

St. Louis - General Offices

May 11, 1970

W. B. Papageorge ✓

H. S. BERGEN  
J. E. SPRINGGATE

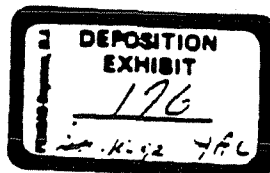
Attached hereto are copies of charts I used in the presentation with the CMC this morning.

The CMC gave its approval for us to implement the plan as outlined on the two sheets marked "PRESENT PLAN".

We are required to report to the CMC should we make any major deviation from these plans and we are also required to make a progress report probably around the 1st of August. Would you please go ahead and take the necessary action within your individual business groups and keep me advised of progress.

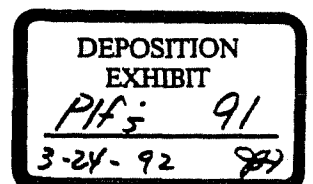
JOHN MASON

Att.



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COST OF RAPID PHASE-OUT - ALL CHLORINATED  
BIPHENYLS EXCEPT DIELECTRICS

1970

LOSS IN SALES - \$ 5.4 M  
LOSS IN GROSS PROFIT - \$ 2.6 M

IN ADDITION COGS WOULD INCREASE GIVING

TOTAL LOSS IN GROSS PROFIT OF - \$ 2.75 M.

1971

LOSS IN SALES - \$ 12 M  
TOTAL LOSS IN GROSS PROFIT - \$ 6.1 M

PLUS POSSIBLE WRITE-OFF OF SOME \$ 2.6 M

KRUMMICH AROCLOR FACILITIES.

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OBJECTIVE

TO MAINTAIN A PROFITABLE BUSINESS SERVING THE  
NEEDS OF FUNCTIONAL FLUIDS USERS AND THE  
CARBONLESS DUPLICATING PAPER INDUSTRY WHILST  
MINIMIZING THE ESCAPE OF NON-BIODEGRADABLE  
BIPHENYLS INTO THE ENVIRONMENT.

