July 20, 1971

Dr. Alan Rubin 703-548-7344
Adams Laboratories Inc.
3543 West Braddock Road
Alexandria, Virginia 22302

Dear Dr. Rubin:

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

Enclosed is a copy of analytical methodology used by Monsanto's laboratories for the determination of polychlorinated biphenyls. I hope this information is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/kl

Enclosures

DSW 171042

256

STLCOPCB4045675

Monsanto

FROM (NAME & LOCATION) W. B. Papageorge - St. Louis

July 16, 1971

cc: D. Danna - B2NA
J. R. Durland - 5260
H. Kada - Yokkaichi
M. Mori - Yokkaichi

SUBJECT : PCB WASTE INCINERATION

REFERENCE Memo S.U. to W.B.P. dated 6-17-71

TO : S. Uneno - 5260

The scrap liquid incinerator was placed into operation in May with the following operating conditions.

Incinerator Temperature	— 2400 - 2600°F.
Waste Rate	— 2 gpm (1200 #/hr.)
Auxillary Gas	— 1.5 M BTU/hr.
Incinerator Pressure	— 80 inches H_2O
O_2 in Exit Gas	— 4%
Weir Water	— 30 gpm
Quench Spray Water	— 110 gpm
Quench Pot Temperature	— 205°F.
Venturi Water Flow	— 25 gpm
Scrubber Water	— 75 gpm

To Sewer:	0.4% HCl 20 ppb PCB
To Atmosphere:	0.015 grains particulate/ft.3 0.6 # HCl/hr. 45 ppm C/2 0.0004 # PCB/hr.

The solid waste incinerator referred to in the April 21, 1971 PCB Management Plan was intended to dispose of capacitors as well as transformer parts, floor sweepings, treatment clay, treatment carbon, rags, etc. The test which was conducted in December indicated that the technology required to properly incinerate was available. Cost estimates for

DSW 171043

255

STLCOPCB4045676

the disposal of 10 million pounds per year indicated an equipment cost of approximately 1 million dollars and operating costs approaching 10 cents per pound of scrap. The decision was made to postpone the installation of an incinerator until the need was great enough to justify the cost. In the meantime, we are recommending the use of approved landfills.

I have enclosed copies of correspondence relating to the test run and copies of literature on shredding equipment. It appears from the Wall Street Journal article that Eidal International has representatives in Japan.

W. B Papageorge

ld

Enclosures

July 14, 1971

Mr. John Thomas
Canada Center Inland Waters
Box 5050
Burlington, Ontario
Canada

Dear Mr. Thomas:

Enclosed are copies of information on PCB's 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 Control

ld

Enclosures

DSW 171045

254

STLCOPCB4045678

W. B. Papageorge - St. Louis

July 14, 1971

D. H. Bechtold - 1180
W. S. Clark - B3NE

CONTINENTAL CAN —
AROCLOR 5460

L. J. Berlik
1180

I telephoned Bill Wheeler, Continental Can, Chicago, on June 23 to discuss disposal of Aroclor 5460 waste.

Mr. Wheeler was interested in the temperatures required for complete incineration of Aroclor 5460. I recommended that temperatures should exceed 1600°F., the higher, the better.

We then discussed disposal by burial. I agreed that burial in approved landfills was appropriate and should not cause any environmental problems.

Mr. Wheeler seemed satisfied with the information I gave him. If I can be of further help, let me know.

W. B. Papageorge

ld

DSW 171046

253

STLCOPCB4045679

July 14, 1971

Dr. Michael P. Shinkle
Terra Society
P.O. Box 110
Mt. Prospect, Illinois 60056

Dear Dr. Shinkle:

I am interested in learning more about the Terra Society in which you indicated you were active.

Will you arrange for someone to mail me any available literature.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

DSW 171047

25

STLCOPCB4045680

July 14, 1971

Mr. William B. Buffaloe
Pesticide Chemist
North Carolina Department of
Agriculture
Raleigh, North Carolina 27611

Dear Mr. Buffaloe:

I apologize for the delay in sending you the replacement Aroclor 1254 sample. I have arranged for a sample to be mailed to you under separate cover.

I hope we have not unduly inconvenienced you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

sample sent 7-14-71

DSW 171048

251

STLCOPCB4045681

cc: P. B. Benignus

July 12, 1971

Mr. Richard L. Hauser
Electrical Utilities Company
LaSalle, Illinois 61301

Dear Dick:

It appears to me that the Nuclear Engineering Co. Inc. of Sheffield, Illinois has the capabilities for properly disposing of Aroclor contaminated waste.

I have no environmentally related objections to the use of their facilities.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/kl

DSW 171049

349

STLCOPCB4045682

cc: J. Early - Washington

July 12, 1971

Dr. Robert Jasper
Pharmacology Laboratory
Building 225
Agricultural Research Center
U. S. D. A.
Beltsville, Maryland 20705

Dear Dr. Jasper:

Dr. Jack Early informed me of your interest in the use of polychlorinated biphenyls in pesticide formulations and of your request for available technical bulletins on Monsanto's Aroclors.

Since August, 1970 Monsanto has not sold polychlorinated biphenyls for use in non-controllable open systems such as pesticide formulations. In June, 1970 we recommended to the USDA to prohibit the presence of PCB's in formulations and in October, 1970 the Pesticide Registration Division, USDA, issued PR-75 banning this use within six months.

Monsanto currently sells PCB's only for use as a coolant in electrical transformers, as an insulating fluid in electrical capacitors and as a high temperature, fire resistant, low pressure heat transfer medium in closed systems.

Enclosed is a copy of Monsanto Technical Bulletin O/PL 306A describing the chemical and physical characteristics of Monsanto's Aroclors.

DSW 171050

548

STLCOPCB4045683

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 Control

cc: Dr. Jack Early
Washington, D. C.

Enclosure

/kl

DSW 171051

WSF
RF

July 12, 1971

Mr. Joseph Giordano
Technical Director
Products Research & Chemical Corp.
410 Jersey Avenue
Gloucester City, New Jersey 08030

Dear Mr. Giordano:

Your request for information and status on our chlorinated terphenyl product line has been referred to me for comment by our sales representative, John Van Gelder. As I understand your need, you would like to know more about 1) the behavior of chlorinated terphenyls in the environment, 2) the PCB content in these products, and 3) our long term plans for these products in the market.

As you know, we made our decision last spring to withdraw PCBs from open system applications. Needless to say, this decision was made only after much deliberation and evaluation of the data available to us. Based on this study, we concluded that it would be in the best interests of Monsanto, our customers, and the environment to stop selling PCBs into open system applications. We believe that this was a good decision based on the facts available at that time.

All during our evaluation of PCBs in the environment, we attempted to find some evidence that polychlorinated terphenyls (PCTs) were also affecting the ecology. At no time did we find these materials in the environment. Since last spring, we have continued to search for PCTs

DSW 171052

247

STLCOPCB4045685

in the environment and our findings are still the same. PCTs do not show up in the lakes, streams, fish, birds or other natural states.

While Monsanto would like to be able to say that we have a complete explanation as to why chlorinated terphenyls do not appear in the environment, this is not the case. We believe that in general, they resist biodegradation to a degree similar to the PCBs. However, we do know that the chlorinated terphenyls are much, much less soluble in water than their chlorinated biphenyl analogs. This would certainly make them less available in the streams and lakes, and thus less likely to enter the food chains. Further, judging from 1) the size and configuration of the two molecules, and 2) the relative solubility data of chlorinated biphenyl and chlorinated terphenyl in organic solvents like hexane, one would certainly be lead to the conclusion that the chlorinated terphenyls should be less soluble than chlorinated biphenyls in the fatty tissues of animals. Here again, this would make it more difficult for the chlorinated terphenyls to enter the food chain.

The product which you are now evaluating, Aroclor 5432, is a chlorinated terphenyl, not a polychlorinated biphenyl or PCB. There are trace quantities of PCBs in this product, however, the actual level at this time being less than 0.4% by weight. We are bringing a plant modification project on stream at the end of this year which will reduce this level to approximately 0.01%. We are confident that this PCB level will not cause any environmental problems.

When Monsanto made its decision last spring to withdraw chlorinated biphenyls from open system applications, and to leave chlorinated terphenyls on the market, we considered all the information which was available to us at that time. The comments given above summarized some

of the thinking that went into that decision. Since last spring, we have continued our studies and our evaluations, and have not as yet found any new data which would tend to change our decision. We fully expect that the chlorinated terphenyl products will remain in our product line.

I hope these comments will be helpful to you as you proceed with your program of reformulation. Please feel free to contact us if we can be of further service or if we can provide additional information to you.

Very respectfully,

W. B. Papageorge
Manager, Environmental Control

/dbw

DSW 171054

W. B. Papageorge - St. Louis

July 12, 1971

TOXICITY STUDIES
AROCLOR 1016, 1221
AND 5432

R. E. Keller - Queeny
A. J. Koenig - B3NF
W. R. Richard - T3A
E. P. Wheeler - A2SA

H. S. Bergen - B1SA

To strengthen our defense position, we must have more information on the effect of Aroclor 1016, 1221 and 5432 on birds and fish.

These studies were not programmed or budgeted for 1971. The chicken reproduction studies are estimated to cost $20,000. The fish sub-acute studies will probably cost $25,000.

I recommend we proceed with these studies. Your approval to over-run the PCB-Administration budget by $45,000 is requested.

W. B. PAPAGEORGE

/kl

DSW 171055

246

STLCOPCB4045688

W. B. Papageorge - St. Louis

July 12, 1971

AROCLOR 5442
ANIMAL TOXICITY STUDIES

E. P. Wheeler - A2SA

J. L. Corder - JFQ
W. S. Clark - JFQ
R. E. Keller - JFQ
J. P. Mieure - JFQ
E. M. Potter - B2NK
W. R. Richard - T3A
E. S. Tucker - JFQ

Since Aroclor 5442 can be produced by direct chlorination to the 42% level or by blending Aroclor 5432 and Aroclor 5460, the isomer distribution varies considerably in the two types of products.

It is appropriate that we adequately identify for future reference that the Aroclor 5442 Lot AL-15 now being used in sub-acute toxicity studies at Industrial Bio-test Laboratories was prepared by straight chlorination and is not a blend.

It is my understanding that current production plans do not provide for the manufacture by direct chlorination of any Aroclor 5442. Our polychlorinated terphenyl needs will be satisfied by Aroclor 5432 and Aroclor 5460.

We will complete current studies now underway on Aroclor 5442 but we will not conduct any new studies with either the blend or the direct chlorination material. Our studies with Aroclor 5432 and Aroclor 5460 should be applicable to blended Aroclor 5442.

W. B. PAPAGEORGE

/kl

DSW 171056

245

Monsanto

FROM (NAME & LOCATION) Mr. W. B. Papageorge - General Offices

TE : July 8, 1971 cc: C. J. Smith - B1SA

SUBJECT : PHTHALATE ESTERS —
ENVIRONMENTAL REVIEW

REFERENCE

TO : Messrs. R. W. Bucknell
M. W. Farrar
P. R. Graham
W. L. Hunt
E. V. John
R. E. Keller
R. E. Kelly
P. S. Park
J. E. Springgate
E. S. Tucker
E. P. Wheeler

A meeting to review the current knowledge, active programs and plans relating to the environmental impact of phthalate esters will be held on Friday, July 9, at 1:00 p.m. in Room E-311.

W. B. Papageorge

/ld

DSW 171057

STLCOPCB4045690

July 7, 1971

Dr. A. S. Y. Chau
Scientific Officer
Department of Fisheries and Forestry
45 Spencer Street
Ottawa, Ontario
Canada

Dear Dr. Chau:

Enclosed is the PCB information you requested in your letter dated June 30.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

Enclosures

DSW 171058

243

STLCOPCB4045691

July 7, 1971

Dr. Floyd R. Smith
Quality Assurance Manager
Pet, Incorporated
Greenville, Illinois 62246

Dear Dr. Smith:

I am sending under separate cover the samples of Aroclor 1242, Aroclor 1248 and Aroclor 1260 requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

DSW 171059

242

STLCOPCB4045692

July 7, 1971

Miss Louise S. Merkins
The Mount Desert Island Biological
Laboratory
Salisbury Cove, Maine

Dear Miss Merkins:

I regret the apparent substitution of Aroclor 1232 for Aroclor 1221 in the box of samples mailed to you in April.

I have arranged for a sample of Aroclor 1221 to be mailed promptly.

I hope we have not caused a serious inconvenience. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

DSW 171060

241

STLCOPCB4045693

July 7, 1971

203-288-8463

Dr. Jesse Tucker
Analabs, Incorporated
80 Republic Drive
North Haven, Connecticut 06473

Dear Dr. Tucker:

Enclosed is a copy of analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

Enclosure

DSW 171061

240

STLCOPCB4045694

Mr. W. B. Papageorge - General Offices

July 7, 1971

J. E. Hastings - C2NF
P. B. Hodges - B2SF

Environmental Control Costs

Howard D. Harmon

Regarding environmental control costs relating to those activities that are expensed as SARE, I do not propose that any new cost centers be established.

Excluding manufacturing related costs which Paul Hodges will review, environmental control costs would include activities by the Central Staff Departments, such as Medical, Public Relations, Legal, Engineering, as well as those costs generated within our own Division by Sales, Commercial Development and Research.

Ideally all environmental costs should be identified in such a manner that retrieval is easy and summaries could be prepared by product, product group, or total division further defined by function.

I suspect that our present system makes retrieval very difficult and that Central Staff Department cost breakdown is non-existent. I suggest that no attempt be made to pinpoint Central Staff Department costs but to resort to estimates from these departments on a selective need basis.

Activities generating environmentally related costs within the Division would include studies of effects on animals, biodegradability studies, development of analytical methodologies, assistance to customers and administration. Except for the analytical studies which are totally Research, all functions within a Business Group can be sources of environmental costs which result from these activities.

W. B. Papageorge

ld

DSW 171062

239

STLCOPCB4045695

cc: J.T. Garrett - A2SA
R.E. Keller - Q.Plt.

July 7, 1971

Dr. Roland Dennistoun
Minnesota Department of Agriculture
State Office Building
St. Paul, Minnesota 55101

Dear Dr. Dennistoun:

Monsanto representatives who will likely participate in the Lake States Governors' Pesticide Committee discussion of PCB's on September 30 at the Hyatt House, Chicago are:

Jack T. Garrett
Manager of Industrial Hygiene and Pollution Abatement
Medical Department
Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Mo. 63166

Dr. Robert E. Keller
Manager, Applied Sciences Section
Research Department
Organic Chemicals Division
Monsanto Company
1700 South Second Street
St. Louis, Mo. 63177

William B. Papageorge
Manager, Environmental Protection
Organic Chemicals Division
Monsanto Company
800 North Lindbergh Boulevard
St. Louis, Mo. 63166

We look forward to an interesting and hopefully mutually beneficial discussion.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ld

DSW 171063

238

STLCOPCB4045696

Mr. W. B. Papageorge - General Offices

July 7, 1971

D. B. Hosmer
G. W. Rankey
C. J. Smith

Environmental Evaluation — Products and Processes

Messrs. F. J. Holzapfel
C. W. Roos

Attached are preliminary drafts of a proposed Organic Division bulletin and an employee handout relating to the bulletin.

The bulletin is deliberately restricted to new products, new applications of existing products, new processes, modified processes and major equipment changes. No attempt was made to define procedures for coping with other environmental activities such as reviewing existing products, service to customers, inquiries made of our suppliers, etc. because of their apparent variability. As we gain more experience, we may find that additional procedures would be helpful.

We propose that the procedure and our functions be discussed at group meetings scheduled during July. Composition of the groups should be as follows:

1. Business Group representatives down to Research Group Leaders, Development Project Managers, Product Managers and Market Managers.

2. Research representatives down to Group Leaders except for those who attend with Business Groups.

3. Plant representatives to include at least the Plant Managers' Staff.

Plant meetings will be held at the plant sites, the Research meeting at the 2nd Street location, the Rubber Chemicals Group at Akron and the remainder at the General Offices site.

We recommend that a Medical Department representative be present at the Business Group and Research sessions.

George Rankey designed the attached handout to be used during the sessions and for the employe's personal use later. George also recommended, and we concur, that existing newsletters be used to further publicize the total program.

P. B. Hodges

W. B. Papageorge

DSW 171064

231

STLCOPCB4045697

July 1, 1971

Mr. John Voller
Eidal, International
250 Woodward Road, S.E.
Albuquerque, New Mexico 87102

Dear Mr. Voller:

Will you please send me available literature on your line of crushing/grinding equipment which includes the Model 100 Minibrute.

Thanks.

W. B. Papageorge
Manager
Environmental Control

mcm

DSW 171065

236

STLCOPCB4045698

July 1, 1971

Miss Barbara Elkins
Apartment 16
1305 Potomac Street, N.W.
Washington, D.C. 20007

Dear Miss Elkins:

Enclosed is the information on polychlorinated biphenyls and pentachlorophenol I offered to send you.

Should any questions remain after you have reviewed this information, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

mcm

Enclosure

DSW 171066

235

STLCOPCB4045699

W. B. Papageorge - General Offices

July 1, 1971

H. S. Bergen - B1SA
T. L. Gossage - B2SL
5040 - P. J. A. Marsh

5260
J. R. DURLAND

Peter Marsh has written concerning a leakage of confidential information on PCB's as shown by the attached memos.

A copy of the memo of concern was sent to you on February 8 and was identical to the copy attached except for the handwritten notes referring to filing instructions on the upper right hand corner.

Can your office help us determine how Kanegafuchi could have obtained a copy?

W. B. Papageorge

mcm

Enclosures

DSW 171067

23

STLCOPCB4045700

MCS 1016/Aroclor 1142 Distillation Residue
complete by August 1

Aroclor 5460/Aroclor 5432
complete by December 1

Toxicity studies currently underway are:

Acute Fish Toxicity Study - Aroclor 1221, Aroclor 5432, Aroclor 5442, Aroclor 5460 and Aroclor 1016

90-Day Subacute Oral Toxicity - Rats - Aroclor 1221, Aroclor 5432, Aroclor 5442, Aroclor 1016

90-Day Subacute Oral Toxicity - Dogs - Aroclor 1221, Aroclor 5432, Aroclor 5442, Aroclor 1016

Final reports are expected by October 1.

Chicken and egg reproduction studies with Aroclor 1016, Aroclor 1221, Aroclor 5432 and Aroclor 5442 will begin in late July.

W. B. Papageorge

mcm

Enclosure

DSW 171068

W. B. Papageorge - General Offices

July 1, 1971

D. Danna - B2NA
J. R. Durland - 5260
S. Uneno - 5260

1760
R. H. MUNCH

Mr. S. Uneno, Tokyo, requested information regarding the composition of MCS-1043 and its potential fields of application. He also requested a one-gallon sample.

Will you please forward the sample and the information to him.

W. B. Papageorge

mcm

DSW 171069

232

STLCOPCB4045702

JUNE

DSW 171070

W. B. Papageorge - General Offices

June 30, 1971 E. P. Wheeler - A2SA

TOXICITY STUDIES

J. T. GARRETT
A2SA

I called Jack Teasley, Federal Water Laboratory, Duluth, Minnesota, to review his fish toxicity program with PCB's. He is exposing scud, daphnia and fathead minnows at 10 and 20 ppb of Aroclor 1242, Aroclor 1248 and Aroclor 1254. No effect noted to date. Expects reproduction, egg hatchability and growth of fry data by October 1.

We discussed commercial laboratories capable of conducting meaningful fish studies, and he strongly recommended we contact Mr. Kenneth Macek, Bionomics, Inc., Wareham, Massachusetts. 617-295-2550

At the Columbia, Missouri, Fish Pesticide Research Laboratory, Dr. Richard Schoettger indicated results of recent work would be published in the next issue of Dr. D. Mount's PCB newsletter which is expected soon. He also gave me a copy of the laboratory's annual report which contains summaries of their findings. I sent a copy to Elmer Wheeler for your department's files.

Dr. Schoettger also recommended Bionomics, Inc. as well as Hazelton Laboratories, Falls Church, West Virginia (J. Heineman) and Battelle's Pacific Northwest Laboratories, Richland, Washington.

W. B. Papageorge

mcm

DSW 171071

STLCOPCB4045704

W. B. Papageorge - General Offices

June 29, 1971

PHTHALATE ESTERS -
FISH STUDIES

M. W. Farrar
R. E. Keller
C. J. Smith
E. P. Wheeler

J. E. SPRINGGATE

During a recent visit with Dr. Richard A. Schoettger, Director, Fish-Pesticide Research Laboratory, Columbia, Missouri, he informed me that they are becoming increasingly concerned with the effects of phthalate and phosphate esters on fish.

Di-n-butyl phthalate, di-2-ethylhexyl phthalate and tricresyl phosphate are being studied at present. Data on TCP was not available, but Dr. Schoettger stated it was being detected in fairly high concentrations in exposed fish. Data on the phthalate esters is shown on the attached excerpts from the laboratory's annual report. I was promised copies of additional data as it becomes available. I understand that reproduction is being affected, and teratogenicity has been observed.

It appears to me that a thorough review of the available information on the environmental impact of phthalate and phosphate esters and the development of a plan to seek answers to remaining questions should be given high priority.

W. B. Papageorge

mcm

Enclosure

DSW 171072

230

STLCOPCB4045705

June 29, 1971

Dr. Robert M. Cook 517-353-5254
Department of Dairy Science
Michigan State University
East Lansing, Michigan 48823

Dear Dr. Cook:

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

I have enclosed copies of information concerning polychlorinated biphenyls.

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

mcm

Enclosures

DSW 171073

STLCOPCB4045706

June 29, 1971

606-723-4910

Mr. W. E. Wise
Department of Veterinary Science
Animal Pathology Building
University of Kentucky
Lexington, Kentucky 40506

Dear Mr. Wise:

Enclosed are copies of literature regarding the polychlorinated biphenyls. I could not find any specifically relating to cattle or milk.

I recommend that you write or call:

Dr. Robert M. Cook
Department of Dairy Science
Michigan State University
East Lansing, Michigan 48823
Phone (517) 353-5254

Dr. Cook is conducting cleanup studies on cattle contaminated with DDT and polychlorinated biphenyls. I believe he can be very helpful to you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

mcm

Enclosures

DSW 171074

STLCOPCB4045707

bcc: E. V. John - C2SE

June 25, 1971

Mr. Virlyn Burris
Toxicology Laboratory
Environmental Protection Agency
4770 Buford Highway
Chamblee, Georgia 30341

Dear Mr. Burris:

I regret that I cannot send you copies of the Monsanto bulletins requested by Miss Nell Richardson, Pesticide Library. These bulletins are no longer in print because many of the polychlorinated biphenyl applications recommended are no longer acceptable environmentally.

I have enclosed a copy of Technical Bulletin PL/306A which contains all of the physical and chemical information which appeared in the older bulletins.

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

mcm

Enclosure

DSW 171075

STLCOPCB4045708

W. B. Papageorge - General Offices

June 25, 1971

H. S. Bergen - B1SA
1920 - S. Pickard
C. J. Smith - B1SA

1920
M. S. MCCAULEY

Our publicly stated policy regarding divulging production information of our Aroclor products is:

> "Monsanto will provide production information on polychlorinated biphenyls produced in this country to responsible representatives of governmental agencies for scientific use on a confidential basis."

W. B. Papageorge

mcm

DSW 171076

336

W. B. Papageorge - St. Louis G. O.

June 24, 1971

P. J. A. Marsh - Brussels
J. Savage

F. Macdonald
Newport

I note in the Newport Plant Report for May a reference on page 2 under "Quality" to paint grade Aroclor 1248 and 1254.

Are we still marketing Aroclors in the U. K. for paint formulations?

