Monsanto

Anniston Plant

TECHNICAL SERVICES DEPARTMENT

MONTHLY REPORT

Anniston

C. K. Eastman
C. A. Rose
J. C. Landwehr
L. J. Boesch
G. W. Miller
W. B. Papageorge
W. F. Taffee
H. L. Williams

General Offices

H. C. Carder
W. R. Robirds
Danna (5)
. . B. Hodges
D. B. Hosmer (2)
W. A. Kuhn
C. F. Luecke
N. L. Sample
J. E. Smith
R. J. Stratmeyer
H. S. Trail

OTHER LOCATIONS

D. W. Jackson-WGK
T. M. Patrick - So. 2nd St.
A. H. Forsten - Alvin, Texas

Summary

May, 1969

Cost Improvement Results

	Est. Act.	Target	% of Target
Month	$41,580	$51,445	80.8
YTD	$138,215	$179,490	77.0

Organic Division

The Santowax R still controls project installation completed last week in May. Test run on revised still system scheduled for 1st week in June.

Long term run to meet FDA approval for chlorinated biphenyl in Solid Aroclor 5460 started and stopped due to affect on biphenyl quality. More detailed test will be run in June.

Chlorine unloading and caustic unloading facilities were started up May 2 and May 21 respectively. The caustic unloading system had no problems while the chlorine unloading has only one problem; automatic shutoff of the empty cars. Modifications are being made to correct.

Purification started up May 2 with unit consistently producing hydrogen at less than 10 ppm CO. HB-40 is operating at record rates using purified hydrogen.

Off-gas catch pot performing successfully after modifications, enabling recovery of water white Muriatic Acid. 70 M lb/day rates have been demonstrated with the elimination of acid sewering formerly required to purge organics.

Agricultural Division

Sulfur Recovery scope development proceeding with Process and Engineering Flow Diagrams and Equipment List in preparation.

DSW 377629

COMPANY CONFIDENTIAL INFORMATION

"This document contains confidential information which is the property of Monsanto Company. Only those portions of the document relevant to a duly authorized individual's need to know may be exerpted for him. The report must not be sent outside the Company without written approval and the recipient is accountable for its safe keeping, exerpting or otherwise disclosing of its contents and for its proper disposal."

STLCOPCB4099361

Agricultural Division (Cont'd)

All background data for appropriation grade estimate will be available by July 1.

Design and Drafting

Santowax R still controls successfully started up May 27. Final calibrations targeted by June 1.

Liaison with Surplus Property Disposal and design to flask mercury continues.

Pollution Control

Aroclor and HCl Department waste audits underway.

Quality

The Plant Quality Score was 87.5, up 3.5 from April with YTD score of 90.0 against a target of 95.0 minimum. Strong quality improvements have been made in P_2S_5, HB-40, Aroclor 5460. Aroclor 1242 shows a wider spectrum of chlorinated isomers. Free chlorine in Muriatic has risen sharply since chlorine plant shutdown.

The 30-day demonstration of the new PNP reactor depressurization control system is underway. In spite of very high solids no pluggage has occurred. Depressurizing cycles are on target (22 minute average).

J. C. Landwehr

jw

DSW 377630

STLCOPCB4099362

ORGANIC DIVISION
1969 TSD COST IMPROVEMENT

		ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Sol.Aro.	TAR					2250	2250	2250	2250	2250	2250	2250	2250	2250
LI-Still SpG.	EST					-	-							
AFE 3015	ACT					-	-							
Sp.Solid Aro.	TAR	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	-	-	-
Lower 5060	EST	1500	5490	4890	2150	4670								
	ACT	1500	5490	4890	2150									
Sol.Aro.-Still	TAR				160	170	160	170	160	170	160	170	160	
Coolout temp.	EST				-	-								
AFE 3015	ACT													
Sol.Aro.-Chlorto	TAR				390	390	390	390	390	390	390	390	390	390
Batch End	EST				-	-								
AFE 3015	ACT				-									
SW/R Composition	TAR					2750	2750	2750	2750	2750	2750	2750	2750	2750
	EST					-								
AFE 3016	ACT													
Solid Aro.	TAR					1080	1080	1080	1080	1080	1080	1080	1080	1080
Montar 5 Flake	EST					-								
AFE 2949	ACT													
Sol.Aro.	TAR	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Blend 4465	EST	1690	1920	1680	1490	710								
	ACT	1690	1920	1680	1490									
Sol.Aro.-Verti-	TAR	70	80	70	80	70								
cal Still Cond.	EST	70	90	90	90	90								
AFE 2324	ACT	70	90	90	90									
Sol.Aro.Cl_2	TAR			940	940	950								
T/C Dock	EST			0	-	-								
AFE 2342	ACT			0	-	-								
Cl_2 Plt.Down No	TAR						950	940	950	940	950	940	950	
Unload	EST					900								
CED 1831	ACT													
Solid Aro.-Flake	TAR	3000	3000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
& Drum	EST	0	0	1000	2000	2000								
CED 1430	ACT	0	0	1000	2000									
Liq.Aro.	TAR	3000	3000	-	-	-	-	-	-	-	-	-	-	-
48-53 M #/yr.	EST	0	5500	-	-	-								
AFE 2545	ACT	0	5500	-	-	-								
Liq.Aro.-No.2	TAR											3000	3000	
Still Entrain Sep.	EST													
AFE 3093	ACT													
Liq.Aro.-Montar	TAR			1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080
Disposal	EST			0	0	0								
AFE 2952	ACT			0	0									
Warehouse	TAR	2000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	EST	2000	2000	2000	3000	3000								
CEA 1452	ACT	2000	2000	2000	3000									
Liq.Aro.New	TAR			1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Burners #3 Still	EST			0	0	1500								
	ACT			0	0									
Biphenyl Relocate	TAR	500	500	500	500	500	500	500	500	500	500	500	500	500
No. 1 Preheat	EST	1500	0	1560	1870	0								
CEA 1892	ACT	1500	0	610	1870									
HB-40 2 A/C's	TAR	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	EST	2230	2580	0	600	9000								
AFE 3102	ACT	3490	2420	0	600									

