1982

ANNUAL REVIEW

ABERDEEN CHEMICAL PLANT

MARCH 23, 1982

AGENDA

	TOPIC	PRESENTED BY
I.	SAFETY	A. H. SATHER
II.	COST CONTROL AND CASH CONSERVATION	S. J. VINCENT
III.	ENERGY CONSERVATION	C. R. MILLER
IV.	PVC EXPANSION	P. E. MARKEY
V.	DEVELOPMENTAL PRODUCTS	P. J. KOBER
VI.	ENVIRONMENTAL	V. E. MESSICK

SAFETY

1981 HIGHLIGHTS

I. INJURY TRENDS (CHART I)

II. KEY ELEMENTS (CHART II)

III. CHEMICAL EXPOSURE TRENDS (CHART III)

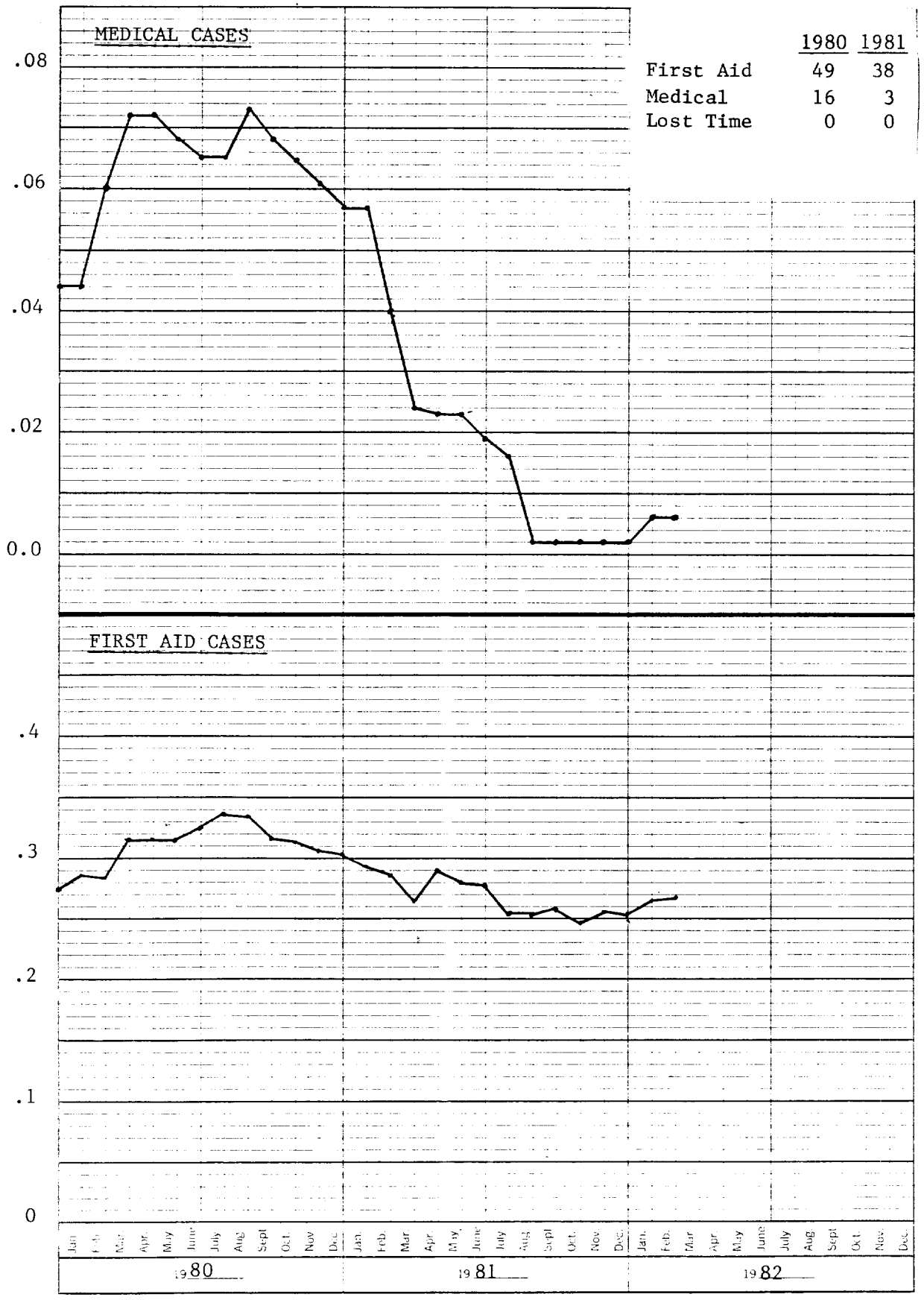
IV. LEAD EXPOSURE CONTROL TRENDS (CHART IV)

