Monsanto

FROM (NAME & LOCATION) J. N. Ehlers - General Office

Staff mtg

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DATE : November 24, 1969 CC:

SUBJECT : Organic Division, Law and Medical Departments --

REFERENCE : Report on Polychlorinated Biphenyls

TO : Messrs.
H. L. Minckler
T. K. Smith
Rodney Harris, Jr.
R. E. Kelly

Copied for:
CJS
JM
WSB
JES
12/2/69

Attached is an excerpt from the minutes of the Corporate Development Committee meeting of November 17, 1969.

J N Ehlers
J. N. Ehlers
Secretary

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Enclosure

IN-10 REV. 11-65

PCB-ARCH-EXT0379180

ORGANIC DIVISION, LAW AND MEDICAL DEPARTMENTS -- REPORT ON POLY-CHLORINATED BIPHENYLS

Present: Messrs. C. J. Smith, J. Mason, T. K. Smith, H. S. Bergen, J. E. Springgate, R. E. Kelly, E. P. Wheeler, Rodney Harris, Jr., D. W. Miller, W. C. Robinson

Monsanto's worldwide Aroclor business amounts to 104 $\overline{M}$ lbs./yr., 70$\overline{M}$ used in functional fluids and 34 $\overline{M}$ in plasticizers. This represents $22 $\overline{M}$ in sales. Products range from monochlorobiphenyl

to decachlorobiphenyl, terphenyls, and chlorinated terphenyls. Production locations are at Anniston, Alabama, Sauget, Illinois, Newport, U.K. and Yokkaichi, Japan.

Environmental Aspects - E. P. Wheeler

The 5 and 6 chlorinated biphenyls (Aroclor 1254 and 1260) have been found at limited locations in water, in birds and some forms of aquatic life. Recent indications are that such biphenyls may affect reproduction of fowl life and may be toxic to shrimp. These products are not toxic from the acute standpoint to man or fish but there is some evidence of ecological buildup in certain water deposits, in fish and ultimately in bird life.

- Aroclors 1248 and lower in number are believed to be biodegradable but this has not been conclusively established as yet.

Legal Aspects - D. W. Miller

The law in the field of manufacturer's liability is changing rapidly. Although the law is unsettled, the present general rule is that if a manufacturer knows or should know that a product of its manufacture may cause damage if not properly used, he has a duty to give adequate warning to customers and users.

Recommendations from the legal standpoint consist of -

1. Take steps to insure that PCB's are contained and not discharged in plant effluent.

2. Provide adequate warnings to customers and users, including advice as to disposal methods.

3. Establish testing program to determine precise effects of PCB's on birds, aquatic life and animals and to determine the possible escape of PCB's from plasticizers.

Plan of Action - H. S. Bergen and J. E. Springgate

The availability of alternate products to satisfy customer requirements was reviewed. Main problems are that no replacement product is available for capacitors and replacement products for other uses pose a pollution problem.

In plasticizer uses, evidence is not available as to whether Aroclors escape from end products, either through leeching or by dispersal in burning.

The recommended plan of action is to establish a tailored program for each business group and each customer market situation to assure that the loss of PCB's in the environment, if any, is minimal.

PCB-ARCH-EXT0379182

1. Appoint a Project Manager - responsible for the overall management of the Aroclor pollution problem. He would be assisted by a Task Force from members of each business group plus Medical, Law, Engineering and Manufacturing.

2. Notify all Aroclor customers of PCB problem.

3. Reduce and effectively control PCB effluents from Monsanto plants.

4. Educate customers on need to reduce and effectively control PCB effluents at their plants.

5. Develop and implement new packaging systems for Aroclor 1254/1260.

6. Introduce to market, replacement products for Aroclor 1254/1260. (dep. on applications)

7. Continue and expand biodegradation test program with Aroclor series, particularly 1242, 1248 and 1254.

8. Continue toxicological test program.

9. Accelerate present analytical test program.

10. Determine feasibility and cost of eliminating 5/6 Cl_2 in Aroclors 1242 and 1248.

11. Study incineration products.

12. Develop business plan to offer:

    - Monsanto Fluid Reclamation and Recovery with Enviro Chem. (Reclamation already under way at Findett.)

Cost of this program is estimated at approximately $400M SARE and $700M capital to change equipment.

Conclusions: In light of the recent and developing evidence of a possible threat to certain species of bird and aquatic life, we should plan to discontinue the manufacture of Aroclors 1254 and 1260. The Division is instructed to develop a program to discontinue these products and report this to the Committee.

The status of Aroclor 1242 should continue to be tested to determine whether it contributes to this problem. Other products which might be involved should also be examined.
(Excerpt to Messrs. H. L. Minckler, Rodney Harris, Jr., R. E. Kelly, T. K. Smith.)

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