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PROGRESS REPORT

TECHNICAL SERVICES DEPARTMENT

ANNISTON, ALABAMA PLANT

JOB NO. 370-1000 **REPORT NO.** 1 **DATE** July 1968

TITLE: AROCLOR MANUFACTURING IMPROVEMENT PLAN

OBJECTIVE: To develop a guide to improvements in cost, capacity, and quality in the Anniston Aroclor plant.

PERSONNEL: V. R. Haupt, (J. C. Landwehr)

REPORTED BY: V. R. Haupt

SUMMARY:

The previous PIP was issued on 2/9/66. This plan was not implemented because of product strategy changes. Divisional goals set in May 1966 required a much improved quality, this was not a major objective of the previous PIP. The major savings item in the 2/9/66 PIP was a labor savings project in the finished goods area; this project has been absorbed in a CED project (Aroclor expansion CEA 1430). The second major item was a modification to the liquid Aroclor still to permit the use of indirect heating of the still and realizing fuel savings, less product decomposition and reduced maintenance; this project has not been installed as yet.

The primary emphasis of this MIP is to increase the capacity of Solid Aroclors (TSD and CED), and debottleneck Liquid Aroclors to keep ahead of the production forecast. With a potential savings of $1.440 M, the expected savings is $585 M to be obtained through 1970. New earnings are not included.

Plan summaries are included for all persons receiving this report with details going to persons with an asterisk beside their name. Details are in a three-ring binder which is an effort to keep the MIP a "living" plan and prevent re-hashing the same basic data each time the MIP is issued. Section revisions will be issued whenever the need arises.

V. R. Haupt
Technical Services Dept.

VRH:kd
7/22/68

ANNISTON

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SOLID AROCLOR

TSD JOB	NFC $	DESCRIPTION	MIP SECTION	MAN DAYS	EDC	POTENTIAL SAVINGS $	SUCCESS FACTOR	EXPECT SAVINGS $	REMARKS
		1. RAW MATERIALS	5			273M			
713	10M	A. STILL INSTRUMENTATION	3	30	11/68	100M	0.58	58M	
492	2M*	B. STILL REC LI (SAVE BASIS = 1966 DT)	3	10	6/68	1.5M	0.0	0	NO DT 1967-8
736	20M	C. OMP BASE 5460 (DOES NOT INCLUDE M9 $ LOSS)	5	75	9/68	241M	0.66	159M	PROVIDED IA COMPLETE
		2. BY-PRODUCTS	8			269M			
775	60M'	A. MONTAR 6 FROM M1 + M5	5	30	/70	15.5M	1.0	15.5M	
775	70M'	B. 1268 FROM M1	5	30	/70	13.5M	0.5	6.8M	75% $ TO 826-08
—	—	C. HCL SALES	—	—		65.7M	0+	0	SEE HCL MIP
		3. QUANTITY	4						
		A. DOWNTIME TO STANDARD	4						
474	—	(1) FR ON STILL - FCE LINE	3	5	/68	5.1M	0.5	2.5M	
452	31.7M*	(2) Cl_2 T/C DOCK	4	20	10/68	12.9M	0.85	11.0M	
ME 207	6.2M*	(3) CHLORINATOR SPARE PUMP	4	5	11/68	8.2M	0.5	4.1M	
ME 213	11.7M*	(4) CHLORINATOR RECYCLE LINE - 316SS	4	5	11/68	6.1M	1.0	6.1M	
MAINT	2.0M*	(5) CHLORINATOR HX 316SS TUBES	4	1	11/68	3.8M	1.0	3.8M	
416	16.6M*	(6) STILL VERTICAL CONDENSER	4	20	6/68	6.8M	0.13	0.9M	
483	5.0M	(7) TC ON STILL CONDENSER COOLANT	3	15	/69	4.1M	0.8	3.2M	
ME		(8) GENERAL MAINTENANCE ITEMS	11/VI			14.5M	0.51	7.4M	
		B. INCREASE CAPACITY	4						
831	—	(1) CHLORINATOR BATCH END - BY HAND	3+4	20	9/68	28.4M	0.5	14.2M	
	10M	- BY INSTRUMENT	3+4	20			1.0	28.4M	
	—	(2) SEE 1C & 5A	—	—	—	—	—	—	
849	20M	(3) USE No1 STILL FOR 5442 & 4465	3	40		0		0	LIQ ARO DEMAND TOO HI TO DO THIS IN FUTURE
849	500M	(4) MEET FORECASTED DEMAND - CED EXPAND	4	100	12/69		0.67		
492		(5) DEBOTTLENECK SOLID AROCLOR	4	175					
		4. LABOR	8						
799	1400M*	A IMPROVE FLAKING & DRUMMING - CEA 1430	8	20	10/68	60M	1.0	60M	
837	50M	B OPERATOR UTILIZATION	8	10					
1000	—	C UPDATE MIP	—	20					
		5. QUALITY	6						
858	0	A. 4465 BY BLENDING	4+6	10	1/69	15M	1.0	15M	
459		B. IMPROVE Cl_2 QUALITY	4	—		16M	0.0	0.0	
794		C. IMPROVE QUALITY (COLOR + UNIFORMITY)	11/VI	60					
		6. SAFETY							
395	0.8M*	A. CHLORINATOR SAMPLE RETURN LINE	—	5	6/68	SAFETY	1.0		
775	6M	B. MONTAR 5 FLAKING	8	30	10/68	33M	0.4	13M	
859	25M	C. AROCLOR SAFETY AUDIT	9	40	/69	SAFETY			
TOTALS	736 M (DOES NOT INCLUDE OVERLAPPING OR APPROVED ITEMS)			795	PLANT $	545.7M		$ 408.9M	
	1471 M*				UNMAN	287.3M			
					TOT POTENT	833.0M			