V. EXPANSION AND PLANT MODIFICATION SAFETY

CHART I

ABERDEEN CHEMICAL PLANT

INJURY PERFORMANCE



	1980	1981
First Aid	49	38
Medical	16	3
Lost Time	0	0

Frequency - No. of Injuries x 10 / Total Employees

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CHART II

SAFETY PROGRAM

KEY ELEMENTS

I. JOB PLANNING

II. TEAMWORK

III. COMMUNICATIONS

IV. TRAINING

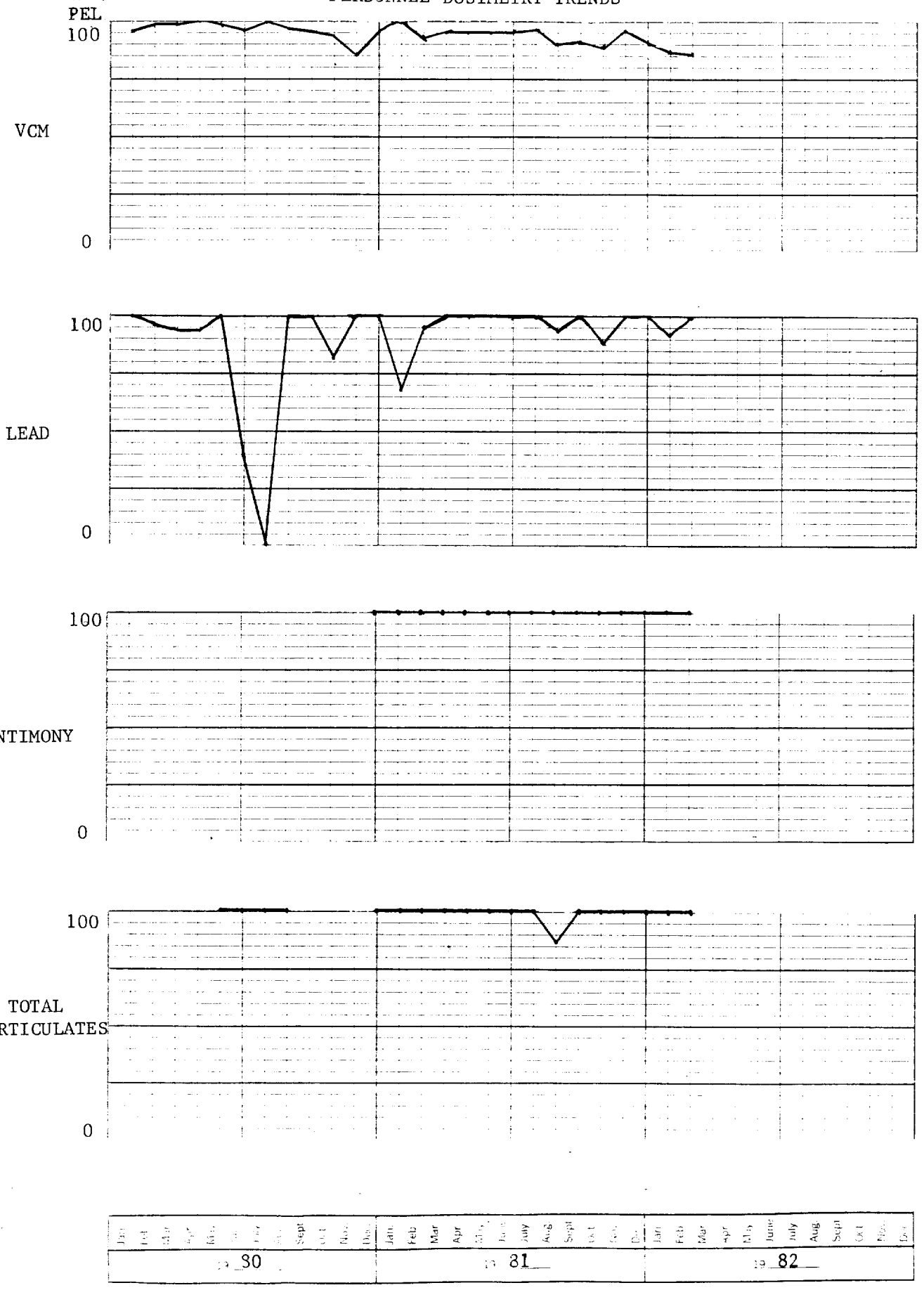
V. FOLLOW-UP

Plant Goal - Everyone goes home unhurt.

CHART III

ABERDEEN CHEMICAL PLANT

PERSONNEL DOSIMETRY TRENDS



PEL = Permissible Exposure Limit

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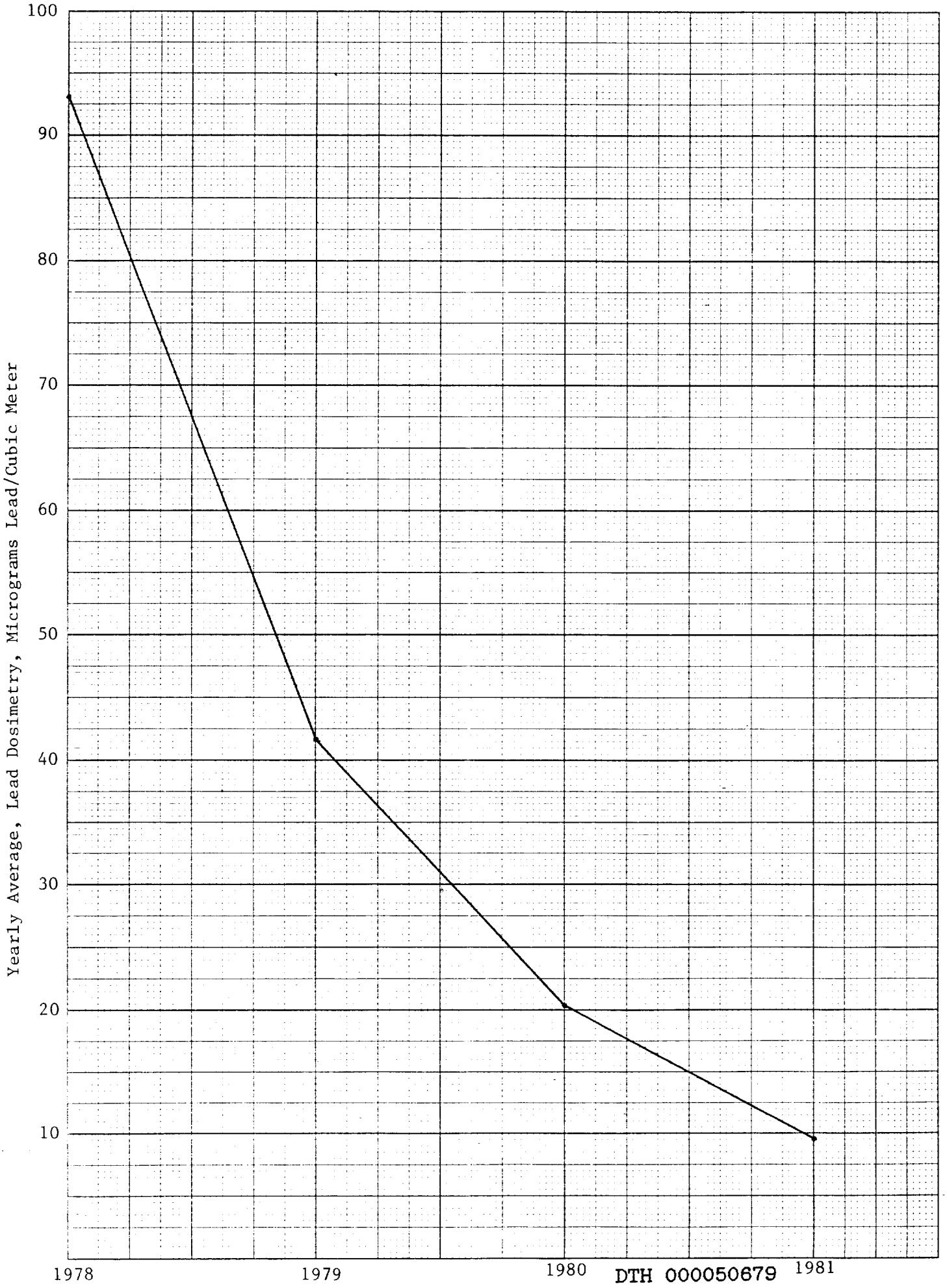
CHART IV

LEAD EXPOSURE CONTROL TRENDS



SAFETY

1982 PLANS

I. INJURY GOALS

A.	Lost Time	0
B.	Medical	4
C.	First Aid	32
	Total	36

II. VCM OVEREXPOSURE PROGRAM

III. NOISE CONTROL PROGRAM

IV. FIRE PROTECTION IMPROVEMENT PROJECT

V. CONTRACTOR SAFETY PROGRAM

COST CONTROL AND CASH CONSERVATION

I. 1981 ABERDEEN COST PERFORMANCE

A. Variable Cost Variance

Due to Efficiency	$ 455 M
Due To Price	$12,859 M

B. Fixed Cost Variance $ 2,266 M

II. 1981 PROFITABILITY IMPROVEMENT ITEMS

Target	$1,129 M
Actual	$2,463 M

A. PVC Variable Cost

B. Upgrade H-Grade Resin

C. Reduce Sifter Overflow Production

D. Use of 5425 Resin in 18031 Compound

E. Compound Stream Factor

F. Utility Costs

G. Plant Fixed Costs

III. 1982 CASH CONSERVATION IMPROVEMENT (First Six Months)

A. Payroll and Benefits	$ 80 M
B. Maintenance and Contract Costs	135 M
C. Antioxidants for PVC	40 M
D. Reduction of H-Grade Resin Production	80 M
E. Capital Project Delays	

