

PAPAGEORGE READING FILE

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DECEMBER 1972

DSW 172401

STLCOPCB4047025

December 22, 1972

Dr. A. S. Y. Chau
Canada Centre for Inland Waters
Water Quality Laboratory and Network
(Ontario Region)
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario
Canada

Dear Dr. Chau:

Your letter dated November 21 addressed to Mr. J. T. Garrett was forwarded to me for response.

I have enclosed a copy of Monsanto's analytical methodology for polychlorinated biphenyls (PCBs) which describes in detail Monsanto's approach to detection and quantification.

My comments relative to your specific questions follow:

1. See Quantitation section, page 9 of the methodology.

Note: When dealing with mixtures of PCBs containing two or more of the PCB products, the chromatogram is divided up into areas which represent the dominant components present in each and more than one calibration curve is run. See attached chromatogram.

2. In most cases a total PCB level is reported and the production grade PCB used as a standard noted, i.e., "xyz ppm PCBs calculated as Aroclor 1242" etc. In cases where the electron capture chromatogram is not similar to any commercial product the word "calculated" is replaced by "estimated".
3. Individual standards are always employed for quantitation.

DSW 172402

86-9

STLCOPCB4047026

4. In order to establish the precision and accuracy of the method we use to estimate the PCB content of environmental samples, a round robin testing experiment was set up. Samples were prepared by spiking water with production grade PCBs at the level of about 500 ppb. Individual preparations included blanks (no PCBs), Aroclor 1242 only, Aroclor 1254 only, Aroclor 1260 only, all 50-50 two component mixtures and a 1/3, 1/3, 1/3 preparation containing all three Aroclors. Six samples of each mixture were prepared, and tested by two analytical laboratories. Each laboratory used equivalent sample work up procedures (all steps as outlined in the attached Method 71-35). Laboratory A quantitated on the basis of peak height. Laboratory B quantitated on the basis of peak area.

Each result, expressed in ppb of the Aroclor detected was converted to % of the total PCBs added. Analysis of variance was run on all data taken together and each lab independently. Two obviously defective samples were deleted from the data.

Conclusions:

- a. The 95% confidence limits for individual results were as follows:

Either Lab	87.5 + 55.2%
Laboratory A	81.3 ± 46.4%
Laboratory B	93.7 ± 19.2%

- b. The repeat ability for the individual labs, based on repeat tests of samples having identical prepared compositions is as follows:

Laboratory A	+ 42.0%
Laboratory B	± 11.6%

- c. In general, Laboratory B comes closer to properly identifying the Aroclor present, with one exception. They found Aroclor 1254 in a mixture of Aroclor 1242 and Aroclor 1260. (See following table)

Dr. A. S. Y. Chau

- 3 -

December 22, 1972

<u>Mixture</u>	<u>Present</u>	<u>Laboratory A</u>	<u>Laboratory B</u>
1	1242	1242, (1254)	1242
2	1242, 1254	1242, (1254), (1260)	1242, 1254
3	1242, 1254, 1260	1242, (), 1260	1242, 1254, 1260
4	1254	1254, (1260)	1254
5	1242, 1260	1242, 1260	1242, (1254), 1260
6	1260	(1248), 1260	1260
7	1254, 1260	(1248), 1254, 1260	1254, 1260

Numbers in parenthesis indicate misidentifications.

I hope you find this information useful. If I can be of further service, please let me know.

Very truly yours,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosure

DSW 172404

STLCOPCB4047028

W. B. Papageorge - World Headquarters

December 22, 1972

H. S. Bergen - B2SL
K. W. Easley - 1920
D. Goodwillie - 5090
T. L. Gossage - B2SL
C. Paton - B2SC
W. R. Richard - T3A
E. P. Wheeler - A2SA

Mr. W. R. Corey
B2SL

Attached are copies of the OECD's Sector Group on Unintended Occurrence of Chemicals in the Environment Proposals for Concerted Action (ENV(72)27), a brief prepared for the U.K. ambassador to the OECD Council and a transmittal letter to the U.K. members of OECD's Environmental Committee.

The U.K. position is to support voluntary controls by manufacturers and is decidedly against the creation of non-tariff barriers by each country.

Early in December Elmer Wheeler understood from conversations with Dr. Ian Presst, the U.K. OECD Sector Group representative, that all member nations had agreed to voluntary controls and that the Germans had agreed to terminate PCBs in mining fluids and the French had agreed to terminate PCBs in all heat transfer applications. We have no confirmation of these developments at this time.

W. B. Papageorge

WBP/bt

Attachment

DSW 172405

163

STLCOPCB4047029

December 21, 1972

Ms. Edythe B. Breuss
Karl Lambrecht Corp.
4318 Lincoln Avenue
Chicago, Illinois 60618

Dear Ms. Breuss:

Your letter of December 14 requesting samples of Aroclor 1262 and Aroclor 1268 and a copy of Monsanto Technical Bulletin O/PL-306 has been forwarded to me for response. I regret to inform you that because of environmental problems these products are no longer manufactured or sold by Monsanto and our supply of samples has been depleted. Since these products are no longer available, the technical bulletin you requested would no longer be applicable to your operation.

I hope the lack of these materials does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

DSW 172406

86-7

STLCOPCB4047030

December 21, 1972

Dr. Myron A. Mehlman
Food & Drug Administration
BF 153
200 "C" Street Southwest
Washington, D.C. 20204

Dear Dr. Mehlman:

Enclosed is the sample request form I offered to send your secretary. If you will return the completed form to me I will make arrangements to have the samples you request forwarded to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosure

DSW 172407

866

STLCOPCB4047031

December 21, 1972

Mr. Paul Hirsch, Principal
Tottenville High School
100 Luten Avenue
Staten Island, New York 10312

Dear Mr. Hirsh:

I am enclosing a copy of the PCB sample request form which I offered to send you. If you will return the completed form to me I will make arrangements to have the samples you request forwarded to you.

Also enclosed is the PCB literature you requested. I hope you find it useful and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosures

F, H, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z

DSW 172408

STLCOPCB4047032

December 21, 1972

Mr. Louis Finger
General Electric, RESD
P. O. Box 7952
Philadelphia, Pennsylvania 19101

Dear Mr. Finger:

Your inquiry relating to the quality of n-butyl-acid phosphate after 1½ years in storage was forwarded to me for response.

Barring any contamination or unusual temperature exposures the quality of the material remains virtually unchanged and should be suitable for your application.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

bcc: Thomas Iversen

DSW 172409

867
STLCOPCB4047033

W. B. Papageorge - World Headquarters

December 21, 1972

Mr. P. J. Marsh
Brussels - 5040

What is your evaluation of Purle Bros., Ltd.,
Essex, relating to their disposal of PCBs?
Are they maintaining proper control? Have
governmental authorities expressed any concerns?

W. B. Papageorge

WBP/bt

DSW 172410

86-3

STLCOPCB4047034

W. B. Papageorge - World Headquarters

December 21, 1972

PCB - UNDERGROUND WATER

Mr. P. J. A. Marsh
Brussels - 5040

Recently a representative of the U.S. Food and Drug Administration mentioned that he had heard that Monsanto was involved in a law suit in Europe because of the presence of PCBs in underground water.

Is this true?

W. B. Papageorge

WBP/bt

DSW 172411

STLCOPCB4047035

W. B. Papageorge - World Headquarters

December 21, 1972

W. R. Corey - E2SL
R. E. Kelly - A2SA

Mr. J. R. Durland
Tokyo - 5260

A representative of the U.S. Food and Drug Administration recently mentioned that he had received a copy of the latest status report on the "Yusho" disease incident. Can your office acquire a copy for us.

W. B. Papageorge

WBP/bt

DSW 172412

STLCOPCB4047036

W. B. Papageorge - B2NA

December 19, 1972

C. Paton - B2SC
W. R. Richard - T3A

SANTOSOLS - "RULE 66"

Mr. G. F. Fague

In responding to NCR's request for information relating to "Rule 66" and Santosols, I find that "Rule 66" refers to an air pollution regulation in Los Angeles County. I have attached a copy.

Similar language has been incorporated in the Wisconsin Air Pollution Control Laws under Section NR 154.13. A copy is also attached.

It appears that Santosol 100 and Santosol 200 fit the definition under 3(b) in Section NR 154.13 (page 64). Limitations which apply are described under 2(a) thru 2(k) (pages 63 and 64) and vary with the application.

I recommend this information be discussed with NCR.

W. B. Papageorge

WBP/bt

DSW 172413

STLCOPCB4047037

W. B. Papageorge - General Offices, B2NA

December 19, 1972

H. S. Bergen - E2SL
R. E. Keller - T1B
R. E. Kelly - A2SA

Mr. W. R. Corey
B2SL

With our interest in PCBs and Penta I recommend that Jim Mieure, Research, someone from the Medical Department and I attend the conference described in the attached notice.

W. B. Papageorge

/bt

Attachment

DSW 172414

159
STLCOPCB4047038

NIEHS CONFERENCE ON
CHLORINATED DIBENZODIOXINS AND DIBENZOFURANS

OUTLINE:

- I. Chemistry.
 - General structure
 - Analytical methodology
 - Synthesis
 - Occurrence of compounds in chemical production
- II. Environmental Aspects.
 - Accumulation + degradation
 - Routes of dissemination
 - Photochemical changes
 - Interaction with plants, soils and water
- III. Toxicology.
 - Absorption, distribution, excretion
 - Acute and chronic effects
 - Teratology
 - Mechanism of action
 - Structure activity relationship
- IV. What is it all about?

DATE: April 2-3, 1973.

PLACE: Governors Inn, Research Triangle Park, North Carolina.

ATTENDANCE: Open. Due to limited meeting facilities, attendance will be limited. There are a number of invited speakers.

Scientists whose work relates to the biological effects of these compounds are encouraged to submit an abstract of their proposed presentation for consideration by January 15, 1973.

SPONSORED BY: National Institute of Environmental Health Sciences
National Institutes of Health
Research Triangle Park, North Carolina

PUBLICATION: Proceedings of the conference will be published in the August 1973 issue of Environmental Health Perspectives.

Individuals interested in attending or submitting abstracts should contact:

Dr. John A. Moore
National Institute of Environmental Health Sciences
P.O. Box 12233
Research Triangle Park, North Carolina 27709

DSW 172415

STLCOPCB4047039

December 18, 1972

Mr. Jack Boettcher
c/o Mr. Bryon Morton
Scientific Attache
American Embassy (Iran)
Box 2000
New York APO 09205

Dear Mr. Boettcher:

I have received Dr. Harrington's request for PCB samples which he requests be forwarded to you and am forwarding under separate cover samples of Aroclor 1221, Aroclor 1242 and Aroclor 1254. I regret I cannot supply samples of Aroclor 1248, Aroclor 1260, Aroclor 1262, Aroclor 4465 and Aroclor 5460 as he requested but these products are no longer being manufactured and our supply of samples has been depleted.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A- 1221 } c/n 1558
1242 }
1254 }

DSW 172416

STLCOPCB4047040

December 18, 1972

Dr. Dinus M. Briggs
North Carolina State University
School of Agriculture and
Life Sciences
Department of Poultry Science
Box 5307
Raleigh, North Carolina 27607

Dear Dr. Briggs:

I have received your request for a sample of
Aroclor 1242 and am forwarding this sample to
you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

A-1242 s/n 1557

DSW 172417

157

STLCOPCB4047041

December 18, 1972

National Technical Information Service
U. S. Department of Commerce
Springfield, Virginia 22150

Gentlemen:

Please send one copy of COM-72-10669, "Levels of Chlorinated Hydrocarbon in Catfish in Alabama, Arkansas, Florida, Georgia, Louisiana and Mississippi", Mississippi State Univ., State College, April 1972 to:

W. B. Papageorge
Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Missouri 63166

A check for \$3.00 is enclosed.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosure

DSW 172418

856
STLCOPCB4047042

December 15, 1972

Mr. Stanley Duke
Duke Standards Company
445 Sherman Avenue
Palo Alto, California 94306

Dear Mr. Duke:

I have enclosed the copies of the Aroclor 1016 Chromatogram and the tables showing the typical properties of Aroclor 1016 and typical composition of PCB products which I offered to send. I hope you find these materials interesting and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosures

DSW 172419

STLCOPCB4047043

December 15, 1972

Dr. James R. Sanborn
Assistant Entomologist
Illinois Natural History Survey
Natural Resources Building
Urbana, Illinois 61801

Dear Dr. Sanborn:

I have received your request for samples of Aroclor 1221, Aroclor 1242 and Aroclor 1254 and am forwarding these samples to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

*Aroclor 1221
1242
1254 } 5/25/73*

W. B. Papageorge, St. Louis

December 15, 1972

Mr. K. W. Easley
1920

Enclosed are the copies of correspondence and procedures relating to the environmental evaluation of Monsanto products.

The products marketed by the Special Chemical Systems group have been evaluated. We are now beginning to review those products marketed by the Specialty Products group.

W. B. Papageorge

WBP/bt

Enclosure

DSW 172421

6.5/
STLCOPCB4047045

December 15, 1972

Mr. Randall Reeser
IRC
Burlington Division
TRW, Inc.
2850 Mount Pleasant Street
Burlington, Iowa 52601

Dear Mr. Reeser:

Enclosed is the Request for Sample of Product
Containing PCB which I offered to send you.
If you will return the completed form to me
I will make arrangements to have the samples
you request forwarded to you.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

Enclosure

DSW 172422

826
STLCOPCB4047046

December 15, 1972

Mr. Carl H. Draude, Jr.
Armstrong Cork Company
Research and Development Center
2500 Columbia Avenue
Lancaster, Pa. 17604

Dear Mr. Draude:

We have received your Purchase Order No. 82960 and regret to inform you that, because of environmental problems, the Aroclors you request are no longer available to applications such as yours.

I understand that Walter G. McCrone Associates, Chicago, Illinois supplies media for mounting specimens. Perhaps they can be of some assistance to you.

Sincerely,

W. B. Papageorge
Manager
Product Acceptability

WBP/bt

DSW 172423

8-19

STLCOPCB4047047

W. B. Papageorge, B2NA

December 14, 1972

PCB - NON-MONSANTO SOURCES - USA

H. S. Bergen - B2SL

T. L. Gossage - B2SL

C. Paton - B2SC

Mr. W. R. Corey
B2SL

We have been receiving and continue to get reports from our Specialty Products marketing representatives that our former PCB customers in the U.S. are able to procure PCBs from sources other than Monsanto.

Most of the activity seems to be centered around Coastal Chemical Company, Abbeville, Louisiana. In the past Coastal was a reseller of our PCB type Therminols to operators of off-shore facilities in the Gulf of Mexico. Since our withdrawal of PCBs from this application, Coastal has continued to offer PCB fluid which was variously reported to be reclaimed material, imported and/or produced for Coastal by Geneva Industries, Inc., Houston, Texas. Recently we had a report that Coastal Chemicals had purchased a pesticide plant near Beaumont, Texas and was producing PCBs.

Yesterday, December 13, Tom Gossage was told by a Geneva Industries representative that they had sold PCBs resulting from their ortho and para-phenyl phenol operations to Coastal Chemicals and had recently contacted some of our dielectric customers to evaluate plans for supplying PCBs to the industry.

Additional information indicates that Sonford Chemical Company, Port Neches, Texas, a producer of pentachlorophenol until early 1972, may be producing PCBs for Coastal Chemical. This facility is probably the Beaumont, Texas "pesticide plant" we heard of earlier.

About two weeks ago Cumming Paton was informed by Westinghouse representatives at South Boston, Virginia that our prices for transformer PCBs were too high and that they had found someone who would supply the blend of trichlorobenzene and PCBs at much lower prices. The source of PCBs was described as "reputable" and "relatively small". In subsequent discussions with Hooker Chemical Company representatives, Cumming was informed that Hooker would supply the TCB and, although they knew the source of PCBs, they could not divulge the name of the producer. They did indicate it was not Dow, Stauffer, Hooker, Standard Chlorine, Coastal Chemical, Geneva, Sonford or Dover Chemical.

DSW 172424

8-48
STLCOPCB4047048

December 14, 1972

We have speculated that the PCB source may be Velsicol or Michigan Chemical if, as Hooker indicated, Geneva is not involved. We are continuing to follow all leads and hopefully will identify the producer soon.

Information relating to imports has been extremely difficult to acquire. We have worked closely with the Department of Commerce and the Council on Environmental Quality to quantify this source. The only number available to us appeared in the Tariff Commission's annual summary which listed 640,610 pounds of PCBs identified as entering this country in 1971. We have not succeeded in getting any numbers for 1972 but Dr. Clarence Davies, CEQ, informed us the imports of PCBs peaked in early 1972 and have dropped to virtually none since then.

W. B. Papageorge

/bt

W. B. Papageorge - World Headquarters

December 13, 1972

J. R. Durland - 5260

E. P. Wheeler - A2SA

S. Uneno
5260

The typical composition of the MIPB-(2) used in the toxicity studies which Mr. E. P. Wheeler summarized in his letter dated November 8 is as follows:

Biphenyl	0-0.8
Mono Isopropyl Biphenyl	71.7 min
Poly Isopropyl Biphenyl	27.7

W. B. Papageorge

/bt

W. B. Papageorge - World Headquarters

December 12, 1972

PCBs - OECD

Mr. W. R. Corey
B2SL

H. S. Bergen - B2SL
K. W. Easley - 1920
D. Goodwillie - 5090
T. L. Gossage - B2SL
P. J. A. Marsh - 5040
C. Paton - B2SC
W. R. Richard - T3A

Warren Easley and I met with Dr. Warren Muir, Council on Environmental Quality and Mr. Lowell Miller, Environmental Protection Administration in separate sessions to review the results of a meeting held on November 22-24 of the OECD Sector Group on the Unintended Occurrence of Chemicals in the Environment.

The Sector Group developed the following proposals:

1. The use of PCBs in transformers and capacitors should be continued. The use in small capacitors does not provide the degree of control possible in large capacitors and every effort should be taken to develop alternative materials for this application.
2. The use of PCBs in heat transfer systems should be continued in those situations in which fire resistance is critical, however, use in heat transfer systems involving food, drug, feed and veterinary products should be terminated.
3. The use of PCBs in hydraulic fluids for the mining industry should be continued.
4. Controls should be instituted for the manufacture, importing and exporting of PCBs and products containing PCBs.
5. Provision should be made for safe disposal.
6. Uniform labeling should be developed.
7. Safety specifications should be developed for container design and transportation.
8. Materials used to replace PCBs are to be reported (identity, amount, application).

These proposals are to be submitted by the Sector Group to the OECD Environmental Committee by December 13. The Environmental Committee will in turn submit its recommendations to the OECD Council, probably for its January meeting.

We expressed our concern relating to adequate control in heat transfer applications and pointed out that alternative non-PCB hydraulic fluids were available for the mining industry. We also expressed concern relating to the reporting of materials which have replaced PCBs explaining that as PCB suppliers we are not necessarily in a good position to know what our customers are using in their applications.

Considerable discussion was centered on the continued use of PCBs in small capacitors. A group, apparently led by Switzerland, was strongly promoting the banning of PCBs in this application. It appears a compromise was worked out permitting PCB use in small capacitors and some heat transfer systems. The continued use in heat transfer systems was strongly supported by the French representatives.

It was recognized that the majority of the member nations had no statutes to support the proposed actions, therefore, reporting on items 4 and 8 would not begin until 1974.

W. B. Papageorge

/bt

W. B. Parageorge, General Offices

December 12, 1972

HEAT TRANSFER SYSTEM
AKRON LABORATORY

W. R. Corey - B2SL
J. Cresce - B3NA
A. Obel - B3NA
C. Paton - B2SC
D. E. Roush - P2SC

Mr. H. S. Bergen
B2SL

Joe Cresce informed me that the project for converting the Therminol FR system at Monsanto's Akron office and laboratory installation has been approved.

Equipment delivery time is estimated at twelve weeks. Conversion is now targeted for next Spring.

W. B. Parageorge

/bt

December 11, 1972

Mr. John Hesse
Michigan Bureau of Water
Management
Mason Building
Lansing, Michigan 48920

Dear Mr. Hesse:

I have received your request for a sample of
Aroclor 1016 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1016
S/X 1555

DSW 172430

341
STLCOPCB4047054

December 11, 1972

Dr. Irvin W. Rubin
Rollins-Purle, Inc.
P. O. Box 221
Bridgeport, New Jersey 08014

Dear Dr. Rubin:

I have received your request for a one pint sample of Aroclor 1016 and am forwarding this sample to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

7-1016 - 5/7 10-574

DSW 172431

STLCOPCB4047055

December 11, 1972

Dr. J. C. Thompson
The University of Texas
at Austin
Department of Physics
Austin, Texas 78712

Dear Dr. Thompson:

I have received your request for a sample of
Aroclor 1254 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-12521 5/7 1553

DSW 172432

857

STLCOPCB4047056

December 11, 1972

Mr. Donald L. Hughes
Chemical Department
WARF Institute, Inc.
P. O. Box 2599
506 North Walnut Street
Madison, Wisconsin 53701

Dear Mr. Hughes:

I am enclosing a copy of the Monsanto Methodology for Aroclor that you requested in your letter of November 9 and apologize for the delay in forwarding this to you. I have also enclosed a chromatogram for Aroclor 1016. I hope you find these publications interesting and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

O
A-1016 Chromatogram

DSW 172433

STLCOPCB4047057

December 8, 1972

Dr. James R. Sanborn
Assistant Entomologist
Illinois Natural History Survey
Natural Resources Building
Urbana, Illinois 61801

Dear Dr. Sanborn:

I have received your letter dated November 30, 1972 requesting samples of Aroclor 1221, Aroclor 1242, Aroclor 1254 and Aroclor 1260. I have enclosed a Request for Sample Quantity of Product Containing PCB. If you will return the completed form to me I will make arrangements to have samples of Aroclor 1221, Aroclor 1242 and Aroclor 1254 forwarded to you. I regret I cannot supply a sample of Aroclor 1260 as this material is no longer being manufactured and our supply of samples has been depleted. I hope the lack of this sample does not seriously inconvenience you in your study.

I am also enclosing a copy of Monsanto Technical Bulletin O/PL-306A and an excerpt from the Encyclopedia of Chemical Technology entitled "Chlorinated Biphenyl and Related Compounds" which I hope you find interesting and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

EIT

DSW 172434

837

STLCOPCB4047058

December 8, 1972

Dr. Dinus M. Briggs
North Carolina State University
School of Agriculture and
Life Sciences
Department of Poultry Science
Box 5307
Raleigh, North Carolina 27607

Dear Dr. Briggs:

I have received your letter of November 30, 1972 requesting a sample of Aroclor 1242. I have enclosed a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have this sample forwarded to you. There is no charge for this sample.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172435

826

STLCOPCB4047059

December 8, 1972

Mr. D. F. Burns
N L Industries, Inc.
Titanium Pigment Division
Technical Service Department
P. O. Box 600
South Amboy, New Jersey 08879

Dear Mr. Burns:

I have received your letter dated December 4 requesting samples of Aroclor 1254 and Aroclor 5460. I regret I cannot supply a sample of Aroclor 5460 but the manufacture of this material was discontinued some time ago and our supply of samples has been depleted. I can supply a sample of Aroclor 1254 if you will complete the enclosed Request for Sample Quantity of Product Containing PCB and return it to me.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172436

STLCOPCB4047060

December 8, 1972

Mr. David Dworkin
Fairfield Associates, Inc.
431 East State Street
Westport, Connecticut 06880

Dear Mr. Dworkin:

Enclosed is the PCB literature I offered to
send you the other day. I hope you find it
useful and informative.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

F, H, I, K, L, m, o, P, Q, T, u, V, w, x, Y, Z

DSW 172437

STLCOPCB4047061

December 7, 1972

Dr. Clifford M. Hardin
Vice Chairman of Board
Ralston-Purina Company
Checkerboard Square
St. Louis, Missouri 63183

Dear Dr. Hardin:

Because of our mutual concern relating to the possibility of unintended presence of polychlorinated biphenyls in some industrial hydraulic fluids it appears appropriate that we review at this time the findings of our respective laboratories.

Attached is a table which summarizes the current information available to Monsanto. It is encouraging to note that, despite the sophisticated analytical procedures required and the slight differences in methodologies employed by the two laboratories, similar results have been obtained.

The results also indicate that Monsanto's reserve samples, Ralston-Purina's Sparks, Nevada sample and the sample from a sealed drum randomly selected from inventory in a public warehouse are all free of any polychlorinated biphenyls. On the other hand, the presence of polychlorinated biphenyls in samples from the other Ralston-Purina locations is disturbing.

We have reviewed our available records to determine the types of old formula Pydrauls delivered to Battle Creek, Michigan; Mechanicsburg, Pennsylvania and Sparks, Nevada in the past. These records reveal that four drums of old formula Pydrauls were delivered to Sparks, Nevada in January, 1972 and returned unopened in June, 1972. Significantly, the sample of new Pydraul from this location has no detectable polychlorinated biphenyls. The polychlorinated polyphenyls identified in the Battle Creek, Michigan and Mechanicsburg, Pennsylvania samples are the types associated with the previous Pydrauls used at these locations.

DSW 172438

82-2
STLCOPCB4047062

Dr. Clifford M. Hardin

- 2 -

December 7, 1972

After seriously reviewing this information it is our considered opinion that polychlorinated biphenyls detected in the samples analyzed were not contained in shipments of our new formulations but were introduced by some means of contamination, perhaps in the sampling or analytical processes. We wanted to relate our findings and opinion concerning them to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

cc: C. H. Sommer
C. P. Cunningham
W. R. Corey

bcc: J. F. Stapleton

DSW 172439

STLCOPCB4047063

DSW 172440

FLUID	MONSANTO LOT NUMBER	RALSTON-PURINA SAMPLE NUMBER	SAMPLE SOURCE	POLYCHLORINATED BIPHENYL (PCB) Content (ppm) (Aroclor Type)	
				RALSTON-PURINA LABORATORY	MONSANTO LABORATORY
Pydraul 90E	QB-14720		Monsanto Reserve Sample	--	N.D.
			Ralston-Purina Cincinnati, Ohio	4.9, 10.01	---
Pydraul 90E	QB 13800	70000	Ralston-Purina Battle Creek, Mich.	52.5, 44.9 (A-1242) and (A-1254)	28*, 36 (A-1242) (A-5432, identified)
			Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina, Davenport, Iowa	2.9, 5.0	---
			Sealed Drum Public Warehouse Chicago, Illinois	---	N.D.
Pydraul 230C	QB 13100		Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina Sparks, Nev.	N.D.	---
Pydraul 230C	QB 10420	70006	Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina Mechanicsburg, Penn.	868, 977, 1123 (A-1242)	1100*, 1800 (A-1242)

Notes: N.D. - Not Detected, less than 0.5 ppm PCB in sample

--- - Not Analyzed

* - Amount detected using Ralston-Purina analytical method

December 7, 1972

Mr. Donald B. Stevens, P.E.
Director, Bureau Water Quality Management
Division of Pure Waters
New York State Department of
Environmental Conservation
Albany, New York 12201

Dear Mr. Stevens:

Your letter dated November 22 and addressed to the President, Monsanto Company, has been forwarded to me for response since I have been intimately involved in the study of polychlorinated biphenyls (PCBs) and their impact on the environment.

We appreciate and share your concern for the environment and, as we have tried to do with other interested governmental agencies, we want to be as cooperative as we can in your present efforts.

Monsanto's current policy, being implemented worldwide, and in which the U.S. Government's Interdepartmental Task Force on PCBs concurs, is to continue sales of PCBs only to customers whose intended use is as dielectric fluids in capacitors and transformers, where continued use is considered critical since alternative fluids with required properties are not presently available.

There are two special situations. One is in Germany where limited continued sales of PCB-containing hydraulic fluid for use in coal mines will continue through the end of the year because state officials are concerned about fire hazards and have not approved any PCB-free materials as alternatives. In the second situation, we have been ordered by the U.S. Department of Commerce under the Defense Production Act to make a limited volume sale in the interest of national defense. Neither of these situations ought to affect New York or the Great Lakes area.

DSW 172441

STLCOPCB4047065

Mr. Donald B. Stevens

- 2 -

December 7, 1972

As requested in your letter, I have enclosed a list of the uses that have been made of PCBs of which we are aware. Terminations of sales to the various applications began in the U.S. in mid-1970 and were phased out approximately as follows:

Open system applications such as coatings, adhesives, wax extenders, plasticizers, inks, cutting oils, etc., were terminated in August, 1970.

Replacement of PCBs in the carbonless copy paper application began in the third quarter of 1970 and sales were ended in early 1971.

The reformulations of industrial hydraulic fluids to eliminate PCBs began in mid-1970 and were finally completed by April, 1971. Incidentally, I am not aware of the use of PCBs in aviation hydraulic fluids.

Sales to heat transfer systems in food processing applications were terminated by August, 1970; in food related and animal feed applications in the third quarter, 1971; and during 1972 sales ended to all other heat transfer applications.

Sales as industrial fluids in vacuum pump and turbine service were terminated early in 1972.

The concern over PCBs in this country has focused upon Monsanto. We feel, however, as you approach your task several items should be called to your attention.

Limited recent data available from the U.S. Tariff Commission confirms entry of PCBs into the United States from foreign sources. Given our attempt to act responsibly, we share with you the concern this causes. Tariff classifications make it difficult to determine in what quantities or for how long such imports have existed.

You refer in your letter to Monsanto as the only United States manufacturer of PCBs. Unconfirmed reports from normally reliable sources indicate that PCBs have been and are being produced and marketed by other manufacturers in this country.

DSW 172442

STLCOPCB4047066

Mr. Donald B. Hughes

- 3 -

December 7, 1972

Also, preliminary studies indicate that at least certain configurations of PCBs are likely to be formed as wastes are processed in municipal waste treatment facilities, and may even occur naturally in nature.

We mention these matters because we feel it important for you to realize the complexities of the task which you are undertaking.

We hope this information will be useful to you as you begin your PCB inventory.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection
Functional Product Groups

WBP/bt

cc: Dr. Edward J. Burger, Jr.
Office of Science and Technology
Executive Office of the President

Dr. J. Clarence Davies
Council on Environmental Quality

Mr. J. W. Hanley, President
Monsanto Company

bcc: C. P. Cunningham
W. R. Corey
K. W. Easley

DSW 172443

STLCOPCB4047067

AROCLOR (PCB TYPE) APPLICATIONS

CURRENT USES

Electrical Capacitors: Aroclor 1016*, the major product used; Aroclor 1221; Aroclor 1254; very limited usage.

Electrical Transformers: Aroclor 1242; Aroclor 1254.

*Similar to Aroclor 1242 with 5 chlorine and higher isomer content reduced.

FORMER USES

Electrical Capacitors: Aroclor 1242; Aroclor 1254.

Electrical Transformers: Aroclor 1242; Aroclor 1254; Aroclor 1260.

Heat Transfer Systems: Aroclor 1242; Aroclor 1248; Aroclor 1254.

Vacuum Pumps: Aroclor 1248; Aroclor 1254.

Gas Transmission Turbines: Aroclor 1232; Aroclor 1242.

Hydraulic Fluids: Aroclor 1232; Aroclor 1242; Aroclor 1248; Aroclor 1254; Aroclor 1260.

Plasticizers in Synthetic Resins: Aroclor 1248; Aroclor 1254; Aroclor 1260; Aroclor 1262; Aroclor 1268.

In Adhesives: Aroclor 1221; Aroclor 1232; Aroclor 1242; Aroclor 1248; Aroclor 1254.

In Surface Coatings: Aroclor 1221; Aroclor 1248; Aroclor 1254; Aroclor 1260; Aroclor 1262.

Plasticizer in Rubbers: Aroclor 1221; Aroclor 1232; Aroclor 1242; Aroclor 1248; Aroclor 1254; Aroclor 1260.

Wax Extenders: Aroclor 1242; Aroclor 1254; Aroclor 1268.

