

QUALITY REPRODUCIBILITY

IMPROVEMENT PROGRAM

R. E. Peavy

6/7/83

N 31745

BACKGROUND

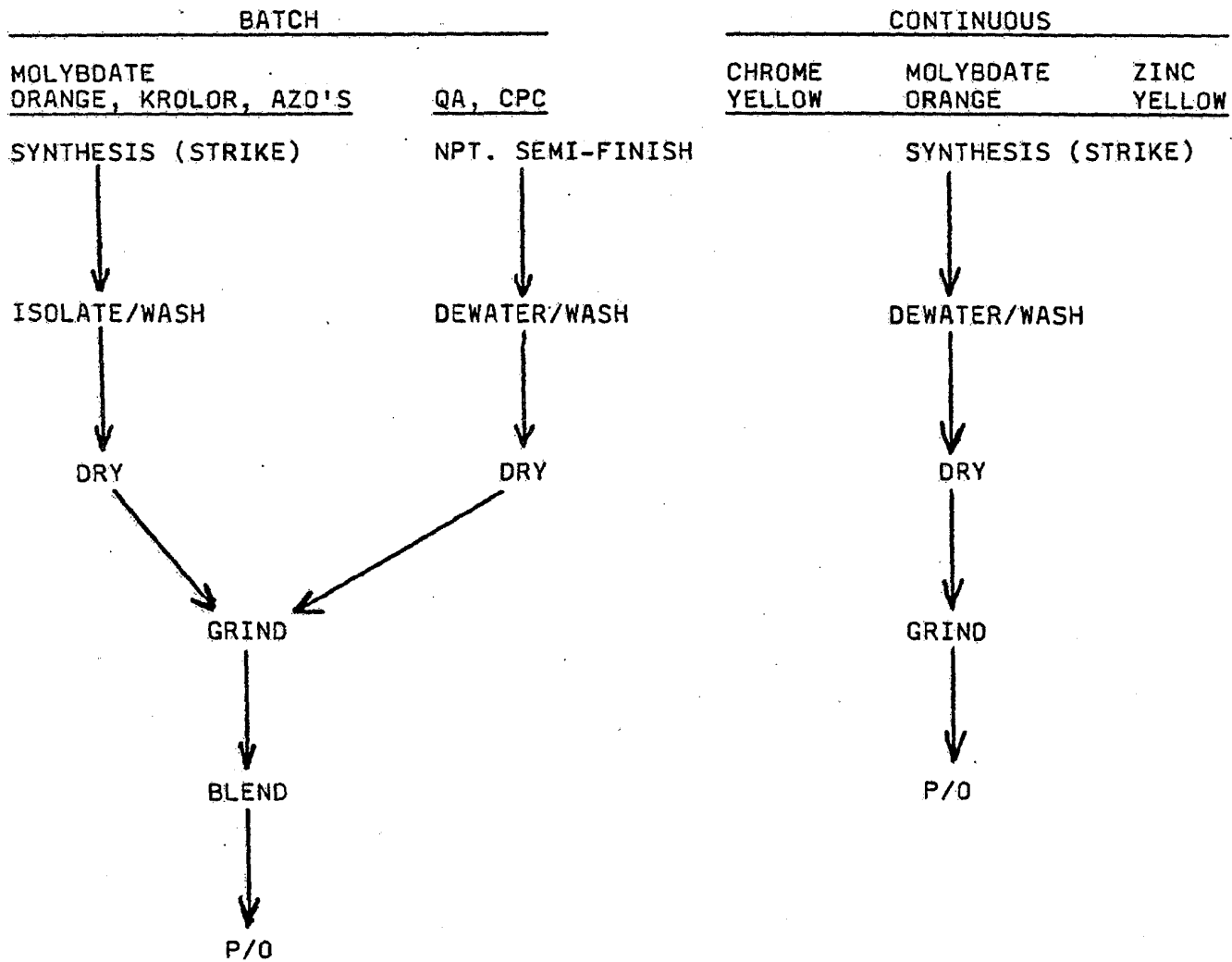
COLORED PIGMENTS MANUFACTURE

- . TWO PLANT OPERATION
 - NEWPORT: CPC BLUE AND QUINACRIDONE CRUDE
 - NEWARK: LEAD CHROMATE, KROLOR, AZO ORGANICS, FINISHING CPC AND QA CRUDE