IV. INVENTORY CONTROL - WAREHOUSE AND RAW MATERIALS

A. 0739 Inventory
   1. Warehouse Stock Levels
   2. Price Competition
   3. Cost Analysis

B. 0744 Inventory

V. PRODUCTIVITY IMPROVEMENTS

A. Resin

B. Compound

C. Maintenance

D. Labor Agreement

E. Energy

WAREHOUSE INVENTORIES

	0739 Account	0744 Account	Total
1980 Budget	$1.330 MM	$1.759 MM	$3.059 MM
Actual	1.300	1.369	2.669
1981 Budget	1.491	1.390	2.881
Actual	1.495	1.177	2.672
1982 Budget	1.510	1.210	2.720

AS OF 3-2-82

INITIAL ___ CHANGE ___ VERIFY X

CONOCO # 1714

DESCRIPTION PIPE, STEEL, BLACK 2" SCH-40

UNIT OF ISSUE 21' SEC

WHERE USED GENERAC PLANT

OPERATING IMPACT IF NOT STOCKED

PREPARED BY [illegible]

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19__ ACTIVITY

STOCKING LEVEL: MINIMUM 6 MAXIMUM 6 RE-ORDER QUANTITY 6 LAST STOCKING LEVEL ESTABLISHED 12-17-80

PURCHASES		ISSUES	
ANNUAL COST	414.90	ANNUAL COST	√92.02
ANNUAL QUANTITY	18	ANNUAL QUANTITY	22

LAST 5 PURCHASES

QUANTITY	6	6	6	11	
DATE	10/1/81	3/6/81	9/29/80	6/8/79	

LAST PURCHASE UNIT PRICE 23.√ AVERAGE MONTHLY PURCHASES 1.√

LAST 5 ISSUES

QUANTITY	6	7	9	11	6
DATE	3/5/81	2/25/81	1/14/81	12/24/80	9/26/80

LAST ISSUE UNIT PRICE 26.91 AVERAGE MONTHLY ISSUES 1.8

SUPPLIER INFORMATION

	SOURCE	LOCATION	LEAD TIME	MINIMUM ORDER QNTY	UNIT PRICE	PRICE BREAK $	PRICE BREAK @	PRICE BREAK $	PRICE BREAK @	WILL STOCK YES	WILL STOCK NO
PRIMARY	WHOLESALE SUPPLY	JACKSON, MS	10 DAYS	√	27.25						X
ALTERNATE	CENTRAL PIPE & SUPPLY	COLUMBUS, MS	1 WEEK	√	28.√0						X
ALTERNATE	O'NEAL STEEL	TUPELO, MS	1 WEEK	√	26.46						X
ALTERNATE	JEFFERIES STEEL	TUPELO, MS	SAME DAY	√	22.√8					X	

STOCKING AUTHORIZATION

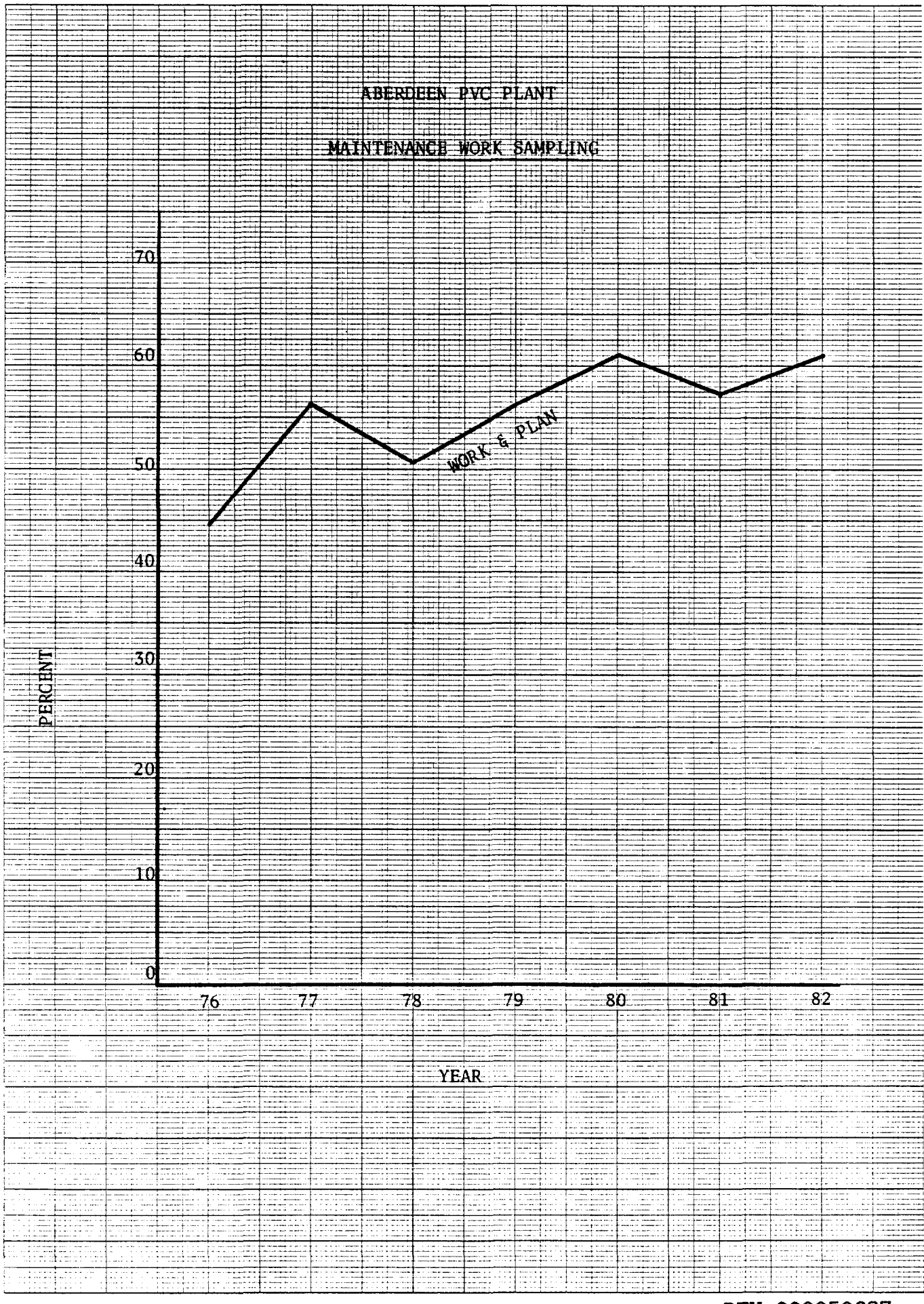
	SOURCE	MINIMUM	MAXIMUM	RE-ORDER	MAX. PRICE	LPA #	REMARKS
PRIMARY	JEFFERIES STEEL				22.√8		
ALTERNATE	ONEAL STEEL				26.46		

