PAPAGEORGE READING FILE

JAN. - APRIL 1972

DSW 171741

STLCOPCB4046367

APRIL 1972

DSW 171742

April 26, 1972

513-223-3432

Mr. Dan Grove
Zip Laboratories
60 Wyoming Street
Dayton, Ohio 45409

Dear Mr. Grove:

I am sending under separate cover the samples of Aroclor 1221 and Aroclor 5460 you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171743

350

STLCOPCB4046369

April 26, 1972

Dr. David L. Stalling
Fish-Pesticide Laboratory
Bureau of Sport Fisheries and Wildlife
U.S. Department of the Interior
Route 1
Columbia, Missouri 65201

Dear Dave:

I am sending under separate cover the sample of Aroclor 1016 you requested.

After reviewing our commitments it appears that the week of June 5 will be the earliest we could meet here in St. Louis. If this is agreeable to your associates will you please let me know the particular day you would prefer as well as any suggestions they may have on the subjects we could review and the facilities they would like to see.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

bcc: J. F. Quinn - T3B
P. R. Graham - B3NB
G. J. Levinskas - A2SA

DSW 171744

34

STLCOPCB4046370

April 26, 1972

Ms. Arlene R. Martel
38 West Street
Hadley, Massachusetts 01035

Dear Ms. Martel:

In response to your letter dated April 12, I have enclosed copies of articles relating to the polychlorinated biphenyls (PCB).

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

WBP/er

Enclosures

DSW 171745

341

STLCOPCB4046371

W. B. Papageorge - General Offices - B2NK

April 25, 1972

Messrs.

C. F. Callis - N1A
W. R. Corey - B2SL
P. R. Graham - B3NB
I. D. Hill - N1A
J. S. Metcalf - E1SF

Attached is a copy of a letter from Dr. G. Fred Lee, Water Laboratories, University of Wisconsin, Madison, Wisconsin, in which he proposes a consulting arrangement with Monsanto.

At times Dr. Lee appears to conduct himself as a responsible scientist anxious to preserve objectivity in environmental matters. Because of this image many of us felt he could be helpful to Monsanto and a closer relationship should be established.

There have, however, been incidents during which Dr. Lee appears to strike out with limited information, for example, a recent barb at Economics Laboratories related to the presence of very low quantities of PCB's detected in their dishwasher compounds. Recently, Joe Metcalf observed at a London meeting that Dr. Lee took a strong anti-phosphate position.

I believe Dr. Lee could very easily react negatively to a rejection of his consulting arrangement offer and become actively anti-Monsanto. On the other hand, if we do agree to some arrangement we could tend to neutralize any tendency on his part to criticize Monsanto. Whether this is worth $2,000-$3,000 per year is difficult to evaluate.

I propose that rather than commit Monsanto to an annual arrangement we should approach Dr. Lee to determine if he could be available on a sporadic, as needed basis.

May I have your comments?

W. B. Papageorge

WBP/er

DSW 171746

347

STLCOPCB4046372

G. FRED LEE
1140 SHERMAN AVENUE
MADISON, WISCONSIN 53703
Soc Sec No 573-42-8765
OFFICE: (608) 262-2470
RESIDENCE: (608) 255-6376

March 19, 1972.

W.P. Papageorge
Monsanto Company
800 Lindberg Boulevard
St. Louis, Missouri
63166

Dear Bill:

I enjoyed meeting with you, Ira, and the other members of the Monsanto staff in the environmental quality area. This visit accomplished one of my major objectives, namely of getting Monsanto's point of view with respect to the hazardous chemicals in the environment. As you know I have became active in this area and will be conducting studies on behalf of the EPA designed to develop hazardous chemical control programs. I hope that I can blend together programs which represent the industries and the regulatory agencies points of view to the best possible benefit of all parties concerned.

Often, the first visit between a consultant and an industry is an awkward situation in that neither party really knows how they might best work together to solve the industry's problems. The situation at Monsanto is no different than other firms for whom I consult in that our first meeting served a useful purpose of letting us get to know each other a little. Particularly I now know some of the problems and approaches being used by Monsanto. Possibly Monsanto is somewhat aware of the ways in which I might be of assistance. There seems to be little doubt that I could work with Monsanto in developing a hazardous chemical screening program and thereby try to eliminate future PCB type problems.

As far as any future consulting arrangement is concerned I am already heavily committed to other firms who, at this time, appear to want to continue the consulting arrangements I have with them for extended periods. However, I would be interested in working with a primary chemicals manafacturer such as Monsanto where we could get together possibly once each quarter to discuss specific problems that the company is having with a particular product.

DSW 171747

STLCOPCB4046373

G. FRED LEE
1140 SHERMAN AVENUE
MADISON, WISCONSIN 53703

OFFICE: (608) 262-2470 RESIDENCE: (608) 255-6376

In the case of Monsanto, I would suggest that we initially focus on the development of a screening program for new products. In addition to getting together to discuss a particular problem or problems, I would also try to keep Monsanto posted on any new developments which I feel would be of interest to them in the areas which are pertinent to a particular chemical that Monsanto is currently interested in.

Although not discussed previously, my consulting rates are $300 per day plus travel expenses, also I charge $40 per hour spent on behalf of a particular firm while in my office.

There were several points raised during the meeting which I wish to follow up on at this time. First, with respect to the International Field Year for the Great Lakes studies on Lake Ontario, I wish to reemphasize that as a member of the Chemistry and Biology Steering Committee for this study I can readily send to you samples of water, fish, etc. from various parts of Lake Ontario for your examination. The studies on Lake Ontario provide a unique opportunity to obtain samples from any location in the lake on relatively short notice. Please let me know if this is of any interest to you.

Secondly, during our discussion, questions arose about the work of one of my graduate students on natural water organics. This student was Dr. Ken Hall. Under separate cover I am sending his Ph.D. thesis for review by yourself and your staff. This thesis may be kept for a maximum of three weeks and then returned to me. Please feel free to Xerox any parts of it that are of interest to you. You will note that Ken did isolate some phthalates from natural water organic matter. However, these were not present in the organics prior to the degredation steps. It appears that the phthalates were part of the building block of the natural organics and not present as individual components in the water. This appears to be distinctly different from the situation that is occurring in southern Lake Michigan today.

DSW 171748

STLCOPCB4046374

G. FRED LEE
1140 SHERMAN AVENUE
MADISON, WISCONSIN 53703

OFFICE: (608) 262-2470 RESIDENCE: (608) 255-6376

Other questions arose about the meaning of degradation. I agreed to send to you the name of the current chairman of the Water Pollution Control Federation Subcommittee on Biodegredation. His name is Robert L. Bunch. His address is Biological Treatment Research Program, Environmental Protection Agency, 4676 Columbia Parkway, Cincinnato, Ohio 45226. This committee was headed up by M.B. Ettinger who is now with Dow. Since the departure of Ettinger the committee has not been very active; however, the current chairman did contact the members a year or so ago asking about whether or not this committee should become active again. It appears that today with all the emphasis on biodegradation that some more specific definitions should be developed. If you wish I would be pleased to act on behalf of Monsanto in trying to stimulate the chairman to reactivate the committee or of course you may go directly to him suggesting that I suggested you take this approach. I fully agree with your position in that somewhat better definitions of degredation are needed in order to protect those such as Monsanto who make a legitimate attempt to determine whether or not a compound is degradable.

Please let me know if there is any interest on the part of Monsanto in the future on going consulting arrangements.

Sincerely yours,

Fred

G. Fred Lee, Professor
Water Chemistry

GFL/sw

DSW 171749

STLCOPCB4046375

April 25, 1972

Mr. E. S. Shaulis
Senior Purchasing Engineer
Tennessee Eastman Company
P. O. Box 511
Kingsport, Tennessee 37662

Dear Mr. Shaulis:

In response to your request dated April 19, to the best of our knowledge and belief there are no detectable quantities of polychlorinated biphenyls in the Santowhite Powder your company purchases from Monsanto.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

bcc: L. D. Press - B3NB

DSW 171750

346

STLCOPCB4046376

April 25, 1972

Dr. Robert W. Risebrough
Bodega Marine Laboratory
University of California
P. O. Box 247
Bodega Bay, California 94923

Dear Bob:

I am sending under separate cover samples of Aroclor 1016, Aroclor 1242 and Aroclor 1254 which represent the only PCB materials still being manufactured.

Our normal supply of Aroclor 1248 and Aroclor 1260 samples was depleted long ago. I will attempt to find a few ounces in Scott Tucker's laboratory. If he can spare some I will have him mail it to you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171751

345

STLCOPCB4046377

April 25, 1972

Dr. John A. Black
Asst. Professor
Department of Marine Science and Technology
Suffolk County Community College
533 College Road
Selden, Long Island, New York 11784

Dear Dr. Black:

Dr. Robert Risebrough, University of California, informed me of the difficulties you encountered in trying to obtain samples of Aroclors (PCB) from Monsanto. I regret any inconvenience this misunderstanding may have created.

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/er

cc: Dr. Robert W. Risebrough
University of California

DSW 171752

STLCOPCB4046378

W. B. Papageorge - General Offices - B2NK

April 24, 1972

NFPA - Santocure NS and
Santovar A

W. K. PHILLIPS - 1010

I regret the delay in responding to your request in your letter dated March 15.

I reviewed NFPA's section 704M and it appears that someone in Akron who is very familiar with Santocure NS and Santovar A will have to do the classifying as described in 704M-5, 704M-7 and 704M-10.

I suspect a copy of Volume 1 of the National Fire Codes is available in the Akron library.

W. B. Papageorge

WBP/tgl

DSW 171753

345

April 24, 1972

Dr. S. Sawyer
Zenith Radio Corporation
6001 West Dickens Avenue
Chicago, Illinois 60639

Dear Dr. Sawyer:

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/er

DSW 171754

542

STLCOPCB4046380

April 24, 1972

Mr. Bruce Buchanan
Laboratory R
Brown Company
243 East Paterson
Kalamazoo, Michigan 49007

Dear Mr. Buchanan:

I am sending under separate cover the samples of Aroclor 1221, Aroclor 5432 and Aroclor 5460 which you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171755

341

STLCOPCB4046381

April 24, 1972

Mr. J. Reinke
Department of Environment
501 University Crescent
Winnipeg, Manitoba R3T2N6
CANADA

Dear Mr. Reinke:

Monsanto's Mr. Jack Garrett informed me of your need of samples of Aroclors to be used as analytical standards.

I am sending under separate cover samples of Aroclor 1242 and Aroclor 1254 which are the only current PCB materials in production. All other sample supplies have been depleted.

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

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

cc: Mr. Jack T. Garrett

DSW 171756

34

STLCOPCB4046382

April 24, 1972

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

Dear Fred:

I have enclosed the copy of Dr. Ken Hall's Ph. D. thesis which you were kind enough to share with us.

Monsanto's Paul Graham, who is interested in phthalate esters, would like to discuss with you portions of the report. You will be hearing from him soon. Perhaps he can visit you when he is traveling near Madison.

Your proposed consulting arrangement is being given serious consideration. I will keep you informed of developments as soon as I can.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl

enclosure (1)

cc: P. R. Graham

DSW 171757

339

STLCOPCB4046383

April 24, 1972

Mr. William Ward
Plant and Environmental Engineering
General Motors Corporation
General Motors Building - A-856
Detroit, Michigan 48202

Dear Mr. Ward:

I apologize for the delay in responding to your questions relating to Pydraul 50E. I finally obtained some information to pass on to you.

Range-finding toxicity studies with Pydraul 50E indicate that the Minimum Lethal Oral Dose in rats is greater than 10,000 mg/kg of body weight and less than 12,600 mg/kg. This classifies the fluid as "practically non-toxic" on the basis of ingestion of single doses.

It is not readily absorbed through the skin as indicated by results with rabbits which survived doses up to the maximum application of 7,940 mg/kg.

In appropriate skin and eye irritation potential studies with rabbits, the data indicate that Pydraul 50E is non-irritating to the skin and only a mild eye irritant.

Vapor inhalation does not appear to be a hazard since when a sample of the fluid was heated to 250°F and air passed through the fluid to an exposure chamber containing six rats, the animals survived the 6-hour exposure with no effects. This is not to imply that the toxicity of the Pydraul 50E vapors was determined since the fluid was not volatized under the conditions of the test.

Based on preliminary acute fish toxicity study data, we would expect the 96 hr. TLM to be between 1 and 10 ppm to both trout and bluegills.

DSW 171758

331

Results we have obtained with chickens in demyelination tests indicate that Pydraul 50E does not produce neurotoxic effects even following multiple high doses on succeeding days.

Ninety-day rat feeding studies at levels in the diet of 200, 1000, and 5000 ppm are in progress with the major component of Pydraul 50E and good literature data are available on the second component. We expect we will find some effect at the 5000 ppm level as to possible target organs or systems.

Biodegradation studies indicate that Pydraul 50E is readily degraded by bacteria in aerobic aqueous systems.

If you have additional questions, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl

bcc: J. H. Davidson - B2SF
C. Paton - B2SC

DSW 171759

April 24, 1972

Mr. James E. Platt
Pollution Control Agent
Standard Products Company, Inc.
P.O. Box 646
Moss Point, Mississippi 39563

Dear Mr. Platt:

I regret the delay in responding completely to your request in your letter dated March 29.

Your question relating to Santoquin has been forwarded to the appropriate product manager for response, and you will receive his comments soon. In the meantime, I would like to assure you that there is no reason for concern.

At present, the only PCB products manufactured and sold by Monsanto are dielectric fluids used in capacitors and transformers. Then products are sold only to electrical equipment manufacturers under the trade marks Aroclor, Pyranol and Inerteen.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl

enclosure

bcc: G. L. Romoser - C3ND
D. Stegen - 1460

DSW 171760

April 24, 1972

Mr. J. J. Forsythe
Corporate Research Center
International Paper Company
P. O. Box 797
Tuxedo Park, New York 10987

Dear Mr. Forsythe:

I am sending under separate cover the samples of Aroclor 5432 and Aroclor 5460 requested in your letter of April 20.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171761

336

STLCOPCB4046387

Monsanto

DUPONT MESSAGE BLANK
Telecommunications System

DATE 4/21/72 | TIME 8:50am | SENDER'S ACCOUNT NO. 47-00-735.40

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

I understand Monsanto is host at PCB meeting to be held May 9 Excelsior Hotel, London Airport. Who is participating? What are meeting objectives?

W. B. Papageorge
St. Louis

cc: W. R. Corey - B2SL
H. S. Bergen - B2SL
J. Mason - 5040

335

IN-IR REV. 7-64

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

DSW 171762

STLCOPCB4046388

April 20, 1972

Mr. S. R. Miller
Sargent and Lundy Engineers
140 South Dearborn
Chicago, Illinois 60603

Dear Mr. Miller:

Enclosed are copies of information relating to askarel dielectric fluids containing polychlorinated biphenyls (PCB).

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/er

Enclosures

DSW 171763

534

STLCOPCB4046389

April 20, 1972

Mr. James E. Faber
Purchasing Agent
Glass Container Division
Owens-Illinois
P. O. Box 26305
New Orleans, Louisiana 70126

Dear Mr. Faber:

In response to the request in your letter dated April 13, the Pydraul AC-A which you purchased from Monsanto Company is not hazardous by definitions in 29 CFR Section 1501.2 of the Occupational Health and Safety Act of 1970.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

bcc: Mike Czichos - 1460
J. H. Davidson - B2SF

DSW 171764

STLCOPCB4046390

W. B. Papageorge - General Offices - B2NK

April 20, 1972

K. W. Easley - 1920

Enclosed is a marked copy of the USDA AD HOC Group PCB report.

I regret the delay and hope Dr. Coombs was not seriously inconvenienced. Will you forward this to him with the offer to help further if appropriate.

W. B. Papageorge

WBP/er

Enclosure

DSW 171765

W. B. Papageorge - General Offices - B2NK

April 20, 1972

H. S. Bergen - B2SL
W. R. Corey - B2SJ
T. L. Gossage - B2SJ
C. Paton - B2SC
J. F. Stapleton - B2SA

K. W. Easley - 1920

Our objective in proposing a meeting with the representatives of the Inter-agency PCB Task Force is to review with them the status of some studies which Monsanto has underway and which up to now have not been discussed in any detail.

We would like to discuss the data which we have on the biodegradation of PCB's, the PCB levels in animal tissues from our long term feeding studies, the development of a modified PCB for capacitor use, the significance of use of this material and its potential impact on the environment, and briefly review our experiences in controlling the PCB in our effluent from the plant which manufactures dielectric PCB.

A discussion of this nature will contribute significantly toward satisfying a void which now exists in the PCB knowledge gathered by the Task Force. Hopefully the Task Force representatives will better understand and appreciate our efforts in controlling not only the PCB losses to the environment but also the significance of the types of isomers now being used.

W. B. Papageorge

WBP/er

DSW 171766

STLCOPCB4046392

April 20, 1972

Mr. James M. Miles
Field Engineer
General Maintenance Department
Cleveland Works Division
Jones & Laughlin Steel Corporation
3341 Jennings Road
Cleveland, Ohio 44101

Dear Mr. Miles:

Responding to your request in your letter dated April 14, I reviewed the files for 1971 and 1972 and note that your Cleveland Works purchased Santosafe W/G-20 and Inerteen 70-30 from Monsanto.

Santosafe W/G-20 contains no polychlorinated terphenyls or monochlorinated biphenyls. Inerteen 70-30 contains up to 70% polychlorinated biphenyls which includes up to 5% monochlorobiphenyl. There are no polychlorinated terphenyls present.

Since the manufacture and use of polychlorinated terphenyls and monochlorinated biphenyls has been terminated by Monsanto no product purchased by your company in the future should contain these materials. The Inerteens which will continue to be available will contain up to 5% monochlorinated biphenyls which are co-produced when the biphenyl is chlorinated to make the 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/er

DSW 171767

STLCOPCB4046393

April 19, 1972

Dr. Sergio Iturri
Department of Poultry Science
College of Agriculture and Natural Resources
Michigan State University
East Lansing, Michigan 48823

Dear Dr. Itturi:

I regret I cannot send you copies of the bulletins you requested in your letter dated April 14, since they have been out of print for years.

I have, however, enclosed a copy of Technical Bulletin O/PL-306A which contains all of the pertinent physical and chemical information.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

enclosure

DSW 171768

STLCOPCB4046394

W. B. Papageorge - General Offices - B2NK

April 19, 1972

PCB - HEAT TRANSFER SYSTEMS -
MONSANTO PLANTS

P. W. Gann - B2SE

Attached are copies of correspondence relating to conversion activities within Monsanto.

I regret I did not compile and summarize the data for you but hopefully the information is still useful in guiding any further action required by your conversion team.

W. B. Papageorge

WBP/er

DSW 171769

STLCOPCB4046395

April 19, 1972

Mr. Dale Thurston
Westinghouse Electric Corporation
P. O. Box 28188
Columbus, Ohio 43228

Dear Mr. Thurston:

As discussed with you by telephone, polychlorinated biphenyls (PCB) are still being used in the manufacture of capacitors and transformers.

Because of their nonflammability transformers filled with PCB-containing fluids do not present the fire and explosion hazards found in mineral oil units and may be used in locations when failures of oil-insulated transformers would present a potential danger to life and property. In addition to improving the safety aspects of capacitors the use of PCB also gives them the advantages of reliability, long life and small size. Since no alternative fire resistant fluid is now available and because these fluids are hermatically sealed in metal containers providing good control of escape to the environment, the use of PCB in this service is justified.

Recent studies have indicated that the PCB containing more chlorine were the most persistent in the environment. To reduce persistence we have removed the higher chlorinated PCB from the former capacitor fluid sold as Aroclor 1242. The new fluid, designated as Aroclor 1016, has been used exclusively in capacitors manufactured in the U.S. since September, 1971.

Although less persistent, we do not advocate the free disposal of the new fluid into plant sewers. We believe that it represents a step in the right direction in reducing any threat to the environment if it should eventually be released.

DSW 171770

-32-

STLCOPCB4046396

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/er

DSW 171771

STLCOPCB4046397

Monsanto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE	TIME	SENDER'S ACCOUNT NO.
4/19/72	8:45 am	47-00-735.40

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

Preliminary information from U.S. agency indicates PCB being imported past six months from Japanese source. Agency suspects source is MMK. Is this true?

W. B. Papageorge
St. Louis

cc: W. R. Corey - B2SL
H. S. Borgen - B2SL
E. W. Easley - 1920
M. T. Feveaux - 1920

326

IN-IR REV. 7-64

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

DSW 171772

April 18, 1972

Mr. Jack F. Weaver
Laboratory Supervisor
Department of Water Resources
State Office Building
Annapolis, Maryland 21401

Dear Mr. Weaver:

I am sending under separate cover samples of Aroclor 5442 and Aroclor 5460 requested in your letter dated April 14. There is no charge for these materials.

I regret I could not include the other Aroclors you requested. These materials are no longer manufactured and our supply of samples has been depleted. I hope the lack of material does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171773

325

STLCOPCB4046399

April 18, 1972

Mr. Joseph Marton
Research Laboratory
Westvaco
Johns Hopkins Road
Laurel, Maryland 20810

Dear Mr. Marton:

I am sending under separate cover samples of Aroclor 1242 and Aroclor 1254 which you requested in your letter dated April 14, to Mr. Merchant.

I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls. Your laboratory can easily adapt this procedure to papercoard analysis.

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/er

Enclosure

cc: Mr. M. V. Merchant

DSW 171774

324

STLCOPCB4046400

Monsanto

OUTGOING MESSAGE BLANK
Telecommunication System

DATE 4/18/72 | TIME 10:55 am | SENDER'S ACCOUNT NO. 47-00-735.40

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

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

E. WILDE
AKRON

MSDS FORMS ARE BEING GENERATED FAIRLY RAPIDLY NOW.

PLEASE CONTACT APPROPRIATE PRODUCT MANAGER FOR COPIES.

W.B. PAPAGEORGE

323

IN-IR REV. 7-64

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

DSW 171775

STLCOPCB4046401

April 14, 1972

Dr. Len Milton
Chairman of the Board
Filtron Company, Inc.
45 South Service Road
Plainview, New York 11803

Dear Dr. Milton:

Enclosed are labels to be used on containers of scrap polychlorinated biphenyls (Aroclors, Pyranols, Inerteens, etc.) for disposal at Monsanto's plant at Sauget, Illinois.

The charge for this service is 3 cents per pound received. Freight and container costs are paid by the shipper.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

DSW 171776

April 14, 1972

Mr. J. Heimlich
Continental Can Company
633 Third Avenue
New York, New York 10017

Dear Mr. Heimlich:

Enclosed are the copies of the Therminol conversion bulletin and Monsanto's PCB analytical methodology you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

DSW 171777

April 14, 1972

Mr. Emil Hensle
Purchasing Agent
Chem-Power
P.O. Box V
Cedar Knolls, New Jersey 07927

Dear Mr. Hensle:

I regret I cannot send you the sample of Aroclor 1260 you requested in your recent letter to Monsanto.

This product is no longer manufactured and we have depleted our supply of samples.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171778

32.

W. B. Papageorge - General Offices - B2NK

April 14, 1972

W. R. Corey - B2SL
H. S. Bergen - B2SL
K. W. Easley - 1920

J. R. Durland - 5260

Warren Easley, Monsanto, Washington DC, has requested help on the questions listed on the attached memo.

Terry Davies is with the U.S. Council on Environmental Quality and is Vice Chairman of the Federal Multi-Agency PCB Task Force.

Can someone in B2NK help?

W. B. Papageorge

WBP/er

Enclosure

DSW 171779

319

STLCOPCB4046405

Monsanto

FROM (NAME & LOCATION) K. W. Easley - Washington, D. C.

DATE : April 11, 1972 CC:

SUBJECT :

REFERENCE :

TO : W. B. Papageorge

These are questions that Terry Davies has regarding the PCB situation in Japan. He is going to try to develop answers through the American Embassy in Japan.

1. What is the extent of current use of PCB's in transformers and capacitors in Japan?

2. In situations where PCB's are not used in transformers and capacitors have there been problems with fire and explosions of such equipment? If there have been such problems is there any indication of the extent or nature of damage caused? Does the Japanese Ministry of International Trade and Industry anticipate such problems as a result of the discontinued use of PCB's?

3. What other problems, if any, does the Ministry anticipate will arise in converting existing electrical equipment from PCB's to alternative fluids? Will there be disruption or reduced liability of electrical service?

4. What problems, if any, will arise with respect to the manufacture of new equipment?

If it's not too much trouble, could we inquire about these questions of our Japan associates?

K. W. Easley

/kp

DSW 171780

April 14, 1972

Mr. E. H. Gallagher
Ultrachem Corporation
1150 Civic Drive
Walnut Creek, California 94596

Dear Mr. Gallagher:

I am sending under separate cover the samples of Aroclors you requested.

Enclosed are copies of Monsanto's analytical methodology and a technical bulletin describing the Aroclors.

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/er

Enclosure

DSW 171781

STLCOPCB4046407

April 14, 1972

Mrs. Georgeanne O'Riordan
Librarian
New York Ocean Science Laboratory
Montauk, New York 11954

Dear Mrs. O'Riordan:

I regret I cannot send you Monsanto's Technical Bulletin O/PL-306 which has been out of print for several years. I have instead attached a copy of the replacement version O/PL-306A.

Technical Bulletin No. PL-321 is also out of print but I was able to get a Xerox copy which is enclosed.

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/er

Enclosures

DSW 171782

317

STLCOPCB4046408

W. B. Papageorge - General Offices - B2NK

April 11, 1972

J. R. Durland - 5260
D. Danna - B1NC

SCHWARTZ PATCH TESTS -
AROCLOR 1254

T. Katayama - 5260

Attached is a copy of the only information we have relating to the Schwartz patch dermal tests described in the Aroclor Technical Bulletins.

I hope you find it useful.

Regards,

W. B. Papageorge

WBP/er

Attachment

DSW 171783

216

STLCOPCB4046409

W. B. Papageorge - General Offices - B2MK

April 11, 1972

THERMINOL FR STATUS REVIEW

H. S. Bergen - B2SL
W. R. Corey - B2SL
T. L. Gossage - B2SL
J. J. Roder - B2SC
D. E. Roush - B2SC

Messrs.

C. Paton
P. W. Gann

It appears appropriate at this time for a small group of individuals involved in the Therminol FR conversion program to meet and discuss progress and future action.

I propose that C. Paton, P. Gann, J. Roder, D. Roush, members of the conversion team and W. Papageorge meet on Tuesday, April 18, in room B-303 at 1:00 PM.

AGENDA

1. Review mailings - Termination and survey letters.

2. Conversions achieved

   a. Draining and flushing experience. Degree of PCB removal achieved.

   b. Mechanical problems encountered.

   c. Subsequent adverse experiences - sludge formation, fires, etc.

   d. Samples of used fluid for furan analysis.

   e. Returned material status.

   f. Status of Therminol 55 supply.

3. Potential conversions

   a. Number of customers involved.

   b. Reasons for delays.

   c. Target dates for conversion.

   d. Possible adverse consequences of delays.

DSW 171784

STLCOPCB4046410

4. Conversion refusals

   a. How many customers are involved?

   b. Reasons given for refusal.

   c. What actions have we taken to convince customer he should convert?

5. Evidence of continuing sources of PCB heat transfer fluid

   a. Imports.

   b. U.S. manufacture.

   c. Reclaimed fluid. Resale.

6. Future action.

W. B. Papageorge

WBP/er

DSW 171785

Monsanto

OUTGOING MESSAGE BLANK
Telex Communications System

DATE 4/11/72 | TIME 12:05pm | SENDER'S ACCOUNT NO. 47-00-735.40

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

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

S. Ueno
Tokyo - Mitsubishi

YOU MAY SHOW THE ARTICLE PCB-POSSIBILITIES OF DESTRUCTION TO THE JAPANESE GOVERNMENT. A COPY OF THE PAPER PRESENTED BY MONSANTO IN PARIS ON AUGUST 9, 1970 IS BEING AIRMAILED.

W. B. Papageorge
St. Louis

3/4

N-IR
V. 7-64

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

DSW 171786

STLCOPCB4046412

W. B. Papageorge - General Offices - B2NK

April 10, 1972 C. Paton - B2SC

PCB SAMPLES

D. R. Hansen - 1800

I appreciate your help in controlling sample requests for PCB-containing products.

I recommend you continue to relay all requests to me.

W. B. Papageorge

WBP/er

DSW 171787

April 10, 1972

Dr. Dan Raveed
Electron Microscope Laboratory
Charles F. Kettering Research Laboratory
150 East South College Street
Yellow Springs, Ohio 45387

Dear Dr. Raveed:

I regret I cannot be as helpful with suggestions for alternative materials to replace the Aroclors as embedding fluids as I would like to be.

I understand that Walter G. McCrone Associates, Chicago, Illinois are knowledgeable in the field of embedding fluids. Perhaps they can advise you of alternative materials which may be available.

I do not have any pure chlorinated biphenyls. They can be obtained from:

Mr. Ted Lynn, President
Analabs, Inc.
80 Republic Drive
North Haven, Connecticut 06473

phone: 203 288-3400

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171788

Monsanto

TELEGRAM MESSAGE BLANK
Telecommunications System

DATE 4/11/72 | TIME 11:05am | SENDER'S ACCOUNT NO. 47-00-725.40

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. Mason - Brussels

I understand Monsanto-Europe has worked with UK Department of the Environment to prepare joint PCB position paper which will be presented at UN meeting in Stockholm in June. May we have copy?

W. B. Papageorge
St. Louis

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

311

IN-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 171789

STLCOPCB4046415

(3011) GR 4-4 P00

April 10, 1972

Dr. George Fries
Animal Science Research Division
Agricultural Research Center
Beltsville, Maryland 20705

Dear Dr. Fries:

I am sending under separate cover the sample of Aroclor 5460 you requested.

I am very interested in analytical methodology for the determination of polychlorinated terphenyls. If you have a procedure which you believe is sensitive enough to detect extremely low quantities I would appreciate a copy.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171790

April 10, 1972

Dr. Gerald O. Barney
Center for Naval Analyses
1401 Wilson Boulevard
Arlington, Virginia 22209

Dear Dr. Barney:

I have attached a summary of the available information relating to the shipment of polychlorinated biphenyl materials to Navy installations in 1971.

