COMPANY CONFIDENTIAL

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
D. Danna (5)
P. 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

March, 1969

Cost Improvement Results

	Est. Act.	Target	% of Target
Month	42,845	24,230	176
YTD	91,460	64,640	141

Organic Division

Estimated manufacturing cost of sodium treating of Santowax R to improve Aroclor 5460 color is $1.04/cwt. New fixed capital is $90,000.

Liquid Aroclor process tentative amendment "B" written proposing a reduction in lime usage and increase in biphenyl yield.

Staley Grade and water-white HCl: Aroclor off-gas catch tank installation 50% complete. All work halted until Parathion turn-around is completed. Best estimate for start-up now is mid to late April to permit increased recovery. June target still good on coalescer to complete project.

Debottlenecking studies on PNP reactor continued; critical variables on reactor letdown cycles have been identified and are being monitored. Production in March was 1.65 M # at 79% OST; actual reactor cycle time was 141 min/batch, equivalent to 1.83 M #/mo. at standard 90% OST.

Construction of central Chlorine unloading and Hydrogen Purification facility proceeding per schedule. Target completion is May 1, 1969. Start-up preparations are underway to demonstrate equipment by May 15.

DSW 551363

AN-306 REV. 11/1/1968

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STLCOPCB4089780

Agricultural Division

Plant test of tentative amendment "A" to Niran process for Acetone Recovery indicates 27% increase in Acetone Recovery at no increase in batch cycle time.

Sulfur Recovery has been delayed in CED due to higher priorities. Anniston TSD proceeding to develop scope to help off-set delay.

Design and Drafting

Emergency radio communications installation 50% complete with mid-April target.

HCl Carbon Conveyor - replacing unsafe elevator - started up successfully.

Information developed for preparation of Retirement Authority covering Anniston Chlorine Plant and forwarded to CED

Utilities Engineering

Project to change Trane Compressor (Niran) from city water to recovered water successfully started up - $1500 per year savings potential.

Process and Quality Analysis

The Plant Quality Score was 94.0, down 0.9 from February, with a YTD score of 92.6 against a target of 95.0 minimum. Conspicuous improvement in quality of P_2S_5 has resulted from efforts by Production supervision to improve raw material phosphorus as received.

J. C. Landwehr

jw

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STLCOPCB4089781

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	-	-	-
Lower 5060	EST	1500	5490	4890									
	ACT	1500	5490										
Sol.Aro.-Still	TAR				160	170	160	170	160	170	160	170	160
Coolout temp.	EST												
AFE 3015	ACT												
Sol.Aro.-Chlor'tor	TAR				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
	EST												
AFE 3016	ACT												
Solid Aro.	TAR					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
Blend 4465	EST	1690	1920	1680									
	ACT	1690	1920										
Sol.Aro.-Verti-	TAR	70	80	70	80	70							
cal Still Cond.	EST	70	90	90									
AFE 2324	ACT	70	90										
Sol.Aro.Cl_2	TAR			940	940	950							
T/C Dock	EST			0									
AFE 2342	ACT												
Cl_2 Plt.Down No	TAR						950	940	950	940	950	940	950
Unload	EST												
CED 1831	ACT												
Solid Aro.-Flake	TAR	3000	3000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
& Drum	EST	0	0	1000									
CED 1430	ACT	0	0										
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
Disposal	EST			0									
AFE 2952	ACT												
Warehouse	TAR	2000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	EST	2000	2000	2000									
CEA 1452	ACT	2000	2000										
Liq.Aro.New	TAR			1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Burners #3 Still	EST			0									
	ACT												
Biphenyl Relocate	TAR	500	500	500	500	500	500	500	500	500	500	500	500
No. 1 Preheat	EST	1500	0	1560									
CEA 1892	ACT	1500	0										
HB-40 2 A/C's	TAR	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	EST	2230	2580	0									
AFE 3102	ACT	3490	2420										

