

To: T. H. Huffman

From: D. C. Skokna  
Date: December 19, 1988

Subject: ABERDEEN MONTHLY PROGRESS REPORT  
NOVEMBER, 1988

# VISTA

**Interoffice  
Communication**

## Safety

There was one first aid case reported in November. As of November 30, the plant's employees have worked 3,436 days or 4,500,865 manhours since the last lost time injury.

| <u>Key Statistical Information</u>     | <u>November</u> | <u>Y.T.D.</u> |
|----------------------------------------|-----------------|---------------|
| PVC Production, MM Lbs.                | 37.9            | 76.5          |
| Reactor Stream Factor, %               | 91.5            | 91.5          |
| Resin Quality, % Prime                 | 95.5            | 95.7          |
| VCM Efficiency, Lbs./Lb                | 1.0146          | 1.0158        |
| Flexible Compound Production, MM Lbs.  | 5.6             | 12.5          |
| Flexible Compound Quality, % Prime     | 92.9            | 92.9          |
| Rigid Compound Production, MM Lbs.     | 5.6             | 12.5          |
| Rigid Compound Quality, % Prime        | 99.8            | 99.8          |
| Plasticizer Production, MM Lbs.        | 1.8             | 3.7           |
| Plasticizer Quality, % Prime           | 92.3            | 93.1          |
| Energy Use (EUI %)                     | ( 4.0)          | ( 1.7)        |
| Fixed Cost Variance, \$M               | (60.8)          | (78.6)        |
| Variable Cost Variance, \$M            | 498.2           | 900.7         |
| Variable Cost Price Variance, \$M      | 501.8           | 992.9         |
| Variable Cost Efficiency Variance, \$M | ( 3.7)          | (84.9)        |

## Costs

Fixed costs were above budget due to costs associated with the Coker water test run, holiday pay, and benefit clearances being higher than budget.

Variable costs were essentially at budget.

T. H. Huffman  
12/19/88  
Aberdeen Monthly Progress Report  
Page 2

A

QMP

- A task force, consisting of plant, PED, and R & D members, was formed to determine the causes of 5305 resin contamination.
- A presentation was made to Purchasing and Manufacturing management concerning a revised raw material supplier partnership program.

*D. C. Skokna*  
*by*  
*ms*  
D. C. Skokna  
Plant Superintendent

rah

| <u>DISTRIBUTION</u>                 | <u>COVER LETTER</u>                                                           | <u>ENTIRE REPORT</u> | <u>COVER LETTER<br/>AND QMP</u> |
|-------------------------------------|-------------------------------------------------------------------------------|----------------------|---------------------------------|
| <u>HOUSTON:</u>                     | J. D. BURNS                                                                   | 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                               |
|                                     | R. H. GERLACH                                                                 |                      | X                               |
| <u>PONCA CITY:</u>                  | S. E. MCGUIRE                                                                 |                      | X                               |
|                                     | R. L. POE                                                                     | X                    |                                 |
|                                     | H. J. HALL                                                                    |                      | X                               |
| <u>OKLAHOMA CITY:</u>               | H. G. GARRISON                                                                |                      | X                               |
| <u>LAKE CHARLES VOM 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, JEN, DWH, TEL,<br>JEB, VEM, HGC, JEL, REP, RBN, BLT |                      |                                 |

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SAFETY - B. L. Trego

| <u>Occupational Injuries</u> | <u>November</u> | <u>Fiscal<br/>Y.T.D. 1989</u> | <u>Fiscal<br/>Y.T.D 1988</u> |
|------------------------------|-----------------|-------------------------------|------------------------------|
|------------------------------|-----------------|-------------------------------|------------------------------|

|                 |          |          |          |
|-----------------|----------|----------|----------|
| First Aid       | 1        | 3        | 3        |
| OSHA Recordable | 0        | 0        | 0        |
| Total Injuries  | <u>1</u> | <u>3</u> | <u>3</u> |

|                                    |   |   |   |
|------------------------------------|---|---|---|
| Number of Restricted Workday Cases | 0 | 0 | 0 |
| Number of Lost Workday Cases       | 0 | 0 | 0 |

Injuries by Department

|                     |          |          |          |
|---------------------|----------|----------|----------|
| Vinyl Operations    | 0        | 0        | 0        |
| Compound Operations | 0        | 0        | 0        |
| Maintenance         | 1        | 3        | 2        |
| Laboratory          | 0        | 0        | 1        |
| Receiving/Warehouse | 0        | 0        | 0        |
| Office              | 0        | 0        | 0        |
| Totals              | <u>1</u> | <u>3</u> | <u>3</u> |

Injuries by Type

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

Non-Occupational Injuries

|                    |    |    |    |
|--------------------|----|----|----|
| Lost Workday Cases | 1  | 1  | 2  |
| Days Lost          | 14 | 14 | 29 |

Safety Record

Last lost time injury      7/5/79  
 Days since -                      3,436  
 Manhours since -            4,500,865

On November 30, 1988, the employees at the Aberdeen Plant completed 3,436 days with no lost time injury.

Topics for the plant safety meetings during the month included: Contractor Safety, Annual Fire Training, Annual Health Training, and Maintenance Weekly Safety and Job Reviews.

Annual health training and annual fire training were both completed during the month.

SAFETY - Continued

Routine dosimetry for the month were as follows:

