12/8/71

1) TERMINATE IMMEDIATELY ALL SPOT SALES OF PCB FLUIDS FOR HEAT TRANSFER APPLICATIONS AND TERMINATE ALL CONTRACT SALES OF SUCH FLUIDS FOR HEAT TRANSFER APPLICATIONS AS SOON AS LEGALLY POSSIBLE.

1) Letter to be sent to all* current customers advising them of this decision and indicating services we can offer to assist them in changing to alternate fluids (draft attached).

*Decision must be taken on several customers who have other business connections with Monsanto.

2) Assemble and train team of six (6) engineers under leadership of Dr. Cumming Paton to visit and assist customers in implementing changeover.

3) Take appropriate actions in the handling and incineration of spent fluids, ensuring most efficient draining and drumming techniques.

4) All actions must be fully documented and recorded and approved by the Law Department.

0427198

EFFECT OF PCB PHASE OUT

HEAT TRANSFER

FINANCIAL

Loss of $1.3M per annum sales

Loss of $0.8M per annum gross profit

Disposal PCB fluid $1.0M (estimated)

CUSTOMER REACTION

- 685 customers using PCB heat transfer fluids
- 62 of these customers major companies and customers for other Monsanto products

EXAMPLES

GOODYEAR: Monsanto 1971 sales est. $21M
Uses PCB's in 150,000 gallon system in Applegrove, West Virginia--polyester plant. Reaction to immediate cut off will be violent and could have significant effect on tire cord and rubber chemical sales.

Recommend we allow Goodyear 3 months to changeover

BURLINGTON INDUSTRIES: Monsanto 1971 sales est. $25M
Has three systems: Altavista, Virginia; Cheraw, S.C.; Greensboro, N.C. All systems used to heat ovens for fabric finishing. Immediate cut off will interrupt production and result in violent reaction. Could result in reduced sales.

Recommend we allow 2 months changeover.

Don't we have to be prepared for longer periods?

PCB-ARCH0744460

GENERAL MOTORS: Monsanto 1971 sales est. $12M
Has six systems--uses include heating of plastic extruders and heating asphalt lines for battery production. Immediate cut off would interrupt production and result in strong reaction.

Recommend we allow 2 months changeover.

FIRESTONE: Monsanto 1971 sales est. $27M
Has three systems including press heating for tank treads and auto parts. Immediate cut off will result in violent reaction and will probably affect rubber chemical sales and textiles.

Recommend we allow 2 months changeover.

LEVER BROTHERS: Monsanto 1971 sales est. $30M
Three systems used in soap manufacture. Proposal already made to convert to non-PCB fluid--favorable reaction but no action to date. Immediate cut off will result in very strong reaction. Sales could be affected.

Recommend we allow 2 months changeover.

RECOMMENDATION

IN ALL CASES WHERE PCB HEAT TRANSFER SYSTEM IS PART OF PRODUCTION OPERATIONS WE SHOULD ALLOW A CHANGEOVER PERIOD TO AVOID SHUTDOWNS AND INTERRUPTION OF PRODUCTION.

0427200

PCB-ARCH0744461

2) SALE OF PCB FLUIDS FOR TRANSFORMER OR CAPACITOR USE WILL BE DEPENDENT UPON THE RECEIPT FROM CUSTOMERS OF DOCUMENTS ACCEPTABLE TO MONSANTO, HOLDING MONSANTO HARMLESS FROM LEGAL LIABILITY ASSOCIATED WITH THE USE OF PCB'S IN TRANSFORMERS AND CAPACITORS. AS A SERVICE TO SUCH CUSTOMERS MONSANTO WILL AGREE TO ACCEPT THE RETURN OF USED OR SURPLUS PCB FOR REUSE OR DESTRUCTION ACCORDING TO ITS USUAL FEE SCHEDULE.

1) Law Department drafting proposed "hold harmless" document acceptable to Monsanto.

2) H. S. Bergen/J. Mason to visit Westinghouse and General Electric at Vice President level for discussions on Monsanto requirements, indicating contents of probable "hold harmless" document.

3) Follow up visits will be made with Monsanto Law Department to finalize agreement.

4) Visit smaller customers with "hold harmless" letter and attempt to obtain agreement without Law Department visits.

5) General Electric is a $9 Million customer of Monsanto; Westinghouse is a $4 Million customer of Monsanto. Negotiations will require very careful handling.

0427201

PCB-ARCH0744462

EFFECTS OF THIS APPROACH

ACCEPTANCE WILL RESULT IN:

1972 SALES $ 8.7M

GROSS PROFIT $ 3.1M*

* Termination of polychlorinated terphenyl business will result in a $2.1M increase in manufacturing costs for Dielectric Aroclors; the gross profit figure quoted assumes we are successful in obtaining a 6¢ per pound price increase.

NON-ACCEPTANCE WILL RESULT IN:

1)	Complete loss of all Dielectric sales	$ 8.7M
2)	Complete loss of Biphenyl, HB-40, and associated product sales	$ 6.0M
	TOTAL	$14.7M
3)	Loss of gross profit from (1) & (2)	$ 5.6M
4)	Total write-off of all Biphenyl-Liquid & Solid Aroclor facilities U.S.A. & U.K.	GROSS..... $19.3M NET..... $ 8.7M

CUSTOMER REACTION

Major customers:

WESTINGHOUSE (Monsanto sales 1971 $4M est.), and GENERAL ELECTRIC (Monsanto sales 1971 $9M est.) will require careful handling and will resist strongly when asked to sign "hold harmless".

Smaller customers:

Will claim they are unable to sign and claim that G.E. and Westinghouse will have an unfair advantage.