I regret I have no information on federal stock numbers or military specifications.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Attachment

DSW 171791

STLCOPCB4046417

Bill To	Shipped To	Purchase Order No.	Description
Supp. Officer, Imprest Fund Cashier 173-IFC-54-0179-71 Naval Research Laboratory Washington DC 20390	Washington Navy Yard Receiving Officer, Bldg. 143	N00171-72M-3119	Inerteen 70-
Supply Officer, U.S.N. C.B.C. Port Hueneme, California 93043	Supply Officer U.S.N. C.B.C Port Hueneme, California 93043	N-62583-72M-2263	Inerteen 70-
United States Navy Naval Regional Finance Ctr. FPO San Francisco, CA 96610	Supply Officer Naval Ammunition Depot P.O. Nbr. N00317-72-M-0185 Oahu, HI 96810	N00317-72M-0185	Inerteen PPC
Disbursing Officer, Code 644 N.N.S.Y. Portsmouth, Va. 23709	REC Officer, Bldg. 276 N.N.S.Y. Portsmouth, Va. 23709	N00181-71M-D932	Inerteen PPC
RECG Officer Bldg. 144 Naval Air Station Moffet Field, Ca. 94035	RECG Officer Bldg. 144 Naval Air Station Moffet Field, Ca. 94035	N002961-M-2871	Inerteen 70-
U.S. Navy Supply Officer USN CBC Port Heuneme, Ca. 93043	U.S. Navy Supply Officer USN CBC Port Hueneme, Ca. 93043	N62583-71M-2745	Inerteen 70-

DSW 171792

STLCOPCB404418

Shipped To	Purchase Order No.	Description	Quantity	Date Entered	Date Shipped
hington Navy Yard eiving Officer, Bldg. 143	N00171-72M-3119	Inerteen 70-30	674 pounds	12-13-71	12-13-71
ply Officer U.S.N. C.B.C t Hueneme, California 93043	N-62583-72M-2263	Inerteen 70-30	674 pounds	10-12-71	11-05-71
pply Officer al Ammunition Depot . Nbr. N00317-72-M-0185 u, HI 96810	N00317-72M-0185	Inerteen PPO	360 pounds	8-19-71	8-20-71
Officer, Bldg. 276 .S.Y. tsmouth, Va. 23709	N00181-71M-D932	Inerteen PPO	2,022 pounds	7-08-71	7-09-71
CG Officer lg. 144 al Air Station ffet Field, Ca. 94035	N002961-M-2871	Inerteen 70-30	674 pounds	3-01-71	3-01-71
S. Navy pply Officer USN CBC rt Hueneme, Ca. 93043	N62583-71M-2745	Inerteen 70-30	7,414 pounds	3-18-71	3-22-71

DSW 171793

STLCOPCB4046419

April 5, 1972

Dr. Roy L. Kirkpatrick
Division of Forestry and Wildlife Sciences
College of Agriculture and Life Sciences
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061

Dear Dr. Kirkpatrick:

I am sending under separate cover a sample of Aroclor 1254 which you requested in your letter dated March 17.

In your letter you had requested an "Analytical Grade" and a "Technical Grade". Aroclor 1254 has been produced and marketed only as a commercial mixture of polychlorinated biphenyls. This commercial material is universally used as a laboratory standard in the detection and quantification of polychlorinated biphenyls.

I have enclosed a copy of Monsanto's analytical methodology 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/er

Enclosure

DSW 171794

STLCOPCB4046420

April 6, 1972

Dr. Daniel J. Call
Department of Biology
Panhandle State College
Goodwell, Oklahoma 73939

Dear Dr. Call:

I am forwarding under separate cover the samples of Aroclor 1242 and Aroclor 1254 you requested in your letter dated March 21.

I regret I could not include a sample of Aroclor 1260. This mixture is no longer manufactured and our supply of samples was recently depleted. I hope the lack of Aroclor 1260 does not seriously inconvenience you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171795

STLCOPCB4046421

April 6, 1972

Mr. J. Zahuta
Toms River Chemical Corporation
Box 71
Toms River, New Jersey 08753

Dear Mr. Zahuta:

I have attached a copy of our Analytical Chemistry Method 69-13 which you requested in your letter dated March 20.

I have also enclosed a copy of Method 71-35, which is the latest revision.

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/er

Enclosures

DSW 171796

STLCOPCB4046422

April 5, 1972

Dr. James W. Rote
Hopkins Marine Station
Pacific Grove, California 93950

Dear Dr. Rote:

Thank you for your letter of March 29, with the attached PCB reference list.

I, too, am concerned with the inferior work being performed by some investigators. It appears that the scientific community must learn to police itself, otherwise it will continue to be misunderstood and highly suspected by the general public.

I am also concerned that studies such as yours are being curtailed or delayed because of the lack of adequate funds. As you can imagine, Monsanto is intensely interested in all PCB research underway. It appears from our correspondence with scientists throughout the world that hundreds of laboratories in universities, governmental agencies and industry have studies underway relating to analytical techniques, presence or absence in the ecosystem and significance where positively identified.

Regarding significance, we know of many individuals investigating the biological effects on fish, mammals, microorganisms and birds, including effects on enzyme and hormone generation, as well as more general evidence of toxicity. As you can see, the total costs of all these studies are more than any one industry or government can support.

Monsanto has already committed several hundred thousand dollars for investigation of the many aspects of the overall problem

DSW 171797

particularly in areas which other investigators have not studied. I regret that at this time we do not feel we can support the project described in your letter.

I hope that you are able to find support soon and offer my best wishes for success.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171798

Monsanto

DOMESTIC MESSAGE BASIC
Inter-Communications System

DATE 4/6/72 | TIME 1:55 PM | SENDER'S ACCOUNT NO. 47-00-735.40

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 YOUR WIRE APRIL 6. IN ITEM 3 DID YOU INTEND PCT IN LIEU OF PCB?

W.B. PAPAGEORGE
ST. LOUIS

304

IN-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 171799

STLCOPCB4046425

April 4, 1972

Dr. Bruce McDuffie
Laboratory for Trace Methods and
Environmental Analyses
Department of Chemistry
State University of New York
Binghamton, New York 13901

Dear Dr. McDuffie:

I am forwarding under separate cover the sample of Aroclor 1254 you requested in your letter dated March 23.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171800

STLCOPCB4046426

April 4, 1972

Mr. Donald J. Wilson
General Manager
Protex Industries, Inc.
1331 West Evans
Denver, Colorado 80223

Dear Mr. Wilson:

In response to your letter dated March 30 requesting Material Safety Data Sheets, I have searched our records and found that your company had purchased our Aroclor 5460 in 1971.

As you probably know, Monsanto has elected to discontinue the manufacture and sale of this material. Therefore, no data sheets are being prepared.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl

DSW 171801

STLCOPCB4046427

bcc: C. E. Hathaway - B2SH
L. O. Raether - B3NB

April 4, 1972

Mrs. R. Frawert
Purchasing Department
BASF Wyandotte Corporation
100 Cherry Hill Road
P. O. Box 181
Parsippany, New Jersey 07054

Dear Mrs. Frawert:

I am sending under separate cover the sample of Aroclor 5460 you requested in your letter dated March 24. There is no charge for this sample.

I regret I could not include a sample of Aroclor 1268 since this material is no longer manufactured and our supply of samples has been exhausted.

I have attached a copy of a Technical Bulletin describing Aroclor 5460.

Will you inform the individuals who plan to study this material that Monsanto has terminated its manufacture and sale and it is no longer available.

I have enclosed copies of additional information describing fire retardant chemicals 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/er

Enclosures

DSW 171802

STLCOPCB4046428

Monsanto

DIRECTO MESSAGE BLANK
Tele-Communications System

DATE 4/4/72 | TIME 10:35am | SENDER'S ACCOUNT NO. 47-00-735.40

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

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

H. F. Dixon - Montreal Office
D. Goodwillie - Montreal Plant

BOOK MESSAGE

NEED CONFIRMATION. WERE PLASTICIZER PCT SALES TERMINATED ON MARCH 31?

W. B. Papageorge
St. Louis

cc: W. R. Corey - B2SL
H. S. Bergen - B2SL
W. S. Clark - B3NC

299

IN-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 171803

STLCOPCB4046429

W. B. Papageorge - General Offices - B2NK

April 3, 1972

MCS-681

H. S. Bergen - B2SL
C. Paton - B2SC
P. W. Gann - B2SC
W. R. Richard - T3A

W. R. Corey - B2SL

The El Dorado Refinery material (Lion Oil 300 Neutral System), which we have designated as MCS-681 and which was recently shipped to two customers of heat transfer fluids, was not intended to be used as the final fill.

In an effort to conserve our dwindling supply of Therminol 55 the decision was made to use MCS-681 as a flushing medium which is eventually returned to us for incineration.

There is a good possibility that this material, or a similar material made from a blend of different petroleum fractions, could be a satisfactory heat transfer fluid. Before any decision is made relating to its commercialization, appropriate environmental screening will be conducted. Bill Richard is aware of this need.

W. B. Papageorge

WBP/er

DSW 171804

STLCOPCB4046430

April 3, 1972

Mr. James Platt
Pollution Control Agent
Standard Products Company, Inc.
P. O. Box 646
Moss Point, Mississippi 39563

Dear Mr. Platt:

To the best of our knowledge and belief there are no PCB's in the Trisodium Phosphate, Crystalline, Technical manufactured by Monsanto Company.

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/er

bcc: Virginia Van Giesen - Atlanta

DSW 171805

W. B. Papageorge - General Offices - B2NK

April 3, 1972

W. S. Clark - B3NC

J. A. Smoke - 1650

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls (PCB).

Will Clark requested I send you this copy for delivery to Sherwin-Williams.

If I can help further, let me know.

W. B. Papageorge

WBP/er

Enclosure

DSW 171806

W. B. Papageorge - General Offices - B2NK

April 3, 1972

H. S. Bergen - B23L
T. L. Gossage - B2GL
W. R. Richard - 73A
E. A. Vodden - 5470
E. S. Tucker - 1300
P. J. A. Marsh --5040

J. R. Durland - 5260

We have been informed by a representative of NCR of a study being conducted at Tokyo University relating to the degradation of PCB with yeasts.

A Professor Sakagomi is mentioned as the principle investigator. He has used two strains of yeast, Rhodotolula and Pityrosporum. A fluid mixture containing 2500 ppm PCB was exposed to Rhodotolula and the PCB content was lowered 40% within one week. Subsequent exposure of the remaining mixture to Pityrosporum resulted in a further lowering of PCB by almost 30%. The total reduction within one week was 70% of the original PCB. Professor Sakagomi is claimed as believing 90% reduction is achievable.

Can your office contact Professor Sakagomi to confirm this information and perhaps get copies of the pertinent reports.

W. B. Papageorge

WBP/er

DSW 171807

STLCOPCB4046433

		DATE	TIME	SENDER'S ACCOUNT NO.
		4/3/72	1:40 pm	47-00-735.40

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. Mason - Brussels
P. J. A. Marsh - Brussels

BOOK MESSAGE

Need confirmation. Were following achieved on March 31?

1. Terminate sales of dielectric fluids to non-approved customers.

2. Terminate sales of dielectric fluids to service users.

3. Terminate PCT sales.

W. B. Papageorge
St. Louis

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

Z14

N-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 171808

MARCH 1972

DSW 171809

STLCOPCB4046435

March 30, 1972

Dr. L. R. A. Bradshaw
Pesticide Section
Division of Toxicology
Food Advisory Bureau
Department of National Health and Welfare
Ottawa, Ontario
KIA OL2
CANADA

Dear Dr. Bradshaw:

In response to your letter dated March 24th, I have enclosed copies of literature relating to the subject of commercial heat transfer fluids supplied by Monsanto.

You will note that we do not manufacture or market diphenyl oxide, although we continue to evaluate this type of material for possible commercialization. Our current line of heat transfer fluids are hydrogenated or alkylated aromatic materials. No oxygen or halogens are present.

The PCB-containing heat transfer fluids used in the food industry in the past were Therminol FR-0 (Aroclor 1242 plus chlorinated benzenes), Therminol FR-1 (Aroclor 1242), Therminol FR-2 (Aroclor 1248) and Therminol FR-3 (Aroclor 1254).

Our known competitors in the heat transfer fluids business include Dow Chemical Company, Union Carbide Company, Mobil Oil Company, Humble Oil Company, Sun Oil Company, and Cities Service Oil Company.

I have enclosed a bulletin in which we describe flushing and cleanout procedures. We offer to incinerate the flush fluid, as well as the old PCB fluid.

A toxicology summary on our Therminol 55 and Therminol 66 are attached.

DSW 171810

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/tgl

enclosures

DSW 171811

March 30, 1972

Mr. Dan Raveed
Electron Microscope Laboratory
Charles F. Kettering Research Laboratory
150 East South College Street
Yellow Springs, Ohio 45387

Dear Mr. Raveed:

Enclosed is a copy of Monsanto Technical Bulletin O/PL 306A which you requested in your letter dated March 7th. I hope the physical and chemical data in it are useful to you.

Of the Aroclors listed in your letter, only Aroclor 1242 and Aroclor 1254 are still being manufactured and are sold only to specific electrical applications. I recommend alternative materials which will continue to be available be studied for your epoxy embedding formulations.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/tgl

enclosure (1)

DSW 171812

241

March 30, 1972

815- 338-1800

Dr. Marshall Newcome
Morton Chemical Company
1275 Lake Avenue
Woodstock, Illinois 60098

Dear Dr. Newcome:

Enclosed are copies of the FDA's and Monsanto's analytical methodology for the determination of polychlorinated biphenyls which I offered to send.

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/er

Enclosures

bcc: Len Berlik - 1180

DSW 171813

STLCOPCB4046439

W. B. Papageorge - General Offices - B2NK

March 30, 1972

Mr. M. S. McCauley
Washington DC Office

I have arranged for the forwarding of a sample of Aroclor 1242 to Mr. R. E. Lang, Bureau of Customs, New York, New York.

I have enclosed a copy of a Monsanto Technical Bulletin which contains chemical and physical data on Aroclor 1242. Also enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls.

On April 1, 1972 Aroclor 1242 prices will be:

Bulk tank car	- $0.200 per pound
Bulk tank truck	- 0.202 per pound
55-gallon drum - carload	- 0.235 per pound
55-gallon drum - less than car load	- 0.255 per pound
5-gallon can	- 0.360 per pound

The greatest aggregate quantity is sold by bulk tank car.

W. B. Papageorge

WBP/er

Enclosure

DSW 171814

2

W. B. Papageorge - General Offices - B2NK

March 30, 1972

H. S. Bergen - B2SL
C. L. Bradford - B2SF
J. H. Davidson - B2SF
T. L. Gossage - B2SL

T. Ishijima - MJL
5270

I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls. You may share this procedure with any laboratory.

I regret I do not have a procedure for the determination of polychlorinated terphenyls. Our research laboratory is in the process of developing methodology for the detection of these materials at the extremely low levels required.

W. B. Papageorge

WBP/er

Enclosure

DSW 171815

287

STLCOPCB4046441

March 30, 1972

703-282-2311
E 41 2571

Mr. Bruce S. Hulcher
Environmental Control Engineer
Reynolds Metal Company
6601 West Broad
Richmond, Virginia 23261

Dear Mr. Hulcher:

Enclosed is a copy you requested of Monsanto's analytical methodology for the determination of polychlorinated biphenyls.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosure

DSW 171816

230

W. B. Papageorge - General Offices - B2NK

March 30, 1972 D. W. Witt - 1180

PCB - CHLORINE

McKesson Chemical Co., Peoria, Illinois

Robert F. Kelleher - 1180

I recommend you respond to McKesson as follows:

"Polychlorinated biphenyls (PCB) are not used in the manufacture of chlorine as a processing fluid in the equipment or as an ingredient or raw material. To the best of our knowledge and belief PCB's are not present in the chlorine purchased by your company from Monsanto."

W. B. Papageorge

WBP/er

DSW 171817

March 30, 1972

Mr. Larry Nichols
Carnation Research
8015 Van Nuys Blvd.
Van Nuys, California 91412

Dear Mr. Nichols:

Monsanto's W. E. Keenan informed me of your interest in information and bulletins on polychlorinated biphenyls (PCB).

I have enclosed copies of information relating to PCB's which I hope you find interesting and useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

cc: Mr. W. E. Keenan

DSW 171818

STLCOPCB4046444

March 30, 1972

212-757-4433

Mr. H. Kamata
Idemipsu Petrochemical Company
630 Fifth Avenue
New York, New York 10020

Dear Mr. Kamata:

I have enclosed copies of articles relating to polychlorinated biphenyls which 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/er

Enclosures

DSW 171819

STLCOPCB4046445

March 29, 1972

414-734-9841

Mr. Ron Jezerc
NCR Company
P. O. Box 348
Appleton, Wisconsin 54911

Dear Mr. Jezerc:

Enclosed are copies of the FDA and Monsanto's analytical methodologies 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

/jf

Atts.

DSW 171820

STLCOPCB4046446

W. B. Papageorge - General Office - B2NK

March 29, 1972 E. P. Wheeler - A2SA

TOXICITY OF CHLORINATED BENZENE

S. Ueno
Tokyo

Elmer Wheeler informs me that limited information is available in the literature relating to the toxicity of chlorinated benzene.

Our search of the literature would be more productive if you could tell us which of the chlorinated benzenes are being considered as substitutes for PCB.

W. B. Papageorge

/jf

DSW 171821

21

March 29, 1972

Mr. Michael Bolgar
Analabs, Inc.
80 Republic Drive
Northhaven, Connecticut 06473

Dear Mr. Bolgar:

I am sending 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/er

DSW 171822

STLCOPCB4046448

W. B. Papageorge - General Offices - B2NK

March 29, 1972 E. P. Wheeler - A2SA

TOXICITY DATA - PCB AND REPLACEMENT PRODUCTS

E. H. Toombs - 5080

Elmer Wheeler informs me that the PCB animal toxicity reports you requested are being assembled and will be forwarded to:

Mr. David J. Clegg
Pesticide Section, Division of Toxicology
Department of National Health and Welfare
Health Protection Branch
Food Advisory Bureau
Ottawa, Ontario

Perhaps Mr. Clegg can share his copies with Drs. Powers and McKinley.

Toxicity data on Therminol 55 and Therminol 66 are attached as well as a copy of the proposed U.S. FDA PCB regulations.

I hope this information is helpful.

W. B. Papageorge

WBP/er

Attachments

DSW 171823

TOXICITY DATA

THERMINOL® 66 Heat Transfer Liquid
THERMINOL® 55 Heat Transfer Liquid

THERMINOL 66 (hydrogenated terphenyl) has an oral LD_{50} of 10.2 g/kg to albino rats and a dermal LD_{50} of approximately 6.8 g/kg to albino rabbits. This material is considered to be practically non-toxic by ingestion in single doses and by single dermal applications.

The undiluted product is a moderate irritant to rabbit skin (average score 3.1 on a scale of 8), but practically non-irritating to the rabbit eye (average score 6.4 on a scale of 110). Human patch tests on 200 subjects indicate that THERMINOL 66 is neither a primary irritant nor a sensitizer.

The product was fed to groups of albino rats, 15 males and 15 females per group, for 90 days at dietary concentrations of 100 ppm, 300 ppm, and 1,000 ppm. A similar group of 30 animals served as controls. There was no untoward behavior among these animals, and there were no deaths which could be attributed to ingestion of the product. Comparisons of final body weight and total weight gains revealed no statistically significant differences between test and control animals. There was a similar lack of outstanding differences between test and control rats in food consumption, blood parameters (hematocrit, hemoglobin, erythrocyte count, and total and differential leukocyte counts), clinical chemical values (blood urea nitrogen, blood glucose, and serum alkaline phosphatase and serum glutamic-pyruvic transaminase activities), and the results of urinalyses (pH, specific gravity, glucose and albumin concentrations, and microscopic examination).

At the end of the feeding period, all surviving animals were sacrificed and given a thorough gross autopsy during which the weights of liver, kidneys, spleen, gonads, heart, and brain were determined and recorded. Females fed 1,000 ppm of the product had statistically significant increases of absolute liver, kidney, and brain weights and the corresponding organ to body weight ratios. The 300-ppm group of females had a statistically significant increase of liver to body weight ratio, but the absolute liver weights were not sifnigicantly elevated. Although some statistically significant intergroup differences were noted in other groups, none of these differences could be related to ingestion of the product. Gross pathological examination did not reveal outstanding differences between test and control rats. Tissues and organs (approximately 30 per animal) from ten rats of each sex in both the control and 1,000 ppm group were examined microscopically. No lesions were observed which could be related to ingestion of THERMINOL 66.

DSW 171824

STLCOPCB4046450

Limited studies indicate that THERMINOL 66 undergoes primary biodegradation and that it would not be a persistent aquatic pollutant if small amounts inadvertently entered waterways. Additional support for this view can be obtained from two published articles dealing with the environmental effects of HB-40. (An earlier designation for THERMINOL 66 was HB-40). The first is by J. E. Guthrie and O. E. Acres, Toxicity to Fish of Two Organic Reactor Coolants, Bull. Environ. Contam. & Toxicol. 5 (No. 2): 145-151 (1970). It states that ".... less than 25% of the fish (trout fry) died within 48 hours in HB-40 suspensions containing 100 mg/l or less....". The second is by J. L. Weeks, An Organic Cooled Nuclear Reactor and Its Environment, Arch. Environ. Health, 23: 123-128 (1971). This article has a general discussion of the environmental problem and concludes that HB-40 has not adversely affected the environment after 5½ years of use in a reactor in Manitoba, Canada.

THERMINOL 55 (alkylated benzene) has an oral LD_{50} of 15.8 g/kg to albino rats and a dermal LD_{50} of 7.94 g/kg to albino rabbits. This product is considered to be practically non-toxic by ingestion in single doses and by single dermal applications.

The undiluted product is a slight irritant to rabbit skin (average score of 1.0 on a scale of 8) but practically non-irritating to the rabbit eye (average score of 6.0 on a scale of 110). A group of male rats survived a six-hour exposure to air near saturation with vapor of this material at room temperature. They exhibited no adverse signs during the exposure and a subsequent 10-day observation period.

The biodegradability of THERMINOL 55 has not been studied. We believe its biodegradability would be similar to that of crude oil, and consequently recommend that the spent fluid be treated as such.

The preceding information was judged to be adequate for the safe use and handling of these two products when they were introduced. Subsequently, since the commercial possibilities for these fluids have increased, we have initiated additional toxicity tests which are currently underway.

THERMINOL 66. A rat feeding study has been designed to determine whether tissue residues occur when this material is ingested. In addition, reproduction studies with chickens have been initiated.

THERMINOL 55. A 90-day feeding to rats with a determination of whether tissue residues occur and chicken reproduction studies are in progress with this material. When these have been completed, we should have essentially the same amount of toxicity information on each of these products.

STLCOPCB4046451

March 28, 1972

Mr. R. Williams
DuPont Company
P. O. Box 3269
Beaumont, Texas 77704

Dear Mr. Williams:

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/er

Enclosure

DSW 171826

277

STLCOPCB4046452

March 28, 1972

Ms. Carol Moenke
New Richmond Foods
Domain Industries, Inc.
P. O. Box 276
Faribault, Minnesota 55021

Dear Ms. Moenke:

I am forwarding under separate cover samples of Aroclor 1242 and Aroclor 1254 you requested in your letter dated March 17.

I regret I cannot include samples of Aroclor 1232, Aroclor 1248, Aroclor 1260 and Aroclor 1262. These materials are no longer manufactured 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/er

DSW 171827

STLCOPCB4046453

March 28, 1972

Mr. R. J. Townshend
Purchasing Agent
Dalhousie University
Halifax, Nova Scotia
CANADA

Dear Mr. Townshend:

I am forwarding under separate cover a sample of Aroclor 5460 which you requested in your purchase order No. 6861 dated March 23, 1972. There is no charge for this sample.

Will you please inform the user of this material that Monsanto will no longer manufacture or market this material after March 31, 1972. I hope the sample is large enough to serve your needs until an acceptable alternative is developed.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171828

March 28, 1972

Mr. Edward Cieplinski 215-692-4575
AID, Inc.
250 South Franklin
Westchester, Pennsylvania 19380

Dear Mr. Cieplinski:

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/er

DSW 171829

Customer letter
April 1970

Dear Sir:

Since early 1970 we have been advising your company of significant developments relating to the polychlorinated biphenyl (PCB) environmental situation.

As you know, many pollution control agencies conduct monitoring programs to evaluate the presence and impact of many materials on the environment. Some of these programs include PCB.

Recently a representative of a governmental pollution control agency contacted Monsanto requesting information concerning PCB sales. Specifically, he asked for names and addresses of PCB customers in his area, with the quantities of PCB product sold to each. He stated that this information was being requested because significant amounts of PCB were being detected in the discharge from sewage treatment facilities in his area.

He was informed that Monsanto considers information of this type confidential and, therefore, does not disclose it outside the Company. He subsequently informed us that the request for information was being sent to the local federal district attorney for appropriate action.

As we have pointed out on numerous occasions to representatives of governmentand of private groups, Monsanto has long had a policy, which it continues to follow, of treating information concerning its customers as confidential information. However

DSW 171830

you should be aware that, because of governmental or judicial orders or requirements or because of a change in circumstances resulting from the unique nature of the PCB problem, Monsanto may at some future date feel obligated to disclose such information to qualified persons.

We wish to strongly re-emphasize with you the importance of preventing PCB's from escaping into the environment. We direct your attention to the recent FDA notice of proposed rule making on PCB's published in the Federal Register, Vol. 37, No. 54, pp 5705 and following, dated March 18, 1972.

If PCB's are still present at your locations you are urged to thoroughly review your procedures and inspect your facilities to insure that extreme care is taken in the handling, use, storage, and disposal of these materials.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

DSW 171831

March 24, 1972

Mr. R. E. Pankratz
Poly Science Corporation
6366 Grosspoint Road
Niles, Illinois 60648

Dear Mr. Pankratz:

I am sending under separate cover the sample of Aroclor 1016 you requested.

I have enclosed a copy of the proposed FDA regulations relating to the use of PCB in food plants and the tolerances that will be established in food and food packaging.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/cr

Enclosure

DSW 171833

270

STLCOPCB4046458

March 24, 1972

Dr. J. A. Vinson
Chemistry Department
Washington and Jefferson College
Washington, Pennsylvania 15301

Dear Dr. Vinson:

I am sending under separate cover the samples of Aroclors you requested in your letter dated March 20.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171834

269

STLCOPCB4046459

W. B. Papageorge - General Offices - B2NK

March 24, 1972

SELLING PRICES -
AROCLOR 1254 ELECTRICAL GRADE

Mr. M. S. McCauley
Washington DC - 1920

Selling prices of Aroclor 1254 electrical grade are as follows:

	(dollars per pound)	
	January 1, 1971 to March 31, 1972	April 1, 1972
Bulk Tank Car	$0.180	$0.195
Bulk Tank Truck	0.182	0.197
55 Gallon Drum CL/TL	0.207	0.230
55 Gallon Drum LTL	0.227	0.250
5 Gallon Drum	0.327	0.355

The greatest aggregate quantity was sold by tulk tank car at $0.180 per pound.

W. B. Papageorge

WBP/er

DSW 171835

26.8

STLCOPCB4046460

March 23, 1972

Mr. Ron Aiello
Quality Control Department
Building 86
Hoffmann-LaRoche, Inc.
Nutley, New Jersey 07110

Dear Mr. Aiello:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls (PCB) which Red Southerland offered to send.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosure

cc: Mr. R. F. Southerland

DSW 171836

March 23, 1972

314-442-2271 Ext 3101 office
314-442-2283 home

Mr. Waynon Johnson
Fish-Pesticide Laboratory
U.S. Department of Interior
Route 1
Columbia, Missouri 65201

Dear Mr. Johnson:

Enclosed is a copy of a bulletin describing our new series of Pydraul fluids which includes Pydraul 50E.

I have arranged for a sample of Tricresyl Phosphate and appropriate literature to be mailed to you under separate covers.

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/er

Enclosure

DSW 171837

STLCOPCB4046462

W. B. Papageorge - General Offices - B2NK

March 23, 1972

EPA - OFFSHORE INDUSTRY

C. Paton - B2SC
D. E. Roush - B2SC
P. W. Gann - C3HC

J. J. Roder - B2SC

When I talked with Mr. Wallace Cooper, U.S. Environmental Protection Agency, Dallas, Texas, he informed me that the operators of the off-shore platforms had organized a group which was called the "Offshore Operators Committee". This committee is primarily concerned with the environmental impact of the platforms and attempts to coordinate activity relating to fires, spills, etc.

Members of the committee are:

Hugh Barton - Humble Oil

Dick Darling - Amoco

Douglas Henry - Gulf Oil

Bill Barry - Shell Oil

All are located in New Orleans.

W. B. Papageorge

WBP/er

DSW 171838

STLCOPCB4046463

March 23, 1972

Mr. Franklin P. Perdue
President
Perdue Incorporated
P. O. Box 1537
Salisbury, Maryland 21801

Dear Mr. Perdue:

I understand and appreciate the concern you expressed in your letter dated March 21, relating to the PCB problem and its effect on the poultry industry.

To the best of our knowledge and belief we have not, since the summer of 1971, sold PCB-containing materials to anyone in the production of ingredients used in poultry feeds. I am personally completely frustrated in attempting to determine the source of high levels of PCB's involved in the Maine incident. With Monsanto's ban on the sale of PCB's to the food related industry an incident such as the one in North Carolina should not reoccur.

Since December, Monsanto instituted a program to further reduce the use of PCB's. Our current objective is to remove it from all uses except as a dielectric fluid in the electrical industry. No alternative material is known to exist today and the benefits related to the safety features of fire and explosion resistance are believed to far outweigh the threat of environmental contamination from these closed system applications.

Your proposal to insist on certificates of analysis with an upper limit of 0.5 parts per million PCB's appears to have merit and is followed in other industries. The FDA has proposed regulations relating to the amount of PCB that will be tolerated in animal feed ingredients and in animal feed. I

DSW 171839

have attached a copy for your use. You may wish to review the 0.5 ppm limit in light of the 5 ppm limit the FDA is proposing for each ingredient.