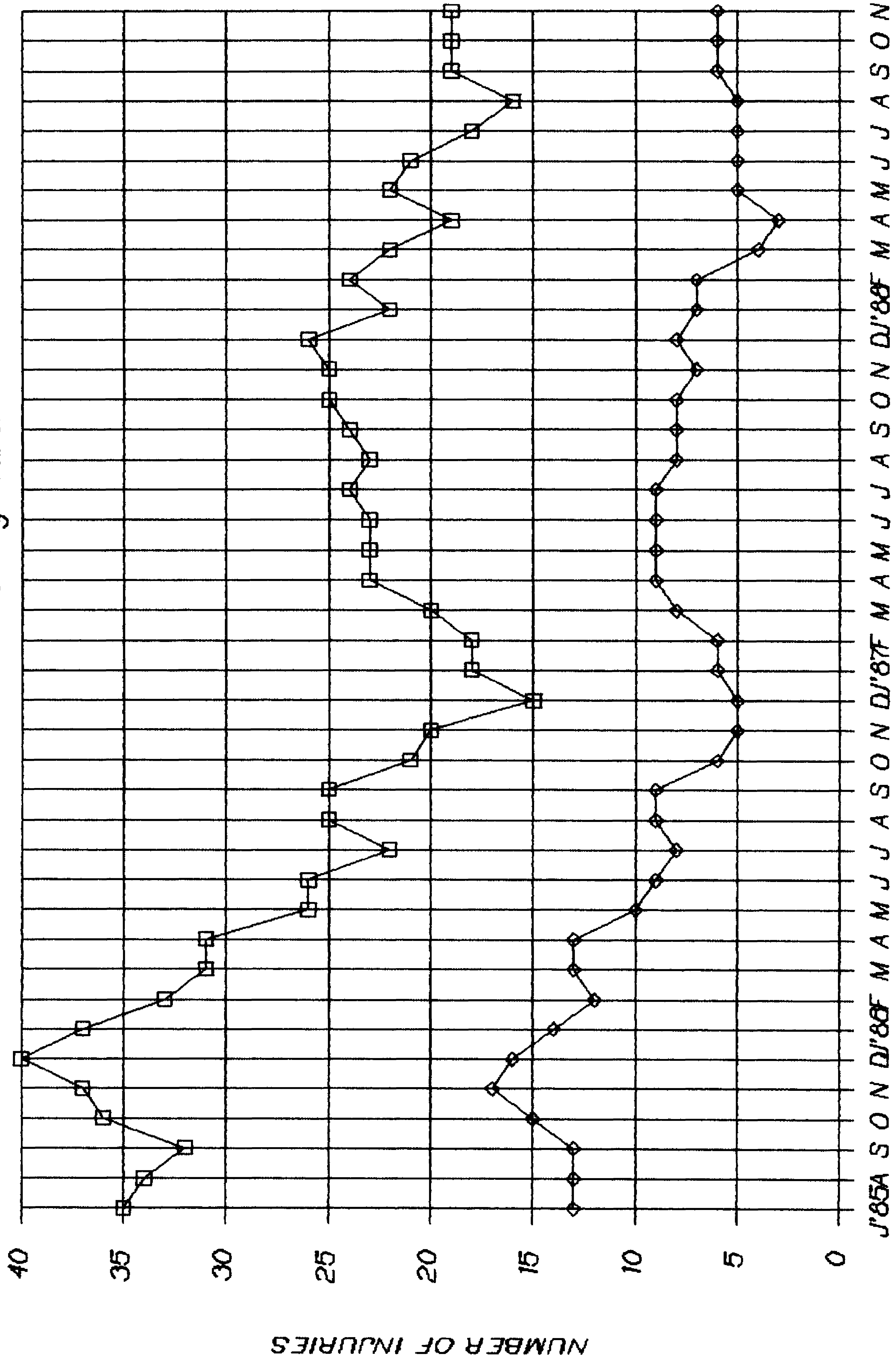
| <u>Chemical</u>    | <u>&lt;</u>   |                        | <u>&gt;</u>   |                        |
|--------------------|---------------|------------------------|---------------|------------------------|
|                    | <u>Number</u> | <u>PEL<br/>Percent</u> | <u>Number</u> | <u>PEL<br/>Percent</u> |
| VCM                | 78            | 100.0                  | 0             | 0.0                    |
| Lead               | 18            | 100.0                  | 0             | 0.0                    |
| Total Particulates | 4             | 100.0                  | 0             | 0.0                    |

Monthly Injury Summary

| <u>Injury Class</u> | <u>Department</u> | <u>Description</u>  |
|---------------------|-------------------|---------------------|
| FA                  | Maintenance       | Bruise, right knee. |

# ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



□ TOTAL INJURIES      ◇ OSHA RECORDABLE

QUALITY DEVELOPMENT - D. W. HollisGeneral Plant

The Plant Manager's Natural team met twice during the month. The members of the team are doing a time study to identify areas that can be changed to be able to devote more time to QMP.

Bob Schettek and Dave Hollis made a presentation to Purchasing and Manufacturing management concerning a revised raw material supplier partnership program.

Administrative Services

No QMP activity was reported this month.

Compound

The Compound Supervisor's natural team met in November. The meeting included review of Ford's Failure Mode and Effects Analysis (FMEA) program and a discussion of possible ways to implement this system.

The metal detectors upstream of the dicers on Lines I and III were placed in operation. These instruments will shut down the dicers upon detection of metal thus preventing dicer teeth damage.

Lab

SPC charts were sent to Southwire for their 1220-06X compound. The data covered the fourth fiscal quarter of 1988.

All six Lab Natural Teams met in November.

Mechanical

There are three active project teams in the Mechanical Department. The Mechanical Superintendent's November Natural Team meeting topic was "How to Remove Barriers that Inhibit Project Team Progress".

The Maintenance Engineer collected team data during November in preparation for the December Commodities Quality Improvement Team meeting in Lake Charles.

Software supplied by our water treatment vendor is being analyzed for on-line water treatment variable charting.

## QUALITY DEVELOPMENT - Continued

### Vinyl

The Department Natural Team met twice during the month to coordinate day-to-day operations, brainstorm ideas and provide support to the Klockner Contamination Team, discuss involvement teams and to continue work on the Quality Implementation Plan.

Four Employee activity teams continue to be active in the department: The 5265/5305 Contamination Team continues to be active in pursuing a resolution to the contamination problem and are contributing to the "full time" technical team that was organized in November to pursue a more timely resolution to the problem. The V-11 Dustbusters are in the process of upgrading one of the five screeners to demonstrate that their proposed solutions will be effective and thus justify further expenditures. The Plasticizer Loading/Unloading Team did not meet during the month and "C" Shift met with PED-Houston to complete the hook-up station design for the low molecular weight expansion design.

### Process Engineering

Natural Teams met five times during this month. In two of the meetings J.E. Nickerson, Operations Superintendent, and T.F. Lyon, Mechanical Superintendent, spoke to the Process Engineers on "What Do I Expect From a Process Engineer?" These talks were recommended by V. E. Messick's Natural Team.

An experimental design was conducted to optimize Dryblend transfer rates from the blenders to storage. This design showed that transfer system improvements and correct operating conditions have allowed a 40% decrease in transfer times and eliminated the transfer system bottleneck to bulk silos.

# COST VARIANCES - D. C. Skokna

## Variable Costs

| <u>Product</u>    | <u>November, 1988 Variances - \$M</u> |                |                |
|-------------------|---------------------------------------|----------------|----------------|
|                   | <u>Efficiency</u>                     | <u>Price</u>   | <u>Total</u>   |
| PVC               | \$16.6                                | \$403.4        | \$420.0        |
| Flexible Compound | (32.2)                                | 6.8            | (25.4)         |
| Rigid Compound    | 38.6                                  | 30.4           | 69.0           |
| Plasticizer       | (26.7)                                | 61.2           | 34.5           |
| Total             | <u>\$ (3.7)</u>                       | <u>\$501.8</u> | <u>\$498.1</u> |

PVC Variances - Efficiencies were essentially at budget.

Flexible Compound - The variance due to product mix was an unfavorable \$28.5M, with other variances near budget.

Rigid Compound - The product mix variances (\$21.0M favorable) and  $TiO_2$  variances (\$21.7M favorable) were the primary contributors to the overall variances.

Plasticizer - Alcohol and phthalic anhydride consumption were both above budget. It is believed that this is due to underestimating the plasticizer (610P and 108P) usage in flexible compound. The low estimate causes an unfavorable variance in Plasticizer with an offsetting variance in flexible compound. The total effect (Plasticizer variances plus the 610P and 108P variance in the compound) is slightly favorable.

## Price Variances

|                         | <u>\$M</u>     |
|-------------------------|----------------|
| VCM (including freight) | \$396.4        |
| Alfol 610               | 61.4           |
| Polyvic 5202            | 15.0           |
| $TiO_2$                 | 13.1           |
| 610P                    | 12.9           |
| DIDP                    | (10.0)         |
| Other Price Variances   | 13.0           |
| Total                   | <u>\$501.8</u> |

## Fixed Cost Variances

|                    | <u>\$M</u>      |
|--------------------|-----------------|
| Payroll & Benefits | \$(69.4)        |
| M. M. & C.         | ( 4.4)          |
| Miscellaneous      | 20.8            |
| T. I. & D.         | ( 4.5)          |
| Clearances         | ( 3.3)          |
| Total              | <u>\$(60.8)</u> |

COST VARIANCES - continued

Payroll and Benefits Overtime costs due to the two day Thanksgiving holiday and a higher than budget benefits clearance rate caused the unfavorable variance.

