

QUALITY MANAGEMENT PROCESS - J. M. Edwards

- The Plant Manager's Natural Team worked on transferring the duties of the Quality Coordinator to other members of the plant staff. They also worked on eliminating many items from the monthly progress report.
- The Chief Process Engineer's Natural Team worked on re-engineering the way they choose, develop, and work on projects.
- The Senior Process Engineer's Natural Team started to work on documenting (flow charts, etc.) Process Engineering documents.
- The Non-Conforming Product Procedure was approved and put in use. This procedure addresses both non-conforming raw materials and finished product.
- The Plant started using Corrective Action Reports (CARs).
- The Vinyl Operations Superintendent's Natural Team reviewed their G-Scorecard status and action items needed. They continued work on evacuation optimization and raw materials inventory improvements (data gathering).
- Vinyl "A" Shift Team - In progress with project to replace PVA ram valves with plug valves. One is being tested now on D-741.
- Vinyl "C" Shift Team is working on evaluation of project to revise power supplies to the 281 and 282 silo transfer systems.
- Vinyl "D" Shift Team - In progress with a project to improve clearing of the E.R.S. seal water exchangers.
- The Yard Team is working on completion of project to improve cleanout and reclaim of compound railcar heels; they're selecting another project.

COST VARIANCES - S. J. Vincent**Variable Costs**

<u>Product</u>	<u>April, 1994 Variance, \$M</u>		
	<u>Efficiency</u>	<u>Price</u>	<u>Total</u>
PVC	<24.9>	43.6	18.7
Flexible Compound	12.0	148.9	160.9
Plasticizer	<38.8>	77.7	38.9
Total	<51.7>	270.2	218.5

COST VARIANCES - Continued**PVC Resin**

The unfavorable efficiency variance for PVC was due to an unfavorable VCM efficiency of \$226.2M which was partially off-set by favorable variances for off-grade production - \$116.6M, utilities - \$74.2M, and Alcotex - \$32.2M.

Flexible Compound and Plasticizer

The favorable price variance is due to favorable resin and plasticizer prices.

The unfavorable efficiency variance in Plasticizer is due to the high VRP production. The favorable price variance is due to favorable Phthalic Anhydride and 610 Alcohol prices.

Major Price Variances**Variance - \$M**

- VCM	42.3
- Plasticizer to Compound	34.3
- Resin to Compound	<u>112.0</u>
	188.6

VINYL - J. D. Olson, W. S. Carroll**Safety**

The Vinyl Department had no injuries in April.

The monthly safety meetings were held on shift.

General

1. April production was 41.5MM pounds of which 40.0MM pounds was prime grade resin. Percent asset utilization was 81.2%.

	<u>Apr.</u>	<u>YTD</u>
- Production, MM Lbs.	41.5	405.3
- Reactor Stream Factor, %	91.4	86.7
- Resin Quality, % Prime	96.4	96.0
- VCM Efficiency, Lbs./Lb.	1.0581	1.0456
- Daily Rate, M Lbs./C.D.	1384.6	1333.3
- Capacity Utilization Factor, %	96.3	92.7
- Total Reactor Charges	974	9321
- Charges/C.D.	32.5	30.7
- Rotary Dryer Stream Factor (#4-#8), %	82.3	90.0
- Fluid Bed Dryer Stream Factor, %	98.9	88.1

VINYL - Continued**General - continued**

2. A VCM shortage occurred in early April resulting in 118 hours of reactor downtime.

Reactor Downtime**Hours**

- Operational downtime (low VCM inventory - 118 hours, recovery scheduling conflicts - 186 hours, and D-745 reactor condenser hydroblasting - 43 hours). 369.0
- Mechanical downtime (New Module hot water tank repairs - 73 hours, New Module process water header repair - 30 hours, and recovery compressor repairs - 27 hours). 252.0

Dryer Downtime**Hours**

- Operational downtime (cleaning, product changes, and centrifuge plugs). 67.0
- Mechanical downtime 89.0
- Reactor limited production. 489.0

COMPOUND - E. T. Stouder, J. B. Hegwood**Safety**

The Compound Department had no OSHA recordable injuries during the month.

General

Orders for Lines I, III, and V continue to be strong. Production volumes were unchanged from last month. We continue to run AT&T trial material on all three lines. All production for AT&T trial material is going well.

<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	30	1832	61	18030
Line III	30	3616	120	36683
Line V	30	1109	37	11391
Total		6557	218	66104
% Prime		95.09		96.52
Capacity Utilization Factor		91.89		90.51

COMPOUND - ContinuedDowntimeHoursLine I

- Product Changes	86
- Miscellaneous Maintenance	13
- Quality	7

Line III

- Product Changes	56
- Miscellaneous Maintenance	44
- Quality	15

Line V

- Product Changes	73
- Miscellaneous Maintenance	15
- Quality	33

	<u>Operating Days</u>	<u>Production M (Lbs).</u>		
		<u>Month</u>	<u>Avg./Day</u>	<u>Fiscal Y.T.D.</u>
Plasticizer	30	1400	47	14133
% Prime		86.22		83.07
Capacity Utilization Factor		74.36		75.10

ENGINEERING - J. E. Nickerson, T. R. Mackay, R. H. Sneed**PROJECTS IN DEVELOPMENT - GENERAL****EXPRESS**Project Scope Work

All Class "A" design reviews were completed during the month of April. Some of the designs required modifications. Design revisions and approvals will be done in May. The project schedule calls for complete designs ready for estimating by the end of May.

