NOVEMBER 19-21, 1975
PICK-CONGRESS HOTEL
CHICAGO, ILLINOIS

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EDUCATION, AND WELFARE

— DEPARTMENT OF THE INTERIOR

MONS 209579

GENERAL INFORMATION

REGISTRATION

Rendezvous Room, Pick-Congress Hotel

Tue., Nov. 18	4 pm - 8 pm
Wed., Nov. 19	8 am - 5 pm
Thu., Nov. 20	8 am - 9 pm
Fri., Nov. 21	8 am - 1 pm

(There is no registration fee)

CONFERENCE MEETING ROOM The Great Hall

PARKING

Hotel valet parking - approx. $1.75 per day

INFORMATION CENTER

Callers to conference participants may dial (312) 427-3800 and ask for the EPA Conference Registration Area. Messages received will be posted.

PROCEEDINGS

Proceedings will be published. Properly registered attendees will be informed how to obtain copies.

SPECIAL EVENTS

Wednesday, November 19, 6:30-8:00 pm. A "Get Acquainted Mixer" (cash bar) will be held in the Windsor Room.

Thursday, November 20, General Session beginning at 7:00 pm in the Great Hall. See page 8 of Technical Program for details.

CONFERENCE SCOPE

The objectives of the conference are to:

...bring together the latest data and best available expertise to help clarify the problems associated with the manufacture, use and disposal of PCBs.
...help assess the effectiveness of steps taken to reduce the problems associated with PCBs.
...provide a platform for interested parties to present previously neglected data concerning PCBs.
...help clarify the feasibility and complications of steps to reduce the problems associated with PCBs.

TECHNICAL PROGRAMS

Wednesday Morning, November 19, 1975

10:00 OPENING REMARKS AND INTRODUCTION OF KEYNOTE SPEAKER
John L. Buckley, Ph.D.

KEYNOTE ADDRESS
The Honorable Russell E. Train
Administrator,
Environmental Protection Agency

SESSION I: HEALTH EFFECTS AND HUMAN EXPOSURE

Chairman, David P. Rall, M.D., Ph.D.

Scope: What exposures to PCBs have what effect on man? Review of toxicological, clinical and epidemiological data obtained since 1972.

INTRODUCTORY REMARKS
David P. Rall, M.D., Ph.D.

YUSHO: CHARACTERISTICS AND LONG-TERM EFFECTS *Masanori Kuratsune, M.D.*

DISCUSSION

PATHOLOGICAL FINDINGS ASSOCIATED WITH CHRONIC EXPERIMENTAL EXPOSURE
Renate Kimbrough, M.D.

DISCUSSION

SUMMARY OF TOXICOLOGY STUDIES ON COMMERCIAL PCBs
J. C. Calandra, M.D., Ph.D.

DISCUSSION

12:00 Lunch Break

Wednesday Afternoon, November 19, 1975
(Continuation of Session I)

1:00 REPRODUCTIVE DYSFUNCTION IN MONKEYS TO LOW LEVEL PCBs
James R. Allen, D.V.M., Ph.D.

DISCUSSION

PCB CHLORINATION vs PCB DISTRIBUTION AND EXCRETION *H. B. Matthews, Ph.D.*

DISCUSSION

ENZYMATIC AND OTHER BIOCHEMICAL RESPONSES TO SELECTED PCBs
D. J. Ecobichon, Ph.D

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BIOLOGICAL RESPONSES IN CHICKENS AND MICE *Maroo Biocca, M.D.*

CORRELATING BIOLOGICAL EFFECTS WITH CHEMICAL STRUCTURE *James D. McKinney, Ph.D.*

TOXICITY OF 2, 3, 7, 8 - TETRACHLORO-DIBENZOFURAN PRELIMINARY RESULTS *John A. Moore, D.V.M.*

DISCUSSION OF BIOLOGICAL STUDIES

GENERAL DISCUSSION OF SESSION I

2:45 Coffee Break

SESSION II: USES, SOURCES AND IDENTIFICATION

Chairman: David Garrett, P.E.

Scope: What are PCBs used for now; how much is used; where do they come from, and how do they reach the environment? Review of present manufacture, import, use, distribution and disposal, and review of chemical analytical procedures.

