

Performance Review

1970 Objectives

46 Polychlorinated Biphenyl Environmental Problem

(1)

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. All plants to achieve target of 10ppb by September, 1971.

Status:

The Newport, Anniston and Sargent plants have reduced losses considerably. Losses are still above the 50 ppb target primarily, because of prior years' contamination of soil, seeds and the like as well as improperly maintained Therminol heating systems. At Sargent tank truck washing is a prime source of contamination. Measures have been taken to control disposal of the wash liquids. At year end Sargent reports 177 ppb, Anniston ^{reports} 321 ppb and Newport reports 54 ppb. The 10ppb 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 coproduction actions.

3. Objective: To assure tight control on Aradon usage the use of distributors by the Plastics Group will be discontinued by September, 1970.

Status: ^{Achieved}
1 Distributors were informed in May, 1970 that they would not be selling Aradon after August 30, 1970.

4. Objective: Replace Aradon 1242 w/ NCR paper coating with monoisopropyl biphenyl for US applications ^{by May 1970} and with HB-40 for U.K. applications by July, 1970.

(3)

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

5. Objective: Develop acceptable substitutes and complete conversion from Avco 1251 and Avco 1260 in sealants and coatings by August 30, 1970.

Status: Achieved

6. Objective: Develop acceptable substitutes and selectively phase out ^{present} Avco. 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 extenders, medicinal, dental and cosmetic use by June, 1970

Status: Achieved

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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 Racine 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 no contract
Complete by July 1, 1970

Status: Decision was made to install a scrap liquid incinerator at Sargent. 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, 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, 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.

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13. Objective: Pursue possible contribution by Monsanto Enviro-Chem Systems, Inc. to disposal of Aroclor wastes. Complete by September, 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 Sanget, Ill.

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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.

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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.

POSITION DESCRIPTION

MANAGER, ENVIRONMENTAL CONTROL

SPECIALTY PRODUCTS BUSINESS GROUP

ORGANIC CHEMICALS DIVISION

I. FUNCTION

on a world-wide basis
Manages the resources made available from existing Business Groups and Staff Departments to minimize the adverse effects of the polychlorinated biphenyl environmental contamination problem on Business Group, Division or Corporate goals.

II. RESPONSIBILITIES

A. Monsanto Plants

The PCB content of all effluent from Monsanto plants will be reduced and effectively controlled.

INDICATORS

1. Routine Monitoring Reports
2. Regulatory Agency Actions

Goals-1971

1. All plants to achieve target of less than 1st/day in water effluent by September, 1971
2. All plants to achieve target of less than 1st/day in atmospheric effluent by December, 1971
3. Complete studies on removal of PCB from water effluent by 5-1-71

Co. Responsibility with:

1. Manufacturing Manager
2. Manufacturing Manager
3. Manager, Research

B. Customers.

Customers will be advised of the importance of preventing PCB pollution and will be given assistance on control, reclamation, proper disposal and substitute products.

1. Marketing Plans and Results
2. Customer Plant Inspections
3. Regulatory Agency Actions

1a Execute existing PCB Marketing Plans for U.S.-Canada, UK-Europe and Japan.

1a Solo, Director

b. Develop marketing plan for South American, Australian and Southeast Asian markets by year end.

b. Solo, Director

2. Complete modification of reclamation facilities at W. G. Krummrich plant by June, 1971

2. Manufacturing Manager

3. Complete installation of liquid incinerator at W. G. Krummrich plant by June, 1971

3. Manufacturing Manager

4. Complete installation of solid waste incinerator at W. G. Plant by year end

4. Engineering Manager

5. Complete installation mcs-1016 distillation unit by July, 1971

5. Manufacturing Manager

6. Develop and
institute drum control
program by 10-1-71

6. Sales Director

C. ENVIRONMENTAL

The effect of PCB's and ^{their} replacements
on the environment will be
determined.

1. Biodegradation Program
and Results
2. Toxicity Studies
and Results

1. Develop biodegradation
program by 4-1-71.
Execute as planned.
 2. Execute toxicity
Studies per existing
plan.
1. Manage,
Research
2. Manage,
Environmental
Health

D. RELATIONSHIPS

Favorable relationships
will be established and maintained
with customers, the press, governmental
agencies, competitors, the public and
universities.

1. Unsolicited comments
from all sources
2. Amount and type
of press coverage

1. Continue to
cooperate fully
with all responsible parties
2. Agencies and laboratories
visited during 1970 - will be
revisited at least once
during 1971.