DSW 377631

STLCOPCB4099363

ORGANIC DIVISION
1969 TSD COST IMPROVEMENT

	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
BiØ Improve Tower Treat. AFE 3155	TAR					450	450	450	450	450	450	450	450
	EST					0							
	ACT												
Improve Plt. Power Factor	TAR					900	900	900	900	900	900	900	900
	EST					0							
	ACT												
Central Air System	TAR									1000	1000	1000	1000
	EST												
	ACT												
Optimize Rx Time	TAR		2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
	EST		0	3420	0	0							
PNP	ACT		0	3420	0								
Reduce Mole Ratio NaOH/PNCB PNP	TAR				4000	4000	4000	4000	4000	4000	4000	4000	4000
	EST				0	0							
	ACT				0								
New Wash Water Pump - PNP AFE 2998	TAR					50	50	50	50	50	50	50	50
	EST		25	50	50	50							
	ACT		25	50	50								
Automatic pH Control PNP	TAR										500	500	500
	EST												
	ACT												
HCl Filter Pump	TAR	330	330	340									
	EST	330	330	340									
	ACT	330	330	340									
New Blow Tank	TAR	200	200	200	200	200	200						
	EST	200	200	200	200	500							
HCl	ACT	200	200	200	200								
150,000 Gal.-HCl Storage Tank AFE 2468	TAR				1760	1760	1780	1760	1760	1780	1760	1760	1780
	EST				-	0							
	ACT				-	-							
Produce Staley Grade Acid AFE 3076	TAR							780	780	790	780	780	790
	EST												
	ACT												
Cl_2 Plt. Shutdown	TAR						8880	8880	8880	8880	8880	8880	8880
	EST					8880							
CEA 1831	ACT												
Hg Recover from Residue	TAR	250	250	250	250								
	EST	3910	0	0	0								
	ACT	3910	0	0	0								
Hg Wash Tank	TAR	250	250	250	250								
	EST	0	0	0	0								
AFE 2802	ACT	0	0	0	0								
Biphenyl Productivity	TAR	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600	5600
	EST	0	9000	15,000	0	0							
	ACT	5150	10,800	13,500	0								
Total Organic By Month M $	TAR	23.3	26.8	29.3	37.5	42.3	51.1	51.6	51.6	51.6	52.7	53.5	50.6
	EST		27.1	30.2	11.5	36.3							
	ACT	19.8	28.7	27.8	11.4								
Total Organic YTD M $	TAR	23.3	50.1	79.4	116.9	159.2	210.3	261.9	313.5	365.1	417.8	471.3	521.9
	EST		46.9	78.8	79.6	115.9							
	ACT	19.8	48.5	68.2	79.6								

DSW 377632

STLCOPCB4099364

AG DIVISION
1969 TSD COST IMPROVEMENT

	ANNUAL	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Cooling Tower	TAR				420	420	410	410	420	420	410	420	420
Repiping	EST				0	0							
AFE 2598	ACT				0								
Optimize N_2 &	TAR				6600	6700	6700	6600	6700	6700			
Cl_2 Levels	EST				0	0							
	ACT				0								
Increase Waste	TAR				400	300	300	400	300	300	400	300	300
Acid Sales	EST				0	0							
	ACT				0								
Chlorinator R.I.	TAR							250	250	250	250	250	250
	EST												
AFE 2244	ACT												
EVOP Condensation	TAR	750	750	500							500	750	750
Rx.	EST	0	0	12,615									
	ACT	0	0	12,615									
Cl_2 Unloading	TAR							5000	5000	5000	2000	2000	2000
	EST												
CEA 1831	ACT												
Recycle Wash	TAR							290	290	290	290	290	290
Water	EST												
AFE 2960	ACT												
Parathion Recovery	TAR										5800	5800	5800
	EST												
AFE 2655	ACT												
Reduce Acetone	TAR										4300	4300	4300
Losses	EST												
	ACT												
Formulations	TAR				1600	1600	1600	1600	1600	1600			
	EST				3000	6600							
AFE 2897	ACT				4300								
Change Cooling	TAR				125	125	125	125	125	125	125	125	125
H_2O Item 737	EST				120	180							
AFE 3067	ACT				120								
Well H_2O to Jets	TAR										500	500	500
	EST												
	ACT												
Ag. Division	TAR	750	750	500	9145	9145	9135	14675	14685	14685	14575	14485	14485
by Month	EST			12,615	3,120	6,780							
	ACT	0	0	12,615	4,420								
Ag. Division	TAR	750	1500	2000	11145	20290	29425	44100	58785	73470	88045	102530	117015
YTD	EST			12,615	15,735	23,815							
	ACT	0	0	12,615	17,035								
	TAR												
	EST												
	ACT												
Organic Div.	TAR					0							
Untargeted - HCl	EST					500							
Catch Tank	ACT												

