W. R. Haupt

THIRD QUARTER REVIEW
ORGANIC PRODUCTION AND MATERIAL HANDLING DEPARTMENTS
1965 OBJECTIVES

November 9, 1965

I. SAFETY

1. Have no lost time or near-miss accidents and attain a serious injury index of 12.

   None - Serious injury index 12

2. Conduct a Safety Audit on all expanded production facilities within four months of start-up.

   Severson to complete audit of Biphenyl Tube by 6/30/65.

3. Complete a minimum of 12 significant safety improvements during the year.

   a. Aroclor electrical gear upgraded.
   b. Safety showers installed - HB-40, Santowax R.
   c. Old hydrogen compressors, and gas meter room dismantled.
   d. New Muriatic Acid loading dock and piping.
   e. Eye wash bottles - all control rooms.
   f. Benzene loading dock upgraded safety-wise by replacing ladder with steps and handrail.
   g. Gas meters removed Santowax R control area.
   h. Hazardous Santowax melt pots dismantled.
   i. Enclosed Santowax R control area.
   j. New Muriatic Acid Department.
   k. Eliminated very hazardous Santowax C draw-off required in manufacture of Aroclor 2565 by installation of steam jacketed loading line. Also eliminated handling problems to put material in chlorinators.
   l. Daily log of pressure condition on three deluge systems at tubular unit.
   m. Improved OM piping eliminated drum draw-off and reworking operation.
   n. Eliminated hazardous operation of operating two Biphenyl stills with one receiver in manufacture of Biphenyl F. Piped in Biphenyl F tank.
   o. Safety showers at HCl and Aroclor installed.
   p. New HCl facilities installed with improved piping and PVC coated grating throughout.
   q. Aroclor chlorinator sampling facilities improved.
   r. Reduced use of gas torches in Aroclor - new therminol system installed.
   s. Level instruments on Aroclor tanks - eliminates measuring sticks and tank openings as tripping hazards.

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t. Replaced North wall of Aroclor building.
u. New Biphenyl transfer line eliminated hazards in transfer for chlorinator charges.
v. New HCl transfer line replaced an old line which caused HCl fume problems.

4. Safety and Housekeeping inspection to be conducted by Superintendent monthly with responsible foreman and/or supervisor. Housekeeping to improve to Plant Manager's satisfaction.

II. QUALITY OPERATIONS

1. Average quality score of 95 minimum to be achieved.

Aroclor	88.4
Biphenyl	103.7
Chlorine	101.1

2. Obtain no more than three justifiable quality complaints, and a complaint index of 2.0 per M pounds production.

Complaint Index 3.5
Number of complaints - 11 - 2 justified
R.F.T. Index 98.8

3. Obtain no more than eight justifiable service complaints, and a complaint index of 4.0 per M pounds production.

6 complaints to date - 4 justified - Carrier error

Complaint Index - 3.6

4. Complete Quality Audit on Liquid and Solid Aroclors and develop plan for quality improvement for these products.

Nothing done - TSD to initiate Quality Control Board Program

5. Achieve a minimum of two significant product quality improvements.

a. Aluminum Aroclor storage tanks.
b. Relocate HB-40 draw-off line - Reactor Grade HB-40.
c. Defined operating conditions to allow OM production in normal reactor grade specification.
d. Modified Biphenyl tubular unit stripping column operation to allow 10th tray control which minimized production of terphenyls.
e. Cleaned up HCl feed gas to Muriatic Acid Department. Should result in acid improvement before end of 1965.

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III. COST IMPROVEMENT

1. Achieve raw material savings of $130,000 from 1964 practice. The yield on the following to be:

	1965 Target lbs/cwt	Achieved Third Quarter	Dollar Savings
Benzene	98.5% Theory	99.7	$ 13,020
Muriatic Acid Cr. (Liq. Aroclors)	43.0	38.12	-9,448
Muriatic Acid Cr. (Sol. Aroclors)	64.0	64.79	6,452
Anhydrous HCl	116.0	117.65	0
Mercury (826.36)	0.021	0.014	26,213
Mercury (827.50)	0.03	0.021	43,180
KCl	141.00	142.79	1,380
			$ 80,797

All raw materials 3rd Quarter savings $79,700 versus targeted $95,000.