M.M. & C. costs were essentially at budget.

|                                 |        |
|---------------------------------|--------|
| Miscellaneous                   | \$M    |
| - Moving/Home Assistance        | \$14.2 |
| - Outside Professional Services | 26.3   |
| - Unclassified                  | (30.5) |
| - Operating Supplies            | 13.6   |
| - All Other Miscellaneous Items | ( 2.8) |
| Total                           | \$20.8 |

OPERATIONS AND MECHANICAL DEPARTMENTS - T. Lyon, P. Kober, J. Nickerson

OPERATIONS/MECHANICAL SAFETY

There was one injury to a Mechanical Department employee requiring first aid. A General Mechanic suffered a bruised knee after tripping on some coiled cable.

The Vinyl, Yard and Compound Departments worked without injury in November.

The monthly safety meeting topics for all departments were health training and fire training.

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

GENERAL

1. A test run using the Coker water as charge water was conducted this month. No buffer addition was needed.
2. An improved temperature controller (like the controller on D745) was installed on D700.
3. The resin raw materials in the 744 account were valued at \$472.9M.

|                                       | <u>November</u> | <u>YTD</u> |
|---------------------------------------|-----------------|------------|
| Production, MM lbs                    | 37.9            | 76.5       |
| Daily Production Rate, Mlbs/c.d.      | 1264            | 1254       |
| Total Reactor Charges                 | 905             | 1811       |
| Charges, Reactor Batches/c.d.         | 30.2            | 29.7       |
| Reactor Stream Factor, %              | 91.5            | 91.5       |
| Rotary Dryer Stream Factor (#4-#8), % | 85.3            | 86.6       |
| Fluid Bed Dryer Stream Factor, %      | 95.0            | 95.9       |
| Resin Quality, % Prime                | 95.5            | 95.7       |

Reactor Downtime

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>Hours</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| - <u>Operational Downtime</u> (recovery scheduling conflicts, power failure, downtime to rinse chem wash tanks, new module rinse water/charge conflicts, waiting on particle size data before charging, flushing lines and false charging for Coker water test, inclement weather, unplugging BPA line to D745, inspecting D700 and D745 as part of Klockner contamination work, cleaning small blend tanks for Klockner contamination work, and no place to dump.) | 292.7        |

VINYL - Continued

| <u>Reactor Downtime</u>                                                                                                                                                                                                                                                                                                                           | <u>Hours</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| - <u>Maintenance Downtime</u> (hydroblasting and drilling condensers on reactors D700, D745, D741, D742, polyvic charge system repairs, replacement of transformer, repairs to D743 jacket, change agitator seal on D745, commissioning chem wash backflush filters, new unit recovery system repairs, and miscellaneous instruments and valves.) | 316.8        |
| Total Downtime                                                                                                                                                                                                                                                                                                                                    | <u>609.5</u> |

Dryer Downtime (does not include dryers #1 [pond] and #2).

|                                                                                                                                                                                                                                                                                                        | <u>% of Total Downtime</u> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| - Reactor limited production                                                                                                                                                                                                                                                                           | 64.9                       |
| - Operational downtime (centrifuge plugging, dryer cleaning, activator transfer problems, checking dust collector socks for leaks, flameouts, checking sifter screens, dust collector backups, lining up small blend tanks to dry 5305 [part of Klockner contamination testing], and a power failure.) | 12.5                       |
| - <u>Maintenance Downtime</u> (dryer #8 air sweep, trunion roller on dryer #7 fluid bed exhauster, dryer #8 star valve, changing fluid bed screens, repairs to the fluid be screeners, replace broken socks on #8 and #4 dust collectors, and various activator and centrifuge repairs.)               | 22.6                       |

Key Maintenance Work - D. A. Miller, J. B. Hegwood

Reactor Area

- Reactors 700, 741, and 742 were shutdown for condenser drilling. Condenser drilling has increased in order to decrease the contamination level of the resin.
- Reactor 745 was also shut down for condenser drilling, during which time the condenser base was hot bolted and Belleville washers were installed. The installation of these washers are part of the Reactor Bolted Joint Program started to improve the integrity of our reactor bolted joints. A new hydraulic torque wrench was also trialed for use by maintenance personnel for the reactor bolted joints. Also during the month, the reactor agitator seal was changed due to an external oil leak through the weep hole.

Reactor Area

- The chem wash backflush filters were repaired and put in service.
- A small water leak in reactor 743 jacket caused by a cracked circumferential weld was repaired.
- A new 881 reactor agitator gearbox was purchased as a replacement for an 805 gearbox due to high repair costs.
- Silo 281 resin blower was replaced due to a split in the case of the old blower.
- As an on-going part of winterization several shelters were installed around vulnerable areas in the vinyl unit. Several steam leak repairs have also been made along with the replacement of some old insulation in the vinyl unit.
- Training for instrument technicians on the new SA module Modicon program using Compaq personal computers was completed.
- Reactors 700 and 745 microprocessor based temperature control system was completed. This was done to improve the temperature control and consistency of the inherent viscosity for 5305 resin.
- There were two major valves changed out in the reactor area during the month due to leaks.

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

A new record for production of 90172D (326,323 lbs.) was set in Dry Blend on November 1. This is also a post-Univox installation record for Dry Blend.

A second successful run of Chisso E2303 Black was completed on Line V in November.

| <u>Flexible Compound</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                   | 29                    | 1736                         | 60                                | 4032                 |
| Line III                 | 29                    | 3056                         | 105                               | 6844                 |
| Line V                   | 21                    | 804                          | 38                                | 1614                 |
| Total                    |                       | 5596                         |                                   | 12490                |

COMPOUND - ContinuedDowntime HoursLine I

|                                     |     |
|-------------------------------------|-----|
| - Product Changes                   | 132 |
| - Quality Problems and Control      | 45  |
| - Dicer Problems                    | 15  |
| - Miscellaneous Maintenance         | 14  |
| - Transfer Problems and Limitations | 13  |
| - Banbury Gate Repair               | 12  |

Line III

|                                      |    |
|--------------------------------------|----|
| - Product Changes                    | 76 |
| - Quality Problems and Control       | 26 |
| - Transfer Problems and Limitations  | 24 |
| - Sweco Star Valve Motor Replacement | 21 |
| - Mill Coupling Repair               | 19 |
| - Dicer Problems                     | 18 |
| - Miscellaneous Maintenance          | 8  |

Line V

|                                     |    |
|-------------------------------------|----|
| - W&P Maintenance                   | 72 |
| - Product Changes                   | 55 |
| - Cooling Water Pump Repair         | 7  |
| - Transfer Problems and Limitations | 6  |

| <u>Rigid Compound</u> | <u>Operating Days</u> | <u>Production - M lbs</u> |                 |            |
|-----------------------|-----------------------|---------------------------|-----------------|------------|
|                       |                       | <u>Month</u>              | <u>Avg./Day</u> | <u>YTD</u> |
| Dry Blend Unit        | 28                    | 5566                      | 199             | 11204      |

Downtime Hours

|                                     |    |
|-------------------------------------|----|
| - Product Changes                   | 56 |
| - Quality Problems and Control      | 16 |
| - Transfer Problems and Limitations | 8  |
| - Miscellaneous Maintenance         | 8  |
| - Univox Problems                   | 6  |

|             | <u>Operating Days</u> | <u>Production - M lbs</u> |                 |            |
|-------------|-----------------------|---------------------------|-----------------|------------|
|             |                       | <u>Month</u>              | <u>Avg./Day</u> | <u>YTD</u> |
| Plasticizer | 29                    | 1818                      | 63              | 3685       |

Key Maintenance Work - D. A. Miller, J. B. Hegwood

- The Line V Werner and Pfleiderer compounder was shut down for repairs to its gearbox. The left pinion shaft splines that connect it to the compounder had become excessively worn and the shaft was in need of replacement. All bearings, bushings, and seals were replaced along with the left pinion shaft.