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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												
	ACT												
Improve Plt. Power Factor	TAR					900	900	900	900	900	900	900	900
	EST												
	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									
PNP	ACT		0										
Reduce Mole Ratio NaOH/PNCB PNP	TAR				4000	4000	4000	4000	4000	4000	4000	4000	4000
	EST												
	ACT												
New Wash Water Pump - PNP AFE 2998	TAR					50	50	50	50	50	50	50	50
	EST		25	50									
	ACT		25										
Automatic pH Control PNP	TAR										500	500	500
	EST												
	ACT												
HCl Filter Pump	TAR	330	330	340									
	EST	330	330	340									
	ACT	330	330										
New Blow Tank	TAR	200	200	200	200	200	200						
	EST	200	200	200									
HCl	ACT	200	200										
150,000 Gal.-HCl Storage Tank AFE 2468	TAR				1760	1760	1780	1760	1760	1780	1760	1760	1780
	EST												
	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												
CEA 1831	ACT												
Hg Recover from Residue	TAR	250	250	250	250								
	EST	3910	0	0									
	ACT	3910	0										
Hg Wash Tank	TAR	250	250	250	250								
	EST	0	0	0									
AFE 2802	ACT	0	0										
Biphenyl Productivity	TAR												
	EST	0	9000	15,000									
	ACT	5150	10,800										
Total Organic By Month M $	TAR	17.7	21.2	23.7	31.9	36.7	45.5	46.0	46.0	46.0	47.1	47.9	45.0
	EST		27.1	30.2									
	ACT	19.8	28.7										
Total Organic YTD M $	TAR	17.7	38.9	62.6	94.6	131.3	176.8	222.9	268.9	316.0	364.0	412.0	457.0
	EST		46.9	78.8									
	ACT	19.8	48.5										

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STLCOPCB4089783

AG DIVISION
1969 TSD COST IMPROVEMENT

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

DSW 551367

STLCOPCB4089784

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)

Work started on running conduit and installing control room instruments. Field work scheduled for April. Awaiting receipt of radioactive materials license before radioactive source for level alarm can be shipped.

Low Color Aroclor 5460	New Sales $90,000 NFC	TSD Objective B-8 (e)

Completed manufacturing cost estimate for producing low color Aroclor 5460 by sodium treatment of Santowax. Estimated cost is 1.0 cents per pound with $90,000 NFC required, excluding engineering costs.

Therminol System	Evaluation	TSD Objective B-8 (h)

CED and TSD are combining efforts to overcome Therminol distribution problem with insufficient flow to important points and too low flow for expected additions to the system.

CED Project 2080 will cover the cost of the new surge tank, the six inch circulating line to the furnace, the main circulating pump, and the Solid Aroclor Expansion Therminol system. TSD Project 3216 will cover the cost of the existing system circulating pump and the necessary piping changes in the existing system. The TSD Project will also provide for the dismantling and retirement of the existing Therminol surge tank and pump.

Debottleneck Liquid Aroclor Stills	Capacity Increase	TSD Objective B-8 (i)

Anniston PR&D Report 446-506-1 discussed the laboratory demonstration of lime requirements of the Liquid Aroclor stills, pointing out the excessive amount of lime presently being added.

Aroclor Standard Manufacturing Process Tentative Amendment "B" proposes a reduction in lime usage and an increase in the biphenyl yield due to increasing number of batches between boildown for Montar removal.

DSW 551368

STLCOPCB4089785

AROCLOR-SANTOWAX W. G. Niemeyer, J. W. McGee, D. A. Self (V. R. Haupt)

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

CED's work in this area is mechanically complete. However the Santowax C surge tank and new still feed pump have not been put into service as yet. A valve was required in the vent line between the column and surge tank to isolate the two during startup and shutdown of the column.

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

This project is essentially complete. Remaining work includes: piping insulation, finish grading at benzene storage tank, and minor punch list items.

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

Installation of instrumentation on this project has been delayed by late delivery of instruments and P&S manpower drain for the Niran turnaround. This project should be installed by late April.

