MINUTES OF MEETING OF THE CORPORATE DEVELOPMENT COMMITTEE

November 17, 1969

Present: Messrs.
E. J. Bock, Chairman
H. H. Bible
J. R. Eck
J. L. Gillis
E. J. Putzell
C. H. Sommer
J. N. Ehlers, Secretary



ORGANIC DIVISION, LAW AND MEDICAL DEPARTMENTS -- REPORT ON POLYCHLORINATED 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 M lbs./yr., 70M used in functional fluids and 34 M in plasticizers. This represents $22 M in sales. Products range from monochlorobiphenyl

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substitution of biodegradable material generating $0.5 M gross profit. Plant programs have reduced discharge in the effluent. Work is being done to contain any spills and to attain a minimal level of plant effluent. Financial consequence is a reduction in net income of $400,000 after tax, representing a decrease in return on gross investment from 11.5 to 8.4%. Gross investment will be increased from $25.4 to $29.8 M. The program represents increased SARE expenses of $0.5 M in 1970, but this should be reduced significantly next year.

- The program in the U.K. is proceeding on the same basis. In addition, with our urging, we expect other European producers to take parallel actions.

Recommendation - The Division requests a three month's extension to achieve a 90% phase out of the use of non-degradable PCBs in hydraulic fluid applications when the new 1242-B product will be available for substitution.

Conclusions

The President commended the Division for the excellent progress made on its program. The three month's extension requested for phasing out of products in hydraulic fluids was approved with the caution that the Division continue to exert pressure to move this program as fast as possible. Further progress on the program should be reviewed with the Committee in the first quarter of 1971.
(Excerpt to Messrs. H. L. Hinckler, T. K. Smith.)

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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.

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 leaching 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.

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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.

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. Hinckler, Rodney Harris, Jr., R. E. Kelly, T. K. Smith.)

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