dryer equipment when possible in light of reduced production requirements.

Product Quality Summary

<u>Resin Type</u>	<u>Prime Grade</u>	<u>"BC" Grade</u>	<u>"H" Grade</u>	<u>% of Total Production</u>
5265	31,500	-	-	0.15
5305	3,933,815	(2,800)	20,300	18.66
5385	12,802,452	40,500	-	60.66
5425	3,805,964	30,000	-	18.11
5465	437,058	-	-	2.06
<u>Sifter Overflow</u>	<u>-</u>	<u>-</u>	<u>74,475</u>	<u>0.36</u>
TOTAL	21,010,789	67,700	94,775	100.00

Quality performance for September was 99.2% customer grade with 0.3% "B" grade and 0.5% "H" grade.

Variable Cost Performance

Variable cost variances for September totalled \$735 M favorable with \$657 M due to price and \$78 M due to efficient operation.

The major price variance was \$656 M due to below budget monomer pricing 20.584 ¢/lb. versus the budgeted 23.636 ¢/lb.

Favorable efficiency variances of \$78 M were comprised of \$24.1 M for VCM, \$34.2 for processing additives and \$21.4 due to lower than budgeted off-grade production. An unfavorable variance of \$2.1 M resulted from a product mix different than budget.

VCM efficiency for September was 1.01458 lbs. VCM/lb. PVC versus the 1.01936 lb./lb. standard. Year to date VCM efficiency is 1.01973.

Cummulative 1981 variable cost efficiency variances in the Vinyl Department total \$492 M favorable.

VINYL - (CONTINUED)

General

1. Packaging activities for the month totalled 1.7 MM pounds.
2. Resifting activities for the month totalled 49 M pounds.
3. A total of 6 railcars of special 5385 with high calcium stearate levels were produced for siding customers. The higher calcium stearate levels are designed to minimize static formation and improve customer processing rates.
4. A single batch of the new 5265 resin was produced and packaged for customer samples. Samples were also forwarded to PAL for further testing.
5. A test batch of 5305 resin was produced using the new L-54 initiator, preliminary results show a desirable heat release curve. The blend was packaged and samples were forwarded to PAL and R&D for further testing. R&D small reactor testing of L-54 has indicated good potential for polymerization time reduction over the currently used initiators.
6. A slurry blend tank aeration test run was conducted on 5305 resin to determine the optimum aeration time required to attain residual monomer content of 10 ppm or less in the dried resin. It was determined the minimum aeration times were in the 3 - 3.5 hour range in the small blend tanks equipped with ring spargers and specification residual content could not be attained in the large blend tanks without prior aeration in smaller blend tanks equipped with ring spargers.
7. On 9/16/81 the plant experienced a reportable VCM relief valve discharge estimated to be approximately 20 pounds. The release was a result of thermal expansion on a VCM filter in the old reactor module. This is the first such release since April, 1980.

COMPOUND - J. R. McCrimon

<u>Compound Production</u>	<u>Month</u>	<u>Per Day</u>	<u>Y.T.D.</u>
Line I, M Pounds	825	53	10,120
Line V, M Pounds	289	28	3,277
Line III, M Pounds	2,365	82	25,042
Total, M Pounds	3,479		38,439
Accounting Days	30		273

Line I operated 15.5 days during September at an average rate of 53 M pounds per day. Major items affecting production efficiency were: product changes (25.7 hours), pull roll (5.0 hours), No. 1 Blender (11.9 hours), scales (3.3 hours), dicers (2.9 hours), and Banbury thermocouple (2.5 hours).

Line V operated 10.5 days during September at an average rate of 28 M pounds per day. Major items affecting production efficiency were: quality problems with hard particles/gels (24 hours), Werner-Pfleiderer instruments (6.6 hours), knife blade change/adjustments (5.5 hours) and Werner-Pfleiderer (4.0 hours).

Line III operated 29 days during September at an average rate of 82 M pounds per day. Line III production was affected by: product changes (37.1 hours), mill (13.0 hours), quality control (7.0 hours), hydrotherm steam leak repair (8.0 hours), FCM (5.8 hours), and plugged transfer line (3.5 hours).

Quality performance for flexible compounds was 3.4 % off-grade of which 85.5% was due to mill scrap. "BC" production was 2.9%.

The raw material requirement for flexible compounds was 1.00290 pounds of raw material per pound of compound versus a 1.01297 standard. (Y.T.D. is 1.00810)

The variable cost variance for compound was \$31.4 M with \$34.1 M due to price and (\$2.7 M) due to efficiency. The variance due to product mix was (\$5.1 M). The only major efficiency variance was \$12.6 M for resin, and there were no major price variances for the month.

<u>Dry Blend</u>	<u>Month</u>	<u>Per Day</u>	<u>Y.T.D.</u>
Production, M Pounds	5,150	184	38,079
Accounting Days	30		273

Dry Blend operated 28 days during September at an average rate of 184 M pounds per day. Production included: 80273G, 80174, 90171, 80274, and RP-100 RW. Dry Blend production was affected by: quality control (15.6 hours), product changes (15.5 hours), out of resin (11.2 hours), RP-100 BW quality control (11.1 hours), No. 1 Welex shaft replacement (7.5 hours), Welex drive belt replacement (7.0 hours), and dust collector sock changes (7.2 hours).

Quality performance for the month was 99.99% customer grade.

COMPOUND - (CONTINUED)

Dry Blend - (Continued)

The raw material requirement for dry blend was 1.00892 pounds of raw material per pound of dry blend versus a standard of 1.00577. (Y.T.D. is 1.00952)

The variable cost variance for dry blend was (\$54.0 M) with \$25.2 M due to price and (\$79.3 M) due to efficiency. The variance due to mix was (\$80.3 M). There were no major efficiency variances for September. There were two major price variances for the month: \$24.5 M for Organo-tin stabilizer and \$10.1 M for Methyl-tin stabilizers.

<u>Plasticizer</u>	<u>Month</u>	<u>Per Day</u>	<u>Y.T.D.</u>
Production, M Pounds	663	44	9,088
Accounting Days	30		273

Plasticizer operated 15 days during September at an average rate of 44 M pounds per day. Production included: DOP, DIDP, and 610P.

VRP production totaled 29.7 M pounds (4.5%). Production was limited by: rupture disc replacement on R-1, R-3 and R-4, inert gas compressor failure and R-1 condenser tube leak repairs.

The raw material requirement for plasticizer was 1.01991 pounds of raw materials per pound of plasticizer versus a 1.10500 standard. (Y.T.D. is 1.10092)

The variable cost for plasticizer was (\$5.5 M) with (\$7.7 M) due to price and \$2.2 M due to efficiency. There were no major price variances or efficiency variances for the month.

The variance due to product mix was \$1.8 M.

General

Total customer grade compound inventory increased from 11.2 MM to 11.6 MM pounds during September.

Line I started up September 10 after the seals were replaced on the Banbury, and a controlled test on mill scrap production from the seals resulted in a 64 pound per day rate. The total mill scrap for September was 102 M pounds which consists of the following makeup:

Vacuum Dust	21 M pounds
Mill Scrap	13 M pounds (Produced in August, but not counted until September inventory.)
Mill Scrap	56 M pounds (Produced in September.)
Mill Scrap	12 M pounds (Cleanout pellets downgraded in September.)

COMPOUND - (CONTINUED)

General - (Continued)

Of the 56 M pounds produced in September it is estimated that 5 M pounds resulted from railcar heel cleanout prior to loading. A total of 20 railcars (both compound and dry blend) required heel cleanouts due to the low inventory of hopper cars and switching the products carried in the cars.

MECHANICAL - S. J. Vincent

Vinyl

The old module was shut down in the latter part of this period for inventory control. A significant amount of the maintenance effort was devoted to repairs and cleaning in this module.

There was one seal failure and one gearbox failure in this period. Both of the failures were in the old module. The seal failed on the D-300 reactor. The top bearing failed on the D-500 gearbox requiring a major overhaul of this gearbox.

Two reactor condensers were cleaned in this period. They were on the 743 and 744 reactors in the new module.

Major valves replaced in the vinyl area in this period were the chemical wash valves on 742 and 744 reactors, 741 charge water valve, 743 atmospheric vent valve, D-500 recovery valve and the chemical wash header valve in the new module. One of the turbine meters was replaced in the new module and the other one repaired. Several instrument transmitters were repaired. The counter weights were reset on the new module Sweco screener. Several control and area lighting repairs were completed.

There were five seal failures to pumps in this period with seals being replaced on the condensate return pump, east recovered VCM return pump, east recovered VCM charge pump and the south knockout tank recirculating pump in the new module. The seal was also replaced on the south sphere transfer pump. In the old module the "A" vacuum pump was pulled and test material used to repair the case and then the unit was overhauled. In the new module the 902 vacuum pump and 904 recovery compressor were overhauled.

Major projects worked on in the vinyl production areas included the final work on the reactor pressure relief modifications for the old module reactors. This included all of the old module reactor safety valve and safety disc being replaced.

The downcomer and lower section was replaced on the plant incinerator. Nineteen new safety discs and holders were installed on various pieces of vinyl equipment.

Some of the modicon relay wiring was revised for the expansion project. Several new "go" switches were installed. Instrumentation was installed in the control room for the spare incinerator.

The dryer area work was primarily to PM and calibrate instrumentation.

Compound-Dry Blend-Plasticizer and Resin Storage

The major overhaul of the Line I Banbury was completed and the unit returned to operations. New blender valves were installed on Line I blenders. Major repairs to the compound Line III equipment were to replace the mill and FCM rotary joints, along with, repairs to steam and water leaks.

MECHANICAL - (CONTINUED)

The drive shaft bearings were replaced on the compound Line V Welex. In the dry blend area belts were replaced on number one and number two Welex units.

Repairs in the Plasticizer Unit were to replace safety discs on the R-1 and R-4 reactors. The Schenk filter was pulled and disassembled for cleaning. The bearing was replaced on the north nitrogen blower. A new compressor was installed on the inert gas unit.

