

File Copy

To: T. H. Huffman

From: D. C. Skokna  
Date: September 20, 1990

Subject: ABERDEEN MONTHLY PROGRESS REPORT  
AUGUST, 1990

Interoffice  
Communication

VISTA

### Safety

There was one first aid and one recordable (MT) cases reported in August. The recordable case involved a mechanic who suffered a small second degree burn to his forearm that occurred when he contacted a steam pipe. As of 8/31, the plant's employees have completed 4,075 days (5,431,094 manhours) since the last lost time injury.

#### FY 1990 Key Statistical Information

|                                        | <u>August</u> | <u>Y.T.D.</u> | <u>SEPT.</u> | <u>FY1990<br/>FINAL<br/>YTD</u> |
|----------------------------------------|---------------|---------------|--------------|---------------------------------|
| PVC Production, MM Lbs.                | 38.9          | 415.9         | 41.3         | 457.2                           |
| Reactor Stream Factor, %               | 86.9          | 88.5          | 87.7         | 88.4                            |
| Resin Quality, % Prime                 | 98.2          | 97.5          | 96.9         | 97.4                            |
| VCM Efficiency, Lbs./Lb.               | 0.99527       | 1.0004        | 1.0048       | 1.0008                          |
| Flexible Compound Production, MM Lbs.  | 5.7           | 65.9          |              |                                 |
| Flexible Compound Quality, % Prime     | 97.5          | 98.1          |              |                                 |
| Rigid Compound Production, MM Lbs.     | 5.5           | 49.9          |              |                                 |
| Rigid Compound Quality, % Prime        | 98.7          | 99.3          |              |                                 |
| Plasticizer Production, MM Lbs.        | 1.5           | 16.2          |              |                                 |
| Plasticizer Quality, % Prime           | 76.3          | 85.6          |              |                                 |
| Energy Use, (EUI, %)                   | < 4.1>        | < 6.8>        |              |                                 |
| Fixed Cost Variance, \$M               | 2.7           | 245.5         |              |                                 |
| Variable Cost Efficiency Variance, \$M | 87.4          | 721.4         |              |                                 |

### Operations

Final tie-ins for the cleanwall project were completed with start-up set for mid-September.

Flexible compound demand increased late in the month and production schedules became tighter. PLENEX polymers development used forty-six hours of production time on Line I.

Rigid compound demand was strong all month. Railcar production of high drop temperature 90172D for U-Brand began during the month. The higher drop temperature caused pluggage on the #2 Welox chute and until a modification is made, this product will be made at reduced rates. The modification is scheduled to be complete during October.

T. H. Huffman

9/20/90

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Costs

Variable costs were favorable due to good raw material use and a favorable product mix in the resin unit and conversion of intermediate (low value) plasticizer inventory to products. Off-setting these favorable items were unfavorable product mix variances in the compound units.

OMP

1. The laboratory "C" shift natural team presented a plan to reduce dry blend moisture testing frequency to save about 900 employee hours per year.
2. The compound "D" shift natural team presented the results of their millscrap reduction efforts. Results year-to-date are a fifty percent reduction and \$300M estimated annual savings. No investment was needed to accomplish this.
3. A.T.&T. (a flexible compound customer) visited the plant on 8/29/90 to see progress made since their 10/89 audit. They were very pleased with our progress.
4. American Mirrex (a resin customer) visited the plant on 8/21 and 8/22 for an overview of our manufacturing process and to learn about our RVCM reduction plans. Mirrex gave us an overview of their operations and products and their resin quality requirements.
5. Bob Seymour visited Klockner and Marley Mouldings during the month.
6. One hundred percent of the plant's natural teams met during the month.



D. C. Skokna  
Plant Superintendent

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DISTRIBUTIONCOVER LETTERENTIRE REPORT

|                      |                                                                                         |   |   |
|----------------------|-----------------------------------------------------------------------------------------|---|---|
| <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 |
|                      | B. J. Bean                                                                              |   | X |
|                      | R. H. Gerlach                                                                           |   | X |
|                      | R. D. Gamblin                                                                           |   | X |
|                      | W. L. McClain                                                                           |   | X |
|                      | J. P. Stokes                                                                            |   | X |
| <u>Austin</u>        | R. L. Poe                                                                               | X |   |
|                      | H. J. Hall                                                                              |   | X |
| <u>Oklahoma City</u> | H. D. Garrison                                                                          |   | X |
| <u>LCVCM Plant</u>   | R. A. Conrad                                                                            |   | X |
| <u>LCCP Plant</u>    | J. Friend                                                                               |   | X |
| <u>LCLAB Plant</u>   | J. W. Ware                                                                              | X |   |
| <u>Baltimore</u>     | L. R. Bauer                                                                             | X |   |
| <u>Hammond</u>       | J. Pavao                                                                                | X |   |
| <u>Blane</u>         | C. R. Miller                                                                            |   | X |
| <u>Premiere</u>      | P. L. Foote                                                                             |   | X |
| <u>Aberdeen</u>      | RWS/DCS (File Copy), TJA, JBA, JEB, JME, SCH,<br>MRK, DAB, DAM, RBN, JEN, JDO, REP, BLT |   |   |

**SAFETY - B. L. Trego**

|                                    | <u>August</u> | <u>Fiscal</u><br><u>Y.T.D. 1990</u> | <u>Fiscal</u><br><u>Y.T.D. 1989</u> |
|------------------------------------|---------------|-------------------------------------|-------------------------------------|
| First Aid                          | 1             | 15                                  | 15                                  |
| OSHA Recordable                    | <u>1</u>      | <u>5</u>                            | <u>9</u>                            |
| Total Injuries                     | 2             | 20                                  | 24                                  |
| Number of Restricted Workday Cases | 0             | 3                                   | 3                                   |
| Number of Lost Workday Cases       | 0             | 0                                   | 0                                   |

**Injuries by Department**

|                     |          |          |          |
|---------------------|----------|----------|----------|
| Vinyl Operations    | 0        | 0        | 2        |
| Compound Operations | 0        | 5        | 4        |
| Maintenance         | 2        | 13       | 14       |
| Laboratory          | 0        | 1        | 1        |
| Receiving/Warehouse | 0        | 0        | 1        |
| Office              | <u>0</u> | <u>1</u> | <u>2</u> |
| Totals              | 2        | 20       | 24       |

**Injuries by Type**

|                    |          |          |          |
|--------------------|----------|----------|----------|
| Cuts and Abrasions | 0        | 7        | 6        |
| Eye Injuries       | 0        | 1        | 2        |
| Burns              | 1        | 4        | 6        |
| Bruises            | 0        | 2        | 4        |
| Strains/Sprains    | 0        | 1        | 4        |
| Stings             | 1        | 3        | 0        |
| Other              | <u>0</u> | <u>2</u> | <u>2</u> |
| Totals             | 2        | 20       | 24       |

**Non-Occupational Injuries**

|                    |    |     |    |
|--------------------|----|-----|----|
| Lost Workday Cases | 0  | 8   | 2  |
| Days Lost          | 22 | 201 | 42 |

**Safety Record**

Last lost time injury - 7/5/79  
Days since - 4,075  
Employee hours since - 5,431,094

On August 31, 1990, the employees of the Aberdeen plant completed 4075 days with no lost time injury.

Topics for the plant safety meetings during the month included Health Training, CPR and Contractor Safety.

**SAFETY - Continued**

Safety banquets were held on August 24 and 31 to celebrate eleven years without a lost time accident.

An emergency response drill was held in the VCM unloading area on August 10, 1990. It included a VCM leak and an injury.

Routine dosimetry results for the month were:

| <u>Chemical</u>    | <u>&lt; PEL</u> |                | <u>&gt; PEL</u> |                |
|--------------------|-----------------|----------------|-----------------|----------------|
|                    | <u>Number</u>   | <u>Percent</u> | <u>Number</u>   | <u>Percent</u> |
| VCM                | 75              |                | 1               |                |
| Lead               | 18              |                | 0               |                |
| Total Particulates | 3               |                | 0               |                |
| Cadmium            | 6               |                | 0               |                |

The single VCM overexposure was with benefit of respiratory protection.