Dedusting Agents: Aroclor 1254; Aroclor 1260.

AROCLOR (PCB TYPE) APPLICATIONS

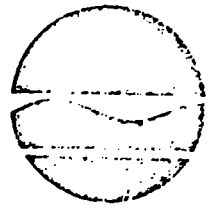
FORMER USES (continued)

Pesticide Extenders: Aroclor 1254.

Lubricants, Cutting Oils: Aroclor 1254.

Carbonless Reproducing Paper: Aroclor 1242.

Inks: Aroclor 1254.



New York State Department of Environmental Conservation
Albany, N Y 12201

Henry L. Diamond
Commissioner

November 22, 1972

President
Monsanto Company
800 N. Lindberg Blvd.
St. Louis, Mo. 63166

Dear Sir:

Re: Polychlorinated Biphenyls

The Great Lakes Water Quality Board and the International Joint Commission have become concerned with the presence of polychlorinated biphenyls (PCBs) in the aquatic environment of the Great Lakes. This has manifested itself in the form of a request which states "Governments should inventory and regulate the disposal of existing stocks and act to control importation of PCBs or PCB containing substances and develop programs to control the contribution of PCBs to surface waters by either direct discharge or fallout." New York State is vitally concerned in this because it borders both Lake Erie and Lake Ontario and in addition borders the Niagara River and portions of the St. Lawrence River which are also within the jurisdiction of the Great Lakes Water Quality Board and the International Joint Commission.

Our present concern is to inventory existing stocks.

We realize that while Monsanto Company is the only United States manufacturer of PCBs, there are foreign producers and their products could be imported to New York State. Originally there were many uses for these materials but the indications are that because of the widespread concern with the environment, the company has recently restricted its sale.

As a base on which to start our inventory, it would be helpful if you could give us a list of the uses that have been made of PCBs and whether they are still sold for that purpose. The materials appear to be used directly in heat transfer equipment such as heating and cooling coils, electrical transformers and

DSW 172446

STLCOPCB4047070

President, Monsanto Company

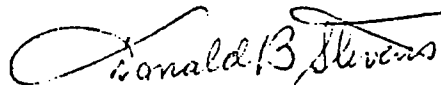
-2-

November 22, 1972

capacitors and possibly in some airplane hydraulic systems. They also have been an ingredient in such diverse products as industrial paints, lubricants, cardboard sealants, putties, soil stabilizers, carbonless carbon papers, protective coatings, adhesives, waxes, varnishes, plasticizers, and many others. If they are no longer sold for that purpose, it would be helpful if you could indicate approximately when such sales were discontinued.

I realize that there are many secrets in the business world. It is hoped that this request is so framed as not to be in the area of confidential and yet will be specific enough to be of assistance to us in making a survey and inventory in New York State.

Sincerely yours,

A handwritten signature in cursive script that reads "Donald B. Stevens".

Donald B. Stevens, P.E.
Director, Bureau Water Quality Mgt.
Division of Pure Waters

DBS/cd

DSW 172447

STLCOPCB4047071

December 6, 1972

Mr. Thomas Dunaway
Oil and Gas Conservation Group
U. S. Geological Survey
P. O. Box 546
Metairie, Louisiana 70004

Dear Mr. Dunaway:

Enclosed are copies of old literature on Monsanto's
Therminol heat transfer fluids which you requested
from Monsanto.

Please note that the FR series and Therminol 77
are no longer available.

I hope this information is useful to you. If I
can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172448

STLCOPCB4047072

December 6, 1972

Dr. J. S. Nelson
General Electric Company
Room 505
Building 36
1 River Road
Schenectady, New York 12345

Dear Dr. Nelson:

Enclosed is the copy of the FDA's Environmental Impact Statement you requested. As soon as I receive a copy of the final draft I will send it to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172449

STLCOPCB4047073

December 4, 1972

Dr. David B. Peakall
Senior Research Associate
Cornell University
Division of Biological Sciences
Ithaca, New York 14850

Dear Dr. Peakall:

I have received your request for five pound samples of Aroclor 1242 and Aroclor 1254 and am forwarding these samples to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A 1242 } 1552
1254 }

DSW 172450

STLCOPCB4047074

December 4, 1972

Mr. David J. Cartwright
Department of Natural Resources
Fish and Wildlife Branch
New Brunswick, Canada

Dear Mr. Cartwright:

I have received your letter of November 7, 1972 requesting a copy of Monsanto Technical Bulletin O/PL-306A. Enclosed is a copy of this Bulletin which I hope you find interesting and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172451

STLCOPCB4047075

December 4, 1972

Mrs. Jean H. Bowdre
Virginia Polytechnic Institute
and State University
Department of Biology
Blacksburg, Virginia 24061

Dear Mrs. Bowdre:

Your letter of November 21 addressed to the
Manufacturing Chemists Association has been
forwarded to me for response.

I am enclosing a Request for Sample Quantity
of Product Containing PCBs. If you will return
the completed form to me I will make arrange-
ments to have the samples you request forwarded
to you.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172452

STLCOPCB4047076

W. B. Papageorge - World Headquarters

December 4, 1972

PCBs - ENVIRONMENT

T. L. Gossage - E2SL
P. J. A. Marsh 5040
C. Paton E2SC

Memo, JIH to PJAM dated 11/8/72

Mr. J. N. Haggart
5040

I note on page 2 of your October, 1972 Specialty Products Product Report dated November 8 to P. J. A. Marsh, references to several activities related to PCB under the Section entitled Environment.

Will you please forward to me full details for each of these activities.

W. B. Papageorge

/bt

DSW 172453

STLCOPCB4047077

December 1, 1972

Mr. E. J. Hormuth
Purchasing Agent
Fisher Body Division
General Motors Corporation
79th St. and Willow Springs Road
Willow Springs, Illinois 60480

Dear Mr. Hormuth:

In your letter dated November 28 you requested information relating to Pyranol A13B3B. Since January, 1972 Monsanto has terminated the sale of this material to companies such as yours. Your future requirements will, therefore, have to be purchased from the General Electric Company or from the manufacturer of the equipment in which this liquid is used.

Since this is a General Electric trademark product, it seems appropriate that you may wish to contact General Electric at the following address for any information you may require.

Mr. E. L. Raab
General Electric Company
Transformer Division
Building 11-223
100 Woodlawn Avenue
Pittsfield, Mass. 01201

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172454

STLCOPCB4047078

NOVEMBER 1972

DSW 172455

STLCOPCB4047079

November 30, 1972

Ms. Joyce Goldstein
United States Environmental
Protection Agency
4770 Buford Highway
Chamblee, Georgia 30341

Dear Ms. Goldstein:

I have received your letter of November 15
requesting information relative to Aroclor
1016 and Aroclor 1242 and am enclosing copies
of the following:

Aroclor 1016 Chromatogram
Typical Properties of Aroclor 1016
Typical % Composition of Polychlorinated
Biphenyl Products.

I hope you find the enclosed information in-
teresting and informative. If I can be of
further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

DSW 172456

STLCOPCB4047080

November 30, 1972

Dr. Paul Germain
Associate Professor
Department of Biology
University of Moncton
Moncton, Nouveau-Brunswick
Canada

Dear Dr. Germain:

I regret the delay in responding to your letter of October 6 which, somehow, was not brought to my attention earlier.

The PCBs that Monsanto currently provides for use as a dielectric fluid in capacitors and transformers is a commercial mixture of the many isomers that are possible. The mixture is physically a colorless fluid and varies in viscosity depending on the chlorine content. I have enclosed a copy of our technical bulletin O/PL-306A which will further describe these materials. Incidentally, the Aroclors now available are Aroclor 1221, Aroclor 1242 and Aroclor 1254. I have also enclosed a sample request form. Should you decide that a sample of one of the available Aroclors will be helpful to you, I will forward a sample as soon as I receive the completed request form.

We at Monsanto have no personal experience relating to the injection of PCBs in developing eggs, therefore, I cannot offer any specific advice.

I hope this information is useful to you and if I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure



DSW 172457

STLCOPCB4047081

November 30, 1972

Mr. R. H. Wardwell, Jr.
Director of Operations
Form-Eze Systems
Post Office Box 7287
Colorado Springs, Colorado 80907

Dear Mr. Wardwell:

Your letter of November 8 addressed to Joe Kleffner requesting information on Monsanto's Aroclor 1221 and Aroclor 5460 has been forwarded to me for response. I regret to inform you that because of environmental problems these materials are no longer sold by Monsanto to applications such as yours. Since they are no longer available, the information you request would no longer be applicable to your operation.

I hope the lack of these materials does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172458

221

STLCOPCB4047082

November 30, 1972

Mr. Jack Boettcher
Biocide Control Unit
Environmental Research Center
Department of Environmental
Conservation
P. O. Box 1430
Tehran, Iran

Dear Mr. Boettcher:

I have received Dr. F. A. Harrington's letter dated October 30, 1972 requesting information relating to PCB reference grade standards be sent to your attention and apologize for the delay in responding.

Monsanto can supply samples of PCBs if you will complete the enclosed Request for Sample Quantity of Product Containing PCBs, specifying the PCB product you desire, and return the Request to me. There is no charge for these samples.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172459

STLCOPCB4047083

November 29, 1972

Mr. Leonard Gordon
MIT
Lincoln Laboratories
Room D-013
Box 73
Lexington, Mass. 02173

Dear Mr. Gordon:

I am enclosing a copy of the PCB sample request form which I offered to send you. If you will return the completed form to me I will make arrangements to have the samples you request forwarded to you.

I have also enclosed copies to the following literature:

Aroclor 1016 Chromatogram
Typical Properties of Aroclor 1016
Typical % Composition of Polychlorinated
Biphenyl Products
Analysis of Water and Sediment for
Polychlorinated Biphenyls

I hope you find this literature interesting and informative. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

DSW 172460

STLCOPCB4047084

November 29, 1972

Mr. John Rourke
Xerox Corporation
1350 Jefferson Road
Rochester, New York 14623

Dear Mr. Rourke:

I am enclosing a copy of the Monsanto methodology for the determination of polychlorinated biphenyls and the Aroclor 1016 chromatogram that you requested from Monsanto's Dr. E. S. Tucker.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure



DSW 172461

STLCOPCB4047085

W. B. Papageorge - B2NA

November 29, 1972

THERMINOL - AKRON
OFFICE AND LABORATORIES

H. S. Bergen - B2SL
F. G. Fague - B2SC
P. W. Gann - B2SE
C. Paton - B2SC

Mr. D. E. Roush
B2SC

What is status of Therminol conversion of system
at Monsanto's Akron facilities?

W. B. Papageorge

/bt

DSW 172462

STLCOPCB4047086

November 29, 1972

Dr. W. A. Glooschenko
A/Head, FRB Detachment
Canada Centre for Inland Waters
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario
Canada

Dear Dr. Glooschenko:

I have received your request for sample quantities of Aroclor 1016 and Aroclor 1242 and am forwarding these samples to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A 1016 } 1551
A 1242 }

DSW 172463

5/6

STLCOPCB4047087

November 29, 1972

Mr. H. M. Burgan
The Nestle Company, Inc.
Regional Control Laboratory
P. O. Box 70
Marysville, Ohio 43040

Dear Mr. Burgan:

I have received your request for sample quantity of Aroclor 1016 and am forwarding this sample to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1016 S/n 1350

DSW 172464

STLCOPCB4047088

November 28, 1972

Ms. Gail Baum
25 Knolls Crescent
Bronx, New York 10463

Dear Ms. Baum:

I have received your request for a sample of
Aroclor 1254 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1254 27 1549

DSW 172465

STLCOPCB4047089

November 28, 1972

Dr. Travis Griffin
Institute of Experimental
Pathology and Toxicology
Albany Medical College
47 New Scotland Avenue
Albany, New York 12208

Dear Dr. Griffin:

I have received your request for sample quantity
of Aroclor 1221 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1221 E/X 1348

DSW 172466

STLCOPCB4047090

W. B. Papageorge - B2NA

November 28, 1972

Mr. A. F. Davis
C3NC

I have received a request from the U.S. E.P.A. Laboratories for samples of Alochlor, Propachlor, Butachlor, Lasso and Ramrod. Will you make arrangements to have these samples forwarded to the following address:

Dr. H. J. Rodriquez
U.S. E.P.A. Laboratories
25 Funston Road
Kansas City, Kansas 64115

Thank you.

W. B. Papageorge

/bt

DSW 172467

STLCOPCB4047091

W. B. Papageorge - B2NA

November 28, 1972

THERMINOL SAMPLES

Mr. G. Fague
B2SC

I have received a request from the U.S. E.P.A. Laboratories for samples of Therminol 55 and Therminol 66. Will you make arrangements to have these samples forwarded to the following address:

Dr. H. J. Rodriquez
U.S. E.P.A. Laboratories
25 Funston Road
Kansas City, Kansas 64115

Thank you.

W. B. Papageorge

/bt

DSW 172468

STLCOPCB4047092

November 28, 1972

Dr. H. J. Rodriquez
U.S. E.P.A. Laboratories
25 Funston Road
Kansas City, Kansas 64115

Dear Dr. Rodriquez:

We are sending under separate cover the sample of Aroclor 1016 you requested on our sample request form, which is intended to apply only to materials containing PCBs. The other materials you have requested; which are Therminols, Alochlor, Propachlor, Butachlor, Lasso and Ramrod; do not contain PCBs. I am arranging for samples of these materials to be mailed to you from the appropriate individuals within the Monsanto organization.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1016 S/n 1547

DSW 172469

810

STLCOPCB4047093

November 28, 1972

Dr. J. R. Roberts
Environmental Secretariat
National Research Council
Room 3117, 100 Sussex Drive
Ottawa, Ontario K1A 0R 6
Canada

Dear Dr. Roberts:

In response to your recent request, I am enclosing
copies of the following publications:

Two-Year Chronic Oral Toxicity Study
of Aroclor 1242 in Albino Rats,
IBT No. B7298

Two-Year Chronic Oral Toxicity Study
of Aroclor 1254 in Albino Rats,
IBT No. B7298

Three Generation Reproduction Study
in Albino Rats - Aroclor 1254
Results of the First Generation
IBT No. P7297

I hope you find these publications interesting and
informative. If I can be of further service please
let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

DSW 172470

STLCOPCB4047094

November 27, 1972

Dr. Carl C. Smith
Department of Environmental Health
College of Medicine
University of Cincinnati
Cincinnati, Ohio 45219

Dear Dr. Smith:

I have received your request for sample quantities of Aroclor 1016, Aroclor 1221, Aroclor 1242 and Aroclor 1254 and am forwarding these samples to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A - 1016 }
1221 } s/n 13246
1242 }
1254 }

DSW 172471

508

STLCOPCB4047095

November 27, 1972

Dr. David B. Peakall
Senior Research Associate
Cornell University
Division of Biological Sciences
Ithaca, New York 14850

Dear Dr. Peakall:

Enclosed is a copy of the Monsanto Presentation
to the Interdepartmental Task Force on PCBs,
Washington, D. C., on May 15, 1972. which I hope
you find useful and informative.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W

DSW 172472

807

STLCOPCB4047096

November 27, 1972

Dr. Irvin W. Rubin
Rollins-Purle, Inc.
P. O. Box 221
Bridgeport, New Jersey 08014

Dear Dr. Rubin:

Your letter dated November 9 addressed to Monsanto's Dr. E. S. Tucker requesting a sample of Aroclor 1016 has been forwarded to me for response. I am enclosing a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have the Aroclor sample forwarded to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Dr. E. S. Tucker

DSW 172473

So 6-

STLCOPCB4047097

November 27, 1972

Mr. Edward P. Bogden, P.E.
Chief, Water, Land and Recreation
Sanitation Section
Division of Environmental Sanitation
Onondaga County Department of Health
300 S. Geddes Street
P. O. Box 1325
Syracuse, New York 13201

Dear Mr. Bogden:

Your letter dated November 13 requesting information relating to sales of polychlorinated biphenyls in Central New York, the Syracuse area, was forwarded to me for response since I have been intimately involved in Monsanto's PCB-environmental program.

As you probably are aware, sales by Monsanto Company in your State of these materials have been terminated for all users except as a dielectric fluid in capacitors and transformers in which fire resistance is critical. We have never utilized the services of distributors in the marketing of dielectric fluids.

I regret I cannot send you the names of our current dielectric customers since Monsanto considers the list to be confidential and it is our firm policy not to divulge this type of information.

In your letter you refer to Monsanto Company as the only manufacturer in the U.S. of polychlorinated biphenyls. It may be of considerable interest to you that information available from the U.S. Tariff Commission indicates that polychlorinated biphenyls are being imported into this country. Furthermore, unconfirmed information from normally reliable sources also indicates that at least one additional U.S. manufacturer is producing and selling polychlorinated biphenyls in this country.

DSW 172474

STLCOPCB4047098

Mr. Edward P. Bogden

- 2 -

November 27, 1972

I hope this information is useful in your current survey.
If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172475

STLCOPCB4047099

W. B. Papageorge - B2NA

November 27, 1972

Mr. C. E. Hathaway
B2SH

The attached may be of interest as a way to approach consistency, consensus and acceptability in standards, methods, etc. relating to fire retardants.

W. B. Papageorge

/bt

Attachment

DSW 172476

STLCOPCB4047100

W. B. Papageorge - B2NA

November 27, 1972

PYDRAULS - RALSTON-PURINA

H. S. Bergen - B2SL
P. S. Park - B2NA
J. F. Stapleton - B2SA
R. A. Stohr - A3SB
E. S. Tucker - T2F

Mr. W. R. Corey
B2SL

Attached is a draft of a letter to Dr. C. M. Hardin, Ralston-Purina confirming the results of laboratory analyses of new formula Pydrauls about which our two companies have been having discussions.

Comments from all recipients are requested.

W. B. Papageorge

/bt

Attachment

DSW 172477

STLCOPCB4047101

DRAFT

Dr. Clifford M. Hardin
Vice Chairman of Board
Ralston-Purina Company
Checkerboard Square
St. Louis, Missouri 63188

Dear Dr. Hardin:

Because of our mutual concern relating to the unintended presence of polychlorinated biphenyls in Monsanto's newly formulated fire resistant industrial hydraulic fluids (Pydrauls) it appears appropriate that we review at this time the findings of our laboratories.

Attached is a table which summarizes the current information available to Monsanto. It is encouraging to note that, despite the sophisticated analytical procedures required and the slight differences in methodologies employed by the two laboratories, relatively excellent agreement prevails for those samples analyzed by both laboratories.

The results also indicate that Monsanto's reserve samples, Ralston-Purina's Sparks, Nevada sample and the sample from a sealed drum randomly selected from inventory in a public warehouse are all free of any polychlorinated biphenyls.

On the other hand, the presence of polychlorinated biphenyls in samples from the other Ralston-Purina locations is both unquestionable and disturbing.

Dr. Clifford M. Hardin

- 2 -

November 27, 1972

We have reviewed our available records to determine the types of old formula Pydrauls delivered to Battle Creek, Michigan; Mechanicsburg, Pennsylvania and Sparks, Nevada in the past. These records reveal no old formula Pydrauls were ever delivered to Sparks, Nevada. Significantly, the sample of new Pydraul from this location has no detectable polychlorinated biphenyls.

The polychlorinated polyphenyls identified in the Battle Creek, Michigan and Mechanicsburg, Pennsylvania samples are the types associated with the previous Pydrauls used at these locations.

After seriously reviewing this limited information it is our considered opinion that the samples analyzed were in some manner contaminated. If your company desires, our laboratory representatives would be available to continue to cooperate in the development and execution of a sampling and analysis program to conclusively establish the sources of PCB contamination.

Sincerely,

W. R. Corey
Group Director
Functional Product Groups

DSW 172479

STLCOPCB4047103

FLUID	MONSANTO LOT NUMBER	RALSTON-PURINA SAMPLE NUMBER	SAMPLE SOURCE	POLYCHLORINATED BIPHENYL (PCB) Content (ppm) (Aroclor Type)	
				RALSTON-PURINA LABORATORY	MONSANTO LABORATORY
Pydraul 90E	QB-14720		Monsanto Reserve Sample	--	N.D.
			Ralston-Purina Cincinnati, Ohio	4.9, 10.01	---
Pydraul 90E	QB 13800	70000	Ralston-Purina Battle Creek, Mich.	52.5, 44.9 (A-1242) and (A-1254)	28, 36 (A-1242) (A-5432, identified)
			Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina, Davenport, Iowa	2.9, 5.0	---
			Sealed Drum Monsanto Warehouse Chicago, Illinois	---	N.D.
Pydraul 230C	QB 13100		Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina Sparks, Nev.	N.D.	---
Pydraul 230C	QB 10420	70006	Monsanto Reserve Sample	N.D.	N.D.
			Ralston-Purina Mechanicsburg, Penn.	868, 977, 1123 (A-1242)	1100, 1800 (A-1242)

Notes: N.D. - Not Detected at levels less than 0.5 ppm

--- - Not Analyzed

DSW 172480

STLCOPCB4047104

November 21, 1972

Mr. John Stockham
Goodyear Tire and Rubber Company
P. O. Box 799
Logan, Ohio 43138

Dear Mr. Stockham:

Confirming our telephone conversation this morning the Aroclor® 6062, which you indicated was present in a product purchased by your company from Midland Industrial Finishes, Waukegan, Illinois, is classified as a mixture of chlorinated hydrocarbons. As John Gannon indicated, Monsanto terminated the sale of this material in April, 1972.

I regret I have no OSHA Form 20 prepared for this obsolete product but I can offer the following toxicity information:

Acute Oral LD₅₀ - Rat - mixed sex - undiluted.
8050 mg/kg. Classed as practically non-toxic.

Acute Skin Absorption Minimal Lethal Dose - Rabbits -
mixed sex - undiluted. >7940 mg/kg. Classed
as practically non-toxic.

Skin Irritation - Rabbit - mixed sex - clipped
intact skin - undiluted. Classed as slight
irritant. Ave. Max. Score 1.3/8.

Eye Irritation - Rabbit - undiluted.
Classed as slight irritant. Ave. Max. Score 11.3/110.

Aroclor® 6062 is not considered hazardous as defined in 29
CFR Section 1501.2 which pertains to OSHA Form 20.

DSW 172481

STLCOPCB4047105

Mr. John Stockham

- 2 -

November 21, 1972

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: J. H. Gannon

bcc: W. S. Clark - B3NC

DSW 172482

STLCOPCB4047106

W. B. Papageorge - World Headquarters

November 21, 1972

H. S. Bergen - B2SL
W. R. Corey - B2SL
W. R. Richard - T3A

J. R. Durland
5260

I am interested in obtaining a copy of Professor Eto's scientific paper presented to the 135th Western Japan regional meeting of Society of Agricultural Chemical Industry (Japan) in Miyazaki, Kyushu as described in the enclosed article. I would appreciate your office trying to locate an English translation of this paper.

Thank you.

W. B. Papageorge

/bt

Enclosure

DSW 172483

STLCOPCB4047107

November 20, 1972

Mr. J. L. Copley
Emerson and Cuming, Inc.
869 Washington Street
Canton, Massachusetts 02021

Dear Mr. Copley:

This letter is a confirmation of our telephone discussion during which I acknowledged receipt this morning of your Purchase Order 1-71093-EAD dated November 13, 1972 for 3000 pounds of Aroclor® 1242 and informed you of our response relating to this order and dated November 17, 1972 to Mr. John A. Richards, U.S. Department of Commerce.

In your copy of our response you will note we feel obligated to comply with Mr. Richards' directive but also feel we must insist on compliance with the following conditions because of the provisions of 50 App. USC, Section 2157 which we feel requires us to sell this material on the same terms and conditions under which it is sold to our other remaining customers.

1. The terms and conditions of sale shall be governed by the terms and conditions on the reverse side of Monsanto's standard Sales Contract.
2. Emerson and Cuming, Inc., by an authorized representative, must, prior to delivery of the goods, enter into a hold harmless agreement with Monsanto as set forth in the Special Undertaking.
3. If Emerson and Cuming, Inc. has net assets of \$50,000,000 or more, nothing further will be required. Please, however, give us evidence of your financial position. If you have less than \$50,000,000 in net assets, you must give us satisfactory evidence that you have in effect appropriate insurance backing up the obligation you will be assuming under the Special Undertaking in an amount of at least \$5,000,000.

DSW 172484

799
STLCOPCB4047108

Mr. J. L. Copley

- 2 -

November 20, 1972

Copies of Monsanto's standard Sales Contract and Special Undertaking accompanied your copy of our letter to Mr. Richards. Before we can ship, we will require one executed copy of the Undertaking, evidence of your insurance in force or financial condition, and an indication of your assent to our contract terms governing the contemplated sale.

In response to your inquiry relating to the pricing of Aroclor® 1242, our Marketing Department informs me that for the quantities involved in your order the selling price is twenty-five cents per pound, F.O.B. Sauget, Illinois, in steel drums, 600 pounds net weight per drum.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. W. E. Callahan
Buyer
Emerson and Cuming, Inc.
29 Walpole Street
Canton, Massachusetts 02021

bcc: W. R. Corey
C. P. Cunningham
K. W. Easley
P. W. Gann
P. S. Park
E. J. Putzell, Jr.
J. F. Stapleton
R. A. Stohr

DSW 172485

STLCOPCB4047109

November 20, 1972

Miss Alice Vrbsky
Geology Technician
Herbert H. Lehman College
Department of Geology
and Geography
Bedford Park Boulevard West
Bronx, New York 10468

Dear Miss Vrbsky:

I regret to inform you that the Aroclor with the index of refraction of 1.66 which you require for your mounting medium is not a polychlorinated biphenyl but a polychlorinated terphenyl. Because of environmental considerations Monsanto has terminated the manufacture and sale of these materials, therefore, they are no longer available for this use.

I understand that Walter G. McCrone Associates, Chicago, Illinois supplies media for mounting specimens. Perhaps they can be of some assistance to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172486

STLCOPCB4047110

W. B. Papageorge - General Offices, B2NA

November 20, 1972

W. R. Corey
J. F. Stapleton

Mr. K. W. Easley
1920

Attached is a recommended draft for your response
to Dr. Terry Davies' letter of October 25, 1972.

W. B. Papageorge

/bt

Attachment

DSW 172487

797

STLCOPCB4047111

DRAFT

Dr. J. Clarence Davies
Executive Office of the President
Council on Environmental Quality
722 Jackson Place, N.W.
Washington, D.C. 20006

Dear Terry:

In response to the questions raised in your letter dated October 25 we have the following comments to offer.

Monsanto's policy with respect to the export of bulk PCBs is the same as Monsanto's domestic U.S. PCB policy. We have done what we feel legally permissible and appropriate to confine all such sales, including domestic U.K. sales and export sales from the U.K., to customers whose use is for dielectric applications in the transformer and capacitor industries.

Two exceptions exist. There are limited sales of PCB-containing hydraulic fluids for use in equipment by the German mining industry where State officials are extremely concerned about fire hazards, lack approved alternate materials and have been fully informed about the environmental concerns about PCBs. Also, as you have been advised, we have been ordered under the Defense Production Act of 1950 to make a limited volume sale of a PCB-containing product in the U.S. because of its importance to our national defense.

Our foreign sales policy is identical to our U.S. policy -- with the exceptions just noted.

DSW 172488

STLCOPCB4047112

We are unaware of facts which would indicate our policy is not effective and are, at this time, therefore, satisfied our policy is being observed by our customers. You must appreciate, however, that we cannot guarantee that some customer may not have violated our policy. To our knowledge this has not occurred.

We hope this response is helpful to you. If we can be of further service, please let us know.

Sincerely,

K. W. Easley
Director
Governmental Affairs

DSW 172489

STLCOPCB4047113

November 17, 1972

U. S. Department of Commerce
Bureau of Domestic Commerce
Washington, D. C. 20230

Attention: Mr. J. A. Richards
Executive Secretary

Gentlemen:

Re: BDC Case 36397

This letter is in response to the letter of November 14, 1972 from J. A. Richards, Executive Secretary, Bureau of Domestic Commerce, U.S. Department of Commerce, informing us that we are directed to "accept Emerson and Cuming, Inc. purchase order number 1-71039-EAD, rated DO-D1 for 3,000 pounds of Aroclor "1242, and ship 600 pounds on or before November 21, 1972 and 600 pounds each week thereafter until the order is complete," pursuant to Section 101 of the Defense Production Act of 1950, as amended.

Our response to your letter is as follows:

1. As you are aware, because of the increasing environmental concerns expressed about products containing polychlorinated biphenyls (PCBs), Monsanto Company no longer sells Aroclor® 1242 for the uses which we understand Emerson and Cuming, Inc. intend for the Aroclor® 1242 we have been directed to deliver. This discontinuance of sales for this type of application is a part of a policy voluntarily established by Monsanto and which has had the approval of various branches of the United States Government, including the U.S. Department of Commerce. We, therefore, respectfully question the wisdom of your directing us to sell this material when, as we understand it, alternate acceptable materials are available for the use to which our Aroclor® 1242 is to be put.

DSW 172490

STLCOPCB4047114

2. Nevertheless, we feel obligated to comply with your directive. We point out, however, while we have received oral communications about this purchase, we are not as yet in receipt of the purchase order from Emerson and Cuming, Inc. to which you have referred. When such order has been received by us, we will comply with it subject to the following conditions. We feel we must insist on compliance with these conditions because of the provisions of 50 App. USC, Section 2157, which we feel requires us to sell this material on the same terms and conditions under which it is sold to our only other remaining customers for it.
- (a) The terms and conditions of sale shall be governed by the terms and conditions on the reverse side of Monsanto's standard sales contract, a copy of which is enclosed.
 - (b) Emerson and Cuming, Inc., by an authorized representative, must, prior to delivery of the goods, enter into a hold harmless agreement with Monsanto as set forth in the Special Undertaking, a copy of which is enclosed.
 - (c) If Emerson and Cuming, Inc. have net assets of \$50,000,000 or more, nothing further would be required of them. If such company has less than \$50,000,000 in assets, they must give us satisfactory evidence that they have in effect appropriate insurance backing up their obligations under the Special Undertaking in an amount of at least \$5,000,000.

To expedite the handling of this matter, we are sending a duplicate set of the enclosed documents to Emerson and Cuming, Inc. Upon receipt of their purchase order and their compliance with the conditions set forth above, we will promptly comply with your directive. Our ability to comply with the dates which you have set forth in your letter of November 14 will, therefore, be dependent upon the speed with which Emerson and

U.S. Department of Commerce
Page 3
November 17, 1972

Cuming, Inc. complies with the foregoing procedures which we feel the Defense Production Act of 1950, as amended, requires us to observe.

Sincerely,

MONSANTO COMPANY

By W. B. Papageorge

Title: Manager
Environmental Protection
Functional Product Groups

Enclosures

cc: Emerson and Cuming, Inc.
869 Washington Street
Canton, Massachusetts 02021

November 17, 1972

Mr. S. Oestreicher
Assistant Editor
Kansas City Chemist
5600 Russell
Kansas City, Kansas 66106

Dear Mr. Oestreicher:

I read with considerable interest a copy of one of your recent editorials which appeared in the July, 1972 issue of CHEMTECH. Of particular interest to me was the reference to the presence of PCBs in Egyptian mummies.

I would appreciate very much if you could give me additional information relating to this presence of PCBs.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

bcc: P. S. Park
J. F. Stapleton
R. A. Stohr

DSW 172493

795
STLCOPCB4047117

November 17, 1972

Mr. J. J. Kirby
Air Management Branch
Ministry of the Environment
880 Bay Street
Fourth Floor
Toronto 181, Ontario

I have received your letter of November 14 requesting design information relating to our PCB incinerator. I have enclosed a copy of the specifications drawn up for this unit and I have the following general comments to offer:

- a) Capacity - Incinerators of this type are normally rated for a given heat release. The nominal capacity of the Krummrich Plant incinerator is 1,250 lbs./hr. of Aroclor 1242. This corresponds to a heat release of 13M BTU/hr.
- b) Feed Types - This incinerator was designed for a full range of chlorinated and non-chlorinated products. Still bottoms, solvents of various sorts, material containing lime--virtually any flowable material--can be fed to this incinerator.