Utilities and Services

Repairs to the plant air system in this period were to overhaul the top section of #3 compressor and to repair valves in the #6 and #7 compressors. The heater element was replaced in the #2 air dryer and the inlet and outlet valves were rebuilt. Two new boiler chemical feed pumps were installed at the boiler house.

The compressor on the vinyl unit control room air conditioner was replaced. The #2 boiler was shut down for a tube failure. After the tube was plugged, several tube roll leaks were found on the mud drum. A total of eight tubes were plugged and the boiler was returned to service. The outlet piping on "A" water softener developed a leak and the softener was removed from service to perform repairs.

Planner

There were over 700 work orders processed in this period. Material was ordered for 13 work order projects and 96 work orders were planned. There were 23 invoice registers processed for payment and 21 new registers issued for equipment repair.

MECHANICAL ENGINEERING - J. A. Dixon

The following AFE was submitted and approved during September:

<u>AFE No.</u>	<u>Title</u>	<u>Authorized</u>
9741	Plasticizer Catalyst Handling System	\$38,000

The following AFE was closed to field charges during September:

<u>AFE No.</u>	<u>Title</u>	<u>Authorized</u>
9750	Rotary Dryer Insulation (Energy)	\$22,000

There were no completion reports issued in September.

Design

Design work is in progress on the following projects:

- Resin Reclaim System
- Compound Line III Debottlenecking
- Fire Protection Improvements - Phase III
- V-10 Centrate Heat Recovery
- Vinyl Initiator Charge Pots
- Reactor Seal Access Platform
- Centrate Heat Recovery
- Emergency AMS Kill System
- Slurry Delumper
- Calcium Stearate Addition System
- Reactor Agitator Replacement
- Emergency Cooling for Reactors
- Waste Water Treatment Revisions

AFE Activity

1. AFE 9570 - Replace T-101 P. A. Tank J. P. Windham

Pipe fabrication and installation is in progress.

2. AFE 9630 - Water Stripping M. Ingle & J. L. White

Piping and instrumentation revisions are in progress.

3. AFE 9680 - Fixed Point Monitor Data Computer and Warning Lights R. B. Harned

Contract work is essentially complete except for minor revisions. The computer was powered up and checked during the period. Final hookup and check out is scheduled for October.

MECHANICAL ENGINEERING - (CONTINUED)

AFE Activity - (Continued)

4. AFE 9710 - Fire Protection Improvements - Phase III J. Elkins/W. Modica

Engineering is approximately 95% complete. Drafting is approximately 97% complete. Design completion is scheduled for October.

5. AFE 9720 - Reactor Agitator Replacement M. S. Richards

Mechanical design began this month. Drawings for the seal oil tank were sent out for bids. The gearboxes and mounting bases are slightly larger than the available area for installation. We have requested a design modification of the mounting base from Lightnin Inc. so that installation can be made without requiring foundation modifications to the reactors.

6. AFE 9730 - Compound Line III Debottlenecking J. Tomek

Structural design is on hold pending receipt of equipment outline drawings. A budget estimate is being prepared for an alternate silo location.

7. AFE 9760 - Emergency AMS Kill System J. L. White

A design review was held on 9/10/81. Drafting changes are being incorporated. Quotes are being requested for bulk material items.

8. AFE 9770 - Reactor Pressure Relief Modifications J. L. White

This project is operational and complete except for painting and modification of two spare 6 x 8 relief valves.

9. AFE 9790 - Resin Reclaim System P. Meiers & M. Richards

The design is approximately 70% complete. Levingston Engineers made a field trip this month to determine final measurements necessary to complete the design. Equipment selection is in progress.

10. AFE 9800 - Plasticizer Irritant Control R. B. Harned

The underground conduit and switchgear for the new aerators have been installed. Design of the wastewater stripping equipment is in progress.

11. AFE 9531 - Vinyl Initiator Charge Pots S. Jones

Instrumentation engineering is 97% complete with 85% of the drafting finished.

12. AFE 9541 - VCM Tank Farm Modifications R. B. Harned

Piping and structural steel installation is complete. Electrical installation is in progress.

MECHANICAL ENGINEERING - (CONTINUED)

AFE Activity - (Continued)

13. AFE 80-395 - Interplant Communications - Phase II R. B. Harned
Seven additional stations were installed and are operational.
14. AFE 9551 - V-10 Centrate Heat Recovery S. Jones
Engineering and drafting is complete. Basis of bids are being prepared.
15. AFE 9561 - Cooling Tower Fan Controls R. B. Harned
The drawings and specifications are complete. The installation contract has been let.
16. AFE 9601 - Compliance With EPA VCM Standard R. B. Harned
Installation of the improved safety heads is in progress.
17. AFE 9631 - Ground Water Monitoring V. E. Messick
Drilling of the water wells is scheduled for October.
18. AFE 9641 - Slurry Delumper M. S. Richards
The drawings are complete. Installation is scheduled for October.
19. AFE 9661 - Waste Water Treatment Revisions D. Pace & J. L. White
Quotations for all mechanical equipment have been received and purchasing is proceeding. A plot plan was sent to the plant for approval. Underground piping and concrete design is in progress. Engineering and drafting is approximately 35% complete.
20. AFE 9671 - New VCM Railspur G. A. Morgan
Construction is proceeding and completion is scheduled for October.
21. AFE 9691 - Reactor Agitator Two Speed Motors M. S. Richards
The motors have been purchased with a delivery of 14 to 18 weeks.
22. AFE 9721 - Emergency Cooling for Reactors D. Pace
A project kick-off meeting was held in August. Piping and mechanical drawings are complete and being checked by plant personnel. Bid packages are being prepared. Instrumentation and electrical sections are ready to start drafting.

MECHANICAL ENGINEERING - (CONTINUED)

Construction - G. A. Morgan

The following projects were completed in September:

1. Reactor Pressure Relief Modifications
2. Interplant Communication - Phase II
3. Removal of resin from lagoons NPD-3 and NPD 1-B
4. Rotary Dryer Insulation
5. Replaced NPD-3 Lagoon Outlet Piping

The following contracts were issued in September:

1. Construction of Shed Over Oil Drum Storage Area
2. Electrical Installation for Cooling Tower Fan Controls
3. Drilling of Ground Water Monitoring Wells

Twenty-eight register tickets were issued during September.