W. B. Papageorge

/dc

DSW 171077

June 24, 1971

Mr. H. J. Aronstam
Allied Foods, Inc.
P. O. Box 93326
Martech Station
Atlanta, Georgia 30318

Dear Mr. Aronstam:

Enclosed is the literature on polychlorinated biphenyls I promised 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

/dc

Enclosures

DSW 171078

227

STLCOPCB4045711

Monsanto | OUTGOING MESSAGE BLANK Telecommunications System | DATE 6/23/71 | TIME 4:15pm | SENDER'S ACCOUNT NO. 2-00-[illegible]

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

PRELIMINARY DRAFT OF PCB CONTROL LITERATURE 75 PER CENT COMPLETED BY ADVERTISING AND ENGINEERING. MARKETING WILL REVIEW [illegible] WITHIN TWO WEEKS. WILL FORWARD COPY BY JULY 15.

W. B. PAPAGEORGE
ST. LOUIS G. O.

/dc
CC: [illegible]
J. R. Fallon - B2SH
W. Krull - 1740 (WGK)
P. G. Ziegenfuss - G5ED

223

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

DSW 171079

STLCOPCB4045712

June 22, 1971

Mr. R. M. Eichhorn 715-635-2324
Rawn Company, Inc.
Spooner, Wisconsin 54801

Dear Mr. Eichhorn:

I am sending under separate cover the samples of Aroclor 1221 and Aroclor 5432 we discussed over the telephone.

You may wish to try using these materials alone or as mixtures of the two.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/dc

Standard sample Aroclor 1221 and 5432 sent 6/22/71 - 548649

DSW 171080

STLCOPCB4045713

June 22, 1971

Mr. Robert Sirkoch
Research and Development
Coatings and Resins Division
PPG Industries, Inc.
151 Colfax Street
P. O. Box 127
Springdale, Pennsylvania 15144

Dear Mr. Sirkoch:

Samples of Aroclor 1221 and Aroclor 1262 , requested per your order 72912, are being sent to you under separate cover.

Aroclor 1262 is no longer sold by Monsanto. If you are considering this material for a commercial application, we have environmentally acceptable alternates we can propose.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

CC: Paul J. Zilla
PPG Industries, Inc.

Standard sample Aroclor 1221 sent 6/16/71 - 522980
Aroclor 1262 sent 6/22/71 - 578649

DSW 171081

STLCOPCB4045714

June 21, 1971

Dr. Lyle D. Johnson
Senior Chemist
Analytical Bio Chemistry
Laboratories, Inc.
P. O. Box 1097
Columbia, Missouri 65201

Dear Dr. Johnson:

I regret I cannot supply you with the standard of 2,4-D-isobutylester you requested in your letter dated June 16. Monsanto discontinued the manufacture of these materials and samples are no longer available.

May I suggest you contact Dow Chemical Company, Midland, Michigan.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/dc

DSW 171082

STLCOPCB4045715

June 21, 1971

Mr. R. G. Himstreet
Westinghouse Electric Corporation
469 Sharpesville Avenue
Sharon, Pennsylvania 16146

Dear Mr. Himstreet:

Confirming our telephone discussion this morning, I did visit the Chem-Trol Pollution Services, Inc. facilities at Blasdell, New York.

After reviewing their experiences in the disposal of askarels and heat transfer fluids containing polychlorinated biphenyls, and observing their laboratory and incinerator facilities, I believe they are capable of properly disposing of your scrap Inerteen.

I am not aware of any adverse comments regarding the Chem-Trol operation. I would appreciate your opinion regarding their performance if you decide to use their services.

Sincerely,

W. B. Papageorge
Manager
Environmental Protection

/dc

CC: J. Heilala - Monsanto, Akron

bcc: P. G. Benignus

DSW 171083

STLCOPCB4045716

June 17, 1971

Mr. C. W. Fritsch
GTE-Sylvania
Towanda, Pennsylvania 18848

Dear Mr. Fritsch:

Enclosed is a copy of our bulletin titled "Aroclor Plasticizers" and a copy of our plasticizer's pricing and shipping information which was requested by your Mr. Richard Dunn.

I hope you find this information useful. If you need more information or samples, please contact:

Mr. W. S. Clark
Monsanto Company
800 North Lindbergh Blvd.
St. Louis, Missouri 63166
Phone: (314) 694-2518

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. R. Dunn - GTE-Sylvania 717-265-2121 Ext 240
Mr. W. S. Clark - Monsanto Co.

DSW 171084

STLCOPCB4045717

W. B. PAPAGEORGE - ST. LOUIS

June 17, 1971 R. R. Dukes

GRAPHITE ANODES

Memo LCF to WBP, 6-11-71

L. C. Fuhrmeister

Enviro-Chem - Chicago

Our records show that Allied Chemical Company, Brunswick, Georgia received 30,000 pounds of Aroclor 1268 in 1970. We suspect this was used to impregnate the anodes.

Aroclor 1268 is no longer available. Aroclor 5460 is recommended as an alternate.

W. B. PAPAGEORGE

ms

DSW 171085

217

STLCOPCB4045718

June 17, 1971

Mr. James H. Wiggs
Laboratories Division
Department of Health
Statehouse
Boise, Idaho 83707

Dear Mr. Wiggs:

I am sending under separate cover samples of Aroclor 5442, Aroclor 5460 and Aroclor 1254. There is no charge for these.

Aroclor 1254 contains polychlorinated biphenyls which have been identified as environmental contaminants. Extreme care must be taken to avoid entry into the environment through spills, leakage, use, disposal, vaporization or otherwise.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms
cc: Mr. Frances Stupfell
Monsanto-Seattle, Wash.

DSW 171086

STLCOPCB4045719

Transmittal.
7/16
4/10
E
OPL-366A
O

June 16, 1971

Mr. J. G. Hugony
C.A.P. Sales Corporation
1270 Avenue of the Americas
New York, N.Y. 10020

Dear Mr. Hugony:

I am sending under separate cover the samples of PCB's we discussed over the telephone.

I have enclosed copies of analytical methodology and literature on PCB's.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171087

STLCOPCB4045720

June 16, 1971

Mr. Henry Bell
National Water Quality Laboratories
6201 Congdon Boulevard
Duluth, Minnesota 55804

Dear Mr. Bell:

I am sending under separate cover the sample of ethyl parathion you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171088

W. B. Papageorge - St. Louis

June 16, 1971

M. S. McCauley

NAT'L. ACADEMY OF SCIENCES,
CHLORINATED HYDROCARBONS IN THE
MARINE ENVIRONMENT
Memo MSC to S.P. 6/14/71

Sam Pickard

I reviewed the subject pamphlet and found no surprises. I could not help but notice that Drs. Goldberg and Risebrough exerted considerable influence on the committee.

Regarding the statement on Page 17, we know it is not factual. Monsanto representatives have offered to make production information available to responsible representatives of governmental agencies on a confidential basis for scientific purposes. This policy has been discussed with representatives of EPA, OST, USDA, FDA, Department of Commerce, Department of Interior and HEW, with university scientists and Congressman Ryan.

Reactions were varied but in general Monsanto's position was considered understandable. Only Dr. A. Serafim, MIT, representing the Advisory Committee, Office of Science and Technology, indicated orally and in writing that eventually the committee would formally request Monsanto for this information. Perhaps Monsanto's policy should be reviewed with Mr. Vetter.

I am interested in the study scheduled for August 6 by the same group in Durham, N.C. If you receive any additional information, please let me know.

W. B. PAPAGEORGE

ms

DSW 171089

213

STLCOPCB4045722

OKLMO

News Rel. 7/16
4/10

O/PL-306 A

June 15, 1971

Mr. M. A. Forbes
Eastern Region Water Quality Sub-division
Dept. of Fisheries and Forestry
P. O. Box 861
Mancton, New Brunswick
Canada

Dear Mr. Forbes:

I am sending under separate cover the samples of Aroclor 1248, Aroclor 1254 and Aroclor 1260 you requested in your letter dated May 31.

I have enclosed copies of analytical methodology and 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 Control

WBP:ms

Enclosures

INTERNATIONAL SAMPLE REQUEST

Please fill in the following information to enable us to properly enter a sales sample request.

REFERENCE NO. _____ DATE June 15, 1971

COMPLETE NAME AND ADDRESS OF CONSIGNEE Mr. M. A. Forbes
Eastern Region Water Quality Sub-division
Dept. of Fisheries and Forestry
P.O. Box 861
Moncton, New Brunswick, CANADA

PRODUCT Aroclor 1248, Aroclor 1254, Aroclor 1260

PRODUCT CODE _____

QUANTITY Standard 8 oz samples

PACKING _____

PLANT Anniston Plant - Toby Bell

SHIPPING CLASSIFICATION _____

ROUTING

AIR FREIGHT _____ PARCEL POST X OTHER _____

AIR PARCEL POST _____ OCEAN FREIGHT _____

PREPAID X OR COLLECT _____

VALUE FOR CUSTOMS _____

SPECIAL INSTRUCTIONS _____

CHARGE NO. 2-00-735.70

SAMPLE REQUEST ORIGINATED BY W. B. Papageorge

IN 1036

DSW 171091

STLCOPCB4045724

O/PL-306 A
News Rel 7/16
4/12

FGH MO

June 15, 1971

Mr. Brian Andersen
56-016
Dept. of Chemistry
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

Dear Mr. Andersen:

Enclosed are copies of literature on polychlorinated biphenyls you requested in your letter dated June 9.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171092

211

STLCOPCB4045725

June 15, 1971

Mr. Richard C. Vetter
Ocean Affairs Board
National Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

Dear Mr. Vetter:

If copies are available, will you please send me a copy of the report on the spread of DDT and other chlorinated hydrocarbons into the marine environment prepared by a panel headed by Dr. Edward D. Goldberg and released last week.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171093

STLCOPCB4045726

June 14, 1971

Mr. J. L. Benson
Purchasing Department
Frigidaire Division
General Motors Corporation
300 Taylor Street
Dayton, Ohio 45401

Dear Mr. Benson:

Confirming our telephone conversation regarding your quotation request No. 377421 M dated June 3, there will be no charge for the six samples described.

We are anxious to assist whenever we can but are concerned that our commitments may quickly exceed our capabilities. If after the initial six samples your company desires further service, I suggest that we discuss the many approaches we could follow to meet your needs.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: E. S. Tucker
Queeny Plant

DSW 171094

STLCOPCB4045727

June 14, 1971

Mr. Theodore Mill, Manager
Physical Organic Chemistry Group
Stanford Research Institute
Menlo Park, California 94025

Dear Mr. Mill,

I have reviewed your proposal outlining studies on the pyrolysis/combustion and atmospheric chemistry of polychlorinated biphenyls and find that the results of such work would not contribute significantly to our PCB program.

Pilot studies and actual on-stream experience indicate strongly that the complete and safe destruction of polychlorinated biphenyls can be accomplished with known technology.

Our primary objective regarding atmospheric pollution is to prevent the materials from introduction into the air in the first place. Once accomplished the concern for the atmospheric chemistry involved should diminish accordingly.

I appreciate your interest in these matters but I do not see any benefits to our PCB control program compared to the many studies now underway.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: R. L. Brandenburger
San Francisco

DSW 171095

205

bcc: D. R. Dill
G. G. Kosup
W. C. Moore

June 11, 1971

Mr. H. S. Batek
Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

Dear Mr. Batek,

Confirming our telephone conversation and in response to Mr. M. K. Search's letter dated May 24, my answers to the questions raised are as follows:

1. No reaction will occur when sodium pentachlorophenate or pentachlorophenol is used to treat water in conjunction with chlorine.

2. No special directions pertain to such treatment.

3. Octachloro and some heptachloro dioxins have been detected in the raw material. The highly toxic tetrachloro dioxin is not present.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. M. K. Search, Mgr.
Purchasing Dept.
Nalco Chemical Company
6216 West 66th Place
Chicago, Illinois 60638

DSW 171096

STLCOPCB4045729

June 11, 1971

Dr. Isaiah Gellman
Technical Director
National Council of the Paper Industry for
Air and Stream Improvement, Inc.
260 Madison Avenue
New York, N. Y. 10016

Dear Dr. Gellman:

Your letter dated May 17 addressed to Mr. W. E. Schalk was forwarded to me for response because I am involved in the assessment of several of our products for environmental impact.

1. The biodegradability of monoisopropyl biphenyl was evaluated in our laboratories and we were pleased to note that it can be described as readily degradable.

2. Tests to determine toxicity to fish are now underway and I am informed that they should be completed and reports issued by the end of August.

3. We have no plans for testing for concentration in food systems because the ease of degradability would indicate no build-up problems.

4. Skin tests conducted on human volunteers indicate that direct contact during use or recycle of waste paper should not be irritating.

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 Control

WBP:ms

DSW 171097

STLCOPCB4045730

June 10, 1971

Dr. C. S. Giam
Department of Chemistry
College of Science
Texas A & M University
College Station, Texas 77843

Dear Dr. Giam:

Enclosed are copies of analytical methods and literature on PCB's you requested in your letter dated May 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 Control

WBP:ms

Enclosures

DSW 171098

STLCOPCB4045731

June 10, 1971

314-982-2357

Mr. R. G. Einig
Floor 3RS
Ralston Purina Company
835 South Eighth Street
St. Louis, Missouri 63188

Dear Mr. Einig:

I am sending under separate cover the samples of Aroclor 1221, 1242, 1248, 1254, 1260, 1262 and 1268 you requested.

I have enclosed copies of analytical methodology and 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 Control

WBP:ms

Enclosures

DSW 171099

204

STLCOPCB4045732

June 8, 1971

Dr. Hasmukh Shah
Department of Pharmacology
University of Rhode Island
Kingston, Rhode Island 02881

Dear Dr. Shah:

I apologize for the delay in responding to your letter dated May 7, 1971. I was out of the office for the entire month and I am now attempting to reduce the backlog of correspondence which had accumulated.

I am sending under separate cover the sample of Aroclor 1221 you requested.

Monsanto has not been interested in the individual polychlorinated biphenyl isomers as a commercial product. As a result we have not become experts in isomer separation although some time ago we did isolate milligram quantities which we shared with a few laboratories. The supply is now exhausted and because of the high cost and because we are primarily interested in the commercial mixtures we do not plan to isolate additional quantities.

I am enclosing copies of articles by Harold Weingarten, published in the early 1960's. Perhaps you could adapt his methods to your needs.

I do not know of any laboratory which has a supply of isomers which it is willing to share. The following laboratories have been working with PCB isomers for the past year or so and may be able to help.

Dr. O. Hutzinger
National Research Council
Atlantic Regional Laboratory
1411 Oxford Street
Halifax, N.S., Canada

DSW 171100

202

STLCOPCB4045733

Dr. Ronald G. Webb
Federal Water Pollution Office
Southeast Water Laboratory
Athens, Georgia 30601

Dr. David C. Stallings
Fish-Pesticide Research Laboratory
Bureau of Sport Fisheries and Wildlife
U. S. Dept. of Interior
Route 1
Columbia, Missouri 65201

I have enclosed copies of literature relating to 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 Control

WBP:ms

Enclosures

DSW 171101

bcc: W. Clark - B3NE

June 4, 1971

Mr. A. Surland 914-592-7860
Sinclair-Valentine Research Center
77 Executive Boulevard
Elmsford, New York 10523

Dear Mr. Surland:

I am sending under separate cover the sample of Aroclor 1221 we discussed on the telephone.

To summarize, our tests indicate that Aroclor 1221 is degradable and would respond to the usual municipal waste treating systems. There is no evidence to indicate that Aroclor 1221 is an environmental contaminant.

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 Control

WBP:ms

DSW 171102

201

STLCOPCB4045735

W. B. PAPAGEORGE - ST. LOUIS
June 3, 1971

H. A. Vodden - RUABON

I appreciate your concern for the possible questions posed by the findings reported in the article by Biros, Walker and Medbery in the Bulletin of Environmental Contamination and Toxicology Vol. 5, No. 4, 1970.

Dr. Maury Johnson of our Medical Department contacted a Dr. Harold Price, Michigan State Department of Health, who was mentioned in the article for providing the two human tissue samples. Dr. Price informed Dr. Johnson that he was involved in an active program of determining pesticide residues in human tissue and had recently included PCB's in his study.

Bob Keller contacted Dr. Price to discuss analytical methodology. I have attached a copy of Bob's notes.

It appears PCB's are fairly common in human tissue. The sources are as yet unknown. We intend to follow further developments closely.

W. B. PAPAGEORGE

ms

Enclosure

DSW 171103

W. B. PAPAGEORGE - ST. LOUIS

June 3, 1971

H. S. Bergen
J. Mason
C. W. Roos
C. J. Smith

CORPORATE PROCEDURE - EVALUATION OF PROPOSED NEW PRODUCTS AND PROCESSES

F. J. Holzapfel

I reviewed the corporate procedure for the environmental evaluation of proposed new products and processes as well as the preliminary copy of John Eck's memo to the division general managers dated May 19 and I have the following comments and recommendations to offer.

In my opinion, the impact that our Division's products and activities have on the environment will influence, at a rapidly accelerating pace, virtually every decision made in the Division including what products we research and develop, what type of product or service we will sell, how the product is made, where it is made, how is it shipped, what markets do we serve, what assistance does the customer need, what is our posture regarding our relationships with the governmental agencies, customers, employees, and the public. Because of this widespread effect on the Division and to properly manage this important activity, I recommend that all programs relating to environmental considerations be coordinated by one person. I use the word "coordinate" to indicate that no one individual has all the skills and resources required to do the job alone and must have access to the appropriate resources available within our Division as well as the rest of Monsanto. The appointment of this individual is not to be interpreted as releasing all other individuals from responsibilities concerning environmental impact, but should result in better performance in this area throughout the Division.

OBJECTIVE: The primary objective of this assignment should be:

To assure that the Organic Division's efforts relating to the environmental impact of its products, facilities and activities conform to corporate policy and that the resources expended in this effort are allocated in a manner that shall result in maximum positive contribution toward achieving Division and corporate objectives.

DSW 171104

STLCOPCB4045737

ORGANIZATION: Initially one individual who is qualified regarding skills, knowledge, experience, relationships, etc., should be assigned to coordinate the Division's efforts to achieve the above objective. As the workload increases, consideration must be given to providing additional personnel. This should be thoroughly evaluated before implementing to determine true needs and to avoid "empire building".

Because of the many product lines involved and the many groups, departments and functions which exist a matrix type organization with elements representing the different interests should be immediately formed to support the effort. Provision must be made to provide for effective interfacing between research, development, manufacturing, marketing, medical, engineering, public relations, and legal activities. Perhaps this could be achieved with the assignment of individuals from each of the groups and departments involved.

Because of the negative connotations that many individuals associate with environmental problems, the proper placement of this new job within the Division organization appears to me to be extremely important. If we sincerely desire to achieve the stated objective, this individual must be placed in a position that implies without question that our interest in environmental problems is great, that we will perform accordingly and the job is important.

Although we may not approve there exists, not only in our Division but virtually everywhere, the undesirable situation known variably as departmentitis, productitis, functionitis, etc. Many individuals, for varying reasons, have little understanding or respect for groups other than their own. If this new job is placed in a position that implies "manufacturing", "marketing", "research", etc. the individual assigned to this job is in an untenable position and his effectiveness is immediately and harmfully diminished.

STLCOPCB4045738

Unless we properly place this job, it will immediately deteriorate to one best described as "errant boy", answering the phone, filing reports, sending out samples, performing chores which others in the division find unpleasant, and will not accomplish the objectives of the job.

BUDGETING: I propose that a cost center be established and a budget be developed to cover the costs directly related to the administration of this job and to include the salary of the individual, a portion of his supervisor's salary, and the appropriate portion of stenographic wages, travel, and the usual overheads, communications, office rent, etc. I estimate that this cost will be about $60,000 per year.

By limiting this cost center to just these items we can avoid the problems created when anyone throughout the Division can charge any expense he would arbitrarily define as environmental to an account for which he is not held responsible.

All other environmentally related costs, which I predict will increase dramatically particularly for developing analytical methodology and conducting biodegradation and toxicity studies, should be anticipated and budgeted in existing cost centers. This data should be recorded in a manner that permits easy retrieval for the preparation of appropriate summary reports.

These represent the thoughts that occur to me at the moment. You can probably note that they reflect my personal experiences with the Aroclor defense problem. I would like to discuss this further with you and anyone else who is interested.

W. B. PAPAGEORGE

ms

DSW 171106

STLCOPCB4045739

June 3, 1971

Mr. William L. Abramowitz
Yeda Research & Development Co. Ltd.
524 Statler Office Building
20 Providence Street
Boston, Massachusetts 02116

Dear Mr. Abramowitz:

I apologize for this delayed response to your letter dated April 22. I was not in the office during May and I am now attempting to work my way through the backlog of correspondence which has accumulated.

We are very interested in the possible substitution of bromine for chlorination in many of our processes but have completed very little research and development work primarily because we concentrated our efforts on the PCB problem.

I am intrigued by your comments on the degradation of brominated materials and I would appreciate receiving any further details that are available.

I am also interested in more information regarding the availability and pricing of bromine and of the capabilities of your organization and the type of programs that might be undertaken in this area.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171107

98

W. B. PAPAGEORGE - ST. LOUIS

June 3, 1971 H. A. Vodden - RUABON

P.J.A. Marsh - BRUSSELS

Regarding literature for controlling PCB's the current status is as follows:

1. A scissors and paste preliminary draft is being prepared by plant engineering and advertising representatives. This draft is expected to be ready for review within a week or two.

2. A review with appropriate marketing representatives is planned for the week of June 21.

3. As soon as we arrive at a draft which meets the needs of all concerned, I will send you a copy.

Regarding the budgeting of PCB Research activities at Ruabon which we discussed, I am under the impression that you believed I had a special budget to cover such expenditures.

No such budget exists. All PCB defense expenditures flow through normal cost centers. These costs are coded in a manner that provides for easy retrieval for the preparation of summary reports. It is my responsibility to assure that costs do not exceed the established targets. This responsibility is also given to the manager of each function, e.g., research, manufacturing, engineering, etc.

Therefore costs of the Ruabon activities in 1970 and again for 1971 flow back to the total Specialty Products Research budget which is Bill Richard's primary responsibility.

For 1971 Bill Richard and I agreed to propose a budget of $25,000 for Ruabon. Howard Bergen and John Mason gave their approval. We have not, however, received either formal approval or rejection; therefore, we are assuming eventual approval. In

DSW 171108

175

any event, if reductions in budget are made, we will probably reduce other research activities and allow the Ruabon portion to remain at $25,000.

As we discussed, current plans for 1972 do not include the existence of my assignment. All PCB activities will be continued in the appropriate functional groups and become a part of the day-to-day business.

W. B. PAPAGEORGE

ms

DSW 171109

W. B. PAPAGEORGE - ST. LOUIS

June 3, 1971

J. R. Durland TOKYO
D. Danna DDANN

S. UNENO - TOKYO

Referring to your Telex dated May 31:

1. o-chlorobiphenyl is being used increasingly as a dye carrier. Also, we are at present using Aroclor 1221 with polychlorinated terphenyls (Aroclor 5000 series) to produce plasticizer blends which we call the Aroclor 6000 series. We believe Aroclor 1221 is environmentally acceptable because it degrades easily. If governmental agencies object to the di and tri chloro biphenyls in Aroclor 1221 we can resort to using o-chlorobiphenyl.

2. I have attached Mr. R. A. Lidgett's summary of his work at Ruabon in which he compared Aroclor 1242 with MCS 1016 (now referred to as Aroclor 1016). He will prepare a more complete report on this work which I will forward to you when I receive it.