Improve Biphenyl Process Knowledge	Process Study	TSD Objective B-7 (e)

A designed experiment on No. 1 biphenyl furnace was started on March 10 to determine the effects of various process variables. The test was based on three blocks of data, each run at a fixed process outlet temperature. The variables studied were: 1) average radiant coil pressure, 2) promoter concentration, and 3) per cent biphenyl recycled to the furnace. TSD personnel monitored the test on a 24 hour basis which was planned for 5-1/2 to 6 days. After 2-1/2 days the test was stopped due to color problems in HB-40, but will be re-run when the Santowax R inventory level is back to normal.

HB-40 V. R. Haupt

Plan for Meeting Product Demands in 1970-1973	Capacity	TSD Objective B-12 (c)

Sufficient clean hydrogen from the biphenyl tubular units is available to meet 1973's product forecast.

Present autoclaves cannot handle the demand without increasing their size or going to continuous hydrogenation.

DSW 551369

STLCOPCB4089786

CHLORINE D. W. Dudley (A. G. McCarty)

Central Chlorine Unloading	TSD Backup of Manufacturing Rep. Savings $53,300	TSD Objective B-6 (a)

Construction of central chlorine unloading facility proceeding according to scheduled completion date of May 1, 1969. Don Dudley is assisting in start-up preparations which are underway to meet May 15 demonstration. Rough draft of tentative operating instructions are being revised and training, simulation, and demonstration plans in progress.

HCl O. J. Norris, G. L. Moore (A. G. McCarty)

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

Target date for catch tank installation missed. All work will now be delayed until completion of the Parathion turnaround. Presently this installation is 50% complete. Startup may get under way by late April.

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

Rubber lining complete, pointing 95% complete. Piping work scheduled to begin in mid April.

PNP O. J. Norris, G. L. Moore (A. G. McCarty)

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

Reactor operated at 2783 lb/hr rate for 590 hrs.(79% OST) versus standard of 2700 lb/hr. Adjusted to standard OST of 90% this is equivalent to 1.83 M lbs. per 30 day month which exceeds objective B-9 (a) by 30 M lbs. Cycle time on reactor averaged 141 min/batch versus February 151 min/batch. Key process variables on letdowns have been identified and are the major reason for cycle time improvement. Further optimization of reactor cycle time is still possible with equipment modifications. Capacity studies on filter and dryer will be necessary as reactor improvement continues.

Revise PNP MIP

Changes being made to rough draft to incorporate comments from TPM review. EDC for revised draft is week of April 7.

STLCOPCB4089787

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

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

Laboratory tests of sequestering agent for chelating iron from waste water to allow filtration were largely inconclusive. No consistent data were obtained on filter life. Program being prepared to pilot test sequestering agent, precoat filter, and fiberglass coalescing media this summer.

Parathion Formulations	Savings $10,000	TSD Objective B-5 (f)

Design package for expanding formulation capacity from 65,000 to 77,000 gallons per month was completed and circulated for approvals. Following approval, the package will be filed until future needs require its installation.

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

Plant test of tentative amendment "A" to Niran process for Acetone Recovery indicates 27% increase in Acetone Recovery at no increase in batch cycle time on No. 3 reactor. Test on Niran was completed March 28. Tentative amendment "K" to the Methyl Parathion Standard Manufacturing Process is being circulated for approvals. Demonstration of Recovery on Methyl will require approximately one week.

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

Plant test of revised wash and prewash systems will be delayed until June. Construction of piping revisions will be completed during March turn-around, and existing system will be used until a controlled plant test shows benefit of new washing arrangement.

Sulfur Recovery From Residue	$500,000/yr. Savings 40% Reduction in SO_2	TSD Objective B-5 (d)

CED has delayed work on the Sulfur Recovery Project due to higher priorities. Anniston TSD will continue work on scope and equipment process design in an attempt to off-set the present delay in CED.

Anniston PR&D is continuing work on corrosion tests and necessary modifications.

STLCOPCB4089788

NIRAN (Cont'd)

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

The Refractometer pump was started and circulated for four days before seal problems developed. The pump has been removed and inspected. Some indications of corrosion or mechanical failure are present. Potential modifications to pump and/or seals will be investigated with Taber (Pump Manufactory).

STLCOPCB4089789

ENGINEERING DESIGN AND SERVICES

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

Installation of emergency communications radio system (AFE 2951 - $14M) is approximately 50% complete. Completion now targeted for mid-April.