## COMPOUND - Continued

### Key Maintenance Work

- The Line V cooling water pump for the Werner and Pfleiderer compounder was replaced due to severe corrosion. The old pump was replaced with a new Gould's standard ANSI pump.
- Line III was shut down for repairs to the roll mill coupling. The roll mill back roll inboard coupling half failed. It was removed and replaced with a new coupling.
- The Line I Stewart Bolling mixer discharge door hydraulic actuator failed. The actuator was rebuilt and reinstalled.

### UTILITIES - D. A. Miller, J. B. Hegwood

- The west propane storage tank and all of the mixed gas storage tanks were cleared for inspection and installation of a capital project to upgrade the piping to current NFPA standards. Also, the relief valves were reconditioned.
- The annual inspection and certification of the maintenance crane was performed and a one-day training course was held for maintenance personnel.
- On November 22, 1988, transformer 7C failed causing a plant outage. The critical equipment to operate the plant was temporarily fed from Motor Control Center 7B1 and 7B2, and a rental transformer was located and installed on November 29, 1988. Testing of the old transformer revealed a winding short that affected the turns ratio on one leg and would require the transformer to be rewound. It will take approximately six weeks for the rewinding of the transformer.
- Three underground storage tanks at the Plasticizer building were filled with sand in compliance with new federal EPA regulations.
- Repairs to #2 boiler were completed and all tubes were mechanically cleaned to remove any deposits.
- Temporary repairs to a natural gas leak at the boiler house were made due to pin-hole leaks caused by galvanic corrosion. A new section of pipe is being fabricated and will be installed with cathodic protection.
- Winterization of the boilers and propane system was completed.

ENGINEERING - R. E. Polk, R. B. Newton, S. C. Hillman

PROJECTS IN DEVELOPMENT - GENERAL

Coker Water Test Run

Seven PVC reactor batches have been successfully produced using Coker water. There appear to be no significant problems with using this water. Design of the permanent water treatment facilities and wells for use of Coker water will begin in December.

Low Molecular Weight Resin Expansion

A field trip was made by GED to gather information for the estimate planning packages. Estimates are to be completed in early December for review and approval before the next budget issue. The project is expected to cost approximately \$1.5MM.

Klockner Contamination Team

The team has concentrated on identifying contamination sources in the existing systems. A meeting is scheduled for December 13 to discuss results to date.

Alternate Natural Gas Pipe Line

A project design meeting with Gulf Fuels, Inc. is scheduled for December at the plant.

Steam Stripping

A steam stripping test run was completed in November. The new steam stripping procedures reduced residuals by 30-40% from 120 ppm average to 80 ppm average. Steam consumption increased by 16%. Implementation of these new procedures will begin in January after operator training is completed.

Noise Reduction Project

An engineering services contract has been signed with a consultant to evaluate plant noise data to determine possible methods for noise reduction.

Recruiting

Campus recruiting has been completed. Plant trip offers have been extended to prospects. All plant interviews will be completed by late February.

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ABERDEEN CHEMICAL PLANT

APPROVED CAPITAL PROJECTS

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| AFE<br>NUMBER | PROJECT<br>DESCRIPTION                    | STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|               |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| F786/F557     | RESIN QUALITY IMPROVEMENT PROJECTS        | <p>THE SA MODULE IS OPERATIONAL WITH PUNCHLIST ITEMS IN PROGRESS. DELIVERY OF THE REMAINING ITEMS ARE EXPECTED IN DECEMBER. FINAL PROCESS TIE-INS ARE PLANNED FOR COMPLETION IN DECEMBER. CONSTRUCTION IS COMPLETE. START-UP AND DEBUGGING IS IN PROGRESS. PUNCHLIST ITEMS ARE IN PROGRESS AND SCHEDULED FOR COMPLETION IN FEBRUARY. INSTALLATION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THESE ARE PLANNED FOR COMPLETION BY MID-JANUARY. INSTALLATION OF THE TEST WELL IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN DECEMBER. ENGINEERING IS IN PROGRESS WITH CONSTRUCTION PLANNED FOR COMPLETION IN FEBRUARY. THE COMPRESSOR IS ON ORDER AND DUE IN JANUARY. ENGINEERING IS COMPLETE AND MATERIALS HAVE BEEN PLACED ON ORDER. CONSTRUCTION IS COMPLETE. STARTUP AND DE-BUGGING IS IN PROGRESS. THE CONDENSER IS ON ORDER AND SCHEDULED FOR DELIVERY IN DECEMBER. ALL MAJOR EQUIPMENT IS ON ORDER. CONSTRUCTION IS SCHEDULED TO BEGIN IN MARCH. THE EQUIPMENT HAS BEEN PLACED ON ORDER AND IS DUE IN DECEMBER. ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN DECEMBER. INSTALLATION IS COMPLETE EXCEPT FOR TWO VALVES ON D-600 REACTOR. THESE WILL BE COMPLETED BY MID-JANUARY. INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN DECEMBER. INSTALLATION IS COMPLETE EXCEPT FOR THE I/E PORTION. THIS PLANNED FOR COMPLETION IN DECEMBER. CONSTRUCTION IS IN PROGRESS AND PLANNED FOR COMPLETION IN JANUARY. ENGINEERING IS IN PROGRESS. ALL VALVES WILL BE PLACED ON ORDER BY JANUARY 1. CONSTRUCTION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. IT WILL BE CLOSED TO FIELD CHARGES IN JANUARY. THE PROJECT IS COMPLETE EXCEPT FOR MAINTENANCE TRAINING. THIS WILL BE COMPLETED IN JANUARY. BASIS OF BIDS PREPARATION IS IN PROGRESS. ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN DECEMBER. ENGINEERING IS SCHEDULED TO BEGIN IN DECEMBER. ENGINEERING IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN DECEMBER. THE FORK TRUCKS HAVE BEEN PLACED ON ORDER. ALL ITEMS HAVE BEEN PLACED ON ORDER. CONSTRUCTION IS 20% COMPLETE AND IN PROGRESS. CONSTRUCTION IS IN PROGRESS ON REMAINING PROJECTS. DETAILED ENGINEERING WITH LITWIN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR DECEMBER 1989. DESIGN IS SCHEDULED TO BEGIN IN JANUARY WITH CONSTRUCTION COMPLETE IN APRIL. ENGINEERING OR CONSTRUCTION IS IN PROGRESS ON 20 APPROVED PROJECTS. THE NEW GEARBOX IS ON ORDER AND SCHEDULED FOR DELIVERY IN FEBRUARY. ALL APPROVED EQUIPMENT IS BEING PLACED ON ORDER.</p> |
| H636          | CRITICAL SPARE EQUIPMENT                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D667          | PROPANE TANK FARM REMOTE OPERATED VALVES  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6677          | PA FLUF CONTAINMENT                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A568          | 5415 PRODUCTION IN THE OLD MODULE         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A698          | ROOF UPGRADE PHASE III                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A708          | COKER WATER ACQUIFER TEST WELL            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A718          | PLANT AIR SYSTEM MODIFICATIONS            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A728          | RECOVERY SYSTEM COMPRESSOR                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A808          | 500 SERIES SILD VALVES                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C558          | DRY CALCIUM STEARATE ADDITION SYSTEM      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C738          | PLASTICIZER REACTOR CONDENSER             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C748          | RESIN RAILCAR CLEANING SYSTEM             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C788          | VINYL HYDROBLASTING UNIT                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| C798          | RECOVERY SYSTEM PRESSURE CONTROL          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D618          | VINYL VALVE LIMIT SWITCHES PHASE III      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D638          | BOILERHOUSE MCC REPLACEMENT               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D648          | D-745 BME ADDITION SYSTEM MODIFICATIONS   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D668          | OXYGEN MONITORS                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D818          | VINYL VALVE UPGRADE                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| F868          | SOYA EPOXY ELECTRIC TRACING               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| F588          | D-700/745 TEMPERATURE CONTROL REVISIONS   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6688          | PLASTICIZER EDUCTOR COOLING WATER RECYCLE |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6768          | WATER TREATMENT ACID DIKE REPLACEMENT     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6828          | VINYL RECEIVER PIPING UPGRADE             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6848          | IMPROVED POND AERATION                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H838          | NEW PLANT FORK TRUCKS                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| L528          | FURNITURE AND OFFICE EQUIPMENT            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| L778          | FRONT OFFICE EXPANSION                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H518          | MISCELLANEOUS CAPITAL PROJECTS < \$15M    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A519          | PLANT ELECTRICAL UPGRADE                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D559          | ALCHOL TANK MODIFICATION                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H509          | MISCELLANEOUS CAPITAL PROJECTS < \$15M    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H549          | PVC REACTOR GEARBOX REPLACEMENT           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| L529          | FURNITURE AND OFFICE EQUIPMENT            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