**Monthly Injury Summary**

| <u>Injury Class</u> | <u>Department</u> | <u>Description</u>               |
|---------------------|-------------------|----------------------------------|
| FA                  | Maintenance       | Insect bite, right forearm       |
| MT                  | Maintenance       | Second degree burn, left forearm |

## **QUALITY MANAGEMENT PROCESS - T. J. Arbeiter**

100% of the plant's natural teams met during the month of August. Some of our team highlights for the month are:

- Lab C shift made their presentation to management justifying a reduction in dry blend moisture testing and blender checks. These changes result in saving over 900 employee hours per year, reducing turn-around time on samples, and improving productivity.
- Compound D shift presented the results of their millscrap reduction project to management. The team implemented new procedures that have reduced millscrap 50%. Estimated annual savings are \$300M.
- The Plant Manager's Natural Team began planning Quality Appreciation Day III to be held September 24 at the plant. We will be recognizing teams that completed projects during FY90.

The Quality Management Coordinator traveled to AT&T Omaha with Mark Washington on August 6 to discuss preparations for the AT&T re-audit held on August 29 at the Aberdeen Plant. AT&T was pleased with the progress made on the corrective action requested from the previous audit held October, 1989.

American Mirrex visited the Aberdeen Plant on August 21 and 22. Our objective of this visit was to provide American Mirrex representatives with an overview of Vista's PVC operation, with emphasis on RVCM reduction project work, plant reliability projects, low-mole resin quality and quality management processes applied at the plant. Mirrex also gave a presentation outlining their finished products and raw material quality requirements.

The Quality Management Coordinator attended the quarterly meeting of manufacturing site coordinators in Houston on August 22 and 23. Topics included quality manuals, customer audits and ISO 9000 series quality standards.

R. W. Seymour made MBWA visits to Klockner and Marley Mouldings with Mark Eramo on August 15 and 16. At Klockner, they met with Rolf Riesterer, Klockner's Plant Manager - a first in our relationship with Klockner.

**COST VARIANCES - D. C. Skokna**

**Variable Costs**

| <u>Product</u>    | <u>August 1990 Variance.</u> |              | <u>\$M</u>   |
|-------------------|------------------------------|--------------|--------------|
|                   | <u>Efficiency</u>            | <u>Price</u> | <u>Total</u> |
| PVC               | \$128.7                      | <\$ 50.6>    | \$ 78.1      |
| Flexible Compound | < 25.9>                      | < 28.4>      | < 54.3>      |
| Rigid Compound    | < 35.7>                      | < 123.2>     | < 158.9>     |
| Plasticizer       | <u>20.3</u>                  | <u>36.0</u>  | <u>56.3</u>  |
| Total             | \$ 87.4                      | <\$166.2>    | <\$ 78.8>    |

**PVC**

Raw material use was below budget and the variance due to product mix was favorable resulting in this month's overall favorable efficiency variance.

Off-grade production was 47% below budget in August.

**Flexible Compound**

An unfavorable product mix was the primary cause of this month's unfavorable variance.

**Rigid Compound**

The unfavorable variance was due to product mix.

**Plasticizer**

Inventories of lower-valued intermediate products were converted to products.

**Price Variances**

|                               | <u>\$M</u>  |
|-------------------------------|-------------|
| - 610P to Flexible Compound   | \$36.4      |
| - Natural Gas                 | 21.2        |
| - Alfol <sup>R</sup> Alcohols | < 30.1>     |
| - Resin to Flexible Compound  | < 75.2>     |
| - VCM                         | < 86.0>     |
| - Resin to Rigid Compound     | < 115.9>    |
| - Other Prices Variances      | <u>83.4</u> |
| Total                         | <\$166.2>   |

**COST VARIANCES - Continued**

**Fixed Cost Variances - \$33.3M Favorable**

|                        | <u>Variance - \$M</u> |
|------------------------|-----------------------|
| - Payroll and Benefits | \$11.6                |
| - MM&C                 | 0.6                   |
| - Miscellaneous        | < 20.0>               |
| - TI&D                 | 5.5                   |
| - Clearances           | <u>&lt; 0.4&gt;</u>   |
| Total                  | <\$ 2.7>              |

**Payroll and Benefits**

This item was somewhat below budget due to low maintenance and operating payroll.

**M. M. & C.**

Was essentially at budget.

**Miscellaneous**

- Moving, Home Assistance - <\$13.6M>
- Outside Professional Services - <\$27.4M>, due to VMS charges and modeling studies.

**VINYL** - J. D. Olson, J. M. Vinoski

**Safety**

The Vinyl Department had no first aid or OSHA recordable injuries during August.

The monthly safety meeting topic was "Health Training".

**General**

1. Final tie-ins were completed and programming work was started on the cleanwall system. Startup is scheduled for mid-September.
2. Mechanical design work began on the permanent water decalcification system for Klockner resin production. This system will allow production of decalcified 5305 resin in both reactor modules.
3. The resin raw materials in the 744 account were valued at \$567.6M.

|                                         | <u>August</u> | <u>YTD</u> |
|-----------------------------------------|---------------|------------|
| - Production, MM Lbs.                   | 38.9          | 415.9      |
| - Daily Rate, M Lbs./C.D.               | 1232.2        | 1239.1     |
| - Capacity Utilization Factor, %        | 96.6          | 97.1       |
| - Total Reactor Charges                 | 903.0         | 9736.0     |
| - Charges/C.D.                          | 29.1          | 29.1       |
| - Reactor Stream Factor, %              | 86.9          | 88.5       |
| - Rotary Dryer Stream Factor (#4-#8), % | 88.7          | 82.6       |
| - Fluid Bed Dryer Stream Factor, %      | 97.2          | 93.2       |
| - Resin Quality, % Prime                | 98.2          | 97.5       |

**Reactor Downtime**

|                                                                                                                                                                                                  | <u>Hours</u> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| - Operational downtime (recovery scheduling conflicts, New Module rinse/charge water conflicts, waiting for Q.C. data before charging, O-ring leaks, no place to dump, rinsing chem wash tanks). | 383.5        |
| - Maintenance downtime (Old unit charge header replacement, BUS-80 tie-ins on all reactors, New Unit recovery compressor seal repair, hydroblasting and condenser drilling on D700 and D745).    | 591.0        |

**VINYL - Continued**

| <b><u>Dryer Downtime</u></b>                                                         | <b><u>% of Total Downtime</u></b> |
|--------------------------------------------------------------------------------------|-----------------------------------|
| - Reactor limited production.                                                        | 49.3                              |
| - Operational downtime (centrifuge plugs, dryer cleaning, and flameouts).            | 37.9                              |
| - Maintenance downtime (activator, centrifuge, screw feeder and star valve repairs). | 12.8                              |

**Key Maintenance Work - J. B. Autrey, J. B. Hegwood**

- Reactors 700 and 745 were each shut down on two different occasions during the month for hydroblasting as part of the contamination control program and the BUS-80 startup. The condensers on each reactor were hydroblasted during the first shutdown in order to get them as clean as possible before the startup of the new BUS-80 system.
- Reactors 600 and 744 were shut down during the month because of VCM leaks that were detected around their condenser bases. The base of each reactor was torqued down using the hydraulic torque wrench and the appropriate torquing procedures.
- The fluid bed dryer was shut down during the month so that the demister pads on the fluid bed scrubber could be cleaned.
- The spare Bird centrifuge was reconditioned during the month.
- New breakers and current limiters were installed on the west cooling tower fan, new unit water pump and the west chiller. The need for these repairs was identified by an HSB infrared survey.
- There were nine seal failures in the new reactor unit that were caused by the collapse of the seal water filters that supply seal water to the seals.
- There were three major valves changed out in the reactor area during the month.
- Numbers 1 and 4 VCM unloading compressors were changed out during the month and replaced with spare compressors. The compressors that were removed from service will be rebuilt and kept for spares.

**COMPOUND - J. E. Nickerson, K. G. Akins**

**Safety**

The Compound Department had no first aid cases or OSHA recordable injuries in August.

**General**

Demand for flexible compounds increased late in August. Production schedules became very tight - particularly for our clear and natural colored products produced on Line I. It appears the demand will remain steady through September. PLENEX polymers production consumed forty-six hours of production time on Line I.