Projects forwarded for approval: (AFE 3212 - $3.6 M) Provide Offices for New TSD Personnel. (AFE 3250 - $1.4 M) Purchase Office Equipment for TSD. (AFE 3181 - $.9 M) P_2S_5 Vent Temperature Indicator.

Review drawings were completed for (AFE 3124 - $7 M) Niran Tank Farm Area Lighting, (AFE 3205 - $.7 M) Biphenyl Tank Farm Lighting, (AFE 2934 - $11.3 M) Niran Intermediate Loading Dock, (AFE 3216 - $11 M) Alter Therminol System in Solid Aroclor, (AFE 2949 - $12 M) Montar Flaking Pump.

Construction drawings were completed for (AFE 2754 - $22 M) Niran Formulation.

Information for authority for retirement (3214) was prepared and forwarded to CED covering Dismantling and Removal of Chlorine Manufacturing Facilities at Anniston.

Assistance rendered in start-up of HCl Carbon Conveyer. Provided design services for ten other jobs during the month.

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

Assisted in start-up of Project 3067 - Cooling Water on Trane Compressors (savings $1500/yr.). Completed preliminary study of possible utilities savings in Biphenyl Department and forwarded results for inclusion in Biphenyl MIP. Project 3155 - Improve Biphenyl Cooling Tower Treatment was approved, design for this project is completed and ready for drafting. Arranged for emergency treatment to Biphenyl tower because of fouling of heat exchangers by Algae. Manual addition of treating chemicals will be done until equipment for automatic feeding can be received and installed.

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

AFE forwarded for Niran loading dock drain pad, Aroclor, Biphenyl and Niran safety shelters. Project premise forwarded for repaving of 7th Street, HCl area drainage. Anniston Plant organization charts were up-dated and published. Contract was signed for preparation of plant maps by photogrammetric methods and necessary ground control provided for photo flights. Design package forwarded to Maintenance for renovating 3rd floor of Building 28 for operator traning room.

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

Contact With Regulatory Agencies	Community and Govt. Relations	TSD Objective F-2

Visited city treatment plant one time during March. They have not complained about solids this month.

Waste Audits	Pollution Abatement	TSD Objective F-3

Waste audit plans have been published and distributed. All necessary equipment has been ordered. Will begin audits in April.

Wildlife Study	Pollution Abatement	TSD Objective F-4

Final report was received on the January study. The report has been distributed.

Spills and Emission Reporting	Pollution Abatement	TSD Objective F-4

Three reports were received during March. Two were for SO_2 fumes and one for Cl_2 fumes.

Solids Removal Equipment at Waste Treatment	Pollution Abatement	TSD Objective F-4

Project revision was approved during March. Project is in Maintenance for planning and scheduling.

Waste Treatment

All wastes were effectively treated during March. Solids have been sewered to the city at a steady rate rather than in "slugs" and they haven't complained. Average daily values for Monsanto's effluent are as follows:

	Average Daily	Specifications
PNP	1.2 ppm	5 ppm
COD	58 ppm	< 200 ppm
Parathion	.08 ppm	1.0 ppm
BOD	6.5 ppm	< 200 ppm

DSW 551374

PROCESS AND QUALITY ANALYSIS W. B. Dunlap

Quality

The Plant Quality Score was 94.0, down 0.9 from February, with a YTD score of 92.6 against a target of 95.0 minimum. Conspicuous improvement in quality of P_2S_5 has resulted from efforts by Production supervision to improve raw material phosphorus as received.

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

The process controls which are critical in stabilizing the depressurization cycle ("letdown") were identified and tentatively quantified. Operation has been maintained for extended period at rates which eliminate the reactor as the bottleneck in PNP. Immediate future plans include a written description of control relationships and a full month demonstration run to confirm the improvement.

Manpower

Lamar Murphree was selected as Process Analysis Technician, effective upon his replacement as Laboratory Analyst.