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/er

Attachment

DSW 171840

March 22, 1972

Dr. Adel F. Sarofim
Department of Chemical Engineering
Massachusetts Institute of Technology
Building 12 - 188
Cambridge, Massachusetts

Dear Adel:

Enclosed is your copy of your OST Panel Report draft. I appreciate the opportunity to reproduce it for our records. As soon as we have completed our review we will send you our comments.

You may include the table of properties of Aroclors (your pages A23 and A24) in your report. Would it be appropriate to reference the Monsanto Bulletin in which the tables originally appeared?

Regards.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosure

DSW 171841

March 22, 1972

301 - 443 - 3420

Mr. John Wessel
Office of the Associate Commissioner for Compliance
(CC-10)
Food and Drug Administration
5600 Fishers Lane
Rockville, Maryland 20852

Dear John:

Enclosed are copies of pamphlets, brochures, articles, etc. describing equipment which has been used in PCB heat transfer systems.

I have asked representatives of the electrical equipment industry to send you similar information for transformers and capacitors.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

cc: Mr. K. W. Easley - 1920

DSW 171842

STLCOPCB4046467

March 22, 1972

714 - 540 - 2910 Ext 262, 263, 264, 265

Dr. Monte Greinetz
Orange County Sanitation Districts
10844 Ellis Avenue
Fountain Valley, California 92708

Dear Dr. Greinetz:

I am forwarding under separate cover samples of Aroclor 1221, Aroclor 1242, Aroclor 1254, and Aroclor 1260.

I regret I could not include samples of Aroclor 1232 and Aroclor 1248 which you also requested. These materials have not been manufactured for many months and our supply of samples was depleted long ago.

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/er

Enclosure

DSW 171843

STLCOPCB4046468

March 22, 1972

415-843-2740

Dr. A. S. Newton
Lawrence Berkeley Laboratory
University of California
Berkeley, California 94720

Ext 5039

Dear Dr. Newton:

I am sending 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/er

DSW 171844

25

STLCOPCB4046469

March 22, 1972

Mr. R. J. Fairweather
Purchasing Department
The University of Alberta
Edmonton 7, Alberta
CANADA

Dear Mr. Fairweather:

I regret I cannot supply the material, Aroclor 1248, described in your Request for Quotation dated March 14, 1972.

This product has not been manufactured for about two years and our inventory was depleted long ago.

I hope the lack of Aroclor 1248 does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171845

March 22, 1972

Dear Bob,

I was personally pleased to hear you were given the opportunity to complete the full 50 years with Monsanto. I know how much you looked forward to achieving this goal.

Many of us in Monsanto appreciate the years of loyal service you have given to Monsanto. I, for one, thank you for the help and advice you freely gave to me. I know the Anniston Plant will miss "Uncle" Bob.

I wish you a long, pleasant and rewarding retirement.

Sincerely,

W. B. Papageorge

Mr. Robert Cambron
216 East 22nd Street
Anniston, Alabama 36201

DSW 171846

257

STLCOPCB4046471

March 20, 1972

617-773-6900

Mr. John Scully
Pneumatic Scale Corporation
65 Newport Avenue
Quincy, Massachusetts 02169

Dear Mr. Scully:

Enclosed are copies of the PCB articles I offered to send.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

DSW 171847

25

STLCOPCB4046472

March 20, 1972

Mr. Jack Blease
103 Holmes Hall
Maine Agricultural Experiment Station
Orono, Maine 04473

Dear Mr. Blease:

I regret I cannot send you a copy of Monsanto's Technical Bulletin O/PL 306 you requested in your card dated March 7, to Miss Shea. This bulletin has been out of print for several years and was replaced by O/PL 306A, a copy of which is enclosed.

I have also enclosed copies of additional PCB articles which I hope you find useful.

I can send you samples of commercial mixtures of polychlorinated biphenyls which are normally used as analytical standards. If yourwork requires samples of the pure isomers I suggest you contact:

Mr. T. R. Lynn, President
Analabs, Inc.
80 Republic Drive
North Haven, Connecticut 06473

Telephone: 203 288-3400

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

Enclosures

DSW 171848

254

March 20, 1972

Mr. Thomas Marsch
Proctor and Gamble Company
6071 Centerville Road
Cincinnati, Ohio 45224

Dear Mr. Marsch:

I am sending under separate cover the samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 you requested for use as analytical standards.

I regret I could not include a sample of Aroclor 1248. This material has not been manufactured for over two years and our supply of samples has been exhausted. I hope the lack of this material does not seriously inconvenience you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/er

DSW 171849

STLCOPCB4046474

W. B. Papageorge - B2NK - General Offices

March 20, 1972 C. Paton - B2SC

PCB DISPOSAL - MEXICO

F. J. Camargo - A2NH

It appears that disposal of PCB's in the glass company refractory ovens could pose a serious atmospheric pollution problem.

With the distance to a remote desert area being so great, I concur with your recommendation that in this instance the material be returned to the W. G. Krummrich Plant for disposal.

W. B. Papageorge

WBP/er

DSW 171850

March 20, 1972

Mr. Paul A. Rishel
Vice President
Linden Laboratories, Inc.
Box 920
State College, Pennsylvania 16801

Dear Mr. Rishel:

In response to your letter dated March 8, 1972, to the best of our knowledge and belief the Maleic Anhydride purchased by your company from Monsanto Company does not contain polychlorinated biphenyls or polychlorinated terphenyls.

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/er

bcc: R. F. Sellew - B3NC

DSW 171851

25

STLCOPCB4046476

W. B. Papageorge - General Offices - B2NK

March 20, 1972 H. W. Kilbourne - 1010

Mrs. Naida Kisinger - 1010

Material Safety Data Sheets for Ajone HP, Ajone H and Ajone HP Flakes are approved.

Please add the following statement on all copies for all products:

> "While the information and recommendations set forth herein are believed to be accurate as of the date hereof, MONSANTO COMPANY MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON."

I suggest this statement be stamped or typed in the margin below Section IX.

W. B. Papageorge

WBP/er

DSW 171852

251

March 17, 1972

Dr. V. Gobel
Assistant Professor of Geology
Department of Geology
Stephen F. Austin State University
Nacogdoches, Texas 75961

Dear Dr. Gobel:

I am sending under separate cover the sample of Aroclor 5442 you requested in your letter dated March 14.

As you know, we are terminating the manufacture of this material and samples will not be available in the future. I hope this supply will meet your current requirements.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171853

279

STLCOPCB4046478

March 17, 1972

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

Dear Al:

I have been asked by the FDA for photographs and literature describing electrical equipment in which PCB's are used. Will you arrange to have appropriate sales bulletins, catalogs, etc. describing capacitors sent to:

Mr. John Wessel
Office of the Associate Commissioner
for Compliance
(CC-10)
Food and Drug Administration
5600 Fishers Lane
Rockville, Maryland 20852

Thanks.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171855

-117

March 17, 1972

Mr. Floyd Schnell
Gerber Products Company
445 State Street
Freemont, Michigan 49412

Dear Mr. Schnell:

Enclosed is a copy of the Monsanto polychlorinated biphenyl analytical methodology and the list of Aroclor applications you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 171856

March 16, 1972

Mr. A. J. Morak
Chief Chemist
Badger Laboratories and
Engineering Company
635 S. Oneida Street
Box 363
Appleton, Wisconsin 54911

Dear Mr. Morak:

I am sending under separate cover the sample of Aroclor 1242 you requested in your letter dated March 6 addressed to Monsanto Enviro-Chem Systems.

I regret I cannot include a sample of Aroclor 1248. This material has not been manufactured for over two years and our supply of samples has been depleted. I hope the lack of this material 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

DSW 171857

PCB - Lamp ballast

March 16, 1972

216-352-9311
Ext 242

Mr. Clarence Sturm
Diamond Shamrock Corporation
T. R. Evans Research Center
7528 Auburn Road
P. O. Box 348
Painesville, Ohio 44077

Dear Mr. Sturm:

I am sending under separate cover samples of commercial polychlorinated biphenyls for use as laboratory standards.

I have enclosed a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls and copies of articles relating to these materials.

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

cc: Mr. E. Wilde
Monsanto Company
Akron, Ohio

DSW 171858

W. B. Papageorge - General Offices, B2NK

March 16, 1972

ACUTE FISH TOXICITY -
THERMINOLS

G. J. Levinskas - A2SA
C. Paton - B2SC
J. J. Roder - B2SC
D. E. Roush - B2SC
E. P. Wheeler - A2SA

D. R. Miller
T3F

Will you please arrange to have 16 ounce samples of Therminol 55, Therminol 66, Therminol 77 and Therminol 88 sent to George Levinskas, Medical Department.

George, in turn, will arrange for acute fish toxicity studies at Industrial Bio-Test Laboratories. Preliminary acute studies are estimated to cost about $2,500 and results are expected within one month.

W. B. Papageorge

/bt

DSW 171859

STLCOPCB4046483

March 16, 1972

Dr. Elpidio de la Teja
Technical Services
Thomas J. Lipton, Inc.
800 Sylvan Avenue
Englewood Cliffs, N. J. 07632

Dear Dr. de la Teja:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which you requested in your letter dated March 14.

The samples you received are commercial mixtures of isomers and are 100% polychlorinated biphenyls.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure

DSW 171860

STLCOPCB4046484

March 16, 1972

Mr. F. A. Peck
Hartford Insurance Group
1100 Pierce Building
St. Louis, Missouri 63102

Dear Mr. Peck:

Enclosed are copies of articles relating to 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

Enclosures

DSW 171861

March 16, 1972

Mr. H. V. Whelan
234 Douglas Place
Mount Vernon, New York 10552

Dear Mr. Whelan:

Your letter dated February 29 requesting information on the use of PCB's was forwarded to me for response.

Currently the uses of PCB's are not regulated by any governmental agency. Monsanto has voluntarily curtailed the marketing of these materials to the extent that the only use that will remain will be as dielectric fluids in electrical systems. It is our considered opinion that the safety benefits of fire and explosion resistance of these closed system applications far outweigh the threat to the environment should any of the liquid accidentally be released.

It is my understanding that the FDA is in the process of proposing significant restrictions on PCB's. Publication is expected within the next ten days.

I have attached copies of recent articles predicting FDA action. 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
Enclosures

DSW 171862

W. B. Papageorge - General Offices, B2NK

March 15, 1972

P. J. A. Marsh - 5040
H. A. Vodden - 5470

Dr. R. A. Baxter
Ruabon - 5470

Dr. A. V. Holden, Freshwater Fisheries Laboratory, Pitlochry, Pertshire, Scotland and Dr. Soren Jensen, University of Stockholm, Stockholm, Sweden are listed among the participants at the International Decade of Oceanic Explorations (IDOE) Baseline Study to be held at the Brookhaven National Laboratories, Long Island, New York on May 24-26, 1972.

In your opinion is there any merit in inviting either or both to visit Monsanto in St. Louis while they are in the United States?

W. B. Papageorge

/bt

DSW 171863

STLCOPCB4046487

PCBs
complete

March 15, 1972

Dr. H. A. Greim 212-876-1000
Mount Sinai Hospital Ext 6242
Atran 426
Fifth Avenue at 100th St.
New York, New York 10029

Dear Dr. Greim:

I am forwarding under separate covers the samples of commercial polychlorinated material you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171864

STLCOPCB4046488

W. B. Papageorge - General Offices, B2NK

March 15, 1972

DISPOSAL OF AROCLORS/THERMINOLS

Memo, I.A.M. to W.B.P.
dated 3/1/72

Mr. I. A. May
West Footscray, Australia

In response to your request for information about the Aroclor Incinerator, a specification sheet and an engineering flow diagram are attached. These will give you many of the details that were asked for. Also attached is the final Project Startup Status Report for the incinerator project giving system effluent concentrations which may be of interest.

General information follows:

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. PCB's 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.

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

DSW 171865

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 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 sec.

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.

W. B. Papageorge

/bt

Enclosure

DSW 171866

March 15, 1972

Mr. Harry L. Palmer
President
Delmarva Poultry Industry, Inc.
Route 2, Box 47
Georgetown, Delaware 19947

Dear Mr. Palmer:

I understand and appreciate the concern you expressed in your letter dated March 13 relating to the PCB problem and its effect on the poultry industry.

To the best of our knowledge and belief we have not, since the summer of 1971, sold PCB-containing materials to anyone in the production of ingredients used in poultry feeds. I am personally completely frustrated in attempting to determine the source of high levels of PCB's involved in the Maine incident. With Monsanto's ban on the sale of PCB's to the food related industry an incident such as the one in North Carolina should not reoccur.

Since December, Monsanto instituted a program to further reduce the use of PCB's. Our current objective is to remove it from all uses except as a dielectric fluid in the electrical industry. No alternative material is known to exist today and the benefits related to the safety features of fire and explosion resistance are believed to far outweigh the threat of environmental contamination from these closed system applications.

Your proposal to insist on certificates of analysis with an upper limit of 0.5 parts per million PCB's appears to have merit and is followed in other industries. I understand that the FDA is working on regulations which they hope to publish within a week. I would suggest the 0.5 ppm limit be reviewed when the FDA report is available.

DSW 171867

STLCOPCB4046491

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 171868

March 15, 1972

Mr. R. S. Munger
Cities Service Company
Petrochemical Research
Drawer 4
Cranberry, New Jersey 08512

Dear Mr. Munger:

I am sending under separate cover samples of commercial polychlorinated biphenyl mixtures to be used as analytical standards.

I have enclosed a copy of Monsanto's analytical methodology for polychlorinated biphenyl determination. 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 171869

STLCOPCB4046493

March 15, 1972

Mr. M. J. Crisanti 314-289-9500
Marketing Director
Zinsco Electrical Company
P. O. Box 357
St. Louis, Missouri 63166

Dear Mr. Crisanti:

I am enclosing copies of the polychlorinated biphenyl literature I had offered to send you.

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 171870

STLCOPCB4046494

W. B. Papageorge - General Offices

March 14, 1972

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

Attached is a request from the French Department of Agriculture for samples of Aroclors.

Will you arrange with the appropriate people in Monsanto-Europe to have the available samples sent to Dr. Richou-Bac.

W. B. Papageorge

/bt
Attachment

DSW 171871

W. B. Papageorge - General Offices, B2NK

March 14, 1972

PCB's - OFF-SHORE PLATFORMS

Mr. K. W. Easley
Washington, D.C.
1920

Attached are copies of literature describing the use of PCB heat transfer fluids on off-shore gas platforms.

The schematic piping diagram depicts the two primary uses -- regeneration of ethylene glycol used to absorb moisture from the gas and heating the choke (main gas control valve) to prevent freezing. Additional heat uses include heating of water and living quarters for the employees.

Our records indicate that up to 17 platforms had PCB heat transfer systems. Recently two of these have converted to Dowtherm G. The average unit contains about 1,000 gallons of fluid and replacement was averaging 8% per year.

Steam as a source of heat can and is used on off-shore platforms. Steam generation involves more operating attention, exposure to high pressures and the costs of supplying fresh water and treatment chemicals.

W. B. Papageorge

/bt
Attachment

DSW 171872

March 14, 1972

Mrs. Paul Mickey
Concern, Inc.
Room 210
2233 Wisconsin Avenue
Washington, D.C. 20037

Dear Mrs. Mickey:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls. Dr. George Ingle of our Washington office had informed me of your request for a copy.

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: Dr. George W. Ingle
Washington, D.C.

DSW 171873

STLCOPCB4046497

medical

W. B. Papageorge, General Offices, B2NK

March 14, 1972

Mr. E. P. Wheeler
A2SA

Attached is a copy of the experimental design to be used by Dr. Joel Bitner, Agriculture Research, USDA, Beltsville, Maryland.

I suggested that this work may duplicate the work by Industrial Bio-Test. Dr. Bitner admitted that it would but he claimed that they had to do the study because Monsanto has yet to publish the details of its study.

W. B. Papageorge

/bt
Attachment

DSW 171874

STLCOPCB4046498

March 14, 1972

Dr. Souheil Laham
Assistant Chief of Division
Division of Health Effects
Environmental Health Centre
Tunney's Pasture
Ottawa, Ontario, KIA OK9
Canada

Dear Dr. Laham:

I regret I cannot supply any samples of polychloronaphthalenes since Monsanto does not manufacture or market these materials.

I understand that Koppers Company, Inc., Organic Materials Division, Koppers Building, Pittsburgh, Pennsylvania 15219, U.S.A. markets chlorinated naphthalenes. Perhaps they could provide some sample material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/bt

DSW 171875

229

STLCOPCB4046499

Samples
Sit

March 14, 1972

Dr. M. L. Scott
Rice Hall
Cornell University
Ithaca, New York 14850

Dear Dr. Scott:

I am sending 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

DSW 171876

W. B. Papageorge, General Offices, B2NK

March 14, 1972

FIRES - HEAT TRANSFER SYSTEMS

Mr. K. W. Easley
Washington, D.C.
1920

In response to your question which I believe was prompted by an inquiry from Dr. Edward Burger, we have attempted to get detailed information relating to the causes for the fires which occurred in heat transfer systems shortly after conversion to a non-fire resistant fluid. We have not been entirely successful because the customers do not appear too willing to divulge any information.

Customer/Location	Apparent Cause of Fire
Sea Pass Food Company St. Louis, Missouri	Gasket failed. Hot fluid sprayed on paper causing it to ignite.
Monsanto, Kearny, N.J.	Insulation saturated with fluid leaking from vent line. Auto ignition occurred at the high temperatures which existed.
Cargil, Inc. Des Moines, Iowa	Heater was overfired and failed.
Mrs. Paul's Kitchens Braddock, Pa.	Tube in heater failed due to deposit of carbonaceous material resulting from high local temperatures.

We have not been able to get any information on the fire at Felton International, Brooklyn, New York.

I recommend that during any discussions of these incidents we avoid divulging the customers by name.

W. B. Papageorge

WBP/bt

DSW 171877

STLCOPCB4046501

March 13, 1972

Mr. H, R. Yost
Midland Division Purchasing
47 Building
P. O. Box 1724
Midland, Michigan 48640

Dear Mr. Yost:

I regret to inform you that because of our policy relating to the curtailed distribution of polychlorinated biphenyls I cannot send you the sample of Aroclor 1016 requested in your order dated March 3, 1972.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

bcc: G. F. Fague - 1320

DSW 171878

STLCOPCB4046502

March 13, 1972

Mr. Edward M. Jackson
Department of Biology
The Catholic University of America
Washington, D.C. 20017

Dear Mr. Jackson:

I am sending under separate cover samples of chlorinated biphenyls requested in your letter dated March 3 to Mr. T. L. Gossage.

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/bt
Enclosure

DSW 171879

STLCOPCB4046503

PCB
Lawsuit

March 13, 1972

Ms. Helen Lewandowski 301-825-3484
Huntingdon Research Center
P. O. Box 6857
Baltimore, Maryland 21204

Dear Ms. Lewandowski:

I am sending under separate covers the samples of Aroclors you requested.

I have enclosed a copy of a polychlorinated biphenyl analytical methodology which I hope you find helpful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure

DSW 171880

STLCOPCB4046504

March 13, 1972

Mr. Vincent J. Bagdon
P. O. Box 117
Fort Belroir, Virginia 22060

Dear Mr. Bagdon:

Attached is a copy of a polychlorinated biphenyl (PCB) analytical procedure which you requested of Mr. K. W. Easley.

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

/bt
Enclosure

cc: Mr. K. W. Easley -
Washington, D.C.

DSW 171881

March 13, 1972

412 - 537-7711
Ext 206

Mr. R. W. Weimer
Latrobe Steel Company
P. O. Box 327
Latrobe, Pennsylvania 15650

Dear Mr. Weimer:

Enclosed are copies of articles relating to polychlorinated biphenyls.

I hope you find this information helpful in understanding Monsanto's concern for the uncontrollable use of these materials and their potential impact on the environment.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure

DSW 171882

March 13, 1972

Mr. Joel S. Davis
Safety Officer (BF-14)
Food and Drug Administration
Department of Health,
Education and Welfare
Washington, D.C. 20204

Dear Mr. Davis:

Enclosed are the forms you requested in your letter dated February 29. The current charge for disposal is 3¢ per pound received. The shipper must pay the container and freight costs.

Although the incineration unit is capable of destroying all types of liquid waste we cannot at this time accept chemicals from other manufacturers since the unit is fully occupied for the foreseeable future destroying PCB materials.

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
Enclosure

DSW 171883

March 13, 1972

Mr. L. M. Munro
Manager, Client Conferences
Doble Engineering Company
32 Locust Street
Belmont, Massachusetts 02178

Dear Mr. Munro:

Enclosed is a marked copy of my proposed paper. Note that the changes are in the first paragraph and they are minor. I regret I did not spot the errors in the draft I sent you.

Regarding possible discussors of my paper I am aware of only Mr. Raab and Dr. Pozefsky, both with G.E. I am under the impression they have received a copy from your office.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure

DSW 171884

STLCOPCB4046508

March 7, 1972

Dr. Donald I. Mount
United States Environmental Protection Agency
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, Minnesota 55804

Dear Dr. Mount:

Thank you for the invitation to participate in the PCB work session scheduled for May 22 and 23.

I plan to be present and look forward to an interesting discussion. As additional information develops please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171885

STLCOPCB4046509

March 7, 1972

Dr. George Heckman
Keller-Heckman
1150 Seventeenth Street N.W.
Washington, D.C. 20036

Dear Dr. Heckman:

Attached is a copy of the first page missing from the material I had sent to your Dr. Daniel Dixler.

I regret and apologize for any inconvenience we may have caused.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Attachment

cc: G. W. Ingle -
Washington, D.C.

DSW 171886

March 7, 1972

Mr. D. Linson
Elanco Division
Eli Lilly and Company
740 South Alabama Street
Indianapolis, Indiana 46206

Dear Mr. Linson:

I am sending under separate cover the samples 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

cc: Mary Lou Mart - Cincinnati

DSW 171887

STLCOPCB4046511

W. B. Papageorge - General Offices, B2NK

March 7, 1972

P. G. Benignus - B2SC
W. R. Richard - T3A

Dr. R. H. Munch
1760

Attached is a copy of the latest draft of proposed guidelines for handling askarels in the manufacture and use of capacitors. These guidelines have been developed by a working committee under the auspices of ANSI Committee C-107.

I would appreciate any comments you may have to offer.

W. B. Papageorge

/bt
Attachment

DSW 171888

STLCOPCB4046512

March 6, 1972

Dr. James J. Manion
Chairman, Science Division
Carroll College
Helena, Montana 59601

Dear Dr. Manion:

I am forwarding under separate cover the sample of Aroclor 1254 you requested in your letter dated March 3. There is no charge for this material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171889

STLCOPCB4046513

W. B. Papageorge - General Offices, B2NK

March 6, 1972

F. J. Fitzgerald - B3SA
J. S. Metcalf - E1SF
J. F. Stapleton - B2SA

Mr. Ira D. Hill
N1A

Attached is a copy of a letter I received from the Terra Society relating to a request for an author of a PCB article for a proposed book on chemicals in the environment.

I note in the first paragraph that a chapter is being considered on the subject of phosphates.

It is my understanding that the Terra Society is a fairly objective environmentalist organization which is well known and respected, particularly in the Great Lakes area.

I suggest someone contact Mr. E. Payson Smith to determine what is being planned for the phosphate portion. Perhaps we can contribute in some positive way to assure that a favorable article is written.

W. B. Papageorge

/bt

DSW 171890

March 3, 1972

Mr. J. A. Richards
Bureau of Domestic Commerce
U. S. Department of Commerce
Washington, D.C. 20230

Reference: BDC Case No. X-36207

Dear Mr. Richards:

The answers to the three questions raised in your letter dated February 24 are as follows:

A) To the best of our knowledge the following customers have purchased polychlorinated terphenyls on priority rated orders since December 31, 1970:

Essex Chemical Corporation
1401 Broad Street
Clifton, New Jersey 07015

M. Argueso & Company, Inc.
441 Waverly Avenue
Mamaroneck, New York 10543

Arwood Corporation
Rockleigh Industrial Park
Rockleigh, New Jersey 07647

B) As you have been informed, we have decided to discontinue the sales of polychlorinated terphenyls and consequently plan to shut down our manufacturing facility. At the present time the specific date for this shutdown has not been determined but we anticipate that this date will be approximately the end of March, 1972. Consequently, it is not our current plan to produce any product after March 31, 1972.

DSW 171891

STLCOPCB4046515

C) Polychlorinated terphenyls have been used in the past for a number of different uses and substitute products for the different applications will depend upon the specific manner in which they have been utilized. Attached to this letter are suggested substitute products for the major applications, along with the names of possible suppliers.

We trust this reply to your letter of February 24 provides you with the information you need.

Very truly yours,

W. B. Papageorge
Manager
Environmental Protection

/bt

Attachment

bcc: W. R. Corey - B2SL
W. S. Clark - B3NC
K. W. Easley - 1920

DSW 171892

STLCOPCB4046516

REPLACEMENT SUGGESTIONS

FOR

AROCLOR PLASTICIZERS

The information contained in this bulletin is, to our best knowledge, true and accurate, but all recommendations or suggestions are made without guarantee, since the conditions of use are beyond our control. Monsanto Company disclaims any liability incurred in connection with the use of these data or suggestions.

Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

DSW 171893

STLCOPCB4046517

In conjunction with our removal of Aroclor plasticizers from the market, Monsanto has attempted to put together a list of replacement suggestions for this line of products. Anyone who has had experience with Aroclors will recognize that this is a difficult task. The combination of thermal and chemical stability, good compatibility, low cost, and fire retardance make Aroclors difficult products to replace.

On the following pages, you will find listed products produced by Monsanto and by other competitive suppliers which could be used as a starting point in reformulation work. This list has been compiled based upon our understanding of the requirements of the various application areas and not necessarily upon extensive application research. Therefore, the list should not be construed to be a blanket recommendation.

Monsanto would be happy to discuss replacement reformulation questions as they arise. Listed below are several people who have had contact with the various application areas involved. Please feel free to contact them.

Dr. A. William Coaker (314) 694-2486	Polysulfides Acrylics Adhesives
Dr. Charles P. Farley (314) 694-2438	Polyurethane Foam Rubber
Mr. John H. Orem (314) 694-2489	Melamines Phenolics Coatings Carpet-backing
Mr. L. David Press (314) 694-2487	Polyurethane Film Pigments Film and Sheeting Coated Fabrics

Willis S. Clark
Willis S. Clark
Product Supervisor
Bi/Terphenyl Derivatives
(314) 694-2518

DSW 171895

STLCOPCB4046519

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Adhesives				
Delayed Tack	SBR, PVAc, PS	6090, 5460	Monsanto	DCHP, DPP Santicizer 1-H Santolite MHP
Emulsion	PVAc, SBR Acrylic-VAc Acrylic-Ethylene	1221-B, 6040, 6050	Monsanto	Santicizer 218-A Santicizer 885 Santicizers 8, B-16, M-17
			FRP	Isoester A, B, C
Pressure Sensitive	Natural Rubber, SBR, Cl Rubber	1221-B, 6062, 5460	Monsanto	Santicizers 140, 148, 160 Triphenyl Phosphate
			FRP	Isoester B
Hot Melt	EVAc, PVC, Phenoxies, Polyamides	5460, 5060 Montar 5	Monsanto	Santicizers 9, 1-H Santowax OM DCHP/Santicizer 160 Triphenyl Phosphate DPP
			Picco	Piccotex 75
			Velsicol	Klyrvels
			Goodyear	Wingtac
			FRP	Isoester D

1. 2.

DSW 171896
STLCOPCB4046520

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Adhesives (Continued)				
Hot Melt (Continued)			Hercules	Staybelite

1. Potentially available in mid-February. Not available now.
2. Alkali dispersible hot melt systems.

DSW 171897

STLCOPCB4046521

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Sealants	Polysulfide, Nitrile, Epoxy, Polyurethane	1254, 5432 Santicizer 261/ 5460	Monsanto	HB-40 [2.] Santicizer 261 [2.] Santicizer 278 [2.] Santicizer 358 [1.] Santicizer 898 [3.]
			Thiokol	ZP-680
			ICI	Cereclor 4985
Caulking Compounds	Acrylic, Butyl	5060, 6070	Monsanto	Santicizers 412, 429 Santicizer 8 Santicizer 261 Santicizer 278 DCHP/DPP Santicizer 148
Surface Coatings				
Paints	PVAc, PVC, Nitriles Styrene Acrylics Cl Rubber	5460, 6062, 6070, 6090	Monsanto	Santicizers 160, 261, 278 Santicizer 898 Santicizers 140, 148 DCHP, Santolite MHP
			FRP	HMP, Filtrez [4.]
			ICI	Cereclor 42 Cereclor 70

1. Developmental Item - Refer to P. R. Graham.
2. Recommended primarily for resin system.
3. Recommended primarily for catalyst dispersion system.
4. Several products available under thi[illegible]ode name.