- . MULTIPLE PRODUCT MANUFACTURE
 - 120 FINISHED PRODUCT CODES
 - 21 COMPONENT CODES (KROLOR, ORGANIC DISPERSIONS)

- . SPECIALTY BUSINESS
 - MANY CODES HAVE MULTIPLE QUALITY GRADES (PQ'S)
 - VARIOUS PACKAGES (BAGS, DRUMS, AIR PALLETS)

NEWARK MANUFACTURING SCHEMES



PRODUCT MIX

<u>PRODUCT GROUP</u>	<u>'82 PROD. MM LBS.</u>	<u>'82 SALES \$ MM</u>	<u>END USE</u>
CHROME YELLOW	6.1	7.0	INKS, INDUSTRIAL PAINTS
MOLYBDATE ORANGE	4.4	7.8	INKS, INDUSTRIAL PAINTS
KROLOR	3.6	11.4	PAINTS, PLASTICS.
AZO ORGANICS	1.3	12.0	PAINTS, INKS
QUINACRIDONE	1.3	31.6	ALL INDUSTRIES
CPC BLUE	1.0	11.9	ALL INDUSTRIES

HISTORICAL QUALITY PERFORMANCE

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1Q83</u>	<u>'83 YTD</u>
K. % REPROD.	64	69	69	76	84	92	88

NOTE: '83 YTD REFLECTS PART OF RECENT MOLYBDATE ORANGE CAMPAIGN

PROBLEMS

- . COMPLEX MANUFACTURING SCHEME
- . OLD EQUIPMENT
- . POOR UNDERSTANDING OF PROCESS TECHNOLOGY
- . INCOMPLETE DOCUMENTATION OF EXISTING TECHNOLOGY

OBJECTIVE

ACHIEVE QUALITY REPRODUCIBILITY:

- >95% FOR CONTINUOUSLY MANUFACTURED PRODUCTS
- >90% (BLENDABLE) FOR BATCH MANUFACTURED PRODUCTS

APPROACH

- . IMPROVE DOCUMENTATION OF EXISTING TECHNOLOGY
- . UPGRADE PLANT EQUIPMENT
- . INITIATE PROCESS TECHNOLOGY IMPROVEMENT PROGRAM
- . UPGRADE PRODUCT EVALUATION TEST PROCEDURES
- . IMPLEMENT AREA CHEMIST CONCEPT IN MANUFACTURING AREAS
- . ESTABLISH QUALITY COMMITTEE TO IMPROVE THE DIVISIONS ABILITY TO MANAGE QUALITY.
- . UPGRADE PRODUCT STANDARD SELECTION PROCESS