Because some of the feed material was to contain lime (up to 2%), the refractory had to be carefully chosen. The original refractory proved unsatisfactory. A high alumina (high cost) brick is now being considered for replacement following an extended test period. PCBs caused leaching of silica from original brick and thus caused premature failure.

- c) For HCl Gas Disposal - A scrubber system was installed. A venturi scrubber is used to assure wetting of particulates. A packed column following the venturi is used to scrub out the HCl.

DSW 172494

STLCOPCB4047118

November 17, 1972

The materials of construction for a system such as this become exotic (see the specification sheet).

- d) Oxidation Temperature - This must be coupled with residence time in the oxidizer. Both are needed for complete PCB destruction. Higher chlorination levels require higher temperatures for destruction.

The Krummrich incinerator is designed for 2800°F (for Aroclor 1260). Normal operating temperatures are in the range of 2200-2500°F. Residence time is about 2.5 seconds.

- e) Supplier of Equipment - John Zink Company, P. O. Box 7388, Tulsa, Oklahoma 74105, U.S.A. - Each incinerator is custom designed.

I hope you find this information useful. If I can help further, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

November 16, 1972

Dr. H. J. Rodriguez
U.S. E.P.A. Laboratories
25 Funston Road
Kansas City, Kansas 64115

Dear Dr. Rodriguez:

Enclosed is the Request for Sample of Product
Containing PCB which I offered to send you.
If you will return the completed form to me
I will make arrangements to have the samples
you request forwarded to you.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172496

793

STLCOPCB4047120

November 16, 1972

Mr. John Hesse
Michigan Bureau of Water
Management
Mason Building
Lansing, Michigan 48920

Dear Mr. Hesse:

Enclosed is the Request for Sample of Product
Containing PCB which I offered to send you.
If you will return the completed form to me
I will make arrangements to have the samples
you request forwarded to you.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172497

792

STLCOPCB4047121

November 16, 1972

Dr. Carl C. Smith
Department of Environmental Health
College of Medicine
University of Cincinnati
Cincinnati, Ohio 45219

Dear Dr. Smith:

Enclosed is the PCB sample request form I offered to send. If you will return the completed form to me I will make arrangements to have the samples forwarded to you. I have also enclosed an Aroclor 1016 chromatogram and tables depicting the typical properties of Aroclor 1016 and typical composition of polychlorinated biphenyl products.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

DSW 172498

791

STLCOPCB4047122

W. B. Papageorge - B2NA

November 16, 1972

W. S. Clark - B3NC

CENTRAL SOLVENTS &
CHEMICALS COMPANY

Mr. J. D. Wright
B3NB

In response to Mr. K. F. Giloth's letter of November 10, I would suggest the following wording might be appropriate for their needs:

"PCBs are not used as raw materials or as ingredients in the materials purchased by your Company from Monsanto. In addition, no PCBs are present in the processing equipment used in the manufacture of these products. To the best of our knowledge and belief there are no PCBs present in products now purchased by you from Monsanto."

If I can be of further service please let me know.

W. B. Papageorge

/bt

DSW 172499

790

STLCOPCB4047123

W. B. Papageorge - B2NA

November 16, 1972

Mr. P. R. Graham
B3NB

Enclosed is a copy of a letter Elmer Wheeler received from Dr. David B. Peakall of Cornell University requesting phthalate ester samples. I have written Dr. Peakall telling him that you will be contacting him regarding the specific esters in which he is interested and, therefore, suggest you write directly to Dr. Peakall.

W. B. Papageorge

/bt

Enclosure

DSW 172500

789

STLCOPCB4047124

November 16, 1972

Dr. David B. Peakall
Senior Research Associate
Cornell University
Division of Biological Sciences
Ithaca, New York 14850

Dear Dr. Peakall:

Your letter dated November 6 addressed to Monsanto's Dr. Elmer P. Wheeler has been forwarded to me for response. I regret I cannot supply a sample of Aroclor 1248 as this material is no longer being manufactured and our supply of samples has been depleted. We do have available samples of Aroclor 1242 and Aroclor 1254. However, in compliance with Monsanto policy, the enclosed Request for Sample of Product Containing PCB must be completed and returned to me before I can forward these samples to you.

Your request for samples of phthalate esters has been referred to Monsanto's Mr. Paul Graham, who will be in touch with you relating to the specific esters in which you are interested.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: P. R. Graham
E. P. Wheeler

DSW 172501

783
STLCOPCB4047125

November 16, 1972

Dr. John Christison
Department of Organic Chemistry
Ontario Research Foundation
Sheridan Park, Ontario
Canada

Dear Dr. Christison:

Enclosed is a copy of the Monsanto methodology
for evaluating biodegradability of organic compounds
which I hope you find interesting and informative.
I would appreciate any comments you may have to
offer relating to this methodology.

If I can be of further service please let me know.

Sincerely, -

W. B. Papageorge
Manager
Environmental Protection

WBP/bt'

Enclosure

bcc: D. Goodwillie

DSW 172502

STLCOPCB4047126

November 15, 1972

Mr. Harold E. Myers, President
Kem-Kwip, Inc.
Box 974
Lexington, Virginia 24450

Dear Mr. Myers,

I have received your letter dated November 2, 1972 requesting samples of Aroclor 1260 and Aroclor 5460 and regret to inform you that I cannot supply these samples as these materials are no longer being manufactured and our supply of samples has been depleted.

I hope the lack of these materials does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172503

716
STLCOPCB4047127

November 15, 1972

Mr. H. M. Burgan
The Nestle Company, Inc.
Regional Control Laboratory
P. O. Box 70
Marysville, Ohio 43040

Dear Mr. Burgan:

Your letter dated November 9, 1972 and addressed to Monsanto's Dr. William R. Richard has been forwarded to me for response.

Enclosed is a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me, I will make arrangements to have the sample you desire forwarded to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: W. R. Richard - T3A

DSW 172504

785

STLCOPCB4047128

November 13, 1972

Mr. Lloyd Berg
Purchasing Agent
Montana State University
Bozeman, Montana 59715

Dear Mr. Lloyd:

I have received your request for a one pound sample of Aroclor 1232 and regret to inform you I cannot supply this sample as this product is no longer being manufactured and our supply of samples has been discontinued.

I hope the lack of this material does not seriously inconvenience you. If I can be of service in any other way please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172505

784

STLCOPCB4047129

November 13, 1972

Dr. Sham Chaudhry
Food Testing Laboratory
Department of Public Health
Provincial Laboratories
Regina, Saskatchewan
Canada

Dear Dr. Chaudhry:

I have received your request for sample quantities of Aroclor 1242 and Aroclor 1254 and am forwarding these samples to you under separate cover.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1242 } SN 15215
1254 }

DSW 172506

783

STLCOPCB4047130

November 13, 1972

Dr. Robert K. Ringer
Michigan State University
Poultry Science
28A Anthony Hall
East Lansing, Michigan 48823

Dear Dr. Ringer:

I have received your request for sample quantities of Aroclors and am forwarding to you under separate cover samples of Aroclor 1016, Aroclor 1221, Aroclor 1242 and Aroclor 1254. I regret I cannot send samples of Aroclor 1248 but this material is no longer being manufactured and our supply of samples has been depleted.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016
1221
1242
1254 } 5 x 1544

DSW 172507

782
STLCOPCB4047131

November 13, 1972

Mr. Donald L. Hughes
Chemical Department
WARF Institute, Inc.
P. O. Box 2599
506 North Walnut Street
Madison, Wisconsin 53701

Dear Mr. Hughes:

I have received your request for sample quantity
of Aroclor 1016 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor #1016 - SN 1543

DSW 172508

781
STLCOPCB4047132

November 13, 1972

Dr. W. A. Glooschenko
A/Head, FRB Detachment
Canada Centre for Inland Waters
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario
Canada

Dear Dr. Glooschenko:

I have received your letter of October 12 requesting sample of Aroclor 1016 and apologize for the delay in responding. I am enclosing a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have the sample you requested forwarded to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172509

780
STLCOPCB4047133

November 13, 1972

Ms. Gail Baum
25 Knolls Crescent
Bronx, New York 10463

Dear Ms. Baum:

I have received your letter dated October 22, 1972 requesting a one pound sample of Aroclor 1254. I am enclosing a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have the sample you requested forwarded to you.

If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172510

779

STLCOPCB4047134

W. B. Papageorge - B2NA

November 13, 1972

SECOND INDUSTRY BROCHURE
ON FIRE SAFETY

Mr. C. L. Early
B2SH

I have reviewed the proposed industry brochure
Products to Improve Fire Safety for Manufacturers
of Furnishings and Appliances for environmental
considerations and have no comments or revisions
to offer.

W. B. Papageorge

/bt

DSW 172511

775

STLCOPCB4047135

November 13, 1972

Mr. Paul Gabrielson
5 Park Street
Apartment 4
Brookline, Massachusetts 02146

Dear Mr. Gabrielson:

Enclosed is the sample release form we discussed last Friday. If you will complete this form and return it to me I will make arrangements to have the samples you requested forwarded to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172512

STLCOPCB4047136

W. B. Papageorge - B2NA

November 10, 1972

THIRD (TRANSPORTATION) BROCHURE
ON FIRE SAFETY

Mr. C. L. Early
B2SH

I have reviewed the proposed industry brochure
Products to Improve Fire Safety for Manufacturers
of Automotive and Mass Transportation Equipment
for environmental considerations and I have no
comments or revisions to offer.

W. B. Papageorge

/bt

DSW 172513

STLCOPCB4047137

November 10, 1972

Dr. Travis Griffin
Institute of Experimental Pathology
and Toxicology
Albany Medical College
47 New Scotland Avenue
Albany, New York 12208

Dear Dr. Griffin:

Enclosed is the Request for Sample Quantity of
Product Containing PCBs that we discussed today.
If you will return the completed form to me
I will make arrangements to have the Aroclor
samples you requested forwarded to you.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection.

WBP/bt

Enclosure

DSW 172514

7 7.5
STLCOPCB4047138

November 10, 1972

Mr. Jack Boettcher
Biocide Unit
Environmental Research Center
Department of Environmental
Conservation
P. O. Box 1430
Tehran, Iran

Dear Mr. Boettcher:

Your letter of October 25 to Monsanto's J. M. Wagner has been forwarded to me for response.

The bulletin you requested, O/PL-306, has been out of print for some time and copies are no longer available. In its place I am sending you a copy of the replacement edition, O/PL-306A, which I hope you find useful and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Mr. J. M. Wagner

T

DSW 172515

274
STLCOPCB4047139

November 7, 1972

Mr. Henry R. Kraus
Ralph M. Parsons Company
617 West Seventh Street
Los Angeles, California 90017

Dear Mr. Kraus:

Enclosed is the PCB literature I offered to send to you the other day. I hope you find it useful and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X, J, K, M, W, O, U, Y, L, V, P, Q,
N, Z, F, T.

DSW 172516

STLCOPCB4047140

November 7, 1972

Dr. D. L. Grant
Pesticide Section
Health Protection Branch
Department of National Health
and Welfare
Tunney's Pasture
Ottawa, Ontario, K1A 0L2
Canada

Dear Dr. Grant:

I have received your request for sample quantity
of Aroclor 1016 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016 - Sn 1542

DSW 172517

STLCOPCB4047141

November 7, 1972

Dr. Helene C. Cecil
United States Department
of Agriculture
Agricultural Research Service
Animal Physiology and Genetics
Institute, Building 161
Agriculture Research Center East
Beltsville, Maryland 20705

Dear Dr. Cecil:

I have received your request for sample quantity
of Aroclor 1016 and am forwarding this sample
to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016 - c/n 1541

DSW 172518

STLCOPCB4047142

November 7, 1972

Dr. Robert K. Ringer
Michigan State University
Poultry Science
28A Anthony Hall
East Lansing, Michigan 48823

Dear Dr. Ringer:

Enclosed is the PCB sample release form we discussed. If you will return the completed form to me I will make arrangements to have the samples you request forwarded to you.

Sincerely, -

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

DSW 172519

776

STLCOPCB4047143

November 7, 1972

FDA Headquarters Library
BF-7
200 "C" Street S.W.
Washington, D.C 20204

Attention: Mrs. Liles

Dear Mrs. Liles:

Mr. Warren Easley has informed me of your request for a copy of Monsanto Technical Bulletin O/PL-306. This bulletin has been out of print for several years and copies are no longer available.

I am enclosing a copy of a replacement edition, O/PL-306A, which contains identical physical and chemical information on Monsanto Aroclors. I hope you find this information useful and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: K. W. Easley

DSW 172520

769

STLCOPCB4047144

W. B. Papageorge - B2NA

November 6, 1972

C. Paton - B2SC

Mr. J. H. Davidson
B2SF

Attached is a copy of a report describing BSP's
incinerator. You may wish to send a copy to Bill
Ward, G.M.

W. B. Papageorge

/bt

Attachment

DSW 172521

STLCOPCB4047145

W. B. Papageorge - E2NA

November 6, 1972

D. B. Hosmer - E1SF
P. S. Park - E2NA
J. F. Stapleton - E2SA

Mr. W. R. Corey
B2SL

Attached is a copy of the paper presented at the
Midland, Michigan AIChE workshop in lieu of Art
Pier's proposed paper on Monsanto's PCB incinerator.

W. B. Papageorge

/bt

DSW 172522

STLCOPCB4047146

W. B. Papageorge - B2NA

November 6, 1972

PCB - RALSTON-PURINA

H. S. Bergen, B2SL

C. P. Cunningham, B2SA

J. F. Stapleton, B2SA

Mr. W. R. Corey
B2SL

The phosphate ester base Pydrauls in which the Ralston-Purina laboratory detected PCBs were blended at the J. F. Queeny plant after the system had been thoroughly flushed and chemically cleaned, with all absorbent materials such as gaskets and hoses replaced. The lots involved were also produced after those which, at one time, were questioned by General Motors and which we conclusively demonstrated did not contain PCBs. Status of our investigation is as follows:

Analyses by our laboratory of reserve samples of the four lots involved indicate no PCBs are present. Three of these samples were sent to Ralston-Purina. Their results concur that no PCBs are present.

One sample taken from a sealed drum from our warehouse was also found to be free of PCBs. Sealed drums representing all lots involved are available if we desire to do more analyses.

Two samples of Ralston-Purina material, one from Battle Creek, Michigan and the other from Mechanicsburg, Pennsylvania, were received by our laboratory. Our laboratory, using its normal analytical methodology and Ralston-Purina's method, found PCBs present at levels that indicate agreement with Ralston-Purina's original report. Our laboratory information indicates the samples were contaminated with old formula Pydrauls previously used at the Ralston-Purina locations.

I had called Dr. Hardin, as promised, on Thursday, October 26, to inform him of our reserve sample results and also to tell him the two laboratories were exchanging samples to confirm each other's findings. He agreed this was an excellent approach. I do not know how much information Dr. Hardin has received from his laboratory since then.

DSW 172523

STLCOPCB4047147

Mr. W. R. Corey

- 2 -

November 6, 1972

I recommend we call Dr. Hardin and review with him our total findings. If during the conversation it appears appropriate we should suggest that representatives of the two laboratories meet to review all of the available analytical data.

W. B. Papageorge

/bt

DSW 172524

STLCOPCB4047148

W. B. Papageorge - B2NA

November 6, 1972

PCB - Ralston-Purina

H. S. Bergen - B2SL
C. P. Cunningham - B2SA
J. P. Stapleton - B2SA
E. S. Tucker - T2F

Mr. W. R. Corey
B2SL

In my October 24 memorandum in which I listed Ralston-Purina laboratory data relating to PCBs detected in our phosphate ester base Pydrauls the results for the Mechanicsburg, Pennsylvania sample are reported erroneously.

The amounts detected should read:

868 ppm
977 ppm
1123 ppm

W. B. Papageorge

/bt

November 3, 1972

Dr. Te-Tse Chang
Solid State Materials Section
U. S. Department of Commerce
National Bureau of Standards
Washington, D.C. 20234

Dear Dr. Chang:

Your letter dated October 26 and addressed to Monsanto's Dr. Cumming Paton has been forwarded to me for response.

I regret I have no samples of chlorinated biphenyl isomers that I can share with you. As you know, Monsanto's polychlorinated biphenyls have always been commercial products consisting of mixtures of the many isomers that are possible.

I understand that Analabs, Inc., 80 Republic Drive, North Haven, Connecticut is offering some of the isomers in which you may have interest. I suggest you contact Mr. Ted Lynn.

I hope this information is useful to you and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/paj

cc: Dr. C. Paton

DSW 172526

STLCOPCB4047150

November 3, 1972

Dr. J. C. Thompson
The University of Texas
at Austin
Department of Physics
Austin, Texas 78712

Dear Dr. Thompson:

Your letter dated October 23 addressed to Monsanto's Dr. Cumming Paton requesting Aroclor samples has been forwarded to me for response.

We do not manufacture Aroclor 1245 but we do have Aroclor 1242 and Aroclor 1254. Will you advise which of the available Aroclors you are interested in on the enclosed Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have the Aroclor sample forwarded to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

bcc: C. Paton

DSW 172527

763
STLCOPCB4047151

November 3, 1972

Mr. William P. Ward
Assistant Staff Engineer
Plant & Environmental Engineering
General Motors Corporation
General Motors Technical Center
Warren, Michigan 48090

Dear Bill:

Jerry Davidson has informed me of your interest in design information relating to our PCB incinerator. I have enclosed a copy of the specifications drawn up for this unit and I have the following general comments to offer:

- a) Capacity - Incinerators of this type are normally rated for a given heat release. The nominal capacity of the Krummrich Plant incinerator is 1,250 lbs./hr. of Aroclor 1242. This corresponds to a heat release of 13M BTU/hr.
- b) Feed Types - This incinerator was designed for a full range of chlorinated and non-chlorinated products. Still bottoms, solvents of various sorts, material containing lime--virtually any flowable material--can be fed to this incinerator.

Because some of the feed material was to contain lime (up to 2%), the refractory had to be carefully chosen. The original refractory proved unsatisfactory. A high alumina (high cost) brick is now being considered for replacement following an extended test period. PCBs caused leaching of silica from original brick and thus caused premature failure.

DSW 172528

76

STLCOPCB4047152

November 3, 1972

- c) For HCl Gas Disposal - A scrubber system was installed. A venturi scrubber is used to assure wetting of particulates. A packed column following the venturi is used to scrub out the HCl.

The materials of construction for a system such as this become exotic (see the specification sheet).

- d) Oxidation Temperature - This must be coupled with residence time in the oxidizer. Both are needed for complete PCB destruction. Higher chlorination levels require higher temperatures for destruction.

The Krummrich incinerator is designed for 2800°F (for Aroclor 1260). Normal operating temperatures are in the range of 2200-2500°F. Residence time is about 2.5 seconds.

- e) Supplier of Equipment - John Zink Company, P. O. Box 7388, Tulsa, Oklahoma 74105 - Each incinerator is custom designed.

I hope you find this information useful. If I can help further, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: J. H. Davidson
C. Paton

DSW 172529

STLCOPCB4047153

Monsanto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE

11/3/72

TIME

11:15

SENDER'S ACCOUNT NO.

47-000-735.40

INDICATE DESIRED SERVICE → ☐ FULL RATE ☐ DAY LETTER ☐ NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

J. R. Durland - Tokyo

Re: PCB-type carbonless paper. Is there any indication this type paper was shipped to U.S. prior to February 1971 ban?

W. B. Papageorge
St. Louis, Mo.

cc: R. A. Stohr

761

V-IR
V. 7-64

for **BETTER** service - Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172530

STLCOPCB4047154

November 1, 1972

Mr. Sham Chaudhry
Food Testing Laboratory
Department of Public Health
Provincial Laboratories
Regina, Saskatchewan
Canada

Dear Mr. Chaudhry:

I have received your letter of October 20 requesting sample quantities of Aroclors. Enclosed is a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have samples of Aroclor 1242 and Aroclor 1254 forwarded to you. I regret I cannot supply a sample of Aroclor 1260 but this product is no longer being manufactured and our supply of samples has been depleted.

If I can be of further service please let me know.

Very truly yours,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172531

710
STLCOPCB4047155

OCT., 1972

DSW 172532

STLCOPCB4047156

W. B. Papageorge - B2NA

October 31, 1972

PCBs - "KNOWING LOSSES"

H. S. Bergen - E2SL

W. R. Corey - E2SL

P. S. Park - B2NA

J. R. Savage - E2SL

J. P. Stapleton - B2SA

File

The expression "Knowing Losses" is increasingly being applied to describe certain PCB losses from any source. Since it is a new expression, questions relating to its meaning continue to arise.

The term appears to have originated within EPA-Washington, probably with Dr. John Buckley. It is used by Dr. Buckley to describe those PCB losses directly attributable to current known sources, for example, our manufacturing activities, losses from leaky drums, escape from faulty equipment, etc. In other words, "knowingly" discharged.

The term "Unknowing Losses" is used to describe PCBs which are present as the result of losses which occurred in the past and have left a PCB residue which continues to be detectable.

The EPA has accepted the presence of residual PCBs recognizing they will be detectable for a long time and is primarily interested in controlling current losses.

W. B. Papageorge

/bt

DSW 172533

757
STLCOPCB4047157

bcc: D. E. Roush

Attention D. Roush: Will you please arrange to have samples of Therminol 55 and Therminol 66 forwarded to Mr. Hughes.

October 31, 1972

Mr. Donald L. Hughes
Chemical Department
WARF Institute, Inc.
P. O. Box 2599
506 North Walnut Street
Madison, Wisconsin 53701

Dear Mr. Hughes:

I have received your letter of October 26 requesting samples of Aroclor 1016 and Therminol fluids. I am enclosing a Request for Sample Quantity of Product Containing PCBs. If you will return the completed form to me I will make arrangements to have a sample of Aroclor 1016 forwarded to you. Samples of Therminol 55 and Therminol 66 are being sent to you under separate cover.

I have also enclosed a copy of Monsanto Technical Bulletin O/PL-306A, a table showing the typical properties of Aroclor 1016 and technical data on Therminol 55 and Therminol 66. I am sorry but at present there is no methodology available for the determination of the presence of Therminol 55 or Therminol 66 in food products.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172534

757

STLCOPCB4047158

October 31, 1972

Mr. Thomas L. Broadwell
South Carolina Pollution
Control Authority
Owen Building
1321 Lady Street
P. O. Box 11628
Columbia, South Carolina 29211

Dear Mr. Broadwell:

I regret I cannot send you a sample of Aroclor 5442 as requested in your letter dated October 24 but this material is no longer manufactured and our supply of samples has been depleted.

I hope the lack of this material does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172535

756

STLCOPCB4047159

October 30, 1972

Mr. Ray L. Francis, Supervisor
Materials Laboratories
Department 16124
Burroughs Corporation
41100 Plymouth Road
Plymouth, Michigan 48170

Dear Mr. Francis:

As requested in your letter of October 25, I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A. This is the only bulletin currently available on Aroclors. I hope you find it useful and informative.

If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

7

DSW 172536

744

STLCOPCB4047160

October 30, 1972

Mr. John H. Picciocchi
Gerard Kluyskens Company, Inc.
295 Fifth Avenue
New York, New York 10016

Dear Mr. Picciocchi:

I have received your letter of October 26 and regret to inform you that Monsanto no longer manufactures Aroclors to meet the needs of your customer. I am sorry I cannot be of any help in this matter.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

DSW 172537

153

STLCOPCB4047161

Monranto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE

10/30

TIME

3:15

SENDER'S ACCOUNT NO.

43-000-735.40

INDICATE DESIRED SERVICE → ☐ FULL RATE ☐ DAY LETTER ☐ NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

J. Haggart - Brussels

Re: PCB Conference Utrecht September 20. Dr. J. H. Koeman referred to Canadian PCB-Salmon-Mink studies. Will you get names of researchers and laboratory doing the work.

W. B. Papageorge
St. Louis, Mo.

cc: J. F. Stapleton
R. A. Stohr

751

-IR
Rev. 7-64

for **BETTER** service - Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172538

STLCOPCB4047162

October 30, 1972

Mr. W. Ward
Plant Environmental Engineering Section
Environmental Activities Staff Building
General Motors Technical Center
12 Mile Road at Mound Road
Warren, Michigan 48090

Dear Bill:

Enclosed is the methodology for the determination of polychlorinated biphenyls we discussed during our telephone conversation last Friday. I hope you find it useful and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

bcc: J. H. Davidson
W. Slowikowski



DSW 172539

750

STLCOPCB4047163

W. B. Papageorge - St. Louis General Offices

October 27, 1972

AROCLOR 1254 - NEW ORLEANS
CUSTOMS LABORATORY

Mr. M. S. McCauley
1920

Aroclor 1254 is still manufactured and marketed by
Monsanto. Selling prices are as follows:

Bulk Tank Car	\$0.195 per pound
Bulk Tank Truck	0.197 " "
55 Gallon Drum CL/TL	0.230 " "
55 Gallon Drum LTL	0.250 " "
5 Gallon Drum	0.355 " "

The greatest aggregate quantity sold is by 55 gallon
drums in truckload quantities at \$0.230 per pound.

W. B. Papageorge

/bt

DSW 172540

749

STLCOPCB4047164

October 27, 1972

Dr. E. Kimmel
Temple Division
Big Three Industries
2901 Hamilton Boulevard
South Plainfield, N.J. 07080

Dear Dr. Kimmel:

Attached are copies of the available data relating
to toxicity studies with Aroclor 1221.

I hope you find this information useful. If I
can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

DSW 172541

798
STLCOPCB4047165

AROCLOR 1221

Acute Oral LD₅₀ - Rats - Mixed Sex - Undiluted.
3980 mg/kg. Classed as slightly toxic.

Acute Skin Absorption Minimal Lethal Dose - Rabbit -
female - Undiluted. >2000 <3160 mg/kg.
Classed as slightly toxic.

20 Day Subacute Dermal - Rabbit - Corn Oil Solution
(12.5% w/v) LD₅₀ - 250 mg/kg/day.

DSW 172542

STLCOPCB4047166

October 26, 1972

Dr. Helene C. Cecil
U. S. Department of Agriculture
Agricultural Research Center East
Building 161
Beltsville, Maryland 20705

Dear Dr. Cecil:

Attached is the PCB Sample Release form we discussed. After I receive the completed form from you, I will make arrangement to have the sample you requested forwarded to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

DSW 172543

247

STLCOPCB4047167

October 25, 1972

Ms. Diane M. Johnson
702-B Hamlin Hall
Oakland University
Rochester, Michigan 48063

Dear Ms. Johnson:

Very little has been reported relating to studies for the removal of PCBs from the environment.

Dr. Hutzinger, in New Brunswick, Canada, has studied the effect of ultraviolet light on PCBs. I have enclosed a copy of the abstract of a paper presented at the August 1972 meeting of the American Chemical Society.

The Japanese have apparently studied decomposition using Cobalt-60. I have enclosed a copy of a clipping referring to this work.

We at Monsanto have studied the degradation of PCBs using a semicontinuous activated sludge system similar to those used in many municipal waste treatment plants and have established that PCBs do degrade; those with lower chlorine content degrading more rapidly than those with the higher chlorine isomers.

I have enclosed a copy of a status report we made to the Interdepartmental Task Force on PCBs in Washington, D.C. on May 15. I hope you find it interesting.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W

DSW 172544

746

STLCOPCB4047168

W. B. Papageorge - B2NA

October 25, 1972

PCB - OFF-SHORE FACILITIES

Dr. C. E. Davies' inquiry

Mr. K. W. Easley
1920

The use of PCB fire resistant heat transfer fluids on off-shore facilities in the Gulf of Mexico is not as widespread as I thought.

Five companies operated 15 systems ranging in size from 400 gallons to 4500 gallons, for a total of 20,000 gallons. Makeup supplied was approximately 20% per year. Of the 15 systems, six have converted to non-PCB fluids.

W. B. Papageorge

/bt

DSW 172545

745

STLCOPCB4047169

W. B. Papageorge - General Offices - B2NA

October 24, 1972

Bulletin IC/PC-30
Santo-Res 21

Mr. O. R. French - B1NB

I have reviewed the new bulletin on Santo-Res 21 (IC/PC-30), and I approve the proposed wording as it relates to environmental considerations.

W. B. Papageorge

WBP/tgl

DSW 172546

744

STLCOPCB4047170

W. B. Papageorge - General Offices - B2NA

October 24, 1972

PCB - Ralston-Purina

C. P. Cunningham	B2SA
H. S. Bergen	B2SL
J. F. Stapleton	B2SA
E. S. Tucker	T2F

Mr. W. R. Corey - B2SL

Dr. C. A. Hardin, Vice Chairman of the Board, Ralston-Purina, called yesterday, October 23, at 4:15 p.m. to discuss the Ralston-Purina laboratory data indicating the presence of PCB's in our phosphate ester base Pydraul.

Their results are as follows:

<u>Fluid</u>	<u>Lot Number</u>	<u>Shipped to:</u>	<u>PCB (ppm)</u>
Pydraul 90E	QB-14720	Cincinnati, Ohio	4.9 10.01
Pydraul 90E	QB-13800	Battle Creek, Michigan	52.5 44.9
Pydraul 230C	QB-10120 (Our record shows QB- 10420)	Mechanicsburg, Penn.	8.68 9.77 11.23
Pydraul 230C	QB-13100	Sparks, Nevada	0.05
Pydraul 90E	QB-13800	Davenport, Iowa	2.9 5.0

Samples of the first three lots listed were sent by Ralston-Purina to a consulting laboratory for confirmation. Mr. Hardin did not identify the laboratory.

Reserve samples are being analyzed by our laboratory. Preliminary results are expected today. Confirmation is expected in 2-3 days.

Mr. Hardin requested we share our laboratory data with him. I indicated that we would discuss our information with him, and if discrepancies existed, we would review sampling, analytical methodology, quantification, etc., with his laboratory representatives.

W. B. Papageorge

WBP/tgl

DSW 172547

743
STLCOPCB4047171

October 24, 1972

Dr. D. L. Grant
Pesticide Section
Health Protection Branch
Department of National Health
and Welfare
Tunney's Pasture
Ottawa, Ontario, KIA 0L2
CANADA

Dear Dr. Grant:

Enclosed are copies of data sheets and a chromatogram describing Aroclor 1016. You will note that this PCB mixture is similar to Aroclor 1242, which it has replaced as a capacitor dielectric fluid, except that the homologs representing 5 chlorines and higher per bi-phenyl group have been reduced from about 9% to about 1% or less.

I have also enclosed a sample request form. Will you have the form completed and returned to me so that I can order your sample for you?

I have asked Elmer P. Wheeler of our Medical Department to forward details of the experimental work to obtain the Oral LD50 for Aroclor 1254. You should be hearing from him shortly.

I hope this information is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl
enclosures
Bcc: E. P. Wheeler - A2SA

DSW 172548

STLCOPCB4047172

October 24, 1972

Dr. A. Pozefsky
General Electric Company
Industrial & Power Capacitor
Prods. Department
John Street
Hudson Falls, New York 12839

Dear Al;

Al Salazar called asking for improved copies of the chromatograms and indicated timing was getting critical. I have forwarded copies directly to Al which I hope are usable. I included a graph for Aroclor 1016 in the set.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: A. M. Salazar
National Electrical Manufacturers Assoc.
155 East 44th Street
New York, New York 10017

DSW 172549

741

STLCOPCB4047173

October 24, 1972

Mr. Ralph Lehman, M-3
ITT
320 Park Avenue
New York, New York 10022

Dear Mr. Lehman,

Enclosed are copies of the PCB reports you requested.