ENVIRONMENTAL - F. G. JeansonWater

Permit excursions occurred at our pond #6 outfall on November 2 and 4 when we discharged 45.4 and 64.4 pounds of ammonia to James Creek. Our daily limit is 27.9 lbs. per day.

Ammonia vapor is added to our ponds as a nutrient. The excursions occurred due to an overfeed of ammonia to our ponds. The problem arose when a flow meter was replaced in our ammonia addition system. The flow meter that was installed was not for ammonia service. Once the high concentrations were discovered in the ponds, the flow meter was found to be the problem and was replaced.

We also reported to the State and the National Response Center that we spotted a sheen of oil from our outfall 003. This sheen resulted from rainwater runoff from the fire training grounds. Diesel is used in this area for fire training and apparently had been spilled on the soil. The soil in this area was cleaned up to prevent this from happening again.

All other wastewater discharge parameters were within NPDES limits.

Air

Three-fourths of the annual VCM flange and valve survey was completed this month. The new module, old module, and VCM tank farm will be surveyed.

Waste Management

November waste shipments included:

- One load of separator oil to Stauffer Chemical
- One load of lead bags to Chem Waste
- One bulk load of reactor culls to Sun Polymers

Samples of pit #1, pit #2 and pond #2 were given to Sun Polymers for evaluation.

Miscellaneous

On Thursday, November 10, an eighteen wheeler carrying liquid stabilizer overturned in Starkville. The accident ruptured one of five 400-gallon containers. Vista personnel were quick to respond to this emergency, even though we had no responsibility. The result was the spilled liquid stabilizer was cleaned up and disposed of safely without any harm to the environment.

The three underground storage tanks in the plant were filled with sand and permanently closed.

An audit was conducted this month by a representative from the Bureau of Explosive.

I attended the Mississippi Manufacturers Association Environmental Committee meeting.

VAB.0001190685

ENERGY CONSERVATION - D. A. Moore

I. Energy Conservation Data

|                                     | <u>November, 1988</u> | <u>Fiscal YTD</u> |
|-------------------------------------|-----------------------|-------------------|
| A. Unadjusted EUI %                 | (4.0)                 | (1.7)             |
| B. Adjusted EUI %                   | (5.2)                 | (2.4)             |
| C. BTU/Lb. Product                  | 2535                  | 2472              |
| D. Total Energy Consumption MMM BTU | 128.8                 | 256.5             |

This corresponds to an unadjusted % CMA of 39.6% and an adjusted % CMA of 50.6%.

II. Plant Energy Conservation Program

A. Maintenance

There were ten energy related items completed in November. Nine of these items were steam leak repairs. The remaining one was a steam trap repair.

B. Steam Trap Survey

The survey for the vinyl and plasticizer areas identified fifty steam trap items for repair.