APPROVALS

MECHANICAL SUPT_____ DATE_____ PLANT SUPERINTENDENT_____ DATE_____ PLANT MANAGER_____ DATE_____

ROUTING

ORIGINATOR STOREKEEPER STORES SUPERVISOR PURCHASING BUYER PURCHASING FILES



ENERGY CONSERVATION PROGRAM

I. ENERGY PERFORMANCE HISTORY

- A. Ten Year Performance on CMA Basis
- B. 1981 Performance

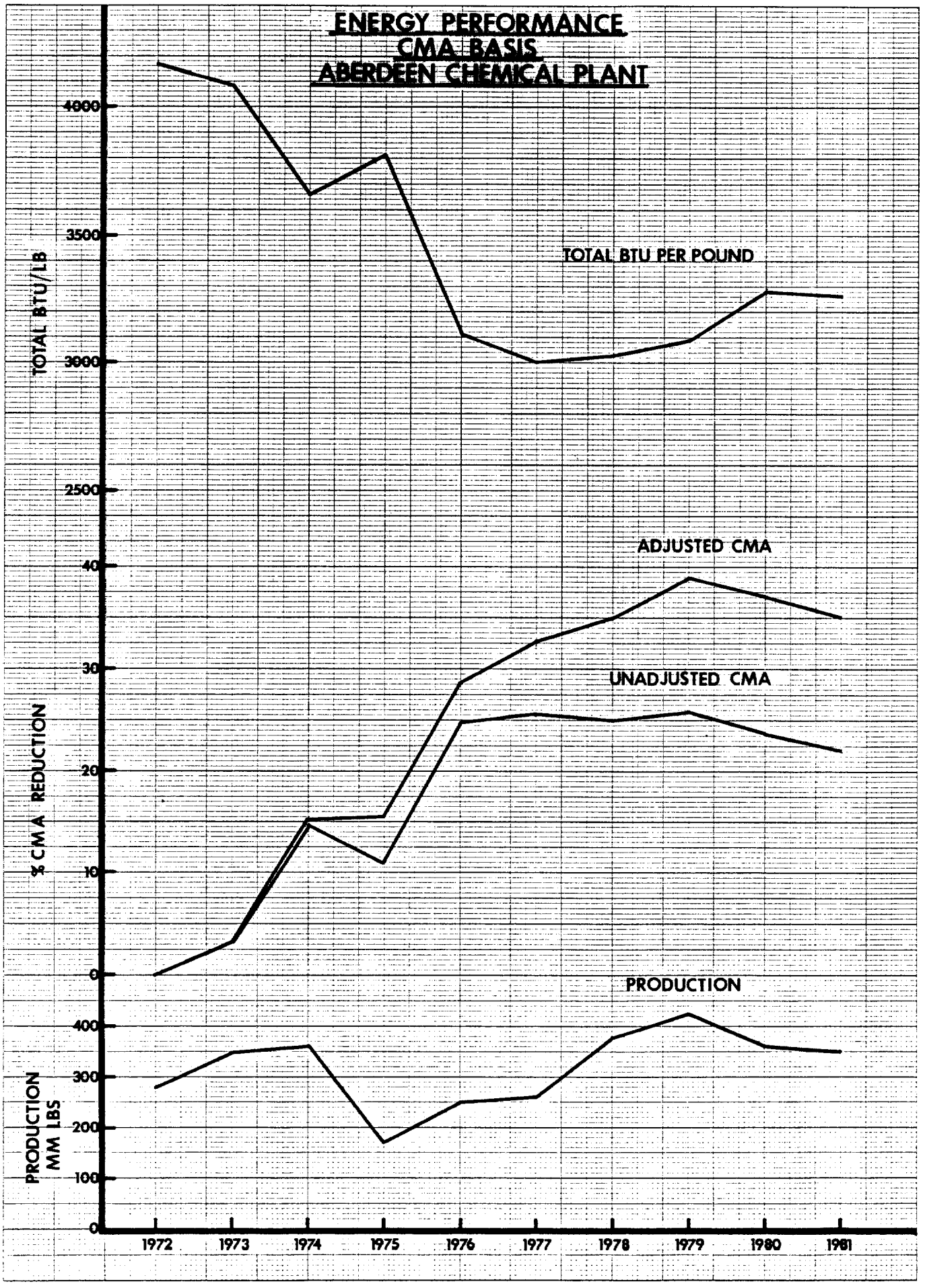
II. MAJOR 1982 PROGRAMS

- A. Reduced Operation Program
  1. 1980-81 Monthly Performance
  2. Energy Consumption Analysis
  3. Short Term Program
  4. Long Term Plan
  5. Shutdown Planning
- B. Boiler Operation Program
  1. O_2 Operating Ranges
  2. Refractory Inspections/Infrared Survey
  3. Boiler Feedwater Quality
  4. Economizer Operations Guidelines
  5. MED Consultation
  6. Training
- C. Steam Trap Program
  1. Utility Area
  2. Comprehensive Steam Trap Inspection
- D. Insulation Program
  1. Freeze Protection Plan
  2. Energy Related Insulation Surveys
- E. Plant Air Conservation Program
  1. Existing Air System
  2. 1982 Conservation Program
- F. Capital Projects
  1. V-10 Centrate Heat Recovery
  2. V-11 Centrate Heat Recovery
  3. Cooling Tower Fan Control

III. ENERGY AWARENESS

- A. Energy Consumption Monitoring
  1. Current Reporting
  2. Proposed Project
- B. Daily Accountability
- C. Employee Awareness
  1. Inclusion of Energy Related Topics in Operations Manuals
  2. Active Involvement of All Employees

