PERFORMANCE REVIEW

1970 OBJECTIVES

POLYCHLORINATED BIPHENYL ENVIRONMENTAL PROBLEM

1. OBJECTIVE: Reduce and effectively control the PCB content of all effluent from Monsanto plants. All plants to achieve 50 ppb in effluent by January, 1971. [redacted] plants to achieve target of 10 ppb by September, 1971.

   STATUS: The Newport, Anniston and Sauget plants have reduced losses considerably. Losses are still above the 50 ppb target primarily because of prior years' contamination of soil, sewers and the like as well as improperly maintained Therminol heating systems. At Sauget tank truck washing is a prime source of contamination. Measures have been taken to control disposal of the wash liquids. At year end Sauget reports 177 ppb, Anniston reports 321 ppb and Newport reports 54 ppb. The 10 ppb target can be achieved in 1971 with continued tightening of control and probably with the installation of carbon absorption equipment.

2. OBJECTIVE: Inform customers of the PCB problem and the importance of preventing environmental pollution both at their plants or by their products. Inform customers in U.K., Canada and Japan by May 1, 1970; Europe and South America as indicated.

   STATUS: Customers in Canada and the U.K. were informed by July 1, 1970. Customers in Japan, Europe and South America have not been informed pending co-producers actions.

3. OBJECTIVE: To assure tight control on Aroclor usage the use of distributors by the Plasticizers Group will be discontinued by September, 1970.

   STATUS: Achieved. Distributors were informed in May, 1970 that they would not be selling Aroclors after August 30, 1970.

4. OBJECTIVE: Replace Aroclor 1242 in NCR paper coating with monoisopropyl biphenyl for U.S. applications by May, 1971 and with HB-40 for U.K. applications by July, 1970.

   STATUS: U.K. application achieved. U.S. application on target.

DSW 333158

5. OBJECTIVE: Develop acceptable substitutes and complete conversion from Aroclor 1254 and Aroclor 1260 in sealants and coatings by August 30, 1970.

STATUS: Achieved

6. OBJECTIVE: Develop acceptable substitutes and selectively phase out of persistent Aroclor-containing industrial fluids. Complete 20% August, 1970, 40% November 1970, 100% April, 1971.

STATUS: On target. Pydraul 312 and Pydraul 150 pose major problems.

7. OBJECTIVE: Discontinue sale of polychlorinated biphenyl for cutting oils, pesticide extender, medicinal, dental and cosmetic use by June, 1970.

STATUS: Achieved.

8. OBJECTIVE: Develop reliable analytical procedures for determining PCB content of liquids, gases and solids. Continue to refine methodology until we reach a level of competence which will provide data whose accuracy will not be challenged. Complete by July 1, 1970.

STATUS: Achieved.

9. OBJECTIVE: Continue biodegradation work of existing and substitute products at both Ruabon and St. Louis to establish degree of degradation possible and optimum conditions required. Complete by October 1, 1970.

STATUS: Work continuing and expanding. Program for 1971 will be better defined.

10. OBJECTIVE: Evaluate alternate methods of disposal by incineration - Monsanto operated vs. contract. Complete by July 1, 1970.

STATUS: Decision was made to install a scrap liquid incinerator at Sauget. Performance of this unit will help determine need for additional units, Monsanto operated or contract operated.

11. OBJECTIVE: Continue the work at Anniston, Krummrich and Dayton on the removal of PCB from water streams. Complete by September 1, 1970.

STATUS: Results at Krummrich and Dayton although technically successful were determined to be too costly to be of practical value. Work at Anniston on carbon adsorption, flocculation, settling and filtration is highly promising. Engineering evaluation will be completed in first quarter 1971.

12. OBJECTIVE: Evaluate the merits of applying for a government grant to install a prototype unit for removal of PCB's from plant effluents at one of our plants. Complete by September 1, 1970.

STATUS: The apparent success of the Anniston studies utilizing fairly well known technology led to a decision not to seek a grant for this application.

13. OBJECTIVE: Pursue possible contribution by Monsanto Enviro-Chem Systems, Inc. to disposal of Aroclor wastes. Complete by September 1, 1970.

STATUS: A test run was completed in early December, 1970 which demonstrated that solid wastes contaminated with Aroclors could be successfully destroyed by pyrolysis-incineration-scrubbing techniques. Equipment designers, including Enviro-Chem, have been requested to submit bids for a unit which will probably be located at Sauget, Ill.

14. OBJECTIVE: Develop methods for reclaiming and reusing off-grade fluids containing PCB. Develop processing procedures by May 1, 1970, modify existing equipment at Krummrich plant by January 1, 1971.

STATUS: Some reclaiming has been achieved in existing equipment. Reclaimed material was used in non-electrical applications. Appropriation for further modifications to the equipment has been approved. Completion of field work now scheduled for June, 1971 completion. Objective is to make reclaimed fluid suitable for dielectric applications. No opportunities for reclaiming have been missed because of the delay.

15. OBJECTIVE: Determine effects of PCB's on birds aquatic life and mammals. Continue studies underway. Evaluate need for extending studies to include chlorinated terphenyls, hydrogenated terphenyls, alkylated biphenyls and Porocel treated chlorinated biphenyls. Resume fish toxicity studies. Complete by mid-1971.

STATUS: On target. Plan has been developed and is being executed.

16. OBJECTIVE: Establish and maintain favorable relationships with customers, the press, governmental agencies, other producers, the public and the universities.

STATUS: Overall our relationships are excellent.