Dryer

The AFE for the UDHE basic engineering package was submitted and signed. A kickoff meeting with UDHE was held. Work is still progressing on contract issues. Targeting mid-May to have a contract ready for management to sign.

ENGINEERING - Continued**EXPRESS - continued**Dryer - continued

A process hazard analysis and Class "A" design review were completed for the dryer portion of EXPRESS outside the limits of UDHE's design. The final issue of the design will be completed in May.

OSHA Process SafetyProcedures

All procedures for the Old Module are complete. Procedures for New Module and SA Module are in the review process. Work has started on writing procedures for the boilers and the plant propane system.

HAZOPS

The P&ID review portion of the Old Module HAZOP has been completed. Equipment for VCM release modeling has been chosen. Remaining work to be completed before writing the HAZOP report includes completing the human factors questionnaire and a review of past incidents.

MOCAs

Training classes have been given for operator training. Also, a plant review meeting was held on the proposed revisions to the MOCA and PSSR policies. The new policies were approved and will become effective 5/9/94.

Increased Reactor Charge Temperature

The DOE completed in March used charge temperatures up to 124°F. In April, 5385 batches were charged between 126° and 130°F. for both single and dual catalyst. An evaluation of permanently increasing the charge temperature will be made in May.

Cooling Tower Improvements

The chlorination system is scheduled for May startup and full operation by the end of June. Construction is still underway. All towers are up to the desired five cycles.

ENGINEERING - Continued**RVCM Reduction Efforts**

Some customers were concerned with RVCM levels this past winter. Currently, RVCM levels are okay because of warmer weather and additional silo aeration. There was a change to the DCS recovery program that improved stripping temperature consistency. The next step is to supply hot air to the blend tanks. A Class "A" design has been issued for review. This design will slow the rate of cooling in the blend tanks and enhance RVCM removal.

Plant Wet Air and Instrument Air

Justification for increasing the plant air capacity has been prepared. This justification is based on operation of four rotary dryers at the same rate that five currently operate. A Class "A" design will be completed in early May. The design will install an additional air compressor and receiver in the process air system and add controls to the instrument air system.

Silo Level Instrumentation Improvement

A project scope meeting was held and the CELTEK brand level equipment was chosen as the recommended instrumentation for this project. A Class "A" design will be completed by the end of June. The compound silos will be included in the design. This is a 2FQ95 budget project.

New Module Small Reactor Condenser Replacement

Reactor 741's condenser was replaced. Three of the four schedule replacements are complete. Reactor 743 is the only one remaining that still needs new baffles in the condenser.

Iron Settling Pond Water Recycle

The Class "A" design for recycling water from the water plant's iron settling ponds is complete and issued for review. This project will reduce the amount of water going to the plant's wastewater treatment ponds by 100 gpm.

Iron Settling Pond Water Revisions

Gravity Flow Systems Inc. has agreed to bring a sludge dewatering unit for testing on the water plant's iron sludge. We are not confident that land-farming iron sludge will be possible long-term. The gravity flow sludge dewatering unit will provide other disposal alternatives.

ENGINEERING - Continued**Cascade Boiler Blowdown**

Work began on a Class "A" design to circulate blowdown from the on-line boilers to the boiler that is not operating. This design is necessary to preserve both boilers 1 and 2 when they are not operating and to allow for faster startup of the boilers.

ENVIRONMENTAL - K. G. Akins**Water**

The second of three monthly bioassays required by the MDEQ was conducted in April. This test indicated possible toxicity as did the test in March. The third and final test will be conducted in May. These additional tests were required based on inconclusive testing done in December.

We have already begun preliminary investigations into possible causes of toxicity with assistance from R&D.

All other wastewater discharge parameters were within permitted limits.

Waste

- Four bulk shipments of waste oil to Fisher Industrial Services, Inc. in Glencoe, Alabama.
- A bulk shipment of empty lead bags to Chemical Waste Management in Emelle, Alabama.
- A shipment of obsolete lab chemicals to Laidlaw Environmental Services in Greenbriar, Tennessee.

KEY ENVIRONMENTAL COMPLIANCE DATA

	<u>MONTH</u>	<u>FYTD</u>
Stormwater Outfall Excursions	0	1
Wastewater Outfall Excursions	1	3
Reportable NESHAP Excursions	0	0
Reportable non-NESHAP Air Excursions	0	0
CERCLA/SARA Reportable Incidents	0	0
Other Reportable Incidents	0	0
Citations and NOV's Received	0	0