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ACTION TO ACHIEVE

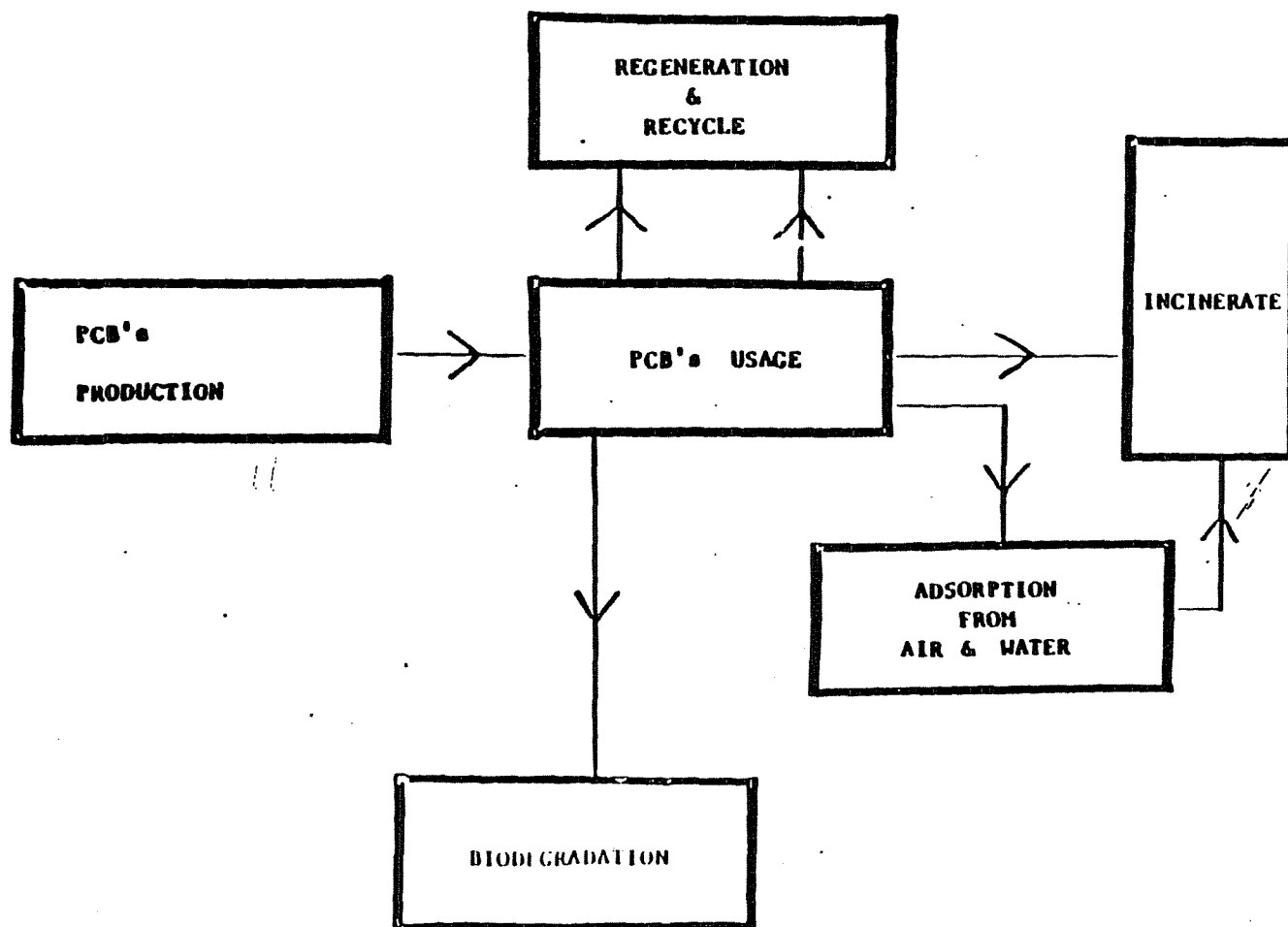
OBJECTIVES

- 1) MARKET NON-BIODEGRADABLE CHLORINATED BIPHENYLS  
ONLY FOR CLOSED SYSTEM APPLICATIONS WHERE CONTROL  
IS POSSIBLE.
- 2) PHASE OUT OF ALL NON-CONTROLLABLE APPLICATIONS  
REPLACING WITH BIODEGRADABLE CHLORINATED BIPHENYLS  
OR OTHER SATISFACTORY PRODUCTS.

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# THE CLOSED LOOP



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DO WE HAVE THE CAPABILITY TO CLOSE

THE LOOP ?