DSW 377633

STLCOPCB4099365

AROCLOR E. E. Bowles, C. R. McIlwain (V. R. Haupt)

Evaluate Quaterphenyl Polyphenyl Effects on Solid Aroclor Yields	1969 Savings $63,200 NFC $14,000	TSD Objective B - 8 (a)

Still awaiting radioactive materials license before the source for the level alarm can be shipped. Operating personnel will be trained in the use of the instruments during June.

Debottleneck Solid Aroclor Chlorinator	1969 Savings TBE Plus Safety	TSD Objective B - 8 (f)

Includes installing a back pressure controller on the #9 chlorinator and a larger collection tank. AFE by 6-15. Drafting scheduled for June.

Therminol System	Potential Lost Sales	TSD Objective B - 8 (h)

Project design is complete and equipment has been selected. Have received verbal approval to purchase pump and pump is now on order. Pump delivery is scheduled for six to eight weeks. This project will be installed when the Solid Aroclor expansion is installed.

BIPHENYL-SANTOWAX W. G. Niemeyer, D. A. Self (V. R. Haupt)

Debottleneck Biphenyl Stills to 87.6 M lbs/yr.	Capacity Increase	TSD Objective B - 7 (a)

During the week of May 26, the capacity of the Santowax reboiler furnace will be increased and instrumentation required to control the Santowax still will be installed. A demonstration test run will be conducted on the biphenyl/ Santowax distillation area during the first week of June.

Santowax with low biphenyl content for FDA Solid Aroclor	Quality	TSD Objective B - 7 (a)

Started long term test during week-end of May 16. Incomplete results were obtained.

The feed composition to the still is now about 65 - 35 (biphenyl-Santowax) compared to 80 - 20 during the initial testing in January, 1969. The June test will establish the minimum biphenyl content of Santowax C with the present feed composition.

DSW 377634

No. 1 Furnace Upgrade Liaison (CEA-1892)	Capacity Increase	TSD Objective B - 7 (c)

The plant punch list is essentially complete.

Improve Santowax R Quality with New Distillation Column	Quality	TSD Objective B - 7 (d)

Installation of instrumentation to control the Santowax distillation column was made on May 27. Calibration of instruments should be complete by May 29. A demonstration test run will be conducted on the Santowax column during the first week in June to determine its capacity and optimum operating conditions.

CHLORINE - HB-40 D. W. Dudley, J. L. Brown (A. G. McCarty)

Chlorine unloading, caustic unloading, and hydrogen purification facilities were successfully started up during May. A problem exists with automatic isolation of empty chlorine cars. System being operated manually until problem is solved.

HCl O. J. Norris, J. M Jones (A. G. McCarty)

Production of Staley Grade Acid-Project 3076	New Earnings $28.8 M Potential Savings $71 M	TSD Objective B - 10 (c)

Acid Recovery up significantly (>70,000#/day) when new catch tank is in service and sewer by-pass valve is closed. Experienced problems draining collected organics from tank week-end of 5/10. Modification to steam supply on coils and discharge valve completed 5/16. Draining successfully demonstrated 5/21. Coalescer for Phase II installed along with all required piping. Vendor supplied wrong size heating strips for coalescer dome, maintenance now modifing - completion by 6/15.

Muriatic Acid Storage	Savings $21,200	TSD Job No. 497

Piping completed. Project will be complete upon installation of level indicator. Sewered approximately 140,000# this month because of full storage.

Muriatic Acid MIP

All plant groups have been contacted for contributions, rough draft will be ready for typing 6/6.

Reduce High Free Cl2 in Muriatic Acid

After extensive KTA, test was made on air sparging HCl gas to absorber. Tests over weekend of 5/24 showed no improvement. Problem has been given top priority.

STLCOPCB4099367

PNP O. J. Norris, J. M. Jones (A. G. McCarty)

Debottleneck to 1.8 M #/mo	Capacity Savings $27,500	TSD Objective B - 9 (a)

Reactor process control program in effect and operating as expected. Rate remains below schedule as tests for determining cause of yield loss continue. This month acid and caustic returned to near normal while PNCB remained high. This would seem to indicate loss occuring in reactor. Production has begun to monitor air flow rate. Poor cycles on carbon towers are being investigated by P.A.C. Company.