2. Labor utilization to be improved 7% by increased productivity, and more effective production planning.

Product	1964 Usage	3rd Quarter T/D 1965 Usage	Hours Savings
Biphenyl	0.078	0.067	3,300
Santowax R	0.096	0.090	410
HB-40	0.143	0.152	- 390
Liq. Aroclors	0.073	0.062	2,625
Sol. Aroclors	0.212	0.206	290
HCl	0.032	0.036	- 420
Cl_2 - NaOH	0.045	0.046	- 175
KOH	0.062	0.062	0
			5,640

$\frac{5,640}{106,309}$ = 5.3% equivalent to $20,300 savings

Organic Production 3rd Quarter 1965 = 148 $\bar{M}$ Lbs.

Organic Production 3rd Quarter 1964 = 125 $\bar{M}$ Lbs.

23 $\bar{M}$ Lbs. = 15.5%

Actual Manhours 3/4 1965 = 81,400

Actual Manhours 3/4 1964 = 80,734

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III. 3. Achieve overall plant on-stream time of 93.2%, process downtime maximum of 1.0%, and all other downtime less than 2.3%. Process downtime to be improved by better control of process, and other downtime by scheduling, and better utilization of surge capacity between products.

a.	On-stream time	88.8
b.	Process downtime	2.1
c.	Other downtime	4.8
d.	Repair downtime	4.3

4. Assist in development and start-up of specific cost reduction items with savings of $330,000. To date $194,000.

5. Improve direct manufacturing costs <u>other than labor</u> at a rate at least proportional to the volume increases.

Product	3rd Qtr. 1965 D.C.	1964 D.C.	Savings Direct $/cwt.	$ Gain, or $ Loss*
Biphenyl	0.998	1.305	0.307	$92,500
Santowax	0.525	0.737	0.212	14,400
HB-40	0.399	1.355	0.956	41,620
Liq. Aroclors	0.543	0.646	0.103	24,570
Sol. Aroclors	2.135	2.136	0.001	0
Muriatic Acid	0.577	0.452	0.125	13,160*
Cl_2 - NaOH	0.648	0.571	0.077	13,600*
KOH	1.890	1.686	0.204	42,270*
			Net Gain =	$103,560

Dollar Improvement - $\frac{\$ 104\ M}{\text{Total Dollars Directs} = \$1,258\ M} = 8.2\%$

Volume Increase = 15.5%

6. Achieve 97% on-time shipments - 2.8%

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IV. METHOD AND FACILITIES IMPROVEMENT

1. Complete start-up of PNP Department, obtaining design rate within 60 days with start-up costs of less than 10% of the capital expenditure.
OK

2. Complete start-up of Aroclor Expansion, and demonstrate design rate with 60 days of construction completion. Start-up expenses not to exceed 10% of capital expenditure. OK

3. Complete start-up of Muriatic Acid facilities, and achieve 90% absorption efficiency within 30 days of completion. Start-up expenses not to exceed 8% of capital expenditure. OK

4. Assist in development of scope and provide liaison for Finished Goods Packaging, and Warehousing Project. OK

5. Implement and assist in development of HB-40 project. Project approval to be obtained by 10/15/65. Cannot be justified.

6. Assist and provide liaison for replacement project for Mechanical Rectifiers. Project approval to be obtained by 9/1/65. OK

7. Implement and assist in development of Biphenyl Still Project. Project scope defined by 10/1/65. OK

8. Audit of all reports and records for possible simplification or elimination. Minor improvements only.

9. Develop measurement and controls for "Work to Assist" costs and report on a quarterly basis. No formal program.

V. PERSONNEL IMPROVEMENT

1. Continue F.L.I.T. Operator Training Program for remaining and new operators. Training to be completed by 1/1/66.

   Training in progress - 24 operators to be trained.

2. Process Function Outlines completed for three manufacturing facilities, and operator training utilizing these outlines to be completed by 1/1/66.
Done

3. Develop realistic targets for each operating facility for operators. Performance report to be published monthly.

   Decided not to publish for operator - supervision only.

4. Develop more objective Position Guides for all supervisory personnel. Moody and Supervisors by 7/1/65. Nothing done - will get 4th Quarter.

5. Conduct at least two supervisory training meetings during the year. Subject to be:
   a. I.F.O's and P.F.O's - use and training -
   b. Cost Standards and Reports - Done
   c. Production Planning
   d. Start-Up Procedures - new facilities - Done