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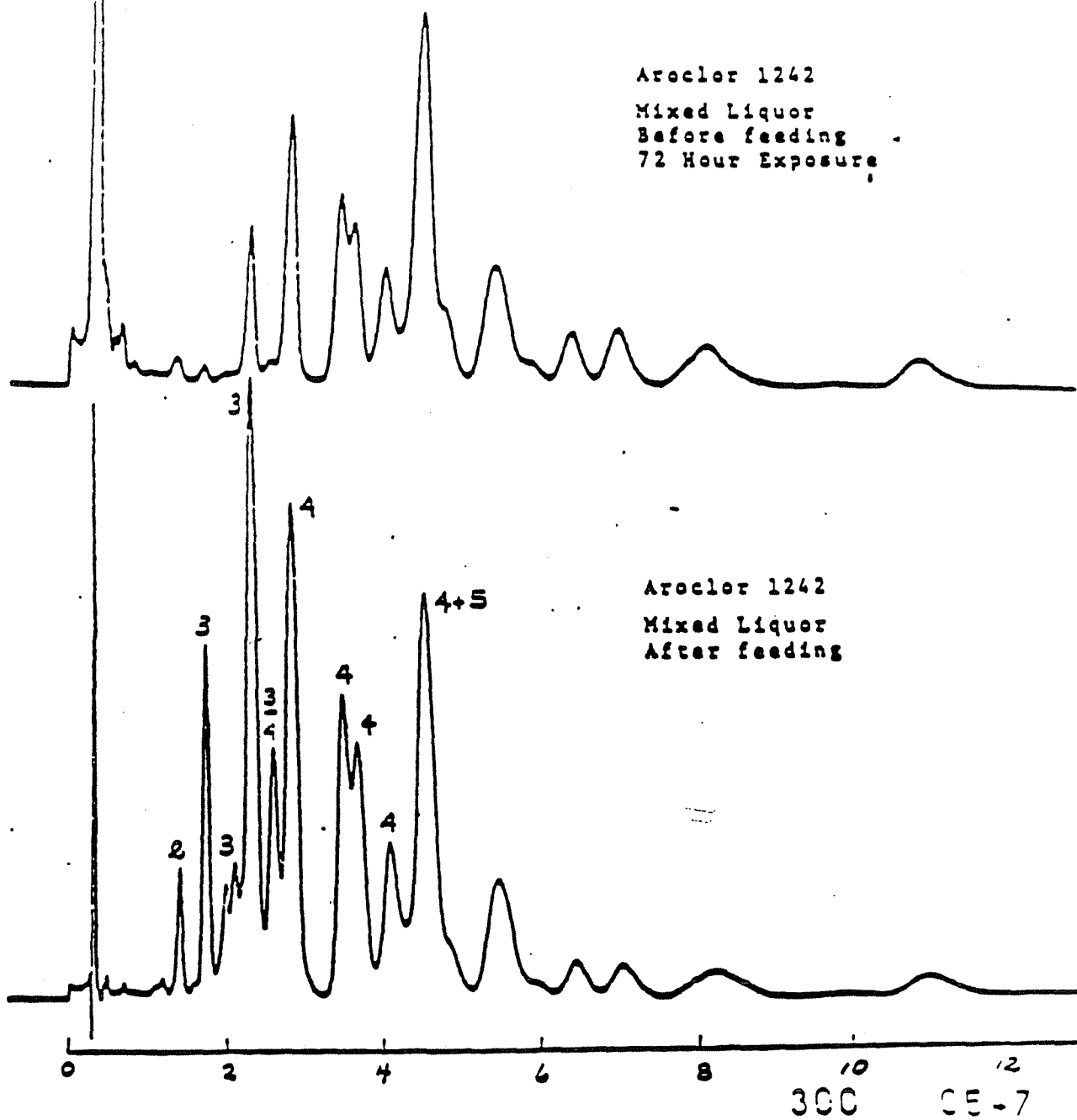
BIODEGRADATION

- 1) GOOD PROGRESS AT BOTH RUABON AND ST. LOUIS.
- 2) LOWER CHLORINATED ISOMERS RESPONDING WELL, BUT  
5 & 6 CHLORINE ISOMERS EITHER NOT RESPONDING  
OR VERY SLOW.
- 3) CRITICAL PRODUCT IS 1242, CONTAINS SOME 50 ISOMERS  
— GOOD RESPONSE ON 2, 3, & SOME 4 CHLORINE  
ISOMERS.
- 4) WORK IN HAND ON FRACTIONATED 1242 GOOD PROGRESS  
TO DATE.