NIRAN K. G. Hale, D. W. Dudley, T. W. Lawrence (A. G. McCarty)

Demonstrate Parathion Recovery	Savings $17,500 10-15% Reduced COD	TSD Objective B - 5 (a)

Drawings of test facilities were sent out for review 5/21. Project 3245 ($6350 experimental expense) was approved 5/26 to conduct tests. Project premise was published 5/27. Transmittal to maintenance is slated for 6/4.

Acetone Recovery	Savings $12,900 40-50% COD Reduction	TSD Objective B - 5 (i)

Background data for acetone recovery tests were gathered but test will have to be delayed until approximately 6/9 when a new nozzle for the vacuum jet can be installed. Average of acetone loss from number three condensation reactor is 5.06% or 800 pounds per batch on methyl vs. 3.2% or 500 pounds per batch on ethyl.

Recycle Wash Water	Savings $3,500	TSD Objective B - 5 (g)

No change in status.

Central Chlorine Unloading	Savings $21,000	TSD Objective B - 6 (a)

Construction underway on chlorine dock and railroad spurs. Operator training to be conducted in June with probable start-up of late June.

STLCOPCB4099368

NIRAN (Cont'd)

Sulfur Recovery From Residue	$271,000/yr. Savings 40% Reduction in SO_2	TSD Objective B - 5 (d)

Anniston continues work on scope details, equipment selection and engineering flow sheets. Completion of package for estimating purposes is expected by 7/1/69. Quotes on Hastelloy equipment were delayed until early June.

Recent corrosion test indicate S.S. 316 is satisfactory in the wash steps under neutralized conditions. P.R.&D. is checking validity of process under changed conditions. EDC for scheduled P.R.&D. work is 6/15/69.

Submerged Pump for Refractive Index Control of Chlorination	Savings $1500 (Potential Automation)	TSD Objective B - 5 (c)

The Maintenance Engineer's visit to "Taber" was delayed until June. He will at this time discuss design changes for the Refractometer pump with Taber Engineers. Plant tests were stopped when pump seals failed after short service.

Optimize Cl_2 and N_2 Levels	Savings $40,000	TSD Objective B - 5 ( )

Test plans will be issued by 6/6. Plant tests are scheduled to begin when sand blasting is stopped and fume system is started.

Methyl-Ethyl Alcohol Cross Contamination	Savings $3200	TSD Job No. 918

Project premise prepared and circulated for approval. Design package and estimate being prepared.

Improve Chlorinator Cooling System	Savings $48,000/mon./0.5 hr Reduction in Chlorination Time	TSD Objective B - 5 (g)

Evaluation has begun on current design and operation. Alternate refrigerants are being considered.

Chlorinator Long Cycle Time	Savings $46,000/mo	TSD Job No. 927

Number 3 Chlorinator consistently exceeds chlorination time standard by approximately 2 hours/batch. Evaluation of operation has begun.

STLCOPCB4099369

NIRAN (Cont'd)

Modify P_2S_5 Charge Valves — Safety Item — TSD Job. No. 919

P_2S_5 hold-up in charge chutes is listed as contributory to sub-major accident (#5-58) involving eye irritation from P_2S_5 dust and H_2S exposure from hydrolyzed P_2S_5 during maintenance on Thio Acid reactor. P_2S_5 charging system being evaluated for modification of charge valves.

ENGINEERING DESIGN AND SERVICES

Mechanical/Electrical/Instrument Design and Drafting — J. C. Price, J. A. Veazey, R. V. Carlisle, R. L. Brewer, J. K. Rennie, J. Childress, (W. F. Taffee)

Instrument and electrical phase of Santowax-R Still Control, (AFE 3016 - $33M) was started up successfully on 5/27/69. Final check-out and calibration targeted for completion by 6/1/69.

A hydrogen sulfide (H_2S) monitor has been placed on order (Accident investigation #5-68). Delivery is expected in 90 days. A plant test will be made to determine if the unit is suitable for use in the Niran department.

The design for the Plant Fire Alarm (AFE 2575 - $2.9M) is being revised. The new revision, a combination of Monsanto and Bell Telephone equipment, will provide a better overall system than the one originally planned. Final design transmittal should be made in June.

A safety and security review for the flasking and storage of mercury obtained from the Dismantling and Removal of Chlorine Manufacturing Facilities at Anniston (AFR 3214) was held on 5/15/69.

Revisions and dismantling in Building 28 A to provide desk space for new employees started in mid May. Delivery of partitions and shelving being expedited by Purchasing. Additional desks and chairs required have been received. Improved lighting provided for Pollution Control Engineers' area.

Projects approved during May:

Provide Fire Pump Capacity Check Equipment (AFE 3227 - $4.1M).

Review drawings were completed for the following projects:

Parathion Recovery Test (AFE 3245 - $6.3M)
Alcohol Separation (Niran) (AFE 3256 - $ to be det.)