III. Boiler Operation

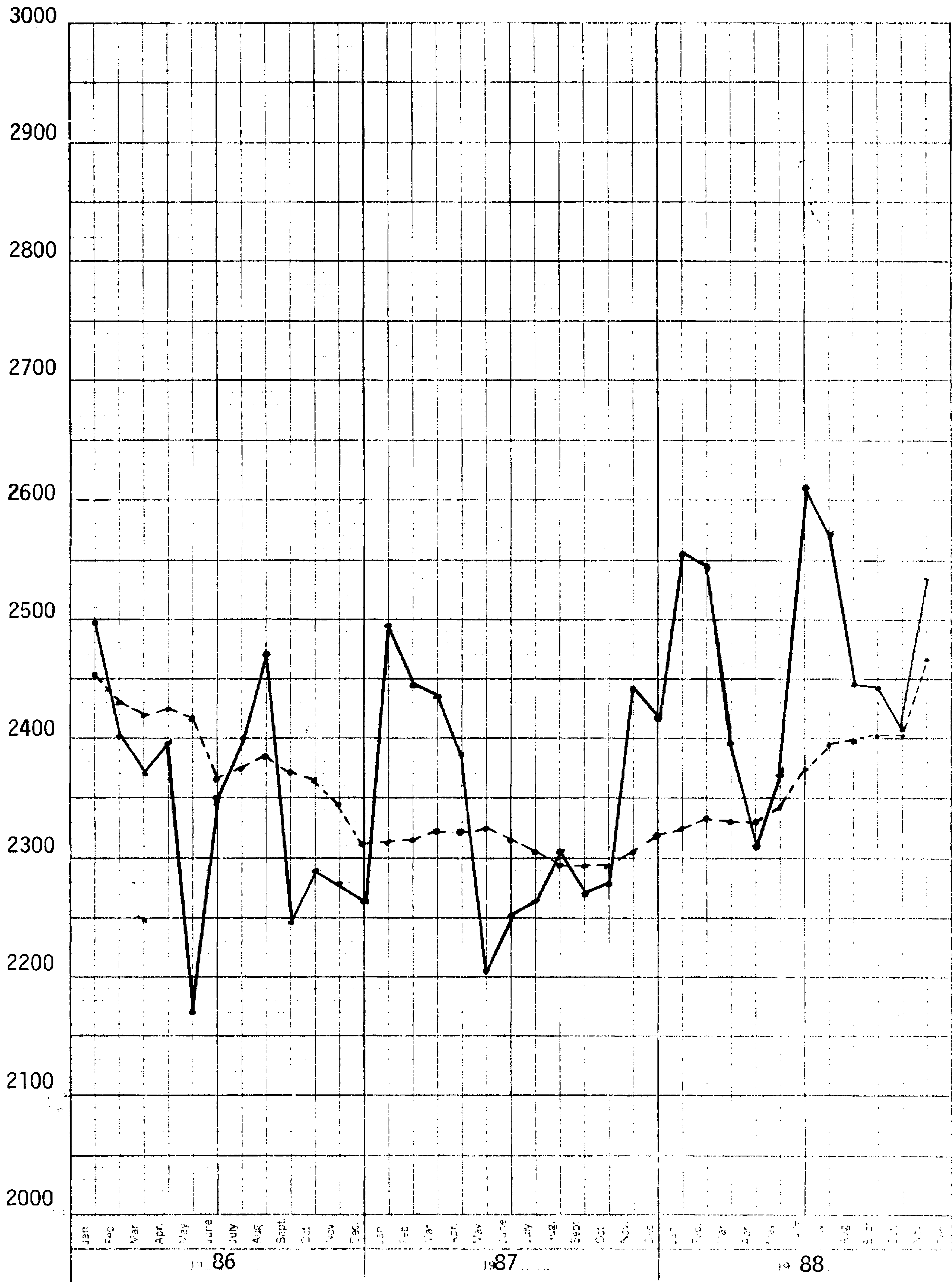
| <u>Boilers</u> | <u>Combustion Efficiency %</u> |                     |
|----------------|--------------------------------|---------------------|
|                | <u>Nov., 1988</u>              | <u>FY89 Y.T.D.</u>  |
| No. 1          | 83.5                           | 83.9 <sup>(2)</sup> |
| No. 2          | (1)                            | 84.0 <sup>(3)</sup> |
| No. 3          | 83.1                           | 83.5                |

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

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

(3) Boiler number three was operated twenty-eight days during the month.

ENERGY USAGE



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

## HUMAN RESOURCE REPORT

PERSONNEL - J. E. Beall

EMPLOYMENT

Amy E. Vernon, New Hire

PROMOTIONS/TRANSFERS

None

RETIREMENTS

Willie B. Nails

TERMINATIONS/RESIGNATIONS

None

TO/FROM LEAVE OF ABSENCE

None

## Aberdeen, Mississippi

NOVEMBER, 1988  
MONTHLY PERSONNEL REPORT

|                           |            |                   |                             |
|---------------------------|------------|-------------------|-----------------------------|
| Salaried Employees        | <u>78*</u> |                   | Minority Employees #, %     |
| Hourly Employees          | <u>170</u> |                   | Salaried <u>7</u> <u>9%</u> |
| Total Employees           | <u>248</u> |                   | Hourly <u>66</u> <u>39%</u> |
|                           |            |                   | Total <u>73</u> <u>29%</u>  |
| <u>Employees (Hourly)</u> |            |                   |                             |
| New Employees             | <u>0</u>   | Hourly Min. Hired | <u>0</u>                    |
| Terminations              | <u>0</u>   | % Min. Hired      | <u>0</u>                    |
|                           |            | Hourly Min. Term. | <u>0</u>                    |
|                           |            | % Min. Term.      | <u>0</u>                    |

| DEPARTMENTS | PAR       | # EMPLOYEES | MIN. EMP. | % MIN.    | NEW HIRES | YTD       | TERM.    | YTD      | TURNOVER | YTD      |
|-------------|-----------|-------------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|
| Warehouse   | <u>16</u> | <u>16</u>   | <u>7</u>  | <u>44</u> | <u>0</u>  | <u>0</u>  | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Gen. Plant  | <u>13</u> | <u>14</u>   | <u>7</u>  | <u>50</u> | <u>0</u>  | <u>10</u> | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Maintenance | <u>41</u> | <u>39</u>   | <u>10</u> | <u>25</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>4</u>  | <u>17</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>65</u> | <u>0</u>  | <u>0</u>  | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Vinyl       | <u>33</u> | <u>33</u>   | <u>10</u> | <u>30</u> | <u>0</u>  | <u>0</u>  | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |
| Plasticizer | <u>5</u>  | <u>5</u>    | <u>2</u>  | <u>40</u> | <u>0</u>  | <u>0</u>  | <u>0</u> | <u>0</u> | <u>0</u> | <u>0</u> |

## Number of Applicants:

Month 0 Year to Date 35

## APPLICANT BREAKDOWN:

# Minority 0 % Minority 0# Female 0 % Female 0

## Hires (Hourly):

Month 0 Year to Date 10

## Terminations (Hourly):

Month 0 Year to Date 5Overall Turnover 0Projected Annual Turnover 3.2%

OVERTIME AND ABSENTEEISM

| Department     | Straight Time<br>Hours Worked | Overtime Hours Worked |                     | Overtime as a %<br>Of Straight Time | Absence Hours<br>Lost | Absence as a % of Straight Time |       |                |
|----------------|-------------------------------|-----------------------|---------------------|-------------------------------------|-----------------------|---------------------------------|-------|----------------|
|                |                               | Controllable(1)       | Non-Controllable(2) |                                     |                       | Sickness                        | Other | Total F.Y.T.D. |
| WAREHOUSE      | 1472.00                       | 174.25                | -----               | 11.84                               | 9                     | .54                             | .07   | .61 .71        |
| YARD           | 1564.00                       | 150.25                | 84.00               | 14.98                               | 29                    | 1.53                            | .32   | 1.85 1.45      |
| MAINTENANCE    | 5429.25                       | 598.50                | 48.00               | 11.90                               | 234                   | 3.68                            | .63   | 4.31 4.47      |
| LAB            | 4281.25                       | 668.25                | 175.25              | 19.70                               | 216                   | 4.48                            | .56   | 5.04 3.14      |
| COMPOUND       | 8207.50                       | 860.75                | 132.00              | 12.10                               | 25                    | .00                             | .30   | .30 .72        |
| VINYL          | 7003.50                       | 866.50                | 399.25              | 18.07                               | 194                   | 2.66                            | .11   | 2.77 3.38      |
| PLASTICIZER    | 983.00                        | 54.25                 | 24.00               | 7.96                                | 1                     | .00                             | .10   | .10 4.80       |
| UTILITY BOILER | 744.00                        | 124.50                | 48.00               | 23.19                               | 0                     | .00                             | .00   | .00 .89        |
| GENERAL PLANT  | 648.00                        | 1.50                  | -----               | .23                                 | 0                     | .00                             | .00   | .00 .00        |
| TOTAL          | 30332.50                      | 3498.75               | 910.50              | 14.54                               | 708                   | 2.01                            | .32   | 2.33 2.49      |

- (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.