Demand for rigid compound was also strong in August. Production of railcar quantities of high drop temperature (220° F.) 90172D for U-Brand began in August. This production is only possible on Welex #1 until modifications to prevent pluggage on Welex #2 drop chute are completed. A dump header with a steeper angle will be installed from the Welex to a cooling blender. This modification allowing the production of higher drop temperature compounds for U-Brand and other customers at full rates is expected to be completed in early October.

Prime plasticizer production was up 30% in August as compared to July. We continued to devote more time than normal to VRP/RAE production to further reduce by-product intermediate inventories.

A plasticizer technology class was conducted in August for plasticizer operators. Topics for the half-day class included chemistry, kinetics, thermodynamics and environmental concerns as they related to our plasticizer operation.

| <u>Compound Production</u>  | <u>Operating Days</u> | <u>Production (M Lbs.)</u> |                 |                      |
|-----------------------------|-----------------------|----------------------------|-----------------|----------------------|
|                             |                       | <u>Month</u>               | <u>Avg./Day</u> | <u>Fiscal Y.T.D.</u> |
| Line I                      | 31                    | 1755                       | 57              | 21456                |
| Line III                    | 30                    | 3152                       | 105             | 37936                |
| Line V                      | 17                    | <u>758</u>                 | <u>45</u>       | <u>6514</u>          |
| Total                       |                       | 5665                       | 207             | 65906                |
| % Prime                     |                       | 97.5                       |                 | 98.1                 |
| Capacity Utilization Factor |                       | .710                       |                 | .766                 |

**Downtime**

**Hours**

**Line I**

|                             |    |
|-----------------------------|----|
| - Product Changes           | 97 |
| - PLENEX Polymer Testing    | 46 |
| - Miscellaneous Maintenance | 35 |
| - Deboxing Export Order     | 23 |

**COMPOUND - Continued**

**Line III**

|                              |    |
|------------------------------|----|
| - Product Changes            | 87 |
| - Miscellaneous Maintenance  | 49 |
| - Mill Motor Replacement     | 29 |
| - Quality Problems & Control | 16 |

**Line V**

|                             |    |
|-----------------------------|----|
| - Product Changes           | 47 |
| - Miscellaneous Maintenance | 15 |
| - Startup/Shutdown          | 14 |

|                             | Operating<br>Days | Production (M Lbs.) |          |               |
|-----------------------------|-------------------|---------------------|----------|---------------|
|                             |                   | Month               | Avg./Day | Fiscal Y.T.D. |
| Rigid Compound              | 31.0              | 5533                | 178      | 49893         |
| % Prime                     |                   | 98.7                |          | 99.3          |
| Capacity Utilization Factor |                   | .937                |          | .844          |

**Downtime**

**Hours**

|                                |    |
|--------------------------------|----|
| - Product Changes              | 92 |
| - Miscellaneous Maintenance    | 36 |
| - Quality Problems & Control   | 23 |
| - Welex Motor Replacement      | 18 |
| - Resin Star Valve Maintenance | 12 |
| - Screener Maintenance         | 11 |

|                             | Operating<br>Days | Production (M Lbs.) |          |               |
|-----------------------------|-------------------|---------------------|----------|---------------|
|                             |                   | Month               | Avg./Day | Fiscal Y.T.D. |
| Plasticizer                 | 31.0              | 1502                | 48       | 16220         |
| % Prime                     |                   | 76.3                |          | 85.6          |
| Capacity Utilization Factor |                   | .608                |          | .677          |

**Key Maintenance Work - J. B. Autrey, J. B. Hegwood**

- The vacuum jets on plasticizer reactors R-1 and R-2 were cleaned on two different occasions during the month because of an excessive calcium carbonate buildup. The vacuum jets on R-3 and R-4 were cleaned once during the month because of the same excessive calcium carbonate buildup.
- Dry blend blender "B" was shut down during the month for repairs to its sprockets and chain. The sprockets and chain were replaced because of normal wear.

**COMPOUND - Continued**

- Number two Welex in Dry Blend was shut down during the month because of a wiring failure. New wiring was pulled to the motor because the old wiring had burned out.
- The dry blend control room uninterruptable power supply (UPS) was shut down for cleaning during the month. This is being done as part of a P.M. program to maintain the integrity of the UPS.

**ENGINEERING - R. E. Polk, S. C. Hillman, M. R. Kane**

**PROJECTS IN DEVELOPMENT - GENERAL**

**Cleanwall Technology**

The BUS-80 cleanwall injection system was completed and started up on all reactors. Reactor rinse water to the sewer has been eliminated. Safety and mechanical audit items remain to be completed.

**Batch Water Stripper Reliability**

The modifications which allow the batch water stripper water to be pumped to the blend tanks have been completed. The piping which will allow the water to go to the cooling towers will be installed by mid-October. The modifications will provide reductions in the water VCM concentration at the inlet to the wastewater treatment system. The TC regulations require that the VCM concentration at the inlet to the wastewater treatment system be less than 200 ppb.

**TC Training**

Training will be scheduled for all vinyl operators. The sessions will cover basic RCRA topics as well as new administrative procedures required as a result of the TC regulations.

**5305 Decalcified Resin**

The AFE has been submitted for this project which will provide permanent ion exchange systems in each reactor module.

**Production Model Building**

Production model building for OASIS continues. Customer specific activities are being added to the models. The models should be complete by the end of September.

**New Water Source**

The tests of both new wells have been completed successfully. Both wells are more efficient than expected. Engineering continues with plant review of electrical drawings expected by October.

**FDA Good Manufacturing Practices Manual**

This manual was completed and issued. Training of plant personnel is 95% complete. Joe Ledvina and Bill McClain will conduct an audit of FDA manufacturing practices on September 18.