W. B. PAPAGEORGE

ms

Enclosure

DSW 171110

19

Monsanto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE 6-3-71 | TIME 8:45 AM | SENDER'S ACCOUNT NO. 2-00-735.70

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

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

T. ISHIJIMA - MK TOKYO
J. R. DURLAND - TOKYO

HEAT OF COMBUSTION OF HYDRAUL 312 IS APPROXIMATELY 8000 BTU PER POUND. MORE CRITICAL REGARDING INCINERATION ARE THE FOLLOWING TEMP ABOVE 1600 DEGREES FAHRENHEIT RETENTION TIME AT LEAST FOUR SECONDS EXCESS OXYGEN THREE PERCENT. MUST PROVIDE FOR SCRUBBING HCl AND OXIDES OF PHOSPHORUS.

W. B. PAPAGEORGE - ST. LOUIS

CC: D. DANNA
J. H. DAVIDSON

195

IN-IR REV. 7-64

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

DSW 171111

STLCOPCB4045744

W. B. PAPAGEORGE - ST. LOUIS

June 2, 1971

H. S. Bergen HBERG
W. R. Richard WRICH

L. R. Stark - LSTAR

Attached are copies of the Corps. of Engineers Refuse Permit procedure and forms which you requested.

The 50 parameters for which specific information will be required are listed on Page 2 of Eng. Form 4345-1.

W. B. PAPAGEORGE

ms

Attachments

DSW 171112

19

MAY

DSW 171113

STLCOPCB4045746

W. B. PAPAGEORGE - ST. LOUIS

May 28, 1971

H. S. Bergen
J. Mason
C. W. Roos
C. J. Smith

CORPORATE PROCEDURE - EVALUATION
OF PROPOSED NEW PRODUCTS AND PROCESSES

F. J. Holzapfel

I reviewed the corporate procedure for the environmental evaluation of proposed new products and processes as well as the preliminary copy of John Eck's memo to the division general managers dated May 19 and I have the following comments and recommendations to offer.

In my opinion, the impact that our Division's products and activities have on the environment will influence, at a rapidly accelerating pace, virtually every decision made in the Division including the type of product or service we will sell, how the product is made, where it is made, how is it shipped, what markets do we serve, what assistance does the customer need, what is our posture regarding our relationships with the governmental agencies, customers, employees, and the public. Because of this widespread effect on the Division and to properly manage this important activity, I recommend that all programs relating to environmental considerations be coordinated by one person. I use the word "coordinate" to indicate that no one individual has all the skills and resources required to do the job alone and must have access to the appropriate resources available within our Division as well as the rest of Monsanto. The appointment of this individual is not to be interpreted as releasing all other individuals from responsibilities concerning environmental impact, but should result in better performance in this area throughout the Division.

OBJECTIVE: The primary objective of this assignment should be:

To assure that the Organic Division's efforts relating to the environmental impact of its products, facilities and activities conform to corporate policy and that the resources expended in this effort are allocated in a manner that shall result in maximum positive contribution toward achieving Division and corporate objectives.

ORGANIZATION: Initially one individual who is, of course, qualified regarding skills, knowledge, experience, relationships, etc., should be assigned to coordinate the Division's efforts to achieve the above objective. As the work-load increases, consideration must be given to providing additional personnel. This should be thoroughly evaluated before implementing to determine true needs and to avoid "empire building".

Because of the many product lines involved and the many groups, departments and functions which exist a matrix type organization with elements representing the different interests should be immediately formed to support the effort particularly in the detail work requiring specific skills and knowledge such as research, development, manufacturing, marketing, legal, engineering, public relations, etc.

Because of the negative connotations that many individuals associate with environmental problems, the proper placement of this new job within the Division organization appears to me to be extremely important. If we sincerely desire to achieve the stated objective, this individual must be placed in a position that implies without question that our interest in environmental problems is great, that we will perform accordingly and the job is important.

Although we may not approve there exists, not only in our Division but virtually everywhere, the undesirable situation known variably as departmentitis, productitis, functionitis, etc. Many individuals, for varying reasons, have little understanding or respect for groups other than their own. If this new job is placed in a position that implies "manufacturing", "marketing", "research" etc. the individual assigned to this job is in an untenable position and his effectiveness is immediately and harmfully diminished.

STLCOPCB4045748

Unless we properly place this job, it will immediately deteriorate to one best described as "errant boy", answering the phone, filing reports, sending out samples, performing chores which others in the division find unpleasant. If this is really what we want, we should not attempt to deceive anyone that it offers great opportunities but assign the duties to an intelligent, dedicated clerk-steno who is liked by everyone.

BUDGETING: I propose that a cost center be established and a budget be developed to cover the costs directly related to the administration of this job and to include the salary of the individual, a portion of his supervisor's salary, and the appropriate portion of stenographic wages, travel, and the usual overheads, communications, office rent, etc. I estimate that this cost will be about $60,000 per year.

By limiting this cost center to just these items we can avoid the problems created where anyone throughout the Division can charge any expense he would arbitrarily define as environmental to an account for which he is not held responsible.

All other environmentally related costs, which I predict will increase dramatically particularly for developing analytical methodology and conducting biodegradation and toxicity studies, should be anticipated and budgeted in existing cost centers. This data should be recorded in a manner that permits easy retrieval for the preparation of appropriate summary reports.

These represent the thoughts that occur to me at the moment. You can probably note that they reflect my personal experiences with the Aroclor defense problem. I would like to discuss this further with you and anyone else who is interested.

DSW 171116

W. B. PAPAGEORGE

ms

STLCOPCB4045749

May 27, 1971

Mr. George R. Harvey
Assistant Scientist
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts 02543

Dear Mr. Harvey:

I am sending under separate cover the sample of Aroclor 1254 you requested in your letter to Howard Bergen dated May 25. I am also sending samples of Aroclor 1242 and Aroclor 1260. These three Aroclors represent the types most commonly used.

I have enclosed a copy of the analytical methodology used by Monsanto laboratories in the determination of polychlorinated biphenyls.

I hope you find these methods applicable to your needs. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171117

19a

STLCOPCB4045750

May 26, 1971

Miss Susan Simon
Center of Political Research
1730 M Street
Washington, D.C. 20036

Dear Miss Simon:

Enclosed are copies of the literature regarding polychlorinated biphenyls which I promised to send.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171118

STLCOPCB4045751

bcc: D. W. Miller DMILL
E. S. Tucker - JFQ

May 25, 1971

Dr. David A. Hill, D.V.M.
Division of Foods, Dairies & Drugs
Ohio Department of Agriculture
711 State Office Building
Columbus, Ohio 43215

Dear Dr. Hill:

Mr. Jacob Hess informs me that a portion of your laboratory sample No. 42379 is available for further analysis.

We are interested in receiving an adequate amount for analysis in our laboratory. Will you arrange for the shipment of the sample to:

Dr. E. S. Tucker
Monsanto Company
1700 South Second Street
St. Louis, Missouri 63177

To avoid delays and possible loss, we would appreciate information on method of shipment and expected time of arrival in St. Louis.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. Jacob F. Hess Jr.
Amerman, Burt, Shadrach,
McHenry & Jones
Peoples-Merchant Trust Bldg.
Canton, Ohio 44702

DSW 171119

190

STLCOPCB4045752

May 25, 1971

Mrs. Candace Plato, Chemist
Division of Chemical Technology
Food and Drug Administration
Public Health Service
Dept. of Health, Education & Welfare
Washington, D.C. 20204

Dear Mrs. Plato:

I am not aware of a booklet entitled "The Aroclor Compounds" as indicated in your letter dated May 5.

I have, however, enclosed copies of analytical methodology, a technical bulletin and recent articles 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 Control

WBP:ms

Enclosures

DSW 171120

157

May 25, 1971

Mr. Kenneth Adams
Dept. of Biological Sciences
University of California, Santa Barbara
Santa Barbara, California 93106

Dear Mr. Adams:

I am sending under separate cover the samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 you requested in your letter dated May 18.

I have enclosed a copy of analytical methodology used by Monsanto laboratories in 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 Control

WBP:ms

Enclosure

DSW 171121

188

STLCOPCB4045754

May 24, 1971

Dr. Rex W. Richburg
Director
Pesticide Residue Laboratory Div.
Alabama Dept. of Agriculture & Industries
P.O. Box 370
Auburn, Alabama 36830

Dear Dr. Richburg:

I have enclosed the bulletins you requested in your letter dated April 29.

The applications recommended in these publications should help in determining the uses which were formerly made of polychlorinated biphenyls.

With mounting evidence that some PCB's were environmental pollutants, Monsanto management decided to discontinue on August 30, 1970 the sale of PCB's for uses in which escape to the environment could not be controlled; therefore the uses described in these bulletins are no longer applicable to PCB materials.

I hope this information is useful in your residue studies. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171122

STLCOPCB4045755

Monsanto

DATE	TIME	SENDER'S ACCOUNT NO.
5-21-71	10:00 AM	2-00-735.70

INDICATE DESIRED SERVICE → [X] FULL RATE [ ] DAY LETTER [ ] NIGHT LETTER

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

K. MURAKAMI - TOKYO

"PESTICIDE RESIDUE ANALYSIS IN THE PRESENCE OF PCB'S"BY L. M. REYNOLDS IS VOLUME 34 OF BOOK "RESIDUE REVIEWS" PUBLISHED BY SPRINGER-VERLAG, 175 FIFTH AVENUE, NEW YORK, NEW YORK 10010. THEY PUBLISH ABOUT TWO VOLUMES A YEAR ON THIS.

W. B. PAPAGEORGE - ST. LOUIS

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

DSW 171123

STLCOPCB4045756

"C"

May 19, 1971

Dr. Gary L. Westberg
Chief Chemist
Morse Laboratories
316 Sixteenth Street
Sacramento, California 95814

Dear Dr. Westberg:

Attached are price lists of polychlorinated biphenyls which Monsanto markets currently and a copy of analytical methodology used by Monsanto laboratories for the determination of PCB's.

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 Control

WBP:ms

Enclosures

DSW 171124

181

STLCOPCB4045757

bcc: W. S. Clark - WCLAR

May 19, 1971

Mr. Leon Hunter
Pope Testing Laboratories
Dallas, Texas 75200

Dear Mr. Hunter:

Monsanto's Mr. S. G. Morlock informs me of your interest in polychlorinated biphenyls. I am sending under separate cover samples of Aroclor 1254 and Aroclor 1260.

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 Control

WBP:ms

cc: Mr. S. G. Morlock
Monsanto - Houston

DSW 171125

53

STLCOPCB4045758

bcc: Marion Remley - SEATTLE

May 19, 1971

Mr. Sam Boggs
Geology Department
University of Oregon
Eugene, Oregon 97403

Dear Mr. Boggs:

I am sending under separate cover the Aroclor 4465 you requested in your Purchase Order 32120 dated April 23, 1971. There is no charge for this material since it represents residual samples of a product Monsanto no longer manufactures.

If your need for this material is a continuing one, I suggest that alternative materials be evaluated for replacement before this supply is exhausted. Monsanto will be happy to work with you in suggesting substitutes if we had an idea of the application involved.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Dr. F. S. Wilhelm
Graduate School
University of Oregon
Eugene, Oregon 97403

DSW 171126

bcc: W. Clark - WCLAR
J. Arbogast - CHICAGO

May 19, 1971

Dr. Randy C. Hall
Assistant Professor
Dept. of Entomology
School of Agriculture
Purdue University
Lafayette, Indiana 47907

Dear Dr. Hall:

Your letter dated April 29 to Monsanto's Mr. J. Arbogast was forwarded to me for response.

I am sending under separate cover the Aroclor samples you requested. I have also enclosed a copy of analytical methodology used by Monsanto laboratories for PCB determination. I hope you find it useful.

Your experience with apparent contamination in your laboratory is not unusual. In my experience, virtually every laboratory that attempts PCB determinations undergoes a period of three to six months of frustration combating the contamination problem. Extreme precautions must be taken to avoid it. The sources listed in your letter, e.g. plastic containers, adhesives, labels, lubricating oils are unlikely candidates for suspicion.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171127

18

STLCOPCB4045760

May 14, 1971

Mrs. Janet L. Booth
Chemist
Dept. of Health, Education, & Welfare
Food & Drug Adm.
Room 5003, Fed. Ofc. Bldg.
909 First Avenue
Seattle, Washington 98104

Dear Mrs. Booth:

I am forwarding under separate cover a sample of Aroclor 5460 which you requested in your letter of May 11.

I am also enclosing copies of data sheets, articles and pamphlets containing information on the synthesis, toxicity, chemical and physical properties of our 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 Control

WBP:ms

Enclosures

DSW 171128

STLCOPCB4045761

May 14, 1971

Mr. Michael Wider
Biology Department
University of Detroit
4001 W. McNichols Rd.
Detroit, Michigan 48221

Dear Mr. Wider:

I am forwarding under separate cover samples of Aroclor 5442 and 5460 which you requested in your letter of May 11.

I have enclosed information on the general physical properties of our Aroclor chlorinated compounds.

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 Control

ms

Enclosure

DSW 171129

STLCOPCB4045762

May 13, 1971

Miss Marian E. Wilke
Chairman, PCB Committee
Ventura College
929 Cuyama Road
Ojai, California 93023

Dear Miss Wilke:

Enclosed is a collection of articles concerning polychlorinated biphenyls (PCB's) which you requested in your letter of May 3.

I hope these articles are useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

ms

Enclosures

DSW 171130

178

STLCOPCB4045763

APRIL

DSW 171131

April 30, 1971

Mr. Michael Dean Edwards
333 Second Street, N.E.
Washington, D. C. 20002

Dear Mr. Edwards:

I have enclosed copies of Monsanto literature describing several plasticizers which we market which I believe will be helpful in preparing your term paper.

Monsanto's Technical Bulletin O/PL 306 which you have is an outdated bulletin and recommends plasticizer uses which Monsanto no longer supplies.

We have withdrawn from the plasticizer market those Aroclors which contain persistent polychlorinated biphenyls which have been identified as environmental contaminants.

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 Control

WBP:ms

Enclosures

DSW 171132

17;

STLCOPCB4045765

April 30, 1971

Dr. H. S. Olcott
Professor, Marine Food Science
Institute of Marine Resources
College of Agricultural & Environmental
Sciences
University of California, Davis
Davis, California 95616

Dear Dr. Olcott:

When Monsanto's Mr. E. V. John informed me of your letter of April 23 in which you expressed continued interest in our PCB activities, I was reminded of our pleasant visit with you on the Berkeley campus last year.

Regarding the availability of News Releases concerning PCB's, it appears that you have seen all that we have issued. Since July 1970 our contacts with the press have been either in person or by telephone which precluded any further need for a prepared news release.

Recent dialogues with representatives of the press resulted in articles in Chemical Week in the United States and New Scientist and Science Journal in the United Kingdom.

I have attached copies of these two articles. Although you have seen the previously issued News Releases of April 10 and July 16, 1970 I have enclosed copies in the event you may have a need for extra copies.

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 Control

WBP:ms
Enclosures
cc: E. V. John
Monsanto-St. Louis

DSW 171133

171

April 30, 1971

Mr. James A. Laubscher
Woodson-Tenent Laboratories
345 Adams Avenue
P. O. Box 2135
Memphis, Tennessee 38102

Dear Mr. Laubscher:

I regret that our sample of Aroclor 1248 was broken enroute.

I have arranged for a replacement and for a sample of Aroclor 1232 you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171134

175

STLCOPCB4045767

April 30, 1971

Mr. R. A. Currie
Dairy and Food Laboratory
Animal Industry Division
Alberta Department of Agriculture
O. S. Longman Building
6909-116th Street
P. O. Box 4370
Edmonton 62, Alberta

Dear Mr. Currie:

I am forwarding under separate cover samples of Aroclor 4465, Aroclor 5432, Aroclor 5442 and Aroclor 5460 which you requested in your letter dated April 19.

Our Aroclor 1254 is manufactured by the same process used to produce all of our Aroclors and I am surprised that it appears to behave differently in your chromatographic system. If you will forward to me additional information regarding your methodology and observations, I will consult with our Research Department and hopefully we can explain the differences noted.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171135

G
FAJKL

April 29, 1971

Mrs. Stella Miller
National Paint, Varnish & Lacquer
Assoc. Inc.
1500 Rhode Island Avenue, N.W.
Washington, D.C. 20005

Dear Mrs. Miller:

Enclosed is a collection of articles concerning polychlorinated biphenyls (PCB's) which I promised to send you.

I believe our discussion Tuesday was interesting and informative and I appreciated the opportunity you extended to share your PCB experiences with us.

I hope these articles are useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171136

17

STLCOPCB4045769

cc: S. Pickard - WASH. D.C.

April 29, 1971

Dr. William D. Upholt
Staff Director
Pesticide Advisory Committee
Environmental Protection Agency
Room 4554 NHEW
330 Independence Avenue, S.W.
Washington, D.C. 20201

Dear Dr. Upholt:

I have enclosed typical examples of labels we apply to containers of packaged material that contains polychlorinated biphenyls.

These are the labels I offered to mail you during our discussion last Tuesday.

I personally believe our discussion was interesting and informative and I appreciated the opportunity you extended to us to share our PCB information with you.

We are very interested in continuing to help wherever possible and if we can be of further service, please let us know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171137

April 28, 1971

Dr. P. N. Dua
Div. of Animal Health & Dairies
Dept. of Agriculture and Commerce
Commonwealth of Virginia
116 Reservoir Street
Harrisonburg, Virginia 22801

Dear Dr. Dua:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 as requested in your letter dated April 20. These Aroclors represent the most common types used.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171138

/7,

STLCOPCB4045771

April 28, 1971

Mr. William Thomas Vick
Pesticide Residue Chemist
North Carolina Dept. of Agriculture
Raleigh, North Carolina 27611

Dear Mr. Vick:

I am sending under separate cover samples of Aroclors 1221, 1232, 1242, 1248, 1262, 4465, 5442 and 5460 you requested in your letter of April 23. We do not have any Aroclors of 20, 30, 40, 45 or 50% chlorine.

I regret I do not have a copy of Monsanto's Technical Bulletin O/PL-306 since it is no longer in print. I am enclosing a copy of O/PL-306A which contains much of the information regarding chemical and physical characteristics which formerly appeared in the older bulletin.

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 Control

WBP:ms

Enclosure

DSW 171139

STLCOPCB4045772

April 28, 1971

Mr. Robert J. Barbour
Maribeni-Iida
200 Park Avenue
New York, N. Y. 10017

Dear Mr. Barbour:

Attached is the label which we use on packages containing polychlorinated biphenyls.

As we discussed, Monsanto sells these materials only for use in closed system applications.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Attachment

DSW 171140

169

STLCOPCB4045773

April 26, 1971

Mr. Charles W. Flickinger
Environmental Health and Safety
Research Department
Koppers Company, Inc.
440 College Park Drive
Monroeville, Pennsylvania 15146

Dear Charles,

I have enclosed a copy of our "New Products" checklist which you requested in your letter of April 20.

Because of its relative newness we still consider our program as being in an evolutionary stage with changes for improvement being made as we acquire more experience.

I hope it is useful to you and I would appreciate any comments you may have to offer.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171141

STLCOPCB4045774

W. B. PAPAGEORGE - ST. LOUIS

April 26, 1971

D. Danna DDANN
J. R. Durland TOKYO
K. Murakami Tokyo
K. Hoshino TOKYO
T. Adachi TOKYO
T. Nakamura YOKKAICHI

Sumito Uneno - TOKYO

On December 29, 1970 Mr. Seiji Fujii requested information on the international conference on oceanic pollution held in Rome, Italy last December.

A copy of the United Nations Food and Agriculture report finally arrived and I have attached a copy for your information.

Chlorinated hydrocarbons are mentioned in Section 1.6.

W. B. PAPAGEORGE

ms

Enclosure

DSW 171142

16

STLCOPCB4045775

April 26, 1971

Miss Louise S. Merkins
Dept. of Pharmacology
SUNY
Upstate Medical Center
766 Irving Avenue
Syracuse, New York 13210

Dear Miss Merkins:

I am sending under separate cover samples of Aroclors 1221, 1248, 1254 and 1268 you requested in your letter of April 21.

I hope these are useful in your studies of physiological effects of polychlorinated biphenyls. Perhaps you will be able to share your results with us as your studies progress.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171143

STLCOPCB4045776

April 22, 1971

Mr. Irving Schwartz
Environmental Editor
Chemical Week
P.O. Box 386
Times Square Station
New York, New York 10036

Dear Irv:

I was pleased to read your account of Monsanto's PCB environmental program in the April 21 issue. You probably gathered from our interview last month, that the PCB issue and our program are complicated by a great many details. You were able to handle this complexity in a factual and straightforward manner. I believe you have given the public an honest view of the PCB problem and our attempt to contain further escape of this material to the environment.

Incidentally, we have ordered reprints of your article and plan to send them to customers and certain editors in the country who have been following the PCB story.

Thanks for your interest in this environmental effort.

Sincerely,

William B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. P. R. Wilkins -
Monsanto - New York

Mr. E. V. John
Monsanto - St. Louis

DSW 171144

165

bcc: D. H. Bechtold - CHICAGO
W. S. Clark WCLAR
A. W. Hempelman- SEATTLE

April 21, 1971

Dr. Colin Campbell
Director
United Analytical Laboratories
10005 N.E. Sandy Boulevard
Portland, Oregon 97208

Dear Dr. Campbell:

I regret I cannot send you a copy of Monsanto's Technical Bulletin O/PL-306 since it is no longer in print.

I have enclosed a copy of Technical Bulletin O/PL-306A which contains much of the information which appeared in the older bulletin.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171145

OTL-306A
F H 40

April 21, 1971

Dr. J. R. Harris
Extension Veterinarian
Dept. of Poultry Science
School of Agriculture & Life Sciences
North Carolina State University
Box 5307
Raleigh, North Carolina 27607

Dear Dr. Harris:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 requested in your letter dated April 16, 1971. These Aroclors represent the types most commonly found in the environment.

I have enclosed copies of information relating to polychlorinated biphenyls. I hope it is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171146

163

STLCOPCB4045779

From the desk of 4-21-71

W. B. PAPAGEORGE

COPIES TO:

C. J. Smith
H. S. Bergen
F. J. Holzapfel
T. L. Gossage
J. R. Savage
W. R. Richard
R. E. Keller - Queeny
R. M. Kountz
P. B. Hodges
H. A. Vodden - Ruabon
P.J.A. Marsh - Brussels
J. R. Durland- Tokyo
G. L. Bratsch- Krummrich
G. L. Jessee - Anniston
D. B. Shearn/F. McDonald - NEWPORT

W.E.P.

DSW 171147

STLCOPCB4045780

4/21/71

MANAGEMENT PLAN - 1971

POLYCHLORINATED BIPHENYL ENVIRONMENTAL PROBLEM

I. THE PROBLEM:

Polychlorinated biphenyls have been identified as environmental contaminants and studies have indicated that they may be involved in producing adverse effects noted in some species of fowl, mammals and marine life. Monsanto is a major producer of polychlorinated biphenyls worldwide.

II. BASIC STRATEGY:

Our strategy for 1971 will continue the pattern followed in 1970. We will continue to assume an aggressive posture worldwide working closely with our customers, co-producers and regulatory agencies to prevent precipitous action. In the United States, Canada and United Kingdom we will market persistent polychlorinated biphenyls only to those end uses which are essentially closed systems and where control of escape to the environment is possible. For the remainder of the competitive worldwide market, we will assume leadership in influencing the other producers to adopt the same marketing policy of limited application to closed systems and the adoption of tight controls during manufacture and use. We may, if circumstances in different areas indicate it would be appropriate, take unilateral action and extend our limited application policy.