DSW 377638

STLCOPCB4099370

ENGINEERING DESIGN AND SERVICES (Cont'd)

Construction drawings were completed for the following projects:

Alter Therminol System in Solid Aroclor (AFE 2949 - $12M), provide offices for new TSD Personnel (AFE 3212 - $3.6M), Liquid Aroclor still Debottleneck (AFE 3093 - $4.5M), Bi-Ø Cooling Tower Treatment (3155 - $3.6M0, Capacitor Relocation (AFE 3184 - $18.1M [11.1M transferred equipment]), Niran Tank Farm Area Lighting (AFE 3124 - $7M), Bi-Ø Tank Farm Lighting (AFE 3204 - $0.7M), Upgrade Intermediate Dock at Niran (AFE 2934 - $11.3M [3 docks]).

UTILITIES ENGINEERING J. C. Price, L. O. Chambers (W. F. Taffee)

Forwarded revised project premise for use of Well Water @ Niran Jets. Estimated savings were increased from $6000 to $8000 per year. Transmitted design packages for Capacitor Relocation and Improve Biphenyl Cooling Tower Treatment projects. Relocation of the capacitors is to be completed early in June with the savings of $10,800 per year to start in July. Preliminary efficiency studies of the Biphenyl Furnace and Therminol Furnaces in Aroclor, Santowax were completed.

PLANT IMPROVEMENT G. C. Goodwin (W. F. Taffee)

AFE forwarded for approval, paving Duncan Street South (AFE 3243 $1500). Design packages forwarded for alteration to Building 28-A (AFE 3212 - $3600) and drain pad PNP Item 216 (AFE 3222 - $1500) project approved in May, HCl area drainage (AFE 3221 - $1900).

POLLUTION CONTROL E. G. Wright (W. F. Taffee)

Community and Government Relations — Governmental Relations — TSD Objective F - 2

The prepared Alabama Air Pollution law, which is backed by the Associated Industries of Alabama, is being criticized by Health Department and Conservationist sources as being an industry-oriented bill. The "Anti's" are also quoting HEW as saying that the bill would not meet their standards.

Community and Governmental Relations — Complaints — TSD Objective F - 2

Received two air pollution complaints during May. They were aggravated by the weather, i.e. no wind plus high humidity prevented the dispersion of SO_2 fumes.

DSW 377639

POLLUTION CONTROL (Cont'd)

Waste Audits	Pollution Abatement	TSD Objective F - 3

Plan outlined in memo to Paul Hodges 5/12/69 being followed and is on schedule. Waste audits in the aroclor and HCl departments were started during May. Visual inspection of Snow Creek for visible "pockets" deposits of liquid aroclor started, with completion by 7/1. Samplers will be installed at two more points in the Aroclor department as soon as repairs are completed on the sewer.

Waste Treatment

All plant wastes were effectively treated during May. However, the Parathion department did have some downtime due to a plugged drain in the north hold tank. Average daily values for Monsanto's effluent are as follows:

	Average Daily	Specifications
PNP	1.0 ppm	5 ppm
COD	94.9 ppm	∠200 ppm
Parathion	.14 ppm	1.0 ppm
BOD	No Data	∠200 ppm

PROCESS AND QUALITY ANALYSIS W. B. Dunlap

Quality

The Plant Quality Score was 87.5, up 3.5 from April with YTD score of 90.0 against a target of 95.0 minimum. Strong quality improvements have been made in P_2S_5, HB-40, Aroclor 5460. Aroclor 1242 shows a wider spectrum of chlorinated isomers. Free chlorine in Muriatic has risen sharply since chlorine plant shutdown.

PNP - Monitor Critical Variables	Potential Savings $60,000	TSD Objective C - 3 Job 879

The 30-day demonstration of the new PNP reactor depressurization control system is underway. In spite of very high solids no pluggage has occurred. Depressurizing cycles are on target (22 minimum average). Solids have now dropped to normal, without determination of the causes for high level having been made.

Manpower

Lamar Murphree joined the P&QA group May 15th.

STLCOPCB4099373

PLANT LABORATORIES G. W. Miller

PROCESS RESEARCH AND DEVELOPMENT J. T. Bell

A laboratory effort of 55 mandays was expended on projects outlined in the 1969 PR&D Program including the expanded study of Sulfur Recovery. The remaining mandays were used for the Hydrogen Purification Unit start-up and on miscellaneous analytical services.

p-Nitrophenol	Reduce Cycle Times	W. H. Howard

The project involving PNP Reactor improvements is on schedule as per the revised work plan issued 5/23/69. The necessity of developing a continuous HB-40 process will postpone the rate studies as planned for the PNP reactor. A PR&D report is to be issued by 6/18/69 covering the entire PNP project started in January. A completion date of 8/1/69 was forecast in the 1969 PR&D Program.

Sulfur Recovery	Sulfur Refinement for Reuse	I. Ransaw

The study has progressed according to the original work plan and is over 80% completed. A work plan revision was published 5/28/69 with the project to be reported by 6/16/69. This investigation has been continued past the original planned completion date of 4/1/69.

Blend Scavenger Refinement (Aroclor)	Improved Aroclor Electrical Properties	J. L. Brown

A work plan was issued on 5/22/69 to cover the study for the up-grading of Aroclor-phenyl glycidyl ether blends via absorptive column treatment. Work is scheduled for completion by 7/3/69.