ABERDEEN CHEMICAL PLANT  
APPROVED CAPITAL PROJECTS  
\*\*\*\*\*

| AFE NUMBER | PROJECT DESCRIPTION                         | STATUS                                                                                                       |
|------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| A858       | ALTERNATE NATURAL GAS PIPELINE              | THE SYSTEM HAS BEEN STARTED UP AND IS OPERATIONAL. PUNCHLIST ITEMS ARE IN PROGRESS.                          |
| B010       | VINYL VALVE UPGRADE                         | INSTALLATION IS IN PROGRESS AND PLANNED FOR COMPLETION IN OCTOBER.                                           |
| A519       | PLANT ELECTRICAL UPGRADE                    | CONSTRUCTION IS 99% COMPLETE AND IN PROGRESS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER.        |
| A649       | VINYL CONTROL SYSTEM MODERNIZATION          | ENGINEERING IS IN PROGRESS. CONTROL ROOM CONSTRUCTION IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.    |
| A909       | INERTS REMOVAL MODIFICATIONS                | CONSTRUCTION IS IN PROGRESS WITH COMPLETION SCHEDULED FOR NOVEMBER.                                          |
| B619       | PROPANE STORAGE AREA DELUGE SYSTEM          | INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.                          |
| B629       | COMPOUND BLENDING TRANSFER SYSTEM           | INSTALLATION IS COMPLETE EXCEPT FOR PUNCHLIST ITEMS. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN OCTOBER. |
| B749       | LEAD HANDLING AND EXPOSURE REDUCTION        | INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR NOVEMBER.                                            |
| B849       | COMPOUND LINE 3 SEMI-BULK LEAD HANDLING     | LONG LEAD ITEMS HAVE BEEN PLACED ON ORDER. PROJECT COMPLETION IS PLANNED FOR 10/90.                          |
| B859       | COMPOUND SILO BRIDGE BREAKING               | LONG LEAD ITEMS HAVE BEEN PLACED ON ORDER. COMPLETION IS PLANNED FOR 10/90.                                  |
| B899       | RAILCAR CLEANING RACK                       | DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR 11/90.                                              |
| F669       | COMPOUND LINE 5 HEATED PLASTICIZER          | THE PROJECT IS COMPLETE AND OPERATIONAL. IT WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.                    |
| F699       | LOW MOLECULAR WEIGHT RESIN EXPANSION        | INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.                                           |
| F779       | DRYERS NO. 4 & 5 CONTAMINATION REDUCTION    | INSTALLATION IS SCHEDULED FOR COMPLETION IN NOVEMBER.                                                        |
| G569       | DRYBLEND DIV. VALVE AND CHUTE REPLACEMENT   | DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR OCTOBER.                                            |
| G639       | NEW DRYER BASKHOUSES                        | THE ORIGINAL SCOPE OF WORK IS COMPLETE AND THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN NOVEMBER.          |
| G719       | COMPOUND SEWER REVISIONS                    | INSTALLATION IS COMPLETE. THE PROJECT WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.                          |
| G739       | WASTE OIL REDUCTION                         | PUNCHLIST ITEMS ARE IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.                                       |
| G819       | VCM SIGHT GLASS REPLACEMENT                 | DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR SEPTEMBER.                                          |
| G839       | PLANT WATER RECYCLE                         | DESIGN IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR OCTOBER.                                            |
| H769       | PLANT DIVERTER VALVE REPLACEMENT            | THIS PROJECT WILL BE CLOSED TO FIELD CHARGES IN SEPTEMBER.                                                   |
| H799       | HIGHWAY 25 LAND PURCHASE                    | AFE CANCELLED.                                                                                               |
| A540       | REDUCED FLAME & SMOKE COMPOUND PROJECT      | INSTALLATION IS COMPLETE ON ALL DESIRED MODIFICATIONS TO DATE.                                               |
| B600       | PLASTICIZER LOADING AND UNLOADING REVISIONS | DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.                                                   |
| F590       | DRYBLEND TRANSFER LINE ELBOWS               | PRE-FABRICATION WORK IS IN PROGRESS. INSTALLATION IS PLANNED FOR COMPLETION IN OCTOBER.                      |
| F630       | 5305 RESIDUAL VCM REDUCTION                 | DESIGN IS IN PROGRESS AND SCHEDULED FOR COMPLETION IN EARLY OCTOBER.                                         |
| G560       | TC SPILL CONTAINMENT                        | INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR SEPTEMBER.                                           |
| G610       | TC COMPLIANCE PROJECT                       | INSTALLATION IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER.                                             |
| G630       | REACTOR SLURRY STRIPPING OPTIMIZATION       | DESIGN IS IN PROGRESS WITH COMPLETION PLANNED FOR OCTOBER. INSTALLATION IS PLANNED FOR NOVEMBER.             |
| H500       | PLANT WATER SYSTEM                          | ENGINEERING IS IN PROGRESS. PROJECT COMPLETION IS PLANNED FOR MID-1991.                                      |
| H510       | WEST INCINERATOR REPLACEMENT                | DELIVERY OF THE INCINERATOR IS PLANNED FOR 2/91. PROJECT COMPLETION IS PLANNED FOR 5/91.                     |
| H520       | MISCELLANEOUS CAPITAL PROJECTS < \$15M      | ENGINEERING IS IN PROGRESS ON 33 PROJECTS.                                                                   |
| L530       | FURNITURE AND OFFICE EQUIPMENT              | EQUIPMENT IS ON ORDER.                                                                                       |

## ENVIRONMENTAL - F. G. Jeanson

### Water

All wastewater discharge parameters were met for the month of August. A bioassay test was completed during the month. No toxicity was found in our outfall.

Work was started on preparing the NPDES permit renewal application. The application is due in October. Our current permit expires at the end of March, 1991.

### Waste

Waste shipments for the month included:

- One bulk load of separator oil to M&M Chemical in Gadsden, AL.
- One bulk load of stormwater solids to CWM in Emelle, AL.
- One bulk load of API sludge to CWM in Emelle, AL.
- Fourteen drums of stabilizer spill and three drums of PA spill to TES in LaPorte, TX.

### Superfund

DuPont Environmental Remediation Services (DERS) completed the final issue of the Remedial Investigation (RI) Plan. This plan was submitted to the State DEQ. A meeting was held at the State to review the plan. A representative from DERS, Joe Ledvina, David Cohen and I attended this meeting.

After review of the RI Plan, the State DEQ approved the plan. The only additional items the State wanted were a revised schedule and slug tests on two of the monitoring wells. A revised schedule will be issued to the State during September and the slug tests will be incorporated in the RI Plan. Work on the RI Plan is scheduled to start in September.

Comments on the NUS report were sent to EPA and to the State. These comments were prepared by DERS and reviewed by Conoco and Vista.

### Air

Work continued on air permitting issues. Several contractors were contacted about risk assessments and fence line monitoring. They are all sending proposals. Two additional dispersion model test cases were completed by Scott Environmental.

Comments were gathered from Environmental, Legal and the plant on a new proposed air toxics policy that the State DEQ issued for comments. These comments were sent in to the State before the public meeting on this subject was held.

**ENVIRONMENTAL - Continued**

**Miscellaneous**

The annual CMA waste survey was completed and sent in.

A waste minimization tax of \$1500 was paid to the State this month for 1990.

**ENERGY CONSERVATION - D. A. Moore**

**August, 1990**

**Fiscal Y.T.D.**

**I. Energy Conservation Data**

|                                     |        |         |
|-------------------------------------|--------|---------|
| A. Unadjusted EUI                   | <3.7%> | < 6.6%> |
| B. Adjusted EUI                     | <4.1%> | < 6.8%> |
| C. BTU/Lb. Product                  | 2539.0 | 2617.0  |
| D. Total Energy Consumption MMM BTU | 131.12 | 1445.49 |

**II. Plant Energy Conservation Program**

**A. Maintenance**

There were eleven energy related items completed in August, 1990. Ten of these items were steam leak repairs. The remaining one was steam trap repairs.

**III. Boiler Operation**

| <u>Boiler</u> | <u>Combustion Efficiency %</u> |                      |
|---------------|--------------------------------|----------------------|
|               | <u>August, 90</u>              | <u>Fiscal Y.T.D.</u> |
| No. 1         | (1)                            | 83.4%                |
| No. 2         | 83.4%                          | 83.3%                |
| No. 3         | 83.0%                          | 83.0%                |

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

**HUMAN RESOURCE REPORT**

**AUGUST, 1990**

**Personnel** - J. E. Beall

**Employment**

Holli Harris, New Hire  
Michael Schneider, New Hire

**Promotions/Transfers**

A. C. Pettus -bid from Vinyl "A" Operator to P-1  
Operator.

Michael Johnson - bid from Compound Operator to Vinyl "A"  
Operator.

**RETIREMENTS**

None

**TERMINATIONS/RESIGNATIONS**

Allan Bodron  
Berlin Genetti

**TO/FROM LEAVE OF ABSENCE**

Anthoney Deanes

Aberdeen, Mississippi

AUGUST, 1990  
MONTHLY PERSONNEL REPORT

Salaried Employees 79\*  
Hourly Employees 171  
Total Employees 250

Minority Employees #, %  
Salaried 7 11%  
Hourly 65 38%  
Total 72 29%

Employees (Hourly)

New Employees 0  
Terminations 0

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

| <u>DEPARTMENTS</u> | <u>PAR</u> | <u># EMPLOYEES</u> | <u>MIN. EMP.</u> | <u>% MIN.</u> | <u>NEW HIRES</u> | <u>YTD</u> | <u>TERM.</u> | <u>YTD</u> | <u>TURNOVER</u> | <u>YTD</u> |
|--------------------|------------|--------------------|------------------|---------------|------------------|------------|--------------|------------|-----------------|------------|
| Warehouse          | <u>16</u>  | <u>15</u>          | <u>8</u>         | <u>53</u>     | <u>0</u>         | <u>0</u>   | <u>0</u>     | <u>0</u>   | <u>0</u>        | <u>0</u>   |
| Gen. Plant         | <u>13</u>  | <u>16</u>          | <u>5</u>         | <u>31</u>     | <u>0</u>         | <u>0</u>   | <u>0</u>     | <u>0</u>   | <u>0</u>        | <u>0</u>   |
| Maintenance        | <u>41</u>  | <u>41</u>          | <u>10</u>        | <u>24</u>     | <u>0</u>         | <u>0</u>   | <u>1</u>     | <u>1</u>   | <u>1</u>        | <u>1</u>   |
| Laboratory         | <u>24</u>  | <u>24</u>          | <u>5</u>         | <u>22</u>     | <u>0</u>         | <u>0</u>   | <u>0</u>     | <u>0</u>   | <u>0</u>        | <u>0</u>   |
| Compound           | <u>40</u>  | <u>38</u>          | <u>26</u>        | <u>67</u>     | <u>0</u>         | <u>0</u>   | <u>0</u>     | <u>0</u>   | <u>0</u>        | <u>0</u>   |
| Vinyl              | <u>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 0

APPLICANT BREAKDOWN:

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

Hires (Hourly):

Month 0 Year to Date 0

Terminations (Hourly):

Month 0 Year to Date 1

Overall Turnover .8%

Projected Annual Turnover .5%

\* THIS FIGURE INCLUDES 1 SUMMER ENGINEER  
AND 2 CO-OP STUDENTS.