DSW 171898
STLCOPCB4046522

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Surface Coatings (Continued)				
Lacquers	Alkyd Ethyl Cellulose Nitro Cellulose	5460, 6062, 6070, 6090	Monsanto	Santicizers 8, 9, B-16, M-17 DCHP Santolite MHP Santicizers 261, 278
			FRP	Isorosin, Filtrez [1]
			Neville	
			Diamond Shamrock	
Varnish	Polysulfide Other	6070, 5460	Monsanto	Santicizer 261 Santicizer 278
			FRP	Filtrez [1]
Paper Coatings	Ethyl Cellulose	6040, 6050	Monsanto	Santicizers 8, 9, B-16, M-17 DCHP Diphenyl Phthalate Santolite MHP

1. Approximately twenty Filtrez products are available.

DSW 171899

STLCOPCB4046523

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Printing Inks	Nitrocellulose Acrylic Vinyl	5460, 6062, 6070, 6090	Monsanto	Santicizers 160, 261, 278 Santicizers 8, 9
			FRP	Filtrez [1]

1. Approximately twenty Filtrez products are available.

DSW 171900
STLCOPCB4046524

AROCLOR REPLACEMENT SUGGESTIONS

Application Area	Polymer/Binder	Aroclor Used	Replacement Suggestions Supplier	Product
Lost Wax Casting	Wax	5460	Monsanto	Santicizer 9, 9P DCHP, DPP
Epoxy Systems	Epoxy	6062, 6070	Monsanto	Mod-Epox Santicizer 8 Santicizer 9 Phosgard C-22-R Other [1]
Laminating Resins	Phenolic	5460, 1221, 5432, 6070	Monsanto	Santolite MHP Santicizer 8 Santicizer 9 Phosgard 2XC-20 Phosgard C-22-R Other [1]

1. Monsanto has development products in this area. Contact L. O. Raether

LIST OF SUPPLIERS

Monsanto	Monsanto Industrial Chemicals Company 800 North Lindbergh Boulevard St. Louis, Missouri 63166 W. S. Clark (314) 694-2518
Diamond Shamrock	Diamond Shamrock Chemical Company 300 Union Commerce Building Cleveland, Ohio 44115 (216) 621-6100
FRP	FRP Company P. O. Box 349 Baxley, Georgia 31513 (912) 367-3616
Goodyear	Goodyear Tire and Rubber Company 1144 East Market Street Akron, Ohio 44316 (216) 794-4390
Hercules	Hercules, Inc. 910 Market Street Wilmington, Delaware 19899 (302) 656-9811
ICI	ICI America, Inc. 151 South Street Stamford, Connecticut 06904 (203) 327-3200
Neville	Neville Chemical Company Neville Island Pittsburgh, Pennsylvania 15225 (412) 331-4200
Picco	Pennsylvania Industrial Chemicals Corp. 120 State Street St. Clairton, Pennsylvania 15025 (412) 233-8600

DSW 171901

STLCOPCB4046525

LIST OF SUPPLIERS (Continued)

Thiokol	Thiokol Chemical Corporation 930 Lower Ferry Road Trenton, New Jersey 08607 (609) 396-4001
Velsicol	Velsicol Chemical Corporation 341 East Ohio Street Chicago, Illinois 60611 (312) 467-5700

STLCOPCB4046526

MONSANTO DISTRICT SALES OFFICES

AKRON, OHIO 44313
260 Springside Drive
Montrose Development Park
Tel. (216) 666-4111

ATLANTA, GEORGIA 30339
320 Interstate North Parkway
Suite 500
Tel. (404) 432-7111

BOSTON, MASSACHUSETTS 02149
Everett Station
Tel. (617) 387-5010

CHICAGO, ILLINOIS
3158 Des Plaines Avenue
Des Plaines, Illinois 60018
Tel. (312) 296-6688

CINCINNATI, OHIO 45206
1501 Madison Road
Tel. (513) 751-6707

DETROIT, MICHIGAN
500 Northland Towers West
Southfield, Michigan 48075
Tel. (313) 357-0910

HOUSTON, TEXAS 77027
1301 Post Oak Tower
5051 Westheimer Road
Tel. (713) 621-9550

LOS ANGELES, CALIFORNIA 90022
6670 East Flotilla Street
Tel. (213) 723-2492

NEW YORK, NEW YORK 10036
1114 Avenue of the Americas
Tel. (212) 764-5000

ST. LOUIS, MISSOURI 63166
800 North Lindbergh Boulevard
Tel. (314) 694-1000

DSW 171903

SAN FRANCISCO BAY AREA
2710 Lafayette Street
Santa Clara, California 95052
Tel. (408) 243-0414

SEATTLE, WASHINGTON 98121
2112 Third Avenue
Tel. (206) 622-4203

WILMINGTON, DELAWARE 19810
Suite 204, Bancroft Building
3411 Silverside Road
Tel. (302) 478-4600

Monsanto Industrial Chemicals Company
A Unit of Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Missouri 63166

STLCOPCB4046528

PCB Contaminant

W. B. Papageorge - General Offices, B2NK

March 2, 1972

Mr. D. Goodwillie
5090 - Montreal

I received the copy of the report the Ontario Research Foundation had submitted to Kruger Pulp and Paper Limited on February 11 describing the levels of PCB's and PCT's found in two liner-board samples.

I am intrigued by the reported presence of PCT as measured against an Aroclor 5460 standard. Considering the difficulties we have experienced in developing analytical methodology capable of detecting low levels of chlorinated terphenyls I seriously question whether PCT's were actually detected. I suspect the analyst was looking at the PCB contaminant in the PCT.

Can we get a copy of the analytical methodology used by Ontario Research Foundation?

W. B. Papageorge

/bt

DSW 171905

PCB samples Ed

March 2, 1972

Mr. James W. Rote
Hopkins Marine Station
Pacific Grove, California 93950

Dear Mr. Rote:

I regret I cannot send you a copy of the report I gave in March, 1970 at Duluth, Minnesota because my comments were made informally without the benefit of any notes.

I have enclosed copies of articles on PCB's which fairly well cover the subject. I hope you find these useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 171906

STLCOPCB4046530

March 2, 1972

Ms. Teri Holberg
106½ Cherry Street
Apartment 206
Mankato, Minn. 56001

Dear Ms. Holberg:

Thank you for your letter dated February 22 in which you expressed concern relating to the effects of PCB's on the environment.

I can appreciate the confusion you are noting and I believe it is due to the varying definitions of what is considered a high exposure level. For example, our animal studies involved dosages up to 100 ppm in the normal diet. The Japanese incident involved rice bran oil with up to 2,000 ppm PCB's. Incidentally, you will note from the enclosed FDA summary that the number of people exposed was 1,000 instead of the 10,000 initially reported. To my knowledge the miscarriages and stillbirths were not attributed to PCB's.

The use of PCB's in insecticides was extremely small and never was intended for large scale field applications.

Today Monsanto's program for curtailing the use of PCB's has reached the point where the only remaining uses are in the electric applications for which there is no known alternative fire-resistant, explosion-resistant fluid. Until a new fluid is developed it is believed that the safety advantages in these closed system applications far outweigh the potential harm which may occur through accidental loss to the environment.

DSW 171907

I have enclosed copies of articles relating to the PCB subject 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

WBP/bt

Enclosures

DSW 171908

March 2, 1972

Dr. Hiroshi Yagyu
Chief of Section Environmental Hygiene
Tokyo Metropolitan Research
Laboratory of Public Health
Tokyo, Japan

Dear Dr. Yagyu:

I am sending under separate cover the samples of Aroclor 1254 and Aroclor 1260 you requested in your letter dated February 21, 1972. I regret I have no Aroclor 1248 to send but I have included a sample of Aroclor 1242.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Dr. Gen Ohi
Chief Researcher
Section of Environmental Hygiene
Tokyo Metropolitan Research
Laboratory of Public Health
Tokyo, Japan

DSW 171909

STLCOPCB4046533

PCB Letters

W. B. Papageorge - General Offices, B2NK

March 2, 1972

L. T. Johnson - 1650
W. G. Tibbetts - B2SE

GARDEN STATE PAPER COMPANY
AMERICAN PAPER INSTITUTE et al

Mr. P. L. Slayton
1650

I called Mr. John H. Rich, Garden State Paper Company, today to follow-up on the PCB-paper situation.

Mr. Rich is appreciative of the help we have given him. He is still very concerned about the presence of PCB's in paper products used for food packaging and is fearful that government pressure will prevent the use of recycled fibers in food packaging.

He is seeking a "quick and dirty" method for the detection of PCB's. I informed him that at the levels at which everyone is concerned there is no simple detection procedure.

I offered our help at any time he thought we could be of service.

W. B. Papageorge

/bt

DSW 171910

W. B. Papageorge - General Offices, B2NK

March 2, 1972

R. E. Keller - T1B
J. F. Stapleton - B2SA
E. S. Tucker - 1760

Mr. W. R. Corey
B2SL

Attached is a copy of an invitation from Dr. Donald I. Mount, EPA, Duluth, Minnesota for Monsanto representation at a PCB work session.

This meeting will be similar to one held March 17, 1970. No formal papers are presented. Discussion is deliberately held informally. Most of it will be oriented to monitoring and analytical procedures.

Dr. Mount's assistant had called me to inform me the invitation was in the mail and that Dr. Mount hoped that Scott Tucker and I could both attend. I propose we go. Any comments?

W. B. Papageorge

/bt

DSW 171911

W. B. Papageorge, General Offices, B2NK

March 2, 1972

J. C. Livengood - B3SD
J. S. Metcalf - E1SF

Mr. D. W. Witt
1180

Attached is a copy of the analytical results reported by Scott Tucker relating to the presence of PCB's in Electro-Sol and Finish purchased in the St. Louis area.

This data strongly indicates that the container is the source of contamination.

It appears that this information should be shared with Bill Podas, Economics Laboratories. I will call you soon regarding a personal visit with Mr. Podas.

This information should not be submitted to Economics in writing but may be discussed orally with them.

W. B. Papageorge

/bt

Attachment

DSW 171912

STLCOPCB4046536

March 1, 1972

Dr. Sidney I. Miller
Professor of Chemistry
Department of Chemistry
Illinois Institute of Technology
Chicago, Illinois 60616

Dear Dr. Miller:

I am sending under separate cover the samples of Aroclor 1221, 1242, 1254 and 1260 you requested in your letter dated February 24, 1972.

I regret I cannot send you samples of Aroclor 1232, 1248 and 1262 as 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

DSW 171913

March 1, 1972

Dr. Volker Gobel
Department of Geology
Stephen F. Austin State University
Nacogdoches, Texas 75961

Dear Dr. Gobel:

I regret I cannot send you a price list for the Aroclors formerly used as mounting media.

These materials are being withdrawn from the marketplace and will no longer be manufactured. This action is being taken by Monsanto since these chlorinated hydrocarbons are being identified as environmental pollutants.

I understand that Walter G. McCrone Associates, Chicago, Illinois are knowledgeable in the field of embedding fluids. Perhaps they can advise you of alternative materials which may be available.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171914

2 of 3

STLCOPCB4046538

FEB. 1972

DSW 171915

PCB Legal

W. B. Papageorge - B2NK

February 29, 1972

PCB-POULTRY - MAINE

FILE

H. S. Bergen
W. R. Corey
C. P. Cunningham
K. W. Easley - 1920
E. V. John
J. F. Stapleton
R. A. Stohr - A2SB
F. P. Wheeler - A2SA

Reviewed by telephone on February 29, 1972 the PCB-poultry incident in Maine with Mr. LeRoy Schilte, Ralston Purina, St. Louis, Missouri.

Purina representatives met with representatives of FDA and USDA in Washington, D.C. on Friday, February 28. FDA was represented by Messrs. Wodicka, Kolbye, Ramsey, Quinn, Duggan, Schrafner and Swanson. USDA was represented by Messrs. Fullerton and MacEnroe.

Purina asked that chickens with PCB content in the fatty tissue up to 40 ppm be released for human use. They did not expect approval.

A heated discussion took place between USDA and FDA regarding methods of flock sampling and application of guidelines. Finally agreement was reached that flocks would be released if a ten-bird composite sample had 4.5 ppm PCB in the fatty tissue. If PCB levels exceed 5.5 birds must be destroyed. If level fell between 4.5 and 5.5 individual bird analysis would be permitted if each bird did not exceed 10 ppm PCB in its fatty tissue. Mr. Schilte believes this guideline will be followed for all future cases as well as the current.

FDA had obtained samples of meat fat and meat meal from Pine State Rendering Company. No PCB's are being found in current production.

A flock of chickens in New Hampshire was found to have birds with up to 7.7 ppm in fatty tissue. There is no apparent relationship between this flock and the Maine flock.

The transformer incident at the Purina mill occurred in November. Some of the oil did leak from the outdoor unit. Amount lost was estimated at 1-2 pounds. It is not known whether the oil contained PCB fluid or was mineral base. Since the amount of oil lost was small no tie-in to the poultry contamination problem can be established.

DSW 171916

Mr. Schilte reported that Purina is detecting fairly rapid lowering of PCB content in the birds. Three flocks were found to have the following lowered levels in one week: 90 ppm to 50 ppm, 50 ppm to 25-30 ppm, 6 ppm to 4 ppm. Purina plans to study other flocks to better understand the rate at which this lowering takes place.

Maplewood Farms, which had experienced symptoms in its flocks which were attributed to "salt" or "air sac", is reported to also have found PCB in its birds. The government agencies have embargoed some of the Maplewood Farm flocks.

W. B. Papageorge

/bt

DSW 171917

Samples

February 29, 1972

Ms. Candace Plato
Chemical Industry Practices
Branch/BF-424
Division of Chemical Technology
Public Health Service
Food and Drug Administration
Department of Health, Education
and Welfare
Washington, D.C. 20204

Dear Ms. Plato:

I regret and apologize for the delay in response to your letters requesting information and samples.

Your letter dated January 14 to Mr. Paul R. Graham was forwarded to me for handling.

I have enclosed copies of the available literature. I recognize that it is limited but I hope you find it useful.

I have arranged for samples of Therminol FR-Lo Temp, Santowax O, Santowax M, Santowax P, Santowax R, Santowax OMP and Santowax OM to be sent to you under separate covers.

The Therminol FR and Therminol R-2 you requested are not, and have never been, Monsanto product designations. Samples of Therminol FR-O and Therminol FR-2 are no longer available. In fact, as of December 15 no Therminol FR series fluids are being marketed. The samples of Santowax you will receive represent materials used in heat transfer applications. The quantities used in this service are extremely small.

DSW 171918

STLCOPCB4046542

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

Enclosure

DSW 171919

Phthalate Esters

February 28, 1972

312 - 236 - 5083

Mr. M. P. Powell
U. S. Plywood-Champion Paper
130 North Franklin Street
Chicago, Illinois 60606

Dear Mr. Powell:

I am informed that dimethyl phthalate is regulated by the FDA as follows:

Cleared for adhesives Sec. 121.2520
Cleared for use under Sec. 121.2576 (Cross Linked Polyester Resins) for use as a solvent for inhibitors, accelerators, and catalysts
Cleared for use under Sec. 121.2591 (Semirigid and Rigid Acrylic and Modified Acrylic Plastics)

I have attached a summary of the toxicity data available to us.

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 171920

STLCOPCB4046544

TOXICITY DATA

DIMETHYL PHTHALATE

Acute Oral LD50

Rats, mixed sex, undiluted - 6790 mg/Kg - classed as practically non-toxic

Acute Skin Absorption Minimal Lethal Dose

Rabbits - mixed sex - clipped intact skin - undiluted - >7940 mg/Kg - classed as practically non-toxic

Skin Irritation

Rabbits - mixed sex - clipped intact skin - undiluted - classed as non-irritating - avg. max. score 0/8

Eye Irritation

Rabbits - mixed sex - undiluted - classed as slight irritant - avg. max. score 2/110

Vapor Inhalation

Rats - male - six-hour exposure - ambient temperature - classed as practically non-toxic - slight drowsiness - no lacrimation - animals appeared normal at termination of test

From Literature -- "Insect Repellants" by A. J. Lehman, Division of Pharmacology, FDA, Page 89-90, Vol. XIX, No. 3 of the July 1955 Quarterly bulletin of the Association of Food and Drug Officials of the U.S.

Acute Oral Toxicity

Rats	6.9
Mice	7.2
Rabbits	4.4
Guinea Pigs	2.4
Chicks	8.5

Dermal Acute ml/Kg

Rabbits	>10

Dermal - 90 day ml/Kg.

Rabbits	>4

DSW 171921

TOXICITY DATA (continued)

Symptoms of Poisoning

Rats exhibited drowsiness and listlessness within 15 minutes after acute oral dose. Very large doses may produce a state not unlike general anesthesia. Time of death >7 hours and may be extended to the third day. Rabbits receiving large doses topically showed weight loss or failure to gain weight during the period of exposure.

Topical Effects

Skin - no primary irritation of the skin noted except in molting areas. This is true for the single dose application as well as for the 90-day repeated exposures. Abraded skin showed a similar response.

Mucous Membrane - the repellent is irritating to mucous membrane.

Dermal Absorption

Poorly absorbed

Hematology

No changes noted in the hemaglobin values and morphology of the blood during any of the acute and subacute dermal studies.

Sensitization

No sensitization noted in animals receiving repeated daily dermal applications.

Chronic Oral Toxicity

The compound was fed to female rats, 10 to each group, at levels of 8, 4, 2 percent in the diet for two years. The 2% level had no effect on growth. The two higher levels had a slight but significant effect on growth. Mortality rates in the treated animals did not differ from the controls.

Pathology

Edema of the lungs in rabbits at the highest dosage of 4 ml/Kg - 90 day exposures.

Mild to severe chronic nephritis and slight to moderate liver damage also at this level.

STLCOPCB4046546

TOXICITY DATA (continued)

Pathology (cont'd)

Dermitis absent. Lower dosages produced no effect that could be attributed to dimethyl phthalate.

Chronic nephritis also seen in the rats on the long-term feeding experiment but limited to the 8% level.

Estimation of Safety

Dimethyl Phthalate is very poorly absorbed through the skin and only mild symptoms of toxicity developed following dermal exposure in amounts more than 8 times that which might be used under practical conditions. It is considered safe for unrestricted use as an insect repellent.

DSW 171923

STLCOPCB4046547

February 29, 1972

Dr. Paul B. Pearson
Head, Department of
Nutrition and Food
College of Home Economics
Drexel University
Philadelphia, Pa. 19104

Dear Dr. Pearson:

I am sending under separate cover samples of the commercial polychlorinated biphenyls requested in your letter dated February 24.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171924

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STLCOPCB4046548

February 29, 1972

Mr. M. Okamoto
Chemist in Charge
USDA, C&MS
Meat and Poultry Inspection Program
Laboratory Services Division
P. O. Box 2423
San Francisco, California 94126

Dear Mr. Okamoto:

I am sending under separate cover a sample of Aroclor 1242 which you requested in your letter dated February 8. There is no charge for this material.

I regret I cannot send you any Aroclor 1248. This material has not been manufactured for over a year and our supply of samples is depleted. I hope the lack of this material 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

DSW 171925

STLCOPCB4046549

medical

February 28, 1972

Mr. Alfred M. Salazar, Jr.
122 Higbie Lane
West Islip, New York 11795

Dear Mr. Salazar:

I apologize for the delay in responding to your letter dated December 22, 1971. I have attempted principally through Monsanto's Medical Department to determine the interest in local industry and medical laboratories in your capabilities. I regret to inform you we have not found anyone who could help.

Since your training is so highly specialized it appears that the best contacts should be available through your university.

Best regards.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Mr. A. M. Salazar, NEMA

DSW 171926

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Samples Ltr

February 28, 1972

Mr. Bruce Jeffries
201 North Woodworth
Corunna, Michigan 48817

Dear Mr. Jeffries:

I am sending under separate cover samples of commercial polychlorinated biphenyls for use in your studies.

I have enclosed copies of articles relating to polychlorinated biphenyls which I hope you find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt
Enclosure

DSW 171927

196

STLCOPCB4046551

Sample Ltr

February 28, 1972

Dr. Renato Dell'Acqua
Research Scientist
Division of Laboratories and Research
New York State Department of Health
New Scotland Avenue
Albany, New York 12201

Dear Dr. Dell'Acqua:

I am sending under separate cover the samples of polychlorinated terphenyls requested in your letter dated February 22, 1972.

I would appreciate receiving from you copies of your analytical methodology for these materials.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171928

195

STLCOPCB4046552

OSHA

W. B. Papageorge - B2NK

February 28, 1972

TOXICITY DATA SHEETS

Naida Kisinger

[redacted]

Data sheets for the following products are approved:

[redacted]

Santoflex 13
Santoflex 13 Flakes
Santoflex 13S
Santoflex 134
Santoflex DD
Ajone DD
Santoflex 77
Sulfasan R
Nitrol

W. B. Papageorge

/bt

DSW 171929

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W. B. Papageorge - B2NK

February 22, 1972

W. R. Corey
J. L. Stapleton

EPA - L.A. REQUEST

FILE

Called Mr. Paul DeFalco, Jr., EPA Administrator Region IX today. Discussed problems in divulging customer names. He admitted he had no previous experience of this type but felt since PCB's are so unique something must be done. He claims levels of PCB's found are high (he did not have numbers) and that samples were recent. He suggested we inform customers we will divulge, review cleanup procedures with them, and in about one week, send him the list. I suggested customer reaction will be extremely negative. He stated that the Attorney General in Los Angeles County is very interested and perhaps he (DeFalco) can get this information by subpoena. He added that he did not like this and would prefer cooperative approach. I indicated that I was not optimistic but would seriously consider his suggestion and would be in touch with him.

W. B. Papageorge

WBP/bt

DSW 171930

191

STLCOPCB4046554

February 25, 1972

Dr. Souheil Laham
Assistant Chief of Division
Division of Health Effects
Environmental Health Centre
Department of National Health
and Welfare
Tunney's Pasture
Ottawa, Ontario, KIA OK9
Canada

Dear Mr. Laham:

I am sending under separate cover the samples of polychlorinated biphenyls and polychlorinated terphenyls requested in your letter to Canada Colors and Chemicals, dated January 14.

I have also enclosed a copy of Monsanto's polychlorinated biphenyl analytical methodology 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

bcc: D. Goodwillie - Montreal

DSW 171931

STLCOPCB4046555

February 25, 1972

Mr. H. L. Good
American Maize-Products Company
113th Street and Indianapolis Blvd.
Roby (Hammond), Indiana 46326

Dear Mr. Good:

I am sending under separate cover the sample of Aroclor 1254 you requested on your purchase order No. X-6491 dated February 14, 1972. There is no charge for this material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171932

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STLCOPCB4046556

PCB Legal

W. B. Papageorge - B2NK

February 25, 1972

H. S. Bergen
W. R. Corey
C. P. Cunningham
K. W. Easley - 1920
E. V. John
J. F. Stapleton
R. A. Stohr
E. P. Wheeler - A2SA

FILE

Telephoned Dr. A. C. Kolbye, FDA, Washington, D.C. at 8:00 a.m. Friday, February 25, 1972 to review his knowledge of the Maine PCB-poultry situation. He qualified all of his statements, repeatedly, by stating he had limited information, therefore, could not reach any conclusions.

He stated that Pine State Rendering Company is suspected as being the source of the PCB but Pine State strongly denies using PCB's. Pine State Rendering has a sterilizing unit but no information is available regarding its design or heat source. There is a possibility that plastic film containing PCB's used in meat packaging may have been processed with the scrap meat.

Dr. Kolbye indicated that about 50 flocks were involved at present but state-wide monitoring is far from complete. He also stated emphatically that the 5 ppm PCB in fat guideline would be rigidly followed in determining acceptability of poultry for human use.

Dr. Kolbye is very disturbed by this incident and feels he has been placed in an untenable position because of his previous defense of PCB's. He offered to call and report results of his discussions with the Ralston-Purina representatives.

W. B. Papageorge

/bt

DSW 171933

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PCB Legal

W. B. Papageorge - B2NK

February 25, 1972

H. S. Bergen
W. R. Corey
C. P. Cunningham
K. W. Easley - 1920
E. V. John
J. F. Stapleton
R. A. Stohr
E. P. Wheeler - A2SA

FILE

Discussed Maine PCB poultry incident with Mr. LeRoy Schilte, Ralston-Purina, St. Louis, at 1:00 PM Thursday, February 24, 1972.

He informed me of the following:

1. The number of chickens (200,000) involved as quoted in the USDA press release dated 2/23/72 is low. Actually there are many more. He did not state how many.

2. Penobscot Poultry Company, Belfast, Maine and Fort Halifax Poultry Company, Waterville, Maine were formerly Purina operations.

3. The samples of feed which ranged from 88 to 578 ppm PCB were four in number and were analyzed by the Purina laboratory.

4. He confirmed that samples of fat tissue from some of the birds had as much as 600 ppm PCB present.

5. The only symptom noted among the flocks was mortality.

6. Pine State Rendering Company, Portland, Maine, was inspected by FDA on February 22, 1972. No evidence of PCB use was found.

7. Samples of meat meal from current Pine State Rendering Company production were analyzed and no PCB's were detected. No samples of previous production are available.

8. The poultry by-product meal was processed by Bay Side Rendering Company from wastes resulting from the slaughtering of 8 week old birds from the same producers (Penobscot and Fort Halifax). Presence of 11-13 ppm PCB is attributed to contamination in feed and could have occurred at anytime during the two month growing period (approximately December and January).

DSW 171934

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9. All feed ingredients used by Purina were analyzed and, except for the poultry by-product sample, were found free of PCB. Samples were also taken of hydraulic fluids, greases, oils, etc. in the feed formulating plant. No PCB's were detected.

10. Mr. Schilte reported that he was told of a recent transformer "blowout" at the formulation plant in Thorndike, Maine. He asked if this could be a source of PCB. I told him PCB's were present in some transformer fluids but usually they are either Aroclor 1254 or Aroclor 1260 but some did contain Aroclor 1242. I also informed him that a transformer failure did not necessarily involve rupture of the transformer case and release of the fluid. I also expressed doubt that the amount of transformer fluid which could have escaped could account for the extremely high PCB levels found in the feed and in the poultry tissue. Mr. Schilte stated he will look further into the transformer incident.

11. Mr. Schilte asked if I thought anyone could get a drum of PCB's and deliberately add it to a feed ingredient. I agreed that it was possible but I could not understand why anyone would take such action.

12. Purina is sending representatives to Washington on Friday, February 25, 1972 to discuss permissible PCB levels in poultry.

W. B. Papageorge

/bt

DSW 171935

Penta

W. B. Papageorge - B2NK

February 23, 1972

DISPOSAL OF PCP RESIDUES

H. S. Bergen - B23L
J. T. Garrett - A2SA
P. J. A. Marsh/
J. N. Haggart - 5040
W. R. Richard - T3A
B. G. Tibbetts - B2SE
H. A. Vodden - 5470

Mr. R. A. Baxter
5470 - Ruabon

I apologize for the delay in responding to your request for suitable statements relating to the disposal of Penta and Santobrite wastes.

We have no unique and personal experience regarding the incineration of non-aqueous solutions, but it would appear that the conditions which we have prescribed for the destruction of polychlorinated biphenyls would be suitable for Penta and Santobrite.

The Purdue University degradation study is not advanced enough to give us definite guidance in the proper handling of aqueous solutions but it appears that Penta in concentrations representing its solubility in water can be destroyed in a sewage treatment unit which has become acclimated. The introduction of the Penta must be carefully kept at a steady rate and if operations are temporarily suspended Penta must be artifically introduced into the treatment system to maintain activity.

Santobrite can be similarly handled and from the limited information we have it appears that concentrations in the 50-100 ppm can be treated. Hopefully, a higher concentration can be tolerated but we will not know definitely until the Purdue work is further along.

W. B. Papageorge

/bt

DSW 171936

STLCOPCB4046560

PCB Legal

W. B. Papageorge - B2NK

February 23, 1972

H. S. Bergen
W. R. Corey
C. P. Cunningham
J. F. Stapleton
R. A. Stohr - C1NA
E. V. John
K. W. Easley-1920

File

At 11:30 a.m., Wednesday, February 23, 1972 I received a telephone call from Mr. Leroy Schilte, Director, Governmental Relations, Ralston-Purina Company, St. Louis, Missouri.

Mr. Schilte informed me that he believed PCB contamination had occurred in nine flocks of poultry in an operation in Thorndike, Maine.

On February 10-11, 1972 mortality was noticed in the flocks of 10-11 day old broilers. The symptoms were judged by Ralston Purina people to be similar to those experienced by PCB contaminated flocks. Samples of the feed currently used were analyzed and no detectable PCB was found. Samples of feed representing the previous week's supply analyzed 88-578 ppm PCB's as unaltered Aroclor 1242. Ingredients used in the feed were sampled and PCB was found in poultry by-product meal at 11-13 ppm. This PCB was identified as metabolized (altered) PCB suggesting PCB in the feed came from another source.

Purina made a check of other poultry producers in the area and determined that Maplewood Farms (name given to me in confidence) was having difficulties for several weeks which were attributed to "salt" and "air sac".

The only common ingredient used in both feeds is claimed to be meat fat from Pine State Rendering Company, Mr. Mendelsohn, President. Mr. Schilte indicated there may be some financial relationship between Maplewood Farms and Pine State Rendering.

The FDA and USDA have been informed and are active. FDA is insisting on a maximum of 5 ppm in fat tissue in birds permitted for food use.

Purina is no longer owner of the operation but apparently the incident occurred at a time that Purina feels some responsibility.

Purina is meeting with FDA and USDA personnel, Dr. V. Wodicka and Dr. A. Kolby were mentioned, in Washington, D.C. on Friday, February 25, 1972. Objective is to get the agencies to relax the 5 ppm guideline. Mr. Schilte asked if I or some other

DSW 171937

STLCOPCB4046561

Monsanto representative would also go to Washington to help. I told him that the FDA had all of Monsanto's data and we had nothing new to contribute. I also expressed concern that a discussion in this area could result in a lower guideline being established.

Mr. Schilte asked me to call tomorrow with any new information I may have regarding Pine State Rendering or Maplewood Farms.

A check of our business records with C. Paton, J. Roder, and P. Gann was quickly made and neither of these companies are listed as having received PCB's from Monsanto.

W. B. Papageorge

/bt

DSW 171938

STLCOPCB4046562

PCB Customers

February 23, 1972

217-523-3601

Mr. R. A. Wierschem
Central Illinois Power Company
607 East Adams
Springfield, Illinois 62701

Dear Mr. Wierschem:

Attached is a copy of the procddure for returning scrap askarel fluids to Monsanto for disposal.

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 171939

STLCOPCB4046563

Samples Sent

February 23, 1972

Mr. Richard Paver
Principal
Alice Vail Junior High School
5350 East 16th Street
Tuscon, Arizona 85711

Dear Mr. Paver:

I am sending under separate cover a sample of polychlorinated biphenyl as requested in your letter dated February 21.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

DSW 171940

STLCOPCB4046564

PCB Conference

W. B. Papageorge - B2NK

February 23, 1972

W. R. Corey - B2SL

Messrs.

I. D. Hill - N1A
R. E. Keller - T1B
W. R. Richard - T3A
E. S. Tucker - 1760
E. P. Wheeler - A2SA

Dr. G. Fred Lee, Water Chemistry Laboratory, University of Wisconsin, Madison, is scheduled to visit with us on March 1 to probe areas of common interest and determine if any mutual benefits could result.

Dr. Lee is one of the early researchers in PCB's and I understand he is also interested in phosphates and NTA.