PLANT LABORATORIES G. W. Miller

PROCESS RESEARCH AND DEVELOPMENT J. T. Bell

During the month, 51 mandays out of a scheduled 84 mandays were directed toward projects outlined in the 1969 PR&D Program. The Blend Scavenger Refinement (Aroclor) project is 3-4 weeks behind the published work plan primarily due to the unscheduled effort directed toward improved HB-40 color improvement. Analytical studies were made to demonstrate the effectiveness of plant investigations to lower acetone losses in the Parathion condensation process.

p-Nitrophenol — Reduce Cycle Times — W. H. Howard

Construction of the laboratory apparatus to simulate plant PNP production has been completed. The presence of the ortho isomer of nitrophenol has been detected in mix-tank and 216 recycle water apparently at very low concentrations. The study to determine the effects of high solids level and ONP on reactor cool-down rates is being initiated.

Sulfur Recovery — Sulfur Refinement for Reuse — I. Ransaw

A method to determine the amount of H_2S generated in the first wash step of the Sulfur purification process by trapping the off-gases in a liquid N_2 cold trap has been unsuccessful to date. High levels of H_2S are indicated. Corrosion testing has indicated that after 4 days of immersion in water from the third wash step, Hastelloy and 316 stainless were not affected. A work plan for studies involving corrosion and neutralization of wash water has been prepared and is being issued.

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

The investigation to determine stress voltage vs. resistivity relationships for Aroclor 1242 and phenyl glycidyl ether has begun after a delay to investigate HB-40 color. Results are inconclusive at this time.

Quaterphenyl Conversion — Possible Montar 9 Utilization — J. L. Brown

Completion of project awaits instrument repair and special analytical work. No effort expended during report period.

Montar Utilization — Recover Aroclor Value — G. L. Arnett

It was determined that 20 batches of Aroclor 1142 may be distilled over a single lime charge with no abnormal changes in color, free chloride, or hydrolysis stability. Pretreatment of Aroclor 1142 by passing through a column packed with various neutralizing agents was unsuccessful. The project has been concluded and a report issued.

STLCOPCB4089793

PROCESS RESEARCH AND DEVELOPMENT (Continued)

HB-40 — Color Improvement — J. L. Brown

Laboratory studies have demonstrated that HB-40 color may be reduced by approximately 40 APHA (Hellige Aqua Tester) by reducing hydrogenation temperature from 250 to 220°C. A color dependency of HB-40 on thermal stress of the Santowax R was also demonstrated. The active effort in this area has been terminated.

Parathion Isomer Reduction — Improve Yields — G. L. Arnett

A work plan has been prepared and is being issued. The laboratory study has been initiated.

Muriatic Acid — Lower Organic Contaminants — I. Ransaw

A work plan has been published but laboratory studies will be delayed indefinitely due to expanded work on Sulfur Recovery.

ANALYTICAL AND QUALITY CONTROL S. O. Kemp

Complaint Report

Quality

None

YTD Quality Complaints/100 Shipments 0.11 Target 0.20

Service

None

YTD Qaulity Complaints/100 Shipments 0.0 Target 0.25

COMMUNITY RELATIONS, PERSONNEL, RECRUITING, AND DEVELOPMENT

Personnel

1. T. W. Lawrence, Process Engineer, reported to work March 31. He will be working under A. G. McCarty.

2. March 28 Lamar Murphree was promoted to Process Analysis Technician responsible to W. B. Dunlap.

3. K. G. Hale, W. G. Niemeyer and J. T. Bell were judges in the Northeast Alabama Regional Science Fair held Friday, March 28.

4. All members of TSD attended "State of the Division" talk by Mr. Minckler on March 4.

Community Relations

1. On March 26, J. C. Landwehr and H. L. Williams attended "Close Circuit Telecast with Key Members of Nixon Adminstration" sponsored by Anniston Chamber of Commerce in Birmingham.

Development

1. O. J. Norris attended Process Control Seminar week of March 10 and week of March 24 in St. Louis.

2. J. T. Bell, K. G. Hale, S. O. Kemp, W. G. Niemeyer and J. A. Veazey attended Management Process Course at Holiday Inn taught by C. K. Eastman, March 2-7, 1969.

