bcc: A. J. Koenig
[redacted]

Monsanto

SPECIALTY CHEMICALS DIVISION

MONSANTO INDUSTRIAL CHEMICALS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

August 29, 1977

Ms. Naomi L. Jaffe
Regulations Group (WH-557)
Office of Toxic Substances
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Re: 1976 OECD PCB Information Exchange Report

Dear Ms. Jaffe:

Attached are the pages as completed for the subject report. Some comment is in order.

Page 9 - no imports

15 - only production and export numbers shown, we had no imports. You indicated on phone to A.J. Koenig that you had import numbers and would complete last column.

17 - we have no information regarding consumption in large vs. small capacitors. Domestic, U.S.A. sales and U.S. Export sales are reported as apparent consumption numbers. Apparent consumption numbers on p. 15 will be different from our production numbers because ± beginning and ending inventory positions.

23 - We have made no commercial sales of chemicals as replacements for PCBs in the dielectric fluids application.

Sincerely,

J. Coleman Weber
Manager
Product Acceptability

JCW:rd
Attachments

DSW 012975

STLCOPCB4002899

OCDE
ORGANISATION DE COOPÉRATION ET
DE DÉVELOPPEMENT ÉCONOMIQUES

OECD
ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

DIRECTION DE L'ENVIRONNEMENT
ENVIRONMENT DIRECTORATE

Our Ref.: ENV/Chem/77.478

Your Ref.:

2, rue André-Pascal, 75775 Paris Cedex 16
Téléphone: 524 82-00
Télégrammes: DEVELOPECONOMIE
Télex: 620.160 OCDE PARIS

Paris, 11th July, 1977

CHEMICALS GROUP

Dear Sir,

Following the Second Consultation on PCBs held at the OECD in June 1976, the Council agreed to extend until 1980 the annual information exchange called for in Section III of its Decision on Protection of the Environment by Control of Polychlorinated Biphenyls [C(73)1 (Final)]. In extending this procedure, the Council also agreed that the information required should be as complete as possible and available at the required date [C/M(76)15 Part I, para. 162(c)].

As you know, this information exchange has been carried out during the past three consecutive years (for data concerning 1973-1975) by means of a questionnaire designed to assist Member countries in reporting statistical data and other information on regulatory measures relevant to PCBs. A copy of this questionnaire is enclosed for use in providing information for the calendar year 1976.

It would be most appreciated if this form, completed in as much detail as possible, were returned by 20 September 1977 to:

O.E.C.D. / Env
2, rue André Pascal
75775 Paris Cedex 16

Thank you in advance for your continued assistance.

Yours faithfully,

Mariatta Idman

U.S. Delegation to the OECD

c.c. Mr. L. Miller
Mr. I.E. Wallen

DSW 012976

ORGANISATION FOR ECONOMIC
COOPERATION AND DEVELOPMENT

RESTRICTED

Paris, 11th July 1977

Environment Directorate

ENV/Chem/77.7

Or. Engl.

Scale D

Decision on Protection of the Environment
by Control of Polychlorinated Biphenyls

INFORMATION EXCHANGE

The attached forms are provided by the Environment Directorate of the OECD for the purpose of facilitating the exchange of information called for under the Council Decision on Protection of the Environment by Control of Polychlorinated Biphenyls [C(73)1 (Final)].

The forms, completed in as much detail as possible, should be returned to:

O.E.C.D. / ENV
2, rue André Pascal
75775 Paris Cedex 16

not later than 20th September, 1977.

Please note that the statistical data requested in Part I of the Schedule should refer to a specific calendar year.

All other information should be as recent as possible.

DSW 012977

STLCOPCB4002901

INFORMATION EXCHANGE CONCERNING MEASURES ON THE PROTECTION OF THE ENVIRONMENT BY CONTROL OF POLYCHLORINATED BIPHENYLS (PCBs)

Reporting Country :

U.S.A.

The statistical information refers to the year :

1 January to 31 December 19.76

DSW 012978

STLCOPCB4002902

INTRODUCTION TO THE INFORMATION EXCHANGE SCHEDULE

A. General Notes

The Information Exchange Schedule consists of four Parts :

Part I - Production, Trade and Use of PCBs;

II - Disposal of Used PCBs;

III - Chemicals Introduced into Commerce as Replacements for PCBs;

IV - General Information on PCB Monitoring and Control.

All quantities of PCBs entered in the tabulations of the schedule should be in metric tons :

1 metric ton = 1000 kilograms = 1.102 short tons = 0.984 long tons. = 2204 lbs

B. The Specification of PCBs by Type

A "PCB" is usually a mixture in at least one of the following senses :

i) Types of PCBs Manufactured. The industrial chemical processes for manufacturing PCBs commonly result in a "PCB" which is a mixture of chlorinated biphenyl molecules in which the extent of chlorination is different. The composition of such a PCB is usually specified by the mean weight percent of chlorine it contains;

ii) Types of PCBs in Commerce. Some PCBs are introduced into commerce in the form in which they are manufactured; others are introduced into commerce as blends produced by mixing chlorinated biphenyl and chlorinated triphenyl components. In the latter case the specification of the PCB is usually done by identifying the ratio of biphenyl to triphenyl components, and the overall mean weight percent of chlorine.