CONTINUOUS INORGANICS

ACCOMPLISHMENTS

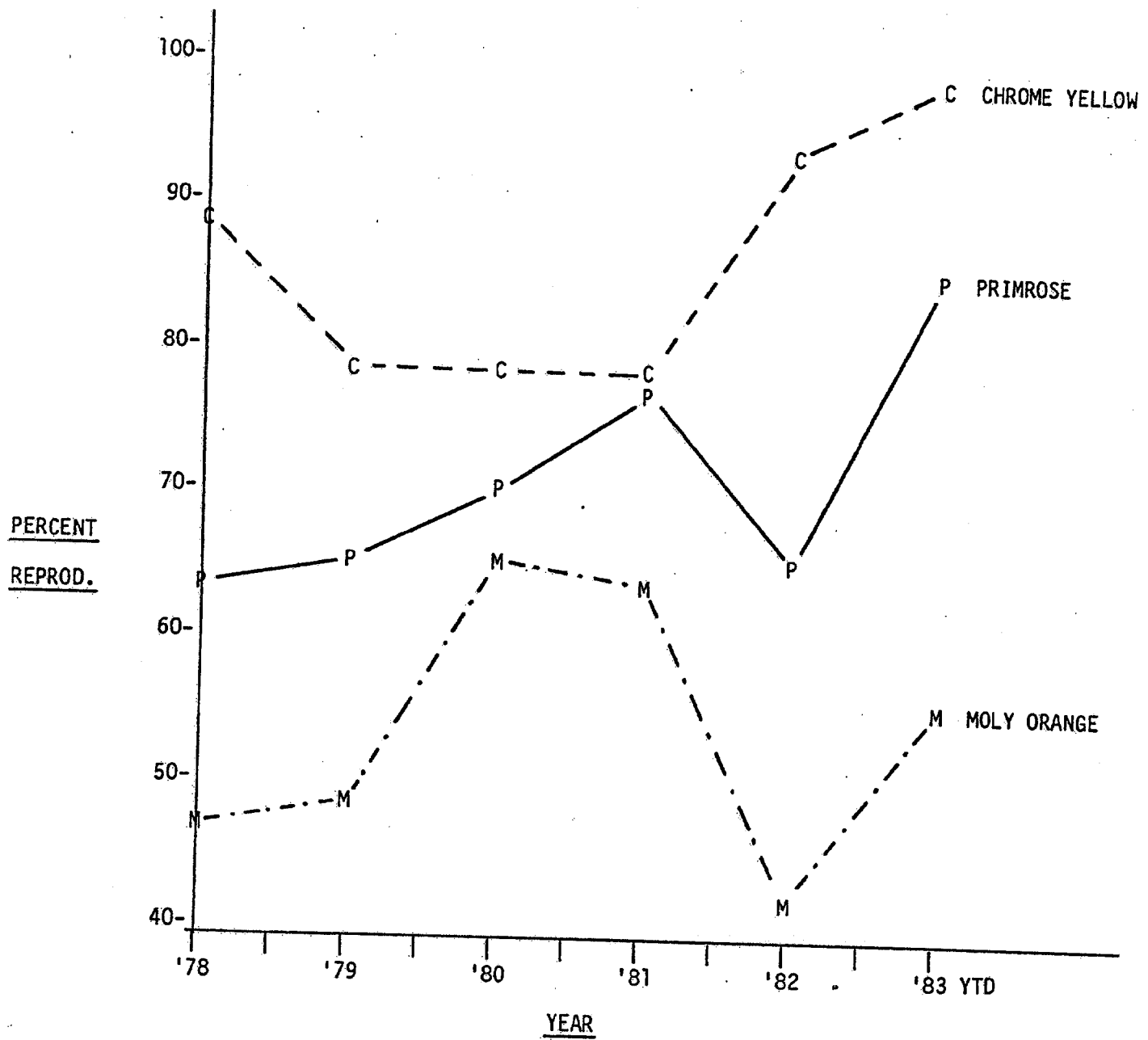
- . COMPLETED DOCUMENTATION OF EXISTING PROCESS TECHNOLOGY
- . INSTALLED BAUER MILL FOR IMPROVED PRODUCT & COMPONENT GRINDING
- . INSTALLED CONTROL SYSTEM TO IMPROVE LEAD NITRATE & SODIUM CHROMATE SOLUTION FLOWS TO THE CASCADE
- . INSTALLED CONTROL DEVICES (TEMPERATURE, LEVEL, FLOW) TO IMPROVE REGULATION OF CASCADE CONDITIONS
- . IMPLEMENTED EVALUATION OF PRODUCT BY INSTRUMENTAL COLOR MEASUREMENT TO IMPROVE SHIPMENT RELIABILITY

PROGRAMS

- . COMPLETE FLOW CONTROL INSTALLATION TO STABILIZE SOLUTION STANDARDIZATION
- . DEFINE PROCESS VARIABLES FOR MOLYBDATE ORANGE MANUFACTURE TO IMPROVE QUALITY REPRODUCIBILITY
- . INSTALL DURANT PACKER TO PROVIDE MORE RAPID AND ACCURATE PACKAGING OF PRODUCT WITH LESS DUST
- . CONTINUE PROCESS IMPROVEMENT PROGRAMS FOR PRIMROSE AND ZINC YELLOW.