I hope you find them both interesting and informative. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X, 2

DSW 172550

7-40

STLCOPCB4047174

W. B. Papageorge - B2NA

October 23, 1972

PCB - RALSTON-PURINA

W. R. Corey - B2SL

J. F. Stapleton - B2SA

Mr. C. P. Cunningham

On Friday, October 20, W. R. Corey, W. B. Papageorge and P. S. Park met with the following Ralston-Purina representatives: Dr. C. A. Hardin, Vice Chairman of the Board; Mr. M. C. Bahle, Assistant to the Chairman of the Board; and Mr. J. A. Fraser, General Counsel.

At the beginning of the discussion, Dr. Hardin did not appear to have a very good understanding of PCBs or their characteristics. Our discussion, together with the reading of material which we left with him, should help him to put the matter in proper perspective.

Wink Corey re-emphasized to Dr. Hardin that Monsanto will cooperate with Ralston-Purina concerning its PCB problems to the extent that legal considerations do not require us to do otherwise.

Monsanto's general worldwide program of restricted PCB sales to approved dielectric customers was outlined. The possibility that exceptions to this policy could occur was discussed. No customer names or specific situations were revealed. In response to Dr. Hardin's request for a list of the dielectric customers, he was informed that Monsanto's policy prohibited the sharing of this type of information with anyone, including governmental regulatory agencies. This response did not appear to bother him. During this part of the discussion Dr. Hardin asked if the number of customers was nearer 30, 300 or 3,000. He was told it was near 30. A copy of the General Electric comments filed with the Federal Interdepartmental Task Force on PCBs, which was left with Dr. Hardin, did contain the names of six or eight transformer manufacturers who use askarel fluid.

Mr. Fraser asked what assurances we could give relating to the control of PCBs by our customers and in turn their customers. We suggested that representatives of the capacitor and transformer industries would be better qualified to speak for the industry. In addition, we recommended that the American National Standards Institute (ANSI) Committee C-107, which is addressing itself to this problem, be contacted.

DSW 172551

739

STLCOPCB4047175

October 23, 1972

Mr. Fraser asked if Monsanto had a program for helping customers with PCB problems. He was reminded that legal considerations place some limitations on our efforts but we tried to be helpful wherever possible. Mr. Fraser indicated that he believed Monsanto's assistance to Ralston-Purina in the Maine poultry contamination incident was inadequate.

Dr. Hardin is extremely interested in preventing a repeat of the Maine incident in any of Ralston-Purina's operations worldwide. We reminded him that the PCB problem is worldwide and we reviewed with him the problem of imports to this country, the evidence of PCB being produced by a small U.S. chemical firm and the names and locations of the current foreign producers. We shared with Dr. Hardin our estimate that Bayer in Germany was following Monsanto's program and is about one year behind us; Prodelac, representing Frogil and Kuhlmann in France, is only recently taking steps to control PCBs; and the Italian and Spanish producers have shown no concern for the problem.

Dr. Hardin expressed his personal opinion that PCBs should be totally banned and asked if any work is underway for the development of alternative dielectric fluids. We assured him that considerable research has been and is being conducted but at present no acceptable substitute has been found. We also reminded him that if a fluid were found to be suitable it would take about three years before all of the product development, environmental impact, and toxicity studies were completed and the product was finally accepted.

Dr. Hardin indicated that Ralston-Purina was developing a very extensive program for evaluating its operations and its suppliers' operations for effective control of PCBs and wanted to know if Monsanto would be willing to help in the development of this program. We suggested that after Ralston-Purina representatives had reviewed the reading material we had given them that they inform us of any remaining specific needs and we would seriously consider their request, subject to the limitation outlined earlier.

At the end of our discussion Dr. Hardin informed us that his laboratory had tentatively identified PCBs (300 ppm) in a sample of our new Pydraul (phosphate ester base). We assured him that no PCBs are used in the formulation

Mr. C. P. Cunningham

- 3 -

October 23, 1972

and the plants involved in the production of the ingredients and in the final blending do not have PCBs present. Dr. Hardin agreed that the laboratory should confirm its findings. We will follow-up with Ralston-Purina research people on this.

Copies of the following documents were left with Dr. Hardin:

Interdepartmental Task Force Report on PCBs

U.S. Department of Agriculture PCB Report

U.S. Tariff Commission 1971 Import Summary

Monsanto PCB Production and Sales Summary

Proposed FDA PCB Regulation

Monsanto Dielectric Customer Hold-Harmless Agreement

NIPCC Report on Electrical Insulating Fluids

G.E. and Westinghouse Reports on PCBs in Electrical Equipment

W. B. Papageorge

P. S. Park

/bt

Monsanto

OUTGOING MESSAGE BLANK

TELECOMMUNICATIONS SYSTEM

DATE

10/23

TIME

12:45

SENDER'S ACCOUNT NO.

27-000-735.40

INDICATE DESIRED SERVICE → ☐ FULL RATE- ☐ DAY LETTER ☐ NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

J. R. DURLAND - TOKYO (MITSUBISHI)

MONSANTO WASHINGTON OFFICE HAS BEEN REQUESTED BY GOVERNMENT
REPRESENTATIVE FOR ANY INFORMATION WE HAVE ON PCB-TYPE CARBONLESS
COPY PAPER SHIPPED FROM JAPAN TO U.S. CAN YOUR OFFICE HELP?

W. B. PAPAGEORGE
ST. LOUIS

bcc: W. R. Corey
K. W. Easley

IN-IR
REV. 7-64

for BETTER service - Forward to transmitting operator IMMEDIATELY after preparation.

738

DSW 172554

STLCOPCB4047178

October 20, 1972

Mr. Edward Martin
Ralston Purina Company
900 Checkerboard Square Plaza
St. Louis, Missouri 63188

Dear Mr. Martin:

Enclosed is the form I discussed with you over the telephone. Will you have it completed and returned to me so that I may send you the sample you requested.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172555

737

STLCOPCB4047179

October 20, 1972

Mr. A. M. Salazar
National Electrical Manufacturers Assoc.
155 East 44th Street
New York, New York 10017

Dear Al:

Enclosed is a copy of the chart on Aroclor 1016
to be added to the charts I sent you on October 13.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Dr. A. Pozefsky
General Electric

Mr. E. L. Raab
General Electric

736

DSW 172556

STLCOPCB4047180

October 20, 1972

Mr. Arthur McB. Block
Puerto Rico Nuclear Center
University of Puerto Rico
U. S. Atomic Energy Commission
Caparra Heights Station
San Juan, Puerto Rico 00935

Dear Mr. Block:

I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254 as requested in your letter of October 5. I regret I cannot provide samples of Aroclor 1232 or Aroclor 1248 but these products are no longer being manufactured and our supplies of samples have been depleted. I hope the lack of these materials does not seriously inconvenience you. There is no charge for the samples I am sending.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

T-1242
1232

S/L 1449

DSW 172557

735

STLCOPCB4047181

October 20, 1972

Dr. M. D. Stonard
Medical Research Council
Toxicology Unit
Woodmansterne Road
Carshalton, Surrey
England

Dear Dr. Stonard:

I am forwarding under separate cover the samples
of Aroclor 1016 and Aroclor 1254 that you
requested in your letter of October 5, 1972.

If I can be of further service, please let
me know.

Very truly yours,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016 S/n 1448
1254

DSW 172558

734

STLCOPCB4047182

October 16, 1972

Mr. Howard Mumm
Orchard Corporation
1154 Reco Avenue
Crestwood, Missouri 63126

Dear Mr. Mumm:

As you have requested I have made arrangements
to have a one gallon sample of Inerteen 54201 CM
forwarded to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

*Inerteen 54201
CM \$/n 1447*

DSW 172559

733

STLCOPCB4047183

October 13, 1972

Mr. G. W. Laver
Pesticide Section
Department of National
Health and Welfare
Health Protection Branch
Tunney's Pasture
Ottawa, Ontario

Dear Mr. Laver:

Responding to your letter of October 5, 1972,
I regret to inform you that the Aroclors for
which you requested samples are no longer manu-
factured and our supply of samples has been
depleted.

Enclosed is a copy of Monsanto Technical Bulletin
O/PL-306A describing Aroclor 1242 and Aroclor
1254. If you feel samples of these products will
fulfill your needs, please let me know and I will
be happy to send them to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

T

DSW 172560

732

STLCOPCB4047184

October 13, 1972

Mr. Stephen A. Gunning
c/o Harriet R. Williams
Chairman, Dept. of Chemistry
Delaware State College
Dover, Delaware 19901

Dear Mr. Gunning:

I am sending under separate cover samples of
Aroclor 1242 and Aroclor 1254 as you requested
in your letter.

I have enclosed a copy of Monsanto's methodology
for the determination of polychlorinated biphenyls
which I hope you find interesting and informative.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

A-1242 }
1254 } = M 1442

G

DSW 172561

731

STLCOPCB4047185

October 13, 1972

Mr. W. M. Russell
12552 Postgrove Drive
St. Louis, Missouri 63141

Dear Bill:

I am sending under separate cover samples of
Aroclor 1242 and Aroclor 1254 as you requested.

Enclosed is a copy of Bulletin O/PL-306A which
describes these materials. Also enclosed is
the technical information on the Calutron Fluori-
meter which you had left with me.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

7.
A 1242 } S/N 1445
A 1254 }

DSW 172562

730

STLCOPCB4047186

October 13, 1972

Mr. A. M. Salazar
National Electrical Manufacturers Assoc.
155 East 44th Street
New York, New York 10017

Dear Al:

Enclosed are copies of the charts which I offered to send you to replace the charts that we had included in the draft of the C-107 Committee guidelines.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Dr. A. Pozefsky
General Electric Company
Industrial & Power Capacitor
Prods. Department
John Street
Hudson Falls, New York 12839

Mr. E. L. Raab
Chemical & Processes Section
General Electric Company
100 Woodlawn Avenue
Pittsfield, Mass. 01201

DSW 172563

729

STLCOPCB4047187

W. B. Papageorge - B2NA

October 13, 1972

PCB/PCT ACTION PLAN
CERTIFICATIONS

Mr. W. R. Corey

As requested, I have consolidated the requests for certification and the responses relating to the PCB/PCT Implementation Program dated December 27, 1971.

Responding to Mr. C. P. Cunningham's interest in Section III, page 4, certifications were obtained from W. S. Clark and T. L. Gossage, and in Section III, page 6 certifications were obtained from W. S. Clark, P. J. Marsh, D. Goodwillie and E. Greene.

Since the certifications were received the following key modifications have occurred:

1. The sale of PCB-type Pydrauls to the German mine industry is scheduled to terminate on November 30, 1972. One of the formulations involved also contains PCT and is included in this exception.
2. The sale of Therminol FR-1 to Goodyear Tire and Rubber Company is now planned for termination on November 7, 1972.
3. Sales of dielectric fluids to Eastern Europe are made under special requirements identical to those used for other European customers.
4. The heat transfer system located at the J. F. Queeny Plant and mentioned in J. R. Savage's certification was converted to a non-PCB fluid in early August, 1972.

W. B. Papageorge

/bt

Enclosure \

WBP's memo requesting certification?
Approved.

DSW 172564

72-8

STLCOPCB4047188

W. B. Papageorge - E2NA

October 13, 1972

PCB/PCT PYDRAULS
CANADA

H. S. Bergen - E2CL
H. F. Dixon - 5090
D. Goodwillie - 5090
T. L. Gossage - E2CL
C. Paton - E2EC

Mr. W. R. Corey
E2CL

I discussed with Dave Goodwillie the marketing of Pydrauls in Canada and he reviewed with me the program he has followed. Key points are as follows:

1. Shipments to Canadian customers are made either from inventory in Canada or direct from the U.S.
2. All Pydrauls sold in Canada through February, 1971 were PCB type.
3. In January, 1971, at a Pydraul sales policy meeting in St. Louis, Dave was informed of the reformulation program and was told not to return the old formula material to the U.S. but to continue to sell in Canada.
4. Also in January, 1971, Dave received a memo from Norm Johnson describing reformulation schedules and suggesting that all existing inventories be sold in the next 60 days.
5. Beginning in mid-1971 Pydrauls shipped from the U.S. directly to Canadian customers were the PCT type. Pydrauls sold from Canadian inventory continued to be PCB type.
6. The Canadian inventory of PCB type Pydrauls was finally depleted in November, 1971. PCT type Pydrauls were being added to the Canadian inventory.
7. Shipments of PCT type Pydrauls were terminated in June, 1972.
8. Dave also stated that the Pydraul sold to Ralston-Purina, Canada, in 1971 was Pydraul 150 (PCB), not Pydraul 150A (PCT) as originally reported.

W. B. Papageorge

/bt

DSW 172565

727

STLCOPCB4047189

W. B. Papageorge - World Headquarters

October 12, 1972

Mr. J. N. Haggart
5040

Enclosed are two copies of PCB Task Force Report.
Will you please forward one copy to Professor
H. van Genderen at Utrecht.

W. B. Papageorge

/bt

Enclosure

DSW 172566

004
STLCOPCB4047190

W. B. Papageorge - B2NA

October 11, 1972

J. G. Edmiston - 5110

PHOSTANE MDP
IMPERIAL OIL

Mr. H. F. Dixon
5090

I have reviewed possible disposal methods for this material with Dr. Martin Farrar, Director of Research, Plasticizers and he informed me that the description of the material indicates hydrolysis has occurred resulting in deterioration.

This material cannot be incinerated in any practical manner and we do not know of any economical way to treat it chemically to convert it into a totally innocuous material.

Since it is not a highly toxic substance it appears that the best disposal method is by burial in a properly-operated authorized landfill.

W. B. Papageorge

/bt

W. B. Papageorge - B2NA

October 11, 1972

PYDRAULS - RALSTON-PURINA

Mr. W. R. Corey

The information you requested is as follows:

Santicizers Used in Pydraul Formulations

Santicizer 140 is cresyl diphenyl phosphate

Santicizer 141 is 2-ethylhexyl diphenyl phosphate

I have accordingly marked the Formulation Data Sheet which is attached.

Pydraul AC-A to Ralston-Purina, Canada

The drum of Pydraul AC-A shipped to Canada in May, 1972 is identified as coming from lot QA-380 manufactured at the Queeny Plant on August 12, 1971 with the following components: 56,000 pounds A-5432, 48,870 pounds Santicizer 140 and Blue Dye. A reserve sample is available in our laboratory. A copy of the production record is being sent to me.

Pydraul Reformulation Program

Phase-out of PCB formulations began in June, 1970 with PCT replacing PCB. By December 1970 80% of the reformulations were completed, Factory Mutual approved and were being sold. Remaining 20% were phased-out by April, 1971 in the U.S., U.K. and Canada. Sales of PCB-based Pydrauls in Continental Europe and other world markets were terminated on January 31, 1972.

Phase-out of the PCT formulations began in March, 1972 with sales terminated worldwide on June 30, 1972.

You are aware of the single exception, the German mine industry application, which is planned for termination on November 30, 1972.

PCB Content of PCT-Base Pydrauls

In December, 1971, Jerry Davidson informed Mr. Bill McCollister, Ralston-Purina that the reformulated Pydrauls contained minor amounts (0.1% to 0.3%) of PCBs as a contaminant.

W. B. Papageorge

DSW 172568

724

STLCOPCB4047192

October 11, 1972

Mr. Terry F. Bidleman
Department of Food and
Resource Chemistry
Woodward Hall
University of Rhode Island
Kingston, R.I. 02881

Dear Mr. Bidleman:

I am forwarding under separate cover a sample of Aroclor 1242 as you requested in your letter to Monsanto's Dr. E. S. Tucker. I regret I cannot send a sample of Aroclor 1248 but this material is no longer manufactured and our supply of samples has been depleted.

I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A and an excerpt from the Encyclopedia of Chemical Technology on Chlorinated Biphenyl and Related Compounds which I hope you find interesting and informative.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

cc: Dr. E. S. Tucker

- - 1242 S. 27 1443
T. E.

DSW 172569

723

STLCOPCB4047193

W. B. Papageorge - B2NA

October 11, 1972

Messrs.

H. S. Bergen	- B2SL
W. R. Corey	- B2SL
J. R. Durland	- 5260
K. W. Easley	- 1920
D. Goodwillie	- 5090
T. L. Gossage	- B2SL
E. Greene	- A2NA
E. V. John	- B1NC
W. R. Richard	- T3A
J. F. Stapleton	- B2SA
E. P. Wheeler	- A2SA

Attached are copies of papers associated with the Organisation for Economic Cooperation and Development (OECD) meeting which convened in Paris on October 3.

These papers are highly restricted at this time and should be used only within Monsanto.

W. B. Papageorge

/bt

Attachment

DSW 172570

722

STLCOPCB4047194

W. B. Papageorge - B2NA

October 11, 1972

H. S. Bergen - B2SL
K. W. Easley - 1920
J. P. Stapleton - B2SA

Mr. W. R. Corey
B2SL

The attached memorandum summarizes a special OECD meeting held in Paris primarily because of the persistence of Dr. C. E. Davies, CEQ, who in turn was responding to our repeated requests for import information and control relating to PCBs.

It appears that the French producers are now responding. The Italian and Spanish delegations apparently do not believe they have a problem.

W. B. Papageorge

/bt

Attachment

DSW 172571

721

STLCOPCB4047195

October 9, 1972

Dr. I. T. Diamond
115 Sociology-Psychology
Duke University
Durham, North Carolina 27706

Dear Dr. Diamond:

I have received your Purchase Order dated September 20 requesting a one pound bottle of Aroclor 5460 and apologize for the delay in responding.

The manufacture of Aroclor 5460 has been discontinued and is no longer available commercially. However, I have made arrangements to have a one pound sample of Aroclor 5460 forwarded to you under separate cover. I hope this sample will fulfill your needs. There is no change for this sample.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A 52160
1444

DSW 172572

719

STLCOPCB4047196

W. B. Papageorge - B2NA

October 6, 1972

PYDRAULS - RALSTON-PURINA

W. R. Corey - B2SL
J. H. Davidson - B2SF
C. Paton - B2SC
J. F. Stapleton - B2SA
R. A. Stohr - A3SB

Mr. H. S. Bergen
B2SL

As requested I have attempted to summarize all known information relating to Ralston-Purina's recent interest in Monsanto's Pydrauls.

Ralston-Purina's concern apparently was first stimulated by their involvement in the North Carolina fishmeal incident last summer and became greater following a PCB-poultry feed incident in Maine in February, 1972.

Jerry Davidson has been discussing Pydrauls with Messrs. Bill McCollister and Paul Brauch of Ralston-Purina's Engineering Department. A memorandum to File summarizing activities up to April, 1972 was written by Jerry (a copy is attached). In addition to the offer to incinerate returned used Pydraul fluid free of charge, Jerry also offered to accept with full credit any unused, unopened drums. Since April six Ralston-Purina plants have returned material.

In January, 1972 Paul Brauch had requested samples of our new phosphate ester Pydrauls (Pydraul 90E, Pydraul 230C and Pydraul 312C) indicating that tests would be conducted. On October 4 Jerry was informed that feeding studies were conducted with chickens and these Pydrauls were determined to be non-toxic. Paul Brauch asked if they could use Pydraul 30E. George Levinskis was consulted and recommended that because of our demyelination studies that Pydraul 30E not be used in feed applications. Jerry was asked if Pydraul 29ELT could be used and he advised Mr. Brauch it should not be used. During this conversation Mr. Brauch informed Jerry that Mr. Cliff Harden, former Secretary of Agriculture and presently Vice President, Ralston-Purina, was personally interested in Monsanto's Pydrauls, particularly the formulations containing PCBs, and was very disturbed that Monsanto had not offered free replacement fluid. Mr. Brauch indicated Mr. Hardin planned to discuss this matter with Monsanto's upper management.

Also, on October 4 I received a call from Dr. M. Cover, Head, Veterinary Services, Ralston-Purina, who asked me what the letters "LT" in Pydraul 29ELT meant. I told him I thought they indicated "Low Temperature" but I would confirm this understanding and call him back. I contacted Jerry Davidson who assured me LT referred to "Low Temperature." When I called Dr. Cover back as promised, I attempted to get more information from him regarding his interest in Pydraul 29ELT but he was not responsive. He would only indicate they were reviewing all of our new Pydrauls.

DSW 172573

718

STLCOPCB4047197

Mr. H. S. Bergen
October 6, 1972
Page 2

Back in March, 1972 Ralston-Purina's legal representatives contacted Rod Harris to complain that Monsanto's representatives were not cooperating in determining the source of PCB in the Maine poultry incident. Ralston-Purina suspected that hydraulic fluid from a front end pay-loader was the source of PCB and requested detailed information on analytical methodology and Pydraul formulations.

In early April Dick Stohr and Scott Tucker met with Ralston-Purina representatives at their headquarters and informed them that the old Pydraul fluids were mixtures of PCB, phosphate esters and mineral oil. Although we had no specific analytical methodology, Scott discussed possible approaches for determining phosphate esters in animal feed samples. We have received no further information from Ralston-Purina relating to the Maine incident.

Ralston-Purina has purchased relatively small quantities of Pydrauls. Twenty locations are involved with 1971 purchases of 18,000 pounds and 1972 purchases of 10,500 pounds. Most of the applications are in air compressors.

In summary, Ralston-Purina has a program for replacing the old Pydraul fluids; has evaluated Pydraul 90E, Pydraul 230C and Pydraul 312C and found them acceptable; six of their plants have returned old Pydraul fluids; nine have ordered the new Pydrauls; we have advised against the use of Pydraul 30E and Pydraul 29ELT; Mr. Hardin believes Monsanto should supply replacement fluids as well as disposal service and we have no information relating to the source of PCB in the Maine poultry incident.

W. B. Papageorge

/bt

W. B. Papageorge, B2NA

October 6, 1972

W. R. Corey - B2SL

Mr. J. E. Maurer
ELSA

Attached is the signed agreement which establishes a formal consulting arrangement between Monsanto and Professor G. Fred Lee.

Note Professor Lee's comment in his transmittal letter referring to potential conflicts with an existing arrangement with Procter and Gamble. It appears that he will have to decide on a case basis when a specific chemical under discussion will lead to conflict and inform Monsanto that he cannot consult on that chemical.

W. B. Papageorge

/bt

Attachment

DSW 172575

717

STLCOPCB4047199

W. B. Papageorge - B2NA

October 6, 1972

W. R. Corey - B2SL

J. E. Maurer - E1SA

Messrs.

C. F. Callis - N1A
I. D. Hill - N1A
D. B. Hosmer - E1SF
J. S. Metcalf - E1SF
W. R. Richard - T3A
C. W. Roos - B2SA
W. F. Symes - N1A
E. P. Wheeler - A2SA

Attached is a copy of an agreement MICC has with
Professor G. Fred Lee.

You are encouraged to utilize, whenever appropriate,
Professor Lee's services as described in the
agreement.

W. B. Papageorge

/bt

Attachment

DSW 172576

716

STLCOPCB4047200

October 5, 1972

Mr. E. T. Wulfsberg
American Paper Institute
1619 Massachusetts Avenue, N.W.
Washington, D.C. 20036

Dear Mr. Wulfsberg:

Enclosed are three copies of the report you requested.

I hope you find this information both interesting and useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X - 3 ea

DSW 172577

714

STLCOPCB4047201

October 5, 1972

Mr. James Anderson
Honeywell, Inc.
Mail Zone R2912
2600 Ridgeway
Minneapolis, Minn. 55413

Dear Mr. Anderson:

Monsanto's Dr. C. Paton informed me of your desire to sell used Pydraul 312 drained from diecast machines.

As you know, Pydraul 312 contains polychlorinated biphenyls (PCBs) as major fire resistant components. PCBs have been the subject of considerable interest regarding their build-up and impact on the environment. Interest in PCBs by various governmental agencies has been considerable and has resulted in the formation of an interdepartmental task force to evaluate PCBs. In May, 1972 the task force issued a report summarizing the PCB study. I have enclosed a copy in the event you have not seen it.

In our desire to reduce the entry of PCBs into the environment we discontinued the sale of Pydraul 312 and have now replaced it with a fluid which contains no chlorinated hydrocarbons. This reformulation of Pydrauls is well-known to all potential users of fire resistant hydraulic fluids and I personally doubt that any would be interested in the purchase of your material.

With all this concern over PCBs and the environment I strongly recommend that you dispose of the used Pydraul 312 by incineration in a unit designed to reach the high temperatures required. You may wish to consider sending your material to Monsanto for disposal. The cost of disposal is five cents per pound received. This does not include

X

DSW 172578

7/3

STLCOPCB4047202

Mr. James Anderson
October 5, 1972
Page 2

the cost of freight or the cost of the containers which are paid for by the shipper. If you are interested in Monsanto's disposal service please let me know so that we may discuss further details with you.

I hope this information is useful to you and if I can be of further help, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: C. Paton

bcc: J. H. Davidson - B2SF
P. W. Gann - B2SE

W. B. Papageorge - B2NA

October 5, 1972

CONSULTANTS

Memo, HSB dated 10/3/72

Mr. H. S. Bergen
B2SL

A. J. Koenig	- B2SK
G. G. Kosup	- B2SL
C. Paton	- B2SC
W. R. Richard	- T3A
J. R. Savage	- B2SL
F. G. Sutton	- B2SD
B. G. Tibbetts	- B2SE
D. Tippey	- 1670

We recently signed an agreement with a consultant whose services will be available to your group. You may wish to add his name to the consultant list you are preparing:

1. Consultant's Name:

Dr. G. Fred Lee
Water Chemistry Laboratory
University of Wisconsin
Madison, Wisconsin

2. Conditions of Consultation

Evaluation of impact of industrial chemicals on the environment. Available for ten consulting days per year. Monsanto obligated for one day.

3. Length of Contract Period

October 1, 1972 through September 30, 1973

4. Cost of Consulting Agreement

\$300 per day, plus travel expenses, or
\$40 per hour in office

W. B. Papageorge

/bt

DSW 172580

711

STLCOPCB4047204

W. B. Papageorge, DEWA

October 5, 1972

PCB/FCT PYDRAULS
MONSANTO EUROPE

Mr. H. E. Bergen
DESL

W. R. Corey - B2SL
J. H. Davidson - B2SF
T. L. Gossage - B2SL
J. Haggart - 5040
P. J. Marsh - 5040
C. Paton - B2SC

John Haggart called on September 29 to review the PCB/FCT Pydraul situation in Europe.

1. No discrepancy exists relating to Pydraul F-9-A. All shipments were made before June 30.
2. The Aroclor 5432 produced in July at Newport for delivery to Antwerp was produced due to an error which Ed Weekes is reviewing.
3. Permission to continue the sale of PCB-containing Pydrauls to the German mining industry until November 30 is understood to include Pydraul 231 which also contains FCT. The fluids involved are:

PCB/FCT Components

Pydraul A-200	Aroclor 1242 and Aroclor 1248
Pydraul A-280	Aroclor 1248 and Aroclor 1260
Pydraul A-281	Aroclor 1242 and Aroclor 5442
Pydraul 625	Aroclor 1260
Facilube HYD HF-4 (to Ciba-Geigy)	Aroclor 1248

W. B. Papageorge

/st

DSW 172581

710

STLCOPCB4047205

October 5, 1972

Mr. Richard H. Larose
Canada Centre for Inland Waters
Water Quality Laboratory & Network
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario
Canada

Dear Mr. Larose:

I regret that I cannot send you a sample of Aroclor 1260 as requested in your letter dated September 29 but this material is no longer manufactured and our supply of samples has been depleted.

I hope the lack of this material does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172582

709

STLCOPCB4047206

W. B. Papageorge, B2NA

October 5, 1972

INDUSTRY BROCHURE -
FIRE SAFETY

Mr. C. L. Early
B2SH

I have reviewed the proposed industry brochure
Fire Safety Products for Manufacturers of
Building and Construction Materials for environ-
mental considerations and I have no comments
or revisions to offer.

W. B. Papageorge

/bt

DSW 172583

708

STLCOPCB4047207

October 5, 1972

Mr. M. A. Forbes
Organic Chemist
Analytical Services Section
Environment Canada
P. O. Box 861
Moncton, N.B., Canada

Dear Mr. Forbes:

I am forwarding under separate cover a sample of Aroclor 1016 as you requested in your letter of September 25, 1972.

Enclosed is a copy of Monsanto's methodology for the determination of polychlorinated biphenyls, Specification Properties of Aroclor 1016 and Inspection and Maintenance Guide for Monsanto Askarel.

I hope the above materials will fulfill your needs and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016 S/n 1442
C,

DSW 172584

707
STLCOPCB4047208

October 4, 1972

Mr. Gerald Mears
Alcan Aluminum
Oswego, New York 13126

Dear Mr. Mears:

Monsanto's Mr. L. T. Johnson has informed me of your inquiry relating to the presence of polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs) in Pydraul 312A and Pydraul 312C.

Polychlorinated terphenyls were present in Pydraul 312A as a major fire resistant component. Polychlorinated biphenyls were found to be present in trace amounts as contaminants.

Neither PCBs or PCTs are used as ingredients in the formulation of Pydraul 312C. In addition, these materials are not present in the processing equipment used in its manufacture. In fact, except for electrical transformers and capacitors, there are no PCBs or PCTs present in the plant in which Pydraul 312C is formulated. To the best of our knowledge and belief there are no PCBs or PCTs present in Pydraul 312C.

Studies to determine the effect of PCBs on aquatic life have not established that PCBs are toxic to fresh water fish. Studies involving PCTs have not been extensive but limited work conducted for Monsanto indicate that they are less toxic than PCBs. It appears that the only well-documented effect is the build-up of PCBs in the tissues of fish exposed to waters containing even very low concentrations of PCBs.

DSW 172585

706

STLCOPCB4047209

Mr. Gerald Hears
October 4, 1972
Page 2

I hope this information is useful to you and if I can
be of further help, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. M. DeCastro
Alcan Aluminum

Mr. L. T. Johnson
Monsanto Company

bcc: C. Paton
J. H. Davidson
P. L. Slayton - N.Y.

October 4, 1972

Dr. Alan Rubin
Adams Laboratories, Inc.
3543 West Braddock Road
Alexandria, Virginia 22302

Dear Dr. Rubin:

I am forwarding under separate cover the sample of Aroclor 1242 that you requested during our telephone conversation of today.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1242 - S.N. 1440

DSW 172587

705
STLCOPCB4047211

October 4, 1972

Mr. Stanley Moore
IBM Corporation
Dept. C-30, Bldg. 701
P. O. Box 390
Poughkeepsie, New York 12602

Dear Mr. Moore:

Enclosed you will find copies of articles relating to PCBs which you requested during our telephone conversation today.

I hope this information is useful to you and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

O, F, T, J, K, L, V, P, Q, C, H, Y,
U, E, W, X, M

DSW 172588

714
STLCOPCB4047212

W. B. Papageorge - General Offices

October 2, 1972

Mr. Paul Craska
Akron

I am enclosing two copies of Monsanto's Methodology for Determination of Polychlorinated Biphenyls, as you requested in your memo dated September 25 to Jerry Davidson. I hope this material fulfills your needs.

If I can be of further service please let me know.

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

Q (2 copies)

DSW 172589

703
STLCOPCB4047213

October 2, 1972

Mr. Emil D. Hicks, Director
Pollution Control Department
P. O. Box 2842
St. Petersburg, Florida 33731

Dear Mr. Hicks:

At present polychlorinated biphenyls (PCBs) manufactured by Monsanto are sold worldwide only to approved manufacturers of electrical capacitors and transformers.

I regret I cannot divulge the names of these manufacturers since we consider this information to be confidential. I hope the lack of this information does not seriously inconvenience you.

If I can help further please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172590

705
STLCOPCB4047214

October 2, 1972

Mr. Richard Likwarz
Plastics Laboratory
Allen-Bradley Company
1201 South Second Street
Milwaukee, Wisconsin 53204

Dear Mr. Likwarz:

Your letter dated September 26 in which you requested information relating to the manufacture and sale of the Aroclor product line has been forwarded to me for response since I have been intimately involved in the study of PCBs and their impact on the environment.