3:15 INTRODUCTORY REMARKS *David Garrett, P.E.*

WHAT ARE PCBs - PROPERTIES AND MIXTURES *James P. Mieure, Ph.D.*

OVERVIEW OF ANALYTICAL IDENTIFICATION AND SPECTROSCOPIC PROPERTIES *Stephen Safe, Ph.D.*

PRODUCTION AND USAGE OF PCBs IN THE UNITED STATES *Robert L. Durfee, Ph.D.*

PCB DISPOSAL, RECLAIMING AND TREATMENT *Thomas E. Kopp, Chem. E.*

SOURCES OF PCBs IN WISCONSIN *Stanton Kleinert*

USES, SOURCES AND IDENTIFICATION/POINT SOURCE LOSSES IN MICHIGAN *John Reese*

5:15 GENERAL DISCUSSION OF SESSION II

6:30 Get-acquainted Mixer (Cash Bar)
Windsor Room

SESSION III: ENVIRONMENTAL FATE AND OCCURENCE

Chairman: Ian C. T. Nisbet, Ph.D.

Scope: How much occurs where; how does it move in the environment and what happens to it? Report on current levels in various parts of the environment - water, soil, air, fish, wildlife, human foods and man. Review of what is known on transformations and degradation - mechanisms and rates. To the extent possible, synthesize in mass-balance terms, with particular attention to exposure routes and levels for man and other living organisms.

8:30 INTRODUCTORY REMARKS *Ian C. T. Nisbet, Ph.D.*

RESIDUES OF POLYCHLORINATED BIPHENYLS IN THE GENERAL POPULATION OF THE UNITED STATES *Frederick W. Kutz, Ph.D.*

RESIDUES OF POLYCHLORINATED BIPHENYLS IN THE GENERAL POPULATION OF CANADA *Donald Grant, Ph.D.*

LEVELS OF PCBs IN THE U.S. FOOD SUPPLY *Charles Jelinik, Ph.D.*

LEVELS OF PCBs IN CANADIAN COMMERCIAL FISH SPECIES *Chas M. Blackwood, Ph.D.*

OCCURRENCE OF PCBs IN THE NATIONAL FISH AND WILDLIFE MONITORING PROGRAM *Charles R. Walker*

Coffee Break

TRENDS OF PCBs IN LAKE MICHIGAN FISHES *Wayne A. Wilford, Ph.D.*

A NOTE ON PCBs IN AIR *Frederick W. Kutz, Ph.D.*

PCBs IN U. S. SOILS AND WATERS *D. Steve Dennis, Ph.D.*

INPUT AND DISTRIBUTION OF POLYCHLORINATED BIPHENYLS IN THE SOUTHERN CALIFORNIA MARINE ENVIRONMENT *Diedre J. McDermott*

TRANSPORT OF CHLORINATED HYDROCARBONS IN THE UPPER CHESAPEAKE BAY *Thomas O. Munson, Ph.D.*

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Thursday Morning, November 20, 1975 (Cont'd)

RECENT STUDIES OF TRANSPORT OF PCBs TO MARINE ENVIRONMENTS
Robert W. Risebrough, Ph.D.

THE DYNAMICS OF PURE PCB ISOMERS IN FISH IN FRESH WATER MODEL SYSTEMS
James R. Sanborn, Ph.D.

RATES AND ROUTES OF TRANSPORT OF PCBs IN THE ENVIRONMENT - 1975
Ian C. T. Nisbet, Ph.D.

11:45 GENERAL DISCUSSION OF SESSION III

12.30 Lunch

Thursday Afternoon, November 20, 1975

SESSION IV: ECOLOGICAL EFFECTS AND EXPOSURE

Chairman: Donald I. Mount, Ph.D.

Scope: What is happening in fresh-water, marine, estuarine and terrestrial environments because of PCBs? Review of laboratory and field studies completed since 1972.

1:30 INTRODUCTORY REMARKS
Donald I. Mount, Ph.D.

SUMMARY OF RECENT INFORMATION REGARDING EFFECTS ON PCBs ON BIRDS AND MAMMALS *Ray C. Stendell, Ph.D.*

PRE-1972 KNOWLEDGE OF NON-HUMAN EFFECTS OF PCBs *Charles R. Walker*

SUMMARY OF RECENT INFORMATION REGARDING EFFECTS OF PCBs ON MARINE ORGANISMS *David J. Hansen*

SUMMARY OF RECENT INFORMATION REGARDING EFFECTS OF PCBs ON FRESH-WATER ORGANISMS *Alan V. Nebeker, Ph.D.*

DISTRIBUTION AND EXCRETION OF 14c 2, 4, 5, 2', 5' PENTACHLOROBIPHENYL IN THE DOGFISH SHARK AND THE LOBSTER
John R. Bend, Ph.D.

3:00 Coffee Break

SESSION V: ECONOMICS AND SUBSTITUTES

Chairman: Warren Muir, Ph.D.