(1) Thru August, 1981 Actual Accounting
(2) Thru September, 1981

ABERDEEN AUTHORIZATIONS REPORT

AUTH. NO.	CAPITAL DESCRIPTION	DATE APPROVED	AUTH. AMT.	(1) EXPENDED TO DATE	(2) COMMITTED TO DATE	FINAL TOTAL EST. COST COMP.	UNDER (OVER) AUTH. AMT.	EST. COMP. DATE	EST. CLOS. DATE	REMARKS
9609	Reactor Inert Vent System	6/28/79	90,000	14,541	14,541	90,000	0	12/81	3/82	Project on hold.
9629	Air Compressor	7/9/79	340,000	303,416	308,119	308,119	31,881	6/81	10/81	Closed to field charges.
9639	Revisions to Emission Recovery Sys.	7/12/79	100,000	87,992	89,467	89,467	10,533	7/81	10/81	Closed to field charges.
9689	Diking of Sphere & Curbing of Drum Storage Area	9/15/79	170,000	150,993	166,078	170,000	0	10/81	1/82	Revisions to field charges.
9699	Plant Dryer Debottlenecking	9/15/79	80,000	55,340	75,105	80,000	0	12/81	3/82	Construction in progress.
9709	Facilities for Multiple Grade Resin	9/20/79	870,000	541,825	683,410	738,000	132,000	12/81	3/82	Construction in progress.
9719	Aberdeen PVC Resin Expansion	9/10/79	850,000	887,200	887,200	887,200	(37,200)	7/81	10/81	Closed to field charges.
9729	Fire Protection Improv.-Phase II	10/1/79	490,000	399,621	400,524	490,000	0	12/81	3/83	Construction in progress.
9759	Aberdeen PVC Resin Expansion	12/10/79	11,150,000	7,713,400	9,629,900	10,450,000	700,000	12/81	3/82	Construction in progress.
9530	Spare Incinerator	1/23/80	650,000	443,216	489,493	550,000	100,000	12/81	3/82	Construction in progress.
9550	P. A. Handling Improvements	3/3/80	63,000	32,470	39,633	63,000	0	12/81	3/82	Engineering in progress.
9570	Replace T-101 P. A. Tank	3/27/80	119,000	68,573	110,623	119,000	0	12/81	3/82	Construction in progress.
9590	Critical Spare Equipment	3/26/80	59,000	63,447	63,476	63,476	(4,488)	7/81	10/81	Closed to field charges.
9600	Calcium Stearate Addition System	4/2/80	84,000	17,012	17,731	84,000	-	12/81	3/82	Engineering in progress.
9630	Water Stripping	4/30/80	810,000	411,361	412,506	510,000	300,000	12/81	3/82	Revisions in progress.
9680	Fixed Point Monitor Data Computer and Warning Lights	9/4/80	113,000	52,098	81,342	113,000	0	10/81	1/82	Construction in progress.
9690	Breathing Air Modification	9/9/80	21,000	14,540	15,543	21,000	0	8/81	11/81	Closed to field charges.
9700	Compound Fines & Streamers Removal	10/1/80	95,000	2,227	31,751	95,000	0	4/82	7/82	Engineering scheduled.
9710	Fire Protection - Phase III	10/14/80	385,000	1,707	1,707	385,000	0	5/82	8/82	Engineering in progress CED.
9720	Reactor Agitator Replacement	10/14/80	420,000	192,900	194,608	420,000	0	12/81	3/82	Engineering in progress.
9730	Compound Line III Debottlenecking	10/16/80	1,350,000	135	173,745	1,350,000	0	6/82	9/82	Engineering in progress.
9740	Modifications to Make Profile D.B.	10/27/80	200,000	27,027	55,719	200,000	0	4/82	7/82	Engineering scheduled.
9750	Rotary Dryer Insulation (Energy)	11/10/80	22,000	20,000	27,391	27,391	(5,391)	9/81	12/81	Closed to field charges.
9760	Emergency AMS Kill System	11/15/80	335,000	96,335	111,159	355,000	0	12/81	3/82	Engineering in progress.
9770	Reactor Pressure Relief Mod.	11/25/80	560,000	348,838	396,902	460,000	100,000	12/81	3/82	Construction in progress.
9780	Centrate Heat Recovery	12/8/80	300,000	61,538	83,568	300,000	0	3/82	6/82	Engineering in progress.
9790	Resin Reclaim System	12/14/80	727,000	187,013	285,242	727,000	0	3/82	6/82	Engineering in progress CED.
9800	Plasticizer Irritant Control (Air)	12/15/80	80,000	28,932	46,285	80,000	0	11/81	2/82	Construction in progress.
9810	Replacement Gearbox for Farrell Mix.	12/18/80	73,000	0	69,400	73,000	0	10/81	12/81	Gearbox to ship 10/81.
9511	Miscellaneous Projects Under \$10,000	1/9/81	170,000	160,820	194,894	170,000	0	12/31	2/82	Sixty-two projects approved.
9531	Vinyl Initiator Charge Pots	1/21/81	165,000	7,962	75,971	165,000	0	11/81	2/82	Engineering in progress CED.
9541	VCM Tank Farm Modifications	1/21/81	90,000	40,666	58,297	90,000	0	1/82	4/82	Construction in progress.
80-395	Interplant Communication-Phase II	1/22/81	55,000	28,235	31,755	55,000	0	10/81	1/82	Revisions in progress.
9551	V-10 Centrate Heat Recovery (Energy)	2/17/81	125,000	18,755	41,449	125,000	0	5/82	8/82	Engineering in progress CED.
9561	Cooling Tower Fan Controls (Energy)	2/17/81	40,000	78	29,104	40,000	0	11/81	2/82	Contract let.
9581	Dryer Building Ventilation	3/20/81	23,000	3,567	17,137	23,000	0	10/81	1/82	Project is operational.
9591	Sifter Overflow Reclaim System	3/20/81	200,000	15,569	16,123	200,000	0	3/82	6/82	Engineering in progress.
9601	Compliance with EPA VCM Std. (Air)	3/25/81	72,000	12,179	18,700	72,000	0	12/81	3/82	Engineering in progress.
9611	Recovery System Revisions	3/25/81	30,000	17,236	19,054	30,000	0	12/81	3/82	Revisions in progress.
9621	Laboratory Equipment	3/25/81	42,000	37,974	38,866	42,000	0	8/81	11/81	Closed to field charges.
9631	Ground Water Monitoring (Solid)	3/24/81	30,000	501	28,550	30,000	0	10/81	1/82	Construction scheduled.
9641	Slurry Delumper	5/14/81	35,000	21,537	23,019	35,000	0	2/82	5/82	Engineering in progress.
9651	Safety Equipment	6/8/81	106,000	0	0	106,000	0	6/82	9/82	Engineering scheduled.
9661	Waste Water Treatment Rev. (Water)	6/19/81	560,000	1,060	145,097	560,000	0	9/82	12/82	Engineering in progress CED.
9671	New VCM Railspur	6/30/81	194,000	3,737	189,512	194,000	0	12/81	3/82	Construction in progress.
9681	Miscellaneous Projects Under \$10,000	7/31/81	145,000	2,646	38,190	145,000	0	12/81	3/82	Twenty-two projects approved.
9691	Reactor Agitator Two Speed Motors	7/2/81	40,000	0	4,568	40,000	0	4/82	7/82	Motors purchased 10/1/81.
9701	Misc. Energy Savings Projects Under \$10,000	7/13/81	25,000	0	0	25,000	0	12/81	3/82	Engineering scheduled.
9711	Plasticizer Spill Containment	7/27/81	42,000	0	0	42,000	0	1/82	4/82	Engineering scheduled.
9721	Emergency Cooling for Reactors	7/30/81	190,000	1,139	4,782	190,000	0	4/82	7/82	Engineering in progress CED.
9731	Normal Kill Solution Addition Sys.	9/1/81	93,000	0	0	93,000	0	7/82	10/82	Engineering scheduled.
9741	Plasticizer Catalyst Handling Sys.	9/21/81	38,000	0	0	38,000	0	9/82	12/82	Engineering scheduled.
<u>EXPENSE</u>										
9020	Repairs to Line I Compounder	11/24/80	38,000	23,699	25,854	38,000	0	9/81	12/81	Closed to field charges.

DTH 000021526

PERSONNEL - R. A. Miller

EMPLOYMENT

Albert Gunn, General Helper
Paul Cogsdell, General Helper
Richard Metcalf, General Helper
Richard Garner, General Helper
Will Malone, General Helper

TO/FROM LEAVE OF ABSENCE

Willard Reed, Process Engineer - To Leave
Patrick Thompson, Process Engineer - To Leave
Robert Milner, Electrical Engineer - To Leave

TRANSFER/PROMOTION

Terry Edwards, Compound Utility, transfer to Lab Trainee
George Carnathan, Electrician "B" promoted to Electrician "A"
Robert Williams, Lab Trainee, transferred to Head Building Attendant
Gordon Ostoroski, Head Building Attendant, transferred to Building Attendant

RETIREMENT

None

TERMINATION

John P. McKee, Mechanical Engineer
Charlotte Lowe, Casual Labor
Willie Nails, Casual Labor
Q. C. Townes, Compound Utility

OTHER

During September there were eight (8) casual labor employees on payroll.
Total hours worked were 213.75.

CONOCO CHEMICALS
Aberdeen, Mississippi

September 1981
MONTHLY PERSONNEL REPORT

Salaried Employees	<u>81*</u>
Hourly Employees	<u>165</u>
Total Employees	<u>246*</u>
<u>Employees (Hourly)</u>	
New Employees	<u>5</u>
Terminations	<u>1</u>

Minority Employees	#	%
Salaried	<u>6</u>	<u>7%</u>
Hourly	<u>61</u>	<u>37%</u>
Total	<u>66</u>	<u>27%</u>
Hourly Min. Hired	<u>2</u>	
% Min. Hired	<u>40%</u>	
Hourly Min. Term.	<u>1</u>	
% Min. Term.	<u>100%</u>	

DEPARTMENTS	PAR	# EMPLOYEES	MIN. EMP.	% MIN.	NEW HIRES	YTD	TERM.	YTD	TURNOVER	YTD
Warehouse	<u>11</u>	<u>9</u>	<u>1</u>	<u>11%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Gen. Plant	<u>11</u>	<u>19</u>	<u>8</u>	<u>42%</u>	<u>5</u>	<u>15</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Maintenance	<u>52</u>	<u>47</u>	<u>8</u>	<u>17%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1**</u>	<u>0</u>	<u>0</u>
Laboratory	<u>22</u>	<u>21</u>	<u>4</u>	<u>19%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Compound	<u>37</u>	<u>33</u>	<u>25</u>	<u>76%</u>	<u>1***</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>3%</u>	<u>3%</u>
Vinyl	<u>40</u>	<u>32</u>	<u>13</u>	<u>40%</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Plasticizer	<u>4</u>	<u>4</u>	<u>2</u>	<u>50%</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 103

APPLICANT BREAKDOWN:

Minority - % Minority -
Female - % Female -

Hires (Hourly) :

Month 5 Year to Date 15

Terminations (Hourly) :

Month 1 Year to Date 3**

Overall Turnover .4%

Projected Annual Turnover 3%

*Includes four (4) temporary employees
**Includes one (1) retirement. Retirements are not included in turnover rate.
***Includes one (1) reinstatement. Reinstatements are not included in new hires.

OVERTIME AND ABSENTEEISM

SEPTEMBER 1981

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
Warehouse	1607.50	149.25	32.00	11%	0	0	0	0
Maintenance	7808.50	353.50	0	4%	172	98%	2%	2%
Laboratory	4031.25	430.25	89.00	13%	16	0	100%	.4%
Compound	6951.00	728.00	152.00	13%	24	100%	0	.3%
Vinyl	7701.75	189.00	248.00	6%	80	90%	10%	1%
Plasticizer	633.25	39.75	0	6%	8	100%	0	1%
Utility Boiler House	695.25	121.75	24.00	0	0	0	0	0
General Plant	1135.00	141.25	0	0	0	0	0	0
Total	30563.50	2152.75	545.00	9%	300	91%	9%	1%

Note:

- (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.

PROCESS ENGINEERING - R. A. Frohreich

A. Expansion Project

Work is continuing in all areas. Line flushing and equipment checkout has begun in the Fluid Bed Dryer area. Operator training has started for the Fluid Bed Dryer. Tie-ins to existing process lines in the old reactor module are being made during shutdown of the module. Installation of the chem wash system is nearing completion with startup expected in October.

B. Line I Modernization

The class "A" process design and cost estimate for the project were completed. An AFE request is being prepared.

C. Firewater Improvements - Phase IV

An AFE request for the project was submitted.

D. 1982 Capital Budget

A revised 1982 Capital Budget was prepared using new depreciation methods and submitted to Houston.

E. Firewater Improvements - Phase III

Piping drawings were reviewed and comments returned to CED.

F. Plasticizer Initiator Handling System

An AFE request for this project was submitted.

G. 10-8 Plasticizer Production

The AFE request for the project was submitted. Revisions to the class "A" design are being made.

H. Calcium Stearate Addition System

The class "A" design for this project was issued and a review meeting held. Comments from the review meeting are being incorporated in the design.

I. Recovery System Modifications

The AFE request for this project was submitted.

J. Methocel Make-Up Revisions

A design to install an eductor system on the methocel make up tank to improve methocel dispersion is being prepared.

PROCESS ENGINEERING - (CONTINUED)

K. Schenk Filter Problem

Assistance was given in starting up the Schenk filter again. A rental pump was used to precoat the filter at a higher flow rate. A small amount of filter aid is being added to each batch. Performance to date has improved.