Parathion Isomer Reduction	Improve Yields	G. L. Arnett

Laboratory studies have been reported in the PR&D report dated 5/6/69. The issuance of a follow-up work plan will be delayed until the preparation of a sales sample of Low Color Aroclor 5460 has been completed. The study of Thio Acid Chlorinator Chlorine Distribution and Temperature Improvements is being combined with this project.

Hydrogen Purification Unit Start-up	Purified Hydrogen for HB-40	J. L. Brown

Construction and start-up was completed on the target date of 5/1/69 with excellent results. Revisions are scheduled for the week of 6/2/69 to permit the burning of purge Hydrogen in the Biphenyl Tubular Units.

STLCOPCB4099374

PLANT LABORATORIES (Cont'd)

ANALYTICAL AND QUALITY CONTROL S. O. Kemp

Aroclor

Analytical equipment for electrical quality measurements on Aroclor will be completed this month.

Complaint Report

Quality

Number	Material	Customer	Reason
3-A-69	Aroclor 1242	Essex Corp.	Moisture Content
4-A-69	Montar 5	Philip Carey Corp.	Particle Size and Solubility
5-A-69	Aroclor 5460	Yates Mfg. Co.	Particle Contamination

YTD Quality Complaints/100 Shipments 0.17 Target 0.20

DSW 377643

COMMUNITY RELATIONS, PERSONNEL, RECRUITING, AND DEVELOPMENT

Personnel

1. J. L. Murphree joined TSD as Process Quality and Analysis Technician under W. B. Dunlap.

2. J. C. Landwehr visited the refinery at El Dorado, Arkansas on the Innovation Exchange Program May 14 and 15.

3. O. J. Norris was promoted to Production Supervisor at the Nitro Plant.

4. J. L. Brown was promoted to Research Chemist II effective 6-1-69.

5. J. W. Mattern rejoined the TSD Department on May 15 reporting to V. R. Haupt.

6. O. J. Norris and G. L. Arnett cleaned up a Parathion spill at Edinburg, Texas, week of May 5.

7. G. L. Arnett visited Dr. Scott Tucker in St. Louis, Monday, May 12, to discuss analytical procedure for determination of Aroclor in waste water.

Development

1. Dr. J. Bruce Duncan of the New Enterprises Division presented a seminar to 25 Anniston Plant personnel covering Monsanto developed instruments for process measurement and control, May 12, 1969.

2. A. G. McCarty, S. O. Kemp, J. C. Price, G. W. Miller and W. F. Taffee attended a refresher course in Coaching and Appraisal Interviews conducted by Mr. Ed Pipkin at the Oxford Holiday Inn, May 27 and 28.

3. G. W. Miller and J. C. Landwehr attended Personnel Management course in St. Louis, May 21 and 22.

4. W. B. Dunlap, D. W. Dudley, C. R. McIlwain and T. W. Lawrence spent week of May 5 at the Holiday Inn attending the "Management Process" course taught by Connie Eastman.