PCB-ARCH0744463

3) IMMEDIATELY IMPLEMENT A PLAN TO TERMINATE ALL SALES OF POLYCHLORINATED TERPHENYLS; 75% OF SUCH SALES WILL BE TERMINATED BY MARCH 31, 1972. THE REMAINDER WILL BE TERMINATED NO LATER THAN JUNE 30, 1972.

A) PLASTICIZERS

Advise all customers by letter December 1, 1971, that we are phasing out of polychlorinated terphenyls and that no sales will be made after March 31, 1972. Orders for material for the period December 1, 1971, through March 31, 1972, must not exceed 1/3rd of the total quantity purchased during the preceeding 12-month period.

Many polychlorinated terphenyl customers are major customers for other plasticizers and will need careful handling by Marketing.

B) HYDRAULIC FLUIDS

1) Advise customers individually that we are removing polychlorinated terphenyls from Pydraul formulations by June 30, 1972.

2) As rapidly as possible supply all refill and top-up orders with Phosphate/Oil blends (timing dependent on NC Phosphate Ester availability--project anticipates need for $500M NC).

3) Assist customers in changeover and keep the lowest possible profile to avoid further undesirable publicity.

0427203

PCB-ARCH0744464

EFFECT OF POLYCHLORINATED TERPHENYL PHASE OUT

FINANCIAL

PLASTICIZERS

Loss of $3.4M sales
Loss of $1.0M gross profit

HYDRAULIC FLUIDS

Loss of $5.5M sales
Loss of $1.7M gross profit

Subject to an orderly phase out we should regain 60% of this business with phosphate ester/oil replacement products, resulting in:

1973 sales	$3.0M
1973 gross profit	$1.0M

CUSTOMER REACTION

PLASTICIZERS - Emotional, but with adequate turnover time should be able to hold other plasticizer business.

HYDRAULIC FLUIDS - Emotional, changeover time is vital--otherwise we will be unable to retain business.

EXAMPLES

Texas Eastern Gas Transmission Co. uses Turbinol 153 in 18 gas turbines, supplying major part of East Coast natural gas needs. Turbines were run in on Turbinol 153 and have used product for 14 years. Immediate withdrawal of product would be disastrous and could expose Monsanto to significant law suit.

Major steel companies such as Armco, Inland, Republic use Pydraul 150 in continuous casting plants (5,000-20,000 gallon systems). Change to alternate fluids will take 3-6 months. Immediate withdrawal could idle facilities with investments of $50-$100M.

0427204

PCB-ARCH0744465

POLYCHLORINATED BIPHENYLS, POLYCHLORINATED TERPHENYLS

(PCB's, PCT's)

MONSANTO NAME	MAJOR USE	PRODUCT COMPOSITION			
		PCB	PCT	PHOSPHATE ESTER	OTHER
	PLASTICIZER				
Aroclor 1221E	Plasticizer	X			
Aroclor 5060	Plasticizer		X		
Aroclor 5442	Plasticizer		X		
Aroclor 5460	Plasticizer		X		
Aroclor 5432	Plasticizer		X		
Aroclor 6062	Plasticizer		X		
Aroclor 6090	Plasticizer		X		
Aroclor 6070	Plasticizer		X		
Aroclor 6050	Plasticizer		X		
Aroclor 6040	Plasticizer		X		
Aroclor 6037	Seal Swell Agent		X		
Santicizer 311	Plasticizer		X	X	
Montar 5	Plasticizer		X		X
Santicizer 301	Plasticizer		X	X	X
Santicizer 327	Plasticizer		X	X	X
Santicizer 335	Plasticizer		X		X
Santicizer 336	Plasticizer		X		X
Santicizer 337	Plasticizer		X		X
Santicizer MXP101	Plasticizer		X	X	
	DIELECTRICS				
Capacitor 21	Capacitors	X			
Aroclor 1016	Capacitors	X*			
Aroclor 1232	Capacitors	X			
Aroclor 1242	Capacitors	X			
Aroclor 1254	Capacitors	X			
Inerteen PPO	Transformers	X			
Inerteen 70-30	Transformers	X			
Inerteen 100-42	Transformers	X			
Inerteen 54201CM	Transformers	X			
Pyranol A13B3B	Transformers	X			
Aroclor 1254	Transformers	X			
Aroclor 1260	Transformers	X			
	HEAT TRANSFER				
Therminol FR-1	Heat Transfer	X			
Therminol FR-0	Heat Transfer	X			
Therminol FR-Lo Temp	Heat Transfer	X			
Therminol 55	Heat Transfer				X
Therminol 66	Heat Transfer				X

0427205

*Will be major product in use in 1972. More biodegradable than Aroclor 1242/1254.

(G.E. trademark is Pyranol; Westinghouse is Inerteen; Askarel is generic term for all transformer Aroclors.)

PCB-ARCH0744466

MONSANTO NAME	MAJOR USE	PRODUCT COMPOSITION PCB	PCT	PHOSPHATE ESTER	OTHER
	INDUSTRIAL FLUIDS				
Santovac 1	Diffusion Pumps	X			
Santovac 2	Diffusion Pumps	X			
Turbinol 153	Turbines	X		X	
Pydraul F9A	Hydraulics		X	X	
Pydraul 150A	Hydraulics		X	X	X
Pydraul 625A	Air Compressors		X	X	
Pydraul ACA	Air Compressors		X	X	
Pydraul ACA - Wintergrade 28	Air Compressors		X	X	
Pydraul A-200B	Hydraulics		X	X	
Pydraul 312A	Hydraulics		X	X	X
Pydraul 135A	Hydraulics		X	X	X
Pydraul 230A	Hydraulics		X	X	X
Pydraul 540B	Hydraulics		X	X	X
MCS-1004	Cutting Fluids		X		
MCS-1129	Fire Resistance Additive		X		X

0427206

PCB-ARCH0744467