Monsanto's self-imposed worldwide program of controlled sale of PCBs has now reached the point at which PCBs are manufactured and sold only to approved manufacturers of electrical capacitors and transformers. These dielectric fluids are sold by Monsanto under the following registered trademarks:

Aroclor
Capacitor 21
Inerteen

Pyranol
Pyroclor

I hope this information is helpful and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172591

STLCOPCB4047215

SEPT. 1972

DSW 172592

STLCOPCB4047216

September 29, 1972

Dr. W. A. Glooschenko
A/Head, Fisheries Research Board Detachment
Canada Centre for Inland Waters
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario, Canada

Dear Dr. Glooschenko:

As requested in your letter dated September 25 I have listed below the Aroclors still being produced and their current uses.

<u>Product</u>	<u>Use</u>
Aroclor 1016	Capacitor fluid
Aroclor 1221	Capacitor fluid component
Aroclor 1242	Capacitor and transformer fluid component
Aroclor 1248	Transformer fluid component
Aroclor 1254	Transformer fluid component

Aroclor 1016, Aroclor 1242 and Aroclor 1254 represent the materials most frequently used by the electrical industry. Aroclor 1221 and Aroclor 1248 are not produced in large volumes and generally are specially manufactured to fill specific customer requests.

All of the Aroclors listed are polychlorinated biphenyls. Monsanto has terminated the manufacture and sale of polychlorinated terphenyls.

DSW 172593

STLCOPCB4047217

Dr. W. A. Glooschenko
September 29, 1972
Page 2

I hope this information is useful to you. If I can
be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172594

STLCOPCB4047218

W. B. Papageorge - General Offices

September 29, 1972

D. B. Hosmer

Messrs.

J. C. Good
T. L. Gossage/C. Paton

Our meeting with Dow to discuss their proposal for controlling fluid losses from PCB capacitors and transformers is scheduled for 9:00 a.m., October 10 in room B-274.

Dow representatives who are scheduled to be present are:

Lloyd Knaup - St. Louis
Bob Derby - Midland
Paul Filter - Midland

W. B. Papageorge

/bt

DSW 172595

699
STLCOPCB4047219

W. B. Papageorge - B2NA

September 26, 1972

EPA WATER QUALITY STANDARDS
CRITERIA

Messrs.

R. S. Baker	- B2SB
H. S. Bergen	- B2SL
W. R. Corey	- B2SL
T. L. Gossage	- B2SL
G. G. Kosup	- B2SL
J. W. Lyons	- B2SB
W. R. Richard	- T3A
J. R. Savage	- B2SL
D. L. Sliney	- B2SB
W. F. Symes	- N1A
J. J. Zeman	- B2SB

Attached is a copy of water quality criteria compiled recently by the Environmental Protection Agency.

Detailed information on state standards may be found in the Environmental Report published by the Bureau of National Affairs. A set is available at the Information Center for reference.

W. B. Papageorge

/bt

Attachment

DSW 172596

697
STLCOPCB4047220

September 28, 1972

Mr. Ralph Volbrecht
Potlatch Research Center
Cloquet, Minnesota 55720

Dear Mr. Volbrecht:

I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254 as you requested on September 27. I am also enclosing a copy of Monsanto Technical Bulletin O/PL-306A.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

*Aroclor 1242 } S.N. 1439
" 1254 }*

T

DSW 172597

STLCOPCB4047221

September 28, 1972

Dr. Robert C. Bayer
Department of Animal and
Veterinary Sciences
128 Hitchner Hall
University of Maine
Orono, Maine 04473

Dear Dr. Bayer:

In response to your request of September 19 I
am enclosing a copy of Monsanto's Technical
Bulletin O/PL-306A.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

T

DSW 172598

695
STLCOPCB4047222

September 28, 1972

Ms. Lucy Tevekalian
Literature Research Group
Arthur D. Little, Inc.
Acorn Park
Cambridge, Massachusetts 02140

Dear Ms. Tevekalian:

In response to your request of September 1
I am enclosing a copy of Monsanto's Technical
Bulletin O/PL-306A. This is the only technical
manual currently available on PCBs. I hope it
fulfills your needs.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

7 T

DSW 172599

69
STLCOPCB4047223

September 28, 1972

Mr. John M. Jernigan
2782 Harrow Drive
Chamblee, Georgia 30341

Dear Mr. Jernigan:

The appropriate individuals in Monsanto Company have thoroughly considered your U.S. patent 2,905,604 and have decided we are not interested at this time because its commercial possibilities do not appear to us to be promising, primarily because it involves an industry in which we have limited activities.

I suspect you may have already tried but may I suggest you contact such companies as Boise Cascade, Union Camp, Georgia-Pacific and International Paper.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172600

693
STLCOPCB4047224

bcc: C. H. Sommer
C. P. Cunningham
W. R. Corey

September 27, 1972

Ms. Diane M. Johnson
702-B Hamlin
Oakland University
Rochester, Michigan 48063

Dear Ms. Johnson:

Your letter dated September 19 and addressed to Mr. Edward J. Bock had been forwarded to me for response since I have been intimately involved in the study of polychlorinated biphenyls (PCBs) and their impact on the environment.

We appreciate your concern for the environment and concur with your belief that the use of PCBs should be restricted. In fact, several years ago, when increasing evidence indicated that PCBs were being identified in the environment and may be having some effect on some species of wildlife, Monsanto launched a program which we believe has significantly reduced the chances of PCBs escaping into the environment.

The program, which Monsanto voluntarily implemented worldwide, consisted of a planned termination of sales to those applications in which control of escape to the environment was impractical. We have now reached that point in the program in which the only sales being made are to closed system uses such as capacitors and transformers in electrical systems for which a commercially available fire-resistant alternative fluid is not available.

In conjunction with the restricted sales program we have kept our customers informed, by letters, bulletins, discussions and labels, of the need for extreme care which should be taken to prevent any PCBs from entering the environment through spills, leakage, use, disposal, vaporization or otherwise. We have also made available to our customers a used fluid disposal service which utilizes high temperature incineration for the complete destruction of PCBs.

DSW 172601

692
STLCOPCB4047225

Ms. Diane M. Johnson
September 27, 1972
Page 2

You may ask "Why not discontinue the manufacture and sale of these products completely?" The answer is that in applications such as capacitors and transformers the stability of the PCBs at high temperatures and their fire-resistant properties are vital in protecting public safety. At this time there are no alternative materials available which possess the unique combination of properties in the PCBs. The electrical industry, Monsanto, and other chemical companies have already spent significant time and effort in looking for alternatives which would not create environmental problems in case of accidental leakage. At this stage these efforts have not been successful but the search will continue and I am confident that substitutes will be found in the future. In the meantime, we believe that our policy of restricting sales to vital closed systems, collecting and incinerating used fluids and working with our customers to handle the product correctly to avoid spillage and discharge to the environment is in the best interest of the general public.

You refer in your letter to the elimination of the use of PCBs in Japan and the United Kingdom. It is my understanding that PCBs have not been totally banned in Japan but have been placed under severe restrictions with some critical uses still being permitted. For example, the Government's electrically operated railway system will continue to use transformers containing PCBs because of important safety considerations. In the United Kingdom Monsanto is the sole supplier of PCBs and the program we have in that country is identical to the U.S. program.

I have enclosed a copy of a report entitled Polychlorinated Biphenyls and the Environment issued in May by the Federal Interdepartmental Task Force on PCBs. In my opinion this report is the best summary of the PCB activities worldwide. You will note that excellent cooperation between industry, government and the scientific community has resulted in a control program which dramatically reduces the amount of PCBs which enter the environment but provides for the continued use of PCBs in closed systems in which fire and explosion resistance are critical.

I hope you find this information informative and useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBF/bt

DSW 172602

STLCOPCB4047226

W. B. Papageorge - World Headquarters

September 27, 1972

J. H. Davidson

Mr. S. Roehr
Brussels

In response to your telex request to J. H. Davidson for information about Monsanto polychlorinated biphenyl (PCB) incinerator, the following information may be of interest:

1. Capacity - Incinerators of this type are normally rated for a given heat release. The nominal capacity of the Monsanto incinerator is 1,250 lbs./hr. of Aroclor 1242. This corresponds to a heat release of 13M BUT/hr.
2. Feed Types - This incinerator was designed for a full range of chlorinated and non-chlorinated products. Still bottoms, solvents of various sorts, material containing lime--virtually any flowable material can be fed to this incinerator.

Because some of the feed material was to contain lime (up to 2%), the refractory had to be carefully chosen. The original refractory proved unsatisfactory. A high alumina (high cost) brick is now being considered for replacement following an extended test period. PCBs caused leaching of silica from original brick and thus caused premature failure.

3. For HCl Gas Disposal - A scrubber system was installed. A venturi scrubber is used to assure wetting of particulates. A packed column following the venturi is used to scrub out the HCl.
4. Oxidation Temperatures - This must be coupled with residence time in the oxidizer. Both are needed for complete PCB destruction. Higher chlorination levels require higher temperatures for destruction. The Monsanto incinerator is designed for 2,800°F (for Aroclor 1260). Normal operating temperatures are in the range of 2,200-2,500°F. Residence time is about 2.5 seconds.

DSW 172603

691
STLCOPCB4047227

Mr. S. Roehr
September 27, 1972
Page 2

5. Supplier of Equipment - John Zink Company, P. O. Box 7388, Tulsa, Oklahoma 74105. Each incinerator is custom designed.

I hope you find this information useful. If I can be of further service please let me know.

W. B. Papageorge

/bt

September 26, 1972

Mr. Russel Lewis
Hoerner-Waldorf Corporation
2250 Wabash Avenue
St. Paul, Minnesota 55101

Dear Mr. Lewis:

Enclosed is a copy of the presentation Monsanto representatives made before members of the Interdepartmental Task Force on PCBs in Washington, D.C. on May 15.

I hope you find it interesting and informative.
If I can help further please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W

DSW 172605

100
STLCOPCB4047229

September 26, 1972

Mr. Robert Beyer
Technical Service Department
Mobil Technical Center
P. O. Box 1027
Princeton, New Jersey 08540

Dear Mr. Beyer:

I am forwarding under separate cover a one gram sample of Aroclor 1221 that you requested from Monsanto's Mr. James H. Schuch of our New York office.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. J. H. Schuch
New York

A-122N S/N 1438

DSW 172606

688

STLCOPCB4047230

September 26, 1972

Dr. S. C. Caruso
c/o Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, Pennsylvania 15213

Dear Dr. Caruso:

Will you please send me a copy of the preprints
(Vol. 12, No. 2) of the Water, Air and Waste
Chemistry Division papers given at the recent
ACS national meeting.

A check for \$4.00 payable to Division of Water,
Air and Waste Chemistry, ACS, is enclosed.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

bcc: Jacob F. Hess, Jr.
R. A. Stohr

DSW 172607

687

STLCOPCB4047231

W. B. Papageorge - B2NA

September 26, 1972

G. F. Fague - B2SC

C. Paton - B2SC

D. E. Roush - B2SC

Dr. G. J. Levinskas
A2SA

S. Fujii, MMK, has requested toxicity data on Santotherm 66 (Therminol 66, HB-40).

I have attached a copy of a summary which you had sent to the U.S.D.A. Is this summary (minus the Therminol 55 portion) appropriate for MMK? Is there recent data on the rat residue and chicken reproduction studies mentioned.

W. B. Papageorge

/bt

Enclosure

DSW 172608

685

STLCOPCB4047232

W. B. Papageorge - E2NA

September 25, 1972

FYDRAUL LITERATURE

Memo by ECI dated 9/22/72

Mr. R. C. Isham
BLNB

J. H. Davidson - E2SP
J. T. Garrett - A2SA
P. S. Park - E2NA
C. Paton - E2SC

I propose the inclusion of an environmental statement similar to the one now used with the Therminols.

"While Fydraul E Series, (Pydraul C Series, Santo-safe W/O) fluids pose no serious problems with respect to the environment, as a concerned supplier to industry, Monsanto urges the user to maintain a tight system, to correct leakage promptly and to exercise care in the handling and disposal of this and all other such products. A tight maintenance program not only protects the environment, but keeps employees comfortable, the working area clean and the system running smoothly."

Since Fydrauls could be used in food, animal feed, pharmaceuticals, potable water and breathing air systems, the following paragraph is recommended.

"Under no circumstances should this product contact or in any way contaminate food, animal feed, food products, food packaging materials, pharmaceuticals or any items which may directly or indirectly be ultimately ingested by humans. Any contact may contaminate these items to the extent that their destruction may be required."

W. B. Papageorge

/ot

DSW 172609

684

STLCOPCB4047233

September 25, 1972

Dr. Paul Trout
Director, Environmental Control
Container Corporation of America
Longford Road
Oaks, Pennsylvania 19456

Dear Paul:

I understand that the American Paper Institute submitted to the FDA a copy of a report by Arthur D. Little, Inc. on a PCB study. If this report is available, will you please send me a copy.

Thank you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172610

LSB

STLCOPCB4047234

September 21, 1972

Miss Gail Baum
25 Knolls Crescent
Bronx, New York 10463

Dear Miss Baum:

Working with Aroclors in the laboratory should pose no problem if the present-day practices followed by responsible laboratories are followed. Adequate ventilation must be present to assure removal of any fumes that might be generated. The Aroclor should be used at the minimum temperatures required to successfully carry out your work. Any clothing that is contaminated should be removed and laundered before reuse. Any Aroclors on the skin should be washed with ordinary soap and water. Scrap Aroclor or materials containing Aroclor such as rags should be disposed of by burial in a sanitary land fill.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172611

LY2

STLCOPCB4047235

W. B. Papageorge - B2NA

September 21, 1972

HB-40 -- PCB CONTENT

F. G. Fague - B2SC

P. W. Gann - B2SD

C. Paton - B2SC

E. S. Tucker - T2F

Mr. D. E. Roush

B2SC

Responding to your memo dated September 18, I have the following comments to offer. All analyses conducted to-date would indicate that the HB-40/Therminol 66 products have no detectable PCBs present. With the present concern by the plant for keeping PCBs out of the products I believe it is safe to say that the presence of PCBs in these products will not occur.

When requested by customers we can comfortably report that there are no detectable PCBs in HB-40/Therminol 66 products. It is not customary to report the detection limit of analyses, therefore, I recommend we do not do so in this case unless specifically requested.

W. B. Papageorge

/bt

DSW 172612

6 X 1

STLCOPCB4047236

September 21, 1972

Mr. George P. Graff, Manager
Environmental Programs
Michigan State Chamber of Commerce
Suite 500
501 South Capitol Avenue
Lansing, Michigan 48933

Dear George:

Your continued interest in PCBs is appreciated and the clipping attached to your letter dated September 14 confirms some unofficial reports that I had received. I have not heard what action of a similar nature will be taken relating to sports fishing. If you hear of anything in this area please let me know.

Monsanto's present program relating to PCB production and distribution includes the sale of PCBs only to electrical capacitor and transformer manufacturers who comply with certain legal requirements requested by Monsanto. All other sales have been terminated.

I have enclosed a copy of the report issued by the Federal Interdepartmental Task Force on PCBs which represents an excellent summary of the overall PCB environmental problem. I hope you find this both interesting and informative.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172613

1811
STLCOPCB4047237

September 21, 1972

Mr. George Goldstein
San Jose Creek Laboratory
Los Angeles County Sanitation District
2101 Workmanmill Lane
Whittier, California

Dear Mr. Goldstein:

Enclosed are copies of the articles on polychlorinated biphenyls (PCBs) which you requested.

I hope you find these both interesting and informative. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

bcc: K. Wells
Los Angeles

T, V, P, G, O, H, F, Y, X, M

DSW 172614

179

STLCOPCB4047238

W. B. Papageorge - St. Louis General Offices

September 20, 1972

PCBs

Letter, E. Kaiser to
G. Ingle, dated 9/5/72

Mr. George Ingle - 1920

It appears to me that Mr. Kaiser is confusing inefficient open pit burning with high temperature incineration.

Open burning at low temperatures will result in the vaporization of PCBs and lead to dispersement in the environment. Incineration at temperatures above 800°C will lead to total destruction to H₂O, CO₂ and HCl. We suggest operating at temperatures above 2000°F. A typical set of operating instructions for our incinerator at the W. G. Krummrich Plant, Sauget, Illinois, is as follows: Temperature 2700°F, sojourn time 1.5 seconds, 2% excess oxygen. The resulting gases are scrubbed to remove the HCl gas and prevent atmospheric pollution. The weak acidic solution is neutralized by combining with plant effluent of high alkalinity.

We see no need for further testing. Our tests were conducted by the incinerator designer, The John Zink Company, Tulsa, Oklahoma. The required technology is easily obtained. Economic considerations are more difficult to resolve, therefore, more incinerators have not been installed throughout the country.

W. B. Papageorge

/bt

Enclosure

DSW 172615

678

STLCOPCB4047239

September 19, 1972

Mr. W. D. Major
Technical Director
Westvaco
Bleached Board Division
Covington, Virginia 24426

Dear Mr. Major:

Your letter dated September 12 requesting information on the PCB content of Monsanto products purchased by your Company has been forwarded to me for response.

PCBs are not used as raw materials or as ingredients in the materials purchased by your Company from Monsanto. In addition, no PCBs are present in the processing equipment used in the manufacture of these products. To the best of our knowledge and belief there are no PCBs present in products now purchased by you from Monsanto.

I hope this information is helpful. If I can be of further service please let me know.

Very truly yours,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172616

STLCOPCB4047240

September 19, 1972

Dr. Lynn B. Willett
Ohio Agricultural Research
and Development Center
Wooster, Ohio 44691

Dear Dr. Willett:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which you requested. I hope you find it helpful.

We are actively reviewing your proposed Grant-In-Aid agreement. I will inform you of our decision as soon as we reach one.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172617

175

STLCOPCB4047241

September 19, 1972

Mr. Richard Allison
TRW Semiconductors
Research and Development Division
14520 Aviation Boulevard
Lawndale, California 90260

Dear Mr. Allison:

I am forwarding under separate cover the sample of Aroclor 5460 you requested from Monsanto's Mr. Paul Benignus.

As Mr. Benignus indicated this material is no longer manufactured by Monsanto and would not be commercially available for any application you may develop as a result of your studies.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: P. G. Benignus

Aroclor 5460 - S.N. 1437

DSW 172618

STLCOPCB4047242

W. B. Papageorge - E2HA

September 19, 1972

PCT DISPOSAL

Memo, SU to WBP, 8/17/72

D. Danna - BINC
J. R. Darland - Tokyo
M. Hatano - Tokyo
H. Kada - Tokyo

Mr. S. Uneno
Tokyo

We do not have any data relating to the conditions required for the total destruction of polychlorinated terphenyls (PCTs) by incineration. It is reasonable to assume that there is considerable similarity to PCBs. We have incinerated mixtures of PCB and PCT at the usual PCB conditions and experienced no difficulties.

With low solubilities it would appear that burial in approved landfills not located near water would be a practical method for disposal but certainly not the preferred method.

Dr. Scott Tucker offers the following method for analyzing PCT at low concentrations:

"We analyze water and activated sludge by extracting the PCTs from the aqueous sample with nanograde chloroform. The chloroform is then completely removed via evaporation and PCTs redissolved in nanograde hexane. The extracts are then subjected to an alumina column cleanup. After concentration to a specific volume the PCTs are detected by electron capture gas chromatography. The instrument employed is a Hewlett-Packard 5750 and the gas chromatographic conditions are as follows:

Detector	High Temperature N163 Electron Capture Cell
Column*	6mm x 2M glass column packed with 2.5% SE-52 on 80/100 mesh gas Chrom Q.
Carrier Gas	Helium ~ 60 ml/min
Purge Gas	Argon/Methane (90/10) ~120 ml/min
Pulse	150 μ sec.

*Columns are sealed with "O" rings made from Dexsil 300 impregnated asbestos cord (Analabs Research Notes, 11 (2), June 1971.

DSW 172619

STLCPCB4047243

Mr. S. Uneno
September 19, 1972
Page 2

	<u>Aroclor 5432</u>	<u>Aroclor 5460</u>
Column Temperature	220°C	260°C
Injection Port Temperature	245°C	285°C
Detector Temperature	300°C	300°C

Aroclor Recoveries

	% (Av.)
Aroclor 5432	
>2 ppm (water)	96
1-2 ppm (water)	82
<1 ppm (water)	69
0.6-2.8 ppm (sludge)	59
Aroclor 5460	
0.6-2.8 (water)	100
0.6-2.8 (sludge)	93

"We have seen the report by M. Zitko and have no reason to question his method or results at this point in time. The report is very sketchy and does not contain enough detail on which we can make any judgement."

I hope this information is useful to you. Regards.

W. B. Papageorge

/bt

Monsanto

OUTGOING MESSAGE BLANK

Radio Communications System

DATE

9/19/72

TIME

10:45

SENDER'S ACCOUNT NO.

47-000-735.40

INDICATE DESIRED SERVICE →

☐

FULL RATE

☐

DAY LETTER

☐

NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

BOOK MESSAGE

S. Ureno - Tokyo
J. R. Darland - Tokyo

Re sample of used Kanechlor KC-400 mailed to Dr. E. S. Tucker on March 13, 1972. Please obtain quickly as much information as possible regarding history of this sample, e.g. type of service, size of system, temperature of operation, design of system, how long fluid in system, etc.

W. B. Papageorge
St. Louis, Mo.

bcc: W. R. Corey
J. F. Stapleton
H. S. Bergen
R. E. Keller

672

IN-IR
REV. 7-64

for **BETTER service** - Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172621

STLCOPCB4047245

W. B. Papageorge - B2NA

September 18, 1972

H. S. Bergen - B2SL
W. R. Corey - B2SL

Dr. W. R. Richard
T3A

Will you please arrange to have copies of all
EC-201's and EC-202's (Environmental Impact
Assesments) currently available and prepared
in the future sent to me.

W. B. Papageorge.

/bt

DSW 172622

151

STLCOPCB4047246

September 18, 1972

Mr. Jim Napoleon
Enviro-Tech Systems, Inc.
100 Valley Drive
Brisbane, California 94128

Dear Mr. Napoleon:

Enclosed are copies of technical bulletins describing the Aroclors and Therminols you requested.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

T₁
Bulletins - Therminol 88
" " 66
" " 66

DSW 172623

STLCOPCB4047247

September 18, 1972

Mr. John F. Matthews
ICI America, Inc.
24 Richmond Hill Avenue
Stamford, Connecticut 06904

Dear Mr. Matthews:

Your letter dated September 12 to Mr. Howard S. Bergen has been forwarded to me for response since I have been intimately involved with the PCB environmental problem.

I have enclosed copies of articles relating to polychlorinated biphenyls including a report issued by the Federal Interdepartmental Task Force on PCBs and a copy of Monsanto's analytical procedure for the determination of PCBs in samples.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. H. S. Bergen

V, O, U, Y, H, F, T, U, P, G, M

DSW 172624

1.69

STLCOPCB4047248

September 14, 1972

Mrs. Ellen R. Price
Reynolds Metals Company
Tenth and Byrd Streets
Richmond, Virginia 23219

Dear Mrs. Price:

I am enclosing a copy of Monsanto Technical
Bulletin O/PL-306A as you requested by phone
today.

If I can be of further service please let
me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

9

DSW 172625

STLCOPCB4047249

W. B. Papageorge - B2NA

September 14, 1972

PHENOLICS

J. H. Davidson
C. Paton
L. R. Stark

Dr. J. T. Garrett
A2SA

In their efforts to market the new phosphate ester base Pydrauls our marketing managers find they need more information relating to the presence of phenolics in plant effluents.

They would like to know specifically the attitudes, analytical methods used, and the levels tolerated by the regulatory agencies in Michigan, New York and Ohio.

We also need information pertaining to bacteriological degradation of phenolics. Information such as the type of culture used and the conditions required in a commercial degradation system would be helpful.

Can you provide some guidance?

W. B. Papageorge

/bt

DSW 172626

666

STLCOPCB4047250

Monsanto

OUTGOING MESSAGE BLANK
TELECOMMUNICATIONS SYSTEM

DATE
9/14

TIME
9:45

SENDER'S ACCOUNT NO.
47-000-735.40

INDICATE DESIRED SERVICE → ☐ FULL RATE ☐ DAY LETTER ☐ NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

P. J. A. MARSH
BRUSSELS

RE MY MEMO DATED 8/30 RELATING TO PCT FOR PYDRAUL - PLEASE RESPOND.

W. B. PAPAGEORGE
ST. LOUIS, MO.

bcc: H. S. Bergen
W. R. Corey
J. H. Davidson
T. L. Gossage
C. Paton

665

4-IR
REV. 7-64

for BETTER service - Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172627

STLCOPCB4047251

September 14, 1972

Dr. Robert K. Ringer
Michigan State University
East Lansing, Michigan 48823

Dear Dr. Ringer:

Will you please send me a copy of your paper
entitled "Effect of Dietary Polychlorinated
Biphenyls on Growth and Reproduction of Mink"
presented at the recent ACS national meeting.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172628

664

STLCOPCB4047252

September 14, 1972

Dr. Helene C. Cecil
Animal Science Research Division
Agriculture Research Service
United States Department of Agriculture
Beltsville, Maryland 20705

Dear Dr. Cecil:

Will you please send me a copy of your paper
entitled "PCBs in Laying Hens" presented at
the recent ACS national meeting.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172629

663

STLCOPCB4047253

September 13, 1972

Professor G. Fred Lee
1140 Sherman Avenue
Madison, Wisconsin 53703

Dear Fred:

Attached is a proposed letter of agreement which I hope is acceptable to you for establishing a relationship which I believe can be mutually beneficial.

If there are any changes which you believe should be made please let me know. If it is acceptable as written will you please sign one of the copies and return it to me.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: C. P. Cunningham

DSW 172630

661

STLCOPCB4047254

September 12, 1972

Dr. Tatuso Hayakawa
Vice-Director
National Feeds and Fertilizers
Inspection Office
Ministry of Agriculture and Forestry
No. 3 Ohtemachi Office Building
1-3-3 Ohtemachi, Chiyoda-ku
Tokoyo 100, Japan

Dear Dr. Hayakawa:

Your letter of September 2 has been forwarded to me as I am involved with the problem of PCB contamination of the environment. I look forward to meeting with Mr. Yoshihiro Shishido on October 11.

If you will advise what time Mr. Shishido will be arriving in St. Louis I will plan to meet him at the airport. If you like we can make reservations for hotel accommodation for Mr. Shishido while in St. Louis.

I look forward to hearing from you soon.

Sincerely,

William B. Papageorge
Manager
Environmental Protection

WBP/bt

bcc: Dr. J. R. Durland
5260

DSW 172631

660

STLCOPCB4047255

September 11, 1972

Dr. P. S. Sabharwal
University of Kentucky
College of Arts and Sciences
Department of Botany
Lexington, Kentucky 40506

Dear Dr. Sabharwal:

I am forwarding under separate cover the samples of Aroclor 1242 and Aroclor 1254 as requested in your letter of August 23, 1972.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1242 } 5-1436
A-1254 }
9

DSW 172632

650
STLCOPCB4047256

September 11, 1972

Dr. Marjan Milohnoja
Veterinary College
Department of Food Hygiene
60 Gerbiceva
Ljubljana, Yugoslavia

Dear Dr. Milohnoja:

I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254 that you requested in your letter of August 29, 1972. I am sorry I cannot send samples of the other Aroclors you requested but these materials are no longer available and our supply of samples has been depleted.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

*Aroclor 1242 } 1-135
1254 }*

DSW 172633

STLCOPCB4047257

September 8, 1972

Dr. Richard D. Flotard
The University of Wisconsin
Water Chemistry Laboratory
Madison, Wisconsin 53706

Dear Dr. Flotard:

I am forwarding under separate cover the sample
of Aroclor 1016 that you requested in your letter
of September 5.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1016 - 1434

DSW 172634

STLCOPCB4047258

September 8, 1972

Dr. J. Arly Nelson
Research Biochemist
Southern Research Institute
200 Ninth Avenue South
Birmingham, Alabama 35205

Dear Dr. Nelson:

I am forwarding under separate cover the samples of Aroclor 1221 and Aroclor 1254 that you requested in your letter of September 1.

If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1221 - S.N. 1432
A-1254 - S.N. 1433

DSW 172635

STLCOPCB4047259

September 8, 1972

Mr. T. H. Chung
Government Laboratory
Government Supplies Compound
Oil Street, North Point,
Hong Kong

Dear Mr. Chung:

I am forwarding under separate cover samples of
Aroclor 1242 and Aroclor 1254 as you requested in
your letter of August 18.

I am enclosing a copy of Monsanto's methodology for
the determination of polychlorinated biphenyls along
with various other documents and articles which I
hope will fulfill your needs.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

X, G, Y, F, T, J, K, L, V, P, Q, H,

O, M.

Aroclor 1242 } S.M. 1421
Aroclor 1254 }

DSW 172636

655

STLCOPCB4047260

bec: J. H. Davidson - E2SF
C. Paton - E2SC
E. L. Shimley - 1010

September 8, 1972

Mr. Rod Diehl
Chevrolet Motor Division
General Motors Corporation
1535 N. Madison Avenue
Bay City, Michigan 48706

Dear Mr. Diehl:

Monsanto's Mr. Bill Slowikowski has informed me of your inquiry relating to the presence of polychlorinated biphenyls (PCBs) in Pydraul 50E and Pydraul 312C.

Polychlorinated biphenyls (PCBs) are not used as ingredients in the formulation of these Pydrauls. In addition, no PCBs are present in the processing equipment used in their manufacture. In fact, except for electrical transformers and capacitors, there are no PCBs present in the plant in which these products are made.

To the best of our knowledge and belief there are no PCBs in Pydraul 50E and Pydraul 312C.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: W. H. Slowikowski
Detroit

DSW 172637

65
STLCOPCB4047261

W. B. Papageorge - B2NA

September 7, 1972

H. S. Bergen - B2SL
E. W. Easley - 1920
J. F. Stapleton - B2SA

Mr. W. R. Corey

Attached is a table summarizing the volumes, operating temperatures, procedures used and residual PCB present in selected Monsanto heat transfer systems which were converted from Therminol FR fluid to Therminol 66. A reference list is included to identify the systems by Monsanto location and process application.

Systems numbered 5, 10 and 11 will be redrained, refilled and resampled within one month.

It appears that the higher PCB residues are related to the larger systems or to the less thorough cleaning procedures used. This is not surprising.

With this experience I believe we can predict that residuals below 1% can be achieved with thorough drainage, solvent flush and chemical cleaning. We have no information on any systems with residuals in the ppm or non-detectable range.

I suggest we discuss with FDA representatives all of this information except for the location and system description.