VAB.0001189991

ABE, EEN CHEMICAL PLANT  
 DEPARTMENTAL HOURS ANALYSIS REPORT  
 DISTRIBUTION LIST RWS, JFC, JVV, DEPARTMENT HEADS, FILE  
 10/ 2/89 THRU 9/ 2/90

FY 1990 Y-T-D

| DEPT            | OVERTIME HOURS       |                                      | OVERTIME<br>AS A % OF<br>STR TIME | ABSENCE<br>HRS LOSS | ABSENCE AS A % OF STRAIGHT TIME |                      |       | YEAR-TO-<br>DATE | VACATION<br>HOURS |
|-----------------|----------------------|--------------------------------------|-----------------------------------|---------------------|---------------------------------|----------------------|-------|------------------|-------------------|
|                 | STK TIME<br>HRS WRKD | OVERTIME HOURS<br>NONCONTROL CONTROL |                                   |                     | SICKNESS                        | OTHER<br>PAID UNPAID | TOTAL |                  |                   |
| YARD            | 14484.00             | 348.00 1889.25                       | 15.45                             | 778.50              | 3.65                            | 1.16 0.57            | 5.37  | 5.24             | 1328.00           |
| UTILITY         | 7166.25              | 216.00 1184.75                       | 19.55                             | 277.75              | 3.85                            | 0.00 0.02            | 3.88  | 3.79             | 668.00            |
| MAINTENANCE     | 59988.00             | 355.75 8465.25                       | 14.70                             | 2377.50             | 2.47                            | 0.55 0.95            | 3.95  | 3.99             | 6080.00           |
| QC LAB          | 32156.50             | 588.00 2596.75                       | 9.90                              | 1151.00             | 1.79                            | 0.93 0.86            | 3.58  | 3.65             | 2184.00           |
| JANITORS        | 3643.50              | 0.00 115.00                          | 3.14                              | 25.50               | 0.00                            | 0.44 0.25            | 0.70  | 0.68             | 336.00            |
| WAREHOUSE       | 11637.25             | 0.00 895.75                          | 7.70                              | 1678.75             | 13.85                           | 0.21 0.37            | 14.43 | 14.18            | 1032.00           |
| STORES          | 3344.00              | 0.00 71.75                           | 2.15                              | 49.00               | 0.24                            | 0.00 1.23            | 1.47  | 1.43             | 324.00            |
| DEVELOPMENT LAB | 10020.00             | 108.50 842.75                        | 9.49                              | 61.50               | 0.24                            | 0.00 0.57            | 0.61  | 0.66             | 1200.00           |
| DRY BLEND       | 11130.75             | 132.00 1015.00                       | 10.30                             | 489.75              | 0.11                            | 1.00 0.55            | 1.70  | 1.67             | 660.00            |
| UNFOUND         | 69417.50             | 676.00 7248.00                       | 11.41                             | 2826.00             | 2.66                            | 0.77 0.65            | 4.07  | 4.10             | 4100.00           |
| VINYL           | 69724.00             | 1754.50 7146.75                      | 12.77                             | 1678.50             | 1.11                            | 0.49 0.81            | 2.41  | 2.36             | 4160.00           |
| PLASTICIZER     | 8825.75              | 132.00 557.90                        | 7.81                              | 228.50              | 1.36                            | 0.00 1.23            | 2.59  | 2.94             | 856.00            |
| GENERAL HELPERS | 0.00                 | 0.00 0.00                            | 0.00                              | 0.00                | 0.00                            | 0.00 0.50            | 0.00  | 1.10             | 0.00              |
| TOTAL PLANT     | 301558               | 4310.75 32020.00                     | 12.05                             | 11322.25            | 2.41                            | 0.61 0.74            | 3.75  | 3.75             | 23016.00          |

TOTAL PLANT HOURS FOR JURY DUTY..... 108.00  
 TOTAL PLANT HOURS FOR NATIONAL GUARD/RESERVE DUTY..... 1025.50  
 TOTAL PLANT HOURS FOR DEATH IN FAMILY..... 696.00

ABERDEEN CHEMICAL PLANT  
 DEPARTMENTAL HOURS ANALYSIS REPORT  
 DISTRIBUTION LIST RWS, JFC, JWB, DEPARTMENT HEADS, FILE  
 7/30/90 THRU 9/2/90

August, 1990

| DEPT            | STR TIME<br>HRS WAKED | OVERTIME HOURS                          |                           | OVERTIME<br>AS A % OF<br>STR TIME | ABSENCE<br>HRS LOST | ABSENCE AS A % OF STRAIGHT TIME |      |         | YEAR-TO-<br>DATE | VACATION<br>HOURS |
|-----------------|-----------------------|-----------------------------------------|---------------------------|-----------------------------------|---------------------|---------------------------------|------|---------|------------------|-------------------|
|                 |                       | OVERTIME HOURS<br>NONCONTINGENT CONTROL | OVERTIME HOURS<br>CONTROL |                                   |                     | SICKNESS                        | PAID | NONPAID |                  |                   |
| VAB             | 1600.00               | 0.00                                    | 134.50                    | 8.53                              | 60.00               | 3.00                            | 0.00 | 0.75    | 3.75             | 5.24              |
| UTILITY         | 816.00                | 0.00                                    | 40.75                     | 4.99                              | 0.00                | 0.00                            | 0.00 | 0.00    | 0.00             | 24.00             |
| MAINTENANCE     | 6603.00               | 0.00                                    | 1020.00                   | 15.45                             | 60.00               | 0.00                            | 0.24 | 0.67    | 0.91             | 504.00            |
| QC LAB          | 3200.00               | 0.00                                    | 420.75                    | 12.83                             | 220.00              | 6.57                            | 0.00 | 0.37    | 6.95             | 276.00            |
| LABORERS        | 590.50                | 0.00                                    | 4.25                      | 1.07                              | 3.50                | 0.00                            | 0.00 | 0.00    | 0.00             | 0.00              |
| INVENTORY       | 1287.50               | 0.00                                    | 154.25                    | 12.14                             | 202.00              | 15.53                           | 0.00 | 0.16    | 15.69            | 120.00            |
| STORAGE         | 372.00                | 0.00                                    | 3.00                      | 0.77                              | 0.00                | 0.00                            | 0.00 | 0.00    | 0.00             | 0.00              |
| DEVELOPMENT LAB | 1026.00               | 0.00                                    | 87.25                     | 8.45                              | 0.00                | 0.00                            | 0.00 | 0.02    | 0.02             | 100.00            |
| DRY BLEND       | 1176.00               | 0.00                                    | 120.75                    | 10.27                             | 40.00               | 0.00                            | 2.04 | 2.04    | 4.00             | 24.00             |
| COMPOUND        | 7304.00               | 0.00                                    | 852.50                    | 11.67                             | 65.75               | 0.30                            | 0.00 | 0.57    | 0.90             | 616.00            |
| VINYL           | 7140.25               | 0.00                                    | 640.25                    | 9.24                              | 303.75              | 2.73                            | 0.04 | 0.40    | 4.25             | 306.00            |
| PLASTICIZER     | 1074.50               | 0.00                                    | 103.50                    | 9.63                              | 1.50                | 0.00                            | 0.00 | 0.14    | 0.14             | 0.00              |
| GENERAL HELPERS | 0.00                  | 0.00                                    | 0.00                      | 0.00                              | 0.00                | 0.00                            | 0.00 | 0.00    | 0.00             | 0.00              |
| TOTAL PLANT     | 32133.75              | 0.00                                    | 3607.75                   | 11.23                             | 772.75              | 2.17                            | 0.31 | 0.35    | 3.83             | 2300.00           |

TOTAL PLANT HOURS FOR JULY 1991 ..... 0.00  
 TOTAL PLANT HOURS FOR NATIONAL GUARD/RESERVE DUTY ..... 0.00  
 TOTAL PLANT HOURS FOR DEATH IN FAMILY ..... 100.00

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**ADMINISTRATIVE SERVICES - D. A. Barclay**

**Safety**

There were no safety instances for the month of August.