The composition of a "PCB" is an important factor in determining its environmental toxicity.

../..

STLCOPCB4002903

INTRODUCTION (CONT'D)

B. The Specification of PCBs by Type (contd)

In the following tabulation, an estimate of composition (as just defined) is used to specify each Type of PCB. The specifications given in this tabulation should be those used wherever possible in all subsequent tabulations of this Schedule. No attempt is made in the Schedule to specify in greater detail the content of polychlorinated biphenyl molecules in a PCB.

Type of PCB	Percentage Composition of Chlorinated n-Phenyls		Mean Weight Percent of Chlorine (%)
	Biphenyl (%)	Triphenyl (%)	
Aroclor 1242	100		42.0
" 1254	100		54.0
" 1016	100		41.3

DSW 012980

PART I - PRODUCTION, TRADE AND USE OF PCBs

1. Apparent Consumption of PCBs by Type

Apparent consumption is defined as equal to production plus imports minus exports. The following tabulations refer to PCBs produced nationally or traded internationally, and exclude PCBs contained in traded goods eg. PCB impregnated paper, PCBs in paints, etc..

The tabulations are designed for the reporting of statistics by PCB Type (as defined in the Introduction to this Schedule), however some difficulty may be experienced for the present in providing such statistics covering trade. Export statistics by PCB Type may not be immediately available in official statistical series (but they should in principle be available from the industry), and the relevant import statistics may also be difficult to achieve. To make allowance for these possibilities, the present Schedule contains provision for the reporting of Import and Export statistic by other means than by PCB Type (See Sections 1.2, 1.3 and 1.4).

1.1 Production of PCBs by Type

Type of PCB	Production[a] (metric tons)
AROCLOR 1242	1965
AROCLOR 1254	1829
AROCLOR 1016	9629
TOTAL	13423

Note a : Secondary production (recovery) of PCBs is assumed for the purposes of this Schedule to be subsumed in the figure recorded here.

DSW 012981

STLCOPCB4002906

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PART I (CONT'D)

1. Apparent Consumption of PCBs by Type (contd)

1.2 Import of PCBs

Statistics should be entered in this section by Type (as defined in the Introduction). Alternative categories of imports may be used, provided they are described in the tabulation of Section 1.4. All quantities should be in metric tons.

PCB by Type (or other category by code) / Country of origin			Total imports (by country)
OECD Member country : Not Applicable		(None)	
Total OECD countries Non OECD countries			
Total Imports by Type (or other category)			

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STLCOPCB4002907

PART I (CONT'D)

1. Apparent Consumption of PCBs by Type (contd)

1.3 Export of PCBs

Statistics should be entered in this section by Type (as defined in the Introduction). Alternative categories of exports may be used, provided they are described in the tabulation of Section 1.4. All quantities should be in metric tons.

PCB by Type (or other category by code) / Country of destination	Aroclor 1016	Aroclor 1254	Aroclor 1242		Total Exports (by country)
OECD Member country :					
CANADA	564	572	-		1136
Total OECD Countries	564	572	-		1136
Non OECD Countries	777	91	148		1016
Total Exports by type (or other category)	1341	663	148		2152

1.4 Import and Export Categories Including PCBs

To be completed only if the import and export figures given in sections 1.2 and 1.3 respectively are not by PCB Type (as defined in the Introduction).

Category Description	Category Code
Import Categories :	
NOT APPLICABLE	
Export Categories :	

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PART I (CONT'D)

1. Apparent Consumption of PCBs by Type (contd)

1.5 Estimation of Apparent Consumption of PCBs[b,c]

PCB Type	Production (from 1.1) ADD	Import (from 1.2) ADD	Export (from 1.3) SUBTRACT	Apparent Consumption (by PCB type) EQUALS
AROCLOR 1242	1965	-	148	
AROCLOR 1254	1829	-	663	
AROCLOR 1016	9629	-	1341	
Total PCBs (by sector)	13423	-	2152	

Note b : All figures to be in metric tons.

c : Depending on the nature of the presently available statistics for imports and exports, it may not be possible to complete this tabulation in detail (eg. import categories of Section 1.4 may contain chemicals other than PCBs, or used PCBs imported for regeneration). In such cases, estimates of import and export figures, either for PCBs by Type, or solely for Total PCBs (by Sector) should be made, and an explanatory note appended to this Schedule as an additional page.