W. B. Papageorge

/bt

Attachment

DSW 172638

STLCOPCB4047262

MONSANTO SYSTEMS CONVERTED

<u>System</u>	<u>Location</u>	<u>Description</u>
1	Anniston	Santowax flash still, expansion tank, Dept. 20
2	Anniston	HB-40, Dept. 24 expansion tank
3	Anniston	Santowax Q, expansion tank Dept. 23
4	Anniston	P2S5 Dept.
5	Krummrich	Santophen I, Dept. 239
6	Krummrich	4-NDPA, Dept. 255
7	Queeny	Dept. 32
8	Queeny	W Bldg. Yard
9	Queeny	W Bldg. Leader
10	Queeny	Ortho column Dept. 55, TSC1
11	Queeny	STO system, Dept. 55, TSC1 —
12	Delaware River	Dept. 831.01, Tank No. M112
13	Everett	Polymer heating
14	Nitro	Santoquin unit
15	Kearny	Alkylphenol unit
16	Springfield	99-Saflex color unit, new
17	Springfield	Saflex, Pkg. B
18	Springfield	Saflex, Pkg. C

DSW 172639

STLCOPCB4047263

<u>System</u>	<u>Volume (Gallons)</u>	<u>Normal Operating Temperature (°F)</u>	<u>Conversion Method</u>	<u>PCB Residual Wt %</u>
1	880	360	Drained. Flushed with replacement fluid. Filled.	1.0
2	400	440	Drained. Flushed with replacement fluid. Filled.	1.5
3	2300	480	Drained. Flushed twice with replacement fluid. Filled.	1.5
4	990	580	Drained. Flushed with replacement fluid. Blown with nitrogen. Filled	1.7
5	1300	500	Drained. Flushed with replacement fluid. Filled.	4.4
6	250	520	Drained. Flushed with acetone. Blown with nitrogen. Flushed with chemical cleaning solution. Filled.	0.1
7	1000	500	Drained. Replaced piping. Filled	0.5
8	700	650	Drained. Flushed twice with replacement fluid. Flushed with chemical cleaning solution. Filled.	2.7
9	1200	650	Drained. Flushed twice with chemical cleaning solution. Filled.	0.7
10	300	400	Drained. Flushed with replacement fluid. Filled.	3.2
11	300	400	Drained. Flushed with replacement fluid. Filled.	10.8
12	4000	550	Drained. Flushed with replacement fluid. Filled.	9.3

DSW 172640

STLCOPCB4047264

<u>System</u>	<u>Volume (Gallons)</u>	<u>Normal Operating Temperature (°F)</u>	<u>Conversion Method</u>	<u>FCB Residual Wt %</u>
13	1650.	500	Drained. Blown with nitrogen. Filled	5.7
14	250	450	Drained. Flushed with replacement fluid. Filled	3.2
15	3000	580	Drained. Flushed with chemical cleaning solution. Flushed with neutralizing solution. Filled.	4.8
16	250	520	Drained. Flushed with replacement fluid. Filled.	0.2
17	300	400	Drained. Flushed with solvent. Filled.	0.8
18	340	400	Drained. Flushed with solvent. Filled	5.3

All units are in chemical processing service and include heating coils, shell and tube heat exchanges, jacketed tanks and jacketed pipelines, all of which are very common in the chemical industry.

W. B. Papageorge, B2NA

September 6, 1972

PRODUCT LITERATURE
AND ADVERTISING

R. S. Baker - B2SB
H. S. Bergen - B2SL
R. C. Isham - B1NB
J. F. Stapleton - B2SA

Mr. W. R. Corey
B2SL

I reviewed with Bob Isham and John Stapleton the procedure followed in clearing product literature and advertising before publication and they both assured me that legal clearance is obtained.

Bob also agreed to review proposed material for Functional Products Group products with me for environmental considerations.

W. B. Papageorge

/bt

DSW 172642

652

STLCOPCB4047266

September 6, 1972

Mr. George L. Gutscher
Supervisor, Chemical Engineering
Building 85
Buick Motor Division
General Motors Corporation
Flint, Michigan 48550

Dear Mr. Gutscher:

Monsanto's Mr. Bill Slowikowski informed me of
Mr. Milo Nielson's interest in analytical method-
ology for determining polychlorinated biphenyls
(PBCs).

I have enclosed a copy of Monsanto's procedure
which I hope you find useful.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: W. H. Slowikowski
Detroit



DSW 172643

651
STLCOPCB4047267

September 1, 1972

Mr. W. H. Rivard, Manager
Materials and Processes
Potter and Brumfield
1200 East Broadway
Princeton, Indiana 47670

Dear Mr. Rivard:

Enclosed is a copy of the report issued by the
Federal Interdepartmental PCB Task Force which
I offered to send you.

I hope you find it informative and useful. If
I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X

DSW 172644

STLCOPCB4047268

AUGUST 1972

DSW 172645

STLCOPCB4047269

August 31, 1972

Mr. William H. Palmatary
Director of Purchases
H. B. Fuller Company
2400 Kasota Avenue
St. Paul, Minnesota 55108

Dear Mr. Palmatary:

Monsanto's Mr. Charles W. Cook has requested that I respond to your letter dated August 23.

Rule 66 does not apply to Tricresyl Phosphate, therefore, no restrictions of usage exist.

I hope this information is helpful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. C. W. Cook
Monsanto, Chicago

bcc: W. S. Clark - B3NC

DSW 172646

STLCOPCB4047270

W. B. Papageorge - World Headquarters

August 31, 1972

H. S. Bergen - E23L

W. R. Corey - E23L

K. W. Easley - 1920

Mr. J. R. Durland
Tokyo - 5260

Warren Easley heard from Dr. Clarence Davies, U.S.
Council of Environmental Quality, that Japanese
law prohibits the export of PCBs from Japan to
other countries.

Is this information factual?

W. B. Papageorge

/bt

DSW 172647

STLCOPCB4047271

W. B. Papageorge - E2NA

August 31, 1972

CORROSIVE MATERIALS

Memo, GRS to WBP, 8/10/72

Mr. G. R. Sido
G5EC

L. B. Crosby - E2NK
W. L. Friebs - E2NC
W. R. Richard - T3A
J. F. Savage - E2SL
W. F. Symes - N1A

In preparing the list of products sold by the Functional Products Group, FICC, and which might fall under the new corrosive definition, we considered all material moved in Monsanto's name.

W. B. Papageorge

/bt

DSW 172648

STLCOPCB4047272

W. B. Papageorge - General Offices

August 31, 1972

E. P. Wheeler - A2SA

LAMPBLACKS - ANALYTICAL DATA

Mr. J. C. Weber
E1SF

Attached is a copy of a letter from Mr. D. A. Koenemund, Colonial Printing Ink Company, requesting analytical data on Lampblacks.

Will you please arrange for a response to Mr. Koenemund's request. I recommend that consideration be given to future ramifications expected from complying with this request as well as the importance of the account to Monsanto. I personally doubt that having complete records is sufficient reason for providing this type of information.

W. B. Papageorge

/bt

Enclosure

DSW 172649

STLCOPCB4047273

W. B. Papageorge - General Offices

August 31, 1972

E. P. Wheeler - A2SA

SANTOVAR A - ANALYTICAL DATA

Mr. Wayne Phillips
Akron - 1010

Attached is a copy of a letter from Mr. D. A. Koenemund, Colonial Printing Ink Company, requesting analytical data on Santovar A and a copy of Elmer Wheeler's April 28 letter which is mentioned.

Will you please arrange for a response to Mr. Koenemund's request. I recommend that consideration be given to future ramifications expected from complying with this request as well as the importance of the account to Monsanto. I personally doubt that having complete records is sufficient reason for providing this type of information.

W. B. Papageorge

/bt

Enclosures

DSW 172650

STLCOPCB4047274

W. B. Papageorge - B2NA

August 31, 1972

CONTAMINANTS IN NATURAL WATERS

Messrs.

R. S. Baker - B2SB
H. S. Bergen - B2SL
C. F. Callis - N1A
W. R. Corey - B2SL
I. D. Hill - N1A
D. B. Hosmer - E1SF
J. S. Metcalf - E1SF
W. R. Richard - T3A
W. F. Symes - N1A
E. P. Wheeler - A2SA

Attached for your information is a copy of A Program for the Control of Contaminants in Natural Waters by Dr. G. Fred Lee, Water Chemistry Laboratory, University of Wisconsin.

This program will be published in a new report series by the University of Wisconsin Sea Grant Program "to aid public officials and others in translating the results of technical studies into meaningful programs for the management of the coastal zone."

W. B. Papageorge

/bt

Attachment

August 31, 1972

Dr. G. Fred Lee
Water Chemistry Laboratory
The University of Wisconsin
Madison, Wisconsin 53706

Dear Dr. Lee:

I regret and apologize for the delay in responding to your letters dated July 14 and July 28 but I have just completed reading your proposed Program for the Control of Contaminants in Natural Waters.

I found the contents highly informative and objective. I have no suggestions to offer for revision.

It may take longer than you would hope but I predict that many, if not all, of your recommendations will eventually be adopted.

Regards.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172652

STLCOPCB4047276

August 31, 1972

Mr. Robert Solotke
Pesticides
Environment Protection Agency
1 North Wacker Drive
Chicago, Illinois 60606

Dear Mr. Solotke:

In response to your request for information about Monsanto's polychlorinated biphenyl (PCB) incinerator, the following information may be of interest:

1. Capacity - Incinerators of this type are normally rated for a given heat release. The nominal capacity of the Krummrich Plant incinerator is 1,250 lbs./hr. of Aroclor 1242. This corresponds to a heat release of 13M BTU/hr.
2. Feed Types - This incinerator was designed for a full range of chlorinated and non-chlorinated products. Still bottoms, solvents of various sorts, material containing lime--virtually any flowable material can be fed to this incinerator.

Because some of the feed material was to contain lime (up to 2%), the refractory had to be carefully chosen. The original refractory proved unsatisfactory. A high alumina (high cost) brick is now being considered for replacement following an extended test period. PCBs caused leaching of silica from original brick and thus caused premature failure.

3. For HCl Gas Disposal - A scrubber system was installed. A venturi scrubber is used to assure wetting of particulates. A packed column following the venturi is used to scrub out the HCl.
4. Oxidation Temperatures - This must be coupled with residence time in the oxidizer. Both are needed for complete PCB destruction. Higher chlorination levels require higher temperatures for destruction.

DSW 172653

STLCOPCB4047277

Mr. Robett Solotke
August 31, 1972
Page 2

The Krummrich incinerator is designed for 2,800°F (for Aroclor 1260). Normal operating temperatures are in the range of 2,200-2,500°F. Residence time is about 2.5 seconds.

5. Supplier of Equipment - John Zink Company, P. O. Box 7388, Tulsa, Oklahoma 74105. Each incinerator is custom designed.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172654

STLCOPCB4047278

bcc: R. J. Christman - 1460
B. G. Tibbetts - B2SE

August 30, 1972

Mr. H. C. Cook
Unbleached Paper and Board Division
Union Camp Corporation
P. O. Box 326
Montgomery, Alabama 36101

Dear Mr. Cook:

I regret and apologize for the delay in responding to your letter dated June 7 in which you requested statements regarding the FDA status of Monsanto's Scripset® 500 and Sterox® NJ.

Polychlorinated biphenyls (PCBs) are not used as raw materials or as ingredients in the production of either Scripset® 500 or Sterox® NJ. In addition, PCBs are not used in the processing equipment involved in the manufacturing or packaging of these products. To the best of our knowledge and belief, there are no PCBs present in Scripset® 500 or Sterox® NJ.

With the absence of PCBs in these products it would appear there is no cause for concern that violations of the Federal Food, Drug and Cosmetic Act would occur. If you believe that a guaranty would serve a worthwhile purpose we would consider submitting one to you similar to the copy which is attached.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172655

STLCOPCB4047279

GUARANTY UNDER SECTION 303(c)(2) OF THE
FEDERAL FOOD, DRUG AND COSMETIC ACT

GENTLEMEN:

Monsanto Company ("Supplier"), hereby guarantees that for each shipment or other delivery hereafter made by it to _____ ("Purchaser"), whose address is _____ of any of the products listed below ("Products"):

Said Products, as of the date of said shipment or other delivery, will not be adulterated or misbranded within the meaning of the Federal Food, Drug and Cosmetic Act, and are not Products which may not, under the provisions of Sections 404, 409, 505 or 706 of the Act, as now in effect, be introduced into interstate commerce.

This guaranty is in like terms extended to and shall be applicable to any applicable state law or municipal ordinance in which the definitions and official interpretation of adulteration or misbranding are substantially the same as those in the Federal Food, Drug and Cosmetic Act.

This guaranty shall be void and of no effect if, in any instance, the use of said Products by Purchaser is not authorized by or in accordance with the provisions of the Federal Food, Drug and Cosmetic Act.

DSW 172656

STLCOPCB4047280

This guaranty is not assignable and is given solely for the purposes of Section 303(c)(2) of the Federal Food, Drug and Cosmetic Act. By the acceptance of this guaranty, the Purchaser agrees to notify Supplier in writing, within ten (10) days, of any demand, complaint or proceeding for a claimed violation of the above-mentioned Federal Act or a state act, giving the name and address of the complaining party and the product concerned. Unless such notice is given within ten (10) days of any such claim, demand or proceeding, this guaranty shall be of no effect.

Supplier's liability for breach of this guaranty shall in no event exceed the value of the Products shipped to or otherwise delivered to Purchaser which fail to comply with this guaranty.

This shall be a continuing guaranty and shall remain in full force and effect until revoked in writing by Supplier. Any and all prior guaranties and/or indemnity agreements heretofore given by Supplier are hereby revoked.

Dated this _____ day of _____, 19____.

MONSANTO COMPANY

By _____

DSW 172657

STLCOPCB4047281



UNBLEACHED PAPER
& BOARD DIVISION

P. O. BOX 326, MONTGOMERY, ALA. 36101 TELEPHONE (205) 365-8841

June 7, 1972

Monsanto Company
COP Center
800 N. Lindbergh Blvd.
St. Louis, Missouri 63166

Gentlemen:

A proposed rule change under the Food and Drug Administration was published in the Federal Register (March 18, 1972) which sets limits of 5.0 ppm polychlorinated biphenyl (PCB) content in food packaging materials. Since our liner may be used as food packaging material, we must secure statements regarding PCB's in any substances used in our operation which may become part of our finished product to assure that we maintain our compliance to the standard.

We need a statement regarding the FDA status of your Scriptset 500 and Sterox NJ.

For this material, please furnish us one of the following:

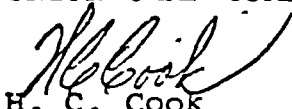
1. A categorical guaranty that neither we nor our customers will be in violation of the Federal Food, Drug, and Cosmetic Act as a consequence of our use of the material,
- OR
2. A statement that our use of your product is not in whole or in part subject to regulation under the provisions of the Federal Food, Drug, and Cosmetic Act.

We also need a statement of the PCB content of this material.

Your prompt attention to this matter will be very helpful and appreciated.

Yours very truly,

UNION CAMP CORPORATION


H. C. COOK
Buyer

HCC/ec

DSW 172658

STLCOPCB4047282

August 30, 1972

Polychlorinated Biphenyls -
WGK Strategy

Memo of E. E. Stewart to
A. Leisy dated 8/3/72

Mr. E. E. Stewart

G. L. Bratsch
W. C. Engman
P. E. Heisler
G. A. Hippe
P. B. Hodges
A. Leisy
J. R. Savage
E. S. Tucker

I concur with your recommendation that further sampling of fish from the Mississippi be terminated at this time and that spot sampling be considered in about six months.

Your suggestion that Hap Horner visit the Government laboratory in Cincinnati has considerable merit. I suggest that Hap discuss this with Scott Tucker who has already established good relations with the laboratory and has reviewed methodologies with them in considerable detail.

W. B. Papageorge

/ab

DSW 172659

STLCOPCB4047283

August 30, 1972

Mr. Robert D. Smith
Corning Glass Works
3900 Electronics Drive
Raleigh, N.C. 27602

Dear Mr. Smith:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure



DSW 172660

STLCOPCB4047284

August 30, 1972

Major Ralph A. Vosdingh
Chief, Veterinary Department
Fifth U.S. Army Medical Laboratory
Fort Sam Houston
San Antonio, Texas 78234

Dear Major Vosdingh:

I am forwarding under separate cover the sample of
Aroclor 1254 you requested.

If I can be of further service, please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1254- 5.72. 1430

DSW 172661

STLCOPCB4047285

August 30, 1972

Ms. Becky Yates
Biology Department
Memphis State University
Memphis, Tennessee 38152

Dear Ms. Yates:

I am forwarding under separate cover the sample of Aroclor 1254 that you requested in your letter of August 18.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1254 SN 1429

DSW 172662

126
STLCOPCB4047286

August 30, 1972

Dr. Myron A. Mehlman
Chief, Biochemical Toxicology Branch
Division of Toxicology
Bureau of Foods
Department of Health, Education
and Welfare
Food and Drug Administration
BF-153
Washington, D.C. 20204

Dear Dr. Mehlman:

I am forwarding under separate cover the samples
of Aroclor 1016, Aroclor 1242 and Aroclor 1254
that you requested from Monsanto's Dr. Scott
Tucker on August 25.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Dr. E. S. Tucker

A-1016 } SIN 1468
1016
1254

DSW 172663

STLCOPCB4047287

August 30, 1972

T. L. Gossage
H. K. Nason

Polychlorinated Biphenyls

Mr. R. K. Flitcraft
Monsanto Research Corporation
Mound Lab

I note in a collection of recent correspondence between Monsanto Research Corporation and the Atomic Energy Commission the use of Monsanto's trademark "Therminol" to describe dielectric fluids containing polychlorinated biphenyls.

The word "Therminol" is used by Monsanto for a group of fluids used as heat transfer media in processing equipment. The Therminol FR Series included the fluids which contained polychlorinated biphenyls. Sales of this series of fluids were terminated in December, 1971. The remaining Therminols, which are not chlorinated hydrocarbons, are still available.

Dielectric fluids containing polychlorinated biphenyls and used in capacitors and transformers are shipped under the following trademarks:

1. Aroclor (Monsanto)
2. Inerteen (Westinghouse)
3. Pyranol (General Electric)

Will you please arrange to have this information passed on to your AEC contacts to help eliminate the apparent confusion?

It is my understanding that the AEC is well aware of the need for proper handling, use and disposal of polychlorinated biphenyls. If additional help in this area is deemed advisable we would be glad to offer our suggestions.

W. B. Papageorge

ab

DSW 172664

STLCOPCB4047288

August 30, 1972

PCB Data - National
Research Council of Canada

Mr. D. Goodwillie
Montreal

I recommend that we share with the National Research Council the information requested which is available.

I have no information which specifically mentions the half-life of PCBs in the environment. In fact, we do not believe the half-life concept can be properly applied to a mixture such as PCBs in which each isomer has a different rate of disappearance and in a mixture seems to effect the disappearance of the other isomers. I have enclosed two copies of a presentation we made to the PCB Task Force in Washington, D.C. In this presentation we attempted to display evidence that PCBs do degrade. Perhaps Mr. Roberts can use this information to arrive at some understanding of fate of PCBs in the environment.

Regarding the request for sales figures relevant to Canada, I suggest you share with Mr. Roberts the type of information we divulged in the United States. I have attached two copies of the United States information to show how it was presented.

W. B. Papageorge

ab
Enclosures

DSW 172665

STLCOPCB4047289

August 30, 1972

Mr. G. Fredrick Holden
Allied Products Specialist
Adolph Coors Company
Golden, Colorado 80401

Dear Mr. Holden:

At Monsanto's Mr. Jim Rollins' request I am enclosing a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls (PCBs).

I have also enclosed copies of articles relating to PCBs which I hope you find interesting and informative.

In your letter dated August 2 to Mr. Rollins you requested information which might be helpful in determining the source of PCBs in your pelleted "spent grain." Since no PCBs have been detected in the components making up the spent grain pellets, it would appear that contamination occurs after the components have been sampled.

Although Monsanto no longer sells PCBs to "open" type applications, I would suggest that someone analyze samples of paints, gasketing, adhesives, inks, hydraulic fluids including compressor fluids, and packaging materials in the event old formulations are still in use.

I hope this information is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/ab
Enclosures

cc: Mr. J. Rollins

DSW 172666

STLCOPCB4047290

August 30, 1972

H. S. Bergen
W. R. Corey
J. Davidson
T. L. Gossage
C. Paton

P. J. A. Marsh
Brussels

I note in the Newport Plant Report for July, 1972 that 8745 Kgs of Aroclor 5432 were manufactured on July 17 and July 18 for shipment to Antwerp for Pydraul blending.

Since recent correspondence relating to the PCB/PCT Action Plan make no reference to the continuation of PCT- containing Pydraul sales in Europe after June 30, 1972 and your July 17 letter to H. S. Bergen indicates no anticipated sales of Pydraul 281 for the remainder of 1972, will you please send us the following:

1. When will Pydraul be blended?
2. Which Pydraul will be made?
3. When and to whom will it be sold?
4. When will sales of PCT- containing Pydrauls be terminated?

W. B. Papageorge

/ab

DSW 172667

STLCOPCB4047291

August 30, 1972

Mr. W. R. Corey

H. S. Bergen
M. W. Farrar
P. S. Park
W. R. Richard
J. F. Stapleton
R. A. Stohr
E. P. Wheeler

Attached is a copy of a proposed Grant-in-aid Agreement submitted by the Ohio Agricultural Research and Development Center for our consideration. The general objective of the proposed studies is to provide information relating to PCB contamination of milk resulting from silo coatings.

The proposed cost of \$12,500 does not appear to be excessive. It consists primarily of the salary for a technical assistant and I find it difficult to understand how his services will be utilized effectively during the entire year. Perhaps the work is such that part time help would be difficult to schedule. Note the project is not charged with any costs relating to procurement, care and feeding of the test animals.

The proposed agreement is worded to assure that control of the work, data, reports and patent possibilities remains completely with the Research Center. It appears the Donor has no particular advantages over others who may also be interested in the work.

At present no new silo coating situations have developed in those areas in which Bloomfield Silo and Michigan Silo Companies operated. Activity has been centered in the southeast and relates to silos coated by Munteagle Silo Company or its predecessor, the Concrete Silo Company. These cases are being handled on an individual basis with many of the silos being sandblasted and replastered. There are some indications that the regulatory agencies, both state and Federal, do not believe the PCB-in-milk problem is serious and activity is being limited.

Insofar as our current program is concerned I have personal doubts that the information generated by this study, becoming available in January-February, 1973 with a final report in October, 1973, would be timely.

DSW 172668

STLCOPCB4047292

Mr. W. R. Corey

-2-

August 30, 1972

I believe that the study will probably result in data which will support some tentative conclusions which Dr. Willet has derived and which encourage our sand-blasting - replastering programs. I also believe that Dr. Willet will somehow continue the study with or without Monsanto aid and the information acquired will be available to all.

It seems to me the only direct benefit we might derive from sponsorship of this study is in the intangible area of public relations, in this case the academic and agricultural community in Ohio.

I would appreciate comments from all recipients.

W. B. Papageorge

/ab
Enclosures

DSW 172669

STLCOPCB4047293

August 29, 1972

J. T. Garrett
L. R. Stark

Phenolics

Mr. C. Paton
B2SC

Several weeks ago you requested information relating to the definition of phenolics in waste waters, methods for their analysis and tolerance levels established by regulatory agencies.

I find from discussions with Jack Garrett and Lou Stark that phenolics in waste waters is a very complex subject primarily because of the lack of a reliable specific method for analysis.

Phenolics are defined as those materials which react with 4 - amino antipyrine at high pH in the presence of potassium ferricyanide to form a dye. A copy of current standard analytical methods is attached. I understand these methods do not detect some phenols.

Studies are currently underway for the establishment of methodology using gas-liquid chromatography procedures. Lou indicated a tentative method has been proposed.

Levels which regulatory agencies will tolerate seem to vary. The Federal agencies are promoting a maximum of 1 part per billion. It appears most states are approaching this level and are guided by the minimum quantity detectable by someone's favorite analytical procedure.

Lou Stark has accumulated considerable information in this area particularly relating to phosphate ester hydraulic fluids. I recommend we discuss this further with him.

W. B. Papageorge

ab
Enclosure

DSW 172670

STLCOPCB4047294

August 29, 1972

Mr. N. S. Salomons
Ashland Oil, Inc.
P.O. Box 2458
Columbus, Ohio 43216

Dear Mr. Salomons:

Your letter dated August 22 requesting information on the PCB content of Monsanto's sodium sulfite (Santosite) was forwarded to me for response.

PCBs are not used as raw materials or as ingredients in Santosite. In addition, no PCBs are present in the processing equipment used in its manufacture. To the best of our knowledge and belief there are no PCBs present in the Santosite purchased from Monsanto by your company.

I hope this information is helpful. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/ab

bcc: V. Vangiesen, Atlanta

DSW 172671

628
STLCOPCB4047295

August 22, 1972

Dr. Kenneth P. DuBois
University of Chicago
Toxicity Laboratory
930 East 58th Street
Chicago, Illinois 60637

Dear Dr. DuBois:

I am forwarding under separate cover the samples of Aroclor 1221 and Aroclor 1254 that you requested from Monsanto's Dr. William H. Hunt. You should receive these samples sometime next week.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Dr. W. H. Hunt

7-1221 } SR 1427
" 1254 }

DSW 172672

STLCOPCB4047296

August 21, 1972

Mr. Charles Hummel
Sunkist Growers
Lemon Products Division
310 North Joy Street
Carona, California 91720

Dear Mr. Hummel:

I am forwarding under separate cover samples of
Aroclor 1242 and Aroclor 1254.

I am enclosing a copy of Monsanto's methodology
for the determination of polychlorinated biphenyls.
which I hope you find interesting and informa-
tive.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

A-1242 } 5x 1226
A-1254 }

G.

DSW 172673

STLCOPCB4047297

bcc: Dr. C. Paton - E2SC

August 18, 1972

Mr. John L. Schaefer, President
The Specialty Papers Company
Box 1031
Dayton, Ohio 45401

Dear Mr. Schaefer:

In response to our letter relating to PCBs and dated August 10, I have surveyed our records and note that Monsanto's Therminol 55 and Therminol FR-1 have been purchased by your Company.

Therminol FR-1 contains 100% PCBs. This material is no longer manufactured and sales were terminated in December, 1971.

There are no PCBs used as raw materials or as ingredients in Therminol 55. In addition, no PCBs are used in the processing equipment involved in the manufacture of this product. To the best of our knowledge and belief there are no PCBs present in Therminol 55.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172674

STLCOPCB4047298

August 18, 1972

Dr. Lynn A. Hutchinson
Kennecott Copper Corporation
Process Control & Environment
P. O. Box 11299
Salt Lake City, Utah 84111

Dear Dr. Hutchinson:

Your letter to Monsanto's Don A. Olson dated August 15 was forwarded to me for response since I am intimately involved with the polychlorinated biphenyls.

In your letter you request a copy of a book entitled "The Aroclor Compound". I am not aware of any Monsanto publication having that title but I have taken the liberty of attaching copies of articles which describe the Aroclors that I hope you find useful.

You mentioned in your letter that you were researching a method to analyze for PCBs. Enclosed you will find a copy of Monsanto's analytical methodology which I believe can be adapted to your needs.

I regret I have no information concerning the reaction and stability of PCBs in concentrated Sulfuric Acid at elevated temperatures.

I hope this information is useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

E, G, T

DSW 172675

STLCOPCB4047299

August 18, 1972

Dr. James Woods
National Institute of
Environmental Health Sciences
P. O. Box 12233
Research Triangle Park, N.C. 27709

Dear Dr. Woods:

I am forwarding under separate cover the sample of Aroclor 1254 that you requested during our telephone conversation of today.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A 1254 = SN-1425

DSW 172676

STLCOPCB4047300

W. B. Papageorge - B2NA

August 18, 1972

Mr. G. F. Fague - B2SC

DETERMINATION OF
THERMINOL 66 IN WATER

Dr. C. Paton
B2SC

Attached is a "proposed" method for determining Therminol 66 in water at low levels. Note it requires the use of sophisticated instruments and, therefore, is not suitable for adaptation as a simple field method.

W. B. Papageorge

/bt

Attachment

DSW 172677

1.21

STLCOPCB4047301

August 18, 1972

Miss Dagmar Michalova, Librarian
New York State Department of Health
New Scotland Avenue
Albany, New York 12201

Dear Miss Michalova:

I regret I cannot send you a copy of the complete report relating to the two-year animal feeding study described in your letter dated July 31. This report is now being prepared and we hope to have it published before the end of the year.

I have enclosed a copy of the summary of this work which was presented by Dr. M. L. Keplinger at the PCB conference held in December, 1971 under the auspices of the National Institute of Environmental Health, Raleigh, North Carolina.

I hope this summary will serve your needs until I can forward to you the complete report.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172678

6-20

STLCOPCB4047302

August 18, 1972

Mr. Y. A. Nishioka
McClellan Air Force Base
Environmental Health Laboratory
Sacramento, California 95652

Dear Mr. Nishioka:

Confirming our telephone discussion this morning, Aroclor 1242 was the commercial polychlorinated biphenyl mixture used by the paper industry in the manufacture of carbonless reproduction paper. Monsanto terminated sale of this material to this application in April, 1971. I understand that the last paper in which polychlorinated biphenyls were used was manufactured in June, 1971.

Proper disposal of paper containing polychlorinated biphenyls can only be achieved by incineration at temperatures which exceed 800°C. Therefore, burning in the normal solid waste incinerator would result only in the vaporization of the polychlorinated biphenyl with the subsequent pollution of the atmosphere and eventual presence in natural water systems.

Relating to your question of what toxic effects can be expected from the handling of paper containing polychlorinated biphenyls, we have no information that would lead us to believe that any problems exist. Polychlorinated biphenyls are considered to be only mildly toxic at fairly high levels of exposure and these conditions do not normally exist with respect to carbonless reproduction paper.

I have enclosed copies of articles relating to polychlorinated biphenyls which I hope you find interesting and informative. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/nt
Enclosure

X, F, T, Y, E, G, M

DSW 172679

1-10

STLCOPCB4047303

August 16, 1972

Ms. Kathy Haisch
5911 NW Garfield Avenue
Vancouver, Washington 98663

Dear Ms. Haisch:

I am forwarding under separate cover a sample of Aroclor 5442 as you requested in your letter of July 25, 1972. I regret I cannot send a sample of Aroclor 1260, but Monsanto no longer manufactures this material and our supply of samples has been depleted. There is no charge for the sample being sent.

I have enclosed copies of articles which I hope you will find useful.

Good luck to you in your research project. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

A 5442 SN 1393

M, E, T, W, X, Y, S

DSW 172680

STLCOPCB4047304

August 16, 1972

Mr. B. P. Collins
Reynolds Metals Company
10th and Byrd Streets
Richmond, Virginia 23219

Dear Mr. Collins:

In response to your telephone request I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A 1242 } S.N. 1392
A -1254 }

DSW 172681

117
STLCOPCB4047305

August 16, 1972

Dr. M. Picer
Ruder Boskovic Institute
Center for Marine Research
Zagreb Laboratories
POB 1016
Zagreb, Yugoslavia

Dear Dr. Picer:

I am forwarding under separate cover a sample of Aroclor 1254 as you requested in your letter dated July 25, 1972. I regret I cannot send samples of Aroclor 1260 and Aroclor 1268 but Monsanto no longer manufactures these materials and our supply of samples has been depleted. I hope the lack of these Aroclors does not seriously inconvenience you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1254 - S.N. 1391

DSW 172682

STLCOPCB4047306

August 16, 1972

Mr. H. A. Pearce
Materials Laboratory
Westinghouse Electric Corporation
469 Sharpesville Avenue
Sharon, Pennsylvania 14614

Dear Mr. Pearce:

I am forwarding under separate cover a one gallon sample of Aroclor 1232 as you have requested.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1232 SN 1390

DSW 172683

615
STLCOPCB4047307

August 16, 1972

Mr. Peter Fusscas
Loctite Corporation
705 North Mountain Road
Newington, Connecticut 06111

Dear Mr. Fusscas:

As you have requested I have made arrangements
to have a 16 ounce sample of Inerteen 70-30
forwarded to you under separate cover.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Inerteen 70-30
S n. 1389

DSW 172684

STLCOPCB4047308

bcc: F. G. Lawicki - Akron

August 15, 1972

Mr. W. W. Ethier
Director of Purchases
PPG Industries, Inc.
One Gateway Center
Pittsburgh, Pa. 15222

Dear Mr. Ethier:

Attached is a list of the products your Company has purchased from Monsanto during 1971 and 1972. Those materials marked with an asterisk do contain polychlorinated biphenyls (PCBs). These products have been withdrawn from the market and are no longer available. The remaining materials listed do not use PCBs as a raw material or as an ingredient. Also, PCBs are not used as processing fluids in the equipment used for the manufacture of these products. To the best of our knowledge and belief there are no PCBs in the products now available to you from Monsanto.

