CHLORINATED BIPHENYLS

CHRONOLOGICAL EVENTS

3/17/69

12-15-66	Report of New Chemical Hazard - New Scientist Dec. '66 (Jensens Work) First published report about PCB
12-29-66	Widmark letter to Ford-Monsanto Head of Institute of Analytical Chemistry University of Stockholm, Sweden Found unknowns to be polychlorinated biphenyls made by Monsanto, et al - used GC/Mass. Sea eagle - 80 ppm polychlorinated biphenyls - 80 ppm pesticides - 40 ppm mercury No knowledge of biological significance in living organisms. Collaboration started with Dept. of Toxicology/Carolin Institute. Would like to work with Monsanto Toxicologists on problem.
1-10-67	Press Release, LKB Instrm. Co. (Jensens Work)
1-26-67	D. Wood letter to Buchanan Visited Sweden Confirmed chlorinated biphenyl report of Jensen
1-30-67	Editorial in Chemical Engineering Covers Jensens work
2-13-67	Wilde letter to Kelly
2-21-67	Hardy letter to Kelly Richard of Shell - Jensen may have jumped gun in blaming chlorinated biphenyls
2-21-67	Kelly letter to Wilde - No need to contact Swedish people
2-27-67	Widmark letter to Wilde Reviews lecture at Baeyer in Germany
2-27-67	Kelly letter to Thomas - NCR
3-16-67	Wilde letter to Kelly - Widmark Letter
5-67	S.A.O.A.C. - Pub. - Widmark 50 1069 (1967)
10-21-67	Holmes, Simmons, Tatton - Nature 216 227 (1967) Confirms work of Jensen
11-1-67	Hardy letter to Richardson at Shell Status of work at Shell?
11-2-67	Richardson letter to Hardy Confirmed by GC/Mass. Aroclor 1254 in eggs from 100 ppm feeding studies - confirmed Govt. Labs.

12-30-67 Holden, Marsden - Nature 216 1274 (1967)
PCB in seals
PCB appears in birds with aquatic environment - suggests river contamination.
Human in UK contain little PCB <0.1 ppm in fat.
Suggests pollution is of aquatic origin - if air more would be found in human fat.
Conns. found & LD_{50} - unlikely that residues of PCB constitute direct toxic hazard.

1-8-68 Heininger letter to Robson/Anagnostopoulos.
Birdsall, Wisconsin Alumni Res. Foundation (WARF)
Studies to be on shore birds
Funded by U.S. Dept. of Interior, Fish & Wildlife Service
Suggested that Monsanto-WARF work openly

1-16-68 Wilson letter to Gentlemen/Monsanto
Res. Chemist, U.S. Dept. of Interior
Fish & Wildlife Service
Investigation of chlorinated polyphenyls in avian and animal tissues

1-26-68 Lincer letter to Patterson, MCL
Res. Assistant, Syracuse Univ. Res. Corp., New York
Wanted polychlorinated biphenyl references & materials

2-8-68 Spencer letter to Richard
Consultant, Nat. Ag. Chemicals Assoc-
Interferences with chlorinated hydrocarbons

2-13-68 Baxter letter to Richard - Ref. to Syracuse

2-19-68 Richard letter to Baxter - Aroclor 5a, status

2-23-68 Hardy letter to Richard

4-26-68 Paton letter to Kelly

5-3-68 Newell letter to Hunt
Chairman Dept. of Ag. & Environmental Toxicology, Stanford Res. Institute
Toxicological results/birds & fish/enzyme induction stimulated
Recommended tests in cooperation with Monsanto rather than seek govt. support
Med. Dept. recommended no action.

5-6-68 Kelly memo to Robson/Anagnostopoulos - Reference to 5-3-68 √

5-20-68 Richard to Davis and back √

5-23-68 Richard to Davis and back

7-15-68 Glasgow, Chief Pesticides - requested info on Aroclors
Ref. Stds. Section
Dept. Health, Education & Welfare
Blickenstaff - USDA - quality control for formulations
Dykstra - USDI - Pautuxent, Maryland Labs - Aroclor sent

7-31-68 Paton Memo

8-23-68 Wheeler to Early, trip plan

9-5-68 Wheeler plan memo for visits

9-11-68 Wheeler memo to Richard - Biotest Protocols

10-9-68 Risebrough - Confidential pre-publication
PCB in fish & birds
Comments from Monsanto solicited

10-21-68 Wheeler to Richard - Risebrough paper

11-1-68 Risebrough to Conkin - Publication Review

11-6-68 Wheeler to Richard

11-13-68 Conkin to Risebrough - Comments on review of manuscript

11-14-68 Wheeler memo to Richard

11-27-68 Paton to Richard
Include Aroclor 5460

11-68 Gunther - Prof. of Entomology & Chemistry, Univ. of Calif.
School of Ag. Sciences
Dept. of Entomology
Citrus Res. Ctr & Ag. Expt. Sta. - Riverside

State USDA Research Area
Committee including Hawaii
DDT & chlorinated hydrocarbons

12-3-68 Gunther to Paton - Request for Aroclor Sas.

12-9-68 Wheeler to Richard - Calendra Minutes

12-9-68 Richard to Wheeler - Calendra Minutes

12-14-68 Risebrough - Nature 220 1098 (1968)

12-19-68 Richard to Tucker - DDT, et al

12-20-68 Wheeler to Calendra - Letter of authorization

12-23-68 Bryant to Harris - Rome Pollution Laboratory

12-30-68 Richard to Kuhn - Legal problems

12-30-68 Tucker to Richard - Chlorinated Naphthalenes

12-31-68	Tucker ~~to Tucker~~ memo - Aroclor at Anniston
1-7-69	Wheeler to Richard - Aroclor Wildlife
1-9-69	Wheeler to Richard - Meeting
1-10-69	Wheeler to Calendra - Feeding of Halowaxes
1-16-69	Wheeler to Tucker - Widmark Paper
1-21-69	Wheeler to Fancher - Proceed with chickens
1-21-69	Wheeler to Richard - Pesticide Structures
1-23-69	Hodges to Buckley - Aroclors in Plant Effluents
1-24-69	Paton to Keller, et al - Montar
1-30-69	Tucker to Wood - Update
2-4-69	Wood to Tucker - Reply
2-7-69	Tucker to Wheeler - Pesticide Sas.
2-10-69	Wheeler to Fancher - DDT, et al sas.
★ 2-24-69	Perlman - San Francisco Chronicle
2-25-69	Tucker to Keplinger
2-25-69	Tucker to Wheeler - Widmark's Paper
2-25-69	Tucker to Wheeler/Richard - Anniston River Results
2-26-69	Notes on meeting - Burgen, et al
2-26-69	Tucker to Stark - Solubility
2-28-69	Rough Draft - Keller - Position Statement
3-4-69	Tucker to Richard - Combustion
3-4-69	Wheeler to Wood - Dept. of Fish & Game
3-5-69	Paton to Richard - DDT on Trial

R. E. Keller
3/10/70