Visitors

1. Plant Innovation Exchange was March 20 & 21 and included visitors, Carl Tillstrom of El Dorado Refinery, Don Minges of Avon and Dick Korff of Bridgeview.

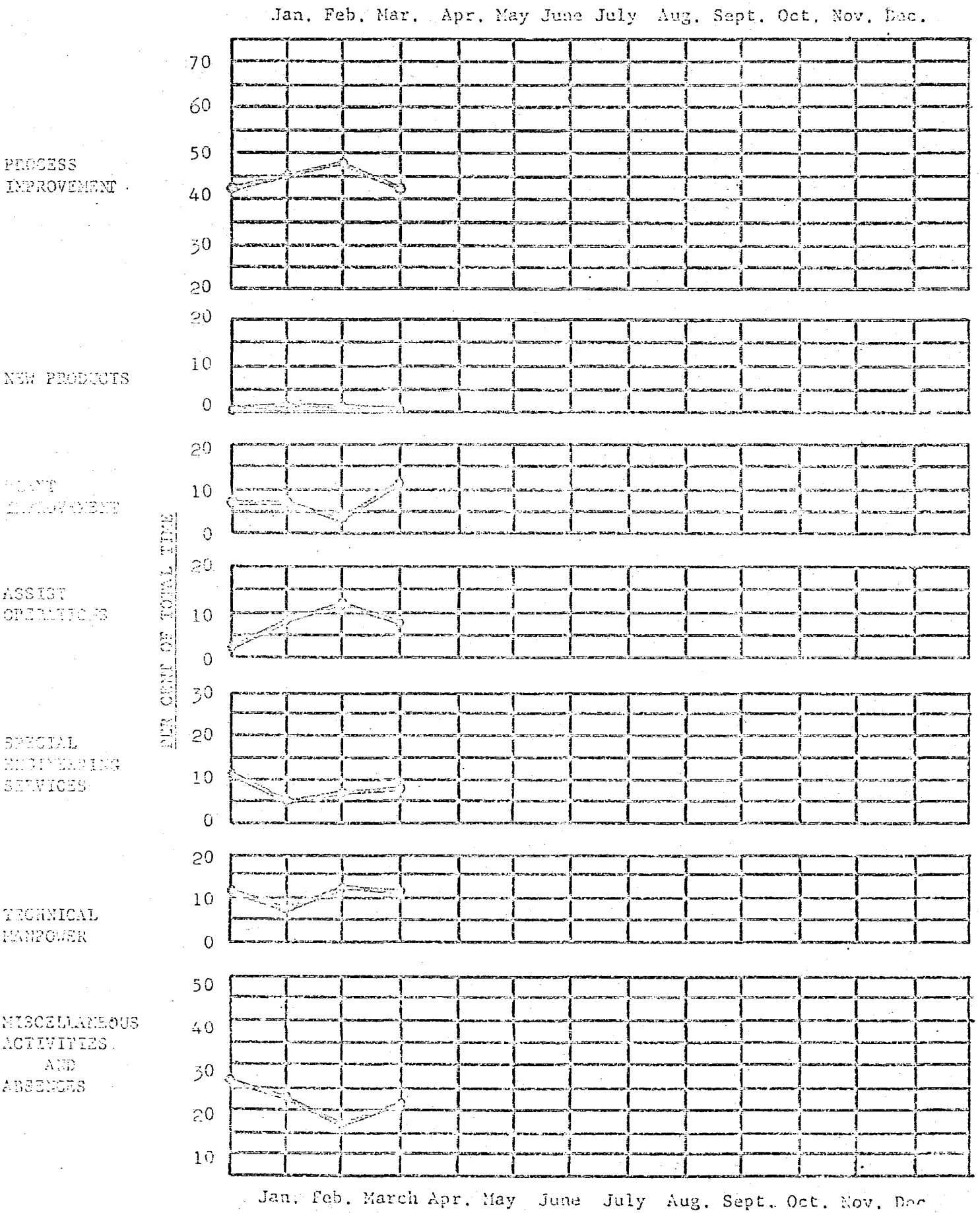
2. Bob Yates CED visited concerning Solid Aroclor Expansion March 25 & 26.