Scope: What are PCBs used for now; what substitutes are available, and what are the economic, health and environmental aspects of proposed substitutes?

3.30 INTRODUCTORY REMARKS
Warren Muir, Ph.D.

Panel Discussion: This Session is composed of representatives from U.S. and foreign manufacturers actively involved in the production of, and research into substitutes for, PCBs plus data from research organizations and interested professional associations.

ELECTRONIC INDUSTRIES ASSOCIATION
Richard Rollins

FOSTER D. SNELL DIVISION OF BOOZE, ALLEN AND HAMILTON, INC.
Duncan MacArthur

DOW CORNING, INCORPORATED
Richard Montgomery

DOW CHEMICAL COMPANY
Dean Branson, Ph.D.

MONSANTO INDUSTRIAL CHEMICALS COMPANY *David Wood*

PRODELEC, S.A. (FRANCE)
Bruno Rey-Coquais

CENTER FOR POLICY ALTERNATIVES (Massachusetts Institute of Technology) *Albert Murray, Ph.D.*

EXXON CHEMICAL COMPANY
E. J. Inchalik, Ph.D.

5:00 GENERAL DISCUSSION OF SESSION V

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SESSION VI: GENERAL SESSION

Chairman: Christopher M. Timm
(The Great Hall)

7:00 Scope: This session will consist of brief statements by interested groups or individuals expressing opinions and concerns on PCBs, and elaboration of discussion points curtailed by lack of time during sessions.

The Conference organizers have provided "Registration Cards" which are available throughout the conference at the registration desk. Please fill out one of these cards as early as possible and drop it in the box provided at the desk, taking special note of the publication provisions for your statement.

For further information or answers to questions, contact Loren Clarke at the Conference Registration Desk.

Please make your presentation from the floor BRIEF!

Friday Morning, November 21, 1975

SESSION VII: APPROACHES TO CONTROL

Chairman: James E. Brydon, Ph.D.

Scope: What can be done to reduce amounts of PCBs reaching the environment and to limit human exposure?

8:30 INTRODUCTORY REMARKS
James E. Brydon, Ph.D.

A REVIEW OF FEDERAL AND STATE GOVERNMENT ROLES IN CONTROLLING IMPACTS OF PCBs ON THE ENVIRONMENT.
A. Karim Ahmed, Ph.D.

U. S. FEDERAL AGENCY ROLES AND ACTIONS

Food and Drug Administration
John R. Vessel

Environmental Protection Agency
Walter C. Barber

Department of the Interior
The Honorable Nathaniel P. Reed

National Institute of Occupational Safety and Health
Richard A. Rhoden, Ph.D.

PROPOSED CANADIAN REGULATORY MEASURES FOR PCBs
Morris F. Millson, Ph.D.

PCBs IN FOODS: A LOOK AT FEDERAL RESPONSIBILITIES
Joseph Highland, Ph.D.

PANEL DISCUSSION: Review of U. S. and Canadian PCB control efforts. The panel, in addition to discussion of the papers presented, will respond to questions from the floor.

The previous speakers in this session will be joined by the following individuals.

Albert Kolbye, M.D., M.P.H., J.D., Food and Drug Administration

Thomas Billy, National Marine Fisheries Service, Department of Commerce

William Papageorge, Monsanto Industrial Chemicals Company

Mary Williams, Ph.D., Office of Hazardous Materials, Department of Transportation

10:45 Coffee Break

SESSION VIII: SUMMARY SESSION

Chairman: John L. Buckley, Ph.D.

Scope: Concise summaries of the information presented and significant points raised during each session.

11:00 SESSION I: *J. G. Voe*
SESSION II: *David Garrett, P.E.*
SESSION III: *Ian C. T. Nisbet, Ph.D.*
SESSION IV: *Donald I. Mount, Ph.D.*
SESSION V: *Nicholas A. Ashford, Ph.D.*
SESSION VI: *Christopher Timm, Ph.D.*
SESSION VII: *James Brydon, Ph.D.*

11:30 CONFERENCE HIGHLIGHTS
Richard A. Carpenter

Integration and synthesis of the most significant findings and recommendations that emerged during the Conference

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SPEAKERS

A. Karim Ahmed, Ph.D., Staff Scientist
Natural Resources Defense Council,
Washington, D. C.

James R. Allen, D.V.M., Ph.D., Professor
of Pathology, Department of Pathology,
University of Wisconsin, Madison,
Wisconsin

Nicholas A Ashford, Ph.D., Center
for Policy Alternatives, Mass-
achusetts Institute of Technology,
Cambridge, Massachusetts

Walter C. Barber, Director, Standards
and Regulations Evaluation Division,
Office of Planning and Evaluation,
Environmental Protection Agency,
Washington, D. C.