III. OBJECTIVES:

Our overall objective continues to be the management of the polychlorinated biphenyl environmental contamination problem to minimize the adverse effects on Business Group, Division or Corporate objectives while maintaining the corporate image of Monsanto as a responsible and respected member of industry worldwide.

Objectives supporting the overall objective are as follows:

1. The polychlorinated biphenyl content of all effluent from Monsanto plants will be reduced and effectively controlled.

2. Customers will be advised of the importance of preventing PCB pollution and will be given assistance on control, reclamation, disposal and substitute materials.

DSW 171148

3. The effect of PCB's and replacement products on the environment will be determined.

4. Favorable relationships will be established and maintained with customers, the press, governmental agencies, competitors, the public and universities.

IV. ACTION PLAN:

1. Action - All plants to achieve a target of less than 1 pound per day in water effluent.

   Responsibility - Manufacturing Manager - Specialty Products Group

   Plant Managers

   Environmental Engineering Manager, Manufacturing Department

   Date - September, 1971

2. Action - All plants to achieve target of less than 1 pound per day in atmospheric effluent.

   Responsibility - Manufacturing Manager - Specialty Products Group

   Plant Managers

   Environmental Engineering Manager, Manufacturing Department

   Date - December, 1971

3. Action - Complete studies on removal of PCB from water effluent.

   Responsibility - Manager, Research - Specialty Products Group

   Date - May, 1971

4. Action - Execute existing PCB market plans for U.S.-Canada, U.K.-Europe and Japan.

   Responsibility - Sales Director - Specialty Products Group

   Date - As indicated in each plan

5. Action - Develop marketing plan for South American, Australian, and Southeast Asian markets by year end.

   Responsibility - Sales Director - Specialty Products Group

   Date - December, 1971

DSW 171149

6. Action - Complete modification of reclamation facilities at W. G. Krummrich plant.

   Responsibility - Manufacturing Manager - Specialty Products Group

   Date - September, 1971

7. Action - Complete installation of the scrap liquid incinerator at W. G. Krummrich plant.

   Responsibility - Engineering Manager - Specialty Products Group

   Date - June, 1971

8. Action - Evaluate need for the installation of a solid waste incinerator at W. G. Krummrich plant.

   Responsibility - Manager, Environmental Control - Specialty Products Group

   Date - April, 1971

9. Action - Complete installation of the MCS 1016 distillation unit at W. G. Krummrich plant.

   Responsibility - Engineering Manager - Specialty Products Group

   Date - July, 1971

10. Action - Develop used PCB drum control program.

    Responsibility - Manager, Environmental Control - Specialty Products Group

    Date - October, 1971

11. Action - Prepare guidelines for customer in-plant PCB control.

    Responsibility - Manager, Environmental Control - Specialty Products Group

    Date - June, 1971

12. Action - Develop biodegration program and execute as planned.

    Responsibility - Manager, Research - Specialty Products Group

    Section Manager - Applied Sciences, Org. Div. Res.

    Date - Develop by June, 1971

DSW 171150

13. Action - Execute toxicity studies per existing plan.

    Responsibility - Manager, Environmental Health - Medical Department

    Date - As indicated in plan.

14. Action - Agencies and laboratories visited during 1970 will be revisited in 1971 to further strengthen relationships.

    Responsibility - Manager Environmental Control, Specialty Products Group

    Date - September, 1971

15. Action - Work actively with customers and trade organizations to promote positive image of benefits of products still containing PCB.

    Responsibility - Manager, Environmental Control, Specialty Products Group

    Date - September, 1971

16. Action - Transfer duties and responsibilities of the Manager, Environmental Control - Specialty Products Group to the appropriate functions in the Business Group, Manufacturing Department and Corporate Staff Departments.

    Responsibility - All concerned.

    Date - December, 1971

V. COSTS:

Costs (excluding capital costs) for the program for 1971 have been budgeted as follows:

Function	Budget ($M)
Administration	$125
Engineering	50
Manufacturing	337
Research	166
	$678

W. B. PAPAGEORGE

ms

DSW 171151

April 20, 1971

Dr. A. R. Stemp
Research & Development Division
Kraftco Corporation
801 Waukegan Road
Glenview, Illinois 60025

Dear Dr. Stemp:

I am sending under separate cover samples of Aroclor 6040, Aroclor 6050, Aroclor 6062, Aroclor 6070 and Aroclor 6090.

I recommend you evaluate these along with the 5000 series Aroclors you have in lieu of the Aroclor 1254, Aroclor 1260 and Aroclor 1262 you requested in your order RD 05218 dated April 8, 1971.

I am enclosing copies of an information brochure and a price sheet.

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 Control

WBP:ms

Enclosures

cc: G. E. Dellorto - Kraftco Corp.

DSW 171152

161

STLCOPCB4045785

W. B. PAPAGEORGE - ST. LOUIS

April 19, 1971

N. T. Johnson NJOHN
P. G. Benignus PBENI

A. J. Rego - CINCINNATI

On April 15, 1971 an 80 drum shipment of scrap askarel was received at the W. G. Krummrich plant from Westinghouse-Bloomington with the drum bungs lying on the drum head. Someone obviously forgot to secure the bungs before releasing the shipment.

I have attached photographs which show the contamination which resulted.

Photo #1 - Bungs on drum heads

Photo #2 - Bed of truck after unloading. White spots on floor is floor-dry compound

Photo #3 - End of truck bed showing askarel dripping over edge

Photo #4 - Unloading area pavement. Unloaded drums are in background.

Shipment details are as follows:

Trucker - A & H Truck Lines
Bill of Lading - No. 40387
Customer Code - 90438
Pro Number - 920233

Plant personnel inform me this is the second such incident. The first was not reported because it was considered a very unusual incident with low probability of re-occurring.

The adverse legal and environmental consequences can be very serious. Will you please contact the appropriate personnel in Westinghouse to renew this incident to prevent any future problems.

W. B. PAPAGEORGE

ms
Enclosure

DSW 171153

159

STLCOPCB4045786

W. B. Papageorge - St. Louis

April 19, 1971

J. R. Fallon JFALL
C. L. Bradford CBRAD
G. G. Kosup GKOSU
M. T. Johnson MJOHN

T. L. Gossage - TGOSS

I have received the April Sales Meeting Agenda and note that Environmental discussions are scheduled as follows:

Monday, April 26	11:45 A.M. - Process and Dielectric Fluids - Advanced
	4:15 P.M. - Heat Transfer Fluids - Advanced
Tuesday, April 27	1:00 P.M. - Hydraulics and Lubricants - Advanced

I understand these sessions involved all ex-Functional Fluids field salesmen. If so, exposing them three times to the same subject may not be desirable. I suggest one exposure at 1:00 P.M. on Tuesday, April 27.

The basic sessions are scheduled as follows:

Thursday, April 29,	1:00 P.M. - Hydraulics and Lubricants - Basic
Friday, April 30,	11:45 A.M. - Process and Dielectric Fluids - Basic

These sessions involve all ex-Cellu-Chem field salesmen. I am scheduled to be in Washington D.C. on Friday, April 30. I recommend we cover the Environmental subject on Thursday, April 29 at 1:00 P.M.

W. B. PAPAGEORGE

ms

DSW 171154

STLCOPCB4045787

C/PL-306 A
FH9KLMO

April 16, 1971

Mr. Robert N. Dexter
Research Assistant
Department of Oceanography
University of Washington
Seattle, Washington 98105

Dear Mr. Dexter:

I am forwarding under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260. These represent the more widely used Aroclors. There is no charge for the samples.

The technical bulletins you have requested are no longer available because Monsanto no longer sells Aroclors for many of the uses formerly described in these bulletins. I have, however, enclosed a copy of a bulletin which contains all of the physical and chemical characteristics which were described in the old bulletins.

I have also enclosed additional information which I hope is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171155

15

STLCOPCB4045788

April 16, 1971

Mr. John Hurley
State of Illinois
Div. of Laboratories
Environmental Protection Agency
134 North Ninth Street
Springfield, Illinois 62706

Dear Mr. Hurley:

Mr. Clarence Buckley, of Monsanto's Sauget, Illinois plant informed me of your interest in samples of polychlorinated biphenyls and a copy of analytical methodology.

I am forwarding under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 which represent the most common Aroclors used.

I have enclosed a copy of the methodology used by Monsanto's laboratories.

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 Control

WBP:ms

Enclosures

cc: Mr. C. Buckley - Monsanto

DSW 171156

156

April 16, 1971

Mr. L. W. Bates
Specialty Converters, Inc.
Dawson Drive Delaware Industrial Park
Newark, Delaware 19711

Dear Mr. Bates:

I regret that we cannot supply you the 2 gallons of Aroclor 1254 you requested in your Purchase Order 499 dated April 8, 1971. Aroclor 1254 contains persistent polychlorinated biphenyls which have been identified as environmental contaminants. Monsanto voluntarily withdraw Aroclor 1254 from all open type applications and will supply it only to closed system use where fire resistance is essential.

I am forwarding under separate cover samples of Aroclor 5432 and Aroclor 6062 for your evaluation. These materials sell for $0.55½ per pound in 5 gallon quantities, $0.25½ per pound in 1-2 drum orders (each drum contains 600 pounds), $0.23½ per pound in 3-9 drums, $0.22½ per pound for 10 drums or more, $0.18 per pound in bulk tank truck or tank car orders. These prices are quoted F.O.B., Anniston, Alabama.

Regarding your laboratory constant temperature bath application, I find that your application to 500°F exceeds the level at which our materials are recommended. I would like to suggest that you contact the Dow-Corning people for information on their silicone base liquids.

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 Control

WBP:ms

DSW 171157

STLCOPCB4045790

G 70

April 16, 1971

Dr. Lyle D. Johnson
Senior Chemist
Analytical BioChemistry Laboratories, Inc.
Box 1097
Columbia, Missouri 65201

Dear Dr. Johnson:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 which represent the polychlorinated biphenyls most commonly found in the environment.

I am enclosing copies of articles relating to 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 Control

ms

Enclosures

DSW 171158

154

STLCOPCB4045791

W. B. PAPAGEORGE - ST. LOUIS

April 15, 1971

PCB-SOLID WASTE INCINERATOR

T. L. Gossage TGOSS
R. M. Kountz RKOUN
W. R. Richard WRICH
J. R. Savage JSAVA

H. S. Bergen - HBERG

A rough estimate recently completed by CED indicates that the installation of a solids waste incinerator as an addition to the liquid incinerator at the W. G. Krummrich plant will require a capital expenditure of about $500,000. A unit which would operate independently of the liquid incinerator will exceed $800,000 in capital costs.

Operating costs are estimated to exceed 8 cents per pound of material burned.

Although our customers claim that the disposal of solid waste contaminated with PCB remains the top priority problem and have indicated that over 3 million pounds are generated each year, they will not and, more likely, cannot at this time commit themselves to full participation in a solids incineration program we might develop.

Our experience with the liquids disposal problem in which only a half million pounds of an indicated potential of 6 million pounds per year have been returned would indicate that participation in an incineration program will depend on each customer's interpretation of the legal, governmental and moral pressures he experiences. I do not believe our customers would be interested at this time in sending solid waste to Monsanto for disposal at a relatively high cost per pound.

I recommend that the installation of a solids waste incinerator be delayed until the need for such a unit becomes great enough to justify its high cost.

The use of a properly managed sanitary landfill is in my opinion a responsible method for disposal of this material and despite G.E.'s firm position against the use of landfills we should continue to recommend it to our other customers.

W. B. PAPAGEORGE

ms

DSW 171159

15

STLCOPCB4045792

April 14, 1971

AIRMAIL SPECIAL DELIVERY

Mr. A. M. Salazar
Executive Secretary
Power Equipment Division
National Electrical Manufacturers Assn.
155 East 44th Street
New York, New York 10017

Dear Al,

I apologize for the delay but I had to make an unscheduled business trip last week which prevented me from working on the draft of the letter I promised to send you.

Attached is a very rough draft which I am certain you can improve. Don't hesitate to change it if you wish. I did not add the attachments I mention because I felt you already had the information.

I found I had some difficulty in composing this letter because I was addressing a mixed audience, some of whom know quite a bit about the askarel problem and some of whom may be totally unaware of what we are trying to achieve.

May I have your comments on the letter as well as the procedure we follow to organize the first conference.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171160

152

STLCOPCB4045793

ROUGH DRAFT

Dear Mr. ------

Recently the American National Standards Institute (ANSI) granted formal approval to a recommendation by the National Electrical Manufacturers Association (NEMA) for the formation of an ANSI committee on the disposal of askarel used in electrical equipment.

The formation of this Committee is considered essential to supplement the efforts of the transformer and capacitor manufacturers and Monsanto Company, the sole U.S. producer of askarels, to control the use, maintenance and disposal of askarels, which contain persistent polychlorinated biphenyls, to minimize further contamination of the environment.

To insure full representation on this committee, we invite and encourage your organization to participate.

The first conference will meet during the week of May 24, 1971 for a review of the pertinent background leading to the formation of the committee, the establishment of objectives and the appointment of appropriate subcommittees.

I have attached for your information copies of a list of sponsors, a list of organizations being invited to participate and the scope of the committee as approved by ANSI.

DSW 171161

...Continued...

STLCOPCB4045794

I sincerely hope that your organization can actively participate in this most important activity and that you or your representative can fit the May session into your schedule.

Very truly yours,

W. B. Papageorge

Enclosures

STLCOPCB4045795

bcc: H. M. Fisher -
Allentown, Pa. Ofc.

F G H J K L M O

April 14, 1971

Dr. P. N. Dua
State Laboratories
116 Reservoir Street
Harrisonburg, Virginia 22801

Dear Dr. Dua:

Enclosed is the polychlorinated biphenyl information I offered to send you.

In attempting to determine the source of polychlorinated biphenyls detected in poultry I personally would suspect a deteriorating painted surface, either in the building housing the chickens or in the equipment used to store and handle the feed. A rather remote possibility would be an insecticide used indoors in the poultry raising operation. Although rare, some polychlorinated biphenyls were used as extenders in pesticide formulations.

Commercial laboratories which have some experience in polychlorinated biphenyl determinations include WARF Institute, Madison, Wisconsin, Battele Institute, Columbus, Ohio and Woodson-Tenant Laboratories, Memphis, Tennessee.

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 Control

WBP:ms

Enclosures

DSW 171163

151

STLCOPCB4045796

April 13, 1971

Mr. O. W. Jennings
Doty Laboratories, Inc.
1435 Clay Street
P. O. Box 7498
North Kansas City, Missouri 64116

Dear Mr. Jennings:

I am forwarding under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 requested in your letter dated April 6, 1971.

I am enclosing a copy of analytical methodology used by Monsanto laboratories in the determination of polychlorinated biphenyls.

I hope the samples and procedures are useful to you. If I can be of further service, please let me know.

I regret I have no samples or information on ATRAZINE because it is not one of our products. Perhaps you could contact someone with Geigy Chemical Co.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171164

STLCOPCB4045797

April 12, 1971

Dr. Robert Voigt
Supervisor
Sacramento Pesticide Laboratory
California Dept. of Agriculture
1220 N. Street
Sacramento, California 95814

Dear Dr. Voight:

I am sending under separate cover the samples of Aroclors you requested in your letter dated April 5, 1971.

I have enclosed a copy of analytical methodology used by Monsanto laboratories for the determination of PCB's.

I hope the samples and analytical procedures are helpful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171165

/0

STLCOPCB4045798

April 6, 1971

Dr. S. G. Herman
Dept. of Biological Sciences
University of California, Santa Barbara
Santa Barbara, California 93106

Dear Dr. Herman:

Your letter dated March 24, 1971 was forwarded to me for response since I have the responsibility for managing Monsanto's participation in the PCB environmental problem.

I am pleased to report to you that progress on our five-point program has been gratifying. The status of each point is as follows:

1. Sales of PCB's for plasticizer use were discontinued on August 30, 1970.

2. Our industrial and hydraulic fluids have all been reformulated to exclude PCB's. Over 60% were reformulated by the end of 1970. The remaining 40% were delayed due to technological difficulties which were finally resolved by April 1, 1971.

3. Collection of spent dielectric fluid for regeneration or incineration which started in April of last year continues. We have received about 1 million pounds of the material during the past 12 months. The high temperature incinerator-scrubber system is now under construction and should be in full operation by June 1.

4. Our heat transfer fluids control program is progressing extremely well with the enthusiastic support of our customers. Many systems were converted to fluids which do not contain PCB's.

DSW 171166

14

5. Research programs have contributed significantly toward the development of alternative materials and have resulted in a more biodegradable mixture of PCB isomers which some of our customers are now evaluating.

In the 1950's researchers with the U.S. Department of Agriculture conducted studies that indicated the polychlorinated biphenyls were effective vapor pressure suppressants and would increase the persistence of certain insecticides. Monsanto included this information in some of its marketing publications. This business never did grow to any significant size and we referred it to distributors who sell various chemicals including Monsanto's. To our knowledge the business was sporadic and no shipment exceeded a dozen drums (about 600 pounds each).

These insecticide formulations were never broadcast over food or textile crops as is commonly believed. They were intended primarily for indoor use for flies, silverfish, roaches, etc.

On April 13, 1970 Monsanto's Medical Director, Dr. R. E. Kelly, wrote to Dr. H. W. Hayes, then the Director of the Pesticide Regulation Division, U.S.D.A., strongly recommending that during 1970 when pesticide formulations were being re-registered that PCB's be excluded. On October 29, 1970 the Division issued PR Notice 70-25 informing pesticide formulators that PCB's were not acceptable and that within six months must be excluded from all pesticides.

Regarding your question of divulging sensitive marketing information, I regret I cannot help you. We believe the information would be of extremely limited value since the PCB problem is worldwide and there are producers in Germany, France, Italy, Spain, Japan, Poland, Czechoslovakia and Russia. We also believe we have a responsibility to our employees, shareholders and in some cases to our customers to preserve the business while taking responsible action to reduce PCB contamination.

We recognize, however, the extreme interest that has been generated for this information and have offered to give to any responsible governmental agency this information on a confidential basis and to be used for scientific purposes. So far no agency has made a request on this basis.

DSW 171167

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 Control

WBP:ms

DSW 171168

STLCOPCB4045801

W. B. PAPAGEORGE - ST. LOUIS

April 5, 1971

PCB DEFENSE BUDGET

C. J. Smith CSMIT
H. S. Bergen HBERG
W. R. Richard WRICH
R. M. Kountz RMCUN
J. R. Savage JSAVA

A. J. Koenig - AKOEN

The 1971 PCB defense budget is as follows:

Function	Budget ($M)
Administration	$ 125
Engineering	50
Manufacturing	337
Research	166
	$ 678

Will you arrange for periodic reporting of actual expenditures versus budget starting with the 1st quarter 1971.

W. B. PAPAGEORGE

ms

DSW 171169

146

STLCOPCB4045802

9/PL-3064

F H 110

April 5, 1971

Dr. D. L. Palmquist
Assistant Professor
Department of Dairy Science
Ohio Agricultural Research &
Development Center
Wooster, Ohio 44691

Dear Dr. Palmquist:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 which represent the polychlorinated biphenyls most commonly found in the environment.

I am enclosing copies of articles, methodology and a technical bulletin relating to polychlorinated biphenyls.

We have not made any C^{14} labeled PCB nor do we know of a laboratory which is producing any. Dr. David L. Stalling, Fish-Pesticide Research Laboratory, Bureau of Sport Fisheries and Wildlife, Route 1, Columbia, Missouri 65201, Phone (314)-442-2271 Ext. 3101, has produced some Cl^{36} isomers. Perhaps he has plans for working with carbon labeling

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 Control

WBP:ms

Enclosures

DSW 171170

STLCOPCB4045803

bcc: R. E. Kelly/E. P. Wheele

F H O
16 cy Arc. 1242

April 5, 1971

Mr. W. R. Downs
Manned Space Craft Center
Code ES
Houston, Texas 77058

Dear Mr. Downs:

I am sending under separate cover a sample of Aroclor 1242 for use as your laboratory standard for polychlorinated biphenyl analysis.

I have enclosed with this letter a copy of analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls.

Also enclosed are copies of the Hygienic Guide Series on "Chlorodiphenyls" and the report of vapor toxicity work performed at the Kettering Laboratory which were mentioned by Dr. R. E. Kelly, E. P. Wheeler and Dr. W. H. Hunt of Monsanto's Medical Department to various space center personnel.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171171

144
STLCOPCB4045804

bcc: E. Wheeler/W. H. Hunt EWHEE

April 5, 1971

Dr. Ellis Harris
Manned Space Craft Center
Code DE-5
Houston, Texas 77058

Dear Dr. Harris:

Enclosed are copies of the Hygienic Guide Series on "Chlorodiphenyls" and the report on vapor toxicity work performed at the Kettering Laboratories on Aroclor 1242 and Aroclor 1254 requested by your Mr. Holmes in his discussions with Mr. E. P. Wheeler and Dr. W. H. Hunt of Monsanto's Medical Department.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171172

STLCOPCB4045805

W. B. PAPAGEORGE - ST. LOUIS

April 2, 1971

H. S. Bergen HSBERG
J. R. Savage JSAVA
R. H. Kountz RHKOUN
T. L. Gosrage TGOSS

W. R. Richard - WRICH

H. A. Vodden's letter dated March 26, 1971 contains the following paragraph on Page 2:

> "Until more precise residue figures are available caution should be exercised in interpretation of the results, but it is possible that the total residue for MCS 1016 is not very much less than that for Aroclor 1242, although the isomer distribution will be different. If this is so, distillation and fractionation of the product may not provide a solution to the problem."

Is our MCS 1016 program developing into an embarrassing situation? What do we really know about MCS 1016?

W. B. PAPAGEORGE

WBS

DSW 171173

142

STLCOPCB4045806

Monsanto

OUTGOING MESSAGE BLANK
Telecommunications System

DATE: Apr. 1, '71 | TIME: 9:00 AM | SENDER'S ACCOUNT NO.: 2-00-735.70

INDICATE DESIRED SERVICE → [X] 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 - MONSANTO BRUSSELS

PLEASE SEND ME DETAILS OF FREE PCB DISPOSAL SERVICE OFFERED IN UK. I AM CONCERNED ABOUT ECONOMICS INVOLVED AND OF IMPACT ON U.S.-CANADA PROGRAM WHICH AT PRESENT INVOLVES THREE CENTS PER POUND COST TO CUSTOMER.

W. B. PAPAGEORGE - ST. LOUIS

CC: C. J. SMITH
H. S. BERGEN

IN-IR REV. 7-64

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

DSW 171174

STLCOPCB4045807

C/[illegible]-306A

FGHM

April 1, 1971

Dr. Harold Price
Pesticide Section
Bureau of Laboratories
Michigan Dept. of Public Health
3500 N. Logan
Lansing, Michigan 48914

Dear Dr. Price:

Monsanto's Dr. Robert Keller informed me of your interest in technical bulletins containing information on Aroclor products.

I am enclosing a xerox copy of Monsanto Technical Bulletin O/PL 306A which contains chemical and physical characteristics of the Aroclors. I have also included copies of other articles relating to 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 Control

WBP:ms

Enclosures

cc: R. E. Keller - Monsanto St. Louis

MARCH

DSW 171176

STLCOPCB4045809

W. B. Papageorge - St. Louis

March 31, 1971

J. R. Fallon
P. G. Benignus
R. A. Garcia - AKRON

John Heilala - AKRON

I discussed with Mr. Harold Jones, Globe Metals, Cleveland 216-341-6322 his method for disposing of the Oil/PCB mixture he received from Westinghouse-Sharon.

He claims he can achieve 2400°F and has appropriate gas scrubbing facilities. Apparently these facilities are designed for the recovery of non-ferrous metal scrap. He is not soliciting more business of this type and claims he is doing this to help Westinghouse only.