L. Temperature Controller on Line V

Process Engineering provided assistance in getting the temperature controller on compound Line V adjusted.

M. Line V Air Slide

Several vendors were contacted concerning an air slide on Line V. A quote was obtained and a work order to install the air slide was submitted.

N. Sampling Program for IR Problem

A sampling program for the 5425 resin manufacturing process has been developed to determine what is necessary to improve the IR property of the resin. The sampling program will be conducted in October.

ENVIRONMENTAL - V. E. Messick

Particulates

Two dryer exhausts were sampled for particulates and were within allowable limits.

The procedure for sampling the fluid bed dryer for particulate emissions was reviewed. A longer probe required for sampling the dryer stack was placed on order.

Water

All wastewater parameters were within NPDES limitations in September.

The renewal NPDES permit was received from the Bureau of Pollution Control.

VCM

The comprehensive VCM leak survey has been completed. All leaks have been repaired.

Hazardous Waste Management

The Groundwater Monitoring Plan was reviewed with State Hazardous Waste Authorities on September 17. The monitoring wells will be installed in October.

Other

The update of the OSHA Engineering and Work Practice Controls was issued.

TABLE I
WATER COMPLIANCE WITH
NPDES PERMIT PARAMETERS

		Flow	BOD		COD		Sus. Solids		Diss.	ph
		GPM	PPM	LB./DY.	PPM	LB./DY.	PPM	LB./DY.	0 ²	
Jan.	- Ave.	1069	39	504	69	888	7	93	8.5-10.4	7.4-7.8
	Max.	1297	57	887	106	1650	9	114		
Feb.	- Ave.	757	11	95	43	382	7	65	8.9-9.8	7.5-7.9
	Max.	819	18	154	56	479	10	86		
Mar.	- Ave.	753	10	90	36	330	11	93	8.3-8.9	7.6-7.7
	Max.	790	11	103	51	466	17	139		
Apr.	- Ave.	946	10	118	31	360	13	151	8.2-8.9	6.9-8.1
	Max.	1200	20	253	41	519	19	240		
May	- Ave.	846	12	125	43	470	13	138	7.4-8.4	7.3-8.0
	Max.	1200	14	163	54	629	17	198		
June	- Ave.	739	20	183	56	502	18	157	6.2-8.2	7.6-7.9
	Max.	917	34	314	79	729	27	249		
July	- Ave.	746	12	107	39	339	22	190	6.2-7.5	7.7-8.0
	Max.	922	16	130	53	420	28	209		
Aug.	- Ave.	753	9	81	36	347	25	237	6.0-7.4	7.5-7.8
	Max.	1212	11	131	38	428	35	378		
Sept.	- Ave.	739	8	68	25	208	17	143	6.6-7.5	7.5-7.7
	Max.	1146	14	148	42	443	36	380		
Oct.	- Ave.									
	Max.									
Nov.	- Ave.									
	Max.									
Dec.	- Ave.									
	Max.									
NPDES	- Ave.	-	32	431	-	1462	-	674	6.0	6.0-8.5
	Max.	-	43	800	-	2713	-	1396		

ENERGY CONSERVATION - J. R. Perez-Velasco

I. Plant Operations

Total energy consumption for September was 92.115 MMM BTU's. The energy consumption per pound of product increased to 3021 BTU/lb. as compared with 2959 BTU/lb. in August.

II. Plant Energy Conservation Program

Steam Leaks

One steam trap and eighteen steam leaks were repaired during September.

Boilers

The natural gas flow meter was recalibrated.

ENERGY CONSERVATION DATA

<u>ITEM</u>	<u>1981</u>	<u>1980</u>
	September	September
<u>Production, MM Lbs.</u>		
Resin	21.2	23.3
Dry Blend	5.2	1.6
Compound	3.5	4.2
Plasticizer	<u>0.7</u>	<u>1.1</u>
TOTAL	30.6	30.2
<u>Natural Gas</u>		
Consumption, MSCF	43237	49322
Conversion, BTU/SCF	1020	1020
Energy Consumption, MMM BTU	44.101	50.380
<u>Electricity</u>		
Consumption, MM KWH	4.801	4.680
Conversion, BTU/KWH	10000	10000
Energy Consumption, MMM BTU	48.014	46.800
<u>Propane</u>		
Consumption, M Gal.	0	0
Conversion, BTU/Gal.	92000	92000
Energy Consumption, MMM BTU	0	0
<u>Total</u>		
Energy Consumption, MMM BTU	92.115	97.108
Energy Consumption , BTU/Lb.	3021	3215

Boiler Operating Data

	<u>Avg. Stack Temp.</u>		<u>Avg. % Excess Air</u>	
	<u>1981</u>	<u>1980</u>	<u>1981</u>	<u>1980</u>
No. 1	312	382	18%	29
No. 2	300	464	15%	22
No. 3	289	421	20%	22

LABORATORY - R. D. Jackson

CUSTOMER COMPLAINTS

<u>Customer</u>	<u>Product</u>	<u>Complaint</u>	<u>Report By</u>
Essex Group	5465	Oversize clumps	PEM
Alcan Cable	34641 Black	Metal Contamination	JRM
Industrial Plastics	14331 CB	Poor Clarity	RDJ

WAIVERS RECEIVED

<u>Date</u>	<u>Identification</u>	<u>Product</u>	<u>Customer</u>	<u>Reason</u>	<u>Waived By</u>
9/3	T-2479	5385	Uniroyal	Particle Size	JRW
9/8	PLCX 43750	5385	Uniroyal	Particle Size	JRW
9/8	CONX 45809	5385	Carlton	Viscosity	JRW
9/9	CONX 45303	5305	Intex	Viscosity	ELK
9/9	PLCX 43872	5385	Carlton	Viscosity	ELK
9/15	PTLX 41651	5385	Carlton	Particle Size	RDJ
9/15	CONX 45794	5385	Carlton	Particle Size	JRW
9/23	CONX 45725	5385	Bird & Sons	Viscosity	JRW
9/25	CONX 45715	5425	Intex	Particle Size	ELK
9/25	PTLX 41646	5305	O'Leary Term.	Viscosity	ELK
9/25	CONX 45762	5385	Carlton	Particle Size	ELK

PRODUCT SERVICE & DEVELOPMENT

<u>Ship Date</u>	<u>Product</u>	<u>Amount (Lbs.)</u>	<u>Customer</u>	<u>Requested By</u>
9/3	34431 Natural	2,250	Northwire Inc.	COEDS
9/3	38552 Natural	1,000	Northwire Inc.	COEDS
9/4	90171 DB	1,000	Proto Corp.	COEDS
9/8	5385-3	100	Hammond Lead	MAS
9/8	RP 100 DB	1,000	General Plastics	COEDS
9/8	RP-100 DB	1,000	Technical Plastics	COEDS
9/11	5385-1	1,000	Eslon Thermoplastics	COEDS
9/15	5385-1	2,250	General Binding	COEDS
9/15	5385-1	150	Synthetic Products Co.	COEDS
9/15	5385-1	5	Panasote Corp.	JCL
	5425-1	5		
9/16	5465	2,250	Charlotte Pipe & Foundry	COEDS
9/16	5385	3 x 5	Cerro Wire & Cable	JCL
	5425	2 x 5		
9/17	VRP	5 gal.	Wexford International	WR
9/18	5425	5	Great American Chem. Co.	RDJ
9/21	5385-1	50	E. I. DuPont de Nemour	COEDS
	5305-1	50	and Co.	
	5425	50		
	5465	50		

LABORATORY - (CONTINUED)

PRODUCT SERVICE & DEVELOPMENT - (CONTINUED)

<u>Ship Date</u>	<u>Product</u>	<u>Amount (Lbs.)</u>	<u>Customer</u>	<u>Requested By</u>
9/23	80273G DB	10	Mitsui & Co. USA	JPM
9/24	17461 Natural	2,250	Weed Corp.	COEDS
9/24	5425	50	Fritz Airfreight	JPM
9/25	80273G DB	1,000	Winnebago Drainage System	COEDS
9/25	5385-3S	11,250	Certain-Teed Corp.	COEDS
9/28	80274 DB	1,000	Novatec	COEDS
9/29	34711 Wht. 366	1,000	Atcoflex Inc.	COEDS
9/29	RP 100 DB	1,000	General Plastics.	COEDS

Special Compound Testing

One production lot of 34862 gray 546 was tested to verify that it met Western Electric specifications. Plasticizer content and flammability tests were run on the two railcar samples from this run.

New Compounds

Quality control specifications and standards were prepared for two experimental compounds - 4276-53B and 4276-53C.

Color Matching

A color formula was developed for 34711 White 366.

Compound Property Verification

Compound properties have been measured on thirty-one (31) compounds. These are the compounds which have been made during 1981. Tests will be repeated on some compounds which gave atypical results.

Dry Blend Development

Welex batches of 80174, 80273G and 90171 for the QC laboratory to use as control standards were prepared. A formula has been issued for 80281 - a dry blend for outdoor furniture.

QUALITY CONTROL TESTING

Resin

Regular Samples = 339

Bag Samples = 47

Other In-Process Samples = 3127

Bulk Shipments = 131 (Railcars = 82; trucks = 49)

DTH 000021537

LABORATORY - (CONTINUED)

QUALITY CONTROL TESTING - (CONTINUED)

Dry Blend

Blenders Produced = 604
Blenders Tested = 559
Blenders Adjusted = 5.0%
Other In-Process Samples = 698
Bulk Shipments = 50 (Railcars = 18; trucks = 32)

Compound

Blenders Produced = 479
Blenders Adjusted = 1.5%
Line V Production = 158 skids; 80 M pounds bulk
Other In-Process Samples = 1,085
Bulk Shipments = 4 (Railcars = 4; trucks = 0)

Raw Material Testing

Sixty-one (61) lots of plant raw materials were tested and released. One shipment of Ross Wax 145 was rejected because it had formed large, hard lumps which could not be used. One lot of Advawax 280 was rejected for black contamination.