Visitors

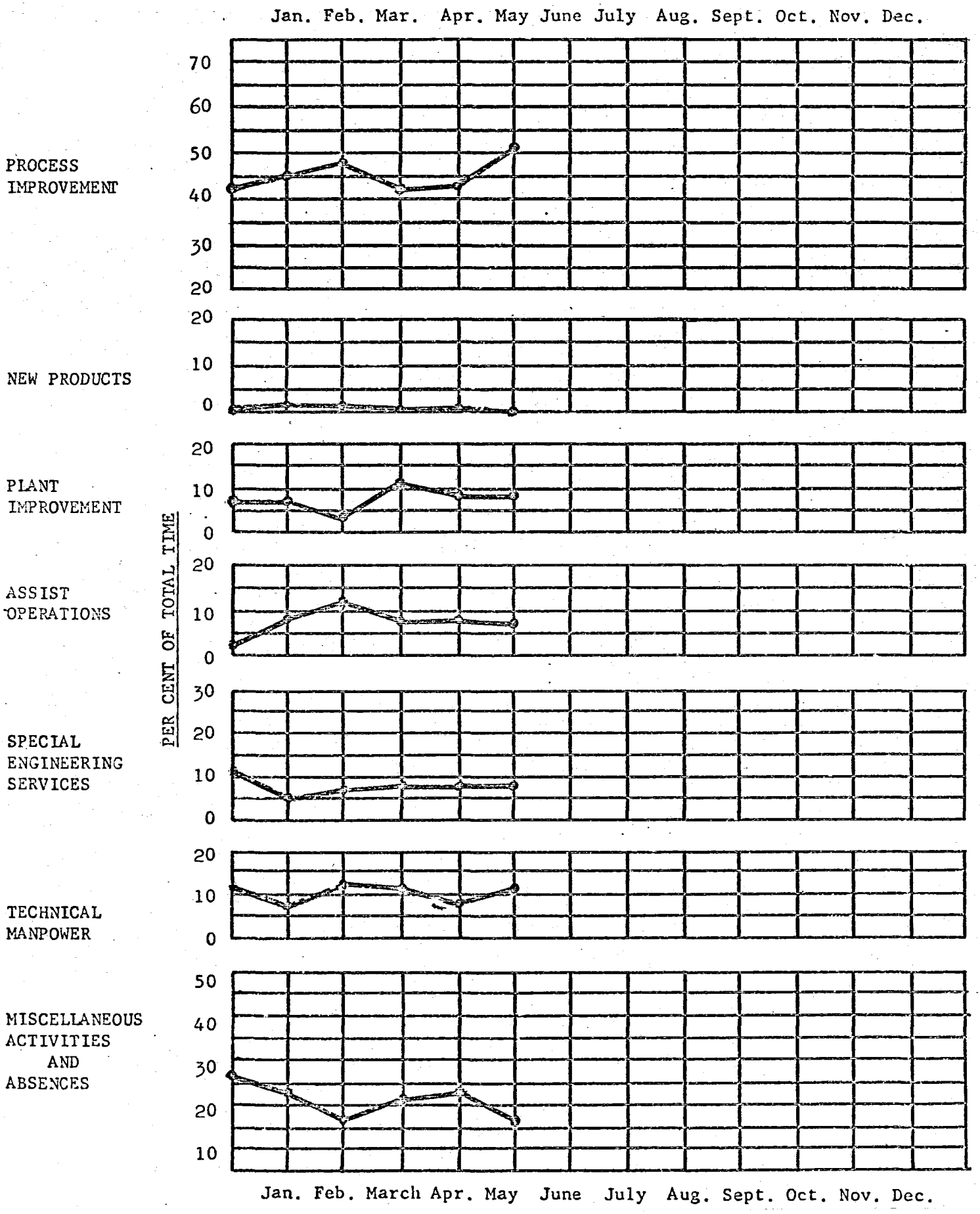
1. J. E. Smith and J. E. Springgate, Plasticizer Business Group, visited May 8 and 9.