IV. 1982 ENERGY CONSERVATION FORECAST



46 1510

10 X 10 TO THE CENTIMETER 18 X 25 CM.
KEUFFEL & ESSER CO. MADE IN U.S.A.

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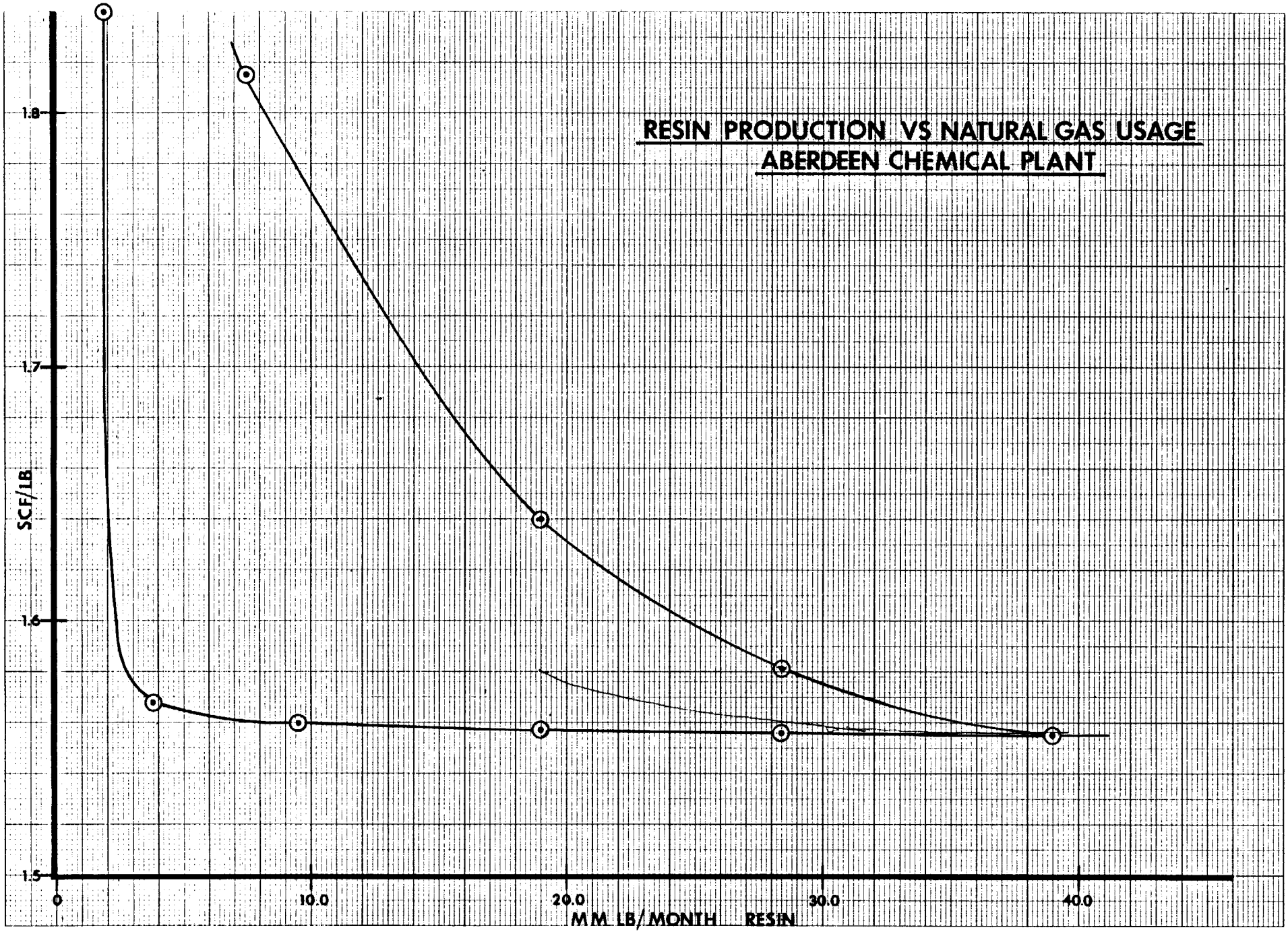
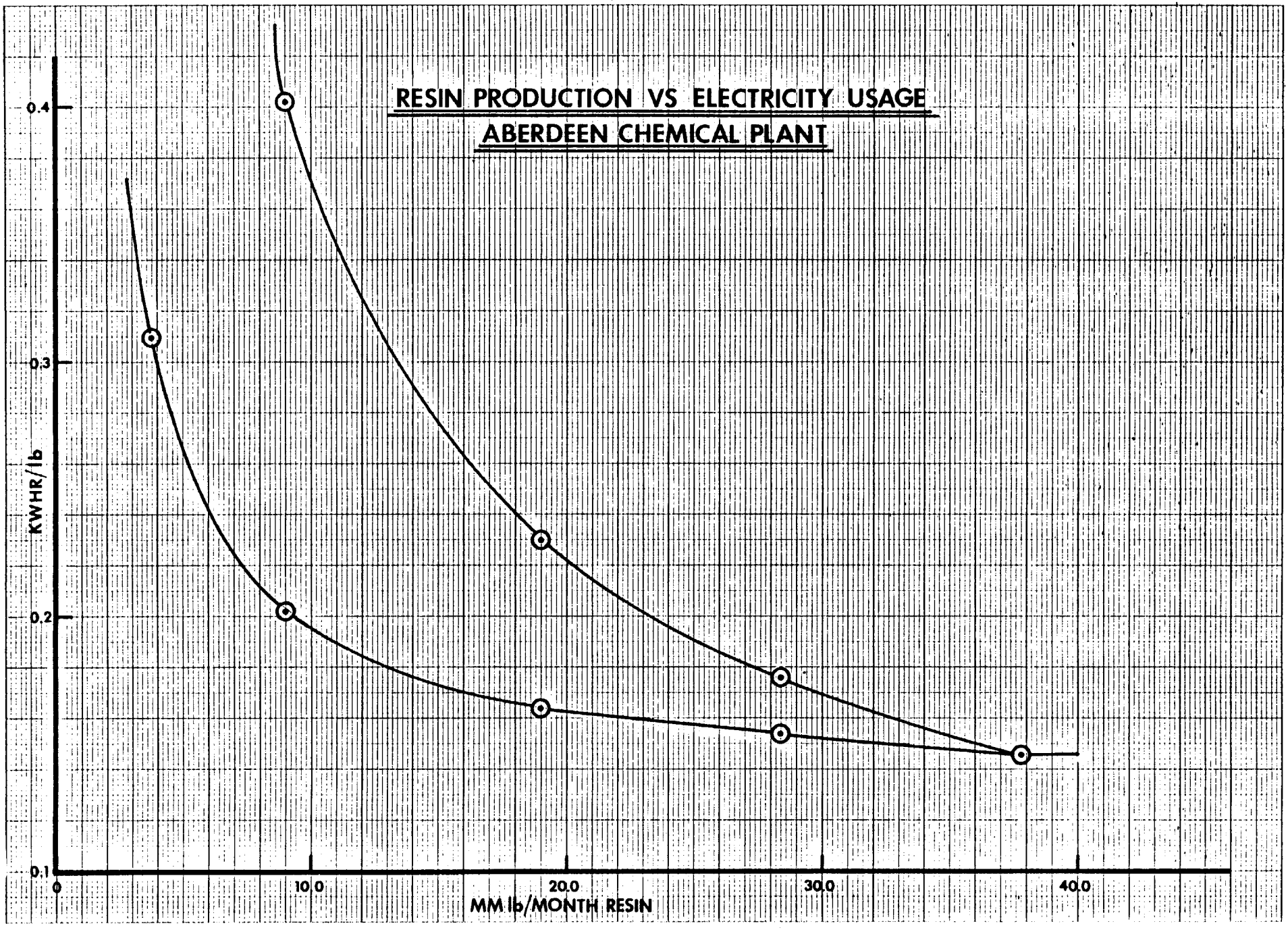
1981 BUDGET VS 1981 PERFORMANCE

ABERDEEN CHEMICAL PLANT

	INCREMENTAL MMM BTU/LB.	%	% ADJ. CMA
1981 Budgeted Energy Reduction			40.9
1981 Changes vs 1981 Budget			
Product Mix Effect	(45.6)	-3.0	
Decreased Production Impact	(25.0)	-1.7	
Boiler Blowdown Heat Losses	(6.3)	-0.4	
Undefined Energy Consumption	(4.5)	-0.3	
Net Change 1981 Budget vs 1981 Actual	(81.4)		35.5





