

CAROL VAN STRUM
7493 East Five Rivers Road
Tidewater, Oregon 97390
(541) 528-7151

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Attached is an extra copy of the Monsanto "Chlorinated Biphenyls, Chronological Events" 3/10[?]/69 index to this set of documents as provided in discovery to Nevada Power. On this copy I have keyed each reference to its page number. Note that some of the documents listed are missing. Many documents are partially or totally illegible. Also, pp. 780644 and 780645 are not listed in the chronology; these are part of a larger document, "FLU-030" that might be interesting, as are the handwritten notes. A couple of items are misdated on the chronology, with handwritten corrections.

CHLORINATED BIPHENYLS
CHRONOLOGICAL EVENTS

3/1/67

- 12-1-66 ✓ Report of New Chemical Hazard - New Scientist Dec. '66
[780598] (Jensens Work)
First published report about PCB - 780598
- 12-29-66 ✓ Widmark letter to Ford-Monsanto - 780602
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. 780603
[780603] (Jensens Work)
- 1-26-67 ✓ D. Wood letter to Buchanan
[780607] Visited Sweden
Confirmed chlorinated biphenyl report of Jensen
- 1-30-67 ✓ Editorial in Chemical Engineering
[780610] Covers Jensens work
- 2-13-67 ✓ Wilde letter to Kelly
[780611]
- 2-21-67 ✓ Hardy letter to Kelly
[780613] 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
[780614]
- 2-27-67 ✓ Widmark letter to Wilde
[780615] Reviews lecture at Baeyer in Germany.
- 2-27-67 ✓ Kelly letter to Thomas - NCR
[780618]
- 3-16-67 ✓ Wilde letter to Kelly - Widmark Letter
[780619]
- 5-67 ✓ S.A.O.A.C. - Pub. - Widmark 50 1069 (1967) ✓
[780620]
- 10-21-67 ✓ Holmes, Simmons, Tatton - Nature 216 227 (1967)
[780621] Confirms work of Jensen
- 11-1-67 ✓ Hardy letter to Richardson at Shell
[780624] Status of work at Shell?
- 11-2-67 ✓ Richardson letter to Hardy
[780625] Confirmed by GC/Mass. Aroclor 1254 in eggs from 1966 egg feeding studies - confirmed Govt. Labs.

NEV 031056

780594

12-30-67 ✓ Holden, Halden - Kuehn

[780626]

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.

Conc found & LD50 - unlikely that residues of PCB constitute direct toxic hazard.

1-8-68 X Heininger letter to Robson/Anagnostopoulos.

[780628]

-18-68
WARR
C&A

Birdsall, Wisconsin Alumni Res. Foundation (WARR)

Studies to be on shore birds

Funded by U.S. Dept. of Interior, Fish & Wildlife Service

Suggested that Monsanto-WARR work openly

1-16-68

MISSING

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 ✓

[780629]

Lincer letter to Patterson, MCL

Res. Assistant, Syracuse Univ. Res. Corp., New York

Wanted polychlorinated biphenyl references & materials

2-8-68 ✓

[780630]

Spencer letter to Richard

Consultant, Nat. Ag. Chemicals Assoc-

Interferences with chlorinated hydrocarbons

2-13-68 ✓

[780631]

Baxter letter to Richard - Ref. to Syracuse

2-19-68 ✓

[780632]

Richard letter to Baxter - Aroclor status

2-23-68 ✓

[780633]

Hardy letter to Richard

4-26-68 ✓

[780634]

Paton letter to Kelly

5-3-68 ✓

[780635]

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 ✓

[780637]

Kelly memo to Robson/Anagnostopoulos - Reference to 5-3-

5-20-68 ✓

[780638]

Richard to Davis and back ✓

5-23-68 ✓

[780640]

Richard to Davis and back

NEV 031057

780595

7-15-68 ✓

MISSING

Glasgow, ...
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

[780641]