He stated that he has stockpiled the material and plans to burn it when "everything is right". I cautioned him about losses of PCB's to the air or sewer and he was confident he would have no problem.

He is seeking non-ferrous metal business from Monsanto and is apparently negotiating with someone in Monsanto's Purchasing organization.

We discussed the possibility of an inspection of his facilities. Initially he was reluctant to show what he considers to be confidential design features but later agreed to a visit if we give him a few days advance notice.

If he truly reaches 2400°F and scrubs the stack gases I see no problem in burning the oil. I will try to arrange for a visit early next month.

W. B. PAPAGEORGE

ms

DSW 171177

STLCOPCB4045810

W. B. Papageorge - St. Louis

March 31, 1971

H. S. Bergen HSBERG
P. S. Park PPARK
E. P. Wheeler EWHEE
W. S. Clark WCLAR

D. W. Miller - DMILL

The Sherwin-Williams Company, Chicago, Illinois, has submitted to the U.S. Department of Agriculture, Customer and Marketing Service Division, for approval, a proposed formulation for paint to be used in meat processing plants. One of the ingredients in the formulation is Aroclor 6050 (50% Aroclor 5460-50% Aroclor 1221). I was asked by Sherwin-Williams to contact the U.S.D.A. representative, Mr. Donald D. Derr to help answer his questions regarding Aroclor composition.

While involved in these discussions, I found out that this approval procedure applies to all materials used in meat processing plants, - detergents, bactericides, preservatives, lubricants, etc. - as well as paints. In the past paint formulations containing Aroclor 1254 have been approved.

Mr. Derr admitted that approval had been given but could not recall specific requests and stated that a search of the files would be very difficult and time consuming. Mr. Derr also commented that paint approval by U.S.D.A. did not extend to silo coatings.

I requested copies of correspondence concerning past approvals of formulations containing Aroclor 1254 but Mr. Clyde Hirn, Sherwin-Williams Research Dept., refused to send me copies claiming that the formulations were confidential.

I recognize that this does not directly relate to the Ohio silo cases but it is the first example we have of a Federal agency approving a coating containing Aroclor 1254 for use near food intended for human consumption. Perhaps Jacob Hess can use this information.

It appears to me that the possibility of a PCB problem arising in meat processing plants is present.

W. B. PAPAGEORGE

DSW 171178

ms

138

STLCOPCB4045811

March 31, 1971

Mr. Donald D. Derr 301-474-4800 Ext 683
U. S. Dept. of Agriculture
Customer and Marketing Services
Laboratory Services Division
P. O. Box 348
Beltsville, Maryland 20705

Dear Mr. Derr,

As we discussed over the telephone, Monsanto's Aroclors are chemical mixtures which are manufactured by the chlorination of biphenyl or terphenyl to predetermined specific gravities or softening points. Chlorination to these various levels not only gives several isomers of the same chlorine content but also gives appreciable portions of the isomers of compounds of higher and lower chlorine contents. The mixture which is finally marketed is designated by a number, the first two digits indicate the type of material and the last two indicate the approximate weight percentage of chlorine in the product.

The materials that the Sherwin-Williams Company has proposed for a maintenance paint include Aroclor 5460 and Aroclor 1221. Aroclor 5460 is a chlorinated terphenyl (54-) with 60% by weight of chlorine in the total mixture. The isomers range from 1 through 14 chlorines per terphenyl group with the 8, 9 and 10 chlorine isomers dominating.

The Aroclor 1221 is a chlorinated biphenyl (12-) with 21% by weight of chlorine in the total mixture. This mixture has a high concentration of unchlorinated biphenyl and is predominately a monochlorobiphenyl with very small amounts of dichloro and trichloro- isomers. This chlorinated biphenyl should not be confused with the highly chlorinated persistent polychlorinated biphenyls which have been identified as environmental contaminants. Aroclor 1221 is not persistent and degrades easily.

DSW 171179

137

STLCOPCB4045812

As you know the persistent polychlorinated biphenyls have been voluntarily withdrawn from the market by Monsanto. Aroclors 1232, 1248, 1262, 1268, 2565 and 4465 are no longer available. The remaining Aroclors which contain persistent PCB's, Aroclors 1242, 1254 and 1260, are sold only to controlled closed system applications in which fire resistance is important. These include electrical transformers, capacitors and closed high temperature, low pressure heat transfer systems. The only Aroclors which you should encounter in your review of materials proposed for meat processing plants are Aroclor 1221 and the 5400 series of which Aroclor 5460 is typical.

I have enclosed copies of an article from the Encyclopedia of Chemical Technology and a Monsanto technical bulletin which I hope you find informative.

I hope this information is useful to you in favorably considering the Sherwin-Williams Company's request. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. Clyde Kirn, Sherwin Williams Co. 312-264-3900 Ext 236
(Chicago, Illinois)
Mr. L. J. Berlik - Monsanto-Chicago
Mr. W. S. Clark - Monsanto-St. Louis

Attn: Mr. Berlik - Attached is the Sherwin-Williams copy - you may wish to deliver personally or drop in the mail. W. B. Papageorge

DSW 171180

March 30, 1971

Mr. G. E. Johnson
Specialist-Manufacturing Engineering
Insulator Products Department
Power Transmission Division
General Electric Company
100 Woodlawn Avenue
Pittsfield, Mass. 01201

Dear Mr. Johnson:

In your letter to Mr. P. L. Slayton dated March 16, 1971 you requested information on the proper disposal of Santovac fluids. Since I have been intimately involved in the proper disposal of polychlorinated biphenyls (askarels), perhaps I can help.

It is my understanding that at your location the disposal of askarels has received considerable attention. I recommend that the waste Santovac fluids be handled in like manner and in the same systems. Compatibility is not a problem.

Your Mr. Ed Raab and Mr. Jim Thayer are involved in askarel disposal and could guide you in developing disposal methods for your Santovac fluids.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: P. L. Slayton - Monsanto, New York
R. W. Ehrhardt - Monsanto, New York
R. E. Hatton - Monsanto, St. Louis

DSW 171181

136

STLCOPCB4045814

W. B. PAPGEORGE - ST. LOUIS

March 29, 1971

J. R. Durland - TOKYO
D. Danna - DDANN

S. Ueno - TOKYO

I appreciate your concern regarding the environmental acceptability of the various materials which are being offered by Monsanto Company as replacements for the conventional polychlorinated biphenyl products.

Laboratory tests have shown that Aroclor 1221, HB-40 and MIPB easily degrade, therefore assuring us they will not continue to accumulate in the environment.

The difference in degradability between Aroclor 1242 and MCS 1016 (formerly Aroclor 1242B) is a matter of degree. We have never claimed instant or complete degradation, but we have claimed that the isomers which are the most persistent have been removed. We believe this represents a step in the right direction.

Our available information on Aroclor 5442 and Aroclor 5460 is sketchy. To date they have not been identified as environmental problems. We are conducting toxicity and biodegradation studies which are well underway but are being hampered by a lack of adequate analytical methodology to enable us to determine concentrations at extremely low levels. I anticipate that results from these studies should be available by mid-year.

I am enclosing copies of reports, letters, etc. which refer to biodegradability and toxicity of these materials. If I recall correctly, additional information was forwarded in the past to Dr. J. R. Durland's office. Perhaps copies of these are still available. If they cannot be located, please let me know what additional data is required.

W. B. PAPAGEORGE

ms

Enclosures

DSW 171182

STLCOPCB4045815

70

March 29, 1971

Mrs. Recilla Koblintz 518-489-6725
51 Maxwell Street
Albany, New York 12208

Dear Mrs. Koblintz:

Enclosed are the copies of articles I promised to send you.

None of the articles are specific to your particular study; however, you may find those by Zitko, Duke, et. al., and Wildish of interest.

I have also enclosed a copy of methods used by Monsanto laboratories for polychlorinated analysis. Precautions to prevent contamination and methods for cleaning glassware, etc., are included in the write-up.

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 Control

WBP:ms

Enclosures

DSW 171183

STLCOPCB4045816

March 29, 1971

Mr. Anthony F. Gross
National Biscuit Company
2111 Route 208
Fair Lawn, New Jersey 07410

Dear Mr. Gross:

I am sending under separate cover the samples of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260 I promised you.

I regret that I did not get these to you sooner and I hope the delay has not greatly inconvenienced you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. E. H. Fording
Monsanto-N. Y.

DSW 171184

STLCOPCB4045817

March 29, 1971

Mr. John Minney
Chem Plex Corp.
P. O. No. 819
Hwy. 30 West
Clinton, Iowa 52732

Dear Mr. Minney:

I am sending under separate cover 16 oz. samples of Aroclor 1260 and Aroclor 5442.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171185

STLCOPCB4045818

O/PL - 306 A

M, O

March 29, 1971

Dr. F. L. Lorscheider
Assistant Professor
Medical Physiology
The University of Calgary
Calgary 44, Alberta, Canada

Dear Dr. Lorscheider:

Enclosed is the polychlorinated biphenyl literature I offered to mail to you.

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 Control

WBP:ms

Enclosures

DSW 171186

STLCOPCB4045819

bcc: Frances Stupfell-SEATTLE

"O"

March 29, 1971

Dr. Gary M. Lampman
Associate Professor of Chemistry
Dept. of Chemistry
Western Washington State College
Bellingham, Washington 98225

Dear Dr. Lampman:

I am sending under separate cover the sample of Aroclor 1254 you requested in your letter dated March 16, 1971.

I have enclosed a copy of the methodology used by Monsanto Laboratories for the analysis 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 Control

WBP:ms

Enclosure

DSW 171187

bcc: J. M. Magner

March 29, 1971

Dr. Tsutomu Nakatsugawa
Assistant Professor
Forest Entomology
State University College of Forestry
Syracuse University
Syracuse, New York 13210

Dear Dr. Nakatsugawa:

I am sending under separate cover samples of Monsanto's Aroclor 1242, Aroclor 1254 and Aroclor 1260. These materials represent the most common commercial products containing polychlorinated biphenyls.

The chlorinated biphenyls present vary from 1 chlorine per biphenyl group up to a possible maximum of 10 chlorines per biphenyl group. The last two digits in the Aroclor designation represent the percent on a weight basis of the chlorine present.

I regret to inform you that we at Monsanto have never thoroughly pursued isomer isolation to the point that we consider ourselves experts because we have never been able to justify the high cost involved in segregating 210 isomers. Recently two federal laboratories have indicated that they were preparing isomers. Perhaps you could contact these laboratories for further information. Their addresses are:

Dr. Ronald G. Webb
Research Chemist
Federal Water Pollution Office
Southeast Water Laboratory
Athens, Georgia 30601

or,

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

DSW 171188

STLCOPCB4045821

I am enclosing copies of articles regarding 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 Control

WBP:ms

Enclosures

DSW 171189

STLCOPCB4045822

O/PL-306 A

E, "O"

March 29, 1971

Miss Louise S. Merkens
Dept. of Pharmacology
State University of New York
Upstate Medical Center
766 Irving Avenue
Syracuse, New York 13210

Dear Miss Merkens:

I am not aware of any publications nor have I had any personal correspondence relating to studies with the pure isomers we shared with several laboratories.

Two laboratories which I understand are involved in isomer preparation and investigation and the individuals with whom we have corresponded are:

Dr. Ronald G. Webb
Research Chemist
Federal Water Pollution Office
Southeast Water Laboratory
Athens, Georgia 30601

and

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

In my opinion these two laboratories are the best sources of information regarding isomer isolation and identification.

DSW 171190

128

STLCOPCB4045823

I have enclosed articles on analytical methodology and a copy of a bulletin in which the physical and chemical characteristics of the mixtures are described.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171191

STLCOPCB4045824

March 26, 1971

Mr. Welburne D. Johnson
Supervisor
Organic Chemistry Laboratory
Environmental Protection Agency
Lake Michigan Basin Office
1819 West Pershing Road
Chicago, Illinois 60609

Dear Mr. Johnson:

I regret I cannot send you the technical bulletins you requested because all bulletins in which Aroclors are recommended as plasticizers have been withdrawn and are no longer available. This action followed Monsanto management's decision to restrict the sale of polychlorinated biphenyls to electrical transformers and capacitors and closed heat transfer systems.

I have enclosed, however, copies of articles which I hope contain information which is useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171192

STLCOPCB4045825

bcc: W. Clark - WCLAR

March 26, 1971

614-772-3564

Dr. Dale Shackle
Central Research Laboratories
Mead Corporation
Chillicothe, Ohio 45601

Dear Dr. Shackle:

Enclosed are copies I promised of an article from Toxicology and Applied Pharmacology in which MIPB inhalation work is mentioned and of the method used by our laboratory to evaluate biodegradability.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171193

STLCOPCB4045826

March 26, 1971

Mr. Chuck Peters
Mallory Capacitor Company
101 Mallory Drive
Glasgow, Kentucky 42141

Dear Mr. Peters:

In searching my files for information regarding landfills in Kentucky I found it was missing. I have requested additional copies which I expect to receive next week. As soon as it arrives, I will forward it to you.

I have attached a Chemical Week article which summarizes the water quality standards of all the states. You will note under Kentucky the reference to "Toxic Substances". This is the area under which polychlorinated biphenyls (askarels) fall. No concentration limits have been established by any agency, Federal or State, but I would predict that when it is, it will approach the "one molecule is too much" concept.

We at Monsanto are targeted for control in our plant effluents at the 10 ppb (10^9) level. We prefer also to state it in terms of "loss of PCB's to water streams shall not exceed 1 pound per day".

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms
Enclosure

DSW 171194

STLCOPCB4045827

March 26, 1971

Dear Randy,

I regret I cannot attend your farewell luncheon and tell you personally how much I appreciated the interest, commitment and help you contributed toward managing the unpleasant PCB problem during 1970.

Thanks for a job well done and best wishes for a rewarding future with your new employer.

Sincerely,

(W. B. Papageorge)

Mr. G. Randy Graham
239 Plymouth Drive
Freehold, New Jersey 07728

DSW 171195

STLCOPCB4045828

March 26, 1971

Mr. Ralph C. Pickard
Director
Water Pollution Control Commission
State Department of Health
275 East Main Street
Frankfort, Kentucky 40601

Dear Mr. Pickard:

We have been requested by our plants and by our customers' plants to summarize the policies and practices in each state regarding the use of land fills and dumps for disposal of industrial wastes. We are also interested in the locations of approved, properly managed land fills.

Can your office assist us in compiling this information pertaining to Kentucky? Any help you can provide is appreciated.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171196

STLCOPCB4045829

March 25, 1971

Dr. John H. Phillips
Director
Hopkins Marine Station
Pacific Grove, California 93950

Dear Dr. Phillips:

I am sending under separate cover samples of Aroclor 1221, Aroclor 1268, Aroclor 4465, Aroclor 5442, and Aroclor 5460.

I am not familiar with Aroclor 1219, Aroclor 1269 or Aroclor 1270. Perhaps you can quote your reference to these materials and I can determine what they are.

The 2500 series Aroclors have not been produced for over five years; therefore no samples are available.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171197

STLCOPCB4045830

March 25, 1971

Mr. Robert J. Boyko
1216 North 49 Street
Phoenix, Arizona 85008

Dear Mr. Boyko:

Your letter dated March 9, 1970 requesting information on polychlorinated biphenyls was forwarded to me since I have the responsibility for studying the PCB's effect on the environment.

To my knowledge polychlorinated biphenyls have never been considered as replacements for DDT because they are not effective as insecticides. At one time PCB's were recommended as ingredients in pesticide formulations to extend the effective life of insecticides such as lindane and chlordane by acting as vapor pressure suppressants. This use never became widely practiced.

Today polychlorinated biphenyls are supplied by Monsanto to only three end uses; electrical transformers, electrical capacitors and closed heat transfer systems where fire resistance is important.

We believe these applications justify the continued use of polychlorinated biphenyls because of the safety advantages offered and also represent systems in which good control of escape to the environment can be achieved.

I have enclosed copies of articles relating to PCB's and the environment. 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 Control

WBP:ms
Enclosures

DSW 171198

STLCOPCB4045831

O/PL-306 A

"O"

March 25, 1971

Mr. Donald A. Griffin
Department of Agricultural Chemistry
Oregon State University
Corvallis, Oregon 97331

Dear Mr. Griffin:

I am sending under separate cover all of the samples of Aroclors you requested in your letter dated March 17, 1971 except for Aroclor 2565. This material has not been manufactured for over five years and no samples are available.

I have enclosed copies of analytical methodology and a technical bulletin.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171199

120

STLCOPCB4045832

01PL-306 A
FGHMO

March 25, 1971

Mr. Andrew T. McCord
Research Director
Chem-Trol Pollution Services, Inc.
4818 Lake Avenue
Blasdell, New York 14219

Dear Andy,

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260 which you will want to use as standards in polychlorinated biphenyl determinations.

I have enclosed copies of the articles I promised to send you.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171200

STLCOPCB4045833

March 25, 1971

Dr. David A. Kurtz
Assistant Professor
Department of Entomology
College of Agriculture
The Pennsylvania State University
University Park, Pennsylvania 16802

Dear Dr. Kurtz:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260. These Aroclors are typical of the Aroclors most extensively used.

I am enclosing copies of a technical bulletin and analytical methodology.

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 Control

WBP:ms

Enclosure

DSW 171201

STLCOPCB4045834

W. B. PAPAGEORGE - ST. LOUIS

March 25, 1971

R. N. Erell REREL
C. W. Buhrmann GBUHR
W. S. Clark WCLAR

A. W. M. Coaker - ACOAK

The Protectowire Company's application of Aroclor 1254 and Aroclor 1260 is a typical plasticizer application which we discontinued supplying on August 30, 1970.

I regret the inconvenience we may cause Mr. Andrews but we have too much at stake to make exceptions.

W. B. PAPAGEORGE

ms

DSW 171202

STLCOPCB4045835

bcc: W. Clark - WCLAR
G. Busch - AKRON

March 23, 1971

Dr. Tyler
B. F. Goodrich Company
9921 Brecksville Road
Brecksville, Ohio 44141

Dear Dr. Tyler:

Attached is the information on the thermal conductivity of polychlorinated biphenyls I promised to send you.

I regret the delay and 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 Control

WBP:ms

Enclosure

DSW 171203

STLCOPCB4045836

"D"

March 22, 1971

Dr. J. S. Palmer
Director
Veterinary Sciences Research Division
Agricultural Research Service
United States Dept. of Agriculture
P. O. Box 311
Kerrville, Texas 78028

Dear Dr. Palmer:

I am sending under separate cover the samples of Aroclors you requested in your letter dated March 18, 1971.

We make no distinction between technical standards and commercial formulations. The samples you will receive are typical of the material supplied commercially.

I am also enclosing copies of analytical methodology which Monsanto laboratories use 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 Control

WBP:ms

Enclosure

DSW 171204

115

STLCOPCB4045837

March 18, 1971

Mr. E. Hoover 717-752-4561
Wise Foods
Division of Borden Food Company
Raseley Street
Berwick, Pennsylvania 18603

Dear Mr. Hoover:

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

I have also enclosed a copy of analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171205

STLCOPCB4045838

March 18, 1971

Dr. Adel F. Sarofin
Associate Professor
Chemical Engineering 12-188
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Dear Dr. Sarofin:

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

I am also enclosing a copy of the analytical methodology which was slightly revised in late 1970. I do not recall which set was originally mailed to you.

I will assemble the remaining information we discussed and forward it to you in the very near future.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171206

STLCOPCB4045839

W. B. PAPAGEORGE - ST. LOUIS

March 17, 1971

R. A. Garcia - AKRON

P. R. MALLORY
INDIANAPOLIS, INDIANA

A. J. Rego - CINCINNATI

All of week of May 17 and early part of week of May 24 are convenient for me regarding proposed pollution control presentation.

Will you arrange with Bud Dibble and let me know date selected.

W. B. PAPAGEORGE

ms

DSW 171207

March 16, 1971

Mr. George Knorr
Agway, Inc.
Box 128
Buffalo, New York 14240

Dear Mr. Knorr:

I have arranged for delivery of the samples of Aroclor 1221, Aroclor 1232, Aroclor 1262 and Aroclor 1268 we discussed.

If I can help further, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171208

STLCOPCB4045841

March 16, 1971

Mr. F. Scaramucci
Kansas City Laboratory
Gulf Research & Development Co.
9009 West 67th Street
Merriam, Kansas 66202

Dear Mr. Scaramucci:

I am sending under separate cover the Aroclor 1232 you requested on your Purchase Order No. KCL 14373. There is no charge for this sample which is one of the few remaining in our inventory, since Aroclor 1232 is no longer being sold by Monsanto.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171209

110

STLCOPCB4045842

Monsanto

OUTGOING MESSAGE BLANK
Telex Communications System

DATE	TIME	SENDER'S ACCOUNT NO.
3-16-71	3:55 PM	2-00-735.70

INDICATE DESIRED SERVICE → [X] 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 - MONSANTO BRUSSELS

I HEARD THAT A MEETING WILL BE HELD IN LONDON ON APRIL 8 TO DISCUSS PCB'S IN FOOD SUPPLY. IS THIS TRUE? IF SO, WILL YOU FORWARD DETAILS.

W. B. PAPAGEORGE - ST. LOUIS

109

IN—IR REV. 7-64

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

DSW 171210

F G H M O

March 16, 1971

Dr. Gary P. Carlson
Dept. of Pharmacology and Toxicology
College of Pharmacy
University of Rhode Island
Kingston, Rhode Island 02881

Dear Dr. Carlson,

I am sending under separate cover the samples of polychlorinated biphenyls you requested in your letter dated March 3, 1971.

These samples are typical of the commercial product and are mixtures of isomers with the total chlorine content in weight percent indicated by the last two digits in the Aroclor designation. For example Aroclor 1242 has 42% by weight chlorine.

I am also enclosing copies of literature relating to 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 Control

WBP:ms

Enclosures

DSW 171211

STLCOPCB4045844

March 15, 1971

Dr. Thomas Ginsberg
Research Chemist
BA 107-4A
Union Carbide Corporation
Chemicals and Plastics
Bound Brook, New Jersey

Dear Dr. Ginsberg:

I am sending under separate cover the samples of Aroclor 1254 and Aroclor 5460 you requested.

I do not know what end use is intended for these materials and to avoid wasted effort you should know that Aroclor 1254 is no longer available for general use and is sold only for use as an insulator fluid for electrical transformers.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171212

March 15, 1971

Mr. James A. Laubscher
Woodson-Tenent Laboratories
P.O. Box 2135
345 Adams Avenue
Memphis, Tennessee 38102

Dear Mr. Laubscher:

I am sending under separate cover the samples of Aroclor 1242 and Aroclor 1248 you requested.

If I can help further, please call.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171213

STLCOPCB4045846

March 15, 1971

Dr. John J. Sciarra
Director, Graduate Division
College of Pharmacy
St. John's University
Albertus Magnus Hall
Grand Central and Utopia Parkways
Jamaica, New York 11432

Dear Dr. Sciarra:

I am sending under separate cover the sample of Aroclor 1254 you requested in your letter dated March 4, 1971.

Enclosed are copies of technical literature and analytical methodology relating to 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 Control

/lse

Attachments

DSW 171214

103

STLCOPCB4045847

March 15, 1971

Mr. W. A. Carey
Chief Control Chemist
Montrose Chemical Corporation of California
P.O. Box 147
Torrence, California 90507

Dear Mr. Carey:

I am sending under separate cover the Aroclor samples you requested in your letter to Mr. Desmond Hosmer dated March 9, 1971.

I am enclosing copies of Analytical Methodology used by Monsanto laboratories in PCB determinations.

I regret that we neglected to respond to your request in January. Somehow your letter was misplaced.