ENERGY CONSERVATION FORECAST - 1982

ABERDEEN CHEMICAL PLANT

	INCREMENTAL MMM BTU/Yr.	%	% ADJ. CMA
1981 Energy Reduction vs 1972 (CMA Adjusted Basis)	-	-	35.5
1982 Changes vs 1981 Performance			
Product Mix Effects	33.1	2.2	
Increased Production Impact	27.0	1.8	
V-11 Centrate Heat Recovery (4 months)	13.4	0.9	
V-10 Centrate Heat Recovery (10 months)	12.5	0.8	
Boiler Blowdown Recovery (10 months)	6.7	0.4	
Cooling Tower Fan Control (11 months)	1.8	0.1	
Dryer Insulation (6 months)	1.4	0.1	
Undefined Energy Savings	4.5	0.3	
Net Change 1981 to 1982	100.4	6.6	
1982 Budget CMA Adjusted Reduction			42.1

PVC
EXPANSION

ABERDEEN PVC EXPANSION PROJECT

A. PROJECT HISTORY AND DEVELOPMENT

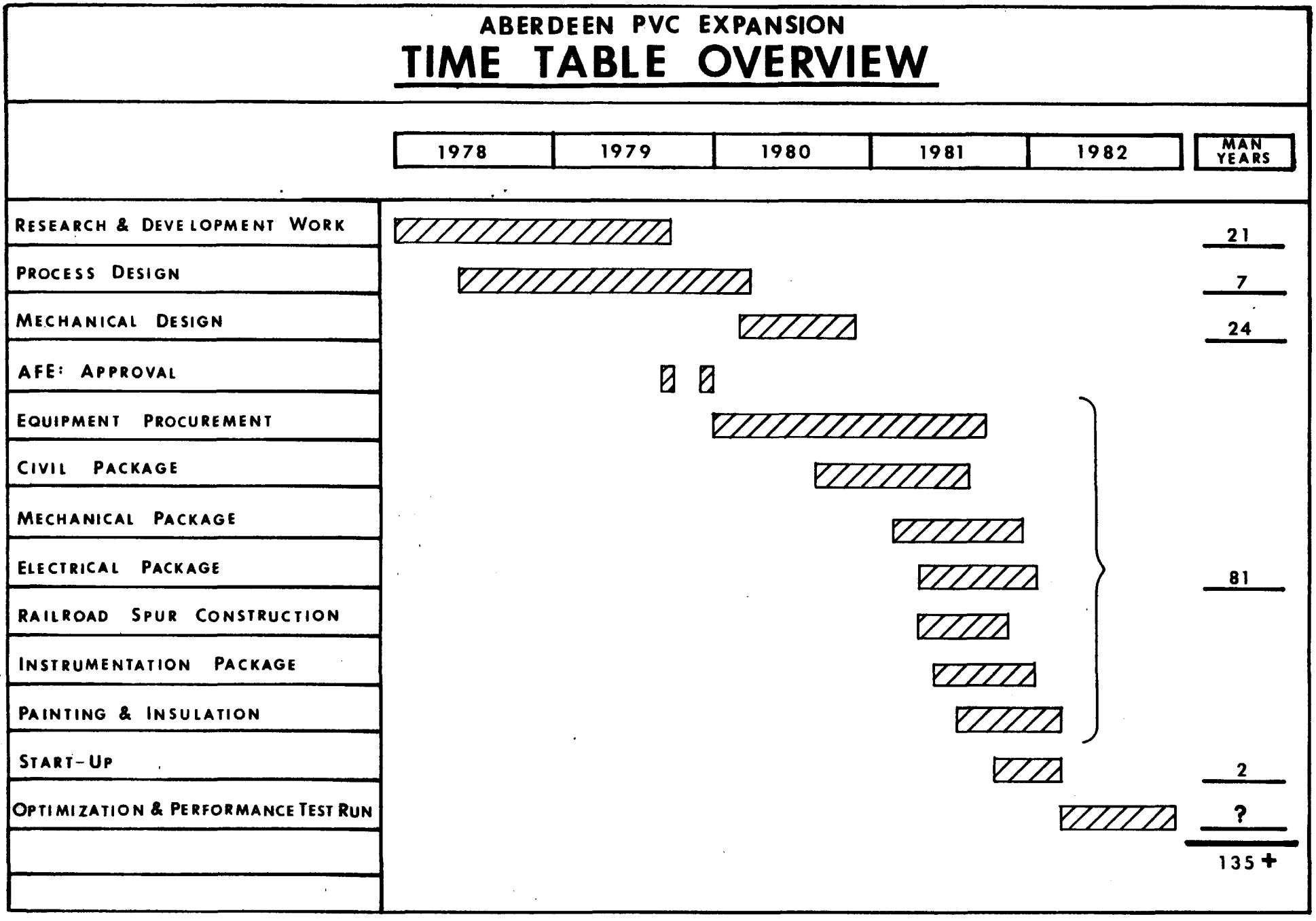
B. TECHNOLOGY ADVANCEMENTS
   1. XXL Reactors
   2. Fluid Bed Dryer

C. PROJECT COST

D. FUTURE WORK
   1. Optimization and Rate Improvement
   2. Operator Staffing and Training Program

ABERDEEN PVC EXPANSION

TIME TABLE OVERVIEW



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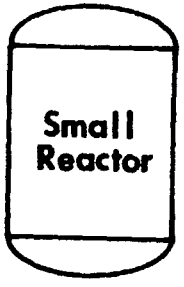
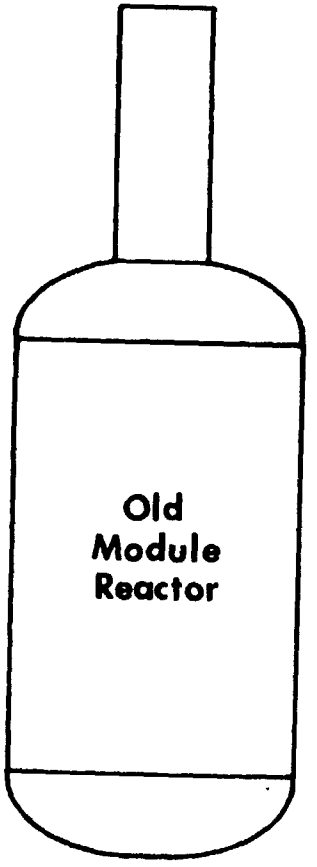
EXPANSION START-UP