3. J. R. Ryland CED Project Manager and Bill Kennedy (E) Estimator for CED 1831 (chlorine unloading) and CED 8008 (dismantle chlorine department) visited the plant March 5 & 6.

DSW 551378

STLCOPCB4089795

DISTRIBUTION OF TIME BY TECHNICAL SERVICE



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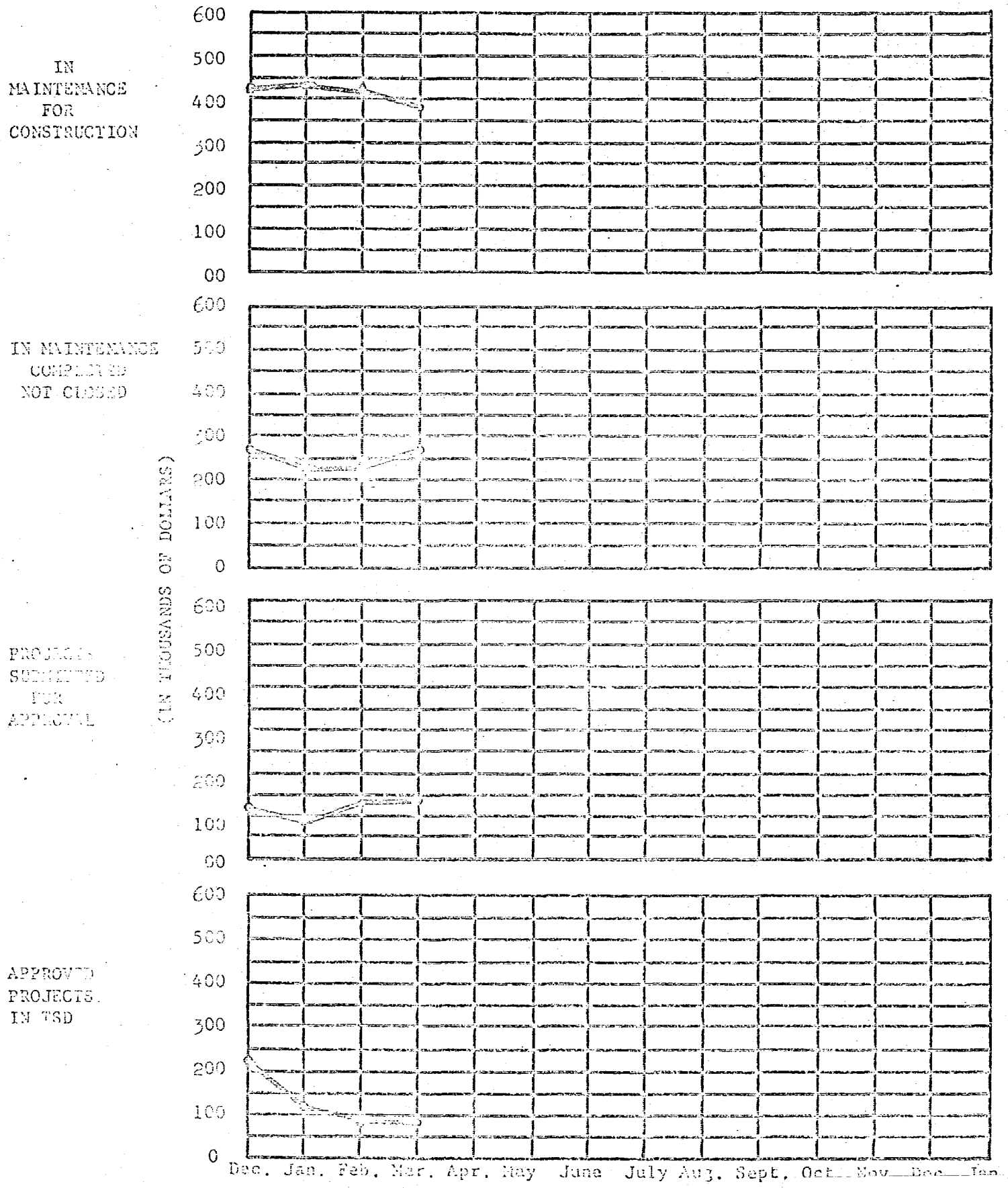
TSD PROJECT SUMMARY