CONTINUOUS INORGANICS

QUALITY REPRODUCIBILITY



BATCH INORGANICS

ACCOMPLISHMENTS

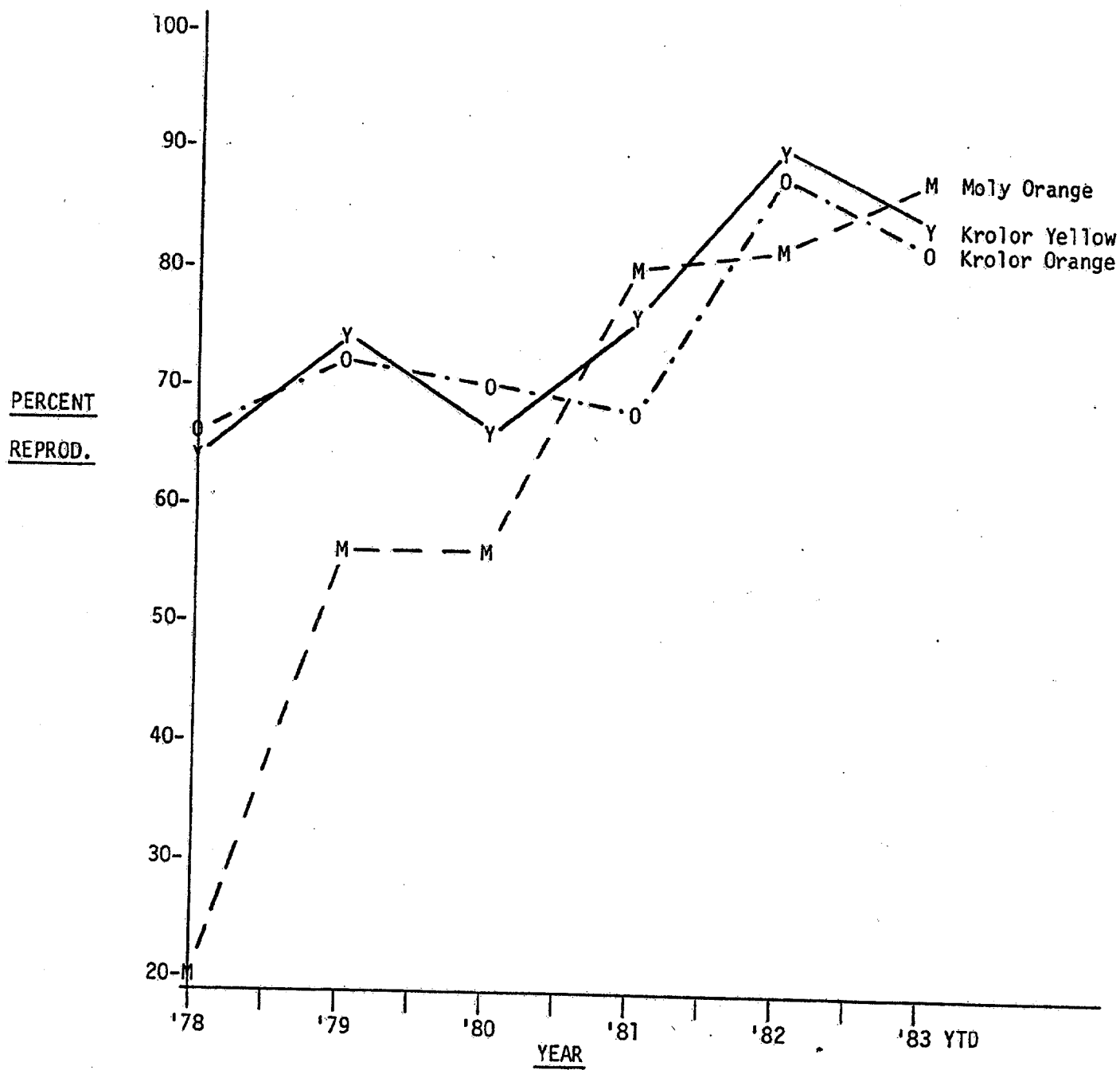
- . COMPLETED DOCUMENTATION OF EXISTING PROCESS TECHNOLOGY
- . IMPROVED THE SILICA ENCAPSULATION PROCESS FOR KROLOR
- . INSTALLED LEAD NITRATE, HCl AND CAUSTIC METERING SYSTEMS FOR MORE ACCURATE DELIVERY OF THESE REACTANTS
- . INSTALLED DURANT PACKER FOR ACCURATE, DUST FREE PACKOUT OF KROLOR YELLOW
- . INSTALLED AUTOMATIC TITRIMETER FOR CONTROL OF MOLYBDATE ORANGE MANUFACTURE