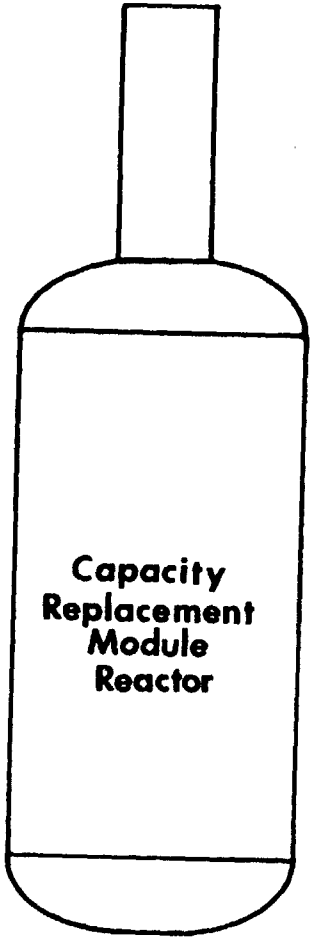
KEY ITEMS

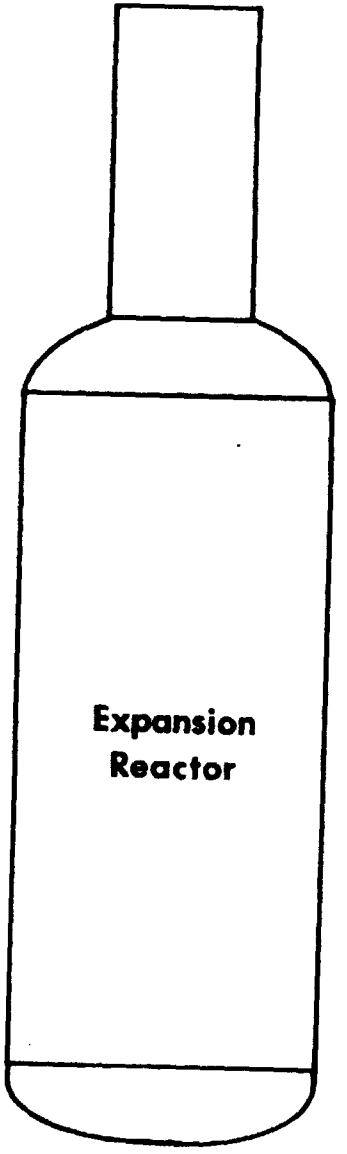
MAJOR EQUIPMENT	START-UP DATE
FLUID BED DRYER	OCTOBER 28, 1981
D-745 EXPANSION REACTOR	DECEMBER 17, 1981
D-700 EXPANSION REACTOR	MARCH 12, 1982

ABERDEEN CHEMICAL PLANT
REACTORS









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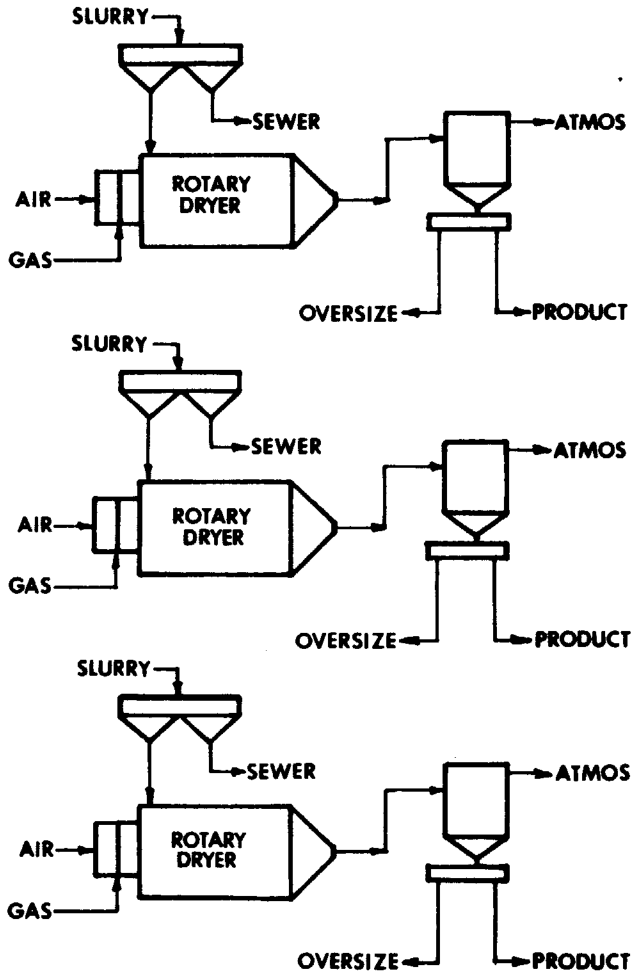
5385 CHARGE CAPACITIES

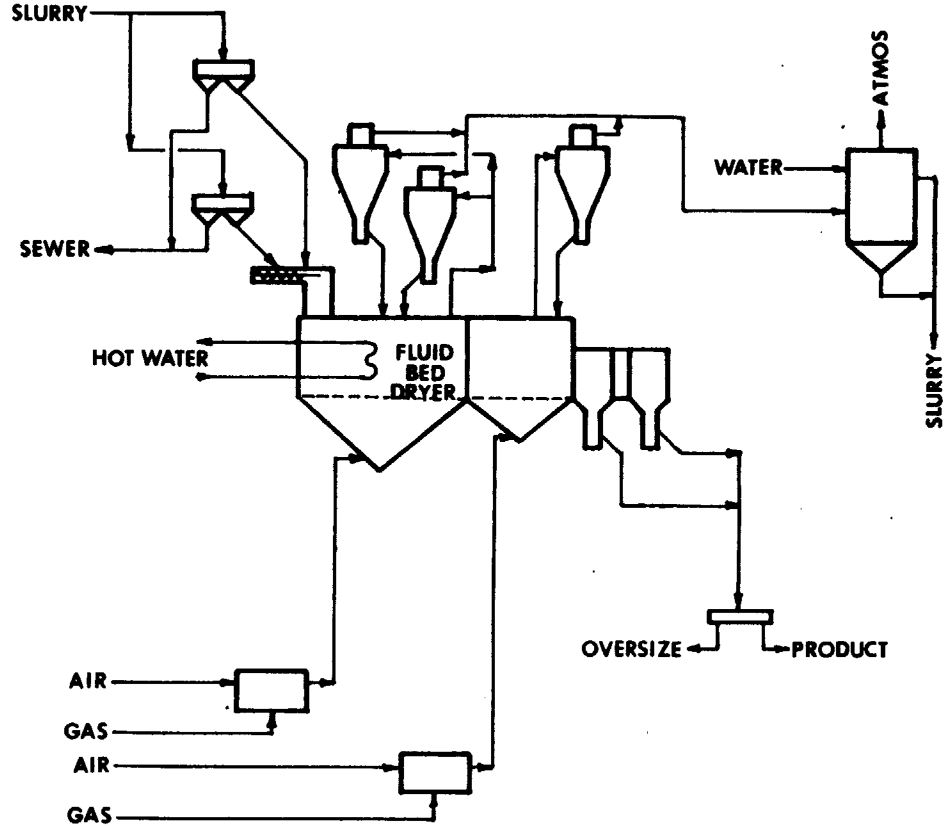
	SMALL REACTOR	OLD MODULE REACTOR	CRD REACTOR	EXPANSION REACTOR
VCM lbs.	6524	49500	59500	76500
H_2O lbs.	7828	59400	71400	99450
CHARGE VOL.				22000