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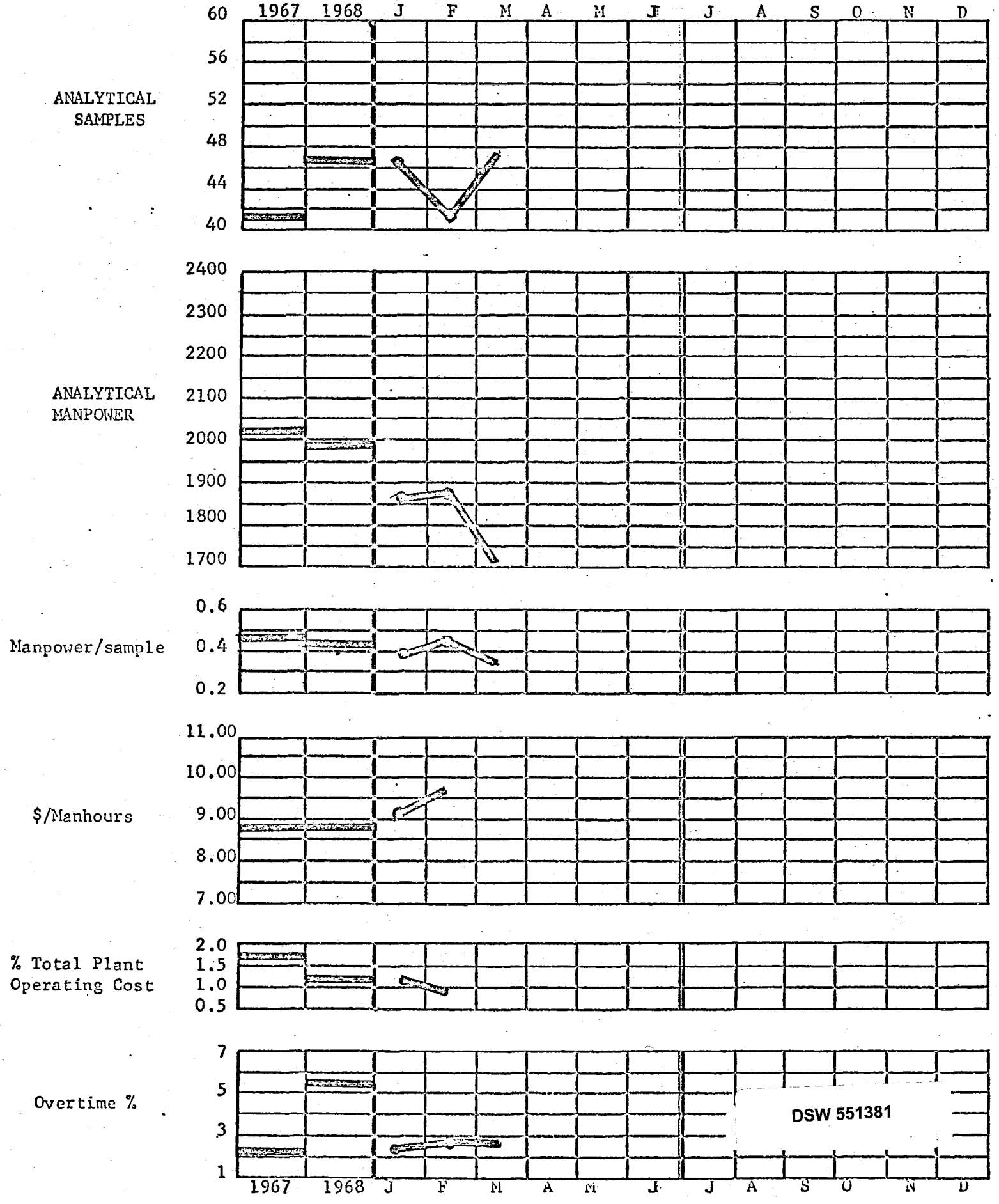
LABORATORY ADMINISTRATION



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