**Quality**

At month-end, we had five natural teams with a total of thirty-eight points for an average score of 7.6 points.

**Statistics**

| <b><u>Processed</u></b>            | <b><u>Month</u></b> | <b><u>Y.T.D.</u></b> |
|------------------------------------|---------------------|----------------------|
| Invoices                           | 1185                | 12,083               |
| Working Fund Checks Written        | 18                  | 208                  |
| Number of Packaged Customer Orders | 162                 | 1,476                |
| Packaged Shipped Pounds            | 4,794,462           | 45,032,405           |

**Cost Savings**

Savings due to competitive bidding were \$55,876.80 for August, and \$161,160 for fiscal 1990 YTD.

Per Controllers, the new computer system is not able to allocate invoice discounts taken back to individual plants. Therefore, we are not able to report discounts taken. For YTD ending July, we have taken \$19,745.

**Obsolete and Overaged Inventory August, 1990**

|                             |                   |
|-----------------------------|-------------------|
| Prime                       | 1,465,253 lbs.    |
| Off-grade                   | 164,931 lbs.      |
| Dry Blend Prime             | 77,819 lbs.       |
| Dry Blend Off-Grade (Scrap) | 1,416 lbs.        |
| Millscrap                   | 328,349 lbs.      |
| Vent Dust                   | 292,203 lbs.      |
| Sifter Overflow             | <u>9,309 lbs.</u> |
| Total Obsolete & Overaged   | 2,339,280 lbs.    |

**Training**

Supervisors attended CPR training.

All Administrative/Purchasing personnel attended Health Training, FDA Resin and Good Manufacturing Practices Manual Training.

**ABERDEEN CHEMICAL PLANT  
SHIPPING ANALYSIS  
AUGUST 1990**

| -SHIPMENTS BY PRODUCTS-    | MONTH             |                   |                  | YTD                |                    |                   |
|----------------------------|-------------------|-------------------|------------------|--------------------|--------------------|-------------------|
|                            | PUBLIC            | IPT/ITC           | EXCH/TOLL        | PUBLIC             | IPT/ITC            | EXCH/TOLL         |
| RESIN-BULK                 | 20,057,630        | 9,524,940         | 176,650          | 222,111,192        | 103,639,940        | 2,307,050         |
| RESIN-PACKAGED             | 403,043           | 176,150           | 0                | 3,307,928          | 2,202,400          | 0                 |
| FLEXIBLE COMPOUND-BULK     | 316,720           | 1,594,100         | 0                | 14,590,560         | 11,607,230         | 0                 |
| FLEXIBLE COMPOUND-PACKAGED | 3,302,839         | 100,400           | 0                | 34,730,182         | 1,693,671          | 0                 |
| NEW BUSINESS               | 1,445             | 0                 | 0                | 71,418             | 0                  | 0                 |
| RIGID COMPOUND-BULK        | 4,063,880         | 691,700           | 0                | 34,662,070         | 9,893,200          | 0                 |
| RIGID COMPOUND-PACKAGED    | 182,399           | 0                 | 0                | 2,216,708          | 268,723            | 0                 |
| TOLLING - BULK             | 0                 | 0                 | 693,850          | 0                  | 0                  | 7,833,740         |
| TOLLING - PACKAGED         | 0                 | 0                 | 0                | 0                  | 0                  | 184,565           |
| PLASTICIZER                | 262,520           | (20,700)          | 566,000          | 1,826,960          | 2,254,310          | 2,249,910         |
| <b>TOTAL</b>               | <b>28,680,476</b> | <b>12,164,590</b> | <b>1,436,500</b> | <b>313,597,018</b> | <b>131,559,474</b> | <b>12,555,265</b> |

**-SHIPMENTS BY MODE-**

| BULK:               | RAILCAR      | CUSTOMER PICKUP | COMMON CARRIER | TOTAL        |
|---------------------|--------------|-----------------|----------------|--------------|
| <b>*AUGUST*</b>     |              |                 |                |              |
| RESIN               | 154          | 26              | 60             | 240          |
| FLEXIBLE COMPOUND   | 10           | 0               | 3              | 13           |
| RIGID COMPOUND      | 29           | 4               | 17             | 50           |
| PLASTICIZER         | 2            | 0               | 16             | 18           |
| <b>TOTAL AUGUST</b> | <b>195</b>   | <b>30</b>       | <b>96</b>      | <b>321</b>   |
| <b>*YTD*</b>        |              |                 |                |              |
| RESIN               | 1,636        | 288             | 629            | 2,553        |
| FLEXIBLE COMPOUND   | 133          | 11              | 47             | 191          |
| RIGID COMPOUND      | 265          | 21              | 166            | 452          |
| PLASTICIZER         | 23           | 0               | 61             | 84           |
| <b>TOTAL YTD</b>    | <b>2,057</b> | <b>320</b>      | <b>903</b>     | <b>3,280</b> |

| PACKAGED:           | CUSTOMER PICKUP | COMMON CARRIER | TOPC     | CONTAINER | AIR/UPS    | TOTAL        |
|---------------------|-----------------|----------------|----------|-----------|------------|--------------|
| <b>*AUGUST*</b>     |                 |                |          |           |            |              |
| RESIN               | 1               | 24             | 0        | 0         | 14         | 39           |
| FLEXIBLE COMPOUND   | 23              | 89             | 0        | 0         | 13         | 125          |
| RIGID COMPOUND      | 2               | 8              | 0        | 0         | 0          | 10           |
| PLASTICIZER         | 0               | 0              | 0        | 0         | 0          | 0            |
| <b>TOTAL AUGUST</b> | <b>26</b>       | <b>121</b>     | <b>0</b> | <b>0</b>  | <b>27</b>  | <b>174</b>   |
| <b>*YTD*</b>        |                 |                |          |           |            |              |
| RESIN               | 31              | 152            | 0        | 0         | 83         | 266          |
| FLEXIBLE COMPOUND   | 249             | 811            | 5        | 0         | 65         | 1,130        |
| RIGID COMPOUND      | 19              | 90             | 0        | 1         | 2          | 112          |
| PLASTICIZER         | 0               | 3              | 0        | 0         | 1          | 4            |
| <b>TOTAL YTD</b>    | <b>299</b>      | <b>1,056</b>   | <b>5</b> | <b>1</b>  | <b>151</b> | <b>1,512</b> |

**LABORATORY - J. M. Edwards, Jr.**

- A. **Safety** - There were no safety incidents in the Laboratory during August. The monthly safety meeting topics were "Health Training", "FDA Status" and the "Good Manufacturing Practices Training" taught by Jerald Uptain and Doug Knittig.
- B. **Customer Contacts** - There were four customer contacts during August.

Mike Quakenbush and Jim Edwards traveled to Gold Bond in Sardis, MS to discuss 5385 specifications with Robert Kwapisz and C. Lafayette Mason. During the meeting, several target specifications were set. We had an understanding that the specification sheet was a working document and as more information was learned, spec limits and windows would change.

Carm Covais, John Blum and David Pullin from American Mirrex Corporation visited the Aberdeen Plant. They toured the plant and participated in a technical information exchange. 5305 and 5265 resin specifications were set during this meeting.

Richard Williams accompanied the Pacific Western Resins Technical Team from Vista to the Pace Florida facility. The purpose of this meeting was for evaluation and to discover any technical issues that would prohibit us from entering into a toll/exchange agreement with Pacific Western resins.