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FIGURE 2

Semi-Continuous  
Activated Sludge  
Biodegradation



**FIGURE 3**

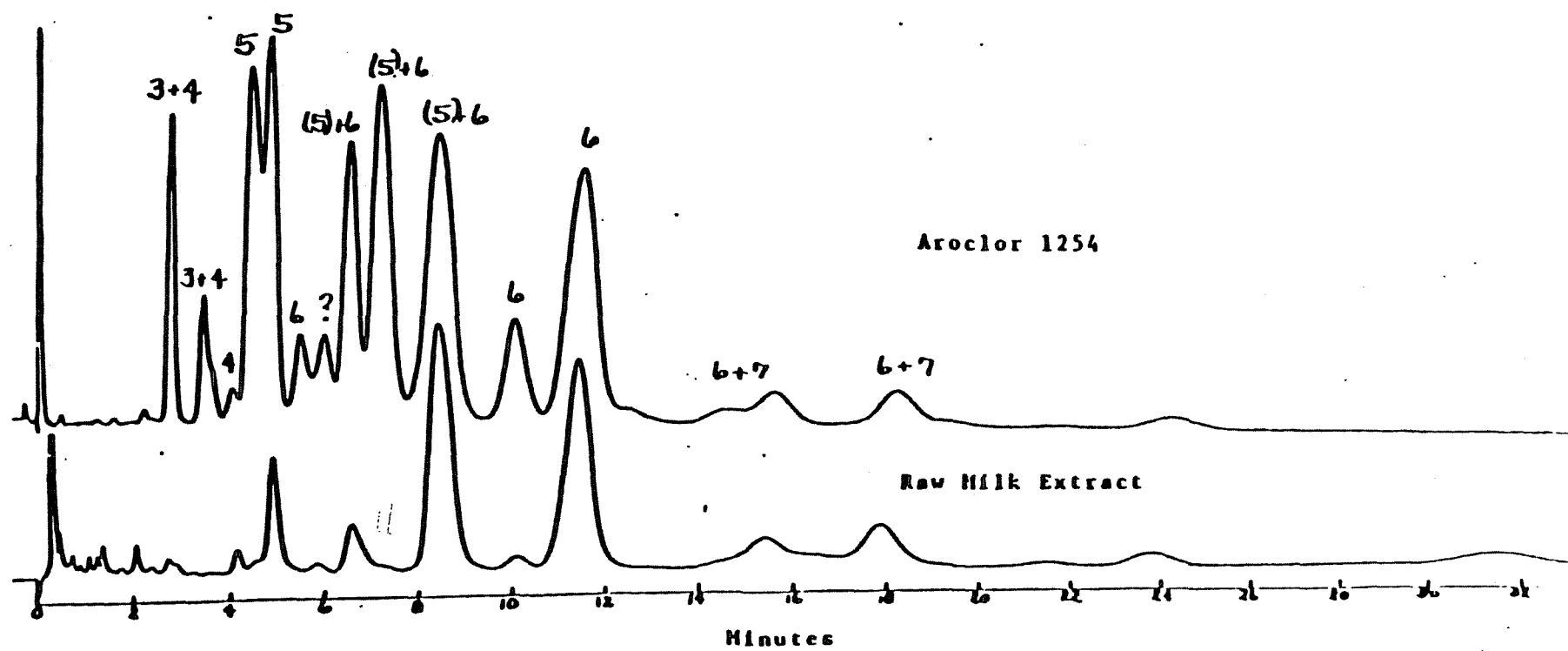
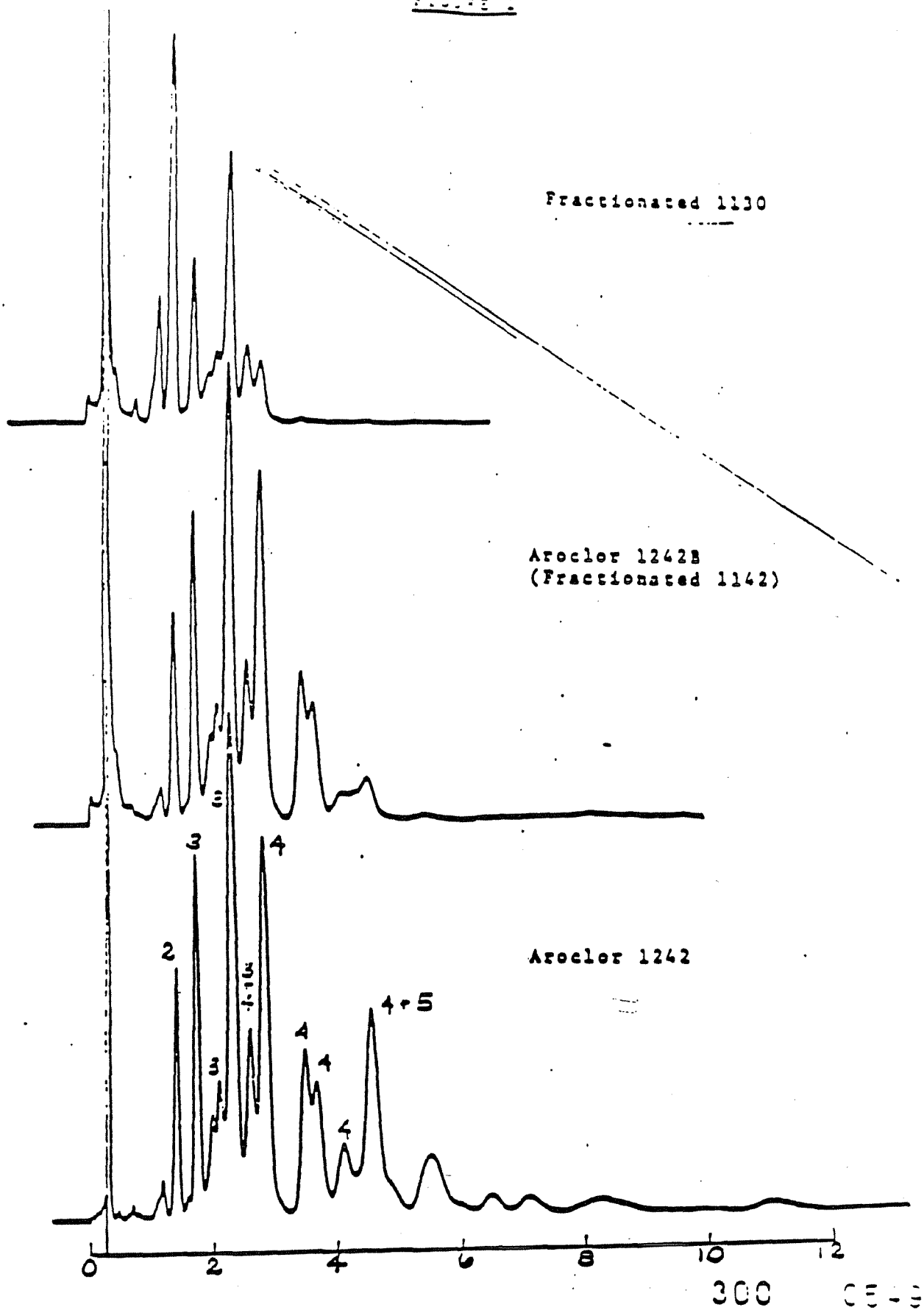