You are invited to participate in an informal discussion scheduled to start at 9:00 a.m. in room B-274-S.

W. B. Papageorge

/bt

DSW 171941

STLCOPCB4046565

PCB General

February 23, 1971

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

Dear Dr. Lee:

Arrangements have been made for you at the Clayton Inn, 7750 Carondelet, Clayton, Missouri, telephone (314) 726-5400, for the night of February 29.

If I knew your time of arrival I would gladly meet you at the airport and ride with you to the hotel. If you prefer taxi or limousine service is available at the airport just outside the baggage claim area.

I suggest I meet you in the hotel lobby at 8:00 AM, March 1 for breakfast. After checkout we can proceed to Monsanto's facilities to arrive at about 9:00 AM. If these arrangements are not appropriate please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP/bt

cc: Dr. I. D. Hill

DSW 171942

STLCOPCB4046566

PCB General

W. B. Papageorge - B2NK

February 23, 1972

PCB/PCT

W. S. Clark - B3NC
W. R. Corey - B2SL
T. L. Gossage - B2SL
W. E. Schalk - B3NJ
J. E. Springgate - B3NA
J. F. Stapleton - B2SA

Mr. H. S. Bergen
B2SL

On February 22 Mr. Robert Barbour, Marubeni-America, N.Y., Kanegafuchi's representative, called to inform me that they were turning down orders for PCB's and PCT's from Monsanto customers. He indicated they did not wish to become involved in this sensitive area.

He also indicated that some Monsanto representatives were recommending Kanega to our customers and he hoped we could discourage this approach. I informed him I was not personally aware of this but would give his request serious consideration.

W. B. Papageorge

/bt

DSW 171943

February 18, 1972

Mr. Roland E. Jenkins
Chief of Division
Foods, Dairies and Drugs Division
Ohio Department of Agriculture
Columbus, Ohio 43215

Dear Mr. Jenkins:

I was asked by Dr. E. S. Tucker to respond to your letter dated February 2 in which you requested information relating to the treatment of contaminated silos.

Your concern and patience in this matter is sincerely appreciated. At this time, we have no unique personal experience or information to share with you on how the problem should be handled.

If, of course, pertinent information does develop, we will be in touch with you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: Dr. E. S. Tucker

bcc: R. A. Stohr

DSW 171944

STLCOPCB4046568

February 18, 1972

Mr. Jules S. Lapides
Industrial Waste Department
Gilbert Associates, Inc.
525 Lancaster Avenue
P. O. Box 1498
Reading, Pennsylvania 19603

Dear Mr. Lapides:

Attached are copies of information which you may find useful in developing your guidelines for the proper handling and disposal of polychlorinated biphenyls.

More complete information is being developed by American National Standards Institute (ANSI) Committee C-107. We expect final drafts to be available within three months. As soon as they are ready, I will send you a copy.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171945

STLCOPCB4046569

February 18, 1972

Dr. W. P. McKinley
Director of Research
Food and Drug Directorate
Tunney's Pasture, Ottawa
CANADA

Dear Dr. McKinley:

Our discussion this morning relating to polychlorinated terphenyls was to me both informative and interesting. I hope you found the information useful to you.

I am sending, under separate cover, the sample of Aroclor 5460 you requested.

I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A which contains chemical and physical data of both the polychlorinated biphenyls and polychlorinated terphenyls.

I will attempt to consolidate the available animal toxicity data we have on Aroclor 5460 and mail it to you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

cc: E. H. Toombs - Montreal

1159
1

DSW 171946

STLCOPCB4046570

W. B. Papageorge - B2NK - General Offices

February 18, 1972

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

PCB Labeling of Tank Cars
and Trucks

Messrs:

E. M. Potter - B2NK
G. R. Sido - G5EC
C. B. Sigler - B2NH
J. F. Stapleton-B2SA

Please be advised of a meeting to be held on Thursday, February 24 at 9:00 A.M. in Room B274-S regarding the above subject.

W. B. Papageorge

WBP:gw

DSW 171947

15

February 18, 1972

Mr. D. W. Schmedding
Department of Agricultural Chemistry
Oregon State University
Corvallis, Oregon 97331

Dear Mr. Schmedding:

I regret I cannot send you a copy of Monsanto Technical Bulletin O/PL-306 since it is out of print and no longer available.

I have, instead, enclosed a copy of the replacement version O/PL-306A which contains all of the chemical and physical data which appeared in the old bulletin. I have also enclosed a copy of an article from the Encyclopedia of Chemical Technology 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:gw
Encs.

T + E

DSW 171948

194

STLCOPCB4046572

February 18, 1972

Dr. R. Haque
Assistant Professor
Department of Agricultural Chemistry
Oregon State University
Corvallis, Oregon 97331

Dear Dr. Haque:

I regret I have no pure polychlorinated biphenyl isomers to send you. I recommend you contact:

Mr. T. R. Lynn, President
Analabs, Inc.
80 Republic Drive
North Haven, Connecticut 06473
Telephone: 203-288-3400

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 171949

173

STLCOPCB4046573

February 17, 1972

Mr. J. A. Lasswell
Technical Laboratory
Plastics-Division - U. S. Operations
Gulf Oil Chemicals Company
Orange, Texas 77630

Dear Mr. Lasswell:

Enclosed is a copy of Monsanto's analytical methodology for the detection of low level concentrations of polychlorinated biphenyls.

I do not have any information relating to the migration of PCBs. Perhaps you may wish to contact Dr. Paul Trout, Director, Environmental Control, Container Corporation of America, Longford Road, Oaks, Pennsylvania, 19456, telephone 215-933-9211. Dr. Trout is actively involved with some studies being sponsored by the American Paper Institute.

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:gw
Encs.

0

DSW 171950

172

February 17, 1972

Mr. George B. Walker, Jr.
Research Center
Philip Morris
P. O. Box 26583
Richmond, Virginia 23261

Dear Mr. Walker:

I am sending, under separate cover, samples of Aroclor 1254, Aroclor 1260, Aroclor 5442 and Aroclor 5460 which you requested in your letter dated February 8. There is no charge for these samples.

I regret I could not include a sample of Aroclor 4465 since this material has not been manufactured for several years and no samples are available.

I have enclosed a copy of Monsanto's polychlorinated biphenyl analytical methodology as well as copies of technical literature relating to the Aroclor series.

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:gw
Encs.

1157
&
1158 O&T

171

DSW 171951

STLCOPCB4046575

February 17, 1972

Dr. V. Zitko
Water Pollution Research
Biological Station
Fisheries Research Board of Canada
St. Andrews, New Brunswick
CANADA

Dear Dr. Zitko:

Our Aroclor line of products is still based on both the polychlorinated biphenyls and polychlorinated terphenyls.

The sale of polychlorinated biphenyls is, however, severely restricted to the dielectric applications. Sales to all other uses are now terminated.

We are currently in the process of phasing out of the polychlorinated terphenyl business. We are informing our customers of this decision and are working with them in the search for suitable alternative materials.

I am sending, under separate cover, the samples you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1156

DSW 171952

190

STLCOPCB4046576

W. B. Papageorge - B2NK - General Offices

February 17, 1972

Velsicol - PCB

H. S. Bergen - B2SL
W. R. Corey - B2SL
T. L. Gossage - B2SL
H. R.Ford - 1070

C. Paton - B2SC

I discussed with Ray Ford the possibility that Velsicol could be producing PCBs at either Memphis or Chattanooga.

Ray is not aware of any information, including that from Monsanto field personnel who had been to Velsicol recently, to indicate that PCBs are being manufactured. Ray offered to alert Monsanto representatives who call on Velsicol of the possibility and to report any pertinent information.

W. B. Papageorge

WBP:gw

DSW 171953

167

February 17, 1972

Letter re-mailed (address correction) 3-2

4FFBL-ECM

Mrs. Iva J. Murph
Imprest Fund Cashier
Bldg. 45, Area B, Room 2E27
Wright-Patterson AFB, Ohio 45433

Dear Mrs. Murph:

I am sending, under separate cover, the Aroclor you requested in your purchase order 5 YE 20390011 dated February 14. There is no charge for this material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1155

DSW 171954

167

February 17, 1972

Dr. David Miller
U. S. Department of Commerce, NOAA, NMFS
College Park Fishery Products Technology Laboratory
Regents Drive, University of Maryland Campus
College Park, Maryland 20740

Dear Dr. Miller:

I am sending, under separate cover, the samples of Aroclor 1221 and Aroclor 1242 you requested in your letter dated February 15.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBp:gw

1153
&
1154

DSW 171955

166

STLCOPCB4046579

February 17, 1972

Mr. E. Payson Smith, Jr.
Terra Society
P. O. Box 110
Mt. Prospect, Illinois 60056

Dear Mr. Smith:

Your offer to me to participate in the selection of an author of a PCB article to be included in a proposed resource book is sincerely appreciated.

There are, of course, many individuals eminently qualified who could prepare such an article. I was personally impressed by an article on PCBs which appeared in the October, 1970 issue of Environmental Science and Technology. I have attached a copy in the event you have not read it.

The author, Dr. Carl G. Gustafson, appears to have been able to grasp the salient facts in a highly complex situation and present them in an easily read and objective text.

I have not met Dr. Gustafson and I do not know if he would have any further interest in writing about PCBs. I suggest, however, that he be approached as a potential author for your article.

Monsanto representatives are available to discuss PCBs with Dr. Gustafson and to inform him of the current PCB situation.

I hope I have been helpful.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 171956

145

STLCOPCB4046580

February 17, 1972

Dr. Edward D. Goldberg
Professor of Chemistry
Scripps Institution of Oceanography
University of California, San Diego
La Jolla, California 92037

Dear Ed:

I appreciate your invitation to Monsanto to send a representative to your forthcoming workshop session at Brookhaven National Laboratories.

I am pleased to inform you that Dr. Scott Tucker, whom you met during your recent visit, will be able to participate. As soon as details relating to the conference are available, will you have someone pass them on to Scott at Monsanto Industrial Chemicals Company, 1700 South Second Street, St. Louis, Missouri 63177.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

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

DSW 171957

February 17, 1972

Mr. L. M. Munro
Manager, Client Conferences
Doble Engineering Company
32 Locust Street
Belmont, Massachusetts 02178

Dear Mr. Munro:

Enclosed is a copy of my proposed talk to be given at your 1972 Client Conference.

I hope the delay in making it available to you has not caused you any serious inconvenience.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171958

163

STLCOPCB4046582

February 15, 1972

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

Dear Mr. Wulfsberg:

Attached is a copy of a guide for the return of askarel fluids to Monsanto for incineration. Askarels is the generic name used worldwide by the electrical industry to describe fire resistant dielectric fluids. Current askarels contain PCBs.

The procedure described applies to any PCB containing liquid waste except for dilute water waste.

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

Sincerely,

W. B. Papagerorge
Manager
Environmental Protection

KBP:gw

DSW 171959

STLCOPCB4046583

February 15, 1972

Mr. John J. Cargille
R. P. Cargille Laboratories, Inc.
55 Commerce Road
Cedar Grove, New Jersey 07009

Dear Mr. Cargille:

I have given your purchase order for Aroclor 1242, Aroclor 1254 and Aroclor 5442 serious consideration.

Arrangements have been completed for the shipment of the Aroclor 5442. I regret, however, that I cannot send you the other Aroclors you requested since our sales of these materials are limited strictly to dielectric applications.

I hope the lack of this additional material does not seriously inconvenience you and that your five year supply of previously purchased Aroclor 1242 and Aroclor 1254 will be sufficient to permit adequate time for developing a satisfactory alternative.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

bcc: W. R. Corey
W. S. Clark

DSW 171960

STLCOPCB4046584

W. B. Papageorge - B2NK - General Offices

February 10, 1972

PCB/PCT Action Plan

H. S. Bergen	B2SL	C. Paton	B2SC
C. L. Bradford	B2SF	E. M. Potter	B2NK
F. J. Camargo	A2NH	W. R. Richard	T3A
W. S. Clark	B3NC	J. R. Savage	B2SL
W. R. Corey	B2SL	W. E. Schalk	B3NJ
J. R. Durland	5260	R. E. Sprague	B2NG
K. W. Easely	1920	J. E. Springgate	B3NA
D. Goodwillie	5080	J. F. Stapleton	B2SA
T. L. Gossage	B2SL	H. A. Vodden	5470
E. Greene	A2NA		
N. T. Johnson	B2SF		
P.J.A. Marsh	5040		
J. Mason	5040		

This is the first attempt to present a composite of the action plans of the various product and area groups involved in the PCB/PCT program.

Will each of the managers concerned please forward to me the missing information and any comments relating to additions or deletions which should be considered.

W. B. Papageorge

WBP:gw

DSW 171961

153

W. B. Papageorge - B2NK - General Offices

February 10, 1972

PCB Disposal - Ex. U. S.

W. R. Corey - B2SL
H. S. Bergen - B2SL
T. L. Gossage - B2SL
J. F. Stapleton - B2SA
E. Greene - A2NA

C. Paton - B2SC

I have been informing correspondents from areas outside of continental U. S. that the preferred method for disposal of scrap PCB fluids or solid waste containing PCB is by incineration at temperatures exceeding 800° C with provision for scrubbing the resulting acidic gases to prevent atmospheric pollution.

In most cases there are no facilities available which are capable of providing the conditions required. Some Canadian customers have used our Sauget, Illinois service and the Chem Trol Services, Inc., unit at Blasdell, New York. Monsanto-U.K. has made arrangements with Purle Bros. at Essex. I understand Progil and Bayer have the capability but I do not know if they offer this service generally.

Lacking an incinerator, the use of properly located, properly operated landfills can be considered, preferably with the approval of local authorities.

W. B. Papageorge

WBP:gw

DSW 171962

157

February 10, 1972

Mr. John Teasley
National Water Quality Laboratory
6201 Congdon Boulevard
Duluth, Minnesota 55804

Dear Mr. Teasley:

Confirming our telephone conversation today, Mr. W. B. Papageorge has authorized sending to you, under separate cover, a 10# sample of Aroclor 1254 for your long-range laboratory tests.

If you require any additional information, please let us know.

Yours very truly,

Glenda J. Wallace (Mrs.)
Secretary to
W. B. Papageorge

11522

DSW 171963

156

STLCOPCB4046587

W. B. Papageorge - B2NK - General Offices

February 9, 1972

Biphenyl

R. Ford - Atlanta
C. Paton
N. Johnson

E. P. Wheeler

Ray Ford has requested some guidance on how to advise our biphenyl customers regarding the levels of biphenyl vapors which should not be exceeded in the working environment.

Bill Hunt has expressed a concentration in milligrams per cubic meter of air. Since many customers do not have the means for accurately measuring atmosphere concentrations, the numbers are not very meaningful. Are there any other indicators available to our customers to assure them that proper ventilation is being maintained.

W. B. Papageorge

WBP:gw

DSW 171964

155

STLCOPCB4046588

W. B. Papageorge - B2NK - General Offices

February 8, 1972

R. A. Baxter - 5470
H. S. Bergen - B2SL
W. R. Richard - T3A
E. P. Wheeler - A2SA

H. A. Vodden - 5470

What is status of proposed PCB pond experiments.

W. B. Papageorge

WBP:gw

DSW 171965

153

STLCOPCB4046589

February 8, 1972

Dr. D. S. Grosch
Department of Genetics
Institute of Biological Sciences
School of Agriculture and Life Sciences
North Caroline State University
Box 5487
Raleigh, North Carolina 27607

Dear Dr. Grosch:

I am forwarding, under separate cover, the sample of Aroclor 1254 you requested in your letter dated February 2 addressed to Mr. A. J. Speziale. There is no charge for this material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: A. J. Speziale

DSW 171966

152

STLCOPCB4046590

February 8, 1972

314-291-0540 Ext 54

Dr. James Woods
Mallinckrodt - Nuclear
P. O. Box 10172
Lambert Field
St. Louis, Missouri 63145

Dear Jim:

I am sending, under separate cover, the samples of Aroclor 1221, Aroclor 1242, Aroclor 1254 and Aroclor 1260 you requested.

I have enclosed a copy of Monsanto's analytical methodology which I hope you find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171967

151

STLCOPCB4046591

February 7, 1972

Mr. James P. Ussary
Analytical Bio-Chemistry Laboratories, Inc.
P. O. Box 1097
Columbia, Missouri 65201

Dear Mr. Ussary:

I am sending, under separate cover, samples of poly-chlorinated terphenyls as requested in your letter dated January 28 to Dr. R. E. Keller.

I have attached a summary of toxicity data available on Aroclor 5460 and a copy of Monsanto Technical Bulletin O/PL-306A which contains physical and chemical characteristic information on both the chlorinated biphenyls and chlorinated terphenyls.

I regret I have no analytical methodology to share with you. Our laboratory is attempting to develop procedures for detecting these materials at the extremely low levels we are all looking for. Should your laboratory have any information relating to PCT methodology, we would appreciate hearing from you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

cc: Dr. R. E. Keller

DSW 171968

Animal Toxicity Studies

Aroclor 5460

Acute Oral LD_{50} - Rat - Mixed sex - 33.3% solution in corn oil. 19,000 mg/kg. Classed practically non-toxic.

Acute Skin Absorption Minimal Lethal Dose - Rabbit - female - 33.3% solution in corn oil. 7940 mg/kg. Classed as practically non-toxic.

20 Day Subacute Dermal - Rabbit - 50% (w/v) corn oil solution.
LD_{50} - 250 mg/kg/day
100 mg/kg/day - no effect

21 Day Chick Edema -
Doses of 50,200 and 400 ppm-no significant increase of pericardial edema.

90 Day Subacute Oral Toxicity - Rat - admixed in feed.
100 and 300 ppm - no effect.
1000 ppm - slight growth depression.

Chicken Toxicity - White Leghorn - admixed in feed.
500 ppm - no effect on mortality.
1000 ppm and 2000 ppm compound related effect on mortality.
500 ppm - slight effect on hatchability.
1000 and 2000 ppm - hatchability severely depressed.

DSW 171969

Sample Ltr

February 22, 1972

Mr. John H. Rich
President
Garden State Paper Company, Inc.
950 River Drive
Garfield, New Jersey 07026

Dear Mr. Rich:

I was informed by Monsanto's Mr. Phil Slayton of your interest in the industrial chemicals known as polychlorinated biphenyls (PCB's).

With the increasing evidence that polychlorinated biphenyls were being identified in the environment and may be having some effect on some species of wildlife, about two years ago Monsanto began a program which we believe will reduce significantly the chances of PCB's escaping into the environment.

Because the PCB problem is complex the program of voluntary withdrawal was executed in a stepwise fashion with those applications in which control of escape was practically impossible being the first to be discontinued.

We have now reached that stage in which sales of PCB's are severely restricted to closed dielectric applications for which a commercially available fire-resistant alternative fluid is not available.

We have carried out an extremely detailed research program aimed at developing alternatives to PCB's and also modifying the PCB's to improve their degree of biodegradation in waste treatment facilities. Our aim here is not to develop PCB's which can be allowed to escape into the environment but rather to produce it so that, in case of accidental spillage, it will be capable of being contained and degraded in waste treatment facilities.

DSW 171970

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 PCB's at high temperatures and their fire-resistant properties are vital in protecting public safety. At this time there are no possess alternative materials available which ~~pass~~ the unique combination of properties in the PCB's. 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 fluid 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.

Considerable comment has been made, particularly in the popular press, that PCB's are "highly poisonous", "am imminent hazard", "cause birth defects", "carcinogenic". None of these statements have been substantiated. Incidents of human toxicity have been associated with situations involving extremely high exposure levels due to improper industrial hygiene practices or accidental ingestion of highly contaminated food.

I have enclosed copies of articles relating to PCB's.

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

cc: P. L. Slayton - New York

bcc: L. T. Johnson - New York
B. G. Tibbetts - B2SE

DSW 171971

W. B. Papageorge - B2NK - General Offices

February 8, 1972

Terra Society - PCB Article

H. S. Bergen
E. V. John
W. R. Richard
J. F. Stapleton

W. R. Corey

Attached is a copy of a letter from the Terra Society seeking a suggestion for an author of a PCB article to be included in a proposed book.

The Terra Society is a fairly objective environmentalist organization which is well known and respected, particularly in the Great Lakes States. I have attached a copy of descriptive literature.

The proposed book does not appear to be the proper forum for publishing new scientific data, for example toxicity results, animal tissue PCB residue results or biodegration data should we decide we are ready to publish this type of information. The article Terra is seeking should be a review of the available PCB information.

I believe we should avoid getting Monsanto too involved in this activity but we should help select an author who could prepare an objective article.

I propose that we recommend Dr. Carl G. Gustafson, Kings College, Briarcliff Manor, N. Y. as the author. Gustafson's PCB article which appeared in the October, 1970 issue of Environmental Science and Technology is the one we are sending to our customers. I believe we could help him correct some of the misunderstanding he may have and also inform him of the current PCB situation.

I would appreciate comments from all recepients.

W. B. Papageorge

WBP:gw

DSW 171972

W. B. Papageorge - B2NK

February 7, 1972 J. F. Stapleton

C. Paton

Please remove Monsanto Research Corporation from your list of approved laboratories for PCB analysis published in Sales Information Bulletin No. 60 dated November 19.

MRC has a very capable laboratory but is being withdrawn because of its intimate relationship to Monsanto Company.

W. B. Papageorge

WBP:gw

DSW 171973

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W. B. Papageorge - B2NK - General Offices

February 7, 1972 W. S. Clark

Aroclor Disposal

Memo D. L. to W.S.C. dated 1-28-72

D. LePage
Melbourne

We have no record of any correspondence directly with a Mr. Doty or with any one associated with the Fats and Proteins Research Foundation in the United States.

I suspect that Mr. Doty is aware of our general recommendation that liquid Aroclors (PCBs) should be destroyed by incineration at temperatures exceeding 1600° F.

Monsanto has installed a unit at its Sauget, Illinois plant which was designed by the John Zink Company, Post Office Box 7388, Tulsa, Oklahoma 74105 U.S.A. One set of operating conditions used includes a temperature of 2700° F, retention time of 1 1/2 seconds and excess oxygen of 2 1/2%.

The unit is lined with aluminum oxide refractory brick and contains a guenching and scrubbing system to remove hydrogen chloride gas from the stack gases.

Details of design are considered privileged by the John Zink Company and should be obtained by direct contact with their representatives.

W. B. Papageorge

WBP:gw

DSW 171974

1-6

STLCOPCB4046598

February 7, 1972

Mr. V. K. Babayan
Stokely-Van Camp, Inc.
P. O. Box 1113
Indianapolis, Indiana 46226

Dear Mr. Babayan:

I regret I cannot send you a copy of the talk I was scheduled to present before the North Central AOCS January Symposium because I was not able to attend the meeting and I do not use notes for my presentation.

I have enclosed copies of articles relating to PCBs which I hope you find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171975

STLCOPCB4046599

February 7, 1972

Dr. David Miller
U. S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
College Park Fishery Products Technology Laboratory
Regents Drive, University of Maryland Campus
College Park, Maryland 20740

Dear Dr. Miller:

I regret I cannot send you the Aroclor 1248 you requested in your letter dated February 2. This material is no longer manufactured and our supply of samples has been exhausted. I can send samples of Aroclor 1221, Aroclor 1242, Aroclor 1254 or Aroclor 1260 if you are interested in these materials.

Monsanto Technical Bulletin O/PL 306 is out of print but I have enclosed a copy of Technical Bulletin O/PL 306A which contains the same physical and chemical data.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171976

STLCOPCB4046600

W. B. Papageorge - B2NK

February 7, 1972

Dr. A. D. Snyder
Dayton Laboratory

Attached is a list of the laboratories we have been recommending for PCB determinations.

W. B. Papageorge

WBP:gw
Enc.

DSW 171977

February 7, 1972

Dr. Donald L. Grant
Pesticide Section, Food Division
Health Protection Branch
Department of National Health and Welfare
Tunney's Pasture
Ottawa, K1A OL 2 Ontario
CANADA

Dear Dr. Grant:

I am sending under separate cover, the samplesof Aroclor 1254 you requested in your letter dated January 31.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

DSW 171978

1-2

STLCOPCB4046602

February 7, 1972

716-876-7200 Ext 567

Mr. Merle Hughes
Chemistry Supervisor
Chevrolet Towanda Forge
Box 31
Buffalo, New York 14240

Dear Mr. Hughes:

I am sending, under separate cover, samples of Aroclor 1221, Aroclor 1242, Aroclor 1254, and Aroclor 1260, which you requested.

I have enclosed a copy of Monsanto's PCB analytical methodology 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:gw
Encs.

DSW 171979

STLCOPCB4046603

February 7, 1972

Dr. F. C. Arnold
Environmental Control Unit
Division of Game and Fish
State of Minnesota Department of Natural Resources
Centennial Office Building
St. Paul, Minnesota 55155

Dear Dr. Arnold:

I am sending, under separate cover, the samples of Aroclor 1221 and Aroclor 1242 you requested in your letter dated February 1.

I regret I cannot send you samples of the other Aroclors you requested. These materials are no longer manufactured and our supply of samples has been exhausted.

I have enclosed a copy of Monsanto Technical Bulletin O/PL-306A which I hope you find useful.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171980

February 7, 1972

Dr. David R. Bickers
Department of Endocrine Physiology
Rockefeller University Hospital
New York, N. Y. 10021

Dear Dr. Bickers:

Enclosed are copies of the information I offered to send you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encss

DSW 171981

STLCOPCB4046605

February 7, 1972

Dr. Paul B. Pearson 215-387-2400
Department of Nutrition and Food
College of Home Economics
Drexel University
Philadelphia, Pennsylvania 19104

Dear Dr. Pearson:

I have enclosed copies of articles relating to polychlorinated biphenyls which I hope you find useful.

I regret I have no samples of the pure compounds to send to you. We at one time had isolated nanogram quantities of the isomers but our supply was quickly exhausted when shared with a few laboratories.

You may wish to contact Mr. T. R. Lynn, Analabs, Incorporated, 80 Republic Drive, North Haven, Connecticut 06473 for information regarding the availability and cost of pure isomers.

I can send you samples of the commercial material if you are interested in working with the mixtures.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171982

STLCOPCB4046606

February 7, 1972

Dr. Gordon W. Newell
Stanford Research Institute
Menlo Park, California 94025

Dear Dr. Newell:

The batch of Aroclor 1254 which you received was analyzed by the production quality control laboratory using procedures listed from 6 through 18 in the attached methodology packet and met the characteristics listed in table 2 found in the attached copy of Monsanto Technical Bulletin O/PL-306A.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encs.

DSW 171983

Monsanto

OUTGOING MESSAGE BLANK
Telex Communications System

DATE 2-7-72 | TIME 12:45 PM | 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.

GENE WILDE - AKRON

RE: YOUR TELEX DATED 1-31-72. SAFETY DATA SHEETS FOR PLASTICIZERS LISTED ARE BEING PREPARED. HOPE TO HAVE WITHIN ONEMONTH. WILL FORWARD WHEN READY. CUSTOMER SHOULD BE INFORMED GOVERNMENT DOES NOT REQUIRE UNTIL JULY 1.

W. B. PAPAGEORGE
ST. LOUIS GENERAL OFFICES

CC: H. HEHNER - 1750

136

IN-IR REV. 7-64

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

DSW 171984

STLCOPCB4046608

Monsanto

INTERNATIONAL TELEGRAM
Telecommunication System

DATE 2/4/72 | TIME 12:15PM | SENDER'S ACCOUNT NO. 43-000-735.0

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. MASON
BRUSSELS

NEED CONFIRMATION. WAS OBJECTIVE TO TERMINATE BY JANUARY 31 ALL SALES OF PCB OTHER THAN DIELECTRICS AND GERMAN MINE FLUIDS ACHIEVED?

W. B. PAPAGEORGE
MONSANTO
ST. LOUIS

pw

cc: W. R. Corey - B2SL
H. S. Bergen - B2SL
T. L. Gossage- B2SL

135

IN-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 171985

STLCOPCB4046609

onsanto

OUTGOING MESSAGE BLANK
COMMUNICATIONS SYSTEM

DATE 2/4/72 | TIME 2:00 PM | SENDER'S ACCOUNT NO. 43-000-735.03

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

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

D. GOODWILLIE
MONTREAL

NEED CONFIRMATION. WAS OBJECTIVE TO TERMINATE BY JANUARY 31

ALL SALES OF PCB OTHER THAN DIELECTRICS ACHIEVED?

W. B. PAPAGEORGE
MONSANTO
ST. LOUIS

cc: W. R. Corey - B2SL
H. S. Bergen "
T. L. Gossage "

134

4-IR REV. 7-64

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

DSW 171986

STLCOPCB4046610

Monsanto

COMPANY MESSAGE BLANK
Telecommunications System

DATE 2/4/72 | TIME 12:20 | SENDER'S ACCOUNT NO. 43-000-735.03

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

NEED CONFIRMATION. WAS OBJECTIVE TO TERMINATE BY JANUARY 31 ALL MMK EXPORTS OF PCB other THAN DIELECTRICS ACHIEVED?

W. G. PAPAGEORGE
MONSANTO
ST. LOUIS

cc: W. R. Corey - B2SL
H. S. Bergen - B2SL
G. F. Wingard - B2SL

133

IN-IR REV. 7-64

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

DSW 171987

STLCOPCB4046611

February 4, 1972

Mr. R. T. Richards
Industrial Hygiene and Toxicology
Texaco, Inc.
135 East 42nd Street
New York, New York 10017

Dear Mr. Richards,

Monsanto has marketed polychlorinated biphenyls (PCBs) under the trade names: Aroclor 1200 series, Aroclor 2000 series, Aroclor 4000 series, Therminol FR series, Santovac 1, Santovac 2, Pydrauls and Montars.

I am not familiar with the trade name "Ascorels" unless you have reference to the generic name askarels used by the electrical industry to describe fire resistant dielectric fluids. PCB's are ingredients in current askarel fluids.

If Texaco has used the Aroclor series listed above the materials contained PCBs as ingredients. If you used the Aroclor 5000 series or Aroclor 6000 series PCBs have been detected as present in contaminant quantities.

As you probably know all Aroclors are being withdrawn from the market except for use in transformers and capacitors.