I hope the samples and methodology are useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachment

DSW 171215

STLCOPCB4045848

March 12, 1971

Mr. William Berry
Inmont Corporation
3738 Chouteau Avenue
St. Louis, Mo. 63110

Dear Sir:

We have heard from our St. Louis area salesman, Mr. G. W. Spears, that you have received communication from your New York Office that Monsanto Company is planning a further withdrawal of Aroclors from the market. Such a statement is a matter of great concern to us. Our decision of last spring to withdraw our polychlorinated biphenyls (PCB's) from open system applications was made only after much deliberation and evaluation of the data available to us. Based on this study, we concluded that it would be in the best interests of Monsanto, our customers, and the environment to stop selling PCB's into open system applications. We believe that this was a good decision based on the facts available at that time.

All during our evaluation of PCB's in the environment, we attempted to find some evidence that polychlorinated terphenyls (PCT's) were also affecting the ecology. At no time did we find these materials in the environment. Since last spring, we have continued to search for PCT's in the environment and our findings are still the same. PCT's do not show up in the lakes, streams, fish, birds or other natural states.

Based on this kind of information, Monsanto made the decision last spring to leave the polychlorinated terphenyls on the market. We have uncovered no new data since that time which would tend to make us change this decision. We fully expect that these products will remain in our product line.

If we can be of further service or if we can provide

additional information, please do not hesitate to contact us.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

bcc: G. W. SPEARS - GSPEA
E. H. FORDING - NEW YORK
R. N. BRELL - RBREL
W. S. CLARK - WCLAR

DSW 171217

BCC: W. S. Clark - WCLAR
E. H. FORDING - NEW YORK
G. N. REA - NEW YORK

March 12, 1971

Mr. M. L. Weinstein
Modern Maid Food Products
Dunkirk Street
Jamaica, New York 11412

Dear Mr. Weinstein:

Monsanto's Mr. E. H. Fording informed me of your interest in some information on polychlorinated biphenyls (PCB's).

I am enclosing copies of articles on the chemical and physical properties and toxicity of these materials.

If, after studying these articles, you need additional information, please call me at (314) 694-4051.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171218

100

STLCOPCB4045851

March 12, 1971

Mr. Gordon Parrish
The Twining Laboratories, Inc.
P.O. Box 1472
Fresno, California 93716

Dear Mr. Parrish:

I am forwarding under separate cover the samples of Aroclor 1254 and Aroclor 1260 you requested in your letter dated February 26, 1971.

I am also enclosing copies of analytical methodology used by Monsanto laboratories for the determination of PCB's in water, sediment, biological tissue and gases.

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 Control

/lse

Attachment

DSW 171219

March 11, 1971

Mr. R. K. Locke
200 C Street, S.W.
BF-218
Washington, D.C. 20204

Dear Mr. Locke:

Enclosed is a copy of analytical methodology used by Monsanto laboratories for PCB determination.

I hope you can adapt these to your metabolic studies. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachment

DSW 171220

98

STLCOPCB4045853

March 11, 1971

Mr. George Knorr
Agway Inc.
Box 128
Buffalo, New York 14240

Dear Mr. Knorr:

I am sending under separate cover the sample of Aroclor 1248 you requested.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171221

STLCOPCB4045854

March 11, 1971

Mr. James A. Laubscher
Woodson-Tenent Laboratories
P.O. Box 2135
345 Adams Avenue
Memphis, Tennessee 38102

Dear Mr. Laubscher:

I am sending under separate cover samples of Aroclor 1254 and Aroclor 1260 you requested.

I have also taken the liberty of enclosing copies of analytical methodology used by Monsanto's laboratories for the determination of PCB content.

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 Control

/lse

Attachment

DSW 171222

STLCOPCB4045855

March 11, 1971

Mr. Nick Malueg
Environmental Protection Agency
Room 614
511 N.W. Broadway Street
Portland, Oregon 97209

Dear Mr. Malueg:

I am sending under separate cover the samples of Aroclor 1254 and Aroclor 1260 Mr. E. P. Wheeler mentioned in his letter dated March 11, 1971.

I am enclosing a copy of the analytical methodology Monsanto laboratories use for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

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 Control

/lse

Attachment

cc: E. P. Wheeler - EWHEE

DSW 171223

92

STLCOPCB4045856

March 10, 1971

Dr. R. E. Bergman, Director
Division of Laboratory Services
Department of Agriculture
State of Minnesota
State Office Building
Saint Paul, Minn. 55101

Dear Dr. Bergman:

I am sending under separate cover the samples of Aroclor 1254 and Aroclor 1260 requested in your letter dated March 1, 1971.

I have also taken the liberty of enclosing copies of the analytical methodology used by Monsanto laboratories in the determination of polychlorinated biphenyl concentrations.

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 Control

/lse

Attachment

cc: Cle Rector - CRECT

DSW 171224

STLCOPCB4045857

March 9, 1971

Mr. Ken Mohlhenrich 301-747-4928
American Bio-Chemical Laboratory
1113 North Rolling Road
Baltimore, Maryland 21228

Dear Mr. Mohlhenrich:

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

I am enclosing copies of analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls (PCB).

I hope these are useful to you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachment

DSW 171225

9

STLCOPCB4045858

J. D. WRIGHT - ST. LOUIS

MARCH 9, 1971

H. S. BERGEN
H. N. DAHLSTROM - BRUSSELS
T. L. GOSSAGE - TGOSS

P. J. A. MARSH - BRUSSELS

I note in your progress report on the PCB Plan Europe dated March 1, 1971 that you are establishing a free disposal service for unreclaimable capacitor Aroclor, Pyroclor and Santotherm FR.

Will you send me a description of the procedure which will be followed and of the economies involved?

W. B. PAPAGEORGE

/lse

DSW 171226

March 9, 1971

Mr. Thomas T. Shen
Senior Sanitary Engineer
New York State Department of
Environmental Conservation
Albany, New York 12201

Dear Mr. Shen:

I regret to inform you that I cannot send you a sample of fuel oil additive requested in your letter dated March 3, 1971 since Monsanto no longer manufactures these products.

You may wish to contact the company which acquired the facilities and process technology from Monsanto by addressing an inquiry to -

Mr. D. J. Coon
Edwin Cooper Inc.
1700 South Second Street
St. Louis, Missouri 63104

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171227

March 8, 1971

Dr. Ted Mill
333 Ravenswood Drive
Menlo Park, California 94025

Dear Dr. Mill:

Enclosed are copies of Monsanto's analytical methodology for the determination of polychlorinated biphenyls (PCB) which we discussed over the telephone last Friday.

I have also taken the liberty of enclosing additional information on PCB's which I hope you find useful.

As we discussed, Monsanto is very interested in all activities relating to PCB's and the environment. We have and continue to support studies in analytical procedures, biodegration and toxicity. We are aware of at least 100 institutions, academic, industrial, and governmental, which are involved in PCB work of some type. Some of the work has now matured to the point where formal reports on results will be appearing frequently.

Before I can comment on Monsanto's interest in supporting a study by your institute I would like to receive from you a proposal of the type of work to be undertaken, the duration of the study, the objectives sought, the capabilities available to you and the total cost.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

cc: R. L. Brandenburger - San Francisco

DSW 171228

STLCOPCB4045861

March 8, 1971

Dr. Alan R. Hanks
Assistant Professor
Department of Agricultural Analytical Services
College of Agriculture
Texas A & M University
College Station, Texas 77843

Dear Dr. Hanks:

I am sending under separate cover samples of Aroclors requested in your letter dated February 23, 1971.

I am sending Aroclor 1242, Aroclor 1254 and Aroclor 1260 since these are the mixtures usually found in environmental studies. If you need samples of the other Aroclors, I will gladly send them.

I am enclosing copies of methodology used in Monsanto laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

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 Control

/lse

Attachment

DSW 171229

STLCOPCB4045862

March 4, 1971

Mr. W. C. Ballard
Sales Engineer, Utility Sales
Ontario District
Canadian Westinghouse Company Limited
840 York Mills Road
Don Mills, Ontario 404
Canada

Dear Mr. Ballard:

Your letter dated January 18, 1971 was forwarded to me for response because I have the responsibility for studying the Aroclor environmental pollution problem.

I wish to emphasize that the Aroclors are not highly toxic or hazardous materials, therefore, no precipitous actions are justified.

Some of the polychlorinated biphenyls in Aroclors have been found to be resistant to degradation therefore can persist in the environment for a long time. Some studies have shown that some species of wildlife, such as fish-eating birds, can accumulate these persistent materials in their bodies and eventually levels are reached which are high enough to affect the egg laying and reproduction process. This effect is similar to the one observed for DDT.

To avoid this material from building up in the environment every effort should be made to prevent Aroclors from entering any water disposal systems. In the event any spills occur the material should be quickly contained and segregated for disposal. Disposal is preferably accomplished by incineration at temperatures exceeding 1600° F. If no high temperature incinerator is available, an alternate mode of disposal is the use of a properly operated landfill not located near any water.

Aroclors have not been shown to be acutely toxic to humans. If any is spilled on the skin, the skin should be washed in

Continued.....

Mr. W. C. Ballard March 4, 1971

the usual manner with a soap solution. I have enclosed copies of literature describing toxic properties and industrial hygiene practice recommended for handling Aroclors.

I apologize for the delay in responding to your inquiry. I hope this information is helpful to you and if I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

bcc: T. W. Oneson - Montreal

DSW 171231

STLCOPCB4045864

March 4, 1971

Dr. Thomas A. Bratkowski
Section of Neurobiology and Behavior
Division of Biological Sciences
Langmuir Laboratory
Cornell University
Ithaca, New York 14850

Dear Dr. Bratkowski:

I am sending under separate cover the Aroclor samples you requested in your letter dated February 24, 1971.

I am enclosing a technical bulletin, an article from the Encyclopedia of Chemical Technology and copies of analytical methodology.

I hope this information is useful for your studies. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171232

86

STLCOPCB4045865

March 3, 1971

Mr. F. M. McKim
Process Laboratory
Continental Oil Company
Ponca City, Oklahoma 74601

Dear Mr. McKim:

I am sending under separate cover the sample of Aroclor 1254 Mr. John H. Murphy ordered per your P.O. No. 508151. There is no charge for this sample.

Since Aroclor 1254 contains persistent polychlorinated biphenyls which have been identified as environmental contaminants, Monsanto is selling it only for use in closed system electrical transformers.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

cc: Mr. John H. Murphy
Purchasing Department
Continental Oil Company
Box 2197
Houston, Texas 77001

DSW 171233

85

STLCOPCB4045866

W. B. PAPAGEORGE - ST. LOUIS

MARCH 3, 1971

PCB DRUM RETURN

H. S. BERGEN
T. L. GOSSAGE - TGOSS
R. C. SPRAGUE/G. E. GIBSON
R. D. MINTEER - RMINT
P. J. A. MARSH - BRUSSELS
G. R. SIDO - GSIDO
N. T. JOHNSON - NJOHN

P. G. BENIGNUS - PBENI
J. G. BRYANT - JBRYA
B. B. BYRNE - JFQ
J. R. FALLON - JFALL
F. J. KUSIAK - FKUSI
J. D. LEYERLE - JFQ
T. RASMUSSEN - WGK
J. R. SAVAGE - JSAVA

J. Fallon, P. Benignus, J. Bryant and I met on February 22, 1971 to review the drum return program outlined in my memo dated December 16, 1970. We addressed ourselves specifically to the handling and freight costs which could add up to $20,000 - $40,000 per year more than credit received for the drums depending on the number of drums returned and the distance shipped. We decided unanimously that the Business Group should not absorb this perennial cost and the drum return program must be modified.

The following program is proposed:

1. Continue to use the present type of drum with no deposit charged to the customer.

2. Arrange with reputable drum reclaimers, located in key areas, for the proper decontamination of returned drums. The Evans Steel Barrel Co., for example, would be the approved reclaimer in the St. Louis area.

3. Notify our customers of the location of the qualified drum reclaimers and strongly encourage them to send the used PCB drums to these reclaimers for disposal.

4. The customer would pay all freight costs and in turn would be paid by the reclaimer the established price for a used drum in that area.

B. Byrne, J. Leyerle and T. Rasmussen will continue their efforts to establish the Evans Steel Barrel Company as the first approved PCB drum reclaimer.

I will work with N. Johnson and R. Minteer in the establishment

Continued...

DSW 171234

of additional drum recovery centers.

As each center is approved, we will notify customers through N. Johnson's group.

W. B. PAPAGEORGE

/lse

DSW 171235

STLCOPCB4045868

W. B. PAPAGEORGE - ST. LOUIS

MARCH 2, 1971

P. J. A. MARSH - BRUSSELS

At a meeting held in Rome, Italy from December 9 through December 28, 1970 by the United Nations Food and Agriculture Organization Monsanto's reluctance to divulge production figures was an emotional subject of discussion.

Have you any copies of papers presented at this meeting, minutes of the meetings or resolutions made which would enlighten us as to what transpired?

W. B. PAPAGEORGE

/lse

DSW 171236

83

STLCOPCB4045869

March 2, 1971

Long Island University
Mitchell Campus
40 Merrick Avenue
East Meadow, New York 11554

Attn.: Mr. Guggino

Dear Mr. Guggino:

I am sending under separate cover samples of Aroclor 6040, 6050, 6062, 6070 and 6090.

I hope these are useful to you in your pesticide studies. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

cc: Pat Sullivan - New York
W. S. Clark - WCLAR

DSW 171237

STLCOPCB4045870

March 2, 1971

Mr. Jerome W. Eckenrode
Pesticide Research Center
Room 201
Michigan State University
East Lansing, Michigan 48823

Dear Mr. Eckenrode:

I am enclosing copies of information you requested in your letter dated February 24, 1971.

I hope I included everything you need. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171238

STLCOPCB4045871

March 2, 1971

Mr. Christian Walmer
Hershey Chocolate and Confectionary Division
Hershey Foods Corporation
Hershey, Pennsylvania 17033

Dear Mr. Walmer:

I am sending under separate cover the samples of Aroclor 1254 and Aroclor 1260 you requested in your letter dated February 23, 1971. There is no charge for these.

I have enclosed copies of recent articles on polychlorinated biphenyls and of the analytical methodology used in Monsanto laboratories for the determination of PCB's in water, sediment, biological tissue and gases. This methodology will separate PCB's from DDT residues.

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 Control

/lse

Attachments

DSW 171239

STLCOPCB4045872

FEBRUARY

DSW 171240

W. B. Papageorge - St. Louis

February 23, 1971

PCB Pollution

J. R. Durland - Tokyo
K. Hoshino - Tokyo
T. Adachi - Tokyo
S. Ueno - Tokyo
T. NaKamura - Yokkaichi
D. Danna - DMMN

KANAE MURAKAMI
TOKYO

I appreciate your concern regarding the strong possibility that PCB in the environment will become a very emotional subject in Japan.

As you know, Monsanto made the decision to refuse to sell PCB's for uses where environmental pollution could not be controlled to avoid precipitous action by governmental agencies. The program is active in the United States and will be effective in the United Kingdom on March 1. We are working with the producers in Continental Europe to develop a similar program there.

To reduce the effect of any emotional reaction that might develop in your country I suggest strongly that MMK and Kanegafuchi Chemical agree to a similar approach.

I have attempted to keep you informed of the PCB situation with frequent mailings to Dr. J. R. Durland. If you are lacking any particular information, please let me know.

W. B. Papageorge

cs

DSW 171248

STLCOPCB4045874

bcc: J. A. Heilala - Akron
R. A. Garcia - Akron

February 23, 1971

Mr. Richard Pfieffer
Union Carbide
P.O. Box 180
Sistersville, West Virginia 26125

Dear Mr. Pfieffer:

In substituting Therminol FR-0 for the non-available Aroclor 1232 in your heat transfer application you are maintaining the very desirable features of stability at relatively high temperatures and fire resistance but must still review the environmental contamination considerations.

To keep stability and fire resistance in Therminol FR-0 we use some of the more resistant polychlorinated biphenyls (PCB) which have been identified as environmental contaminants. We believe, however, that the advantages gained warrant the extra care involved in its use.

To prevent the escape of PCB's to the environment calls for a level of control and housekeeping many of us have never been asked to achieve in the past. Every effort must be made to prevent leakage and spillage. Maintenance must be kept at a very high standard. For those areas where leakage and spills will occasionally occur, catch pans must be provided. These pans must drain to a collecting basin or be emptied by responsible employees on a scheduled basis.

Mixing of Aroclors with waste water streams should be avoided since separation of PCB's from water can be costly. If mixing cannot be avoided, a catch basin and settling pond should be provided to separate the heavy Aroclor from the water.

Unusable contaminated Aroclor should be disposed by incineration which assures complete destruction to CO_2, H_2O, and HCl. Any incineration below 800°C will result in vaporization which will contaminate the atmosphere or in partial oxidation which may yield materials which are highly toxic. To avoid polluting the atmosphere with HCl the stack gases must be scrubbed and neutralized before disposal into the plant waste water system.

DSW 171249

STLCOPCB4045875

To help our customers with their liquid disposal problems, we have offered to accept for future incineration scrap liquid Aroclors shipped to Monsanto Company, W. G. Krummrich Plant, Sauget, Illinois, Attention: Supervisor, Dept. 246. The charge for this disposal is 3¢ per pound of material. This charge is tentative pending a complete evaluation of incineration costs and does not include freight or container costs. The services of a waste disposal company such as Rollins-Purle, Inc., 3208 Concord Pike, Wilmington, Delaware, 19803, (302) 478-5150 should also be investigated.

Contamination of the atmosphere must also be eliminated. All handling systems must be closed wherever possible. Fumes exhausted from a tank, vessel, or working area must be trapped and collected using condensers and entrainment separators.

Solids contaminated with PCB's pose a greater challenge. Until a proper incinerator is designed, we are suggesting that disposal be made in an authorized, properly operated land fill away from any water systems. These solids include absorbing materials used to contain spills, rags and containers.

In summary, control of PCB's can be achieved with equipment engineered to prevent losses and maintained properly coupled with good manufacturing practices which result in a high standard of housekeeping.

From the interest and concern which you have expressed, I am certain that you will do all you can to reduce the escape of PCB's from your operation. When all of us succeed in this objective, I am confident that no regulatory agency will be compelled to take precipitous action regarding the use of PCB's in vital applications.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

cs

DSW 171250

W. B. Papageorge - St. Louis

February 23, 1971

J. MASON - JMASO
H. S. BERGEN - HBERG
T. L. GOSSAGE - TGOSS
E. P. WHEELER - EWHEE
W. R. RICHARD - WRICH

Attached is a copy of a questionnaire sent to industry in Indiana by the director of the state's Division of Water Pollution Control.

It appears to be identical to the letter sent by the state of Wisconsin which mailed about 100 received replies from about 50 of which 12 indicated using PCB's.

W. B. Papageorge

cs

DSW 171251

STLCOPCB4045877

February 22, 1971

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

Dear David:

I read in the February 15th issue of Chemical and Engineering News that you were presenting a paper entitled "Preparation of 36 Cl - Labeled Polychlorinated Biphenyls: Aroclor (R) 1248 and 1254" at the Los Angeles ACS meeting in March.

I am very interested in all PCB work and would like to receive a copy of your paper when it becomes available.

Although I have not been to your laboratory as I had indicated earlier, I am still very interested and hope to arrange a visit soon.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171252

STLCOPCB4045878

BCC: R. A. DAMIANI - CHICAGO
R. GARCIA - AKRON

February 18, 1971

312-375-6200 Ext 3261

Mr. John Brough
Quality Control Center
Inland Steel Co.
3210 Watling Street
East Chicago, Illinois 46312

Dear Mr. Brough:

With increasing evidence that polychlorinated biphenyls were being identified as environmental pollutants and in some instances were affecting some species of wildlife Monsanto, early in 1970, decided to limit the sales of its Aroclors, which contain polychlorinated biphenyls, to controllable, closed system applications.

I have enclosed copies of correspondence we mailed to our customers informing them of the problem and of our plan. I have also enclosed a copy of a statement summarizing Monsanto's plan to control the escape of PCB's to the environment.

It should be noted that many of the former applications such as in printing inks, coatings and gasketing were specialized and limited in quantity.

Our program is proceeding as scheduled with reformulations of remaining PCB containing industrial fluids (Pydrauls) now undergoing testing and expected to be available within the next few months.

We are confident that the amount of PCB's introduced into the environment has been dramatically reduced and that losses from the remaining applications, i.e., electrical transformers and capacitors, and closed heat transfer systems, can be effectively controlled.

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 Control

DSW 171253

/lse
Attachments

February 18, 1971

Dr. Arthur J. Libbey, Jr.
Marine Sciences Institute
The University of Connecticut
Avery Point, Groton, Connecticut 06340

Dear Dr. Libbey:

I am sending under separate cover samples of Aroclors you requested in your letter dated February 8, 1971.

In your letter you referred to a 1300 series of Aroclors. Since we do not have a 1300 series, I assume you would be interested in our 1200 series.

I hope these samples are useful in your pesticide work. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171254

66

STLCOPCB4045880

W. B. PAPAGEORGE - ST. LOUIS

FEBRUARY 17, 1971

ROLF BUCHDAHL - RBUCH

P. J. A. MARSH - BRUSSELS

Professor Alexander Silberberg, Weizmann Institute of Science, Rehovot, Israel has requested small quantities of Aroclors for experimental purposes. I have attached copies of the correspondence relating to his problem.

Can your office help Professor Silberberg?

The New York office of the Weizmann Institute informed me that designating this material as "samples" will help clear Israel customs with minimum cost and red tape.

W. B. PAPAGEORGE

/lse

Attachments

DSW 171255

65

STLCOPCB4045881

February 15, 1971

Dr. Adel F. Sarofin
Associate Professor
Chemical Engineering, 12-188
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139

Dear Mr. Sarofin:

I have enclosed copies I promised you of the analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

I personally felt our discussion Monday was interesting and informative and I hope you also found it useful to you and your committee.

If Elmer Wheeler or I can be of further service, please let us know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171256

64

STLCOPCB4045882

February 12, 1971

Miss Gail Ann Vasco
Methods Development Laboratory
Laboratory Services Division
Consumer and Marketing Service
United States Department of Agriculture
Building 318 Room 110 (ARC)
Beltsville, Maryland 20705

Dear Miss Vasco:

I am forwarding under separate cover the Aroclor samples you requested in your letter dated February 9, 1971.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171257

February 11, 1971

Dr. Hanz Crump
U.S. Geological Survey
Water Quality Laboratory
Room 101 Old Post Office Building
12th and Pennsylvania Avenue
Washington, D.C. 20242

Dear Dr. Crump:

Enclosed is a copy of the chlorinated biphenyl section of the Encyclopedia of Chemical Technology which I promised to send to Mr. Frank Thompson.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachment

DSW 171258

STLCOPCB4045884

February 11, 1971

Miss Louise S. Merkens
Department of Pharmacology
State University of New York
Upstate Medical Center
766 Irving Avenue
Syracuse, New York 13210

Dear Miss Merkens:

I regret to inform you that we have no samples of the pure isomers of polychlorinated biphenyl to share with you.

As you know the separation of the isomers, of which there are 210 possible, is a very costly operation and since we were interested only in the chemical and physical properties of the mixture as produced commercially, we could not justify the added expense.

At one time we did make a few milligrams of some of the isomers. We shared this small amount with several laboratories until our supply was exhausted.

I am aware that some of the government laboratories are preparing pure isomers for their studies, however, I do not know of any laboratory which can supply isomers to others.

I hope the lack of material does not seriously hamper your studies on liver enzyme induction. If you can use samples of the commercial material, I will gladly send you some.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171259

STLCOPCB4045885

February 11, 1971

Miss Carol Zemliak
Box 12310
U.C.S.B.
Santa Barbara, California 93107

Dear Miss Zemliak:

Enclosed are copies of articles regarding the polychlorinated biphenyls which you requested in your letter dated January 29, 1971.