I hope this information is useful to you and if I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Attachment

cc: H. L. Pugh

DSW 172685

112

STLCOPCB4047309

August 15, 1972

Mr. Joseph Kiss
906 Beacon Street
Apartment 3
Boston, Massachusetts 02215

Dear Mr. Kiss:

As requested in your letter of August 1, 1972 I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A. I have also enclosed copies of various other articles which I believe you will find useful and informative.

Should you receive the grant you are working for, I will be glad to send you samples of whatever Aroclors we would have available at that time. At the present the only Aroclors we are manufacturing are 1221, 1242 and 1254.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

M, E, T, W, O, Y, H, F

DSW 172686

612

STLCOPCB4047310

W. B. Papageorge - World Headquarters

August 15, 1972

H. S. Bergen - B2SL

T. L. Gossage - B2SL

PCB/PCT IMPLEMENTATION PROGRAM

Memo, PJAM to WBP, 7/20/72

Mr. P. J. A. Marsh
Brussels

Your memo dated July 20 certifying certification as to actions taken in Europe relating to the PCB/PCT program does not mention sales to Eastern European countries. I suspect it belongs under item #1. Will you please clarify?

W. B. Papageorge

/bt

DSW 172687

STLCOPCB4047311

W. B. Papageorge - B2NA

August 15, 1972

Gene McDonald - Chicago

E. S. Tucker
T2F

Arrangements have been made for Mr. Larry Rue of Economics Laboratories to visit with your laboratory on Monday, September 18 to review polychlorinated biphenyl analytical methodology as it relates to various types of samples. Mr. Rue plans to arrive Sunday evening, September 17 and will stay at the Clayton Inn.

I suggested to Mr. Rue's supervisor that someone from Monsanto would join Mr. Rue Monday morning at 8:00 AM for breakfast prior to his visit to our laboratory.

Mr. Rue's supervisor did not know how long Mr. Rue should visit with you. Perhaps you can call Mr. Rue at 612-224-4678 and offer suggestions relating to the length of his stay in St. Louis.

W. B. Papageorge

/bt

DSW 172688

STLCOPCB4047312

August 15, 1972

Mr. George A. Egermier
Metropolitan Dade County-Florida
Dade County Pollution Control
864 W. 23rd Street
Miami, Florida 33127

Dear Mr. Egermier:

Responding to your letter dated August 3 requesting information on Aroclor 5442, I regret to inform you that Monsanto has discontinued manufacture and sale of this material. I hope the lack of this material does not create a serious inconvenience for you.

I do not have any alternative materials to suggest to you but I understand Walter G. McCrone Associates in Chicago, Illinois are very knowledgeable in the field of embedding materials. Perhaps they can be of some assistance to you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172689

STLCOPCB4047313

August 15, 1972

Mr. G. Mahmood
New York Ocean Science Laboratory
of Affiliated Colleges and Universities
Montauk, New York 11954

Dear Mr. Mahmood:

I am enclosing a copy of Monsanto's Technical
Bulletin O/PL-306A as you requested. I hope
you find this Bulletin useful and informative.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

T

DSW 172690

108

STLCOPCB4047314

August 15, 1972

202-962-4026

Dr. Myron A. Mehlman
Chief, Biochemical Toxicology Branch
Division of Toxicology
Bureau of Foods
Department of Health, Education
and Welfare
Food and Drug Administration
BF-153
Washington, D. C. 20204

Dear Dr. Mehlman:

I have enclosed a copy of Monsanto's "Presentation To The Interdepartmental Task Force on PCBs, Washington, D.C., May 15, 1972" as you requested in your letter dated August 9.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W

DSW 172691

STLCOPCB4047315

August 15, 1972

Mr. Robert L. Wilson
Shell Oil Company
P. O. Box 127
Matarie, Louisiana 70004

Dear Mr. Wilson:

I am enclosing a copy of "Polychlorinated Biphenyls and the Environment, Interdepartmental Task Force on PCBs, Washington D.C." as you requested from Monsanto's Mr. J. J. Roder.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Mr. J. J. Roder

X
DSW 172692

606
STLCOPCB4047316

August 15, 1972

Mr. L. B. Day, Director
Department of Environmental Quality
Terminal Sales Building
1234 S.W. Morrison Street
Portland, Oregon 97205

Dear Mr. Day:

I regret and apologize for the tardy response to your letter dated July 10 to Monsanto's Mr. Earl M. Potter.

As discussed over the telephone by Mr. Potter and your District Manager, compliance with your recommendations enumerated in your letter was achieved by August 1.

Referring to each of the actions proposed, the following has been accomplished:

1. The contents of the drums which were leaking were transferred to sound drums and a program has been established to continue this as new leaking drums are discovered.
2. All drums have been relocated and are now stored in an area which is enclosed and which minimizes public contact with this material. Empty drums from the transfer described in item #1 above are stored along with the full containers.
3. Monsanto's Mr. John Wheeler of our Eugene, Oregon plant has personally instructed the personnel at the McCracken Van and Storage Warehouse relating to the proper handling of this material. In his opinion he believes that the proper appreciation of the matter now exists at the warehouse.

DSW 172693

STLCOPCB4047317

Mr. L. B. Day
August 15, 1972
Page 2

We have not as yet arrived at our final plan for the proper disposal of this material. I assure you that if our plans result in the disposal of this material in the State of Oregon, we will be contacting your office seeking your guidance and approval.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. E. M. Potter

DSW 172694

STLCOPCB4047318

bcc: C. Paton
B2SC

August 14, 1972

Mr. G. D. Sando
Manager of Purchases-Adhesives
and Chemicals
Continental Can Company, Inc.
633 Third Avenue
New York, New York 10017

Dear Mr. Sando:

I regret and apologize for this delayed response to you letter addressed to Mr. J. S. Pullman and dated May 31 requesting information on the polychlorinated biphenyl (PCB) content of products purchased by your Company from Monsanto.

A survey of our records indicates that during the years 1971 and 1972 the only products your Company purchased and which contained PCBs were Therminol FR-1 and Pydraul 312. These products are no longer manufactured and are not marketed.

Regarding all other products purchased by your Company, PCBs are not used as raw materials or as ingredients in their formulation. In addition, no PCBs are used in the processing equipment involved in the manufacture of these products. To the best of our knowledge and belief there are no PCBs present in the end products now purchased by your Company from Monsanto.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. J. S. Pullman
New York

DSW 172695

604-

STLCOPCB4047319

August 14, 1972

Mr. E. M. Glymph
Firestone National Rubber & Latex
1200 Firestone Parkway
Akron, Ohio 44301

Dear Mr. Glymph:

I have been informed by our Mr. Shimley of your interest in the presence of polychlorinated biphenyls (PCBs) in sodium pentachlorophenate, marketed by Monsanto under the trademark Santobrite.

PCBs are not used as a raw material or as an ingredient in this product. In addition, no PCBs are used in the processing equipment used in its manufacture. To the best of our knowledge and belief there are no PCBs present in this material.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. E. L. Shimley
Akron, Ohio

DSW 172696

1004
STLCOPCB4047320

August 14, 1972

Mr. G. E. Priester
Materials Manager
American Oil Company
Whiting Refinery
Post Office Box 410
Whiting, Indiana 46349

Dear Mr. Priester:

I regret and apologize for the tardy response to your letter dated June 20 in which you requested a review of our files to confirm whether or not any product containing polychlorinated biphenyls (PCBs) was purchased by your Whiting Refinery.

A review of our records indicates no materials containing polychlorinated biphenyls have been purchased by your plant. I hope this information is useful to you and if I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBS/bt

DSW 172697

W. B. Papageorge - E2NA

August 14, 1972

H. S. Bergen - E2SL

T. L. Gossage - E2SL

W. R. Richard - T3A

Mr. G. G. Kosup
E2SL

During a recent visit with the representatives of the Georgia Department of Agriculture, Dairy Division, I met Mr. John Jernigan who is the analytical laboratories director.

Attached is a letter from Mr. Jernigan in which he is describing a patented process involving wastes from pulp mills. He seems to be interested in having someone like Monsanto help him commercialize this process. Do we have any interest in continuing correspondence with Mr. Jernigan?

W. B. Papageorge

WBP/bt

Attachment

DSW 172698

602.

STLCOPCB4047322

August 14, 1972

Mr. S. R. Wilson
SRW
Box 556
Newburgh, Indiana 47630

Dear Mr. Wilson:

I am forwarding under separate cover a one pound sample of Aroclor 5460 in response to your request to Monsanto's Mr. W. S. Clark in your letter dated July 10.

As you may know, Monsanto has terminated the manufacture and sale of this material, therefore, it will not be available in the future. I hope this sample will be of sufficient quantity to satisfy your needs until you have developed a replacement material.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. W. S. Clark

A-5460 #1388

DSW 172699

601

STLCOPCB4047323

August 14, 1972

Mr. M. J. Cook
Weyerhaeuser Company
Kierks Division -
Paper Products
P. O. Box 7857
Pine Bluff, Arkansas 71601

Dear Mr. Cook:

Responding to your letter addressed to Monsanto's Mr. Don Stegen and dated July 21, I note that our records indicate your Company purchased the following products from Monsanto during 1971 and 1972:

Santosite
mono-Amonium Phosphate
di-Amonium Phosphate

Polychlorinated biphenyls are not used as raw materials or as ingredients in these products. In addition, no PCBs are used in the processing equipment used in their manufacture. To the best of our knowledge and belief there are no PCBs present in these materials.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172700

STLCOPCB4047324

W. B. Papageorge - B2NA

August 14, 1972

S. Uneno - Tokyo

W. R. Richard
T3A

Attached is a copy of a memo from Mr. Uneno in which he is seeking further information on an enzyme capable of decomposing PCBs in water solutions.

I am not aware of the company Mr. Uneno refers to nor am I aware of the use of enzymes for the destruction of PCBs. Have you any information which would be helpful?

W. B. Papageorge

/bt

DSW 172701

599

STLCOPCB4047325

August 11, 1972

Mr. M. Inouye
Nozaki Associates, Inc.
Aircraft & Machinery Department
4 Albany Street
New York, N.Y. 10006

Dear Mr. Inouye:

I am not familiar with the article "Aroclor Compounds" which you requested in your letter of August 2, 1972. In its place I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A and also a copy of an article from the Encyclopedia of Chemical Technology, "Chlorinated Biphenyl and Related Compounds", which I believe should fulfill your needs.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosures

T, E

DSW 172702

598

STLCOPCB4047326

August 11, 1972

Dr. Y. A. Greichus
Associate Professor
South Dakota State University
College of Agriculture and
Biological Science
University Station
Brookings, South Dakota 57007

Dear Dr. Greichus:

I am forwarding under separate cover the sample of Aroclor 1254 you requested in your letter of July 20, 1972.

I am not familiar with the article "Aroclor Compounds" which you requested in your letter. In its place I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A and also a copy of an article from the Encyclopedia of Chemical Technology, "Chlorinated Biphenyl and Related Compounds." I believe these two publications should fulfill your needs.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosures

A-1254 - #1387

T, E

DSW 172703

597

STLCOPCB4047327

August 11, 1972

Mr. Griffin Jones
Headquarters SAAMA
Product Engineering
Branch/SFQT
Kelly Air Force Base
San Antonio, Texas 78241

512-925-5416
-5613

Dear Mr. Jones:

Enclosed are copies of articles relating to the proper handling and disposal of transformer fluids containing polychlorinated biphenyls.

I hope you find this information useful and if I can be of further assistance please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172704

596
STLCOPCB4047328

August 2, 1972

Mr. Derek McManus
Technical Consultant
127 West Maple
Chicago, Illinois 60610

Dear Mr. McManus:

I am forwarding under separate cover the samples of Aroclor 1242 and Aroclor 1254 you requested in your letter dated July 26.

I regret I cannot send samples of Aroclor 1221, Aroclor 1248 and Aroclor 1260 as these products are no longer being manufactured and our supply of samples has been depleted. I hope the unavailability of these Aroclors does not seriously inconvenience you.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

*Aroclor 1242 } #1386
1254 }*

DSW 172705

595-

STLCOPCB4047329

JULY 1972

DSW 172706

STLCOPCB4047330

W. B. Papageorge - B2NA

July 31, 1972

Mr. W. R. Corey
B2SL

H. S. Bergen	- B2SL
G. L. Bratsch	- 1740
W. S. Clark	- B3NC
D. Goodwillie	- 5090
T. L. Gossage	- B2SL
E. Greene	- A2NA
G. L. Jessee	- 1060
P. J. A. Marsh	- 5040
E. M. Potter	- B2NK
J. R. Savage	- B2SL
R. C. Sprague	- B2NG
J. F. Stapleton	- B2SA

Attached is a summary of the current status of each of the actions listed in the PCB/PCT Implementation Program described in your memo dated December 27, 1971 to C. P. Cunningham. Certification by the appropriate managers is shown. You will note that with the termination of PCB sales to Goodyear Tire and Rubber Company and to the German mine industry, the program will be completed in its entirety.

To assure continuing control, the following actions have also been certified:

1. All unsold worldwide inventories of Monsanto products containing PCBs and PCTs are well in hand. Each location has been advised of disposition of remaining inventory to avoid any environmental or other contamination.

Certified by E. M. Potter
E. Greene

2. No shipments of monochlorobiphenyl (Aroclor 1221B) or PCTs will be made from Anniston plant except for disposal purposes.

Certified by G. L. Jessee

3. No samples of PCBs or PCTs will be released from the W. G. Krummrich or Anniston plants without approval from W. B. Papageorge.

Certified by G. L. Jessee

Certification pending from G. L. Bratsch

4. No products containing PCBs are shipped from the W. G. Krummrich plant without proper release from COP.

Certification pending from G. L. Bratsch

DSW 172707

594

STLCOPCB4047331

5. No orders for products containing PCTs are accepted by COP.

Certified by R. C. Sprague

6. No orders for products containing PCBs are accepted by COP except for dielectric uses and heat transfer fluid to Goodyear Tire and Rubber Company.

Certified by R. C. Sprague

7. PCB heat transfer fluid orders for Goodyear Tire and Rubber Company will not be processed by COP after August 4, 1972.

Certified by R. C. Sprague

8. Orders for dielectric fluids containing PCBs are processed by COP only if approval is granted by H. S. Bergen.

Certified by R. C. Sprague

9. All acknowledgements of orders from approved PCB customers include a copy of a letter by H. S. Bergen stating the material contains PCBs and must be handled, used and disposed properly.

Certified by R. C. Sprague

10. None of the products sold by the Specialty Products Group are made with PCBs or PCTs as a raw material or ingredient, or are manufactured in equipment which uses PCBs or PCTs as an industrial fluid with the following exceptions:

- a. Fluids sold to approved customers for dielectric applications
- b. The special hydraulic fluid sold to the German mines
- c. PCB heat transfer fluid sold to Goodyear Tire and Rubber Company
- d. A heat transfer system located at the J. F. Queeny plant used in the processing of some of our products still contains PCBs. No makeup is being supplied to the system. Each lot of product produced is analyzed to assure no detectable PCB content. A conversion to a non-PCB fluid is scheduled for August, 1972.

Certified by J. R. Savage

Mr. W. R. Corey

- 3 -

July 31, 1972

As of July 21, 1972 the U.S. Therminol FR conversion program has resulted in 138 conversions in 1972. With the decrease in activity the conversion team has been gradually reduced down to one engineer who is arranging for another and probably final conversion recommendation to the remaining 200 plus customers with PCB heat transfer systems.

Our survey of 130 known customers of heat transfer units in food related systems resulted in 93 conversion confirmations. Additional information available to us indicates that 28 of the remaining 37 have converted to non-PCB fluids. An attempt will be made to re-contact these 28 to confirm their conversion status and of the remaining 9 to establish their status. A summary report of the total conversion effort is planned for late August.

W. B. Papageorge

/bt

DSW 172709

STLCOPCB4047333

July 28, 1972

Mrs. Aurora K. Wreich
National Institutes of Health
Division of Biologics Standards
Building 29A, Room 1A 21
Bethesda, Maryland 20014

Dear Mrs. Wreich:

Enclosed are copies of the articles on polychlorinated biphenyls I offered to send.

I hope you find the information interesting and informative. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W, Q, U, F, T, V, H, Y, S, M

DSW 172710

STLCOPCB4047334

July 28, 1972

Mr. Marvin Welsh
Shilstone Testing Laboratory, Inc.
814 Conti Street
New Orleans, Louisiana 70112

Dear Mr. Welsh:

I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254 which you requested in your letter dated July 25, 1972.

In response to your request for samples of Therminol heat transfer fluids, Aroclor 1242 is identical to Therminol FR-1 and Aroclor 1254 is the same as Therminol FR-3.

If I can be of further service please let me know.

Very truly yours,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1242 } #1385
A-1254 }

DSW 172711

592

STLCOPCB4047335

W. B. Papageorge, B2NA

July 28, 1972

D. Danna - B1NC
J. R. Durland - 5260
S. Uneno - 5260

Dr. M. W. Farrar
R2E

Attached is a copy of a request from S. Uneno,
MMK, seeking information on several plasticizers.
Will you please arrange for someone to respond
to Mr. Uneno's needs.

W. B. Papageorge

WBP/bt

Attachment

DSW 172712

STLCOPCB4047336

July 25, 1972

Mr. Bill B. Dendy
Executive Officer
State Water Resources Control Board
Room 1015, Resources Building
1416 Ninth Street
Sacramento, California 95814

Dear Mr. Dendy:

To the best of our knowledge PCBs were never used as components in the commercial production of vehicle tires. Very limited quantities were tested in experimental studies involving about a dozen tires at a time but the results were not favorable and the use was never extended.

PCBs could have been present as contaminants as a result of the use of recycled oils in some isolated incidents but the quantities present must have been very low to avoid adverse characteristics in the final product. Another possible source of PCB contamination might have been the adhesive used in the construction of the tires. Here, too, the quantity involved would be extremely low.

With the current limited use of PCBs and the tighter control now exercised by the electrical industry the presence of PCBs in recycled oil should be virtually eliminated. The availability of PCBs for use in adhesives was terminated in August, 1970.

The only use of PCBs in rubbers which met with any commercial success was as a plasticizer for chlorinated rubbers used in adhesives, coatings, gasketing and sealants. This application was also discontinued in August, 1970.

DSW 172713

290

STLCOPCB4047337

Mr. Bill B. Dendy
July 25, 1972
Page 2

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172714

STLCOPCB4047338

July 24, 1972

Mr. W. F. Wills
General Electric
P. O. Box 846
Pleasanton, California 94566

Dear Mr. Wills:

I am sending under separate cover the sample
of Aroclor 5442 you requested.

If I can be of further service please let
me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 5442 - #1384

DSW 172715

589

STLCOPCB4047339

July 24, 1972

609-655-7216

Mr. Jose Garcia
Cities Service Oil Company
Cranberry, New Jersey

Dear Mr. Garcia:

I am enclosing a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which you requested from our Mr. J. H. Davidson on July 20, 1972. I hope you find this information useful.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure



DSW 172716

588

STLCOPCB4047340

July 21, 1972

Mr. Clark Gapen
CPC International, Inc.
Box 345
Moffett Technical Center
Argo, Illinois 60501

Dear Mr. Gapen:

I am forwarding under separate covers samples of
the Aroclors requested by Bob Barbaro.

I have enclosed a copy of Monsanto's analytical
methodology for the determination of polychlorinated
biphenyls. I hope you find this information useful.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: A. Barbaro
CPC International, Inc.

Aroclor 1221 #1382
Aroclor 1242 } #1383
12321 }

DSW 172717

C

587

STLCOPCB4047341

July 19, 1972

Mr. C. R. DeRose
Celanese Chemical Company
Box 937
Pampa, Texas 79065

Dear Mr. DeRose:

Pyranol is the General Electric Company's registered trademark for transformer fluids which contain polychlorinated biphenyls (PCBs). PCBs are essential ingredients to provide the highly desirable fire resistant properties.

Disposal of the scrap fluid must be made by incineration at temperatures exceeding 2000°F. The resulting gases must be scrubbed to prevent atmospheric pollution with hydrogen chloride.

Arrangements for disposal may be made with the General Electric Company, Rollins-Purle, Inc. in Houston or with Monsanto.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172718

586

STLCOPCB4047342

July 19, 1972

Dr. J. T. Snow
Chief Chemist, Research
United States Sugar Corporation
P. O. Drawer 1207
Clewiston, Florida 33440

Dear Dr. Snow:

I am sending under separate cover the samples you requested in your letter dated July 5 of commercial polychlorinated biphenyl mixtures for use as analytical standards.

I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which I hope you find useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

1242 } 1381
1254 }

0

DSW 172719

STLCOPCB4047343

July 19, 1972

Mr. Derek McManus
127 West Maple
Chicago, Illinois 60610

Dear Mr. McManus:

I regret I do not have the polychlorinated biphenyl isomers you listed in your letter dated July 6 to Mr. Will Clark.

You may wish to contact Mr. Ted Lynn whose address is as follows:

Analabs, Inc.
80 Republic Drive
North Haven, Connecticut 06473

He may be able to give you further information.

I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which I hope you find useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

[Handwritten signature]

DSW 172720

584

STLCOPCB4047344

July 19, 1972

Mr. Murray Haynes
Purchasing Supervisor
Hewlett Packard
1900 Garden of the Gods Road
Colorado Springs, Colorado 80907

Dear Mr. Haynes:

In a letter dated April 3 you requested Occupational Health and Safety Act information on Aroclor 5442.

This product is no longer manufactured or sold by Monsanto, therefore, no data sheet has been prepared nor is one considered necessary.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172721

5-83

STLCOPCB4047345

July 19, 1972

Mr. R. J. Caesar
Wilson-Martin Division
Wilson Pharmaceutical and Chemical Corp.
Swanson and Jackson Streets
Philadelphia, Pennsylvania 19148

Dear Mr. Caesar:

I am forwarding under separate cover samples of
Aroclor 1242 and Aroclor 1254 which you requested.

I have enclosed a copy of a Technical Bulletin
describing these materials and a copy of Monsanto's
analytical methodology for the determination of
polychlorinated biphenyls.

I hope this information is useful to you. If I
can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

1242 } 1379
1254 }
T, C,

DSW 172722

582

STLCOPCB4047346

July 19, 1972

Dr. Lawrence A. Wapensky
Technical Support Branch
Surveillance and Analysis Division
Region VIII
Environmental Protection Agency
Suite 900
1860 Lincoln Street
Denver, Colorado 80203

Dear Dr. Wapensky:

I am sending under separate cover samples of Aroclor 1221, Aroclor 1242 and Aroclor 1254 as requested in your letter dated July 5.

I regret I cannot include the remaining Aroclors listed. Manufacture of these mixtures was discontinued long ago and our supply of samples has been depleted.

I hope the lack of some of the Aroclors does not seriously inconvenience you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1021 #1377
A-1042 } #1378
1054 }

DSW 172723

581

STLCOPCB4047347

Monsanto

OUTGOING MESSAGE BLANK
TELECOMMUNICATIONS SYSTEM

DATE 7/19/72

TIME 12:00

SENDER'S ACCOUNT NO.
43-000-741.01

INDICATE DESIRED SERVICE → ☐ FULL RATE ☐ DAY LETTER ☐ NIGHT LETTER

Names of addressee and sender must include initials. Show complete address for telegrams and cables.

P.J.A. Marsh - Brussels

Reference your wire to C. Paton July 6. I note that you confirmed
PCB/PCT actions completed. I need certification, not just
confirmation.

W. B. Papageorge
St. Louis, Mo.

SYO

IN-IR
REV. 7-64

for **BETTER** service - Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172724

STLCOPCB4047348

July 18, 1972

Mr. C. Colomello
Department 997
International Business Machines Corp.
Neighborhood Road
Kingston, New York 12401

Dear Mr. Colomello:

As discussed during my telephone conversation with Mr. B. Hudela, the material which I believe would be appropriate for the proposed meeting on PCBs will consist of information which is already available in the literature and which I have used previously in discussions with governmental agencies, universities and customers.

Since the material is generally available there does not appear to be a need for your disclosure form. In addition, our lawyers have advised against our signing the form.

If your company policy permits I would be very pleased to participate in a PCB discussion without the formality of signing your disclosure form.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. B. Hudela

I E m

DSW 172725

579

STLCOPCB4047349

July 18, 1972

Mr. Leonard E. Eisenberg
President
Lenmar Lacquers, Inc.
148-156 South Calverton Road
Baltimore, Maryland 21223

Dear Mr. Eisenberg:

In your letter dated June 26 you requested
"Material Safety Data Sheets" for several
products.

You will receive the sheets from the appropriate
product manager for each of the products listed
except Aroclor 5460 and Silicone Defoamer I-527.

Aroclor 5460 is no longer manufactured or sold,
therefore, no sheet is available or required.
Silicone Defoamer I-527 is not a Monsanto pro-
duct. I suspect it is manufactured by Dow-
Corning.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172726

278

STLCOPCB4047350

July 18, 1972

Dr. Frank A. Puglisi
National Water Quality Laboratories
6201 Congdon Boulevard
Duluth, Minnesota 55804

Dear Dr. Puglisi:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which I offered to mail you.

I hope you find it useful. If I can of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure



DSW 172727

577

STLCOPCB4047351

July 17, 1972

Ms. Sharon Hammond
Hawaiian Sugar Planters Association
P. O. Box 2450
Honolulu, Hawaii 96804

Dear Ms. Hammond:

In response to your letter dated July 10, I have enclosed a copy of a bulletin describing the various Aroclors.

Because of environmental considerations the marketing of these materials has been restricted. Of the Aroclors you have listed only Aroclor 1254 is still being manufactured and is sold only to manufacturers of transformers for use in the dielectric fluid.

I hope this information is useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

T,

DSW 172728

STLCOPCB4047352

W. B. Papageorge - General Offices

July 17, 1972

CORROSIVE MATERIAL

Messrs.

B. G. Earnheart - F4WF
W. H. Hunt - A2SA

R. S. Baker - B2SB
H. S. Bergen - B2SL
W. R. Corey - B2SL
W. L. Friehs - B2NC
R. M. Kountz - F4WA
W. R. Richard - T3A
J. R. Savage - B2SL
J. R. Sayers - G4NA
G. R. Sido - G5EC
W. F. Symes - N1A
E. P. Wheeler - A2SA

Attached is a list of products of the Functional Product Groups, MICC which on preliminary review are classified as probable candidates for classification as Corrosive Materials.

Bill Richards and Bill Symes are arranging for 2 oz. samples to be sent to Bill Hunt.

W. B. Papageorge

/bt

Attachment

DSW 172729

575

STLCOPCB4047353

SPECIAL CHEMICAL SYSTEMS GROUP

Currently Classified Corrosive Liquids

Di-isooctyl Acid Phosphate
Phosphorus Acid Solution 50%

Probable Candidates for Corrosive Classification

ACL-59
ACL-60
ACL-66
ACL-70
ACL-85
ACL-85 HF
Alkophos C
Alkophos CE
Amyl Acid Phosphate
n-Butyl Acid Phosphate
D.P. Solution
(Dibutylamine Pyrophosphate)
Ethyl Acid Phosphate
n-Propyl Acid Phosphate

SPECIALTY PRODUCTS GROUP

Probable Candidates for Corrosive Classification

Monsat 1814
Monflex 4800

Penta Prilled
Penta 60
Santobrite
Scriptite 435
Scripset 101
Scripset 102

July 17, 1972

Mr. Ken Arnold
Shell Oil Company
P. O. Box 127
Metairie, Louisiana 70004

Dear Mr. Arnold:

Monsanto's Jim Roder has informed me of your need for a sample of Therminol FR-1 for test purposes.

I am forwarding under separate cover a one gallon sample.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. J. J. Roder
G4NN

A-1242 #1376

DSW 172731

STLCOPCB4047355

STATUS REPORT

PCB/PCT IMPLEMENTATION PROGRAM

U.S. DOMESTIC PROGRAM

I. Discontinue sales of PCBs for heat transfer applications

The sales of PCB heat transfer fluids in the U.S. were terminated on December 15, 1971 with two exceptions, both covered with hold harmless agreements. We continue to supply Goodyear Tire and Rubber Company under an agreement until August 7, 1972. We supplied fluid to Bendix Corporation under an agreement but sales were terminated prior to June 1972.

Certified by T. L. Gossage

II. Further sale and delivery of PCBs as dielectric fluids for transformers and capacitors will be made in conformance with certain restrictive policies adopted by Monsanto management.

Sales of PCB dielectric fluids in the U.S. were terminated on January 15, 1972 except to approved customers who satisfy Monsanto's special requirements.

Certified by T. L. Gossage

III. Discontinue all sales of PCTs (polychlorinated terphenyls) no later than June 30, 1972. The program calls for 75% of such sales to be terminated by March 31, 1972, with the remainder to be terminated during the second quarter of 1972.

With two exceptions, sales of plasticizers containing PCTs were terminated on March 31, 1972, exclusive of a few customers who had signed hold harmless agreements. The two exceptions occurred in early April. Sales to customers who had signed hold harmless agreements were terminated prior to June 30, 1972.

Certified by W. S. Clark

Sales of PCT industrial fluids were terminated on June 30, 1972.

Certified by T. L. Gossage

U.S. EXPORT PROGRAM

- I. Discontinue all sales of PCBs for all uses other than as dielectric fluids in transformers and capacitors no later than January 31, 1972. Effective date of discontinuance shall be date of letter giving formal notification.

Sales of PCBs for all uses other than dielectric fluids in transformers and capacitors were terminated by January 31, 1972.

Certified by E. Greene
D. Goodwillie
W. S. Clark

- II. Further sale and delivery of PCBs as dielectric fluids for transformers and capacitors will be made in conformance with the restrictive policies adopted by Monsanto management.

In Canada sales of PCBs to dielectric applications were terminated on January 31, 1972 except to approved customers who satisfy Monsanto's special requirements.

Certified by D. Goodwillie

Remaining export sales of PCB dielectric fluids were terminated on March 31, 1972 except to approved customers who satisfy Monsanto's special requirements.

Certified by E. Greene

- III. Discontinue all sales of PCTs no later than June 30, 1972. The program calls for 75% of such sales to be terminated by March 31, 1972 with the remainder to be terminated during the second quarter of 1972.

All sales of plasticizers containing PCTs were terminated on March 31, 1972 except for those customers who signed special agreements. These were terminated by June 30, 1972.

Certified by W. S. Clark
P. J. Marsh
D. Goodwillie
E. Greene

Sales of industrial fluids containing PCTs were terminated on June 30, 1972.

Certified by D. Goodwillie
P. J. Marsh
E. Greene

MONSANTO EUROPE PROGRAM

- I. Discontinue all sales of PCBs for other than dielectric uses by January 31, 1972.

Sales of all PCB products other than hydraulic fluids for the German mining industry and dielectric fluids were terminated on January 31, 1972. Program calls for termination of sales to the German mines by November 30, 1972.

Certified by P. J. Marsh

- II. Further sales and delivery of PCBs for dielectric uses for transformers and capacitors will be subject to the same restrictive policies adopted for U.S. domestic and U.S. export sales and the effective date of implementation will be March 31, 1972.

Sales of PCB dielectric fluids were terminated on March 31, 1972 except to approved customers who satisfy Monsanto's special requirements and to Eastern European customers to whom we continue to sell without restrictions.

Certified by P. J. Marsh

MMK PROGRAM

Mitsubishi Monsanto discontinued the exporting of PCBs except for dielectric purposes on January 31, 1972. Manufacture of PCBs was discontinued entirely on March 17, 1972 and all sales were discontinued shortly thereafter.