ABERDEEN CHEMICAL PLANT
DRYERS

ROTARY DRYERS
RATE = 6000 LB/HR



FLUID BED DRYER
RATE = 19000 LB/HR



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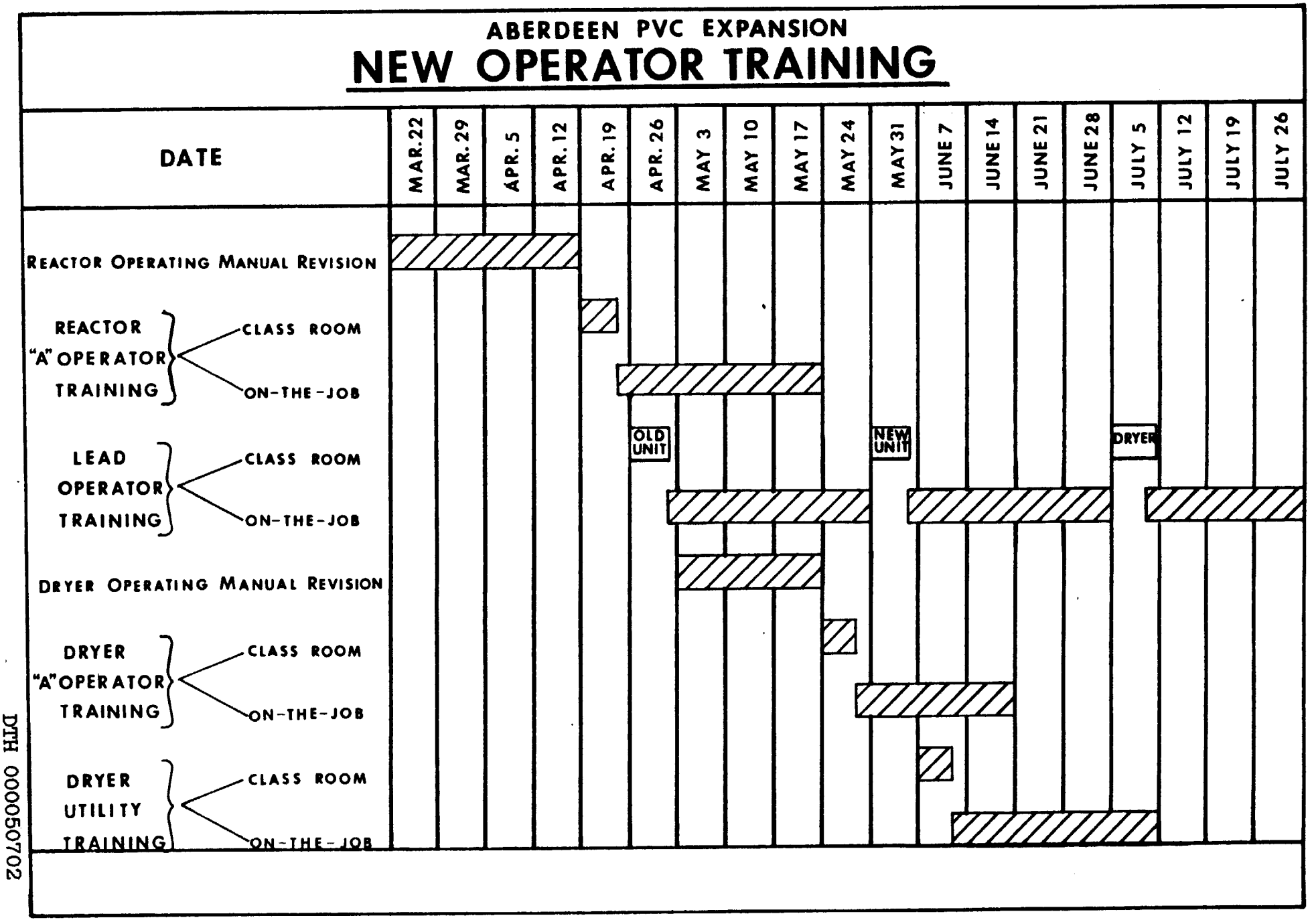
ABERDEEN PVC EXPANSION PROJECT

AFE 9719 & 9759

	BUDGET ALLOCATION	PREDICTED TOTAL	(OVER) UNDER
EQUIPMENT	3,385,000	3,248,000	137,000
BULK MATERIALS	1,650,000	1,787,000	(137,000)
OUTSIDE ENGINEERING	1,367,900	1,058,000	309,900
FIELD CONTRACTS	4,048,900	3,293,900	755,000
CONT.-EXTRA FIELD WORK	161,000	409,100	(248,100)
CONT.-FIELD CHANGE ORDERS	150,000	88,300	61,700
CONOCO FIELD COST	170,000	215,000	(45,000)
UNALLOCATED CONTINGENCY	691,900	121,600	570,300
PERFORMANCE BOND	103,000	15,800	87,200
ALL RISK INSURANCE	24,300	10,500	13,800
SALES TAX	248,000	58,000	190,000
CHANGE ORDERS #1 - 12	0	(1,236,800)	(1,236,800)
TOTAL	$12,000,000	$11,542,000	$458,000

ABERDEEN PVC EXPANSION

NEW OPERATOR TRAINING



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DEVELOPMENTAL PRODUCTS

I. 5265 RESIN

- A. Fittings Market
- B. CTA
- C. Plant Production

II. 90172 DRY BLEND

- A. Fittings Dry Blend
- B. Field Trials
- C. Plant Scale Test Run

III. RP-100 PROGRAM

- A. Compounded Pellet Replacement
- B. Twin Screw Formulation
- C. Single Screw Formulation
- D. Plant Production

ENVIRONMENTAL

1981/82 KEY ENVIRONMENTAL FACTORS

I. PROJECTS COMPLETED

- Reactor Double Rupture Disc Replacement
- Improved Rupture Disc Holders
- Batch Water Strippers
- Diking and Curbing

II. COMPLIANCE TESTS CONDUCTED

- Batch Water Strippers
- Fluid Bed Dryer
- New Module Expansion Reactor

III. OPERATING PERMITS RECEIVED

- NPDES
- RCRA

IV. OTHER

- State of Mississippi has NESHAPS authority for the vinyl chloride standard.

CURRENT ENVIRONMENTAL PROJECTS

PROJECT	AFE DATE	EXPECTED START-UP	CAPITAL COST, $M
VCM CONTAINMENT			
SPARE INCINERATOR	1/80	4/82	650
EMERGENCY AMS KILL SYSTEM	11/80	6/82	325
FIXED POINT MONITOR DATA COMPUTER & WARNING LIGHTS	9/80	4/82	113
EMERGENCY COOLING FOR REACTORS	5/81	5/82	400
REACTOR HIGH LEVEL ALARMS	11/80	1/83	100
RVCM RECEIVER HIGH LEVEL ALARMS	4/81	11/82	16
STEAM STRIPPING INSTRUMENTATION	4/81	11/82	25
BLEND TANK EXHAUSTERS	12/81	9/82	24
WATER-NPDES PERMITTING			
WASTE WATER TREATMENT REVISIONS	6/81	9/82	560
PLASTICIZER SPILL CONTAINMENT	4/81	10/82	50
PLASTICIZER IRRITANT CONTROL	12/80	6/82	80
SOLID WASTE			
RESIN RECLAIM SYSTEM	12/80	6/82	727
1983 CAPITAL BUDGET			
VCM RELIEF VALVE CONTAINMENT			