FIGURE 1



R E P L A C E M E N T      P R O D U C T S

- 1) 1242B SHOWS GOOD PROPERTIES AS CAPACITOR DIELECTRIC -  
NOW MAKING 500 GALS. AT DAYTON FOR CUSTOMER TRIALS. -  
ALSO WORKING ON 1230B.
- 2) GOOD PROGRESS ON PHOSPHATE ESTER REPLACEMENTS FOR  
HYDRAULIC FLUID APPLICATIONS. — TCP — CDP —  
TBP — NONYL PHENYL/CONYL PHENYL DIPHENYL PHOSPHATE.
- 3) HEAT TRANSFER FLUIDS — USING MAINLY ESTABLISHED  
PRODUCTS, E.G. HB-40 — EXAMINING POSSIBLE ENTRY  
INTO DIPHENYL OXIDE PRODUCTION EITHER OWN PROCESS OR  
LICENSING.

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TOXICITY

- 1) NO CHANGE SINCE LAST REPORT - HAVE DISCUSSED RESULTS WITH DR. BURGER, EXECUTIVE OFFICE OF THE PRESIDENT.
- 2) WE HAVE ANALYZED AROCLORS 1248 AND 1254 FOR OCTOCHLORO DIBENZO p-DIOXIN -- NONE FOUND.
- 3) CENTRAL INSTITUTE FOR NUTRITION AND FOOD RESEARCH, ZEIST, HOLLAND -- EXAMINED BAYER, PRODELAC AND MONSANTO CHLORINATED BIPHENYLS FOR DIBENZO FURANS -- NONE FOUND IN MONSANTO MATERIAL.

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INCINERATION

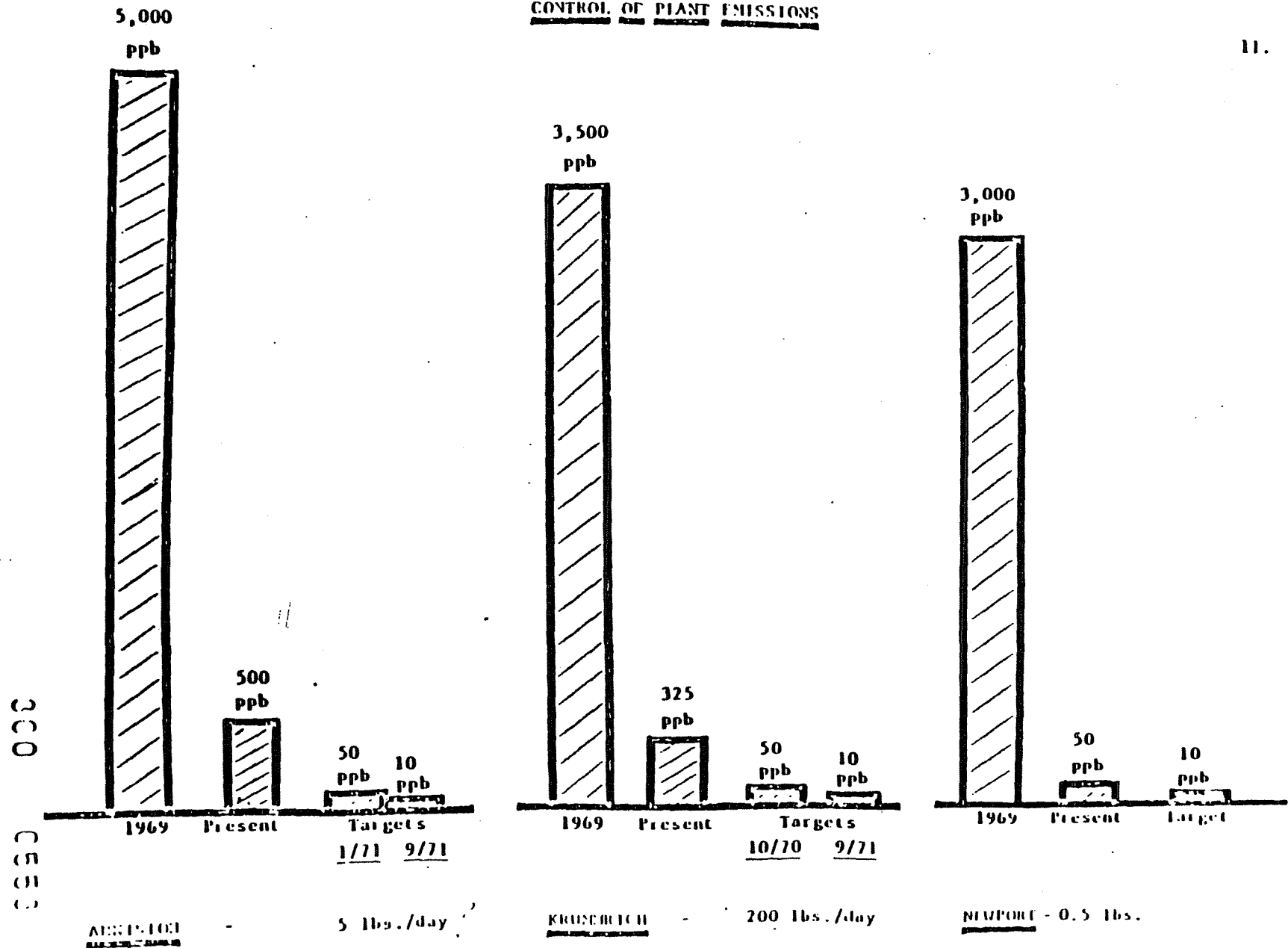
- 1) SUCCESSFUL TRIAL AT JOHN ZINC CO., TULSA. 1242,  
1260, 1254 DESTROYED AT 2000° F. -- OFF GAS HCl.  
ENGINEERING WORK NOW IN HAND TO BUILD SUITABLE  
INCINERATOR. ESTIMATED COST \$250,000 M.
- 2) INTEND TO CARRY OUT FURTHER TRIALS ON STILL  
BOTTOMS.
- 3) INCINERATOR PROBABLY LOCATED AT KRUM-RICH.