* - APPROVED AFE : 1 = TOTAL # FOR LIQ & SOL = # 90M

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BY ..... DATE .....
CHKD. BY ..... DATE .....
SUBJECT SOLID AROCLOR MD, EDC, NFC, & SAVE SUMMARY
JOB NO.
SHEET NO 2 OF 6

TOWOLDMON0044098

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BY ..... DATE .....
CHKD. BY ..... DATE .....
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SUBJECT SOLID ARDCLOR CAPACITY SCHEDULE

SHEET NO 3 OF 6
JOB NO. .....

SECTION 4
PAGE 8

TOWOLDMON0044099

LIQUID AROCLOR

TSD JOB	NFC $	DESCRIPTION	MIP SECTION	MAN DAYS	EDC	POTENTIAL SAVINGS $	SUCCESS FACTOR	EXPECT SAVINGS $	REMARKS
		1. RAW MATERIALS	5			189M			
455	40M	A. SPECIFIC GRAVITY CONTROL	3	60	/70	74.7M	0.18	13.4M	
		2. BY-PRODUCTS	8			243.4M			
775	70M'	A. 1262 FROM M1	5	20	/69	25.1M	0.8	20M	
775	70M'	B. 4465 FROM M1	5	20	/69	27.7M	0.8	22M	
775	6M	C. ELIMINATE MONTAR DRUMS (INCLUDES SOL ARO)	5	20	12/68	45.6M	0.22	10M	
775	60M'	D. MONTAR 4 = M1 + M7	5	20	/69	14.0M	0.2	2.8M	
		E. HCl SALES	—	—		156.8M	0+	0	SEE HCl MIP
		3. QUANTITY	4						
		A. DOWNTIME TO STANDARD	4						
340	50M	(1) EXPORT GRADE (POROCEL COL)	4	5	11/68	5.2M	1.0	5.2M	INSTALLED
793	—	(2) LACK OF STORAGE (CEA 1430)	4	10	10/68	21.4M	1.0	21.4M	
452		(3) Cl_2 T/C DOCK	4			2.1M	1.0	2.1M	SEE SOL ARO 3A(2)
MAINT		(4) GENERAL MAINTENANCE ITEMS	11/VI		/69	33M	0.56	18.5M	
716		B. DEBOTTLENECK STILLS	4	195	69-70				
756	17.1M*	(1) RECEIVER LI'S & PUMPS	4	5	9/68	62.9M	0.9	56.6M	
716	10M	(2) STILL PREHEATERS	4	15	69				
398	13.6M*	(3) No 2 STILL THERMINOL HEATED	4	10	11/68	5.9M	0.85	5M	
716	15M	(4) LARGER STILL CONDENSERS	3	15	69				
		4. LABOR	8						
799		A. IMPROVE FLAKING & DRUMMING - CEA 1430	8	5	10/68				SEE SOL ARO 4A
837		B. OPERATOR UTILIZATION	8	10					SEE SOL ARO 4B
		5. QUALITY	6						
456	200M	A. POROCEL COLUMNS - CED EXPAND	3	20	3/69	QUALITY			
757	3.6M*	B. N_2 BLANKET BLEND & FILTRATE TKS	3	5	8/68	QUALITY			
797	5M	C. CONTINUOUS DISTILLATION	3	30	/70				
715	20M	D. IMPROVE CRUDE ARO TREATMENT	3	20	/70				
481	50M	E. MEET DIV QUALITY GOALS	11/VI	60	/69				
405	—	F. COMPOSITION VS PROPERTIES	11/VI	90	/70				
838	20M	G. QUALITY UNIFORMITY - ARO + BLENDS	11/VI	30	/70				
		6. SAFETY							
		A. AROCLOR SAFETY AUDIT	9	20	/69				
TOTALS	416.0M (DOES NOT INCLUDE OVERLAPPING OR APPROVED ITEMS) 34.3M*			705	PLAN 407.6M UNPLAN 199.9M TOT POTENT 607.5M			177.0M	