Disposal of scrap fluid should be made by incineration at temperatures exceeding 1600 degrees F followed by scrubbing to remove the resulting acidic materials from the stack gases. A unit capable of achieving total destruction has been installed by Monsanto and is available to our customers. The scrap fluid is shipped to Monsanto Company, Sauget, Illinois 62201, Attention Supervisor Department 246. Cost of incineration is 3 cents per pound received. Container and transportation costs are paid by the shipper.

DSW 171988

Disposal of solid waste contaminated with PCBs should also be by destruction with high temperature incineration. To my knowledge there are no units available that are capable of achieving the proper conditions on a commercial scale. Lacking an incinerator it appears that burial in approved chemical landfills is the only alternative now available.

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:pw

DSW 171989

W. B. Papageorge - B2NK - G.O.

February 4, 1972 Cumming Paton - B2SC

Mr. George Fague
1320 (Detroit)

Attached are Ford Motor Company forms relating to Michigan's Critical Materials Act for Therminol 66.

Will you inform Mr. Leo Perini that the Therminol 66 he purchases from Monsanto does not contain any of the materials listed.

W. B. Papageorge

/pw
Attachments

DSW 171990

STLCOPCB4046614

February 4, 1972

Dr. G. Fred Lee
Professor of Water Chemistry
Water Chemistry Laboratory
The University of Wisconsin
Madison, Wisconsin 53706

Dear Dr. Lee,

Dr. Hill and I will be able to meet with you on March 1.
Can I help with hotel accomodations?

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw

cc: Ira Hill - NlA

DSW 171991

February 4, 1972

Mr. W. C. Cullen
Analabs, Inc.
80 Republic Drive
North Haven, Connecticut 06473

Dear Mr. Cullen,

I regret I can not send you a sample of Aroclor 1232 as you requested in your letter dated January 19.

This material is no longer manufactured and our supply of samples has been depleted.

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw

DSW 171992

STLCOPCB4046616

February 4, 1972

Mr. Norman R. Peterson
Manager, Special Projects
Corporate Research and Development
The Dow Chemical Company
Midland, Michigan 48640

Dear Norm,

I do not know who in Dow to ask and thought perhaps you might be able to help.

Have the Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) been determined for your Dowtherm A and Dowtherm G? If so, is the information available?

Regards.

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw

bcc: J. J. Roder

DSW 171993

STLCOPCB4046617

February 3, 1972

Mr. Thomas C. McMahon
Division of Water Pollution Control
Water Resources Commission
The Commonwealth of Massachusetts
Leverett Saltonstall Building
Government Center
100 Cambridge Street
Boston, Massachusetts 02202

Dear Mr. McMahon,

I appreciate the copies of the two reports you forwarded with your letter dated December 28, 1971.

I regret I cannot send you a list of the major PCB consumers in Massachusetts. This information is considered highly confidential therefore it can not be released. I hope the lack of this information does not seriously inconvenience you.

As you probably know PCBs are not as available today as they were before August 30, 1970. Monsanto has continued to curtail the marketing of these materials so that in the very near future the only applications will be as dielectric fluids in the electrical industry.

Temperatures required for the complete destruction of chlorinated biphenyls must exceed 800°C. One set of operating conditions for the incinerator at Monsanto's Sauget, Illinois plant is as follows: Temperature 2700°F, retention time 1.5 seconds, excess oxygen 2.5%. You may wish to contact Mr. Gene McGill, John Zink Company, P.O. Box 7388, Tulsa, Oklahoma 74105, telephone 918 747-1371 for design details of the unit.

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:pw

DSW 171994

STLCOPCB4046618

bcc: P. G. Benignus - B2SC
T. L. Gossage - B2SL
C. Paton - B2SC
P. L. Sleyton

February 3, 1972

Mr. W. A. Chisena
National Lockbox Company
Long Island, New York 11101

Dear Mr. Chisena:

Confirming our telephone discussion of January 27, 1972 the material in the drums in your possession, and labeled Pyranol A13B3B, could be properly labeled. If so, it contains polychlorinated biphenyls which some studies have shown may be an environmental contaminant. Extreme care should be taken to prevent any entry into the environment through spills, leakage, use disposal, vaporization or otherwise.

Proper disposal involves incineration at temperatures exceeding 1600°F with scrubbing of the resulting acidic gases. If an incinerator is not available to you, near your location, you may ship the material to Monsanto Co., Sauget, Illinois, 62201; Attention: Supervisor, Department 246. Cost of disposal is three cents per pound delivered. Freight costs must be prepaid.

I hope you understand and appreciate the importance of properly handling this material.

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

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

DSW 171995

STLCOPCB4046619

February 3, 1972

Dr. R. E. Pankratz
Poly Science Corporation
P. O. Box 791
Evanston, Illinois 60204

Dear Dr. Pankratz:

I am sending, under separate cover, samples of Aroclor 1221, Aroclor 1242, Aroclor 1254 and Aroclor 1260 that you requested in your letter dated January 27th to Mr. Willis Clark.

I regret I can not include a sample of Aroclor 1248. This material is no longer manufactured and our supply of samples has been depleted.

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

DSW 171996

12

STLCOPCB4046620

February 3, 1972

Dr. V. Zitko
Water Rllution Research
Fisheries Research Board of Canada
Biological Station
St. Andrews, New Brunswick
Canada

Dear Dr. Zitko,

Thank you for the copy of your Technical Report No. 272. I have enclosed copies of articles relating to halogenated hydrocarbons. I have nothing to offer for chlorinated diphenyl ethers since Monsanto does not manufacture these materials.

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:pw
Encl.

DSW 171997

STLCOPCB4046621

February 3, 1972

Dr. Gary Van Gelder
College of Veterinary Medicine
Iowa State University
Ames, Iowa 50010

Dear Dr. Gelder,

Your letter to Monsanto's Mr. Willis S. Clark dated January 24 and describing your need for PCB information was forwarded to me since I have been intimately involved in the PCB environment problem.

Your initial request was misunderstood to apply specifically to Monsanto's Technical Bulletin O/PL-306 which is out of print. It appears that a revision, O/PL-306A, which contains the same chemical and physical data with a revised paragraph on the environmental impact of these materials added, would give you the essential information. I have enclosed a copy. The many applications formerly listed in the older bulletin were eliminated because they are no longer recommended.

I have also enclosed copies of other articles relating to PCBs. I suspect you have seen some of them but I hope you find the remainder useful to you. If I can be of further service please let me know.

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw
Enclosures

DSW 171998

STLCOPCB4046622

February 3, 1972

Mr. J. D. Henry
Purchasing Agent
Louisville Varnish Company
P. O. Box 1255
Louisville, Kentucky 40201

Dear Mr. Henry:

In attempting to respond to your letter dated November 23, 1971 in which you requested Material Safety Data Sheets (OSHA-20), we can find no record of any Monsanto material sold to you.

We suspect that your needs may have been supplied through a distributor. If you will list for us the Monsanto products you are using I will forward to you the required data.

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

DSW 171999

STLCOPCB4046623

W. B. Papageorge - B2NK

February 3, 1972

Dr. M. N. Johnson - A2SA

Dr. R. E. Kelly
A2SA

Attached is a copy of a resume' from a Mr. Alfred M. Salazar, Jr. who is seeking help in finding a position in neuropsychological research preferably locating in the Midwest.

I am working with Mr. Salazar's father on a committee of electrical industry representatives concerned with PCB. Mr. Salazar Senior recommended to his son that Monsanto might be able to help.

Since I know nothing about medical research I would appreciate your advice on how to respond to Mr. Salazar's request.

W. B. Papageorge

/pw
Attachment

DSW 172000

February 3, 1972

Mr. S. D. Koonce
Ugine-Kuhlmann of America, Inc.
745 Fifth Avenue
New York, New York 10022

Dear Mr. Koonce,

Monsanto's Dr. Cumming Paton has informed me of your interest in handling and disposal procedures for polychlorinated biphenyls (PCBs).

We have informed our customers of the relative persistence of some of the PCBs and the evidence that some have been shown to be environmental contaminants. It therefore becomes necessary for anyone using PCBs to take extreme care to prevent any entry into the environment through spills, leakage, use, disposal, vaporization or otherwise.

We recommend that all systems handling liquid PCBs be extremely well maintained. If leaks do occur the lost material must be contained and properly disposed. Areas in which PCBs are used should be curbed and the drainage system be designed with a retention basin to prevent PCBs from entering the normal plant effluent streams. Control is more efficient if water is not mixed with PCBs at any time.

Prevention of atmospheric pollution is achieved by operating at the lowest temperatures the application will permit with appropriate condensers, mist eliminators, catch pots and return vent lines.

Disposal of scrap fluid should be made by incineration at temperatures exceeding 1600°F followed by scrubbing to remove the resulting acidic materials from the stack gases. A unit capable of achieving total destruction has been installed by Monsanto and is available to our customers. The scrap fluid is shipped to Monsanto Company, Sauget, Illinois 62201, Attention Supervisor Department 246. Cost of incineration is

DSW 172001

3 cents per pound received. Container and transportation costs are paid by the shipper.

Disposal of solid waste contaminated with PCBs should also be by destruction with high temperature incineration. To my knowledge there are no units available that are capable of achieving the proper conditions on a commercial scale. Lacking an incinerator it appears that burial in approved chemical landfills is the only alternative now available.

The concerned Federal government agencies have formed a PCB task force to evaluate the total PCB problem. This task force is chaired by Dr. Edward J. Burger, Jr. Executive Office of the President, Office of Science and Technology. The vice-chairman is Dr. Terry Davies, Council of Environmental Quality. Agencies participating on the task force include Environmental Protection Administration, Food and Drug Administration, U. S. Department of Agriculture, Department of Interior, Department of Commerce, National Institute of Environmental Health Sciences, National Bureau of Standards and the National Oceans and Atmospheric Administration. The nature of the PCB problem to be discussed should determine the agency to be contacted.

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:pw

cc: Dr. Cumming Paton - C3SF

bcc: Messrs. H. S. Bergen - B2SL
T. L. Gossage - B2SL

DSW 172002

W. B. Papageorge - B2NK - G. O.

February 3, 1972

R. A. Munch PCB Letter to SCIENCE

Messrs. H. S. Bergen - B2SL
R. A. Munch - 1760
C. W. Roos - B3NJ
J. F. Stapleton - B2SA

Mr. W. R. Richard
T3A

I believe Ralph Munch's proposed letter is appropriate in content and should help reduce misunderstandings and erroneous speculation now occurring in the scientific community.

I recommend publication.

W. B. Papageorge

/pw

DSW 172003

STLCOPCB4046627

February 3, 1972

Mr. R. L. Merritt 216-399-9655
Engineering Department
Packard Electric Division
General Motors Corporation
P.O. Box 431
Warren, Ohio 44482

Dear Mr. Merritt,

Enclosed is the list of laboratories which I offered to send.

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

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw
Encl.

DSW 172004

STLCOPCB4046628

February 3, 1972

Dr. J. Clausen
Director of Research
The Neurochemical Institute
58, Radmandsgade
Copenhagen N - Denmark
DK 2200

Dear Dr. Clausen:

I am sending, under separate cover, the sample of Aroclor 1254 you requested in your letter dated January 17th.

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

Sincerely,

W. B. Papageorge
Manager, Environmental Protection

/hg

DSW 172005

February 2, 1972

Mr. R. T. Agster
Petroleum Packers, Inc.
P.O. Box 1768
Tampa, Florida 33601

Dear Mr. Agster:

Your letter dated January 19th requests information and price on our product Aroclor 5460.

These materials are considered to have the potential for creating environmental problems. Monsanto, therefore, is in the process of terminating sales to current customers and is not accepting any new business.

If we had some idea of the application you are considering we would perhaps recommend an environmentally acceptable alternative material.

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

DSW 172006

STLCOPCB4046630

February 2, 1972

Dr. Adel F. Sarofim
Department of Chemical Engineering
Building 12-188
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Dear Adel:

I apologize for the delay in responding to your letter dated January 4th in which you requested comments on your paper "Rates and Routes of Transport of PCB's in the Environment".

I have enclosed a marked copy and you will note our comments are minor. References to heat transfer systems are altered to show that as of December 15, 1971 we terminated all PCB sales to this application.

Your reference No. 3 refers to a homolog distribution which differs from the information found in Monsanto's laboratory.

% Homologs In Aroclor 1242

No. of Chlorine Atoms	0	1	2	3	4	5	6
R. Webb	-	3.0	13	28	30	22	4
Monsanto	-	0.7	16	49	25	9	1

DSW 172007

STLCOPCB4046631

I have enclosed a revised copy of a table dated 12/7/71 which you previously received. This revision now shows the actual 1971 sales by grade and shows predicted 1972 figures. I have also enclosed another table showing the same type of information for the years 1957 through 1962. No records are available for any period prior to 1957.

I hope this information is helpful.

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

enclosures

DSW 172008

February 2, 1972

518-747-3341 Ext 217
518-792-4583 Home

Dr. A. Posefsky
Industrial and Power Capacitor
Products Department
General Electric Company
John Street
Hudson Falls, New York 12839

Mr. E. L. Raab
Distribution Transformer Department
General Electric Company
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

Gentlemen:

Attached is a Question and Answer list for responding to PCB inquiries which I offered to mail to you at our December 10th ANSI C-107 meeting.

I recognize that the list is not complete but I hope it will serve as a good start with further additions made by your respective committees. Should any help be required from Monsanto in responding to additional questions, please let me know.

Sincerely,

W. B. Papageorge
Manager, Environmental
Protection

/hg

attachment

cc: Messrs: A. M. Salegar - NEMA
P. G. Benigus - EEI

DSW 172009

Questions and Answers For ANSI
PCB

1. Question

What is PCB?

Answer

PCB are initials which stand for polychlorinated biphenyl. PCB is a family of chlorinated hydrocarbons which have long been used as a fire-resistant safety fluid in electrical components.

2. Question

Is PCB in Askarel?

Answer

Askarel is a generic name for the PCB-containing fluids used in electrical transformers and capacitors. Individual electrical equipment manufacturers have different trade names which describe their specific fluid.

3. Question

Explain the current environmental flap over PCB.

Answer

In the mid-60's, scientific instruments became sophisticated to the point where parts-per-million or even parts-per-billion of a substance could be detected in the environment.

Swedish scientists, looking for DDT, encountered "interferring substances" in their laboratory analyses. These substances they identified as PCB.

Subsequently other scientists in other parts of the world looked for and found PCB in a variety of samples; thus leading to the conclusion that PCB exists in the worldwide environment.

DSW 172010

4. Question

How does PCB get into the environment?

Answer

Probably through improper handling, use and disposal. A frequently cited accident occurred in Japan in 1968 when PCB leaked into rice oil which the Japanese use for cooking. Levels in the oil reached 2,000 to 3,000 parts-per-million.

However, it should be emphasized that when properly handled, used and disposed of, PCB can be as safe to use as any other chemical -- many of which are much more dangerous than PCB.

5. Question

Is PCB toxic?

Answer

Toxicity is a relative term. Some studies have shown it is toxic to certain species of birds and fish. More important, PCB is a persistant chemical which builds up in the environment. It, therefore, should not be allowed to escape to the environment.

6. Question

Does PCB cause birth defects?

Answer

Again, some studies have shown it can be detremental to the reproductive cycles of certain species of wildlife.

DSW 172011

7. Question

Is the public in any immediate danger?

Answer

The Federal Government at a press conference in September, 1971, stated emphatically that the public was in no danger from present levels of PCB now in the environment. They said proper steps were being taken to reduce further escape of PCB which would ultimately reduce even the low levels currently being found in the environment.

8. Question

How can PCB be disposed of?

Answer

Under high temperature, controlled incineration, PCB breaks down into hydrochloric acid, carbon dioxide and water. There are three commercial incinerators in the United States which can handle disposal of used fluids. Contact your supplier for information about returning used fluids for proper disposal.

DSW 172012

NBP 8/2/72

STLCOPCB4046636

W. B. Papageorge - St. Louis General Offices

February 2, 1972 Mr. W. R. Corey - B2SL

PCB Production Data

Letter - G.F.L. to I.D.H., 12/15/71

Mr. I. D. Hill
N1A

Attached are copies of PCB production and sales information which we have recently shared with government and academic scientists. I suggest these be forwarded to Professor G. Fred Lee, University of Wisconsin, in response to his letter requesting more production data. Records are not available for the years 1930 to 1957.

Dr. Lee is correct in his understanding that the use of PCB as an ingredient in lubricants or plasticizers in now zero.

W. B. Papageorge

/hg

enclosures

DSW 172013

W. B. Papageorge - St. Louis General Offices

February 1, 1972

Messrs: W. B. Bryan - X
C. W. Gambleton - X
R. E. Feiler - X
W. R. Wehrd - X
J. F. Scanlon - X

PCB Meeting
Brookhaven National Laboratories

Mr. W. B. Corey
MCL

As you know, Dr. Edward D. Goldberg, Scripps Institution of Oceanography, has formally invited Monsanto to send a representative to a conference on oceanic pollution to be held at the Brookhaven National Laboratories on May 24th to May 26th. He has specifically requested a representative familiar with the PCB problems.

To maintain the favorable relationships we have established we cannot reject this invitation.

Since it appears much of the discussion will center on analytical techniques and identification of materials in the environment, I recommend that Scott Barker from our Research Department be selected as Monsanto's representative.

W. B. Papageorge

Ajg

DSW 172014

109

STLCOPCB4046638

W. B. Papageorge - B2NK

February 1, 1972

P. G. Benignus - B2SC
J. G. Edmiston - Toronto
D. Goodwillie - Montreal

Mr. T. Oneson
Montreal

Responding to Mr. Vernon Mulhall's inquiry I have attached copies of the only available articles I have relating PCBs to humans. One article simply notes the presence of PCBs in human tissue and the other describes the Japanese incident in which high levels of PCB were accidently ingested with contaminated cooking oil.

Safe handling procedures in our manufacturing plants are those we have used for many years and are based on the normal good industrial hygiene practices followed by most responsible industries. These involve the existence of proper ventilation, the use of protective clothing and the exercising of personal cleanliness by the employees. I have attached a copy of the page on Toxicity and Safe Handling from Monsanto Technical Bulletin 306A.and a copy of the Hygienic Guide Series on Chlorodiphenyls.

I hope this information is useful. If I can help further please let me know.

W. B. Papageorge

/pw
2 Atch.

DSW 172015

February 1, 1972

Dr. Griffith E. Quinby
P. O. Box 1313
Wenatchee, Washington 98801

Dear Dr. Quinby:

I regret and apologize for the delay in responding to comments in your letter to Dr. R. Emmet Kelly dated December 4, 1971 and your letter to me dated January 4, 1972.

I, too, am puzzled by Cornell University's interest in newsprint as a source of PCB into the food chain. I personally suspect the use of recycled paper in the production of some newsprint.

During the late 1940's and early 1950's, PCB's were selling for about 12 to 20 cents per pound. I have no personal knowledge of the cost of the active insecticides at that time; therefore, I cannot evaluate the relative economic benefits from the use of PCB's. In October, 1970, the Pesticide Regulation Division, then under the U.S. Department of Agriculture, issued PR-75 banning the use of PCB's in pesticides within six months. If the formulator who still had PCB's in stock, as of June, 1971, used them in his formulations after about April, 1971, he was producing an unregistered product. Since we did not supply PCB's for that use after August, 1970, I must assume he had stockpiled the material.

Our laboratory has analyzed samples of our Aroclor products and has found no detectable polychlorinated naphthalenes, polychlorinated dibenzofurans or polychlorinated dibenzodioxins.

DSW 172016

STLCOPCB4046640

the sales data you received referred only to polychlorinated biphenyls. We have not assembled the information on the chlorinated terphenyls but we are certain that the quantities involved are considerably less. You may be interested in knowing that we are initiating a program of restricting the sales of chlorinated terphenyls and are now in the process of informing our customers of this change.

Referring to Monsanto's Technical Bulletin 306-A, you may reproduce Tables 1, 2 and 3. We would appreciate appropriate references relating to source of the information. I have not been able to establish the procedure used in the determination of the vapor pressure data. The information was developed many years ago and all personnel involved at that time are no longer with Monsanto.

Our discussion on the manufacture of polychlorinated biphenyls and the undesirable ingredients that would be formed was speculative since no information is available to me regarding the raw materials and process used by other producers. The use by Monsanto of a petroleum refinery-type tubular pyrolysis unit for the generation of biphenyl from benzene is well known. The design of the unit and the conditions of operation are considered privileged information which I cannot share with you. This unit, incidently, became fully operative in 1962.

In your letter dated January 20th to Dr. Warren C. Westgarth you refer to the use of polychlorinated terphenyls (PCT) in dielectric fluids for transformers and capacitors. I am not aware of this application and hope you can elaborate.

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

/hg

cc: Dr. R. E. Kelly - A2SA

DSW 172017

STLCOPCB4046641

February 1, 1972

Dr. Douglas Dube
Division of Environmental Protection
Department of Natural Resources
State of Wisconsin
State Laboratory of Hygiene
437 Henry Mall
Madison, Wisconsin 53706

Dear Doug,

I regret and apologize for the delay in responding to your inquiry relating to solid type transformers.

The following is a short summary of the factors which result in the use of Askarel filled transformers in preference to dry-type transformers:

1. Reliable dry-type transformers with ratings above 2500 KVA and/or 15 KV are not available.

2. Surveys of failures in network transformer banks show a 7% per year failure rate for dry-type vs. 0.2% for Askarel units.

3. Liquid insulated units have a much greater overload capacity - up to 100% overload for 8 hours and 200% for 2 hours.

4. Dry-type transformers are larger by 10 to 30% than comparably rated liquid filled units and usually more expensive.

5. Dry-type transformers are noisier than liquid insulated ones.

6. Open dry-type transformers must be cleaned regularly to avoid blocking cooling air passages and resultant overheating which would lead to failure. Thus, maintenance costs are higher than for Askarel filled transformers.

DSW 172018

STLCOPCB4046642

7. Open dry-type transformers cannot be used in corrosive or hazardous atmospheres.

These are all important considerations which have lead to the use of Askarel type transformers. The comparatively low failure rate of Askarel filled transformers, only one thirty-fifth that for dry-type, is extremely important in this day when users of electrical power demand continuous electrical power service and a blackout is considered a crime against society. Anyone interested in a more detailed discussion should be referred to the G.E. and Westinghouse discussions of Askarel fluids in the electrical industry.

I have attached copies of articles on PCBs in the electrical industry. 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:pw
3 Incl.

DSW 172019

STLCOPCB4046643

February 1, 1972

Ms. Carol Norberg
Assembly Committee on Environmental Quality
California Legislature
Room 4167
State Capitol
Sacramento, California 95814

Dear Ms. Norberg,

From the beginning stages when Monsanto became aware of the presence of polychlorinated bephenyls (PCBs) in the environment we have progressively restricted the marketing of these materials to uses which we believed could be controlled and for which alternative materials were not commercially available.

The controlled applications which were also referred to as "closed" systems included the use in electrical transformers, electrical capacitors, heat transfer systems, gas transmission turbines and vacuum pumps. We are now in the process of further restricting these uses and are informing our customers of this change.

The "open" system applications included such uses as fire resistant industrial fluids, coatings, sealants, carbonless copy-paper, platicizers, adhesives and inks. We terminated the sole of PCBs for the majority of these applications on August 30, 1970 with the remainder terminated at the end of the first quarter of 1971.

Through the years considerable research effort has been expended in the search for an alternative fluid for use as a dielectric in transformers and capacitors. With the emergence of the PCB environmental problem this activity has been accelerated not only at Monsanto's laboratories but at customers', competitors', governmental and academic laboratories. To date no suitable replacement has been found.

DSW 172020

Without the availability of a suitable replacement for use in the electrical industry a total ban on PCBs as proposed by Congressman Ryan would result in extended electrical brown-outs and black-outs or worst yet in explosions and fires with extensive injuries and property damage.

I have attached copies of articles further describing Monsanto's voluntary curtailment program and copies of reports prepared by representatives of the electrical industry relating to the importance of PCBs in transformers and capacitors.

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:pw
Encls.

DSW 172021

February 1, 1972

Mr. Ralph H. Lee
Electrical Section, Design Division
Engineering Department
E. I. DuPont De Nemours & Company
Louviers Building
Wilmington, Delaware 19898

Dear Mr. Lee:

I regret and apologize for the delay in response to your letter dated December 16, 1971.

The problem of disposing of solid waste contaminated with polychlorinated biphenyls is indeed a perplexing one. To my knowledge there are no incinerators available that are capable of reaching the high temperatures required. The technology is known, however, the costs relating to collection, transportation and destruction have, until now, presented serious obstacles toward the justification for the installation of an appropriate unit.

Lacking such a facility the use of a chemical landfill, preferably one authorized by local governments, should be considered.

I have approached state agencies throughout the country and found that the authorities have not yet addressed themselves to the problem of chemical disposal and are, in general, reluctant to commit their agencies to any agreement at this time. It appears that each of your locations should evaluate its local situation, get approval from local authorities where possible, and assure itself that disposal will not result in the pollution of the environment.

DSW 172022

STLCOPCB4046646

In the meantime representatives of the electrical industry, including the equipment manufacturer, utilities, industry and service companies, along with representatives of pollution service companies and governmental agencies have formed American National Standards Institute (ANSI) Committe C107, which is currently working on this challenging problem.

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

/hg

DSW 172023

STLCOPCB4046647

W. B. Papageorge - St. Louis General Offices

February 1, 1972

Messrs: H. S. Bergen - B?SL
W. R. Corey - B?SL
P. W. Gann - C4NC
C. Paton - B?SC

Heat Transfer Systems
Aroclors - Therminol FR's

Mr. J. M. Depp
F4EA

As a result of a recent Corporate Management policy relating to the use and sale of polychlorinated biphenyls (PCBS), no therminol FR or Aroclor fluids are available for use in heat transfer systems in Monsanto.

Operating companies and divisions have been informed of this policy and are now arranging for replacement with environmentally acceptable fluids.

An order for Therminol FR-1 placed this week for a CED project at the Springfield plant reminded me that we had not informed your department of this change.

Will you please arrange to inform the appropriate personnel in your department that heat transfer systems being proposed for installation do not specify the use of Aroclors or Therminol FR series fluids.

This policy does not affect the use of heat transfer fluids identified as:

Therminol 55
Therminol 66
Therminol 77
Therminol 88

W. B. Papageorge

/hg

DSW 172024

STLCOPCB4046648

February 1, 1972

Mr. Dennis R. Reilly
Director of Purchasing
Corporate Purchasing Department
Container Corporation of America
500 East North Avenue
Carol Stream, Illinois 60187

Dear Mr. Reilly:

In response to your inquiry dated January 13th I reviewed our records and noted that the following products were supplied by Monsanto to your company during 1971:

- Mersize RM Dry
- Mersize Ex-CL 70
- Mersize Ex-CL 77
- Diammonium Phosphate Technical
- Mersize TFL 70
- Mersize TFL 77
- RPC-1300
- Santobrite
- Santosite

Polychlorinated biphenyls (PCBS) and polychlorinated terphenyls (PCT's) are not used as raw materials, additives, or in the operation of the processing equipment in the manufacture of these materials. To the best of our knowledge and belief there are no detectable PCB's or PCT's in these materials.

DSW 172025

STLCOPCB4046649

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

/hg

bcc: Messrs: T. L. Gossage - B2SL
B. G. Tibbetts- B2SE

DSW 172026

W. B. Papageorge - St. Louis General Offices

February 1, 1972

Messrs: O. E. Dolin - 1670
J. D. Henninger - 1010

Sodium Mercaptobenzothiazole

Memo-R.W.S. to W.B.P. Dated 1/19/72

Mr. R. W. Spiller
1010 (Akron)

MICC does not, to my knowledge, have an established position relating to the disclosure of product biodegradation information.

This type of information should be handled in the same manner that other chemical and physical data is handled. The group having product responsibility should make the final decision.

I recommend we share the limited information we have with scientists who understand the information and hopefully will use it for scientific purposes.

W. B. Papageorge

/hg

DSW 172027

Monsanto

TELEGRAPHIC MESSAGE BLANK
The Communications System

DATE 2/1/72 | TIME 4:00PM | SENDER'S ACCOUNT NO. 43-000-735.03

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

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

GEORGE FAGUE - DETROIT

SAMPLE OF PYDRAUL 50E 1S BEING AIR MAILED TO MR. JOHN HESSE, MICHIGAN

KXSK WATER RESOURCES COMMISSION. I APOLOGIZE FOR THE DELAY.

W. B. PAPAGEORGE
MONSANTO
ST. LOUIS

pw

cc: C. L. Bradford - B2SG
N. T. Johnson - B2SG
E. L. Shimley - Akron

99

IN-IR REV. 7-64 | *for* BETTER *service* – Forward to transmitting operator IMMEDIATELY after preparation.

DSW 172028

STLCOPCB4046652

W. B. Papageorge - St. Louis General Offices

February 1, 1972

Messrs:

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

Dr. Al Pozefsky, G.E., Hudson Falls, has repeatedly requested copies of our research reports relating to the Anniston water effluent studies and PCB biodegradation.

What is our policy relating to release of these reports to our customers?

W. B. Papageorge

/hg

DSW 172029

STLCOPCB4046653

February 1, 1972

Dr. V. M. Adamovic'
Zavod Za Zdravstvenu
Zastitu S.R. Srbije
Belgade, Dr. Subotica 5
Jugoslavija
Yugoslavia

Dear Dr. Adamovic',

Enclosed are copies of articles relating to PCBs which you requested on your post card dated December 12, 1971.

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:pw
Encl.

DSW 172030

W. B. Papageorge - B2NK

February 1, 1972

OSHA-PCB

H. S. Bergen
G. L. Bratsch - WGK
W. R. Corey
R. E. Kelly

Mr. F. J. Holzapfel

I will attempt to summarize our discussion we had last week during which I expressed my personal concern that the emotions now being associated with PCBs would adversely affect us through an OSHA plant inspection.

In December two incidents occurred which are somewhat related. At a PCB meeting in North Carolina I was approached by a Dr. Powell, a former Monsanto employee and now a chemist with the National Institute of Environmental Health Sciences, who asked if it were possible for government personnel to inspect the PCB producing unit at Sauget, Illinois. I did not commit Monsanto to any visit but informed Dr. Powell we would certainly give serious consideration to a request from a responsible representative of government. He then indicated that he was assigned the task of setting inspection standards for OSHA and was going to recommend that the Monsanto PCB unit be used as a prototype. As yet we have received no formal request to visit the plant.