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# CONTROL OF PLANT EMISSIONS

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11.

CLOSING THE  
LOOP FOR INDIVIDUAL  
BUSINESSES.

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TRANSFORMER & CAPACITOR DIELECTRICS

- 1) RESPONSIBLE INDUSTRIES USING 1254 AND 1242.
- 2) FIRE RESISTANCE EXTREMELY IMPORTANT.
- 3) COLLECTION AND RETURN OF SPENT AND ARCED FLUID.
- 4) REGENERATION AND RECYCLE.
- 5) TRIALS PLANNED FOR 12428 AND 12308 IF SATISFACTORY.
- 6) LABELLING OF ASKAREL TRANSFORMERS.

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HEAT TRANSFER FLUIDS

- 1) EDUCATION OF USERS WHERE FIRE RESISTANCE IS OBLIGATORY  
-- MAJOR INDUSTRIAL CORPORATIONS -- E.G. GOODYEAR AND  
CHEMICAL COMPANIES.
- 2) PHASE OUT OF ALL FOOD APPLICATIONS -- LETTERS WILL BE  
SENT OUT MAY 15th -- NO SALES AFTER AUGUST 15th --  
WILL COLLECT AND DESTROY OLD FLUID.
- 3) INSTITUTION OF REGULAR COLLECTION REGENERATION OR  
INCINERATION SERVICE.
- 4) PHASING IN NEW PRODUCTS WHERE CONTROL NOT POSSIBLE.

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HYDRAULIC FLUIDS

- 1) RECOGNIZE THAT CONTROL OF SPILLAGE AND PUMP LEAKAGE  
MAKES THE USE OF NON-BIODEGRADABLE CHLORINATED  
BIPHENYLS UNDESIRABLE.
- 2) ALREADY REFORMULATED PYDRAUL 625, ACWG, 280 and F9  
— REPLACEMENT COMPLETE BY AUGUST 1
- 3) OTHER PRODUCTS IN INTERIM STAGES (E.G. PYDRAUL AC  
FORMULATION ON COMPRESSOR TEST AT JFQ).
- 4) AIM TO COMPLETE 90% PHASE-OUT BY DECEMBER, 1970.

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N. C. R.

- 1) U.K. HAS APPROVED HB-40, NOW PLACED REGULAR  
ORDERS — EXPECT COMPLETE PHASE-OUT BY  
1st JULY.
  
- 2) U.S. RUNNING TRIALS ON M.I.B.P., EXPECT DECISION  
22nd MAY — PRELIMINARY INTERIUM PRODUCTION  
OF 40 M POUNDS PER MONTH TARGETED FOR 30th AUGUST  
— PLANNING FULL SCALE PLANT 10 M LBS. PER  
ANNUM ON STREAM END JANUARY 1971 — ESTIMATED  
NFC \$1 - 1.2 M.