I regret I cannot send you the Monsanto Technical Bulletins you listed. Following Monsanto's decision to discontinue the sale of Aroclors to certain "open system" applications, we discarded all old bulletins containing references to old uses.

I hope this information is useful to you. If I can be of further service, please let me know. Best wishes for a successful research paper. Perhaps you can send me a copy.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171260

STLCOPCB4045886

BCC: J. MASON - JMASO
H. S. BERGEN
E. P. WHEELER - EWHEE
J. D. EARLY - WASHINGTON
W. S. CLARK - WCLAR

February 10, 1971

Mr. Lowell E. Miller, Director
Pesticide Regulation Division
Environmental Protection Agency
South Agricultural Building
Washington, D.C. 20250

Dear Mr. Miller:

I recently noted in United States Department of Agriculture PR Notice 70-25 dated October 29, 1970 that polychlorinated biphenyls must be eliminated from economic poisons. We at Monsanto understand and are in complete agreement with this action as indicated in correspondence Dr. R. E. Kelly, Monsanto's Medical Director, had with Dr. Harry W. Hayes and Dr. C. Cueto, Jr. when the Pesticide Regulation Division was part of the U.S. Department of Agriculture.

I am deeply concerned, however, to note that this elimination has been extended to include the polychlorinated terphenyls. We have thoroughly searched all available literature and communicated with many laboratories, industrial, academic and regulatory, and been unable to find evidence that would indicate the polychlorinated terphenyls are contaminating the environment or that they are responsible for adverse effects on fish or wildlife.

We realize the importance of preventing the contamination of the environment but seriously question whether the polychlorinated terphenyls can be properly classified as contaminants. Does your division have available any information or data which would justify the elimination of these materials from economic poisons?

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

DSW 171261

STLCOPCB4045887

February 8, 1971

412-256-5035

Mr. Mike Skriba
Westinghouse Research and
Development Center
Beulah Road
Pittsburgh, Pennsylvania 15235

Dear Mr. Skriba:

Enclosed are copies of analytical procedures used by Monsanto laboratories to determine the polychlorinated biphenyl contents of water, sediment, biological tissues and gases.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171262

STLCOPCB4045888

February 8, 1971

Mr. George Knorr
Agway, Inc.
Box 128
Buffalo, New York 14240

Dear Mr. Knorr:

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

I am also enclosing copies of analytical methodology used by Monsanto laboratories to determine the polychlorinated biphenyls in water, sediment, biological tissue and gases.

I hope you can adopt these procedures to your use. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171263

STLCOPCB4045889

February 5, 1971

Mr. M. G. Zigler
Residue Laboratory
Campbell Soup Company
Camden, New Jersey 08101

Dear Mr. Zigler:

I am sending under separate cover the Aroclor samples you requested in your letter dated January 26, 1971.

I have enclosed copies of the analytical methodology used by Monsanto laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

/lse

Attachments

DSW 171264

STLCOPCB4045890

February 5, 1971

Mr. I. Hoffman
Environmental Secretariat
Division of Biology
National Research Council of Canada
Ottawa 7, Ontario
Canada

Reference: Your File No. 4-E10-5

Dear Mr. Hoffman:

Your letter dated January 25, 1971 requesting literature on Aroclors and polychlorinated biphenyls was forwarded to me for response since I have been closely involved with the PCB environmental problem.

I regret to inform you that Monsanto Technical Bulletins O/PL-306 and O/PL-311A have not been available since Monsanto management decided not to sell Aroclors for any of the applications described in these bulletins.

I have however enclosed a copy of O/PL-306A which contains all of the information other than application recommendations.

I have also enclosed additional literature pertaining to Aroclors and 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 Control

/lse

Attachments

DSW 171265

STLCOPCB4045891

W. B. PAPAGEORGE - ST. LOUIS

February 4, 1971

PCB DRUM RETURN

H. S. Bergen HBERG
T. L. Gossage TGOSS
J. R. Savage JSAVA

J. R. Fallon - JFALL

A rough estimate of costs related to the PCB drum return program I described in my memo dated December 16, 1970 indicates that freight and handling costs will exceed drum credit received from the drum reconditioner by $20,000 - $40,000 per year depending on the number returned and distance hauled. I personally do not like the idea of building this type of expenditure permanently into any program.

I propose that rather than proceed with a drum deposit program, we attempt to "close the loop" on contaminated drums just as we have on liquid scrap. We can work with drum reconditioning firms in several locations to establish proper procedures for PCB control. Our customers have the option of sending their drums to someone who will clean them properly. The freight costs will be paid by the customer and he will receive drum salvage value directly from the drum reconditioner.

We could use the Evans Brothers Company located in St. Louis for the pilot study and introduce other drum reconditioners as we get more experience.

What do you think?

W. B. PAPAGEORGE

ms

DSW 171266

BC bcc: Ray Ford - ATLANTA

February 3, 1971

Mr. Charles W. Biederman
Senior Engineer
Reynolds Metals Company
P. O. Box 520
Arkadelphia, Arkansas 71923

Dear Mr. Biederman:

Your letter dated January 22, 1971 addressed to Mr. Carl Clay was forwarded to me for response since I have been given the responsibility for studying the polychlorinated biphenyl problem.

Monsanto's Pydraul 312 does contain polychlorinated biphenyls (PCB), therefore every effort should be made to prevent it from entering any water systems, e.g. sewers, creeks, rivers, lakes, etc. Water containing PCB should be treated to remove the heavier fluid and finally passed through a bed of activated carbon to lower the PCB content to less than 10 parts per billion. This level is not officially established but we believe it represents an acceptable target.

Pydrauls which are no longer usable should be destroyed by incineration at temperatures exceeding 1600°F. Stack gases from the incineration must be scrubbed and neutralized to prevent HCl from escaping to the atmosphere. If incineration facilities are not available you may wish to send the scrap liquid to Monsanto Company, W. G. Krummrich Plant, Sauget, Illinois: Attention Supervisor Department 246. The cost of incineration is 3 cents per pound of liquid received and does not include freight or container costs.

Solid material contaminated with PCB should be segregated from other plant waste and buried in a properly operated landfill located away from any water systems.

The disposal methods I have described above apply specifically to Pydrauls formulated with persistent PCB

and could be followed to control the Pydraul 312 you are now using. As you probably know, we are reformulating our Pydrauls to eliminate the persistence problem and within the next two or three months the reformulated Pydrauls will have replaced all of the old formulations.

Regarding your request for analytical procedures for detecting PCB in water, I am enclosing copies of procedures used by Monsanto laboratories.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. Carl Clay - Monsanto Co.

DSW 171268

EFGH

February 3, 1971

Mr. Michael D. Wider
Department of Biology
University of Detroit
4001 W. McNichols Road
Detroit, Michigan 48221

Dear Mr. Wider:

Enclosed are copies of data sheets, articles and pamphlets containing information on the synthesis, toxicity, chemical and physical properties of Aroclor 1254.

Aroclor 1254 is not a pure chemical compound but represents a mixture of chlorinated biphenyls ranging from 1 chlorine to eight chlorines per biphenyl group. The total chlorine present is 54% on a weight basis.

As of August 30, 1970 Aroclor 1254 is sold only for use in electrical capacitors and transformers in controlled closed system applications.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

[redacted]BP:ms

Enclosures

DSW 171269

51

STLCOPCB4045895

W. B. PAPAGEORGE - ST. LOUIS

February 3, 1971

E. D. Malone JFQ
D. O. Sutter JFQ
E. S. Tucker JFQ

H. C. Carder - HCARD

Attached is the report on the latest Bisphenol A samples analyzed for PCB's.

The levels detected should not cause any problems but do indicate that the HCl pump is a source of PCB and must be kept in proper operating condition to prevent a greater amount of PCB from getting onto the finished product.

W. B. PAPAGEORGE

ms

Enclosures

DSW 171270

STLCOPCB4045896

W. B. PAPAGEORGE - ST. LOUIS

February 2, 1971

W. R. Richard WRICH
E. P. Benzing EBENZ
J. R. Savage JSAVA

J. C. Landwehr

ANNISTON Plant

Peter Benzing informs me of a Monsanto product, RPC-926 which appears to be promising as a flocculating agent in municipal treatment plants.

We should evaluate this material in your current PCB water clean-up studies. Will you let me know how much you need so that I can arrange to have some sent to you.

W. B. PAPAGEORGE

ms

DSW 171271

4

W. B. PAPAGEORGE - ST. LOUIS

February 2, 1971

PCB IN PLANT EFFLUENT

My Memo Jan. 29 to JRS

J. Savage JSAVA

J. Mason	JMASO
H. Bergen	HBERG
F. Holzapfel	FHOLZ
P. Hodges	PHODG
W. Richard	WRICH

I wish to make a correction in my paragraph stating I am proposing that 1 pound per day of PCB in the water effluent be achieved in our plants by Sept. 1971 (not 1972) and 1 pound per day to the atmosphere by year end.

Please make this correction on your copies.

W. B. Papageorge

ms

DSW 171272

STLCOPCB4045898

February 1, 1971

Mr. Donald L. Grant
Food Division, Food & Drug Directorate
Dept. of National Health & Welfare
Tunney's Pasture
Ottawa 3, Ontario
CANADA

Ref. your file No. 913-1-2

Dear Mr. Grant:

I am sending under separate cover the samples of Aroclor 1221 and Aroclor 1254 you requested in your January 15, 1971 letter to Mr. Jack T. Garrett.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: J. T. Garrett - Monsanto

DSW 171273

4

STLCOPCB4045899

February 1, 1971

Dear Linda,

Enclosed is some material I received from Monsanto's Public Relations department which describes some of the positive actions Monsanto has taken to control pollution.

Perhaps you can take some of the ideas and after rewording them, you might be able to use them in preparing your own article.

I hope you find these articles useful and if I can be of further help, please let me know.

Sincerely,

Miss Linda Moody
3635 Seville Court
Florissant, Mo. 63033

Enclosures

DSW 171274

4

STLCOPCB4045900

bcc: P. Park

February 1, 1971

Dr. Warren L. Roller
Agricultural Engineering
Ohio Agricultural Research & Development
Center
Wooster, Ohio 44691

Dear Dr. Roller:

Your letter dated January 7, 1971 requesting information on Aroclors was forwarded to me for response since I am involved with the polychlorinated biphenyl environmental contamination problem.

Regarding the availability of a sealant now on the market that could totally prevent the leaching of polychlorinated biphenyls into the silage acids, I regret to inform you we have no knowledge or experience to guide us. It seems reasonable to expect that a thorough sandblasting of the surface followed by a coating of durable material such as an epoxy or ceramic should result in very good control. If any PCB remains the quantity should be extremely low and any amount eventually appearing in the milk would seem to be well within acceptable limits.

Dr. David A. Hill of the Division of Foods, Dairies and Drugs in Ohio informed me that Vernon V. Vadikin and Sons, Inc., Marietta, Ohio, offer a recoating service which carries some sort of guarantee. I have not had the opportunity to discuss their coatings with them.

I understand that Mr. George Whitesides, George W. Whitesides Company, Louisville, Kentucky, has considerable experience with silo coatings. Perhaps he can help.

The removal of polychlorinated biphenyls from the endogenous lipid pools in dairy cattle has never been a subject for study by Monsanto because it was not anticipated

DSW 171275

4

to be an area for concern. We have read with interest reports of studies involving the use of activated carbon and barbiturates in the removal of DDT and its metabolites. If I recall correctly these studies were conducted in universities in Kentucky and Michigan.

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 Control

WBP:ms

DSW 171276

STLCOPCB4045902

W. B. PAPAGEORGE - ST. LOUIS

February 1, 1971

J. Mason
H. S. Bergen
H. N. Dahlstrom - BRUSSELS
T. L. Gossage

P.J.A. Marsh - BRUSSELS

I note with some personal satisfaction the very favorable press you are receiving following your announcement to curtail sales of Aroclors in the U.K. I recall, however, that we had intended to avoid a big public announcement to prevent an adverse effect on the Continental producers who would be forced to defend themselves actively.

Are we still concerned about such a reaction or have the articles appeared in newspapers with limited circulation?

Alf Vodden reported that your customer letter had been sent to all non-controllable PCB users in the U.K. I have received no other report regarding progress on your "PCB Plan Europe" dated November, 1970. With many of the "Action" items having a "Review or Target" date of March 1, I am wondering if progress to date is satisfactory.

Will you have someone prepare a brief status report.

W. B. PAPAGEORGE

ms

DSW 171277

44

STLCOPCB4045903

JANUARY

DSW 171278

W. B. PAPAGEORGE - ST. LOUIS

January 29, 1971

PCB IN PLANT EFFLUENT

J. Mason JMASO
H. Bergen HBERG
F. Holzapfel FHOLZ
P. Hodges PHODG
W. Richard WRICH

J. Savage - JSAVA

Early in 1970 we established a target of 10 ppb of PCB's in our plant waste streams which we expected to achieve by the third quarter 1971. No specific target was established for the quantity of PCB we could tolerate in the atmosphere.

During the year as the plants gained tighter control of known sources of PCB pollution, it became increasingly obvious that high levels would continue because of the PCB's trapped in the soil and in the sewer systems. Clean-up of these sources can be economically impractical.

Our studies in Anniston designed to develop methods for removing PCB's from dilute water streams were intended to provide us with a method for removing PCB/s from isolated small waste streams. It appears that the PCB contamination is so widespread that all of the plant's effluent must be treated. This would result in a system more complex and costly than anyone had anticipated and approaches tertiary treatment which at W. G. Krummrich plant is scheduled for completion by 1973.

For 1971 I am proposing that 1 pound per day of PCB in the water effluent be achieved in our plants by Sept. 197? and 1 pound per day to the atmosphere by year end. These are levels which I believe the regulatory agencies might tolerate.

What must be done at each plant to achieve these objectives and what will it cost?

W. B. PAPAGEORGE

ms

DSW 171279

4.

W. B. PAPAGEORGE - ST. LOUIS

January 29, 1971 H. S. Bergen

T. L. Gossage
J. R. Savage

On January 20, 1971 I discussed with Mr. James J. McLaughlin, Director of Marketing, Rollins-Purle, Inc. the possibility that his company may be interested in using our liquid incineration service which will be available at the WGK plant. He admitted he had not thought of this approach but it had some appeal since his studies indicated the St. Louis area could not justify a unit similar to those they designed for the Philadelphia, Baton Rouge and Houston areas.

I suggest we discuss within a week or so a proposal we could make to Rollins-Purle regarding cost of the service and types of material we could handle.

W. B. PAPAGEORGE

ms

DSW 171280

4:

STLCOPCB4045906

January 29, 1971

Mr. Richard E. Hanson
Westinghouse Electric Corporation
1216 West 58th Street at the Shoreway
Cleveland, Ohio 44100

Dear Mr. Hanson:

At Randy Graham's request, I am enclosing a copy of Ohio's Solid Waste Disposal Law and accompanying regulations.

Ohio's law appears to be very typical of laws found in other states and does permit the disposal of solid wastes contaminated with polychlorinated biphenyls in properly operated landfills.

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 Control

WBP:ms

Enclosure

cc: Mr. G. R. Graham
Monsanto Co.
New York

DSW 171281

4/

STLCOPCB4045907

W. B. PAPAGEORGE - ST. LOUIS, MO.

January 29, 1971

R. F. Garnsworthy
Monsanto Australia Ltd.
MELBOURNE

In response to Mount Isa Mines Ltd and Standard Waygood Ltd requests for control and disposal information for Pyroclor I believe that the suggestions described in my letter to you dated December 14, 1971 would be appropriate. I strongly recommend that both Standard Waygood and Mt. Isa Mines be assured that there is no cause for panic and that good housekeeping and proper final disposal are very effective in preventing these materials from contaminating the environment.

I am enclosing a rough draft of suggestions for the effective containment of PCB's. You may wish to reword this draft to better fulfill your needs.

In the U.S. and Canada we have offered the services of an incineration unit which is being constructed at our W. G. Krummrich Plant in Sauget, Illinois. We are also evaluating the services of Rollins-Purle, Inc., a company offering industry a wide variety of disposal services including high temperature incineration. In the U.K. we have available the services of Purle Brothers, Ltd., London, England.

I do not know if a high temperature incinerator is available to you; therefore, it appears that proper burial of Pyroclor wastes offers the best solution.

To summarize, I recommend you assure everyone concerned that there is no reason for taking precipitous action and that with good control and proper disposal environmental contamination can be prevented.

W. B. PAPAGEORGE

ms

Enclosure

DSW 171282

4(

January 29, 1971

Mr. R. F. Casey
Substation Operation & Maintenance Engineer
Ohio Edison Company
47 North Main Street
Akron, Ohio 44308

Dear Mr. Casey:

Your letter dated January 20, 1971 addressed to Mr. D. A. Olson was forwarded to me for response since I have been closely involved with the polychlorinated biphenyl environmental problem.

Since February, 1970 when Mr. Olson wrote his letter informing our customers of a potential problem, there has been increasing evidence that PCB's of chlorine content less than 54% have been found in the environment generally near the source of contamination. There is also increasing evidence that the PCB's being identified as Aroclor 1254 and Aroclor 1260 are probably the residues from lower chlorinated materials which had undergone degradation. Because of this limited information we have concluded that control of all PCB's is indicated.

A large percentage of our production has had a chlorine content of less than 54%. However since our Aroclor products are mixtures of many isomers, the higher chlorinated versions have been present in virtually every mixture in varying amounts. These higher chlorinated isomers are very resistant to degradation; therefore, will continue to build up in the environment unless controlled.

We have an active program for evaluating new materials for use in Askarel applications. The most promising material developed to date is a modified PCB from which the persistent higher chlorinated isomers have been virtually removed resulting in a fluid which has attractive dielectric properties but if it escapes into the environment is more biodegradable. Samples of this material, which we have designated as MCS 1016, are now being evaluated by many of

DSW 171283

STLCOPCB4045909

the capacitor manufacturers. If test results confirm that this material is an acceptable fluid we plan to produce it in commercial quantities by mid-year 1971.

An incinerator capable of destroying Askarels must operate at temperatures ranging from about 2000°F to 3000°F and must have facilities for scrubbing the stack gases to prevent hydrogen chloride gases from escaping to the atmosphere. This type of unit can be relatively costly to install and operate but it can be justified if the volume of material to be destroyed is great enough. It may be economically practical for several units of this type to be located throughout the country providing a service to the utilities nearby. We plan to operate our unit to gain experience to help evaluate the practicality for installing more units.

At present only one State, Pennsylvania, has objected to the disposal of Askarel contaminated solids in properly managed landfills. I recommend that landfills be used as long as they are authorized. Certainly if the liquid is drained from failed equipment the potential for migrating into the environment, already very small, is reduced considerably. In the meantime we are continuing our studies on the incineration of these solids and hope to have a unit in operation before the end of the year.

I recognize the many problems that the PCB environmental contamination problem has created; however, I am optimistic that Askarels with their many beneficial characteristics will continue to serve the industry if we all follow good housekeeping and disposal practices.

I recommend that you seriously consider participating in the NEMA-ANSI effort to coordinate the Askarel handling problem country-wide.

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 Control

WBP:ms

DSW 171284

January 28, 1971

Dr. James Bedford
Bureau of Water Management
Mason Building
Lansing, Michigan 48926

Dear Dr. Bedford:

Carlos Fetteroff informed me today that you were involved in polychlorinated biphenyl studies and he suggested I forward to you any information I may have regarding the status of Monsanto's PCB program.

I have enclosed summaries of Monsanto's policy statement, biodegradation studies and toxicity studies. I have also included a collection of copies of articles 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 Control

WBP:ms

Enclosures

DSW 171285

38

STLCOPCB4045911

January 28, 1971

Mr. Barry E. Kidner
Purchasing Manager
E. I. DuPont Co.
Wilmington, Delaware 19800

Dear Mr. Kidner:

Monsanto's Jack Fallon informed me of your interest in the polychlorinated biphenyl environmental contamination problem and suggested that you might be interested in a bibliography on the subject.

I have enclosed a copy of the bibliography along with copies of the articles as well as other related information.

You may wish to forward this material to Phil Blatz at your Experimental Research Station.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. J. R. Fallon - Monsanto
Mr. J. R. Savage - Monsanto

DSW 171286

STLCOPCB4045912

January 25, 1971

Dr. Robert Boudreau
General Electric Company
Hudson Falls, New York 12839

Dear Dr. Boudreau:

I have enclosed copies of analytical methodology used by Monsanto laboratories for the determination of the PCB content of water, sediment, biological tissue and gases which Randy Graham offered to send you.

I hope you find these useful either as is or with modifications. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: G. R. Graham
Monsanto Co.
New York

Enclosures

DSW 171287

36

STLCOPCB4045913

W. B. PAPAGEORGE - ST. LOUIS

January 25, 1971

J. Mason JMASO
H. Bergen
W. Richard WRICH

E. P. Wheeler - EWHEE

I telephoned Dr. K. Diane Courtney, National Institute of Health Sciences, Durham, N.C. to review the status of teratology studies of Aroclor 1254 and Aroclor 1260 on laboratory rats.

She informed me that no effects were observed but she did not give any information on dosage levels. She plans to continue her studies using mice as soon as she completes current work with mercury and NTA.

W. B. PAPAGEORGE

ms

DSW 171288

3 C

STLCOPCB4045914

W. B. PAPAGEORGE - ST. LOUIS

January 22, 1971

G. R. Graham - New York

R. Seifert - RSEIF

Attached are copies of customer responses to Randy Graham's request for an estimate of the PCB wastes expected at each location.

Randy will prepare a summary which I expect soon.

W. B. PAPAGEORGE

ms

Enclosures

DSW 171289

3

January 21, 1971

Mr. Philip A. Einhorn
Rollins-Purle, Inc.
P. O. Box 221
Bridgeport, N. J. 08014

Dear Phil,

I am sending under separate cover samples of Aroclor 1242, Aroclor 1254 and Aroclor 1260. These Aroclors represent the types of polychlorinated biphenyls used in fluid formulations for the electrical industry.

I am enclosing a copy of a table presenting solubility data for Aroclors and copies of analytical procedures used by Monsanto's laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. J. L. McLaughlin
Rollins Purle, Inc.
P. O. Box 2349
Wilmington, Delaware 19899

Mr. G. R. Graham
Monsanto Co. - New York

DSW 171290

3.

STLCOPCB4045916

January 22, 1971

Mr. Peter C. Sukanek
Chemical Engineering Department
Goessmann Laboratory
University of Mass.
Amherst, Mass. 01002

Dear Mr. Sukanek:

I am sending under separate cover the samples of Aroclor 1248 and Aroclor 1260 you requested in your letter dated January 18, 1971.

I hope your studies are progressing well for you. If I can help, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171291

3

January 21, 1971

Dr. Edward J. Smith
Assistant Professor of Chemistry
St. Joseph's College
City Avenue at 54th Street
Philadelphia, Pennsylvania 19131

Dear Dr. Smith:

I am sending under separate cover samples of Aroclor 1221, Aroclor 1242, Aroclor 1248, Aroclor 1260, Aroclor 4465 and Aroclor 5460 which you requested in your letter dated January 13, 1971.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171292

3/

STLCOPCB4045918

W. B. PAPAGEORGE - ST. LOUIS

January 18, 1971

T. L. Gossage TGOSS
E. M. Potter EPOTT
J. R. Savage JSAVA

G. R. Sido - GSIDO

Confirming several telephone conversations:

1. All labels for Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260 will include "Electrical Grade" designation.

2. Labels will be required for 55 gallon drums, 30 gallon drums, 5 gallon cans and sample bottles. Only the 55 gallon drums and samples will be prepackaged for inventory. The 30 gallon drum and 5 gallon can will be filled as ordered.