PROGRAMS

- . DEFINE PROCESS VARIABLES FOR MOLYBDATE ORANGE MANUFACTURE
- . INSTALL DURANT PACKER FOR KROLOR ORANGE PACKOUT
- . EVALUATE ROTARY FILTER AS POTENTIAL REPLACEMENT OF FILTER PRESSES FOR ISOLATING KROLOR
- . TRANSFER MANUFACTURE OF BATCH MOLYBDATES TO THE CONTINUOUS UNIT
- . IMPLEMENT PRODUCT SHIPMENT BASED ON INSTRUMENTAL COLOR MEASUREMENT FOR IMPROVED EVALUATION RELIABILITY

BATCH INORGANICS

QUALITY REPRODUCIBILITY



AZO ORGANICS

ACCOMPLISHMENTS

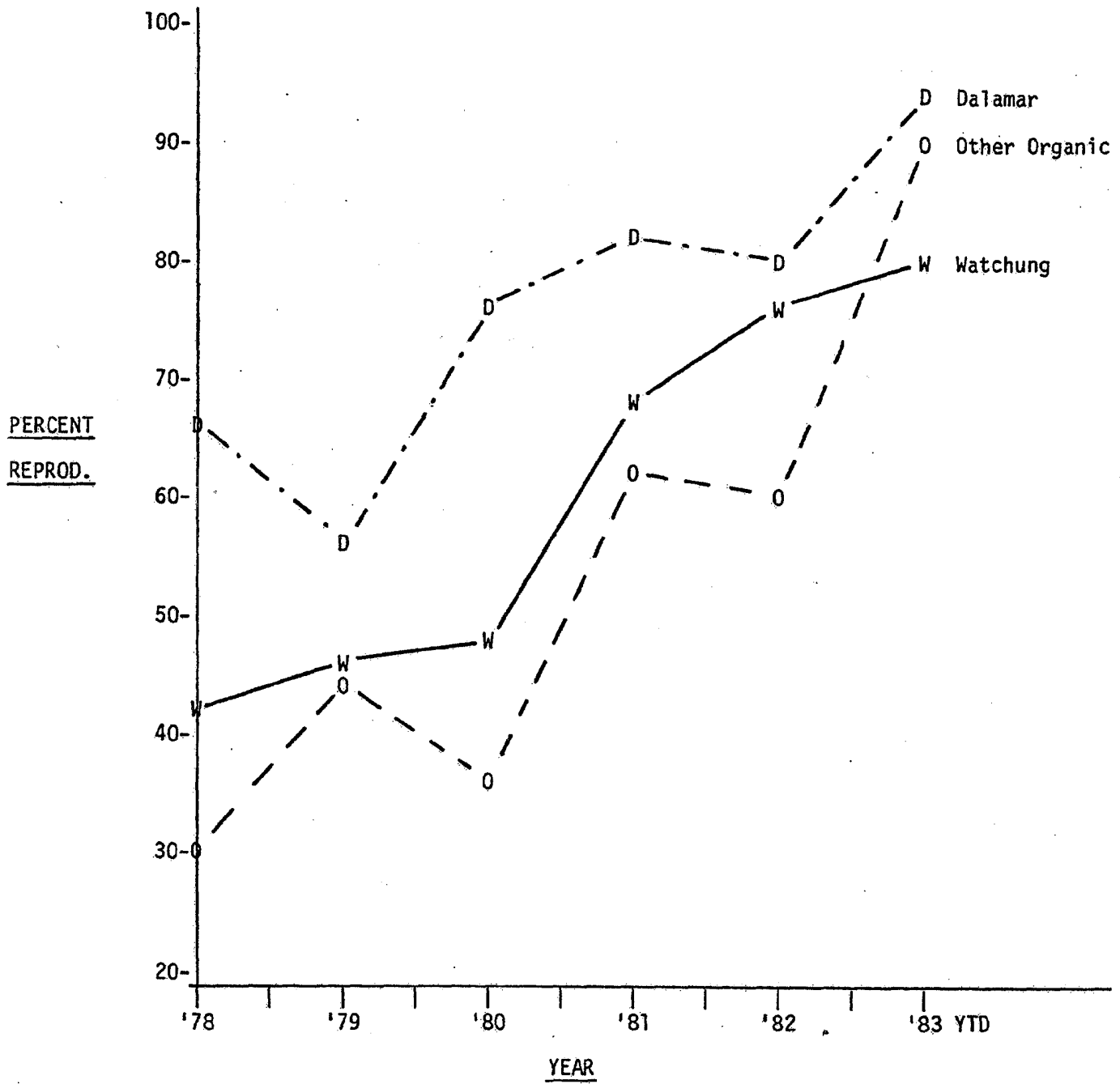
- COMPLETED DOCUMENTATION OF EXISTING PROCESS TECHNOLOGY
- COMPLETED PROCESS IMPROVEMENT FOR SEVERAL LARGE VOLUME CODES (RT-618, RT-761, YT-808) RESULTING IN IMPROVED QUALITY REPRODUCIBILITY
- INSTALLED THE MEMBRANE PRESS AND DELUMPER FOR BETTER ISOLATION AND DRYING OF ORGANIC PRESSCAKES
- INSTALLED THE SUPER MILL TO PROVIDE MANUFACTURING CAPABILITY FOR HIGH SOLIDS DISPERSIONS AT NEWARK