John R. Bend, Ph.D., Pharmacology
Branch, National Institute of
Environmental Health Sciences,
Research Triangle Park, North
Carolina

Thomas Billy, Inspection and Safety
Division, National Marine Fisheries
Service, Department of Commerce,
Washington, D. C.

Marco Biocca, M.D., Institute di
Igiene, G. Sanarelli, Universita di Roma,
Citta Universitaria, Rome, Italy

Chas M. Blackwood, Ph.D., Director, Inspec-
tion and Technology Branch, Fisheries and
Marine Services, Department of Environment,
Ottawa, Ontario, Canada

Dean Branson, Ph.D., Capacitor Fluid H.N.E.
Project Manager, Health and Environment
Research Laboratories, Dow Chemical Inc.,
Midland, Michigan

James E. Brydon, Ph.D., Director, Environ-
mental Contaminants Control Branch, Depart-
ment of Environment, Ottawa, Canada

John L. Buckley, Ph.D., Consultant, Office
of Research and Development, Environ-
mental Protection Agency, Washington, D.C.

J. C. Calandra, M.D., Ph.D., Industrial
Biotest Laboratories, Inc., Northbrook,
Illinois

SPEAKERS (CONTINUED)

Richard A. Carpenter, Executive Director,
Commission on Natural Resources, National
Research Council, Washington, D. C.

D. Steve Dennis, Ph.D., Project Officer,
National Water Monitoring Program for
Pesticides, Ecological Monitoring Branch,
Office of Pesticide Programs, Environ-
mental Protection Agency, Washington, D.C.

Robert L. Durfee, Ph.D., Vice President,
Versar, Inc., Springfield, Virginia

D. J. Ecobichon, Ph.D, Department of
Pharmocology, Dalhousie University,
Sir Charles Tupper Medical Building
Halifax, Nova Scotia, Canada

David Garrett, P.E., Chief, Special Projects
Branch, Office of Toxic Substances, Environ-
mental Protection Agency, Washington, D.C.

Jacques Gosselé, Head, Food Section,
Institute of Hygiene and Epidemiology
Brussells, Belgium

Donald Grant, Ph.D., Department of Health
and Welfare, Toxicological Evaluation
Division, Ottawa, Ontario, Canada

David J. Hansen, Environmental Research
Laboratory, Environmental Protection Agency
Gulf Breeze, Florida

John Hesse, Supervisor, Toxic Material
Unit, Department of Natural Resources,
Lansing, Michigan

Joseph Highland, Ph.D., Staff Scientist,
Environmental Defense Fund,
Washington, D. C.

E. J. Inchalik, Ph.D., Research Associate,
EXXON Chemical Company, Linden,
New Jersey

Charles F. Jelinik, Ph.D., Director,
Division of Chemical Toxicology (HFF-420)
Bureau of Foods, Food and Drug Admin-
istration, Washington, D. C.

Renate Kimbrough, M.D., Toxicology Section,
Center for Disease Control, Atlanta,
Georgia

Stanton Kleinert, Chief, Surveillance,
Wisconsin Department of Natural Resources,
Madison, Wisconsin

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SPEAKERS (CONTINUED)

Albert C. Kolbye, M.D., M.Ph., J.D., Associate Director for Sciences, Bureau of Foods, Food and Drug Administration, Washington, D. C.

Thomas E. Kopp, Chem. E., Environmental Protection Agency, Office of Toxic Substances (WH-557), Washington, D. C.

Masanori Kuratsune, M.D., Department of Public Health, Faculty of Medicine, Kyushu University, Division of Analytical Chemistry, Daiichi College of Pharmaceutical Science, Fukuoka, Japan

Frederick W. Kutz, Ph.D., Project Officer National Human Monitoring Program for Pesticides, Ecological Monitoring Branch, Office of Pesticide Programs, Environmental Protection Agency, Washington, D.C.