ADMINISTRATIVE SERVICES - J. E. LittleSafety

There were no safety instances this month. Safety meetings included a review of outstanding ESAR's and disposition of same.

Personnel/Training

Amy Vernon started work November 7, 1988. She spent two weeks of on-the-job training with Linda Michels. Linda was released November 28, 1988, to assume her new duties as Production Scheduler.

Cost Savings

Savings due to competitive bidding were \$5,042 for the month, and \$11,864 for FY1989.

Savings due to discounts were \$2,468 for the month, and \$4,062 for FY1989.

Meetings

Dave Tarantino, LCCP - OASIS Manufacturing Representative, was in Aberdeen November 9 and 10 to develop test scripts for planned vendor demonstrations. Participants included Jimmy Autrey, Pat Wells, Linda Michels and myself.

A

SHIPMENTS BY PRODUCT - M LBS.

Nov. 1938

FISCAL  
YEAR-TO-DATE

RESIN  
PLASTICIZER  
DRYBLEND  
COMPOUND

28,400  
1,052  
4,479  
7,353

55,271  
1,504  
9,210  
15,082

TOTAL 41,284

81,067

NUMBER OF SHIPMENTS BY MODE:

|               | RAILCAR | VISTA<br>BULK | TRUCK<br>VAN | TRAILER ON<br>A FLAT CAR | COMMON<br>CARRIER | CUSTOMER<br>PICK-UP | CONTAINER | TOTAL |
|---------------|---------|---------------|--------------|--------------------------|-------------------|---------------------|-----------|-------|
| RESIN-Bulk    | 122     | 51            |              |                          | 5                 | 86                  |           | 264   |
| Package       |         |               | 1            |                          | 11                | 7                   |           | 19    |
| Export        |         |               |              |                          |                   |                     |           |       |
| PLAST.-Bulk   | 5       | 3             |              |                          | 1                 |                     |           | 9     |
| Package       |         |               |              |                          | 1                 |                     |           | 1     |
| DRYBLEND-Bulk | 19      | 5             |              |                          |                   | 6                   |           | 30    |
| Package       |         |               | 5            |                          | 20                |                     |           | 25    |
| Export        |         |               |              |                          |                   |                     |           |       |
| COMPOUND-Bulk | 11      | 2             |              |                          | 1                 |                     |           | 14    |
| Package       |         |               | 29           |                          | 60                | 46                  |           | 135   |
| Export        |         |               | 2            |                          | 5                 |                     |           | 7     |
| TOTAL NOV.    | 157     | 61            | 37           |                          | 104               | 145                 |           | 504   |
| OCT.          | 152     | 59            | 62           |                          | 61                | 141                 |           | 475   |

LABORATORY - H. G. ColemanA. Safety

There were no safety incidents in the Lab this month. The monthly safety meeting was the annual training provided by the Safety Department on VCM and lead.

B. Customer RelationsCustomer Contacts

11/03 - Brian Harrison visited Vinyl Building Products in Oakland, New Jersey, to discuss dry blend colors.

11/03 - Brian called on Silverline in Plainfield, New Jersey, to discuss plate-out and Q.C. equipment.

11/10 - Brian visited Polytex in Pittsburgh, Pennsylvania, and discussed fines and moisture.

11/11 - Brian met with Thermal Industries in Pittsburgh to discuss formulation and color preferences.

Requests for Corrective Action

There were no RCA's received in November.

Customer Problem Reports

| <u>Date</u>                                                                                        | <u>Customer</u>                             | <u>Product</u> | <u>Reason</u>                   |
|----------------------------------------------------------------------------------------------------|---------------------------------------------|----------------|---------------------------------|
| 11/02                                                                                              | Hoechst Celanese<br>Delaware City, DE       | 5305           | Contamination.                  |
| <u>STATUS:</u> Contamination confirmed; diverted to customer where contamination was not critical. |                                             |                |                                 |
| 11/10                                                                                              | Klockner<br>Gordonsville, VA                | 5305           | Contamination.                  |
| <u>STATUS:</u> Car re-routed to Hoechst.                                                           |                                             |                |                                 |
| 11/11                                                                                              | United Thermal Plastics<br>Philadelphia, PA | 269-66 BGE 346 | Brown streaking.                |
| <u>STATUS:</u> Could not duplicate problem on mill; suspect customer processing problem.           |                                             |                |                                 |
| 11/15                                                                                              | U-Brand<br>Upper Sandusky, OH               | 90172D         | Fittings failed burst strength. |

STATUS: Prepared sample with KM-653 for evaluation; suspect segregation a problem with BTA-753.

B. Customer Relations - cont.Customer Problems Reports - cont.

| <u>Date</u> | <u>Customer</u>                                    | <u>Product</u>  | <u>Reason</u> |
|-------------|----------------------------------------------------|-----------------|---------------|
| 11/17       | <u>United Thermal Plastics</u><br>Philadelphia, PA | 269-192 WHT 141 | Static.       |

STATUS: Another example of the lumping problem we recently attributed to a bad raw material.

|       |                                               |           |                                |
|-------|-----------------------------------------------|-----------|--------------------------------|
| 11/18 | <u>Universal Manufacturing</u><br>Gallman, MS | 35852 NAT | Excessive fines and streamers. |
|-------|-----------------------------------------------|-----------|--------------------------------|

STATUS: Product returned.

|       |                                  |      |              |
|-------|----------------------------------|------|--------------|
| 11/21 | <u>Uniroyal</u><br>Mishawaka, IN | 5385 | Contaminant. |
|-------|----------------------------------|------|--------------|

STATUS: Related to glassies problem in October.

|       |                                                   |                    |                 |
|-------|---------------------------------------------------|--------------------|-----------------|
| 11/29 | <u>Vycom/Compression Polymers</u><br>Scranton, PA | Various Dry Blends | Poor extrusion. |
|-------|---------------------------------------------------|--------------------|-----------------|

STATUS: Brian Harrison to visit in December.

Waivers Issued

| <u>Customer</u> | <u>Product</u> | <u>Reason</u> | <u>No.</u> |
|-----------------|----------------|---------------|------------|
| BP Performance  | 5415           | Viscosity     | 1 R/C      |
| Essex           | 5415           | Viscosity     | 1 R/C      |
| Essex           | 5415           | Particle Size | 1 H/T      |
| PVC Compounders | 5415           | Viscosity     | 1 H/T      |
| Southwire       | 5415           | Viscosity     | 1 R/C      |
| Uniroyal        | 5415           | Bulk Density  | 1 R/C      |

C. RVCM SummaryRVCM of In-Process Samples

The following is a summary of residual VCM results on in process samples. None of the reactor daily averages exceeded 400 PPM RVCM during the month of November, 1988.

|                   | <u>Reactor</u><br><u>Slurries</u> | <u>Dryer</u> |             |
|-------------------|-----------------------------------|--------------|-------------|
|                   |                                   | <u>5265</u>  | <u>5305</u> |
| Number of Samples | 905                               | 28           | 76          |
| Average, RVCM     | 133                               | 0.4          | 0.6         |