PROGRAMS

- CONTINUE PROCESS IMPROVEMENT EFFORT FOR OTHER PROBLEM ORGANIC CODES (YT-858, RT-698, RT-565)
- INSTALL SODIUM NITRITE METERING SYSTEM FOR IMPROVED STOICHIOMETRY IN DIAZOTIZATION PROCESS
- MODIFY ORGANIC FINISHING AREA GRINDERS & BLENDERS TO IMPROVE PRODUCTIVITY AND REDUCE CONTAMINATION
- IMPLEMENT PRODUCT SHIPMENT BASED ON INSTRUMENTAL COLOR MEASUREMENT

AZO ORGANICS

QUALITY REPRODUCIBILITY



QUINACRIDONE/CPC BLUE

ACCOMPLISHMENTS

- COMPLETED DOCUMENTATION OF EXISTING PROCESS TECHNOLOGY
- INITIATED COOPERATIVE MEETINGS BETWEEN NEWPORT/NEWARK TO COORDINATE MUTUAL QUALITY PROGRAMS
- INSTALLED TORIT DUST COLLECTORS IN ORGANIC FINISHING AREA TO REDUCE CROSS PRODUCT CONTAMINATION
- INTRODUCED SEVERAL NEW PRODUCTS (RT-859, RT-343)

PROGRAMS

- CONTINUE COOPERATIVE NEWPORT/NEWARK QUALITY MEETINGS
- MODIFY ORGANIC FINISHING AREA GRINDERS & BLENDERS
- IMPLEMENT MODIFIED PH ADJUSTMENT PROCEDURE FOR QA CODES CRITICAL IN OUTDOOR DURABILITY PERFORMANCE
- CONTINUE NEW PRODUCT INTRODUCTION
- IMPLEMENT INSTRUMENTAL PRODUCT RELEASE

QUINACRIDONE/CPC BLUE

QUALITY REPRODUCIBILITY