Duncan MacArthur, Associate Research Director, Foster D. Snell Division of Booze, Allen and Hamilton, Inc. New York, New York

Deidre McDermott, Assistant Environmental Specialist in Chemical Oceanography, Southern California Coastal Water Research Project, El Segundo, California

James D. McKinney, Environmental Biology and Chemistry Branch, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina

H. B. Matthews, Ph.D., Pharmacology Branch, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina

James P. Misure, Ph.D., Research Group Leader, Monsanto Industrial Chemicals Company, St. Louis, Missouri

Morris F. Millson, Ph.D., Environmental Assessment Coordinator, Environmental Contaminants Control Branch, Ottawa, Canada

Richard H. Montgomery, New Product Market Manager, Fluids and Lubricants Marketing, Dow Corning Corporation, Midland, Michigan

SPEAKERS (CONTINUED)

John A. Moore, D.V.M., Chief, Environmental Biology and Chemistry Branch, National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina

Donald I. Mount, Ph.D., Director, Environmental Research Laboratory, Environmental Protection Agency, Duluth, Minnesota

Warren Muir, Ph.D., Senior Staff Member for Environmental Health, Council on Environmental Quality, Washington, D.C.

Thomas O. Munson, Ph.D., Fellow Bio-Chemist, Ocean Research Laboratory, Anapolis, Maryland

Albert Murray, Ph.D., Research Associate, Center for Policy Alternatives, Massachusetts Institute of Technology Cambridge, Massachusetts

Ian C. T. Nisbet, Ph.D., Director, Scientific Staff, Massachusetts Audubon Society, Lincoln, Massachusetts

Alan V. Nebeker, Ph.D., Environmental Research Laboratory, Environmental Protection Agency, Corvallis, Oregon

William Papageorge, Manager, Product Acceptability, Specialty and Processing Chemicals, Monsanto Industrial Chemicals Company, St. Louis, Missouri

David P. Rall, M.D., Ph.D., Chairman, Department of Health, Education and Welfare Committee to Coordinate Toxicology and Related Programs, Research Triangle Park, North Carolina

The Honorable Nathaniel P. Reed, Assistant Secretary for Fish, Wildlife and Parks, Department of the Interior, Washington, D.C.

Bruno Rey-Coquais, Director, Prodelec, S.A., 25 Quai Paul Doomer, Courbevoie, France

Richard A. Rhoden, Ph.D., Senior Research Reviewer (Pharmacologist), Office of Research and Standards Development, National Institute of Occupational Safety and Health, Washington, D.C.

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SPEAKERS (CONTINUED)

Robert W. Risebrough, Ph.D., Bodega Marine Laboratory, University of California, Bodega Bay, California

Richard Rollins, Vice President for Engineering, Jard Corporation, Bennington, Vermont

Stephen Safe, Ph.D., Associate Professor, Department of Chemistry, University of Guelph, Ontario, Canada

James R. Sanborn, Ph.D., Illinois Natural History Survey, Urbana, Illinois

Ray C. Stendell, Ph.D., Environmental Coordinator, Patuxent Wildlife Research Center, Laurel, Maryland

Christopher M. Timm, Director, Surveillance and Analysis Division, Environmental Protection Agency - Region V, Chicago, Illinois

The Honorable Russell E. Train, Administrator, Environmental Protection Agency, Washington, D. C.

J. G. Vos, Rijks Institut Voor de Volksgezondheid, Antonie van Leeuwenhoeklaan, Postbus 1, Bilthoven, The Netherlands

Charles R. Walker, Senior Environmental Scientist, Wildlife Monitoring Program, U. S. Fish and Wildlife Service, Department of the Interior, Washington, D.C.

John R. Wessel, Scientific Coordinator, Office for Compliance, Food and Drug Administration, Washington, D. C.

Wayne A. Wilford, Ph.D., Chief, Section of Physiology and Contaminant Chemistry, U. S. Fish and Wildlife Service, Great Lakes Fishery Laboratory, Ann Arbor, Michigan

Mary Williams, Ph.D., Office of Hazardous Materials, Department of Transportation, Washington, D. C.

David Wood, Manager, Product and Marketing Dielectrics, Monsanto Industrial Chemicals Company, St. Louis, Missouri

GENERAL CHAIRMAN

John L. Buckley, Ph.D., Consultant, Office of Research and Development, Environmental Protection Agency, Washington, D. C.

TECHNICAL COORDINATOR

Thomas E. Kopp, Chemical Engineer, Office of Toxic Substances, Environmental Protection Agency, Washington, D C.

ADMINISTRATIVE COORDINATOR

Carl E. Bremer, Chairman, Lake Michigan Cooling Water Studies Panel, Environmental Protection Agency, Region V, Chicago, Illinois

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Roger L. McGuffey, Staff Assistant, Research Triangle Institute, Research Triangle Park, North Carolina

Loren K. Clarke, Staff Assistant, Research Triangle Institute, Research Triangle Park, North Carolina

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