LAB - ContinuedC. RVQM Summary - continuedRVQM of Shipment Samples

The following is a summary of the residual VCM analysis of shipment samples for the month of November, 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    | 46          | 107         | 34          | 74          | 0           | 40               | 4           | 15           |
| Average RVQM, ppm | 0.1         | 0.2         | 0.2         | 0.0         |             | 0.1              | 0.5         | 0.2          |

D. Resin Process Capabilities

|                                   | <u>5265</u> | <u>5305</u> | <u>5385</u> | <u>5415</u>    |
|-----------------------------------|-------------|-------------|-------------|----------------|
| Bulk Density                      | 1.22        | 2.25        | 2.27        | 0.41           |
| Inherent Viscosity                | 0.67        | 0.83        | 0.48        | 0.57           |
| "L" Color Value                   | 3.67        | 6.89        | 6.50        | 7.00           |
| "A" Color Value                   | 2.83        | 7.67        | —           | —              |
| "B" Color Value                   | 1.00        | 1.11        | 1.83        | 2.67           |
| % on Pan<br>(vs. 2% max.)         | 7.00        | 3.25        | 2.83        | 4.00<br>(0.67) |
| % thru 140M                       | 2.22        | 1.01        | 1.77        | 3.36           |
| Drytime                           | —           | —           | 0.67        | 0.83           |
| Mets I.R.<br>(vs. 95% of Control) | —           | —           | —           | 0.78<br>(0.30) |
| Hard Particles<br>(% 10)          | —           | —           | 8.0         | 0.8            |

E. Compound Quality Summary

|                     | <u>Adjustments</u><br><u>M Lbs. (%)</u> | <u>Rejections</u><br><u>M Lbs. (%)</u> |
|---------------------|-----------------------------------------|----------------------------------------|
| Hardness            | 96.5 (1.72)                             | — —                                    |
| Specific Gravity    | 15.0 (0.27)                             | — —                                    |
| Color/Clarity       | 40.0 (0.71)                             | 45.8 (0.82)                            |
| Contamination       | — —                                     | 34.2 (0.61)                            |
| Hard Particles      | — —                                     | 217.6 (3.89)                           |
| Dicing              | — —                                     | 10.5 (0.19)                            |
| Cross Contamination | — —                                     | 6.8 (0.12)                             |
| Metal               | — —                                     | 4.5 (0.08)                             |
| Total               | 151.5 (2.70)                            | 319.4 (5.71)                           |

F. Dry Blend Quality Summary

|              | Rejections    |            |
|--------------|---------------|------------|
|              | <u>M Lbs.</u> | <u>(%)</u> |
| Torque/Color | 6.3           | (0.11)     |
| 40 Mesh      | 2.3           | (0.04)     |
| Partial Box  | 0.6           | (0.01)     |
| TOTAL        | 9.2           | (0.16)     |

G. Compound SPC Test Results

|                      | <u>n</u>           | <u>X</u> | <u>3</u> |
|----------------------|--------------------|----------|----------|
| 38401 - Hardness     | 56                 | 81.1     | 1.28     |
| Specific Gravity     | 55                 | 1.375    | 0.005    |
| Hard Particles (20") | 56                 | 25.5     | 4.7      |
| 35031 - Hardness     | 57                 | 49.7     | 0.65     |
| Specific Gravity     | 57                 | 1.372    | 0.008    |
| Hard Particles (2')  | 57                 | 5.2      | 2.2      |
| Mill Temperature     | 57                 | 326.8    | 2.9      |
| Oven Temperature     | All readings 204°C |          |          |

H. 5415 Control Resin Test Results

|                        | <u>n</u> | <u>X</u> | <u>3</u> |
|------------------------|----------|----------|----------|
| Moisture               | 59       | 0.160    | 0.026    |
| Dry Time               | 30       | 5.05     | 0.37     |
| Particle Size - 60M    | 60       | 1.53     | 1.06     |
| - 80M                  | 60       | 29.72    | 3.40     |
| - 100M                 | 60       | 33.93    | 1.06     |
| - 120M                 | 60       | 21.01    | 2.01     |
| - 140M                 | 60       | 7.41     | 1.33     |
| - 200M                 | 60       | 5.18     | 1.57     |
| Pan                    | 60       | 1.22     | 0.45     |
| Bulk Density           | 30       | 0.5051   | 0.0050   |
| Color - L              | 29       | 100.63   | 0.377    |
| A                      | 29       | -0.17    | .476     |
| B                      | 29       | 2.38     | 0.753    |
| Flow Time              | 30       | 7.83     | 0.69     |
| Hard Particles, 7 Min. | 60       | 4.78     | 2.62     |
| Inherent Viscosity     | 28       | 1.007    | 0.012    |

I. Miscellaneous

1. Harold Coleman and Dave Cox attended the Plasticizer Planning Meeting in Aberdeen on November 9.
2. Harold Coleman participated in the VCM Specification Team meeting on November 29.
3. A malfunctioning oven temperature controller was found to be a source of variation on the inherent viscosity test.
4. Brian Harrison completed two dry blend and one compound color match this month for VBP, Thermal Industries and Calvex.

I. Miscellaneous

5. Brian Harrison attended Flustrated Total Internal Reflectance (FTIR) training in Ponca City on November 2.
6. Brian Harrison attended PLA's Plastics Extrusion Seminar in Chicago on November 16-17.

# SAMPLE SHIPMENTS

NOVEMBER 1988

## RESIN

| <u>Ship Date</u> | <u>Product</u>              | <u>Amount</u>        | <u>Customer</u>           |
|------------------|-----------------------------|----------------------|---------------------------|
| 11/08/88         | 5305                        | 5 lbs.               | Polysar Rubber            |
| 11/08/88         | Sifter Overflow<br>Labscrap | 2 lbs.<br>2 lbs.     | Wexford Int'l.            |
| 11/14/88         | Pond Resin                  | 2 lbs.               | H. Heller                 |
| 11/14/88         | 5385                        | 5 KG.                | International<br>Polymers |
| 11/14/88         | 5265<br>5305                | 15 lbs.<br>15 lbs.   | Chisso Corporation        |
| 11/14/88         | 5385<br>5415                | 2 KG X 5<br>2 KG X 5 | T. C. L. Marketing        |
| 11/22/88         | 5415                        | 5 lbs.               | JTF Elastomerics          |
| 11/29/88         | 5415                        | 10 lbs.              | Capital Wire & Cable      |
| 11/30/88         | 5415                        | 50 lbs.              | Johnson & Johnson         |

## COMPOUND

| <u>Ship Date</u> | <u>Product</u> | <u>Amount</u> | <u>Customer</u>    |
|------------------|----------------|---------------|--------------------|
| 11/01/88         | 39012 BLK      | 1500 lbs.     | Tandy Wire & Cable |
| 11/04/88         | 271-159B BLK   | 720 lbs.      | Comm-Scope         |
| 11/07/88         | 46851 BLK      | 100 lbs.      | J. C. Levardsen    |
| 11/15/88         | 46851 BLK      | 50 lbs.       | Keeler Brass       |
| 11/29/88         | 18031 WAT CL   | 200 lbs.      | United Tech. Corp. |

## OTHER

| <u>Ship Date</u> | <u>Product</u> | <u>Amount</u> | <u>Customer</u> |
|------------------|----------------|---------------|-----------------|
| 11/03/88         | 610P Plast.    | 1 qt.         | Sarnafil, Inc.  |