8-23-68 ✓

Wheeler to Early, trip plan

[780642]

9-5-68 ✓

Wheeler plan memo for visits

[780643]

9-11-68 ✓

Wheeler memo to Richard - Biotest Protocols

[780646]

10-9-68 ✓

Risebrough - Confidential pre-publication

[780647]

~~10-11-68~~ ✓

PCB in fish & birds

Comments from Monsanto solicited

[780671]

10-21-68 ✓

Wheeler to Richard - Risebrough paper

[780670]

11-1-68 ✓

Risebrough to Conkin - Publication Review

[780688]

11-6-68 ✓

Wheeler to Richard

[780689]

11-13-68 ✓

Conkin to Risebrough - Comments on review of manuscript

[780690]

11-14-68 ✓

Wheeler memo to Richard

[780696]

11-27-68 ✓

Paton to Richard

[780697]

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

Missing

State USDA Research Area
Committee including Hawaii
DDT & chlorinated hydrocarbons

12-3-68 ✓

Gunther to Paton - Request for Aroclor Sas.

[780698]

12-9-68 ✓

Wheeler to Richard - Calendra Minutes

[780700]

12-9-68 ✓

Richard to Wheeler - Calendra Minutes

[780699]

12-14-68 ✓

Risebrough - Nature 220 1098 (1968)

[780691]

12-19-68 ✓

Richard to Tucker - DDT, et al

[780702]

12-20-68 ✓

Wheeler to Calendra - Letter of authorization

[780704]

12-23-68 ✓

Bryant to Harris - Rome Pollution Laboratory

[780708]

12-30-68 ✓

Richard to Kuhn - Legal problems

[780706]

12-30-68 ✓

Tucker to Richard - Chlorinated Naphthalenes

[780703 ?]

NEV 031058

780596

12-31-68 ✓ Tucker to Wheeler - Arcolor at Anniston
 [780709]
 1-7-69 ✓ Wheeler to Richard - Arcolor Wildlife
 [780710]
 1-9-69 ✓ Wheeler to Richard - Meeting
 [780711]
 1-10-69 ✓ Wheeler to Calendra - Feeding of Halowaxes
 [780712]
 1-16-69 ✓ Wheeler to Tucker - Widmark Paper
 [780713]
 1-21-69 ✓ Wheeler to Fancher - Proceed with chickens
 [780714]
 1-21-69 ✓ Wheeler to Richard - Pesticide Structures
 [780715]
 1-23-69 ✓ Hodges to Buckley - Arcolors in Plant Effluents
 [780719]
 1-24-69 ✓ Paton to Keller, et al - Montax
 [780721]
 1-30-69 ✓ Tucker to Wood - Update
 [780722]
 2-4-69 ✓ Wood to Tucker - Reply
 [780723]
 2-7-69 ✓ Tucker to Wheeler - Pesticide Sas.
 [780724]
 2-10-69 ✓ Wheeler to Fancher - DDT, et al sas.
 [780725]
 2-24-69 ✓ Perlman - San Francisco Chronicle
 [780726]
 2-25-69 ✓ Tucker to Keplinger
 [780729]
 2-25-69 ✓ Tucker to Wheeler - Widmark's Paper
 [780730]
 2-25-69 ✓ Tucker to Wheeler/Richard - Anniston River Results
 [780731]
 2-26-69 ✓ Notes on meeting - Burgen, et al
 [780732]
 2-26-69 ✓ Tucker to Stark - Solubility
 [780733]
 2-28-69 ✓ Rough Draft - Keller - Position Statement
 [780736]
 3-4-69 ✓ Tucker to Richard - Combustion
 [780738]
 3-4-69 ✓ Wheeler to Wood - Dept. of Fish & Game
 [780745]
 3-5-69 ✓ Paton to Richard - DDT on Trial
 [780750] ... article @ 780747

NEV 031059

780597