NUMBER OF PAGES APPENDED UNDER PART I, SECTION 1.5 [1]

STLCOPCB4002909

PART I (CONT'D)

2. Consumption of PCBs in Manufactured Products[d]

Product \ PCB Type	Aroclor 1016	Aroclor 1254	Aroclor 1242	Total
Transformers				
Capacitors (large)[e]				
Capacitors (small)[e]				
Heat Transfer Systems				
Hydraulic Equipment				
Vacuum Pumps				
Lubricating, Cutting Oils				
Plasticisers : copying paper, paints, inks, etc.				
Other (specify) :				
Dom.				
Transformer	-	1354	1728	3082
Capacitor	8305	-	-	8305
U.S. Export				
Transformer	-	663	148	811
Capacitor	1341	-	-	1341
Total Use (by Type)	9646	2017	1876	13539

Note d : Units should be metric tons

e : The definition of this distinction between small and large capacitors appears at present to be incompletely resolved. Respondents to this Schedule are therefore requested to append additional pages explaining their own operative definition, together with technical information as appropriate.

DSW 012986

NUMBER OF PAGES APPENDED UNDER PART I, SECTION 2 [1]

STLCOPCB4002910

PART II - DISPOSAL OF USED OR CONTAMINATED PCBs

Used or contaminated PCBs require collection from the point of usage, and efficient disposal.

Used or contaminated liquid PCBs can be treated to regenerate useable PCBs, or destroyed by high temperature incineration. (Landfilling is not considered a satisfactory method of disposal for such materials). Software solids such as PCB-soaked cartons, absorbing earths etc., can be disposed of by high temperature incineration, or by closely regulated scientific landfilling. Hardware solids, such as transformer tanks, may be disposed of by scientific landfilling following solvent extraction of the PCBs.

It is considered that only for PCB-containing liquids is it possible to collect numerical data on regeneration and disposal practices at the present time (Section 2). In order to provide general guidance in this area, countries should provide a list of companies and authorities providing various types of PCB collection and disposal facilities (Section 1).

1. PCB Collection and Disposal Facilities

PCB collection and disposal facilities are provided by the following companies and/or authorities. State whether these are under the supervision of national authorities. (Take additional pages if necessary).

NUMBER OF PAGES APPENDED UNDER PART II ☐

DSW 012987

DSW 012988

STLCOPCB4002912

2. Treatment of Used and Contaminated PCB-Containing Liquids

Treatment Plant Identification	Liquid Processed (metric tons)	PCB Recovered (metric tons)	Est'd PCBs Destroyed (metric tons)	For Plants Destructing PCBs[f]			
				Combustion Temp.(°C)	Residence Time (sec.)	Stack Gas Concn	
						PCBs (ug/m^3)	HCl (ug/m^3)
Monsanto Co. Sauget, Ill. USA	1918	0	1822	1315°C -1425°C	1-2 Sec	Not Detect-able	1500
Totals	1918	0	1822				

Note f : It is important that environmental contamination does not follow from the incomplete destruction of the PCBs. For complete destruction, a residence time of at least 2 seconds at a gas temperature of 1000°C (or equivalent conditions) is considered necessary. Stack gas monitoring for PCBs and HCl (a PCB breakdown product) measures the environmental efficiency of the plant operating conditions.

PART III - CHEMICALS INTRODUCED INTO COMMERCE AS REPLACEMENTS FOR PCBs

The class of chemicals referred to in Part III is understood to include chemicals either newly synthesised or previously known, put to what might reasonably be considered - from the point of view of volume, novelty or other measure - as an essentially "new" use, as a PCB replacement. This class would be intended to include for example, newly derived PCB formulations and polybrominated biphenyls, but to exclude such products as mineral oils.

It is necessary to assess the impact on the environment of chemicals introduced as PCB replacements. This involves a knowledge of the identity of the chemical, the nature and extent of its use as a PCB replacement, and of the currently available information on its environmental toxicity. Information under these three headings should be provided for each PCB replacement, on separate sheets of paper, and appended to this Schedule. The following notes are given as guidance.

1. Identification of Replacement Chemical.

Information such as would allow the physical and chemical identification of the replacement product, should be given in as complete a form as respect for the confidentiality of proprietary information will allow. Reference to Patents etc.. may be advantageous.

2. Nature and Extent of Use of the Replacement Chemical

Some details of the use to which the chemical is being put as a PCB replacement, and the extent of use, should be given.

3. Toxicity and Environmental Hazard

Some details should be given of the state of knowledge of the toxicity and environmental hazard of the replacement product or its major constituents and potentially hazardous impurities. This information may take the form of unpublished work (details of which may be submitted herewith), or published work (copies of which may be appended, or referenced by author, year, title of work, journal name, volume and page numbers).

DSW 012989

NUMBER OF PAGES (EXCLUDING JOURNAL REPRINTS ETC.) APPENDED UNDER PART III

PART IV - GENERAL INFORMATION ON PCB MONITORING AND CONTROL

Responding countries may wish to note any activities undertaken towards or results achieved in, the monitoring or control of PCBs in their country, and which might be of interest to other Member countries. Such activities might be in the fields of law, administration or research. Details may be given below, and further pages can be added as necessary. Copies of important legislative acts and suchlike documents may be submitted also.

NUMBER OF PAGES (EXCLUDING DOCUMENTS ETC. APPENDED UNDER PART IV)

STLCOPCB4002914