Cheryl Cincetti, Vendor Certification Coordinator with AT&T, visited the Aberdeen Plant to perform an in-depth review of our quality systems which were found to be deficient in 1989. Six of seven areas audited were found to be "Adequate".

C. **Customer Q.C. Problem Reports and CNR's**

**8/03 Formtech, Stow, OH**

Otto Grill from Formtech reported they were having problems identifying different shipments of the same product. The lab started sending certificates of analysis by fax and putting the lot number on the bills of lading.

**8/03 Dixie Wire**

Dixie Wire reported that drums of wire made with 2153A compound had a bad odor which made their customers' employees sick with nausea. The Aberdeen Tech Service Lab is investigating.

**LABORATORY - Continued**

**C. Customer O.C. Problems Reports and CNR's - continued**

**8/08 Formtech, Stow, OH**

Formtech reported that a truck shipment of RP-91 WHT 110 ran with lower melt viscosity than previous and subsequent shipments. This caused them to have 5% overs on part weight. Randell Jackson visited Formtech on 8/16 and presented torque rheometry data which showed no difference in material quality that would cause that problem.

**8/09 Dayton Extruded Plastics, Springboro, OH**

Dayton reported that a railcar of RP-151 WHT 145 was full of "black regrind". The railroad shipped them a car of black compound pellets by mistake.

**8/15 Available Plastics, Huntsville, AL**

Available Plastics truck loaded with 80273G in the plant had to be off-loaded because of problems with torque rheometry properties. The truck was returned to their plant empty. Vista supplied another truck of good material the next day.

**8/17 Marley Mouldings, Marion, VA**

Customer reported higher than normal percentage on the 80-mesh sieve on one railcar compartment of 5305. Although the compartment was in spec, the material looked suspicious and therefore they asked us to double-check the sample from the car they sent us. The sample was indeed 5305 and Mark Washington relayed the information to Marley Moulding. It is assumed they used the material without problems.

**8/30 Northern Electric, Laurel, MS**

The customer complained that five boxes of compound were labeled with the wrong Northern Electric part number. Ted Nickerson responded and said that we would be more careful in the future labeling their material.

**LABORATORY - Continued**

**C. Customer O.C. Problem Reports and CRR's - continued**

**8/30 Central Plastics. McPherson. KS**

The customer complained that 18831 Water Clear 10 x 16 flexible compound caused "fisheyes" in their flexible luggage strips. Aberdeen Technical Service Lab responded to the complaint. Retains showed no hard particle or gel problem. Since then, Central Plastics has run some product from Blane with the same problem. Customer processing is suspected to be the problem in this complaint.

**D. Requests for Corrective Action**

There were no requests for corrective action during the month of August.

**E. Product Waivers**

| <u>Customer</u>    | <u>Product</u> | <u>Reason</u>   | <u>No.</u>         |
|--------------------|----------------|-----------------|--------------------|
| American Mirrex    | 5305           | Contamination   | 1 R/C              |
| Available Plastics | 80273G WHT 110 | Long Fusion     | 2 H/T              |
| Eagle Plastics     | 80273G WHT 110 | Short Stability | 1 R/C              |
| Stylecrest         | RP-27 WHT 113  | % on 40 Mesh    | 2 R/C              |
| Vycom              | RP-461 WHT 110 | % on 40 Mesh    | 1 H/T and<br>1 R/C |

**F. RVCM Summary**

**RVCM of In-Process Samples**

The following is a summary of residual VCM results on in-process samples. None of the reactor daily averages exceeded 400 ppm RVCM during the month of August, 1990.

|                   | <u>Reactor</u>  | <u>Drier</u> |             |
|-------------------|-----------------|--------------|-------------|
|                   | <u>Slurries</u> | <u>5265</u>  | <u>5305</u> |
| Number of Samples | 899             | 25           | 111         |
| Average RVCM, ppm | 152             | 0.218        | 0.320       |

**LABORATORY - Continued****RVCM of Shipment Samples**

The following is a summary of the residual VCM analysis of shipment samples for the month of August, 1990.

| <u>Product</u> | <u>Number of Samples</u> | <u>Average RVCM, ppm</u> |
|----------------|--------------------------|--------------------------|
| 5265           | 23                       | 0.135                    |
| 5305           | 134                      | 0.128                    |
| 5385           | 57                       | 0.390                    |
| 5395           | 0                        | -----                    |
| 5415           | 52                       | 0.041                    |
| Dry Blend      | 62                       | 0.048                    |
| Debox          | 16                       | 0.484                    |
| Pond           | 1                        | 0.504                    |

**G. Resin Process Capabilities (based on dryer "regulars")**

|                                | <u>5265</u> | <u>5305</u> | <u>5385</u> | <u>5395</u> | <u>5415</u> |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|
| Bulk Density                   | 1.01        | 1.48        | 1.51        | ----        | 1.12        |
| Inherent Viscosity             | 1.58        | 1.00        | 0.64        | ----        | 0.61        |
| (vs. 0.715 - 0.744)            | ----        | 0.58        | ----        |             |             |
| L Color                        | 3.19        | 3.07        | 3.89        | ----        | 6.67        |
| A Color                        | 7.33        | 4.17        | ----        |             |             |
| B Color                        | 5.67        | 1.67        | 2.33        | ----        | 6.33        |
| % on Pan                       | 0.42        | 1.38        | 1.38        | ----        | 1.89        |
| (vs. 2%, max.)                 | ----        | ----        | ----        | ----        | 0.22        |
| % thru 140 Mesh                | 0.36        | 0.89        | 1.75        | ----        | 3.20        |
| Drytime                        | ----        | ----        | 2.00        | ----        | 1.67        |
| Mets I.R.                      | ----        | ----        | ----        | ----        | 4.86        |
| (vs. 95% of control)           | ----        | ----        | ----        | ----        | 2.21        |
| Hard Particles, (% > 10)       | ----        | ----        | 3.0         | ----        | 0           |
| Average particle size, microns | 134         | 143         | 163         | ----        | 172         |

**H. Flexible Compound Quality Summary**

|                     | <u>Adjustments</u> |            | <u>Rejections</u> |            |
|---------------------|--------------------|------------|-------------------|------------|
|                     | <u>M Lbs.</u>      | <u>(%)</u> | <u>M Lbs.</u>     | <u>(%)</u> |
| Hardness            | 26.0               | <0.46>     | ----              | ----       |
| Color               | 15.0               | <0.27>     | 35.6              | <0.63>     |
| Hard Particles      | ----               | ----       | 19.5              | <0.34>     |
| Heat Stability      | 14.0               | <0.25>     | ----              | ----       |
| Contamination       | ----               | ----       | 7.8               | <0.14>     |
| Dispersion          | ----               | ----       | 24.0              | <0.42>     |
| Dicing              | ----               | ----       | 24.4              | <0.43>     |
| Cross Contamination | ----               | ----       | 7.4               | <0.13>     |
| Streamers           | ----               | ----       | 1.5               | <0.03>     |
| Mischarge           | 7.0                | <0.12>     | 12.5              | <0.22>     |
| Metal               |                    |            | 6.1               | <0.11>     |
|                     | 62.0               | <1.10>     | 138.8             | <2.45>     |

**LABORATORY - Continued**

**I. Rigid Compound Quality Summary**

|                  |            | <u>Rejections</u>   |            |
|------------------|------------|---------------------|------------|
|                  |            | <u>M Lbs.</u>       | <u>(%)</u> |
| Torque Rheometry | 14.2       | <0.26>              |            |
| Color            | <u>3.6</u> | <u>&lt;0.07&gt;</u> |            |
| Total            | 17.8       | <0.33>              |            |

**J. Miscellaneous**

1. All six laboratory natural teams met once during the month of August. "C" shift's natural team made a presentation to management about their completed project. By changing sampling frequency and procedure, the dry blend lab technicians were able to trim 2 1/2 hours of sample result turnaround time which should increase the productivity of the dry blend unit.
2. Dave Cox completed software which creates certificates of analysis from the railcar shipment database.
3. A fifty-pound load cell and a die were ordered for PLENEX compound tensile testing.