The December 27, 1971 issue of Air and Water News contains an item referring to PCBs, the Occupational Safety and Health Institute, Monsanto's "easily obtainable health data" and Dr. Terry Davies', Council of Environmental Quality, indication that a health study involving Monsanto's clinical data would be recommended.

It is my understanding that the medical program for our PCB employees is no different than for the other employees at a plant. To date we do not have such basic data as a list of employees who have been involved in the manufacture of PCBs. Since the PCB problem has been of some concern for over three years it seems to me we are extremely vulnerable to severe criticism for not taking any unique action.

I recognize the problems associated with special medical programs but in this instance the "lets do nothing stance" can also lead to serious problems.

You indicated that the W. G. Krummrich plant was ready for a normal OSHA inspection.

DSW 172031

To better prepare the plant for the inevitable visit we need a recommendation from the Medical Department regarding the appropriate medical action we should take.

I will arrange with Dr. Kelly for a meeting to review our approach.

W. B. Papageorge

WBP:pw

DSW 172032

STLCOPCB4046656

W. B. Papageorge - B2NK

February 1, 1972 J. H. Davidson

Disposal of PCB Fluids - Ex U.S.A.

Memo RFG to CLB dated 1-4-72

Mr. C. L. Bradford

I have been recommending to ex U.S.A. correspondents that the preferred method for the disposal of fluids containing PCBs is by incinerating at temperatures exceeding 1600°F with scrubbing of the resulting acidic gases to prevent atmospheric pollution.

If no high temperature incinerator is available the less preferred alternative of burying in a government approved chemical landfill should be considered.

The landfill should not be located near any surface or subterranean water streams.

W. B. Papageorge

WBP:pw

DSW 172033

February 1, 1972

Mr. D. W. Southerst
Canadian Westinghouse Company Ltd.
P.O. Box 5220
London, Ontario
Canada

Dear Mr. Southerst,

Mr. H. Senoff of the Evans Steel Barrel Company, Inc. 3300 S. Second Street, St. Louis, Missouri 63118 has requested I write to you relating to the disposal of scrap fluids containing polychlorinated biphenyls and contaminated drums.

The Evans Steel Barrel Company does not have the facilities to properly dispose of the scrap fluid. They can handle the emptied drums which would retain only a small amount of residual fluid.

Disposal of the fluid can be made by shipping it to Monsanto Company, Sauget, Illinois, 62201, U.S.A., Attention Supervisor Department 246. Cost of disposal is 3 cents (U.S.) per pound of received material. Container and freight costs are paid by the shipper.

You may choose to send your scrap fluid to Chem-Trol Pollution Services, Inc. , Blasdell, New York. Arrangements for this service should be made directly with the appropriate representatives.

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

Sincerely,

W. B. Papageorge
Manager,
Environmental Protection

WBP:pw
cc: Mr. H. Senoff
Evans Steel Barrel Co.

DSW 172034

bcc: T. Oneson - Montreal
J. Leyerle - JFQ

STLCOPCB4046658

JAN. 1972

DSW 172035

January 28, 1972

Mr. J. Douglas Smith
Box 408
Bridgewater College
Bridgewater, Virginia 22812

Dear Mr. Smith:

Enclosed are copies of articles on polychlorinated biphenyls which I believe will answer many of the questions raised in your letter postmarked January 19.

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:gw
Encs.

DSW 172036

STLCOPCB4046660

January 28, 1972

Mr. Earl J. Harris
New York State Department of Environmental
Conservation
Rome Pollution Laboratory
Rome, New York 13440

Dear Mr. Harris:

I am sending, under separate cover, samples of Aroclor 1221, and Aroclor 1260 you requested in your letter dated January 18 to Mr. Kenneth Wells.

I regret I cannot send samples of the other Aroclors listed. These materials are no longer manufactured and our supply of samples has been depleted. I hope the lack of these samples does not seriously inconvenience you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: Kenneth Wells

DSW 172037

STLCOPCB4046661

January 28, 1972

Mr. M. E. Scoville
General Electric Company
John Street
Hudson Falls, New York 12839

Dear Mr. Scoville:

Enclosed is a copy of Monsanto's polychlorinated biphenyl analytical methodology which you requested from Monsanto's Dr. Ralph Munch.

You may show this information freely with any interested laboratory.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

cc: R. Munch

DSW 172038

STLCOPCB4046662

January 28, 1972

Dr. Harold F. Sprague
Technical Director, New England Division
Paperboard Division
Federal Paper Board Company, Inc.
Box 1004
New Haven, Connecticut 06504

Dear Dr. Sprague:

I am forwarding, under separate cover, the samples of Aroclors you requested in your letter dated January 19 to Mr. P. L. Slayton.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: P. L. Slayton - New York

DSW 172039

STLCOPCB4046663

January 28, 1972

Dr. Gordon W. Newell 415- 326- 6200 Ext 3386
Life Sciences
Stanford Research Institute
331 Ravenswood Avenue
Menlo Park, California 94025

Dear Dr. Newell:

I am sending, under separate cover, the sample of Aroclor 1254 you requested.

I have enclosed a copy of the PCB bibliography I have assembled.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172040

January 28, 1972

Dr. C.Collier 202-388-3101
Pesticide Regulation Division
Environmental Protection Agency
Room 1155
South Agricultural Building
Washington, D. C. 20250

Dear Dr. Collier:

This is to confirm our telephone discussion relating to your inquiry regarding Monsanto's recent changes in its marketing program for polychlorinated terphenyls.

We are initiating a program of restricting the marketing of the polychlorinated terphenyls and are now in the process of informing our customers of the changes

Enclosed are copies of available bulletins on phosphate esters.

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:gw
Encs.

DSW 172041

67

STLCOPCB4046665

January 28, 1972

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

Dear Dr. Lee:

It appears that Tuesday, February 15 might be a suitable date for your visit to Monsanto in St. Louis.

Please let me know if this date is satisfactory to you and if I can help in arranging for hotel accommodations.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: Mr. Ira D. Hill

bcc: Mr. W. R. Corey

DSW 172042

W. B. Papageorge - B2NK - St. Louis

January 26, 1972

Gulf of Mexico Off-Shore Installations

W. R. Corey - B2SL
H. S. Bergen - B2SL
T. L. Gossage - B2SL

C. Paton

Warren Easely contacted Department of Interior representatives attempting to get a list of the operators of off-shore installations in the Gulf of Mexico.

He was told a list was not available in the Department of Interior because these facilities are regulated by the state authorities. Warren did receive references to oil journals which might provide the information we need.

I reviewed the suggested journals and compiled the attached list of operators which you may review for possible Therminol FR installations.

I regret I do not have addresses of these producers. I suspect our marketing organization has some of them and the remainder could be obtained from the Louisiana and Texas authorities.

W. B. Papageorge

WBP:gw
Enc.

DSW 172043

STLCOPCB4046667

OFF SHORE OPERATORS - GULF OF MEXICO

Amoco

Apache Oil

Atlantic-Richfield

Belco Petroleum

CAGC

Chevron Oil

Cities Service

Conoco

Consolidated

Forest Oil

Gulf Oil

Humble Oil

Hunt Oil

Le Tourneau

Mesa

Mobil

Odeca

Pennzoil

Phillips Petroluem

Placid

Shell Oil

Signal

Skelly

Southern Producing

Sun

Superior

Tenneco

TransOcean

DSW 172044

STLCOPCB4046668

January 26, 1972

Dr. C. B. Coulson
Project Manager
Pensjonat Zgoda
Szpitalna 1
Warsaw, Poland

Ref: SF 4/6 POL-10
(Equipment & Supplies)

Dear Dr. Coulson:

I am sending, under separate cover, the samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 you requested in your letter dated January 13.

I regret I cannot send samples of the remaining Aroclors because these materials are no longer manufactured and our supply of samples has been depleted. I hope the lack of these samples does not seriously inconvenience you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172045

1056

STLCOPCB4046669

January 26, 1972

Mr. Terry Lance 517-636-8198
Dow Corning Company
Midland, Michigan 48640

Dear Mr. Lance:

Regarding your request for information on Santovac and Aroclor fluids, I have been informed that Dow-Corning's Messrs. Ralph D. Schumak, Product Marketing Manager, Fluids, Emulsions and Compounds and R. A. Buchura, Product Marketing Supervisor, Fluids, Emulsions and Compounds have received all available pertinent information. May I suggest you contact them for the information you need.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

bcc: T. L. Gossage
C. L. Bradford

DSW 172046

8?

STLCOPCB4046670

January 26, 1972

Dr. David R. Bickers
Department of Endocrine Physiology
Rockefeller University Hospital
New York, N. Y. 10021

Dear Dr. Bickers:

I am sending, under separate cover, the samples of Aroclor 1016, Aroclor 1242, Aroclor 1254 and Aroclor 1260 you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1053

DSW 172047

STLCOPCB4046671

January 26, 1972

Mr. Kingsley Packer
Soil Control Lab
1234 Highway 1
Watsonville, California 95076

Dear Mr. Packer:

I am sending under separate cover samples of Aroclor 1221, Aroclor 1242, Aroclor 1254, Aroclor 1260, Aroclor 5442 and Aroclor 5460 which you requested in your letter dated January 20.

I regret I cannot send you samples of the other Aroclors listed. These materials have not been manufactured for many months and our supply of samples has been depleted. I hope the lack of these materials does not seriously inconvenience you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1054
&
1055

SD

DSW 172048

STLCOPCB4046672

W. B. Papageorge - B2NK - General Offices

January 26, 1972

PCB - Removal for Effluents

H. S. Bergen - B2SL
G. Jessee - 1060
M. Mullins - F4WB

W. R. Richard - T3A

Dr. Robert E. Opferkuch, Monsanto Research Corporation, Dayton, called Gene Jessee at Anniston requesting permission to include the results of the Anniston PCB removal studies in a bid being prepared for an EPA grant.

It appears that this may be an opportunity to share some of the costs of the study with MRC. Are you interested?

W. B. Papageorge

WBP;gw

DSW 172049

79

STLCOPCB4046673

W. B. Papageorge - B2NK - General Offices

January 26, 1972

W. R. Corey - B2SL
H. S. Bergen - B2SL
H. W. Kilbourne - 1010
A. Obel - B3NA
E. S. Robson - B3NA
P. W. Yarm - B3NC (cc'd)

E. J. Young - Akron
1010

As a result of a recent Corporate Management policy relating to the use and sale of polychlorinated biphenyls (PCB's) no Therminol FR or Aroclor is available for use in the heating system in your laboratory building.

Arrangements should be made for the immediate replacement of the PCB bluid with alternative materials which are environmentally acceptable.

We have assembled a team of experienced engineers who are available to assist with conversion planning. This group can be reached by telephoning (314) 694-2514.

If I can help, let me know.

W. B. Papageorge

WBP:gw

DSW 172050

78

STLCOPCB4046674

W. B. Papageorge - B2NK - General Offices

January 26, 1972

H. S. Bergen - B2SL
J. F. Stapleton - B2SA

Cargille Laboratories

W. R. Corey - B2SL

201 - 239 - 6633

Mr. John J. Cargille, R. P. Cargille Laboratories, Cedar Grove, New Jersey 07009 called and asked if I would release a shipment of PCB's and PCT's if he placed an order.

Cargille Laboratories is a laboratory supply company and for about forty years has sold small quantities of PCB's to laboratories for use in immersion optical microscopy.

I reminded Mr. Cargille that in 1970 we sold him a five year supply of Aroclor 1254 which was expected to last until he could find an alternative fluid. He acknowledged that he had been given generous consideration but claimed that by withdrawing Aroclor 5442 from the market we had upset his development program. He has heard that Monsanto is asking for hold-harmless agreements and is willing to sign such an arrangement. He is asking for a multi-year supply of Aroclor 1242, Aroclor 1254 and Aroclor 5442.

I made no commitments to Mr. Cargille but suggested that he detail in writing his request and to send it to me.

W. B. Papageorge

WBP:gw

DSW 172051

11

W. B. Papageorge - B2NK - General Offices

January 26, 1972

Askarel Disposal

W. S. Corey - B2SL
H. S. Bergen - B2SL
T. L. Gossage - B2SL
J. F. Stapleton - B2SA

C. Paton - B2SC

Confirming our recent discussion, P. Benignus will prepare a letter describing Monsanto's program for the receipt and disposal by incineration of scrap dielectric fluids. After proper approval, copies of the letter will be mailed to all dielectric customers.

W. B. Papageorge

WBP:gw

DSW 172052

76

STLCOPCB4046676

January 25, 1972

Mr. Donald G. Wilson 317-261-1471
Vice President
P. R. Mallory & Co., Inc.
P. O. Box 1115
Indianapolis, Indiana 46206

Dear Don:

Enclosed is a copy of information released at a press conference held by Commissioner Charles Edwards on September 29, 1971.

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

Regards.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

DSW 172053

15

January 25, 1972

Dr. Gerald O. Barney
Center for Naval Analyses
1401 Wilson Boulevard
Arlington, Virginia 22209

Dear Dr. Barney:

Your letter dated January 17 and addressed to Mr. Charles H. Sommer was directed to me for response since I have been involved in the studies of polychlorinated biphenyls and their effect on the environment.

You state in your letter that you know of the use of polychlorinated biphenyls in hydraulic systems, paints, lubricants, adhesives, sealants, asphalt tile, printing inks, carbonless copy paper and plastics. Actually Monsanto has not sold polychlorinated biphenyls for most of these applications since August, 1970 with sales to the remaining uses terminating in the first quarter of 1971. Recently sales to heat transfer systems, vacuum pumps and gas turbines were terminated.

Because of Monsanto's voluntary restrictive marketing policy, the only continuing application which you should find in the Navy is in capacitors and transformers. I reviewed our sales records for 1971 and found that Navy installations received relatively small quantities of transformer fluid. I have attached a list showing the delivery destinations and fluids shipped. Assuming that proper disposal has been made of the scrap transformer fluid, it appears that the PCB situation in the Navy is under good control.

Regarding disposal procedures, we recommend that scrap fluids be destroyed in incinerators capable of achieving temperatures exceeding 1600° F. with provisions for scrubbing the resulting acidic gases. Monsanto has installed a unit at one of its plants and the service is available to our customers. The charge for disposal is 3 cents per pound of scrap fluid received. Freight and containers costs are paid by the customer. The material should be shipped to Monsanto Company, Sauget, Illinois, 62201, Attention Supervisor Department 246.

The disposal of solid wastes contaminated with polychlorinated biphenyls, such as spent capacitors, poses a greater challenge. We

DSW 172054

74

are not aware of any commercial units capable of properly destroying these materials. We are participating with the electrical industry in the American National Standards Institute Committee C-107 to establish procedures for proper disposal. Meanwhile, I have been suggesting the use of authorized landfills as a satisfactory alternative.

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:gw

cc: Mr. Charles H. Sommer

bcc: C. P. Cunningham
W. R. Corey
H. S. Bergen

DSW 172055

Shipped to	Material
Washington Navy Yard Receiving Officer Bldg. 143 Washington, D. C. 20370	Inerteen* 70-30
Supply Officer, U.S.N. C.B.C. Port Hueneme, California 93043	Inerteen 70-30
Supply Officer Naval Ammunition Depot P. O. NBR N00 317-72-M-0185 Oahu, HI 96810	Inerteen PPO
REC Officer Bldg 276 N. N. S. Y. Portsmouth, Va. 23709	Inerteen PPO
RECG Officer, Bldg. 144 Naval Air Station Moffett Field, California 94035	Inerteen 70-30
U. S. Navy Supply Officer, U.S.N. C.B.C. Port Hueneme, California 93043	Inerteen 70-30

* Inerteen is a Westinghouse Corporation trademark for transformer fluids containing polychlorinated biphenyls.

DSW 172056

STLCOPCB4046680

January 25, 1972

Ms. Rosemary Perdue, Supervisor
Washington State Food & Drug Laboratory
College of Pharmacy
102 Bagley Hall
University of Washington
Seattle, Washington 98105

Dear Ms. Perdue:

In reply to your letter of January 20, we have checked on the sample of Aroclor 1221 and have been advised this will be mailed to your attention today. We apologize for the delay on this sample.

I regret I cannot send a sample of Aroclor 1262 or Aroclor 1268 since this material is no longer manufactured and our supply of samples has been exhausted.

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

Sincerely,

W. B. Papageorge,
Manager
Environmental Protection

WBP:gw

DSW 172057

13

STLCOPCB4046681

January 25, 1972

Dr. A. M. Shannon
Chief, Water and Wastewater Treatment
Detroit Metro Water Department
Water Board Building
735 Randolph Street
Detroit, Michigan 48226

Dear Dr. Shannon:

We have considered your request for PCB customer information in your letter to Mr. George F. Fague dated December 3 and I regret to inform you that the information is considered highly confidential and cannot be made available.

With Monsanto's self imposed curtailment of the marketing of PCB's to the extent that virtually all sales are to dielectric applications, any amount entering the environment should be substantially reduced. Under these conditions an expensive program for surveying and monitoring for PCB's would not appear justifiable.

I hope the lack of user information does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

cc: Mr. Frank Pollard
Detroit Metro-Water Department

G. F. Fague - Detroit

bcc: P. Park
J. F. Stapleton

DSW 172058

72

STLCOPCB4046682

January 25, 1972

Mr. Paul F. Niedner
Attorney at Law
131 Jefferson Street
St. Charles, Missouri 63301

Dear Mr. Niedner:

Your letter, dated January 4, requesting information on "closed system electrical uses" was forwarded to me for response.

We use the expression "closed system electrical uses" to describe applications involving electrical appartus when the material known as PCB is sealed in to prevent escape. Because of its excellent insulating qualities and fire-resistant nature, the material is much desired for this use. Electric transformers come within this category.

It may be of interest to you that many transformers do not contain PCB liquids. Some are gas filled, some contain a mineral oil base fluid and some are encapsulated in solid plastic type materials.

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:gw

bcc: P. Park - ClNA

DSW 172059

71

January 25, 1972

Mr. Paul Verlander
333 Deland Avenue
Indialantic, Florida 32903

Dear Mr. Verlander:

I am forwarding under separate cover, samples of Aroclor 1242, Aroclor 1254, and Aroclor 1260.

I have enclosed copies of articles relating to 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:gw

T, J, K, L, P, Q, R, S, O
1052

DSW 172060

70

STLCOPCB4046684

January 24, 1972

Dr. V. Zitko
Water Pollution Research
Biological Station
Fisheries Research Board of Canada
St. Andrews, New Brunswick
CANADA

Dear Dr. Zitko:

I would like to purchase a copy of the Fisheries Research Board of Canada Technical Report No. 272 (1971) entitled PCB and Other Industrial Halogenated Hydrocarbons in the Environment by V. Zitko and P. M. K. Choi.

What is the procedure for obtaining copies?

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172061

January 24, 1972

303-494-3311 Ext 2371

Mr. N. H. Miller
Dow Chemical Company
Rocky Flats
P. O. Box 888
Golden, Colorado 80401

Dear Mr. Miller:

I am sending, under separate cover, the sample of Aroclor 1242 you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1051

DSW 172062

STLCOPCB4046686

January 21, 1972

Mr. H. G. Graham
Purchasing Agent
Bagpak Division
International Paper Company
P. O. Box 2044 Cullendale Station
Camden, Arkansas 71701

Dear Mr. Graham:

Responding to your letter dated December 30, I wish to inform you that polychlorinated biphenyls are not used in the manufacture of Monsanto's 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:gw

bcc: R. J. Christman - Mobile
E. R. Ford - Atlanta
C. Paton/J. S. Roder/ D. E. Roush

DSW 172063

67

W. B. Papageorge - General Offices - B2NK

January 21, 1972

W. R. Corey
H. S. Bergen
J. F. Stapleton

Attached is a copy of the questions Dr. Warren Muir, Council of Environmental Quality, is bringing with him. Warren Easely obtained an advance copy from Dr. E. J. Burger, Jr. OST.

W. B. Papageorge

WBP:gw
Encs.

DSW 172064

STLCOPCB4046688

January 20, 1972

Dr. Richard Frank
Director
Provincial Pesticide Residue Testing Laboratory
Department of Agriculture and Food
Guelph, Ontario
Canada

Dear Dr. Frank:

I reviewed the applications for polychlorinated biphenyls, marketed by Monsanto as Aroclors, and to the best of my knowledge they are/were as follows:

CURRENT USES

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

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

Heat Transfer Systems: Aroclor 1242, prior to 12/15/71.

Vacuum Pumps: Aroclor 1248; Aroclor 1254, prior to 12/15/71.

Gas Transmission Turbines: Aroclor 1221; Aroclor 1242, prior to 1/15/72.

* Similar to Aroclor 1242 with 5 chlorine and higher isomers removed.

FORMER USES

Electrical Capacitors: Aroclor 1242; Aroclor 1254.

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

DSW 172065

STLCOPCB4046689

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.

Pesticide Extenders: Aroclor 1254.

Lubricants, Cutting Oils: Aroclor 1254.

Carbonless Reproducing Paper: Aroclor 1242.

Inks: Aroclor 1254.

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:gw

DSW 172066

Monsanto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE	TIME	SENDER'S ACCOUNT NO.
1-20-72	9:15AM	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.

JOHN MASON - BRUSSELS

WE ARE PLANNING STATUS REVIEW ON PCB-PCT ACTION PLAN. WE NEED INFORMATION REGARDING MONSANTO-EUROPE SITUATION. HOWARD BERGEN WILL TELEPHONE YOU FRIDAY, JANUARY 21, 8:30 A.M. ST. LOUIS TIME.

W. B. PAPAGEORGE
ST. LOUIS

CC: W. COREY
H. S. BERGEN

gw

64

IN-IR REV. 7-64

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

DSW 172067

STLCOPCB4046691

January 20, 1972

1-215-933-9211

Dr. Paul E. Trout
Valley Forge Marketing and Research Center
Container Corporation of America
Oaks, Pennsylvania 19456

Dear Paul:

Enclosed are copies you requested of the infomma-
tion which we had given to Dr. Adel F. Sarofim.

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:gw
Enc.

DSW 172068

STLCOPCB4046692

January 19, 1972

Mr. James Miles
J & L Steel Corporation
3341 Jennings Road
Cleveland, Ohio 44109

Dear Mr. Miles:

Monsanto's Mr. Charles Seger has informed me of your inquiry regarding the presence of PCB's in our Santosafe W/G fluids.

To the best of our knowledge there are no detectable PCB's in these fluids.

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:gw

cc: Charles Seger - Akron

DSW 172069

62

STLCOPCB4046693

January 19, 1972

Dr. J. K. Crossman
Boise Cascade Pulp and Paper Research
International Falls, Minnesota 56649

Dear Dr. Crossman:

Attached is a list of the laboratories which have been involved in PCB analyses and in my opinion have the desired capability. I suspect there are many more throughout the U. S. and Canada, but I have no information regarding their identity or their capability.

I regret that I somehow gave you the impression that I had a longer list to offer. Perhaps I was referring to laboratories of all types which had become involved in PCB studies - analytical, toxicological biodegration.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

DSW 172070

61

W. B. Papageorge - B2NK - St. Louis

January 19, 1972

D. Danna
J. R. Durland - Tokyo

S. Uneno - Tokyo

I can understand your concern about our poor communications regarding our PCB-PCT marketing policies. By now you probably have seen the information G. F. Wingard mailed to Dr. John Durland on January 6. We will send you any information relating to the plan as it develops.

My comments regarding disposal of scrap PCB were included in my letter to you dated January 17.

Regards.

W. B. Papageorge

WBP:gw

DSW 172071

60

W. B. Papageorge - B2NK - St. Louis

January 19, 1972

PCB = PCT Action Plan

H. S. Bergen B2SL
W. R. Corey B2SL
T. L. Gossage B2SL
W. E. Schalk B3NJ
J. E. Springgate B3NA

C. L. Bradford - B2SF
W. S. Clark - B3NC
C. Paton - B2SC

To improve our communications relating to the status of our PCB-PCT Action Plan, I propose to issue at frequent intervals a status report.

I will need your contributions from each of your areas of concern under the following headings.

ACTION	ASSIGNED TO:	TARGET DATE	ACTUAL DATE	REMARKS

"Action" lists should be submitted for each of the following groups:

1. Dielectric, Process and Heat Transfer Fluids
2. Industrial Fluids
3. Plasticizers

Each of these groups should prepare separate lists for:

1. U. S. Domestic
2. U. S. Export
3. MMK
4. Monsanto Europe

I would like to publish the first report before Friday, January 28, I will therefore need your list by Wednesday, January 26.

W. B. Papageorge

WBP:gw

DSW 172072

59

January 19, 1972

Mr. E. L. Raab
Distribution Transformer Department
General Electric Company
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

Dr. A. Posefsky
Industrial and Power Capacitor
Products Department
General Electric Company
John Street
Hudson Falls, New York 12839

Re: PCB Analytical Sensitivity

Gentlemen:

During our ANSI C-107 meeting on December 10, 1971, I offered to send you information on the sensitivity which can be expected from the PCB analytical methods recommended by Monsanto FDA and USDA.

Sensitivities determined by our laboratory are as follows:

Monsanto	2 ppb	
Basis:	Absolute sensitivity - 0.5×10^{-9} grams	
	Volume injected - 5 µl.	
	Final volume of extract - 5 ml.	
	Sample size - 250 ml.	
FDA	0.5 ppm	
Basis:	Absolute sensitivity - 10×10^{-9} grams	
	Volume injected - 5 µl.	
	Final volume of extract - 5 ml.	
	Sample size - 20 grams	
USDA	1.0 ppm	
Basis:	Absolute sensitivity - 1×10^{-9} grams	
	Volume injected - 5 µl.	
	Final volume of extract - 25 ml.	
	Sample size - 5 grams	

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

cc: A. M. Salazar
NEMA

cc: P. G. Benignus

DSW 172073

58

STLCOPCB4046697

W. B. PAPAGEORGE - B2NK - St. Louis

January 19, 1972

PCB Usage

H. S. Bergen - B2SL
W. R. Corey - B2SL
E. P. Wheeler- A2SA

R. H. Munch - T1B
C. Paton - B2SC
W. R. Richard - T3A
E. S. Tucker - 1760

Our meeting with Dr. Edward D. Goldberg, Dr. Robert W. Risebrough and Dr. George R. Harvey will start at 9:00 A.M. on Friday, January 21 in Room C-303.

At Dr. E. J. Burger's request, Dr. Warren Muir from the Council of Environmental Quality is also joining the group. He will be representing the multi-agency PCB Task Force.

W. B. Papageorge

WBP:gw

DSW 172074

57

STLCOPCB4046698

W. B. PAPAGEORGE - B2NK - St. Louis

January 18, 1972

H. S. Bergen
C. L. Bradford
F. J. Camargo
W. S. Clark
W. R. Corey
T. L. Gossage
E. Greene
C. Paton
W. E. Schalk
J. E. Springgate
J. F. Stapleton

STATUS REVIEW

PCB-PCT ACTION PLAN

CLASSROOM "A"

9:30 A.M.

MONDAY, JANUARY 24, 1972

W. B. Papageorge

WBP:gw

DSW 172075

56

STLCOPCB4046699

Reading File

Monsanto

DATE 1-18-72 | TIME 9:00AM | SENDER'S ACCOUNT NO. 43-000-735.03

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

I UNDERSTAND CASTROL USED PCB'S IN LUBRICANTS SPECIFIED FOR ROLLS-ROYCE JET ENGINES. HOW MANY POUNDS PER YEAR WERE USED IN THIS APPLICATION? WERE THERE OTHER AIRCRAFT LUBRICANT ACCOUNTS? IF SO, HOW MANY POUNDS PER YEAR OF PCB'S DID THEY PURCHASE?

W. B. PAPAGEORGE
GENERAL OFFICE
ST. LOUIS

CC: H. S. BERGEN
W. R. COREY
J. MASON - BRUSSELS

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DSW 172076

W. B. Papageorge - B2NK - St. Louis

January 17, 1972

Acute Fish Toxicity Studies - Aroclor 1016 and Aroclor 1242

H. S. Bergen	B2SL
W. R. Corey	B2SL
J. R. Durland	5260
P.J.A.Marsh	5040
W. R. Richard	T3A
E. S. Tucker	1760
H. A. Vodden	5470
E. P. Wheeler	A2SA

Attached are the results of the acute fish toxicity studies by Bionomics, Inc., with Aroclor 1016, Aroclor 1242 and DDT.

W. B. Papageorge

WBP:gw
Enc.

DSW 172077

W. B. Papageorge - B2NK - St. Louis

January 17, 1972

Purdue University Penta Study

JACK T. GARRETT - A2SA

H. S. Bergen	B2SL
Dale Dill	Q2C
G. C. Kosup	B2SE
W. R. Richard	T3A
R. A. Baxter	5470
H. A. Vodden	5470
B. G. Tibbetts	B2SE

Since you have established the necessary contacts, will you please arrange for the continuation of Monsanto's support for the Purdue University penta study during 1972.

W. B. Papageorge

WBP:gw

DSW 172078

W. B. Papageorge - B2NK - St. Louis

January 17, 1972

J. R. Durland - 5260
D. Danna - B2NA

S. Uneno - 5260

As discussed when you visited with us in St. Louis, we had conducted pilot studies of the incineration of solid wastes contaminated with PCB. The tests were made in Monsanto Enviro-Chem Company's pilot unit and were not extensive or thorough enough to provide the required engineering information for the design of a commercial unit.

Enough information was obtained however, to indicate that the use of a pyrolyzing rotary kiln with high temperature afterburner was feasible. Rough estimates indicated that a unit designed to incinerate 10 million pounds per year of waste (including the larger capacitors) would require about an $800,000 capital investment with an estimated operating cost of 10 cents per pound of waste.

We attempted to determine the interest of our customers in this type of service and found no real enthusiasm, primarily because of the high cost. As a result we have stopped all further work until the need for the unit is firmly established.

Responding to your request for suggestions for convincing regulatory authorities that PCB's can be disposed safely, I suspect that the only solution they will totally accept is one which includes a program for collecting the waste and returning it to disposal sites which have high temperatures incineration capabilities.