* - APPROVED AFE // = TOTAL $ FOR LIQ & SOL = 90M

BY ..... DATE .....
CHKD BY ..... DATE .....
SUBJECT LIQUID AROCLOR MD, EDC, NFC & SAVE SUMMARY
JOB NO. ..... SHEET NO 4 OF 6

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Liquid Arochlor Capacity Projects

BY ..... DATE .....
CHKD. BY ..... DATE .....

SUBJECT LIQUID AROCLOR CAPACITY SCHEDULE

SHEET NO 5 OF 6
JOB NO. .....

Aro-MP
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Page 4

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TOWOLDMON0044101

BY ..... DATE .....
CHKD. BY ..... DATE .....

SUBJECT PR#D JOBS FOR AROCLOR

SHEET NO 6 OF 6
JOB NO. ARO-MIP SECTION II APPENDIX II PAGE 2

	PR#D JOB	TSD JOB	DESCRIPTION	MIP SECTION	MAN DAYS	EDC	POTENTIAL SAVINGS $	SUCCESS FACTOR	EXPECT SAVINGS $
1.			IN-LINE POWER FACTOR ANALYZER				QUALITY		
2.		456	POROCEL COLUMN A. 1254 TEST B. OPTIMUM TEMP & FLOW C. OTHER ABSORBENTS				QUALITY		
3.			IMPROVE CAT ADD TO CHLORINATORS						
4.			IN LINE ANALYSIS & SAMPLING OF AROCLOR & BLENDS				QUALITY		
5.			DEFINE PROBLEM OF CRUDE SP G OF LIQUID AROCLORS				QUALITY		
6.		715	VACUUM DEGASSING OF CRUDE	3			QUALITY		
7.		405	1242 COMPOSITION VS PROPERTIES	II/VI			QUALITY		
8.		838	AROCLOR BLENDS A. REALISTIC SPECS B. SCAVENGER REFINEMENT	II/VI			QUALITY		
9.		775	MONTAR USAGE A. 1262 FROM M1 B. 1268 FROM M1 C. 1260 FROM TRAPPINGS D. M6 FROM M1+M5 E. M11 FROM M1+M7 F. 4465 FROM M1	5	5 5	7/68	25.1M 13.5M 15.5M 14.0M 27.7M	0.8 0.5 1.0 0.2 0.8	20M 6.8M 15.5M 2.8M 22M
10.		858	CONTINUOUS CHLORINATION OF 5060				CAPACITY		
11.		736	5460 - IR OF SW/R BASE VS OMP BASE	5			241M	0.66	159M
12.		736	SP VS SP G OF ALL CRUDE & DISTILLED SOL ARO	5					
13.		858	4465 FROM 1262 + 5460	4+6	3	7/68	15M	1.0	15M
14.		797	1242 CONTINUOUS DISTILLATION				QUALITY		
15.		794	5460 COLOR PROBLEMS				QUALITY		
16			HCl + LIME + STILL = OFF COLOR?				QUALITY		

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