Resin Heat Stability

Forty-four (44) samples of resin were tested for oven heat stability. All of the samples passed the test. The 5385 and 5425 resins continue to average slightly poorer than the controls, while 5465 was slightly better and 5305 was significantly better than the controls.

RVCM Of Shipment Samples

A total of 124 shipment samples were tested for RVCM in September. Below is a summary of these results.

<u>Sample Type</u>	<u>5305</u>	<u>5385</u>	<u>5425</u>	<u>5465</u>	<u>Dry Blend</u>
Average ppm RVCM	1.7	0.7	0.5	0.2	0.3
Number of Samples	67	48	5	4	32

MISCELLANEOUS PROJECTS

Resin Volume Resistivity

Volume resistivity tests were run on 5425 and 5465 resins. The results were lower than normal.

LABORATORY - (CONTINUED)

MISCELLANEOUS PROJECTS - (CONTINUED)

RVCM of Process Samples

Below is a listing of the RVCM of in process samples.

<u>Sample ID</u>	<u>Overall Average RVCM</u>	<u>Number of Samples</u>
Reactor Slurry	193	516
Stripper Water	4.7	119
5305 Drier Samples	2.6	86

The daily average for reactor samples exceeded 400 ppm one time during the month of September.

Inherent Viscosity

A total of 677 resin samples were checked for inherent viscosity in September.

Other Service

The following indicates the number of samples tested as a service to Process Engineering and Safety Department.

<u>Sample Type</u>	<u>Number of Samples</u>
Waste Water COD	94
Well Water Conductivity	12
Waste Water Percent Solids	12
Air Bags ppm VCM	5
Carbon - CTA ppm	14
Carbon - VCM ppm	79

TRANSPORTATION - J. E. STARK

Shipment by Product - M/lbs.

	<u>September</u>	<u>Year-to-Date</u>
Resin	15825	169467
Plasticizer	41	826
Dry Blend	3820	34245
Compound	3306	33062
Total	<u>22992</u>	<u>237600</u>

Number of Shipment by Mode

	<u>R/C</u>	<u>O.T. Bulk</u>	<u>O.T. Van</u>	<u>C.O.T</u>	<u>C.C.</u>	<u>TOFC</u>	<u>CPU</u>	<u>TOTAL</u>
Resin - Bulk	74	28						102
Package			9				10	19
Export	3	2	28					33
Plasticizer							1	1
Dry Blend - Bulk	11	8					21	40
- Package			5				4	9
- Export			13					13
Compound - Bulk	7							7
- Package			35		3		11	49
- Export			3					3
Other - Antifreeze								
- Alumina								
Back Hauls for September	<u>95</u>	<u>38</u>	<u>93</u> <u>34</u>	<u>0</u>	<u>3</u> <u>1</u>	<u>0</u>	<u>47</u>	<u>276</u> <u>35</u>

Number of Shipment by Month-Year-to-Date

	<u>R/C</u>	<u>Bulk</u>	<u>Van</u>	<u>C.O.T.</u>	<u>C.C.</u>	<u>TOFC</u>	<u>CPU</u>	<u>Total</u>
January	91	48	200	2	91	0	55	487
February	91	55	172	0	40	0	58	416
March	132	65	208	6	54	0	74	539
April	96	38	181	0	11	0	69	395
May	111	49	120	0	3	0	68	351
June	123	55	74	0	5	0	50	307
July	104	60	80	0	7	0	47	298
August	87	65	87	0	8	0	44	291
September	95	38	93	0	3	0	47	276

TRANSPORTATION - (CONTINUED)

MATERIAL HANDLING REPORT

	<u>M/Lbs.</u>	<u>T/L</u>
Packaged Resin from Production	2268	56
Packaged Compound, Dry Blend from Prod.	4495	111
Transferred From Main to Prairie	3199	79
Transferred from Prairie to Prairie	1094	27
Transferred from Prairie to Main	1377	34
Reverse Transfer Resin to Plant	284	7
Reverse Transfer Cmpd. to Plant	81	.2
Shipment from Warehouses	2916	72
Special Packaging	1782	44
	<u>17496</u>	<u>432</u>

OFF-GRADE IN STORAGE

<u>MATERIAL</u>	<u>M/Lbs.</u>	<u>T/L</u>
Sifter Overflow	200	5
Resin "BC"	2452	61
Resin "H"	766	19
Mill Scraps	103	3
Compound "BC"	1480	36
Compound "H"	77	2
Vacuum, Dust Collector	100	2
Dry Blend "O. G."	175	4
Total	<u>5346</u>	<u>132</u>

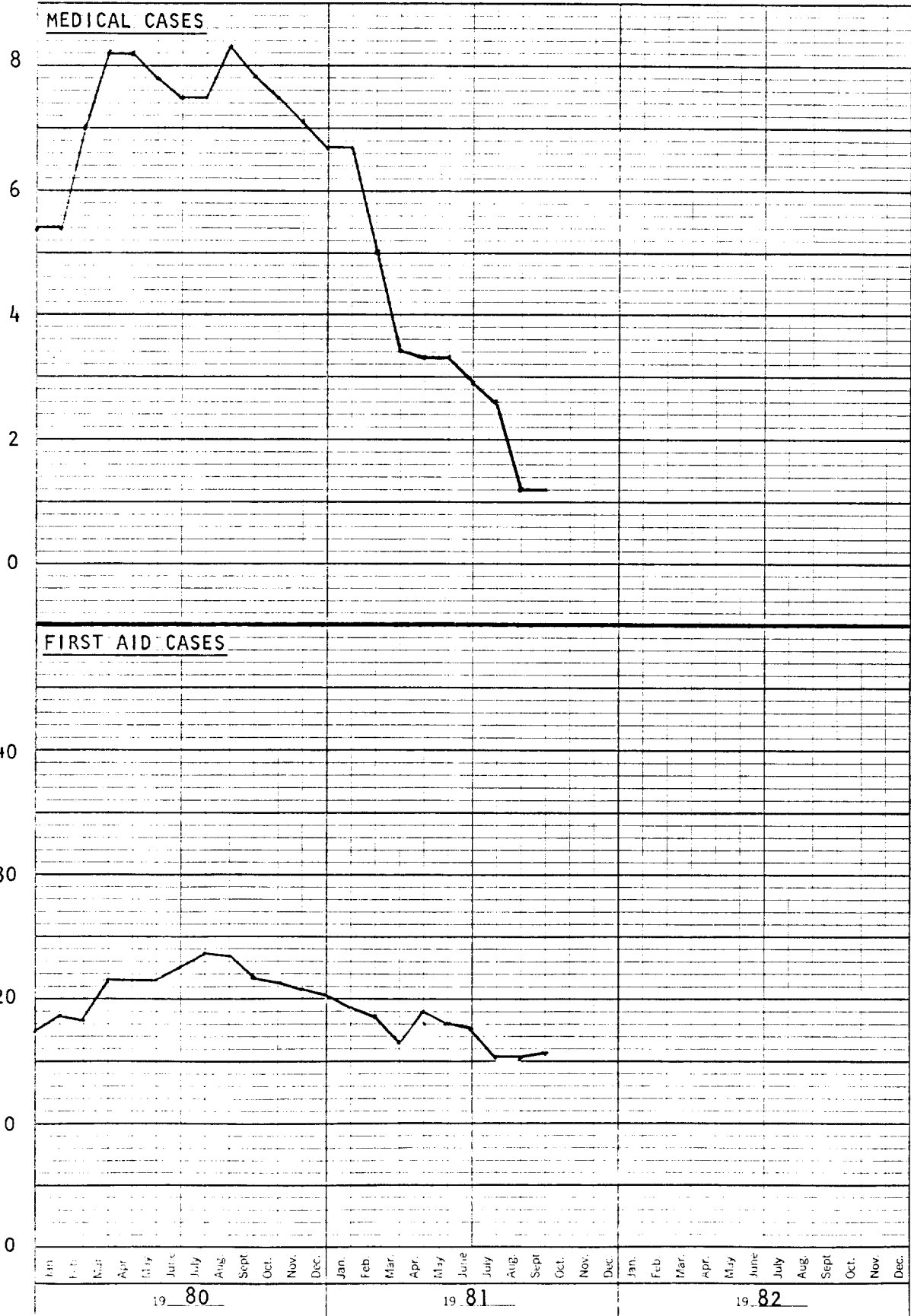
ABERDEEN WAREHOUSE

LOCATION	TOTAL M SQ. FT.	CONTENTS	ESTIMATED MM POUNDS		
			ON FLOOR	OPEN	TOTAL
MAIN-East	48	Compounds	6.9		
		Dry Blend	.3		
		Export Resin	.		
		Conoco Resin	.1	7.3	2.7 10.0
Prairie 12-1	12	HDPE	.4		
		Dry Blend	.	.4	1.5
12-2	22	Conoco Resin	1.9		
		Compound (A)	.3		
		Dry Blend	.1	2.3	1.2 3.5
12-3	21	Conoco Resin	.4		
		Export Resin	1.9		
		Compound (A)	.1	2.4	1.1 3.5
12-4	22	Conoco Resin	4.4		
		Resin O.G.	.	* 4.4	3.5
12-5	21	Mill Scraps	.1		
		Cmpd O.G.	1.0		
		Dry Blend O.G.	.5		
		Sifter Overflow	.		
		Resin O.G.	.2	1.8	.7 2.5
12-6	21	Compound	.		
		Resin	2.9		
		Raw Material	.3	3.2	.3 3.5
12-7	21	Resin O.G.	3.2	3.2	.3 3.5
12-8	21	Conoco Resin	3.7	* 3.7	. 3.5
12-9	21	Conoco Resin	.5		
		Sifter Overflow	.2		
		Compound (A)	.6		
		Compound O.G.	.5		
		D.E. O.G.	.2		
		Mill Scrap	.1	2.1	1.4 3.5
		Sub-Total			38.5
		(Plug-Aisles)			1.1
Total	230	Total Conoco	30.8	8.8	39.6