3. We have no plans for continuing the manufacture of Aroclor 1232 and Aroclor 1262.

4. The continued production of Aroclor 1268 is contingent on the results of negotiations now underway with DuPont. If continued, it will not be electric grade.

5. Aroclor 1221 will continue as non-electric grade.

I had misinformed Virginia Koenig on some of these points. I hope this memo clarifies the Aroclor label picture.

W. B. PAPAGEORGE

ms

DSW 171293

29

STLCOPCB4045919

W. B. PAPAGEORGE - ST. LOUIS

January 18, 1971

1970 PCB EXPENDITURES

T. L. Gossage

Actual expenditures during 1970 for our Aroclor defense program are estimated as follows:

Expense		
Toxicity Studies	166,600	
Research	337,000	
Engineering	50,000	
Manufacturing	170,000	
Administration & Staff Departments	163,100	
Total expense		$886,700
Capital		
U. S. Plants	131,000	
Newport	16,000	
Total capital		$147,000
Grand Total		$1,033,700

W. B. PAPAGEORGE

ms

DSW 171294

28

STLCOPCB4045920

W. B. PAPAGEORGE - ST. LOUIS

January 15, 1971

PCB LEVELS IN ATMOSPHERE-
NEWPORT PLANT

P.J.A. Marsh - Brussels
H. A. Vodden Ruabon
R. Thomas Newport
D. Danna DDANN
J. Savage JSAVA
P. Hodges PHODG

F. Macdonald - NEWPORT

R. Thomas' report on Technical Services Department Job 21/7139/2392 "Environmental Contamination by PCB (Atmospheric)" dated December 30, 1970 is excellent and very useful in defining the atmospheric PCB exposure our employees are experiencing.

As a measure of the PCB's entering the environment from your plant's gaseous effluents the information has its shortcomings because we have no measure of the air movement through each of the locations tested.

A more meaningful set of data could possibly be obtained by identifying the sources of atmospheric contamination such as tank vents, jet exhausts, vacuum pump exhausts, drumming station losses, tanker openings and known leaks and spills which should be very infrequent. A determination of the PCB content of the gases from these sources could be made from sample analysis. This concentration, along with the rate of gas flow, duration of flow and frequency of occurrence could be used to arrive at a good estimate of the amount of PCB being lost.

To effectively communicate performance in controlling vapor losses, I believe we must report these losses in actual pounds per day averaged over a period of time versus an established target loss.

W. B. PAPAGEORGE

ms

DSW 171295

January 15, 1971

513 - 562-0424

Mr. John Weaver
Procter and Gamble Company
Hillcrest Towers
7162 Reading Road
Cincinnati, Ohio 45237

Dear John,

Attached is a copy of a rough draft of a guideline for preventing polychlorinated biphenyls from entering the environment. As you know askarels contain PCB's.

This guideline is deliberately general in nature, outlining methods which should be considered. Specific actions and design details will vary with the unique problems encountered and with the resources available to the individual assigned to solve the problem.

The American National Standards Institute (ANSI) at the request of NEMA has agreed to sponsor a committee representing the manufacturers and users of askarel transformers to develop an askarel control procedure.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171296

26

W. B. PAPAGEORGE - ST. LOUIS

January 15, 1971

E. P. Benzing
R. Davis
M. F. Baber

E. P. Wheeler - EWHEE

The Hydrocarbons and Polymer Division has recently expressed considerable interest in the possible use of Aroclor 5068 and Aroclor 5468 as fire retardant additives in nylon molding resin.

These Aroclors are terphenyls chlorinated to the maximum level. The Aroclor 5468 is a distilled version of Aroclor 5068.

Since these are new materials can you arrange for standard acute toxicity studies. Samples should be available by Feb. 1.

W. B. PAPAGEORGE

ms

DSW 171297

KM

bcc: E. S. Tucker - JFQ

January 15, 1971

Dr. Richard Rice
Agway Research Laboratories
777 Warren Road
Ithaca, New York 14850

Dear Dick,

Scott Tucker informed me of your interest in the results of the animal toxicity studies being conducted by Industrial Bio-Test Laboratories for Monsanto.

The studies have not been completed and we will not have the final reports until the third quarter this year.

I have enclosed a copy of a status report on the rat and dog feeding studies.

The results of the studies on leghorn chickens will be presented by the Bio-Test investigators at a meeting of a toxicology society and then be published early this year. The studies show that Aroclors affect the chicken's ability to lay normal hard-shell eggs similar to the phenomenon noted by investigators on some species of wild birds.

I have enclosed a collection of scientific literature relating to the polychlorinated biphenyls. Perhaps you will find it useful.

In addition to the call from Dr. George, Albany, N.Y., I also received a call from Dr. Hans Crump, U.S. Geodetic Survey, Water Quality Office, Washington, D.C. He mentioned that some problem with polychlorinated biphenyls in chickens had developed in New York State.

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

Sincerely,

DSW 171298

W. B. Papageorge
Manager
Environmental Control

WBP:ms

24

STLCOPCB4045924

bcc: N. T. Johnson
D. R. Hansen -SAN FRANCISCO

January 15, 1971

Mr. W. L. Luke
Purchasing Agent
IRECO Industries, Inc.
P. O. Box 2709
1300 Bethel Drive
Eugene, Oregon 97402

Dear Mr. Luke:

Your letter asking if Pydraul 312 is classified as a pollutant or non-pollutant was forwarded to me for response because I have been very closely involved with the problem of polychlorinated biphenyls (PCB's) and the environment. PCB's are present in Pydraul 312.

You are probably aware that PCB's have been identified as persistent pollutants in our environment and in some cases have been implicated in causing harm to some species of wildlife. There is no evidence that these materials are harmful to mammals or humans. Because of their persistence in the environment, Monsanto management made the decision to discontinue the sale of PCB-containing products for those applications in which control to prevent escape to the environment was virtually impossible.

Following the decision, we started an aggressive research program to reformulate our Pydraul fluids. The program is now well underway with many Pydrauls reformulated, tested and marketed. The remaining reformulations, including Pydraul 312, are expected to be available during the first quarter of 1971.

The new Pydrauls eliminate the problem of contamination by persistent PCB's but like all other industrial liquids should not be freely discharged in public streams and lakes.

All 50 states have established water quality standards to control pollution. There are some differences in these standards from state to state as you can see from the attached summary from "Chemical Week". In every case,

DSW 171299

the blatant disposal of an industrial fluid, whether it contains PCB, mineral oil, glycols, phosphates or any other material, is not permitted.

Admittedly, the enforcement of these standards varies from area to area depending primarily on available funds and on political influences. With the formation of the Environmental Protection Agency enforcement activities will be accelerated forcing all present polluters to take appropriate action.

The choice of industrial fluid to be used in any location should be based on a careful consideration of the many factors involved which include price, service, combatibility, fire resistance, etc. A choice based predominately on the fact that today's environmental spotlight is not focused on the materials in the fluid is not a sound business decision since the environmental spotlight will very soon be focused on all materials introduced into the environment.

I recommend that during the next few months that you continue using Pydraul 312. In the meantime we will have completed our test program with a reformulated product and should be able to offer you a fluid compatible with the old, having all of the good properties you expected in Pydraul 312 and at a competitive price.

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 Control

WBP:ms

Enclosure

DSW 171300

January 14, 1971

Mr. Kenneth J. DeNault
Department of Geology
Stanford University
Stanford, California 94305

Dear Mr. DeNault:

I am sending under separate cover samples of Monsanto's Aroclor 4465 which you requested in your letter of January 7, 1971.

Your suggestion that we market this material for use as a mounting medium is appreciated. In fact we did so until recently. Aroclor 4465 contains polychlorinated biphenyls which some studies indicate are environmental contaminants. To prevent further contamination, we have discontinued the marketing of materials such as Aroclor 4465.

The samples I am sending you are among the last remaining on our sample shelf. I recommend that extreme care be taken to avoid disposal into water systems. For the small amounts involved in your case, burial in an authorized landfill is appropriate.

I hope these samples are useful and if I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. R. D. Jons
Monsanto Co.
Midland, Texas

DSW 171301

22

STLCOPCB4045927

January 14, 1971

Dr. Hans Crump
U.S. Geological Survey
Water Quality Laboratories
Room 101 Old Post Office Bldg.
12th and Pennsylvania Avenues
Washington, D. C. 20242

Dear Dr. Crump:

I am sending under separate cover samples of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260 you requested.

I am enclosing copies of analytical procedures used by Monsanto's laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissue and gases.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171302

STLCOPCB4045928

January 13, 1971

Dr. E. George
New York State Food Laboratories
Building Number 7
1220 Washington Avenue
Albany, New York 12226

Dear Dr. George:

Enclosed are copies of analytical procedures used by Monsanto's laboratories for the determination of polychlorinated biphenyls in water, sediment, biological tissues and gases.

I hope you find these useful in your study of PCB's in animal feed, tissue and eggs.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171303

STLCOPCB4045929

W. B. PAPAGEORGE - ST. LOUIS

January 13, 1971

1970 PCB EXPENDITURES

H. S. Bergen

Our Aroclor defense expense for 1970 is estimated as follows:

Expense

Toxicity Studies		$166,600
Research		
Analytical & Degradation Studies	$120,000	
New Products	185,000	
Effluent Clean-up	32,000	
		337,000
Engineering		50,000
PCB Administration		48,400
Medical Department		23,000
Public Relations		6,700
Legal		
Liberty Mutual (Estimated & included in Monsanto's 1970 Performance)		75,000
Law Department		10,000
Manufacturing		
Anniston	102,000	
Krummrich	45,000	
Newport	15,000	
Queeny	8,000	
		170,000
Total Expense		$886,700

DSW 171304

STLCOPCB4045930

Capital

Manufacturing	
Anniston	$81,000
Krummrich	50,000
Newport	16,000
Total Capital	$ 147,000
Grand Total 1970 Expenditures	$1,033,700

The total shown is greater than the amount reported by L. W. Schneider monthly because it includes capital expenditures as well as estimates of Staff department and manufacturing costs not shown in Schneider's report.

W. B. PAPAGEORGE

ms

DSW 171305

W. B. PAPAGEORGE - ST. LOUIS

January 12, 1971

G. R. Graham - NEW YORK

I talked to Jerry Rowe and his boss W. "Jack" Finn, P. R. Mallory Co., Waynesboro, Tennessee and offered my help in their pollution control program.

Jerry claimed that everything was considerably improved although some oil was still on the floor. After piping changes are completed he assured me the floor would be dry.

He stated that he followed your advice concerning closing impregnating chambers for final dry-out and was successful in improving the amount of fumes in the building. He asked for design information for reducing the fumes leaving his ventilating system. I promised to send him any information I could get together and that I was attempting to find information that would result in good fume control but would not be very costly to install and operate.

Jerry believes he has improved the situation considerably but is very concerned that Monsanto will be unreasonable and difficult to satisfy. I reviewed with him our reasons for insisting that all our customers control their PCB losses.

I asked if a letter from me would be helpful. He responded that no letter was required until we were ready to recommend methods for improving the ventilation system.

W. B. PAPAGEORGE

ms

DSW 171306

Monsanto

OUTGOING MESSAGE BLANK
Telex Communications System

DATE 1-12-71 | TIME 3:55 P.M. | SENDER'S ACCOUNT NO. 2-00-735-72

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. FUJII/J. DURLAND - MONZASHI TOKYO

TEN AROCLOR PLANT EFFLUENT SAMPLES CONTAIN NINETY-NINE AND NINETY-FOUR PARTS PER BILLION,(TEN TO THE NINTH POWER) PCB CALCULATED AS AROCLOR TWELVE FORTY-TWO.

W. B. PAPAGEORGE - ST. LOUIS, MO.

CC: D. DAINA
E. G. WRIGHT - ANNISTON, ALABAMA

17

...V—IR
REV. 7-64

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

DSW 171307

January 12, 1971

Mr. Harry Leo Slatin
Medical Research (113)
V. A. Hospital
4101 Woolworth Avenue
Omaha, Nebraska 68105

Dear Mr. Slatin:

I am sending under separate cover a sample of Aroclor 5460.

This material has a Refractive Index (D Line) at 20°C of 1.660-1.665. I believe this is the material you are seeking.

I am enclosing a fact sheet showing general properties, including the refractive indices, of the various Aroclors.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171308

16

STLCOPCB4045934

bcc: H. L. Hinckler [illegible]
J. Mason [illegible]
H. S. Bergen [illegible]

January 11, 1971

Mrs. Fredrika F. Bernstein
14710 Sutton Street
Sherman Oaks, California 91403

Dear Mrs. Bernstein:

Mr. E. J. Bock, President of Monsanto Company, has asked me to reply to your card since I have been deeply involved in the problem of PCB's and the environment. Mr. Bock was very much impressed with the concern expressed in your letter and you may be assured that all of us at Monsanto share this concern.

We have been investigating the relationship of PCB's to the environment since 1968. Adhering to our policy of cooperating with representatives of the academic and governmental scientific community, we have corresponded with over 100 laboratories and have met with scientists around the world including Dr. Robert Risebrough, University of California, Berkeley, Professor O. Widmark, University of Stockholm, Dr. J. H. Koeman and Professor H. Van Gendeven, University of Utrecht, The Netherlands. These scientists are acknowledged leaders in the study of PCB's.

We have had, and continue to have, thorough discussions and exchange of information with representatives of governmental agencies in the United States, Canada, United Kingdom, and Sweden. The United States agencies include the Food and Drug Administration, Federal Water Quality Administration, Department of Agriculture, Bureau of Commercial Fisheries, Bureau of Sports Fisheries and Wildlife, and the National Institute of Health.

In every instance the scientists have expressed appreciation of Monsanto's approach and noted that we were taking a responsible position on the PCB problem.

DSW 171309

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STLCOPCB4045935

With regard to your suggestion that we release production information on PCB's, I am sure you are aware that production and sales figures are considered confidential information, as they are in most companies, since this information is vital to the survival of any business. We have informed governmental agencies that we are perfectly willing to make such information available to their responsible representatives subject to our receiving an assurance that these figures would be kept confidential and used only for scientific purposes. Much more meaningful in terms of preventing further contamination of our environment is Monsanto's self-imposed decision that effective from the 30th of August, 1970, we will no longer sell the polychlorinated biphenyls to customers for use in applications where the use and disposal of the end product cannot be controlled.

We have taken the position that we have a responsibility to insure that they are used only in applications where their unique properties are vitally important and where usage and eventual disposal can be monitored and controlled. We, therefore, will continue to sell polychlorinated biphenyls for use in sealed or closed system applications, e.g. transformers, capacitors and heat transfer systems, in which their fire-resistant properties are extremely important in insuring maximum protection for the safety of the population of this country. Coupled with this closed system usage, we have established a service to collect used material for regeneration or safe and total destruction.

You suggest that we consider limiting plastics production. Referring specifically to PCB's, although we have referred to the use of these materials as plasticizers, they were never used in the plastic items you normally encounter such as shower curtains, toys or containers, but were used in special, primarily industrial, types of sealants, coatings, gaskets and the like which as I indicated earlier we no longer supply.

In summary we do share your concern regarding the contamination of our environment with PCB's, we have actively cooperated with scientists studying the problem, we have offered to divulge production information to responsible government agencies on a confidential basis, we have voluntarily refused to sell PCB's to uncontrolled uses and we have established a system for controlling environmental contamination from closed system application. We believe our actions are those that any responsible company would take when faced with this type of problem.

DSW 171310

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

cc: Mr. E. J. Bock
President
Monsanto Company

DSW 171311

STLCOPCB4045937

W. B. Papageorge - St. Louis

January 8, 1971

PCB Condensation

Call Report by G.R. Graham 12-9-70

G. R. GRAHAM
NEW YORK

In your call report you indicate that Sangamo Electric, Pickens, S.C. asked for the cold water temperature necessary to condense PCBs out of a vacuum line.

As you know there is no single temperature which must be available. Refrigeration will not be necessary. At 100°F the vapor pressure of Aroclor 1242 is about .001 mm Hg which is certainly low. I personally would set this as an upper limit and using water temperatures in the normal 75-80°F range should be adequate.

The temperature of the water coupled with other factors such as water flow, vapor flow, vapor temperature, pressure drop tolerated, etc. will influence the size of the condenser required.

Following condensation some provision must be made for removing the liquid droplets. I suggest that Sangamo talk to a representative of

R. A. Adams Co., Inc.
225 E. Park Ave.
Buffalo, N. Y.

The Adams Company sell devices for removing particles in vacuum systems.

W. B. Papageorge

cs

DSW 171312

/3

STLCOPCB4045938

W. B. Papageorge - St. Louis

January 8, 1971 G. R. Graham

R. M. KOUNTZ - RKOUN

Attached are copies of sketches Randy Graham left with me for evaluation to determine possible application in our customers' as well as our own plants to control PCB losses.

Included are sketches of:

1. An oil skimmer used by Westinghouse at their South Boston, Virginia plant.

2. A suggested air scrubbing system utilizing rotating oil-wet continuous belt filters.

3. A baffled oil-knockout pot for use in vacuum systems.

I would like to have your comments regarding the merits of these suggestions.

W. B. Papageorge

cs

DSW 171313

STLCOPCB4045939

W. B. PAPAGEORGE - ST. LOUIS

January 7, 1971

PCB LEVELS IN AIR -
ANNISTON PLANT

J. T. Bell ANNISTON
J. L. Corder ANNISTON
G. L. Jessee ANNISTON
J. C. Landwehr ANNISTON
P. B. Hodges PHODG
J. R. Savage JSAVA

E. G. Wright - ANNISTON

The data contained in your letter of December 29, 1970 is very informative in that it gives us an idea of the PCB levels in the air to which our employees could be exposed.

Since we are lacking information on air movement at each location it is very difficult to equate the PCB concentration found to the amount of PCB eventually entering the environment.

For air pollution control purposes, a more meaningful measurement could result from the analysis of vapors from known sources and a measure or estimate of the rate, duration, and frequency of the vapor flow. Sources would include tank vents, jet exhausts, tank car and tank truck openings, drumming locations as well as leaks and spills, which must be infrequent.

To communicate effectively performance in controlling vapor losses, I believe we must report these losses in actual pounds per day averaged over a period of time versus a target.

W. B. PAPAGEORGE

ms

DSW 171314

January 7, 1971

Dr. Walter A. Glooschenko
Research Scientist
FRB Detachment
Canada Centre for Inland Waters
Fisheries Research Board of Canada
867 Lakeshore Road
P. O. Box 5050
Burlington, Ontario, Canada

Dear Dr. Glooschenko:

I regret to inform you that the Monsanto Technical Bulletins you requested in your letter dated December 29, 1970 are out of print and no longer available.

With increasing evidence that polychlorinated biphenyls were contributing to environmental pollution, Monsanto management decided to severely restrict the end uses of Aroclors. Since the bulletins you requested contained recommendations for Aroclor applications which we no longer supply, we decided not to reprint copies.

I have enclosed a copy of Bulletin O/PL-306A which contains virtually all information except for suggested uses that appeared in the old bulletins.

I hope the lack of bulletins does not cause any serious inconveniences for you. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosure

DSW 171315

/c

STLCOPCB4045941

January 7, 1971

Miss Gail Ann Vasco
Methods Development Laboratory
Technical Services Division
Consumer and Marketing Service
United States Department of Agriculture
Bldg. 318 Room 110 (ARC)
Beltsville, Maryland 20705

Dear Miss Vasco:

I am forwarding under separate cover samples of Aroclor 1242, 1254 and 1260. Aroclor 1242 is being sent to you in lieu of the Aroclor 1245 requested in your letter dated December 30, 1970. We do not manufacture Aroclor 1245.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171316

STLCOPCB4045942

January 7, 1971

Mr. S. Takahashi
Manager of Technical Department
Chemicals Division
Kanegafuchi Chemical Industry Co., Ltd.
33-Chome Nakanoshima
Kitaku Osaka
JAPAN

Dear Mr. Takahashi:

Your letter dated November 20, 1970 addressed to Dr. Philip C. Kearney, U.S. Department of Agriculture requesting copies of Monsanto's reports of PCB animal toxicity studies was forwarded to me for response.

I regret to inform you that these reports, which incidently are status reports of studies which are still continuing, are not available except to representatives of appropriate governmental regulatory agencies.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

bcc: Dr. Philip C. Kearney
Bldg. 050
Plant Industry Station
Beltsville, Maryland 20705

Dr. J. D. Early
Monsanto Company
Washington, D.C.

DSW 171317

W. B. PAPAGEORGE - ST. LOUIS

January 6, 1971

P.J.A. Marsh - BRUSSELS

In early December an international technical conference on marine pollution was sponsored by the United Nations Food & Agriculture Organization in Rome.

The U.S. press reported that PCB's were discussed and Monsanto in particular was criticized for not divulging production data.

Do you have copies of any information generated at this conference?

W. B. PAPAGEORGE

ms

DSW 171318

7

STLCOPCB4045944

January 6, 1971

Mr. Loren Delp
Pesticide Chemist
Control Division
Kansas State Board of Agriculture
Room 1032 S State Office Building
Topeka, Kansas 66612

Dear Mr. Delp:

I am sending under separate cover samples of Aroclor 1221, 5442, and 5460.

Enclosed are copies of analytical methodology used by Monsanto laboratories for determining polychlorinated biphenyls in water, sediment, biological tissue, and gases.

I hope you find the samples and procedures helpful. If I can be of further service, please let me know.

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

DSW 171319

6.

January 6, 1971

Dr. James Alberts
Research Associate
Department of Zoology
University of Georgia
Athens, Georgia 30601

Dear Dr. Alberts:

I am sending you under separate cover samples of Monsanto's Aroclor 1254 and 1260 which are representative of the PCB's being identified in the environment.

These samples are typical of the material manufactured and sold. Pure isomers are not available and we have marketed PCB's only as mixtures of isomers. For example, the samples I am sending are mixtures of chlorinated biphenyls from one to seven chlorines per biphenyl group. The last two digits of the Aroclor designation represent the percent by weight of chlorine in the mixture, e.g. 54% and 60%.

We are very interested in any studies of the impact of PCB's on the environment and I hope you can share with us the results of your study as they develop.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171320

STLCOPCB4045946

W. B. PAPAGEORGE - ST. LOUIS

January 6, 1971

P. B. Hodges PHODG
J. R. Savage JSAVA

AROCLOR LOSS - JFQ PLANT

Memo AEP to PEH et al 12/29/70

A. E. Peterson - JFQ

The program you outlined for reducing PCB losses at the J. F. Queeny Plant is excellent.

I recommend strongly we proceed as you have indicated. If I can help, let me know.

W. B. PAPAGEORGE

ms

DSW 171321

January 6, 1971

Mr. Charles Jones
Department 245
Goodyear Tire and Rubber Company
1144 East Market Street
Akron, Ohio 44316

Dear Mr. Jones:

Monsanto's John Heilala informed me that you were interested in analytical methods for detecting Therminol FR in plant effluent.

I have enclosed copies of procedures used by Monsanto's laboratories for detecting these PCB's in water, sediment, biological tissue and gases.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

Enclosures

cc: Mr. J. Heilala
Monsanto Company
Akron, Ohio

DSW 171322

STLCOPCB4045948

January 6, 1971

Mr. J. A. Blease
Ass't. Chemist
Biochemistry-Holmes Hall
Agricultural Experimental Station
University of Maine
Orono, Maine 04473

Dear Mr. Blease:

I am sending you under separate cover samples of Aroclor 1254 and Aroclor 1260 requested in your letter dated December 22, 1970.

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

Sincerely,

W. B. Papageorge
Manager
Environmental Control

WBP:ms

DSW 171323