Certified by E. Greene

July 17, 1972

Dr. S. Green
Food and Drug Administration
200 "C" Street S.W.
BF-156
Washington, D.C. 20204

Dear Dr. Green:

I am forwarding under separate cover the samples
of Aroclor 1242 and Aroclor 1254 you requested.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1242 } # 1375
1254 }

DSW 172735

STLCOPCB4047359

W. B. Papageorge - D2NA

July 17, 1972

H. S. Bergen - E2SL
A. J. Koenig - E2SC
J. F. Stapleton - E2SA
R. A. Stohr - A2SB

Mr. R. M. Kountz
P4WA

With the increase in PCB silo coatings claims I predict that we will require more assistance from Central Engineering relating to surface preparation and replacement coatings.

I recommend that you have a CEA prepared to isolate CED costs generated as a result of this service. As a very rough estimate I propose you consider about six days of consulting and three field trips in preparing any cost estimates.

W. B. Papageorge

/bt

DSW 172736

STLCOPCB4047360

W. B. Papageorge - B2HA

July 17, 1972

HOERNER WALDORF CORPORATION

D. R. Dill - Q2C
E. Shimley - 1010
B. G. Tibbetts - B2SE

Memo, WIS to WBP, 7/5/72

Mr. W. H. Slowikowski
G4NN

I called Bill Aloisi, Brown Company, Kalamazoo, Michigan and discussed the Hoerner Waldorf letter relating to PCBs which he had received.

We covered in general the toxicity and persistence of various Aroclors.

He appeared satisfied with my comments and stated that written confirmation of our discussion was not required.

W. B. Papageorge

/bt

DSW 172737

STLCOPCB4047361

W. B. Papageorge - B2NA

July 17, 1972

C. Paton - B2NC

OSHA MATERIAL SAFETY DATA SHEETS

Mr. H. Hehner
1760

Products of the Biphenyl/Aroclor family still being
sold are as follows:

Biphenyl
Aroclor 1016
Aroclor 1232
*Aroclor 1242
Aroclor 1254
Capacitor 21
*HB-40
Inerteen 100-42
Inerteen 70-30
Inerteen 54201CM
Inerteen 54201KA
Montar 9
Pyranol A13B3B
Santowax OM
Santowax OMP
Santowax R

Material Safety Data Sheets are available for the
products designated with an asterisk. Data sheets
will be required for the remaining.

W. B. Papageorge

/bt

DSW 172738

STLCOPCB4047362

July 17, 1972

Mr. J. C. Patterson
Environmental Pollution Control
Department 191 - Building 32
McDonnell Douglas Corporation
Post Office Box 516
St. Louis, Missouri 63166

Dear Mr. Patterson:

I was just informed that the shipping information I sent you in my letter dated June 15 was not complete. Additional material was shipped to your locations as follows:

<u>Date</u>	<u>Location Shipped to</u>	<u>Product</u>	<u>Amount (Lbs.)</u>
1967	St. Louis, Missouri	Pydraul F-9	13,624
		Pydraul AC	1,830
1968	St. Louis, Missouri	Pydraul F-9	19,468
		Pydraul AC	4,270
		Pydraul A-200	2,580
	Santa Monica, California	Aroclor 1254	1,200
	Long Beach, California	Pyranol A13B3B	1,440
1970	Huntington Beach, California	Pydraul AC	590
	Santa Monica, California	Aroclor 1254	4,800
	Long Beach, California	Inerteen PPO	4,718

I regret this omission and hope it has not seriously inconvenienced you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172739

576

STLCOPCB4047363

W. B. Papageorge - B2NA

July 17, 1972

H. S. Bergen - B2SL

Mr. W. R. Richard
T3A

I note from your June Monthly Summary several references to new materials and new formulations. Will you please arrange to have copies of environmental evaluation sheets EC-201 and EC-202 forwarded to me as they are completed for these products.

Thanks.

W. B. Papageorge.

/bt

DSW 172740

568

STLCOPCB4047364

July 17, 1972

Mr. W. M. Waller
MSB-12
Lockheed Electronics
16811 El Camino Real
Houston, Texas 77058

Dear Mr. Waller:

I am forwarding under separate covers the samples
of Aroclors you requested.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Aroclor 1221 - 1273
1242 } 1273
1244 }

DSW 172741

566

STLCOPCB4047365

July 17, 1972

Mr. Elmo Hubble
P. O. Box 52289
Lafayette, Louisiana 70501

Hear Mr. Hubble:

I have enclosed copies of articles relating to polychlorinated biphenyls which I hope you find informative and useful.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/bt

Enclosure

X

DSW 172742

576 5

STLCOPCB4047366

bcc: W. R. Corey
J. F. Stapleton
H. S. Bergen

July 14, 1972

Mr. John Wessel
Office of Associate Commissioner
for Compliance
Food and Drug Administration
CC-10
5600 Fishers Lane
Rockville, Maryland 20852

Dear John:

Attached is a copy of Monsanto's comments relating to the proposed regulations for PCBs in food, animal feed and food packaging materials.

You will note on page 5 a reference to Monsanto's experience with residual PCBs in converted heat transfer systems. I am corresponding with several Monsanto locations to gather additional information. As soon as the data is compiled and summarized we would appreciate an opportunity to discuss it with you and any other FDA personnel concerned.

Warren or I will be contacting you as soon as the information is available.

Regards.

Sincerely,

W. E. Papageorge
Manager
Environmental Protection

/st

Attachment

DSW 172743

cc: K. W. Hasley - Washington, D.C.

564

STLCOPCB4047367

July 14, 1972

Hearing Clerk
Department of Health,
Education and Welfare
Room 6-88
5600 Fishers Lane
Rockville, Maryland 28052

Re: Department of Health, Education and Welfare
Food and Drug Administration
21 CFR Parts, 3; 121; 122; 128
Polychlorinated Biphenyls, Notice of
Proposed Rule Making
Federal Register, Vol. 37, No. 54, pp. 5705-5707
Saturday, March 18, 1972

Gentlemen:

We have reviewed the Food and Drug Administration's proposed regulations relating to PCBs in food, animal feed, food and feed processing plants and packaging materials.

We agree with the Administration's intent to control the presence of PCBs in the nation's food supply and commit ourselves to continuing our activities directed toward this end. We endorse the recognition of the problem of unavoidable PCB residues in food and animal feeds. We support all appropriate action taken to prevent further introduction of additional PCBs into the environment. We equally support realistic action designed to minimize the unavoidable residues occurring from PCBs already present in the environment.

With respect to the rule making we have the following comments to offer:

1. The temporary tolerances for PCBs in milk and poultry should be maintained as originally established; 5.0 parts per million (fat basis) for milk and 5.0 parts per million edible portions for poultry.

DSW 172744

563

STLCOPCB4047368

Department of Health,
Education and Welfare
July 14, 1972
Page 2

2. Residual PCBs are present in converted heat transfer systems. Therefore, a regulation which specifies no PCBs in a system will create unnecessary hardships which are not warranted by the hazard to human health. Extensive studies should be conducted by the Administration to determine the realistic acceptable level which can be achieved, and the regulation should specify this level. The period for compliance, following the establishment of an acceptable level, should be of sufficient duration to assure its achievement.
3. More information should be developed concerning analytical methodology and migration rates before a PCB tolerance level is established for food packaging materials.
4. Provision should be made in the proposed regulation permitting the use of transformers and capacitors containing PCBs when installed in a manner which would prevent direct contact with the food or animal feed being processed.
5. These comments are premised upon the statement by the FDA that "...the current dietary level of PCBs is not considered an immediate hazard to the public health."

I. GENERAL DISCUSSION

Monsanto Company has been a manufacturer of various chemicals and other products since 1901. At the end of last year, Monsanto was the third largest chemical company in the United States. For many years we have supplied chemical products to almost every American industry, and, in fact, through our research departments have played a role in the development of technology in many industries.

On some occasions, a chemical compound with specific properties is developed to meet a need in a certain application. At other times, whether through innovative research or by happenstance, a chemical compound with unique properties is developed first and then applications are found for which the new compound is uniquely suited.

Department of Health,
Education and Welfare
July 14, 1972
Page 3

So it was in a sense with polychlorinated biphenyls. PCBs were apparently first used commercially in the late 1920's. PCBs are chemical compounds with several very desirable qualities. They are very inert, substantially fire resistant and non-conductors of electricity. As the properties of these new compounds became known, they were put to use in applications where they seemed to be ideally suited. Perhaps the first of the uses was as a dielectric fluid in transformers and capacitors. In situations where high voltage arcing could occur, the fire resistant and insulating qualities of PCBs were highly desirable.

Monsanto's production of PCBs began in the mid-1930's. As the desirability of PCBs gradually increased for many applications so did production of the material. Their fire resistant nature made them excellent choices for use as heat transfer fluids. Their inertness gave long lasting qualities to lubricants. When used as ingredients in coatings, they improved the waterproofing characteristics.

Insofar as handling of the material is concerned, PCBs are considered less toxic than many other chemicals in everyday use.

Recently questions have been raised concerning the effect of PCBs on the environment. The persistent nature of the products, while so desirable from the standpoint of many industrial applications, began to work against them. In the late 1960's, after sophisticated analytical procedures were developed which would determine minute quantities of PCBs, they were detected in the environment. It was later learned that PCBs could affect certain forms of marine, terrestrial and avian wildlife. Early evidence indicated that, like DDT, PCBs did not readily biodegrade in the environment. Recently it has been established that many PCBs are biodegradable, particularly the monochloro, dichloro and trichloro, with evidence that some of the tetrachloro and pentachloro also degrade.

When questions first began to be raised about the effects of PCBs on the environment, Monsanto, in the light of developing data, reviewed again the products and applications

Department of Health,
Education and Welfare
July 14, 1972
Page 4

in which they were used. While the environmental effect of PCBs was still in controversy, Monsanto began unilaterally to take steps intended to reduce the entry of PCBs into the environment. Acting on its own, Monsanto stopped the sale of PCBs for use in plasticizer applications such as paints, sealants and coatings. A program was initiated for reducing the sale of PCBs which provided that sales would be made only for use in applications where (a) the products were necessary from the standpoint of the public interest, and (b) no acceptable alternatives were available. Since sales as plasticizers had already been eliminated, the extended program further called for the termination of sales for use in hydraulic fluids and then the termination of sales for use in heat transfer fluids. Today, virtually all PCBs manufactured by Monsanto Company are used by the electrical industry for dielectric uses such as in transformers and capacitors; applications for which we understand there are, as yet, no satisfactory alternate products. The manufacturing and sales reduction program undertaken by Monsanto was completely unilateral and not because of any governmental requirement. The subject regulations being proposed by the FDA will be the first significant governmental regulations affecting PCBs.

II. TEMPORARY FOOD TOLERANCES

Monsanto's current program on the sale of PCBs should in time virtually eliminate the contamination of foods (assuming no other commercial sources are available). During the interim the establishment of temporary tolerances for the proposed limited group of foods has merit.

Past incidences of PCBs in foods, at levels considered to be unacceptable, have been relatively few, have been attributed to unusual single sources and, in virtually every case, the source has been identified. Additionally, we know of no facts that indicate that the action level guidelines established for milk in 1969 at 5.0 parts per million on a fat basis and for poultry in 1970 at 5.0 parts per million in edible portions have not provided adequate protection to the consumer. We, therefore,

DSW 172747

STLCOPCB4047371

Department of Health,
Education and Welfare
July 14, 1972
Page 5

conclude that the proposed temporary tolerances of 2.5 parts per million on a fat basis for milk and 5.0 parts per million on a fat basis for poultry do not appear to be justified and we respectfully urge that the levels be maintained as originally established.

III. PROCESSING EQUIPMENT

Monsanto basically agrees with the objectives of the proposed regulations relating to the use of PCBs in heat transfer systems in food, feed, and food packaging material plants. In 1971 we discontinued sales of PCBs to these applications and have recommended conversion to other available fluids. A copy of a bulletin available to our customers to assist them in their conversion is attached. You will note on page 12 our statement that heat transfer fluids are intended only for indirect heating purposes.

The food industry requires high temperatures in certain of its operations to properly process its products and to protect the consumer from the dangers of pathogenic microorganisms from products prepared in an unsatisfactory manner. The continued use of existing heat transfer systems must, therefore, be assured to prevent serious disruption to the nation's food distribution chain.

The regulation as proposed prohibits the presence of any PCBs in a system. Our limited experience with converted Monsanto Company units, which are not food related, indicates that, although considerable care is taken, some PCBs still remain in the system. The amount seems to vary with such factors as the design of the system, the age of the system, and the operating conditions involved. No generalization can be made relating to the levels of PCBs remaining in any given system even though our former PCB heat transfer customers have been cautioned to remove PCBs from their systems. Under such conditions, the regulation as proposed could deny the food industry the continued use of its facilities and would make more difficult the achievement of desired processing results.

Before promulgating this section of the regulations, we urge that extensive studies be conducted by the Administration to determine the acceptable residual level of PCBs which can be realistically achieved in well run, properly managed systems. Following the establishment of this level, reasonable time, which we feel is considerably longer than the 30 days proposed, should be permitted to provide the food industry an opportunity for its orderly achievement.

IV. FOOD PACKAGING MATERIAL

The proposed regulations contain a maximum tolerance level of five parts per million PCBs which would be allowed in food packaging material. The proposal of any standard for packaging materials at this time would appear to be ill-conceived. There are at least two areas in which more information must be developed before a reasonable PCB tolerance level can be established. First, accurate methodology for use in determining the exact levels of PCBs in the various materials used in packaging must be developed. Second, it is necessary to determine the actual rate of migration of PCBs from each packaging material into foods. Since the composition of various materials used in packaging foods varies to a considerable extent, this information must be developed with respect to a number of different materials. It may be that some materials contain no PCBs at all, while other materials which do contain PCBs prevent their migration into foods. In either case, a PCB tolerance level for the packaging material would appear to be unnecessary. In any event, more information should be developed concerning analytical methodology and actual migration rates before a PCB tolerance level is established for food packaging materials.

V. CAPACITORS AND TRANSFORMERS

The importance of continuing the use of PCBs as a dielectric fluid in capacitors and transformers has been generally acknowledged. Recent reports supporting this use include the Interdepartmental Task Force on PCBs report entitled

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Education and Welfare
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Page 7

"Polychlorinated Biphenyls and the Environment" dated May, 1972 and the Food and Drug Administration's "Environmental Impact Statement - Notice of Proposed Rule Making - Polychlorinated Biphenyls" dated May 8, 1972.

In the food processing industry there are a number of applications of PCB-type electrical devices which cannot be adequately performed by substitutes. The hermetically sealed construction of capacitors and transformers, the very low failure rates, 0.1% to 0.2% per year, the exceedingly low failure rate which could lead to loss of fluid, approximately 0.01%, and the existence of lost electrical function, which would also occur on equipment failure signaling the operating personnel to take appropriate actions, are all characteristics which would tend to preclude food contamination. Banning of PCB-containing capacitors and transformers in factories engaged in food, animal feed, or food packaging materials would result in extensive rebuilding, relocating and re-equipping programs, all without demonstrable need.

Monsanto, therefore, does not believe that the use of PCB-containing capacitors and transformers in food plants should be arbitrarily denied and wholeheartedly supports the proposals relating to this rule making submitted for your consideration by the General Electric Company, the Aerovox Corporation and the Certified Ballast Manufacturers Association.

Our purpose in making these comments is to aid the Administration in developing realistic rules that will achieve the intended objectives without serious disruptions to the food industry and to the consumer. We believe the suggestions given above, if adopted, will serve this purpose and we respectfully urge that they be given serious consideration.

Respectfully submitted,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Attachment

DSW 172750

STLCOPCB4047374

W. B. Papageorge - General Offices

July 14, 1972

W. R. Corey
J. F. Stapleton

FDA PCB RULE MAKING

Messrs.

H. S. Bergen	B2SL
K. W. Easley	1920
T. L. Gossage	B2SL
E. V. John	B1NC
R. E. Keller/E. S. Tucker	
J. S. Metcalf	E1SF
P. S. Park	B2NA
C. Paton	B2SC
W. R. Richard	T3A
E. P. Wheeler	A2SA

Enclosed is your copy of Monsanto's comments relating to the proposed FDA regulations for PCBs in food, animal feed, food and feed processing plants and food packaging materials.

W. B. Papageorge

/bt

Enclosure

DSW 172751

572 2

STLCOPCB4047375

July 12, 1972

Dr. James D. Stuart
Assistant Professor
0-0203-000
Department of Chemistry
The College of Liberal
Arts and Sciences
Storrs, Connecticut 06268

Dear Dr. Stuart:

I regret I cannot send you samples of the chloro-dibenzofuran and chlorodibenzo-p-dioxin isomers which you requested in your letter dated July 7 because we do not manufacture these materials.

We have in the past been able to obtain very small quantities of the furans from the FDA. You may wish to contact:

Dr. A. E. Pohland
Chief Biotoxin Section
Biochemistry Branch (BF-146)
Division of Chemistry and Physics
Office of Science
Bureau of Foods
200 "C" Street, N.W.
Food & Drug Administration
Washington, D.C. 20204

I have no idea if these materials are available commercially but you may also wish to contact Mr. Ted Lynn, whose address is as follows:

Analab, Inc.
80 Republic Drive
North Haven, Connecticut 06473

He may be able to give you further information.

X
DSW 172752

561

STLCOPCB4047376

Dr. James D. Stuart
July 12, 1972
Page 2

I am enclosing a copy of the report issued by the Federal Interdepartmental Task Force on PCBs which represents the latest document on this subject. I hope you find it informative.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172753

STLCOPCB4047377

W. B. Papageorge - B2NA

July 12, 1972

H. S. Bergen - E2SL
W. R. Richard - T3A

Mr. T. L. Gossage
E2SL

I note in your Monthly Report dated June, 1972
a reference to a new Therminol 44.

Is this a new chemical entity? If so, has it
been screened environmentally using procedures
EC-201 and EC-202?

W. B. Papageorge

/bt

DSW 172754

5760

STLCOPCB4047378

July 12, 1972

Mr. Kenneth F. Bursack
Group Leader, Research
Vulcan Materials Company
Chemicals Division
P. O. Box 545
Wichita, Kansas 67201

Dear Mr. Bursack:

I am sending under separate cover a sample of Aroclor 1254 as requested in your letter of July 6. This is the only type Aroclor available in addition to those you already have.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

A-1254 #1372

DSW 172755

2-5-9

STLCOPCB4047379

July 12, 1972

Mrs. Susan Nehls
Assistant Editor
Department of Natural Resources
State of Wisconsin
Madison, Wisconsin 53701

Dear Mrs. Nehls:

Enclosed are copies of articles relating to PCBs which you requested in your letter dated July 7. The study which was mentioned in the January-February, 1970 issue of Environment relating to soil and water samples is a continuing study, however, with the many laboratories throughout the world conducting similar work we chose not to pursue it in depth. The information we were finding was very similar to that being found in other laboratories. I believe the enclosed copy of the report issued by the Interdepartmental Task Force on PCBs serves as a good summary on this type of information.

If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

U, Y, T, M, F, V, P, Q, R, H, X.

DSW 172756

5-58

STLCOPCB4047380

July 12, 1972

Mr. C. W. McDermott
Plant Engineer
Reilly-Whiteman Inc.
Conshohocken, Pennsylvania 19428

Dear Mr. McDermott:

I regret I cannot send you the information you requested in your letter dated July 6 since the bulletins are no longer in publication and the Aroclors are no longer manufacturer or sold for indirect heating purposes.

I hope this does not create any inconvenience for you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172757

STLCOPCB4047381

July 11, 1972

Mr. C. Matlack
EP-124
Johnson & Johnson
501 George Street
New Brunswick, New Jersey 08903

Dear Mr. Matlack:

Recently you requested information on our product Aroclor 5460 to meet current Occupational Safety and Health Act requirements.

Aroclor 5460 is no longer manufactured or marketed by Monsanto, therefore, you will not have any need for the information you requested.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

bcc: B. W. Eley
A2SA

DSW 172758

STLCOPCB4047382

W. B. Papageorge - B2NA

July 11, 1972

PCB INCINERATION INSTRUCTIONS

Mr. E. V. John

The instructions for the disposal of PCB fluids by incineration at Monsanto's Sauget, Illinois unit are worded as follows:

"Concerning the disposal of Monsanto PCB fluids (sold under the trademarks Aroclor 1200 series, Therminol FR series, Pyranol, Inerteen, Santovac), we offer a 3¢ per pound incineration service delivered to our Sauget, Illinois plant (Department 246). For non-Monsanto fluids containing PCB we charge 5¢ per pound, freight prepaid, to our Sauget Plant. Fluids containing in excess of 2% water are not acceptable. Our system cannot dispose of contaminated solids (i.e. sawdust, rags, sludges).

"We request you use return drums that meet DOT 17E Specifications (55 gallon drums, 18 gauge minimum, 2 bung head; 5 gallon drums, 24 gauge minimum) to prevent leakage. The outside of the return drum should be free of fluid material.

"The return material should be addressed to:

Monsanto Company
Department 246 (Incinerator)
Sauget, Illinois 62201

"Enclosed are pre-addressed labels which should be attached to each drum. Additional labels may be ordered from the above address."

I hope this is adequate for your response to the AP^I representative.

W. B. Papageorge

/bt

DSW 172759

5-5-5-

STLCOPCB4047383

July 11, 1972

Mrs. Patricia Spearman
Air Pollution Control
Environmental Health Division
Mecklenburg County Health Dept.
1200 Blythe Boulevard
Charlotte, North Carolina 28203

Dear Mrs. Spearman:

I appreciate your understanding and intent to use proper precautions in using Aroclors as expressed in your letter dated July 5.

Aroclor 5442 has not been manufactured since early April, 1972, and has not been sold since May, 1972.

I am sending under separate cover a sample of Aroclor 5442 which was available from our diminishing laboratory supply. There is no charge for this sample.

I hope there is enough material in this sample to satisfy your needs for a long time. In the future an alternative fluid must be found because our limited supply will be depleted.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

1-5442 7*1371

DSW 172760

5574

STLCOPCB4047384

July 11, 1972

Lt. R. S. Shockley
MCS USN
Preventive Medicine Officer
Dispensary
Fleet Activities
FPO Seattle, Washington 98766

Dear Lt. Shockley:

In response to your letter dated June 22 I have attached a copy of a report issued by the Federal Interdepartmental Task Force on PCBs which I believe to be the most comprehensive document relating to PCBs.

I hope this report is adequate for your current needs. If you should have any additional questions please do not hesitate to contact me.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Attachment

DSW 172761

553

STLCOPCB4047385

July 11, 1972

Mr. George Bawden
Department of Mines, Resources
and Environmental Management
Environmental Protection Branch
1015-401 York Avenue
Winnipeg 1, Manitoba

Dear Mr. Bawden:

Enclosed you will find copies of articles concerning
PCBs which you requested in your letter dated
June 27.

The Monsanto Technical Bulletin you requested,
O/PL-306, is no longer available but I have included
a copy of its replacement, O/PL-306A.

I hope you find this information interesting and
informative. If I can be of further service please
let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X. U. F. T. V. P. G. R. H. I.
E. M.

DSW 172762

552

STLCOPCB4047386

W. B. Papageorge - B2NA

July 11, 1972

H. S. Bergen
J. F. Stapleton

Mr. W. R. Corey

IBM is experiencing some difficulties in Japan relating to its use of PCB capacitors in its computer systems and is seeking a quick method for "catching up" with the PCB story.

I suggested that their capacitor supplier(s) could be a good source of information but apparently Mr. Colomello has been charged to get Monsanto to make the presentation.

From the attached agreements I get the impression that they wish total freedom to use any information divulged. This implies the preparation of an approved manuscript for handout or the use of a tape recorder.

With the short time period available the preparation and approval of a text would not be possible.

I recommend that we suggest to IBM that they approach their supplier(s) for this information. If this is not acceptable because of commercial reasons, I propose that an informal talk following the proposed outline and steering clear of any sensitive areas be offered.

May I have your comments?

W. B. Papageorge

/bt

DSW 172763

551

STLCOPCB4047387

July 10, 1972

Mr. George Redmond
Brown Company
243 East Paterson Street
Kalamazoo, Michigan 49007

Dear Mr. Redmond:

As requested by Bill Slowiskowski I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls (PCB's) which your laboratory can easily adopt to the analysis of PCB's in paper products.

I hope you find this information useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

cc: Wm. Slowiskowski
Detroit



DSW 172764

STLCOPCB4047388

July 10, 1972

Dr. Ronald G. Webb
Contaminants Characterization Program
Environmental Protection Agency
National Environmental Research
Center, Corvallis
Southeast Water Laboratory
Athens, Georgia 30601

Dear Dr. Webb:

I am sending under separate cover the sample
of Aroclor 1016 you requested.

If I can be of further service please let
me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/bt

*1 pt. Aroclor 1016
#1370*

DSW 172765

STLCOPCB4047389

July 10, 1972

Dr. Anthony Urgil
Organic Chemicals Division
W. R. Grace & Company
62 Wittemore Avenue
Cambridge, Massachusetts 02140

Dear Dr. Urgil:

I am sending under separate cover the samples
of Aroclors you requested from Dr. Scott Tucker.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/bt

cc: Dr. E. S. Tucker

Aroclor 1221 - 1368

*Aroclor 1242 } 1369
" 1254 }*

DSW 172766

STLCOPCB4047390

July 7, 1972

Mr. George Jansen
Newcomb & Boyd
1205 Spring Street N.W.
Atlanta, Georgia 30309

Dear Mr. Jansen;

Attached is a copy of the special agreement
which Monsanto requires from its askarel customers.

I hope you find it useful and if I can be of
further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 172767

STLCOPCB4047391

W. B. Papageorge - B2NA

July 7, 1972

E. Greene

PCB's IN PRODUCTS

Messrs.

J. C. Livengood
R. F. Sellow
K. A. Wells
K. J. Wulfert

Ned Greene informed me of the inquiries you have received relating to the PCB content of your products.

I suggest that these inquiries be answered in the following manner:

"Polychlorinated biphenyls (PCB's) are not used as raw materials or as ingredients in the formulation of this material nor are they used as processing or industrial fluids in the equipment used in its manufacture. To the best of our knowledge and belief there are no PCB's present in this product."

W. B. Papageorge

/bt

DSW 172768

STLCOPCB4047392

July 7, 1972

Mr. Matsuyoshi Iwasaki
Marketing Communications Research
5-21-8 Inamuragasaki
Kamakura City, Kanagawa-Ken
248 Japan

Dear Mr. Iwasaki:

The two million dollar research and control program by Monsanto aimed at controlling the contamination of the environment by PCB's is still active although much of the work has been completed. No new work is anticipated and the remaining effort will be concentrated on the development of alternative materials for use in capacitors and transformers.

The main program consisted of the following major activities:

1. Development and refinement of PCB analytical methodology
2. Animal toxicity studies
3. Determination of the biodegradability of PCB's
4. The search for alternative materials for all former PCB applications
5. The development, installation and operation of facilities for the proper control and disposal of PCB's
6. An active program to assist our customers in understanding the problem and helping control the loss of PCB's to the environment.

DSW 172769

7M

STLCOPCB4047393

Mr. Matsuyoshi Iwasaki
July 7, 1972
Page 2

I hope this information is useful to you and
if I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172770

STLCOPCB4047394

July 7, 1972

Mr. T. Nabara
Idemitsu International, Inc.
630 Fifth Avenue
Rockefeller Center
New York, New York 10020

Dear Mr. Nabara:

Enclosed is a copy of Monsanto's analytical methodology which can easily be adapted for the determination of PCB's in flushing oil. This procedure is sensitive to PCB's and will not give erroneous results because of the presence of chlorine associated with the oil.

The recommended method for disposing of PCB's and flushing oil which contains PCB's is by high temperature incineration. The temperature must exceed 800°C and provision must be made for scrubbing the resulting HCL from the stack gas to assure that atmospheric pollution does not occur.

I hope this information is useful to you and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure



DSW 172771

STLCOPCB4047395

July 7, 1972

Mr. Angelo V. Onevelo
The University of Iowa
College of Medicine
Department of Preventive Medicine
and Environmental Health
Iowa City, Iowa 52240

Dear Mr. Onevelo:

Enclosed are copies of articles relating to PCB's which Monsanto's Mr. Elmer P. Wheeler requested I send you. I hope you find these both interesting and informative.

Monsanto's voluntary action in withdrawing PCB's from general use began in early 1970 with the termination of sales to uncontrollable end uses such as coatings, sealants and inks. Termination of sales were later made for such uses as ingredients in hydraulic fluids and carbonless copy paper. The program calls for sales only to hermetically sealed closed system dielectric applications such as capacitors and transformers.

I hope this information is useful to you and if I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/ht

Enclosure

bcc: E. P. Wheeler

DSW 172772

U, ~~Wheeler~~, F, V, P, G, R.H.

STLCOPCB4047396

July 7, 1972

Mr. Richard E. Guthrie
Legal Department
Harvey Aluminum Company
19200 South Western Avenue
Torrance, California 90509

Dear Mr. Guthrie:

Enclosed is the information Monsanto's Mr.
Dean Danzer indicated would be sent to you.

I hope this information is useful to you and
if I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X,

DSW 172773

641

STLCOPCB4047397

July 7, 1972

Mr. Edward Altenburg
Kellogg Company
235 Porter Street
Battle Creek, Michigan 49016

Dear Mr. Altenburg:

Enclosed is the information Monsanto's Mr.
Dean Danzer indicated would be sent to you.

I hope this information is useful to you and
if I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

X,

DSW 172774

STLCOPCB4047398

July 6, 1972

Dr. A. F. Sarofim
Department of Chemical Engineering
Massachusetts Institute of Technology
Building 12 - 188
Cambridge, Massachusetts 02139

Dear Adel:

Enclosed is a copy of the presentation made
by Monsanto to the Interdepartmental PCB Task
Force on May 15.

We appreciate the opportunity to share this
information with you and hope you find it useful.

If I can be of further service please let me
know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

W)

DSW 172775

STLCOPCB4047399

July 6, 1972

Dr. Brian Bush
New York State Department
of Health
New Scotland Avenue
Albany, New York 12201

Dear Dr. Bush:

Enclosed are copies of articles which will describe the different types of Aroclors which were available, their method of manufacture and some of their commercial applications.

I hope this information is useful. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/bt

Enclosure

T - E

DSW 172776

STLCOPCB4047400

July 5, 1972

Water Resources Scientific
Information Center
Office of Water Resources Research
Washington, D.C.

Gentlemen:

Please forward one copy of the article listed
below to my attention.

PCB IN WATER: A BIBLIOGRAPHY, PB 206 534

I understand the cost of this publication is
\$3.00 each. Please bill me for this amount.

Thank you for your cooperation in this matter.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172777

STLCOPCB4047401

July 5, 1972

Food & Drug Administration
Washington, D.C.

Gentlemen:

Please forward one copy of the article listed
below to my attention.

INTERBUREAU BY-LINES, VOLUME 6,
NUMBER 6, PB-192 766

I understand the cost of this publication is
\$3.00 each. Please bill me for this amount.

Thank you for your cooperation in this matter.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 172778

STLCOPCB4047402

W. B. Papageorge - General Offices, B2NA

July 5, 1972

HEATING AND AIR CONDITIONING
SYSTEM - AKRON OFFICE AND
LABORATORY

Mr. C. Paton
B2SC

H. S. Bergen - B2SL
W. R. Corey - B2SL
P. W. Gann - B2SE
M. Gatens - 1010
A. Obel - B3NA
E. S. Robson - B3NA
D. E. Roush - B2SC
E. J. Young - 1010

I discussed with Maurice Gatens his plans for converting his Therminol FR system and he informed me that he is ready for conversion and is waiting for advice from you or Don Roush regarding the alternative fluids available and the system modifications required.

He thought that visits by you and Don to the laboratory earlier this year would be followed by specific recommendations.

It appears that conversion must be made when the air conditioning system is shut down in November.

Will you please forward the necessary information to Akron so that they may proceed as quickly as possible with their plans for conversion.

W. B. Papageorge

/bt

DSW 172779

535

STLCOPCB4047403