ABERDEEN CHEMICAL PLANT

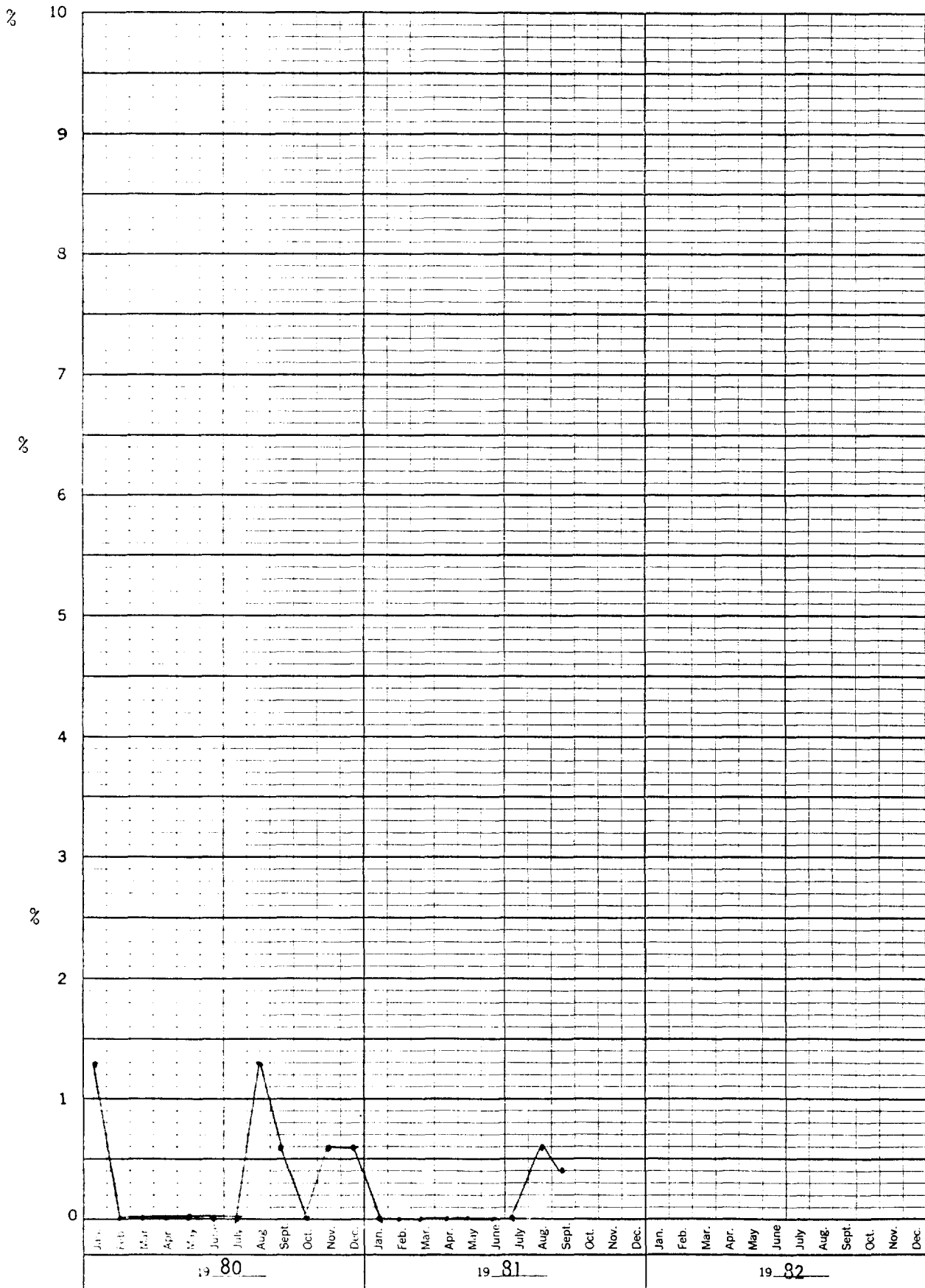
INJURY PERFORMANCE

INJURY FREQUENCY X 100



$$\text{FREQUENCY} = \frac{\text{TOTAL INJURIES (FA OR MC)} \times 12}{\text{TOTAL EMPLOYEES}}$$