# SAMPLE SHIPMENTS

AUGUST 1990

## RESIN

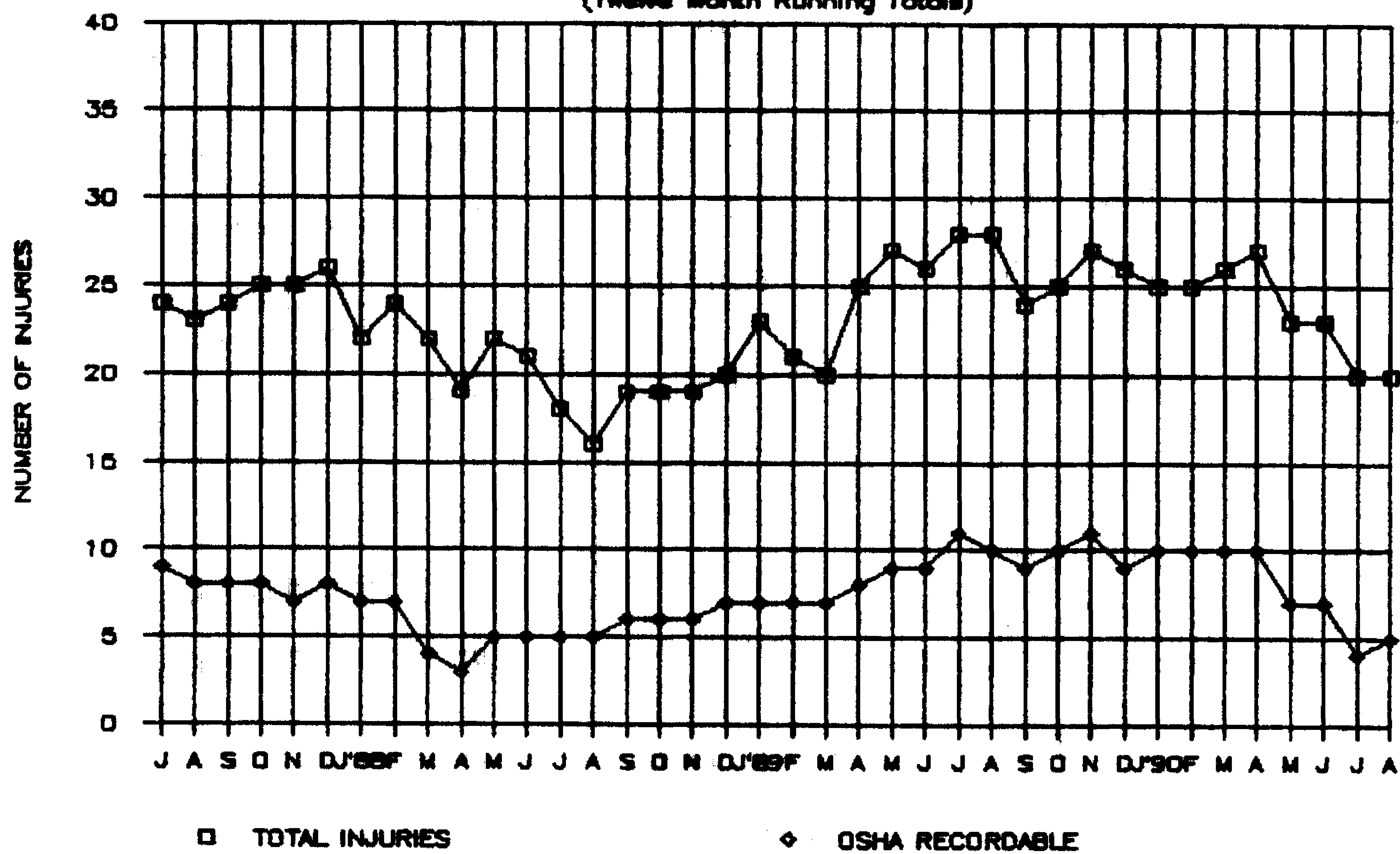
| <u>Ship Date</u> | <u>Product</u>   | <u>Amount</u> | <u>Customer</u>          |
|------------------|------------------|---------------|--------------------------|
| 8/01/90          | 5265             | 50 lbs.       | Tech Mark                |
|                  | 5305             | 50 lbs.       |                          |
|                  | 5385             | 50 lbs.       |                          |
|                  | 5415             | 50 lbs.       |                          |
| 8/01/90          | Pond             | 50 lbs.       | PANAMERICA DE PLASTICOS  |
| 8/01/90          | 5305             | 2250 lbs.     | United Technologies Auto |
| 8/09/90          | 5265             | 50 lbs.       | PIZARRENO S. A.          |
|                  | 5385             | 50 lbs.       |                          |
|                  | 5415             | 50 lbs.       |                          |
| 8/10/90          | 5385 (New Tech.) | 2250 lbs.     | Abitibi-Price Corp.      |
| 8/10/90          | 5415 (Control)   | 50 lbs.       | Vista Polymers - OKC     |
| 8/10/90          | 5385 (New Tech.) | 50 lbs.       | Gencorp Polymer Products |
| 8/10/90          | 5305 (New Tech.) | 50 lbs.       | Uniroyal Plastics        |
|                  | 5385 (New Tech.) | 50 lbs.       |                          |
| 8/14/90          | 5265             | 2 lbs.        | Dar Chem                 |
|                  | 5305             | 2 lbs.        |                          |
|                  | 5385             | 2 lbs.        |                          |
| 8/15/90          | 5415             | 50 lbs.       | Vicrtex Inc.             |
| 8/17/90          | 5265             | 50 lbs.       | 3M Austin Center         |
|                  | 5305             | 50 lbs.       |                          |
|                  | 5385             | 50 lbs.       |                          |
|                  | 5415             | 50 lbs.       |                          |
| 8/17/90          | 5305             | 1000 lbs.     | Ristance Corporation     |
| 8/17/90          | 5385             | 50 lbs.       | CONDUCTORES LATINCASA    |
|                  | 5415             | 50 lbs.       |                          |
| 8/22/90          | 5305             | 50 lbs.       | Great Lake Chemical      |
| 8/23/90          | 5385             | 1 lb.         | DAVID NETKA              |
|                  | 5415             | 1 lb.         |                          |
| 8/27/90          | 5305             | 10 lbs.       | Robbins Tire & Rubber    |
| 8/27/90          | 5265             | 50 lbs.       | Dayton Extruded Plastics |
|                  | 5305             | 50 lbs.       |                          |

COMPOUND

| <u>Ship Date</u> | <u>Product</u> | <u>Amount</u> | <u>Customer</u>                      |
|------------------|----------------|---------------|--------------------------------------|
| 8/02/90          | 18961 NAT      | 100 lbs.      | Macklanburg-Duncan                   |
|                  | 15072 NAT      | 100 lbs.      |                                      |
| 8/02/90          | 35852 NAT      | 200 lbs.      | Tandy Cable Products                 |
| 8/03/90          | 18031 WAT CL   | 100 lbs.      | Flexible Technologies                |
| 8/15/90          | 830 NAT 03     | 500 lbs.      | Arizona Electric<br>Fabricators Inc. |
| 8/17/90          | 34643 NAT      | 50 lbs.       | ELECTROCONDUCTORES DE<br>HONDURAS    |
| 8/20/90          | 38525 NAT 02   | 200 lbs.      | Tandy Wire                           |
| 8/23/90          | 27121 NAT      | 50 lbs.       | IFER DOMINICANA C. A.                |
| 8/24/90          | 15041 CB 50    | 50 lbs.       | Donnelly Corporation                 |
|                  | 16851 CB 50    | 50 lbs.       |                                      |
| 8/30/90          | 38401 ORG      | 50 lbs.       | IFER DOMINICANA C. A.                |
|                  | 14331 WAT CL   | 50 lbs.       |                                      |
|                  | 27121 NAT      | 100 lbs.      |                                      |
| 8/31/90          | 34311 NAT      | 200 lbs.      | Tandy Wire                           |
| 8/31/90          | 18162 GRY 545  | 100 lbs.      | Tandy Speciality Cables              |

# ABERDEEN CHEMICAL PLANT INJURIES

(Twelve Month Running Totals)



# ABERDEEN ENERGY CONSUMPTION