2. R. S. Yates from CED visited to discuss the Solid Aroclor expansion, May 14 and 15.

DSW 377644

STLCOPCB4099376

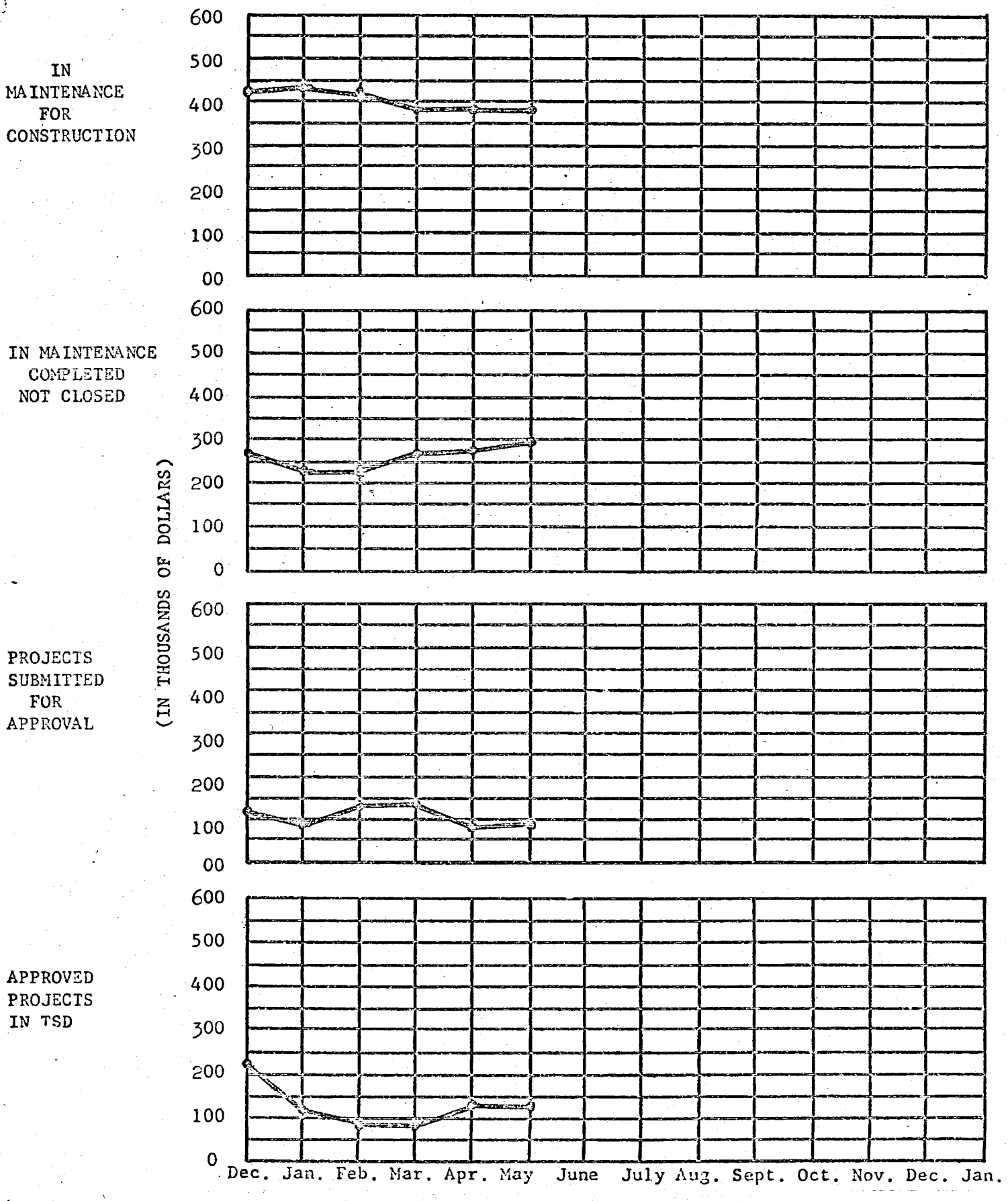
DISTRIBUTION OF TIME BY TECHNICAL SERVICE



DSW 377645

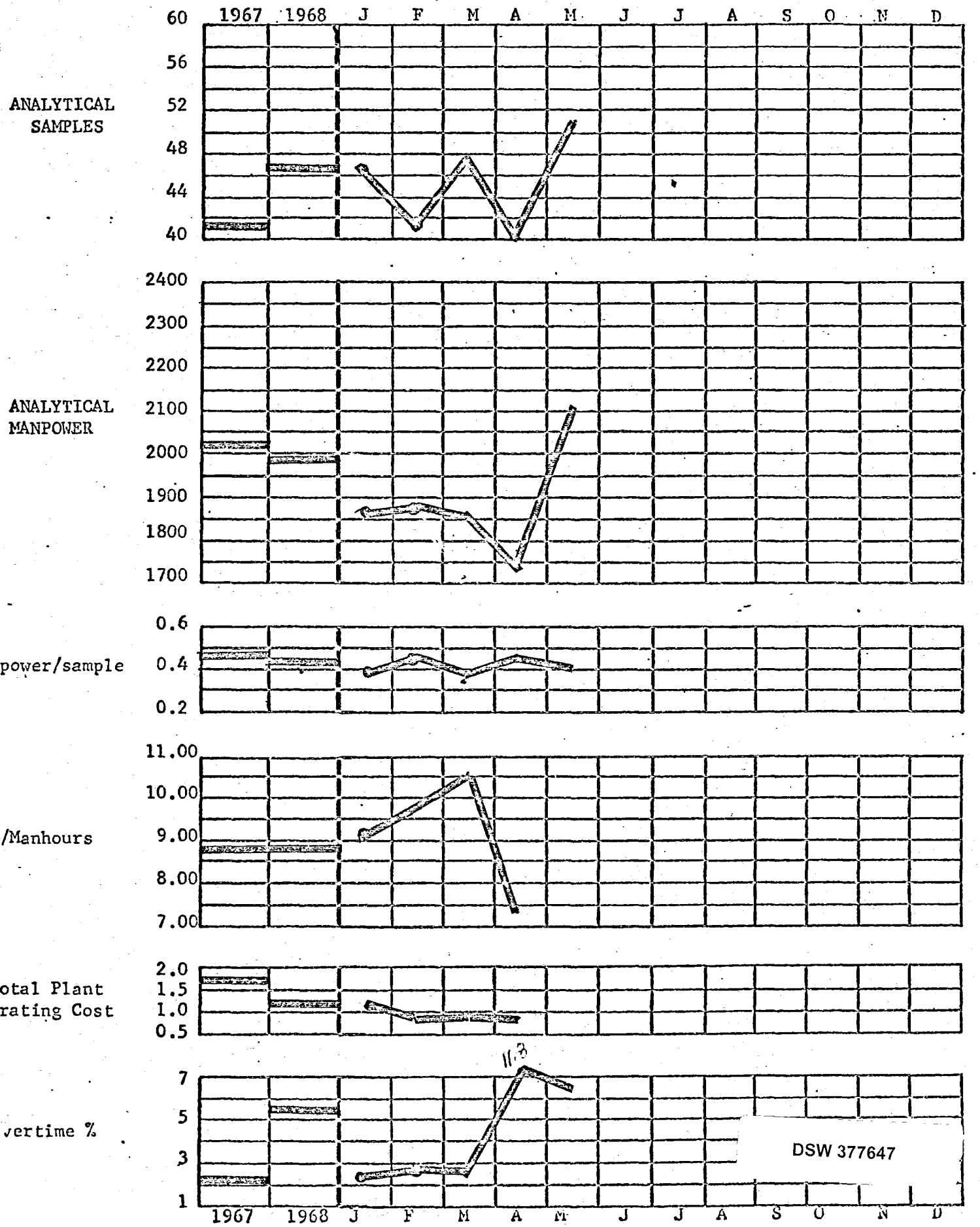
STLCOPCB4099377

TSD PROJECT SUMMARY



DSW 377646

LABORATORY ADMINISTRATION



STLCOPCB4099379