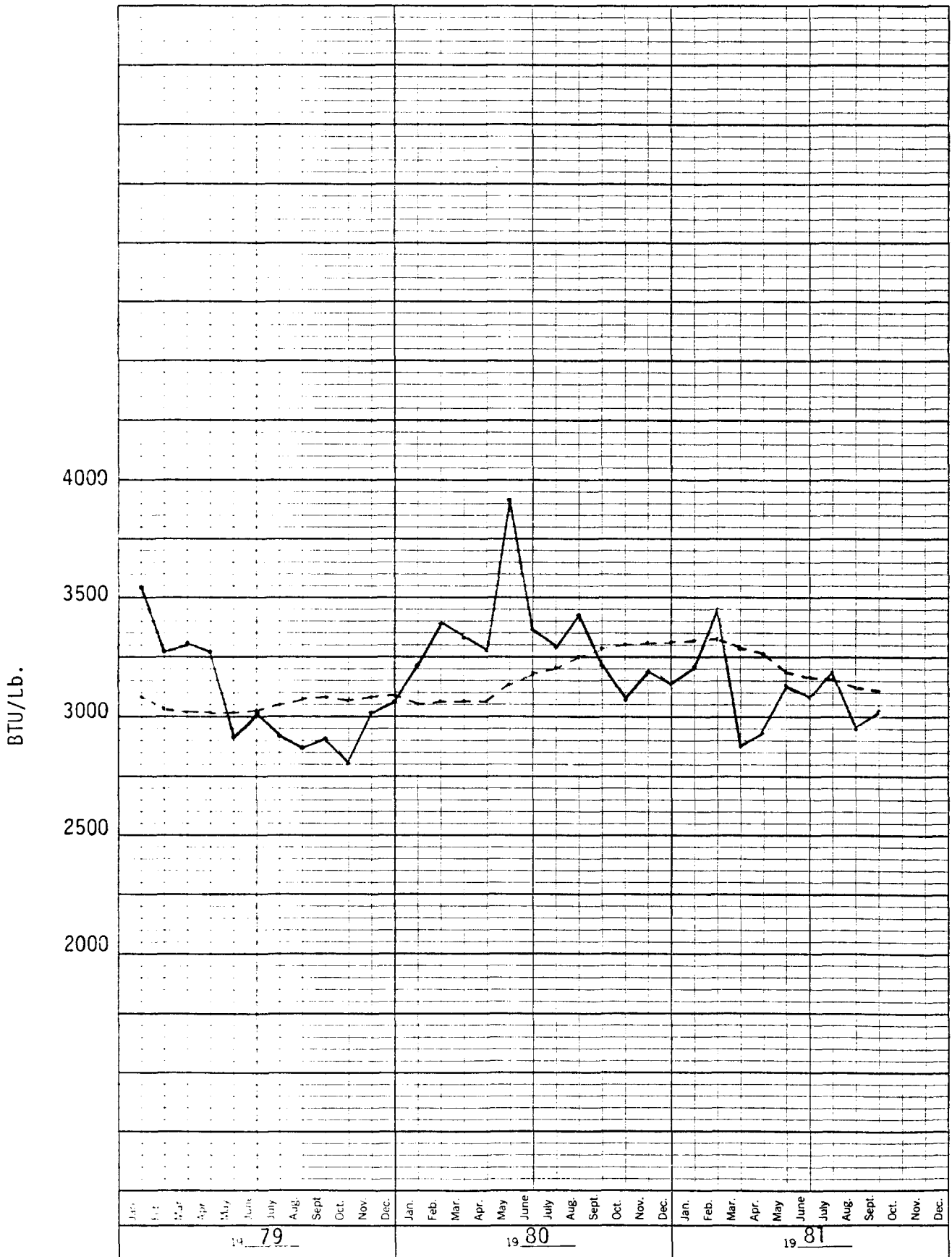
MONTHLY HOURLY TURNOVER



46 3290

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

ENERGY USAGE



_____ Monthly
 ----- 12 Month Moving Average

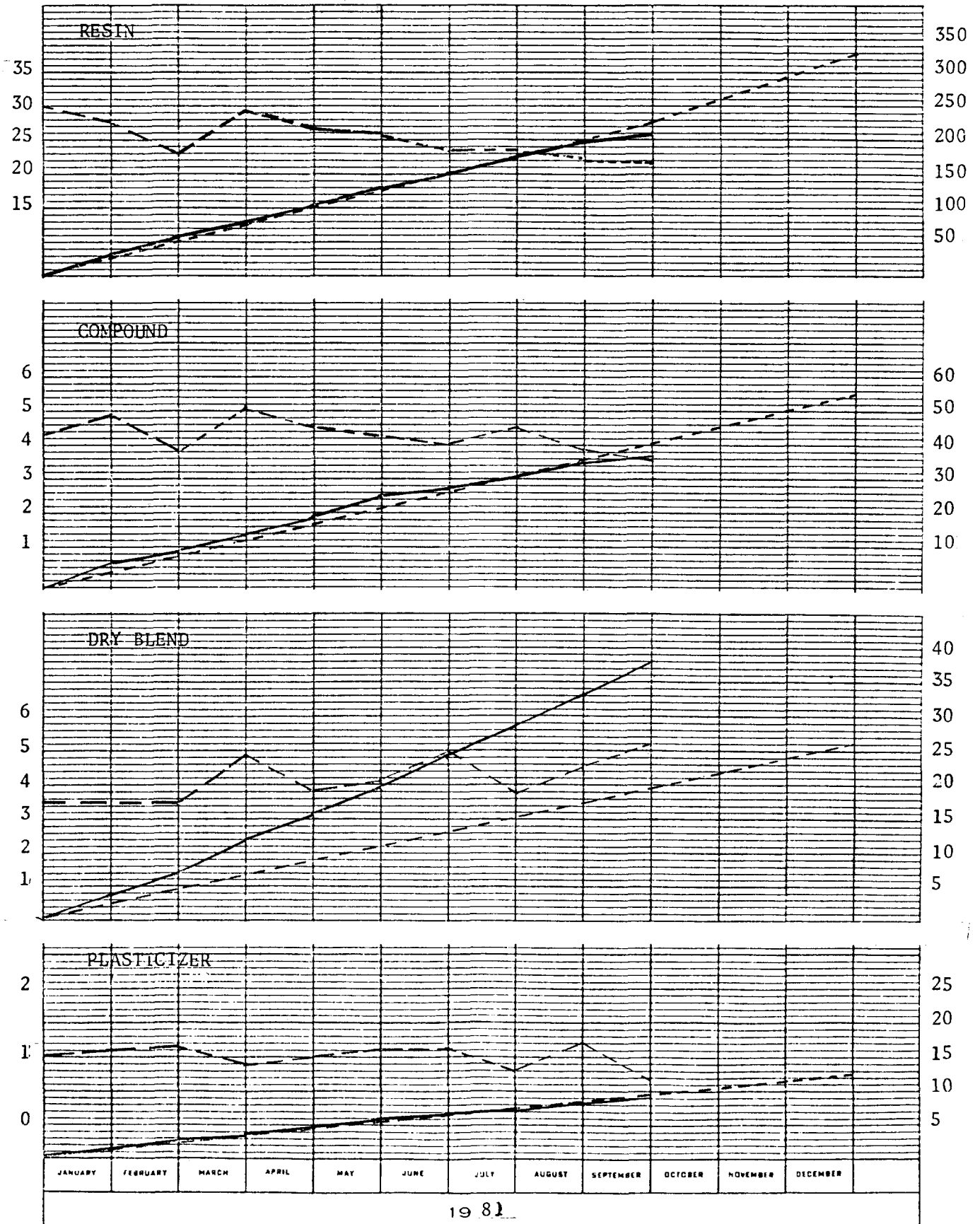
DTH 000021545

MM POUNDS
MONTHLY

ABERDEEN PLANT PRODUCTION

1981

MM POUNDS
CUMULATIVE

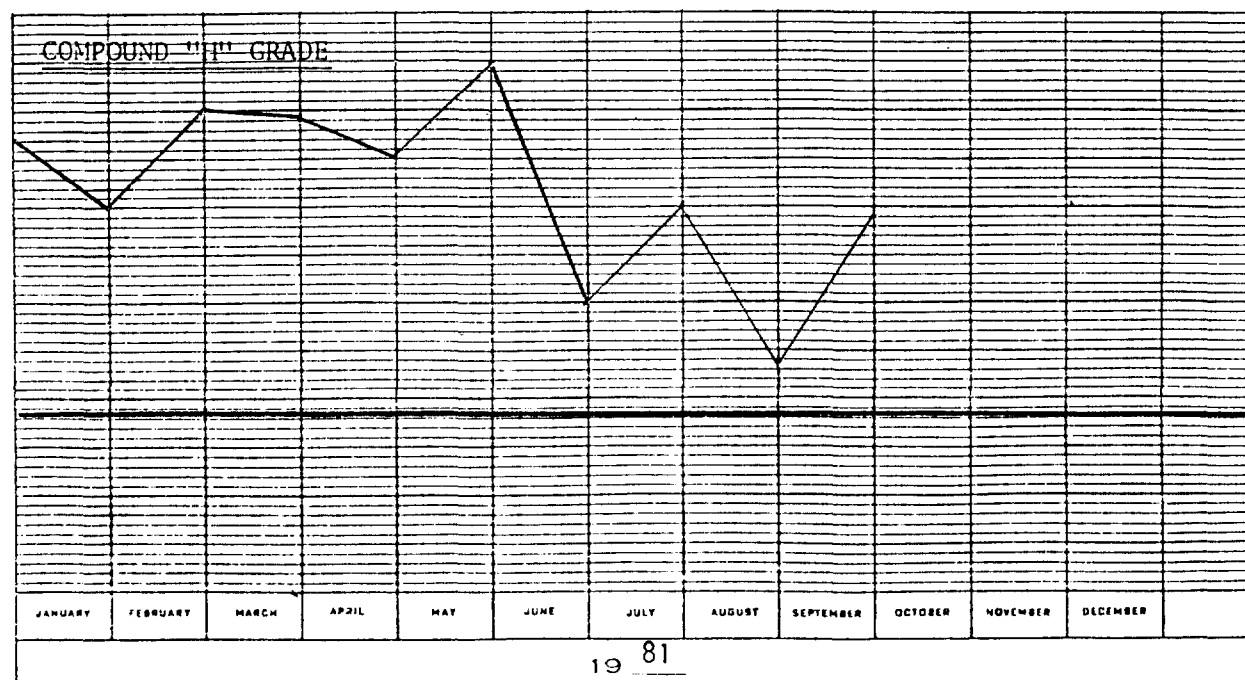
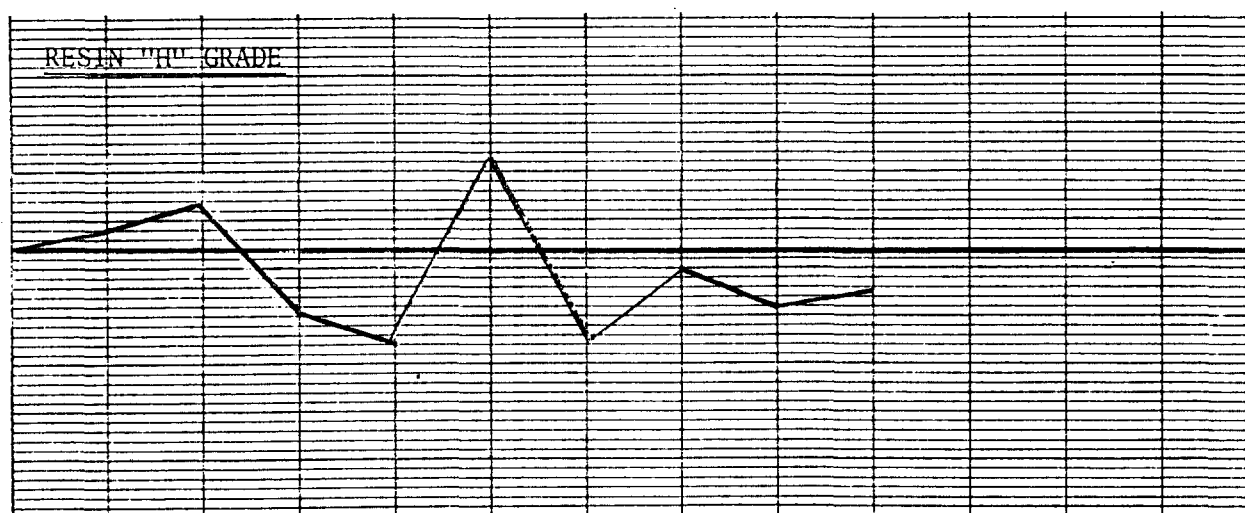
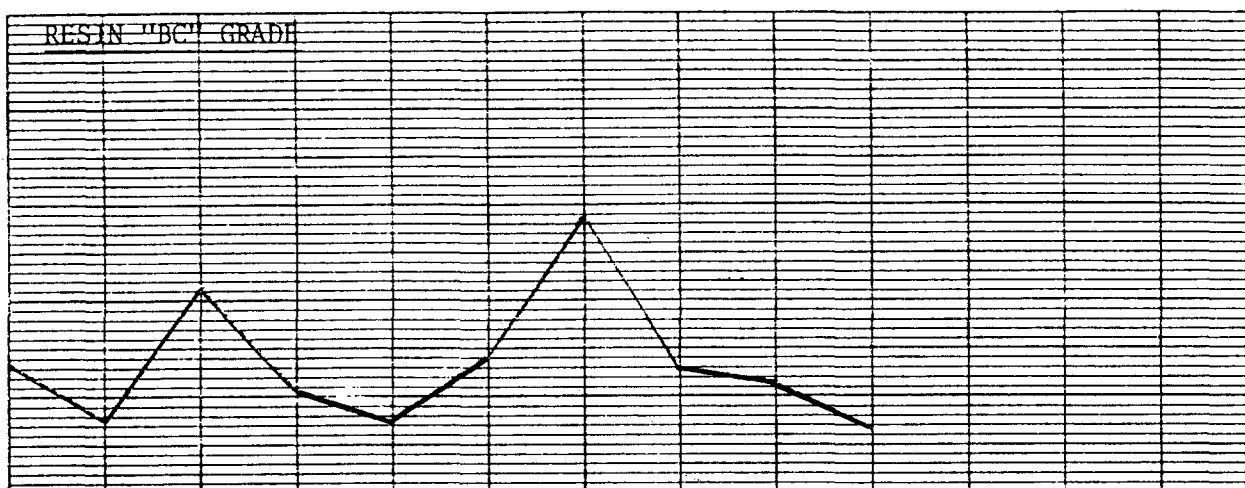