In the interim I would propose that liquid waste can be destroyed by incineration and that solid wastes can be buried to minimize the impact on the environment.

Your letter dated December 28 indicated that a copy of a Yomiuri article was attached. I did not receive the article. Will you send me another.

W. B. Papageorge

WBP:gw

DSW 172079

5 2

STLCOPCB4046703

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

J. R. DURLAND - Tokyo
P.J.A. MARSH - Brussels
H. A. VODDEN - Ruabon

Attached are copies of abstracts of the papers presented at the PCB meeting held in North Carolina on December 20 and 21, 1971.

W. B. Papageorge

WBP:gw
Encls.

DSW 172080

STLCOPCB4046704

Monsanto

DATE 1-14-72 | TIME 10:50AM | SENDER'S ACCOUNT NO. 43-000-735.03

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

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

MR. A. M. SALAZAR
NATIONAL ELECTRICAL MANUFACTURERS ASSN.
155 E. 44TH STREET
NEW YORK, N. Y. 10017

CANNOT ATTEND ANSI C107 ON FEB. 8 AND 9. PROCEED WITHOUT ME.

W. B. PAPAGEORGE
MONSANTO
ST. LOUIS

WBP:gw

50

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DSW 172081

STLCOPCB4046705

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

J. R. Durland - Tokyo-5260
D. Danna - B2NA
W. R. Richard - T3A

S. Uneno - Tokyo - 5260

Enclosed are copies of articles and a Monsanto technical bulletin on Tetrachlorophthalic Anhydride.

I have no information to send on p-chloro alkyl benzoate which is not manufactured by Monsanto.

W. B. Papageorge

WBP:gw
Encls.

DSW 172082

STLCOPCB4046706

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

PCB Shipping

G. L. Bratsch - 1740

W. R. Corey B2SL
H. S. Bergen B2SL
T. L. Gossage B2SL
F. J. Holzapfel B3NA
A. E. Leisy 1740
E. M. Potter B2NK
R.C.E. Sprague B2SE
C. Sigler B2NH
B. R. Williams - 1740

I am writing this memo to confirm and add emphasis to shipping arrangements for PCB products discussed by Earl Potter, Art Leisy and Ben Williams.

Under no circumstances are products produced in your Department 246 to be shipped to any customer or other Monsanto location without approval from the COP group in St. Louis. COP will receive prior approval from appropriate representatives of the business group.

Carl Sigler has implemented a similar arrangement with our outlying warehouses.

Requests for samples of these products should be referred to me for evaluation and approval.

Strict adherence to this shipping control is critical to the success of the PCB curtailment program.

W. B. Papageorge

WBP:gw

DSW 172083

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

W. R. Corey - B2SL
H. S. Bergen - B2SL
C. Paton - B2SC
W. R. Richard - T3A
E. S. Tucker - 1760

Attached is a copy of questions sent to us by Drs. Goldberg, Harvey and Risebrough to help us prepare for our discussion on January 21 and 22.

I propose we meet in Room E-311 at 1:00 P.M. on January 17th to plan our approach.

W. B. Papageorge

WBP:gw
Enc.

DSW 172084

47

STLCOPCB4046708

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

PCB's - Heat Transfer System

W. R. Corey B2SL
H. S. Bergen B2SL
E. P. Wheeler A2SA
P. W. Gann C3NC

R. C. Binning - Monsanto Research Corporation - Dayton - 1250
R. M. Carlson - New Enterprise Division - C3NA
D. B. Hosmer - Monsanto Industrial Chemicals Co - B2NA
R. T. Joens - Fisher Controls Company - 1580
J. E. Lipe - Monsanto Textiles Company - Pensacola - 1690
W. R. Robirds - Monsanto Commercial Products Co - A3NE
R. S. Sadow - Monsanto Polymers & Petrochemicals Co - 1890
D. S. Weddell - International Division - C3SA

Conforming to recent Corporate Management policy relating to the use and sale of polychlorinated biphenyls (PCB's), Mpnsanto products designated as Aroclors or the Therminol FR series are no longer available for use in heat transfer systems within Monsanto or by our customers.

Steps should be taken to immediately identify the heat transfer systems in your organizations which still contain the PCB type fluids and arrangements be made for the immediate replacement of the old fluids with alternative materials which are environmentally acceptable.

We have assembled a team of experienced engineers who are available to assist any location with conversion planning. This group can be reached by telephoning (314) 694-2514.

Will you please contact the appropriate individuals in your organization to inform them of this change and the need for immediate action.

If I can help let me know.

W. B. Papageorge

WBP:gw

46

DSW 172085

January 14, 1972

Dr. Robert F. Billue
Technical Director
Thiele Kaolin Company
P. O. Box 1056
Sandersville, Georgia 31082

Dear Dr. Billue:

Your letter addressed to Mr. Howard Bergen and dated December 29 was forwarded to me for response since I have been closely involved with the PCB environmental problem.

It is possible that the trace quantities of PCB found in your clay were due to the vapor leaks you experienced. However, other sources, such as chemicals used, should not be completely discounted. Whatever the source may have been, Monsanto's program which severely restricts the use of PCB's, should result in the elimination of all known sources of contamination.

To the best of my knowledge the FDA is watching very closely the PCB levels being found in food packaging, but at this time has not found it necessary to take action because the levels have been very low. I do not believe the small amounts detected in your clay would create a problem the FDA could not tolerate. However, I am well aware of the demands by many food packaging users insisting on zero detectable PCB content.

The publicized guideline quantities at which the FDA suggests action be taken are as follows:

Fish	-	5.0 ppm
Poultry	-	5.0 ppm in fat or
		5.0 ppm in total edible
Milk	-	0.2 ppm
Eggs	-	0.5 ppm
Catfish Feed	-	3.0 ppm

I am not aware of a guideline relating to turkey feed.

I have enclosed a copy of infommation released by FDA authorities at a September, 1971 press conference.

45

DSW 172086

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:gw
Encls.

DSW 172087

January 14, 1972

Dr. Charles ReVelle
The Department of Geography and
Environmental Engineering
The Johns Hopkins University
Baltimore, Maryland 21218

Dear Dr. ReVelle:

I regret I cannot send you a copy of Monsanto Technical Bulletin O/PL-306 which you requested in your letter dated January 5. It has been out of print for over two years and our supply was exhausted quickly.

I have enclosed a copy of the revision O/PL 306A and a copy of an article from the Encyclopedia of Chemical Technology. Together these two articles will contain essentially the same information which appeared in the older bulletin.

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:gw
Encs.

DSW 172088

44

STLCOPCB4046712

January 14, 1972

Ms. Jacqueline D. Greenberg
Goucher College
Towson, Maryland 21204

Dear Ms. Greenberg:

I am sending, under separate cover, the sample of Aroclor 1254 you requested in your letter dated January 11.

I am confused by your statement that the "PCB we are interested in working with can be found in your product, Aroclor 1254". Aroclor 1254 is 100% PCB's ranging from 1 chlorine per biphenyl group up to the 8 chlorine homologs. I am assuming you are interested in only one of the PCB isomers.

As you know, the chlorinated dibenzo-p-dioxins are not PCB's. No dioxins have been detected in any of Monsanto's Aroclors, nor, to the best of my knowledge, have they been detected in any PCB commercial mixture by other worldwide producers. Chlorinated dibenzo furans have been identified in European material by a laboratory at the University of Utrecht. I have attached copies of two articles which I hope you find useful.

No special precautions need be followed in handling Aroclor 1254 other than the normal good hygienic practices all well run laboratories follow. This includes good ventilation and personal cleanliness by the laboratory personnel. The amount of material you will receive is so small that disposal should not pose any environmental problems.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Encls.

DSW 172089

4 3

STLCOPCB4046713

January 14, 1972

Mr. Neville Sachs
Cambridge Filter Company
P. O. Box 1255
Syracuse, N. Y. 13201

Dear Mr. Sachs:

Enclosed are copies of the articles on chlorinated terphenyls 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:gw
Encls.

DSW 172090

STLCOPCB4046714

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

PCB's

W. S. Clark - St. Louis
K. F. Witcombe - Melbourne
R. B. Giles - Melbourne

D. LePage - Melbourne

Your proposed response to Mr. R. W. Greville, National Health and Medical Research Council, which you outlined in your memorandum dated December 29 to W. S. Clark is appropriate and I recommend you forward it to Mr. Greville.

One suggestion - in your response to question 3, you should delete the word direct; otherwise the implication that we sell indirectly could be read into it.

W. B. Papageorge

WBP;gw

DSW 172091

41

January 14, 1972

Mr. F. W. Hill
Senior Buyer
Chemicals Division
J. M. Huber Corporation
P. O. Box 310
Havre de Grace, Maryland 21078

Dear Mr. Hill:

I am sending under separate cover, the sample of Aroclor 1254 requested in your letter dated January 5. There is no charge for this material.

I have enclosed copies of information relating to this material 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:gw
Encls.

DSW 172092

4/

STLCOPCB4046716

W. B. Papageorge - B2NK - St. Louis

January 14, 1972

Aroclors

M. S. McCauley - Washington, D. C.

In my letter of January 7, I indicated that we manufactured only four Aroclors and that these were sold only to dielectric applications.

I had neglected to mention Aroclors which are not the PCB types and which we are continuing to market until March 31, 1972.

These Aroclors are designated as Aroclor 1221 or as one of the Aroclor 5000 or Aroclor 6000 series.

A copy of the current price list is attached.

W. B. Papageorge

WBP:gw
Enc.

DSW 172093

January 14, 1972

Mr. Kinsley Packer
Soil Control Lab
1234 Highway 1
Watsonville, California 95076

Dear Mr. Packer:

I am well aware of the difficulties being encountered in the analysis for PCB's and virtually every laboratory which has been involved in actively seeking improvements in methodology.

I personally do not know of any laboratory specifically involved in identifying each of the peaks which are observed on a chromatograph of a PCB mixture.

Dr. David L. Stalling, Fish-Pesticide Research Laboratory, Bureau of Sport Fisheries and Wildlife, Route 1, Columbia, Missouri 65201 has identified some of the homologs. Perhaps he could direct you to other researchers interested in this approach.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172094

28

January 14, 1972

Dr. A. W. J. Dyck
Editorial Director
Paper Industry Management Association
2570 Devon Avenue
Des Plaines, Illinois 60018

Dear Dr. Dyck:

I have reviewed your PCB item which appeared in the December, 1971 issue of American Paper Industry, and have these comments to offer:

1. In the first paragraph, 1964 is identified as the year when PCB's were identified as contaminants. To the best of my knowledge, Drs. Jensen and Widmack, The University of Stockholm, first identified PCB's in pesticide residue samples in 1966. It was not until a year or two later that enough evidence had accumulated to show that PCB's were environmental contaminants.

2. I am not aware that the FDA had established a guideline of 5 ppm PCB's in packaging material. Do you have any information relating to this?

3. Differences in analytical results do occur, however, your example of 5 ppm on one try and 10 ppm on another is most unusual particularly if performed by the same laboratory. This large discrepancy may be due to unrepresentative sampling. Interference with DDT should be no problem for an experienced laboratory until the ratio of PCB to DDT exceeds about 15:1.

I hope my comments are useful. If I can be of further help, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

37

DSW 172095

January 14, 1972

Mr. L. F. Reed 516-775-8000
Cellu Craft Company
1401 Fourth Avenue
New Hyde Park, N. Y. 11040

Dear Mr. Reed:

I am sending, under separate cover, the samples of PCB's you requested for laboratory standards.

Enclosed is a copy of Monsanto's analytical methodology 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:gw
Encls.

DSW 172096

STLCOPCB4046720

bcc: C. L. Bradford - B2SF
R. V. Weyland - Chicago
L. R. Stark - W4A
J. H. Davidson - B2SF

January 12, 1972

Mr. H. O. Carlson
Purchasing Department
Johnson Motors
Waukegan, Illinois 60085

Dear Mr. Carlson:

Your letter dated December 24, 1971 requesting information on Pydraul 50E was forwarded to me for response.

I have enclosed a copy of U. S. Department of Labor Form No. OSHA-20 which contains all of the available pertinent information. This form is used because it is universally accepted by industry as being both adequate and appropriate for its needs.

The product description and technical data brochure is being assembled and when completed will be forwarded to you.

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:gw
Encl.

35

DSW 172097

STLCOPCB4046721

January 12, 1972

Mr. Bernard S. Esarey
Chief Metallurgist
Central Foundry Division
General Motors Corporation
Bedford, Indiana 47421

Dear Mr. Esarey:

Enclosed is a copy of Monsanto's analytical methodology for the determination of polychlorinated biphenyls which you requested from Mr. Lou Stark.

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:gw
Encls.

cc: Mr. C. L. Bradford

Mr. L. R. Stark

0

DSW 172098

33

STLCOPCB4046722

January 12, 1972

Mr. R. D. Bailey
Plant Engineer
National Water Lift Company
2220 Palmer Avenue
Kalamazoo, Michigan 49001

Dear Mr. Bailey:

In response to your letter dated December 17, 1971, none of the materials listed in the Michigan Water Resources Commission's Critical Materials Register are present in the Skydrol 500B you purchase from Monsanto.

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:gw

cc: Mr. C. L. Bradford

DSW 172099

32

STLCOPCB4046723

January 12, 1972

Dr. R. E. Pankratz
PolyScience Corporation
6366 Gross Point Road
Niles, Illinois 60648

Dear Dr. Pankratz:

I regret I cannot send you any information identifying the peaks in the polychlorinated chromatographs you received, since this information is not available.

I hope this lack of information does not seriously inconvenience you.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172100

31

STLCOPCB4046724

W. B. Papageorge - B2NK - St. Louis

January 12, 1972

PCB-Heat Transfer Customer Letter

H. S. Bergen - B2SL
W. R. Corey - B2SL
T. L. Gossage - B2SL
J. Mason - Brussels
J. Stapleton - C1NA

P.J.A. Marsh - Brussels

Attached is a copy of the Therminol FR notification letter sent to U.S. customers and a copy of a proposed letter to be sent to ex-U.S. customers supplied from the Sauget, Illinois facility.

It appears that the letter you send to your customers should be very similar to the ex-U.S. version.

Will you send a copy of your proposed draft for review in time to assure that an approved letter is ready for mailing prior to the January 31 target date.

W. B. Papageorge

WBP:gw
Encls.

DSW 172101

29

STLCOPCB4046725

W. B. Papageorge - B2NK - St. Louis

January 12, 1972 W. Clark -

Triphenyl Phosphite

E. Wilde - Akron

Attached is a copy of Form No. OSHA-20 for Triphenyl Phosphite you recently requested.

Copies may be reproduced and sent to customers on request.

W. B. Papageorge

WBP:gw
Encl.

DSW 172102

27

STLCOPCB4046726

January 11, 1972

Mr. David McCollum
Antarctic Research Facility
Department of Geology
The Florida State University
Tallahassee, Florida 32306

Dear Mr. McCollum:

Monsanto does manufacture a series of products bearing the trademark Aroclor. I believe the particular product that haw been used for microscopy work is Aroclor 5460.

Because of recent management decisions we are withdrawing this product from the market. However, I am able to send you a sample, under separate cover, which I hope is useful to you.

I have also enclosed a copy of a technical bulletin which describes the physical and chemical properties of this material.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

1047
SKL

DSW 172103

26

STLCOPCB4046727

January 11, 1972

Mr. George Howard
The Fleischmann Distilling Corporation
Owensboro, Kentucky 42301

Dear Mr. Howard:

Enclosed are copies of articles relating to PCB's and a copy of Monsanto PCB analytical methodology which you requested in your letter dated December 30.

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:gw
Enc.

JKLVPQRS4TMO

DSW 172104

25

STLCOPCB4046728

January 11, 1972

Mr. Rodney J. Noel
Laboratory Supervisor
Office of Indiana State Chemist & Seed Commissioner
Department of Biochemistry
Purdue University
Agricultural Experiment Station
Lafayette, Indiana 47907

Dear Mr. Noel:

I am sending under separate cover, the laboratory standards you requested in your letter dated January 6, 1972 and addressed to Mr. E. S. Bauer.

I have enclosed a copy of Monsanto's analytical methodology which I hope you will find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

cc: Mr. E. S. Bauer

O 1046 Gordon 124, 125, 1260

DSW 172105

24

January 11, 1972

Mr. Edward F. Bouchard
Technical Director
Pfizer Incorporated
235 East 42nd Street
New York, New York 10017

Dear Mr. Bouchard:

Wink Corey has informed me of your interest in polychlorinated biphenyls.

I have enclosed copies of a collection of articles, bulletins, and assay methods 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

WBP:gw
Enclosures

cc: Mr. W. R. Corey

JKLVPQRSUTM

DSW 172106

22

STLCOPCB4046730

January 10, 1972

Mr. Cliff Budke
U.S. Industrial Chemical Co.
1275 Section Road
Cincinnati, Ohio 45237

1045 & 0

Dear Mr. Budke:

I am sending, under separate cover, samples of Aroclor 1242 and Aroclor 1260, which you requested.

I have enclosed a copy of Monsanto's PCB analytical methodology and copies of literature on PCB's.

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

/hg

bcc: Ms. Mary Lou Mart - 1210

DSW 172107

21

STLCOPCB4046731

January 10, 1972

Ms. Dorothy Heckard
Diamond Paperboard Division
Diamond National Corporation
407 Charles Street
Middletown, Ohio 45042

1044

Dear Ms. Heckard:

I am sending, under separate cover, samples of Aroclor 1254 and Aroclor 1260 that you requested in your letter dated January 5th.

I regret I cannot send you a sample of Aroclor 1248 since this material has not been manufactured for over one year 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

/hg

DSW 172108

20

STLCOPCB4046732

January 10, 1972

Mr. Glen Henderson 615-336-2211 Ext 295
Bowaters Southern Paper Company
Calhoun, Tennessee 37309

-1043 D

Dear Mr. Henderson:

I am sending, under separate cover, the samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260, which you requested.

I have enclosed a copy of Monsanto's PCB analytical methodology which I hope you find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/hg

enclosure

DSW 172109

19

STLCOPCB4046733

Reading file copy

W. B. Papageorge - St. Louis General Offices

January 10, 1972

PCB Report

Messrs: H. S. Bergen - B2SL
W. R. Corey - B2SL
R. E. Keller - 1760
W. R. Richard - T3A
E. S. Tucker - 1760
E. P. Wheeler - A2SA

Attached is a copy of a report by Dr.'s Nisbet and Sarofim of the OST panel studying PCB's.

As indicated by Dr. Sarofim's letter, he would appreciate our comments. May I have your contribution by January 20th.

W. B. Papageorge

/hg

attachment

DSW 172110

18

STLCOPCB4046734

W. B. Papageorge - St. Louis General Offices

January 10, 1972 Mr. J. Davidson - B2SF

Monsanto's Methodology
For Aroclor/News Release

Mr. P.J.A. Marsh
Brussels (5040)

Attached are copies of Monsanto's PCB analytical methodology and a press release showing Monsanto's U.S. PCB production and sales which Jerry Davidson informs me were requested by Dr. Tombergs.

If appropriate will you forward these to Dr. Tombergs?

W. B. Papageorge

/hg

attachments

17

DSW 172111

January 10, 1972

Mr. J. D. Heaman
Director
Waste Management Branch
Department of The Environment
880 Bay Street
Toronto 181, Ontario
Canada

Dear Mr. Heaman:

I apologize for my overdue response to your letter of November 19, 1971.

Our policy relating to the disposal of materials containing PCB's is based on our desire to prevent these materials from being introduced into the atmosphere or into water systems.

Liquid waste can be properly destroyed in incinerators designed to operate at the high temperatures required with subsequent scrubbing of the resulting HCl gas. We have informed our customers that a unit capable of incinerating PCB's is available at Monsanto's Sauget, Illinois plant. The customer must arrange for the delivery of the material to the plant. A charge of three cents per pound of fluid received is being made currently. It may be of interest to you that the operating conditions of this unit are as follows:

Temperature	-	2700°F
Retention Time	-	1.5 Seconds
Excess Oxygen	-	2.5%

DSW 172112

15

The disposal of solid waste contaminated with PCB's poses a much more complex challenge. No solid waste incinerator capable of achieving the high temperatures required is available. Consideration has been given to the installation of such a unit but no satisfactory answer has been found to the problem of collection and transportation of contaminated waste to the disposal site.

We have, therefore, been forced to reluctantly recommend landfill burial as the best available alternative for the disposal of solid waste.

I regret I have no information to send you relating to the amount of residues which can be expected to develop in your area. As you probably know, our current marketing program of curtailing the sale of PCB's will eventually result in the use of PCB's only in electrical transformers and electrical capacitors. I recommend that representatives of the electrical industry in Ontario be contacted to arrive at a realistic number.

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

/hg

cc: Mr. T. Onesin - Montreal

DSW 172113

STLCOPCB4046737

January 7, 1972

Dr. Pasquale Lombardo
Division of Chemical Technology (BF-424)
Department of Health, Education, and Welfare
Food and Drug Administration
Washington, D. C. 20204

Dear Dr. Lombardo:

I regret and apologize for the delay in responding to your letter dated October 15, 1971.

We have been considering a change in our policy regarding the chlorinated terphenyls and I chose to wait until we had instituted our new program before I could answer your questions.

Currently we are in the midst of phasing out the use of the chlorinated terphenyls for any purpose. We have targeted July 1, 1972 as our date for completing this program.

Regarding the PCB's, as you know, we have gradually reduced the applications for these materials so that by the end of this month the only uses which we feel are justified and for which we will continue to manufacture these materials are electrical transformers and electrical capacitors. The only materials which we will manufacture and sell will be Aroclor 1016, Aroclor 1242, Aroclor 1254 and Aroclor 1260.

You requested information relative to the replacement chemicals for polychlorinated biphenyls and polychlorinated terphenyls. I wish I could list all of the possible materials, however, there must be hundreds of readily available chemicals which we suspect are being used. These include the well known plasticizers such as phthalates, phosphates, adipates as well as chlorinated hydrocarbons which, by the way, Monsanto does not market. I can

DSW 172114

14.

supply you with samples of some of these that Monsanto sells. I suspect, however, that your laboratory probably has samples of these common materials. If not, please let me know what you need.

I hope this information is useful to you and if I can be of future service, pleasetlet me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

DSW 172115

January 7, 1972

Dr. R. E. Pankratz
PolyScience Corporation
6366 Gross Point Road
Niles, Illinois 60648

Dear Dr. Pankratz:

The commercial PCB's are mixtures of many isomers which result when biphenyl is chlorinated. The isomers represent the number of chlorine atoms on the biphenyl group and relative position of these chlorines on the group. It is theoritically possible to have a mixture ranging from unchlorinated biphenyl up to decachlorobiphenyl. The concentration of the higher chlorinated isomers increases with the time the biphenyl is chlorinated.

The most commonly used commercial mixtures have been and still are Aroclor 1242, Aroclor 1254 and Aroclor 1260. The last two digits in the designation represents the percent on a weight basis of chlorine present in the mixture. The 54% and 60% chlorine containing mixtures have relatively more of the 5, 6, and 7 chlorine isomers then the lower chlorinated material.

I have enclosed a copy of Monsanto's analytical methodology.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enclosure

DSW 172116

13.

STLCOPCB4046740

January 6, 1972

Mr. R. S. Cohen
Dover Chemical Company
Dover, Ohio 44622

Dear Mr. Cohen:

Enclosed is a copy of the booklet on the Aroclor 6000 series.

I hope you find it useful. If I can of of future service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enclosure

DSW 172117

12.

STLCOPCB4046741

January 6, 1972

Mr. Don Dechert
U. S. Food and Drug Administration
1521 W. Pico Blvd.
Los Angeles, California 90015

Dear Mr. Dechert:

I am sending, under separate cover, samples of Aroclor 5442 and Aroclor 5460 as you requested.

I have enclosed copies of PCB literature which I hope you will find useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enclosures

cc: Robert Lamkin - Los Angeles

MKLM
1042

DSW 172118

11.

January 7, 1972

Dr. Robert L. Batteese, Jr.
Pesticide Project Officer
Department of Health and Welfare
State of Maine - State House
Augusta, Maine 04330

Dear Dr. Batteese:

I am sending, under separate cover, a sample of Aroclor 1242 which you requested in your letter of December 28.

I regret I cannot send you Monsanto Technical Bulletin O-FF/1 since it is out of print and no longer available. However, I have enclosed a copy of Technical Bulletin O/PL-306A and a copy of an article from the Encyclopedia of Chemical Technology. I hope this information is useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enclosures

J+E
1041

DSW 172119

1-

STLCOPCB4046743

W. B. Papageorge - St. Louis

January 7, 1972

Aroclors

M.S.McC. to W. B. P. dated 12/21/71

M. S. McCauley, Washington, D. C.

In responding to Mr. C. Truxson's letter dated December 16, I would suggest that he be informed that Monsanto has not discontinued the manufacture of all Aroclor products but has reduced the number to only four. These are - Aroclor 1016, Aroclor 1242, Aroclor 1254 and Aroclor 1260. Our sale of these materials is strictly limited to electrical transformer and electrical capacitor use only.

Since these materials are not sold for plasticizer applications, I cannot supply him with the price list for plasticizers which he requested. If, however, he is interested in plasticizers of different chemical composition, we of course, would be happy to supply such a list.

W. B. Papageorge

WBP:gw

DSW 172120

W. B. Papageorge - St. Louis - B2NK

January 7, 1972

Durako Paint & Color Corporation

Memo D. G. to W.B.P. dated 12-27-71

W. S. Clark - B3NE
K. A. Wells - B3NE
E. C. Wilde - Akron

DON GASS - Detroit

I recommend you inform Mr. McAndrew of Durako Paint and Color Corporation that Aroclor 1248 contains 100% polychlorinated biphenyls and Aroclor 5460 contains 0.1% polychlorinated biphenyls.

To the best of our knowledge, none of the other materials listed under Michigan Public Act. No. 200 are present in the Aroclor,1248, Aroclor 5460 and Santomask II which we supply them.

W. B. Papageorge

WBP:gw

DSW 172121

8

STLCOPCB4046745

W. B. Papageorge - St. Louis - B2NK

January 7, 1972

PRODUCT ANALYSIS - J. P. Stevens, Inc.

Memo J.D.K. to W.B.P. dated 11/5/71

J. E. Kerwood - Akron

A. Obel - B1SA
J. D. Henninger - 1010
H. W. Kilbourne - 1010
H. B. Cheney - 1010

I regret and apologize for the delay in responding to the J. P. Stevens inquiry concerning heavy metals and properties of some rubber chemicals.

The primary reason for the delay has been my failure to get a stated policy which will guide MICC in its response to our customers' requests.

I personally recommend that any information we have available be shared with our customers, recognizing that this may inadvertently establish another product specification that must be met for all lots delivered. In those instances in which the information is not available, and, as you know, this occurs in many cases, I recommend we inform the customer that the information is not available. The decision on whether or not to conduct the necessary laboratory work must rest with the concerned business group and will probably depend on the importance of the account. We must keep in mind the added cost and the excessive workload that would be imposed on the laboratory should we decide to extensively conduct the analysis and share the information.

W. B. Papageorge

WBP:gw

DSW 172122

7

January 7, 1972

Mr. Malcolm Taylor
Director of Corporate Technology
Union Camp Corporation
1600 Valley Road
Wayne, New Jersey 07470

Dear Mr. Taylor:

Monsanto's Mr. Phil Slayton of our New York office informed me of your interest in receiving copies of any statements which describe the Federal Government's position on PCB's.

I have enclosed a copy of the information which Commissioner Charles Edwards of FDA released to journalists at a press briefing on September 29, 1971. I believe this information reflects the current position of our Government. I hope you find it useful.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enc.

bcc: Mr. P. L. Slayton _= N. Y. Office

Mr. J. S. Pullman - N. Y. Office

DSW 172123

6

STLCOPCB4046747

January 4, 1972

Mr. A. M. Salazar
National Electrical Manufacturer's Assn.
155 East 44th Street
New York, N. Y. 10017

DearAl:

Enclosed are copies of the abstracts of the papers presented at the National Institute of Environmental Health Sciences symposium on PCB's held at Durham, North Carolina on December 20 and 21.

Perhaps we could share this with members of ANSI Committee C-107.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw
Enclosures

DSW 172124

5

January 3, 1972

Dr. Willard J. Visek
Department of Animal Science, Morrison Hall
New York State College of Agriculture
Cornell University
Ithaca, New York 14850

Dear Dr. Visek:

Enclosed is a copy of Monsanto's polychlorinated biphenyl analytical methodology. You will note some revisions have been made since 1970.

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:gw

Enclosure

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DSW 172125

4

STLCOPCB4046749

January 3, 1972

Ms. Rosemary Perdue
Washington State Food and Drug Laboratory
College of Pharmacy
102 Bagley Hall
University of Washington
Seattle, Washington 98195

Dear Ms. Perdue:

Enclosed are copies of articles relating to polychlorinated biphenyls. You will note that these materials are now used only in transformers, capacitors and non-food related heat transfer systems.

I am sending under separate cover, samples of Aroclor 1221, Aroclor 1242, Aroclor 1254 and Aroclor 1260. I regret I cannot send a sample of Aroclor 1248 since this material is no longer manufactured and our supply of samples has been exhausted.

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:gw

Enclosure

JJKLVPRIS
1038
1039

DSW 172126

3

STLCOPCB4046750

January 3, 1972

Mr. John Hesse
Michigan State Department of Natural Resources
Water Resources Commission
Steven T. Mason Building
515 W. Michigan Avenue
Lansing, Michigan, 48926

Dear Mr. Hesse:

I am sending under separate cover, the samples of phosphate ester base hydraulic fluid John Robinson requested. Monsanto has tentatively designated this material as Pydraul 50 E.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

1040

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DSW 172127

STLCOPCB4046751

January 3, 1972

Dr. Roger L. Caldwell
Department of Plant Pathology
College of Agriculture
The University of Arizona
Tucson, Arizona 85721

Dear Dr. Caldwell:

Enclosed are copies of articles relating to polychlorinated biphenyls.

I hope you find this information useful in the preparation of the article you referred to in your letter dated December 16.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

WBP:gw

Enclosure

JKLVPQRSUTM

DSW 172128

STLCOPCB4046752