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17.

PLASTICIZER & MISCELLANEOUS APPLICATIONS

- 1) DISTRIBUTORS ALREADY ADVISED NO MORE SALES AFTER 30th AUGUST. (200 CUSTOMERS)
- 2) LETTERS TO 661 CUSTOMERS WILL BE SENT OUT 27th MAY ADVISING NO MORE SALES AFTER 30th AUGUST — DISPOSAL INSTRUCTIONS WILL BE GIVEN.
- 3) IN CONTACT WITH U.S.D.A. THROUGH AG DIVISION ON SILO PAINT PROBLEM.
- 4) BY 30th AUGUST ALL BUSINESS IN THIS AREA WILL BE PHASED OUT.

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P R E S E N T    P L A N

- 1) TERMINATE SALES OF ALL NON-BIODEGRADABLE CHLORINATED  
BIPHENYLS TO NON-CONTROLLABLE END USES.

COMPLETE - AUGUST 30th, 1970.

- 2) DISCONTINUE SALE OF AROCLOR 1242 TO NCR AND REPLACE  
WITH HB-40 IN U.K., AND MIBP IN U.S.A.

COMPLETE - U.K. -- JULY 1st, 1970

COMPLETE - U.S. -- JANUARY 30th, 1971

- 3) CLOSE THE LOOP ON HEAT TRANSFER APPLICATIONS WHERE  
F/R IS VITAL AND REPLACE WITH ALTERNATES IN OTHER  
CASES.

COMPLETE - DECEMBER 30th, 1970

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- 4) REPLACE ALL NON-BIODEGRADABLE CHLORINATED BIPHENYLS  
IN HYDRAULIC APPLICATIONS.

COMPLETE 20% - AUGUST 1st, 1970

" 40% - NOVEMBER 1st, 1970

" 100% - DECEMBER 30th, 1970

- 5) CLOSE THE LOOP ON ALL NON-BIODEGRADABLE CHLORINATED  
BIPHENYLS IN TRANSFORMER APPLICATIONS.

COMPLETE - AUGUST 1st, 1970

- 6) CLOSE THE LOOP ON CAPACITORS AS FAR AS POSSIBLE AND  
REPLACE 1242 WITH 1242B.

COMPLETE - DECEMBER 31st, 1970

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NEW CAPITAL EXPENDITURE

|                                              |                |
|----------------------------------------------|----------------|
| HD-40 EXPANSION - ARLINGTON                  | - \$ 275,000   |
| SANTOMAX 2 REFINING - ARLINGTON              | - \$ 250,000   |
| HD-40 CAPACITY - NEWPORT                     | - \$ 1,000,000 |
| HD-40 CAPACITY - ARLINGTON ?                 | - \$ 1,200,000 |
| <br>                                         |                |
| CUMYL/NONYL PHENYL DIPHENYL PHOSPHATE<br>JFQ | - \$ 575,000   |
| <br>                                         |                |
| INCINERATOR/RECLAIMING EQUIPMENT             | - \$ 255,000   |
| <hr/>                                        |                |
| TOTAL NEW FIXED CAPITAL                      | = \$ 3,555,000 |

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PROFITABILITY FORECAST

1971

EXISTING ARCOLOR  
BUSINESS

ARCOLORS &  
NEW PRODUCTS

|                  |           |           |
|------------------|-----------|-----------|
| SALES            | \$ 22.0 M | \$ 20.0 M |
| G. P.            | \$ 8.5 M  | \$ 8.0 M  |
| N.I.A.T.         | \$ 2.9 M  | \$ 2.7 M  |
| GROSS INVESTMENT | \$ 25.4 M | \$ 29.0 M |
| R.O.I.           | 11.5%     | 9.5%      |

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