----- BUDGET
- - - - - ACTUAL
————— CUMULATIVE

ABERDEEN PLANT QUALITY PERFORMANCE

1981

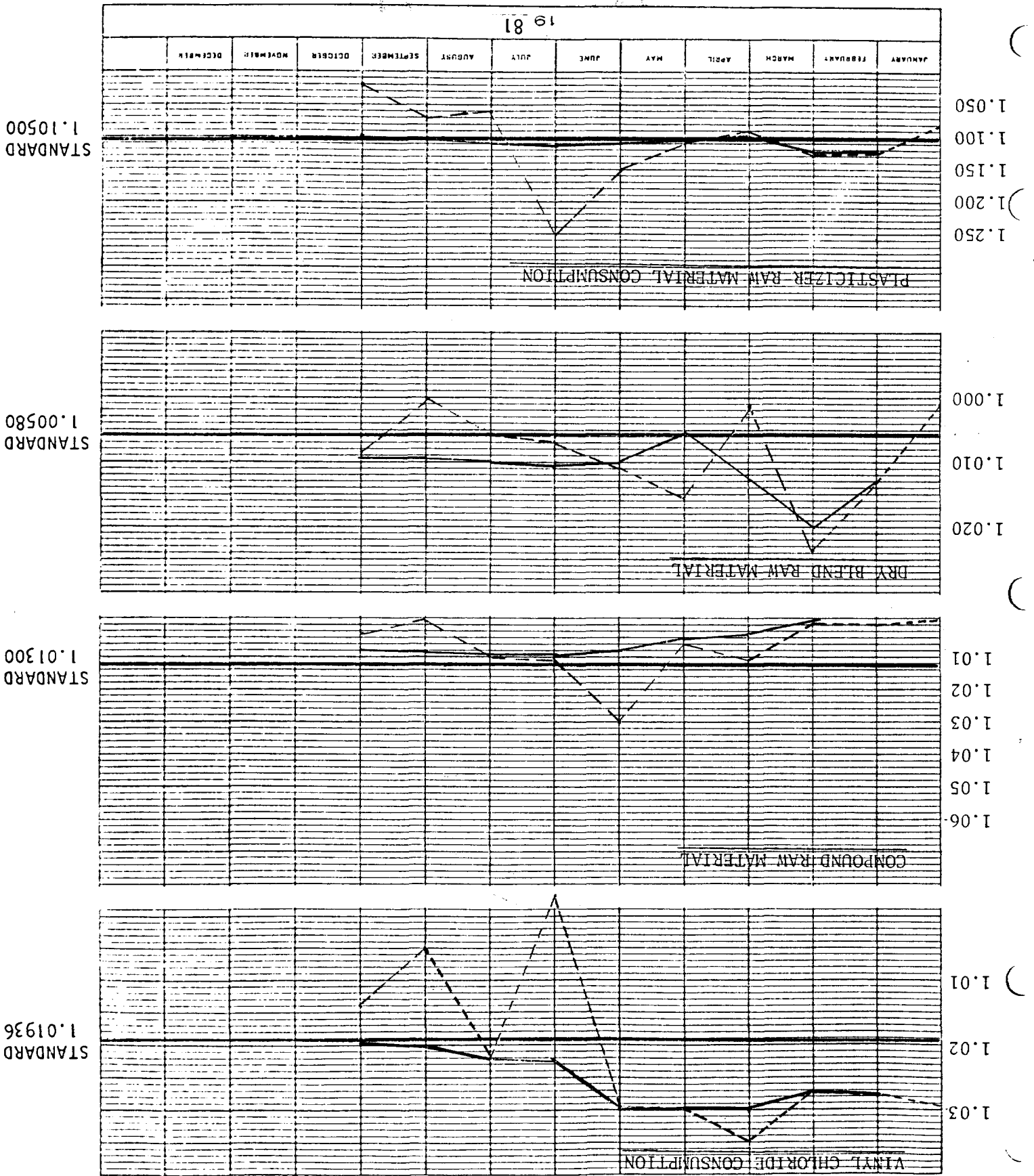
%
OFF-GRADE



19 81

1981

POUNDS OF RAW MATERIAL/POUND OF PRODUCT

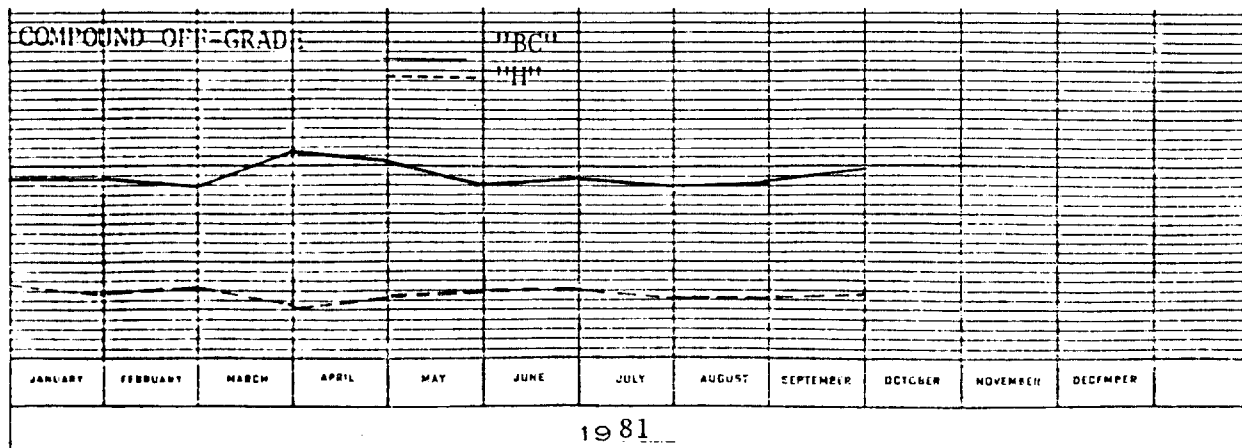
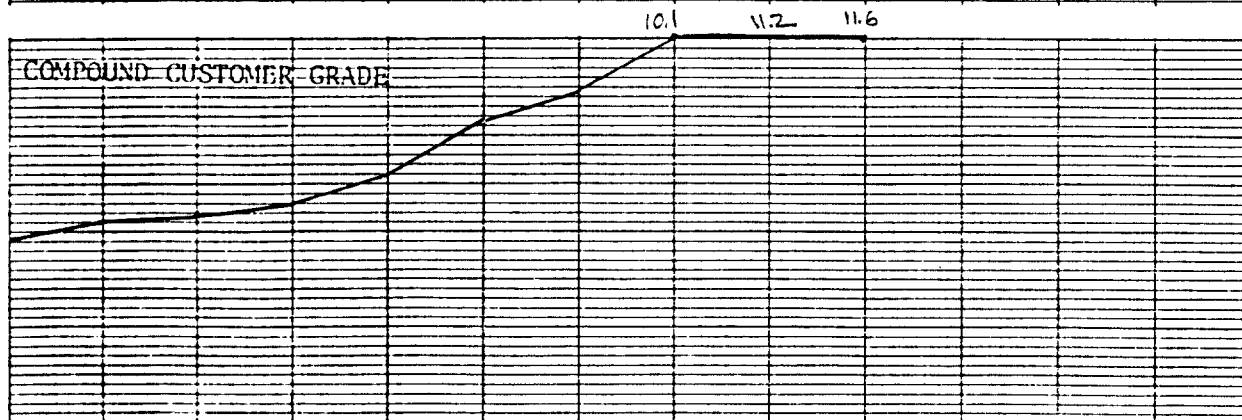
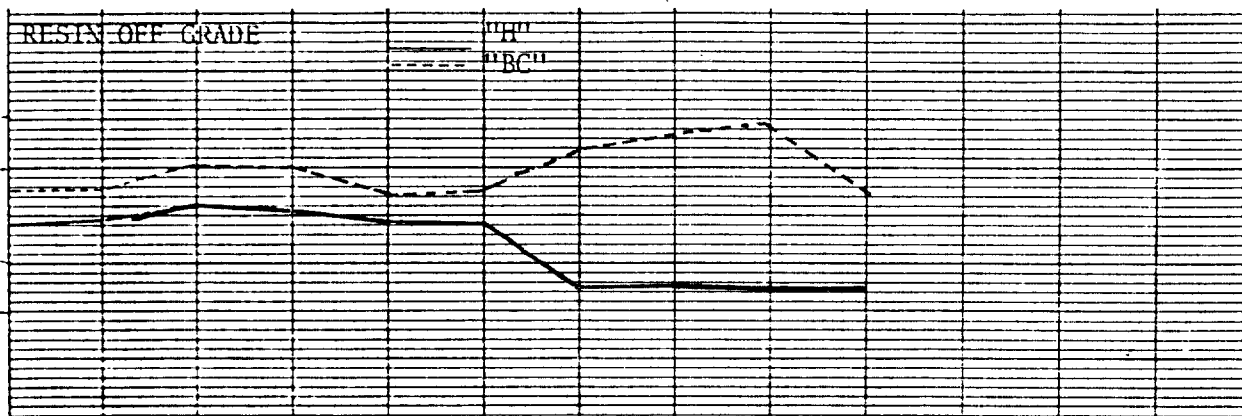
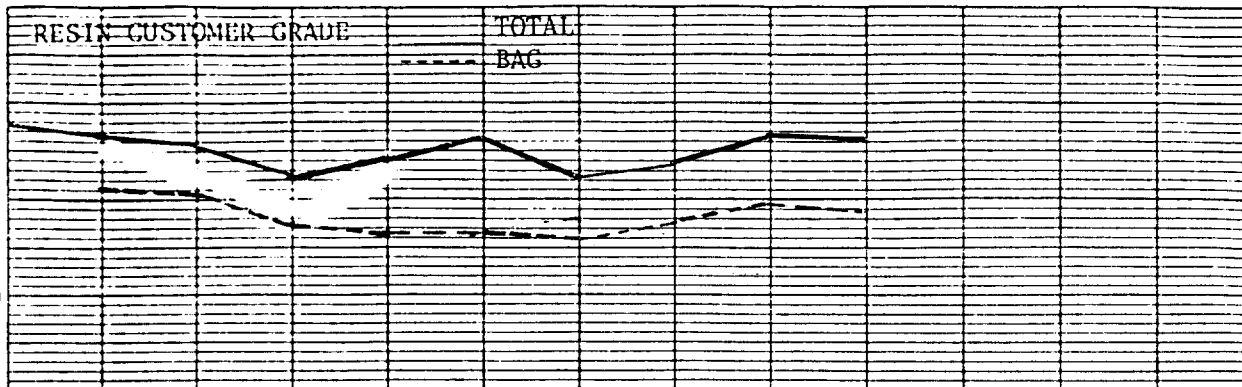


MONTHLY
CUMULATIVE

ABERDEEN PLANT INVENTORIES

1981

MM
POUNDS



1981