Monsanto

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Ms. R. L. Lambert
Standards Section, Division of Air Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Ill 62706

Dear Ms. Lambert,

In answer to the questions posed in your letter of February 25 I have the following information.

Q1. Are you presently monitoring your sources for PCB emission.

A. We monitor the aqueous effluent from all areas in our plant where PCB is handled. We monitor the stack gas from the Incinerator, which is used for the destruction of used Aroclor returned from customers, in accordance with the terms of the operating permit issued for the Incinerator.

Q2. What is the method of Monitoring and Analysis.

A. See Attachment (1) Monsanto Methodology for Aroclors. In order to sample the stack gas from the wet scrubber on the incinerator we use the EPA train described in APTD 0581. The gas is filtered, cooled to condense water vapor and then scrubbed with an appropriate solvent to collect PCB. We have found Di-methyl formamide to be a more suitable solvent than toluene because it can absorb water vapor and its vapor can be trapped by a water scrubber. The material collected on the filter, the condensate and the solvent are analyzed by the methods described.

Q3. What is the annual Production.

A. 21,000 tons of Aroclor were produced in 1973 and it is expected that a similar amount will be produced in 1974.

a unit of Monsanto Company

Q4. What are the raw materials.
A. Around 10,000 tons of biphenyl and 15,000 tons of chlorine will be used in 1974.

Q5. What are the present safety standards for PCB manufacturing.

A. The W.G. Krummrich Plant makes every effort to, as a minimum, conform with the state and federal requirements with respect to the safety and health of its employees. Personnel in all departments receive adequate instruction in the safe handling of the raw materials and finished products they encounter. All personnel receive regular medical examination. Every indication is that good industrial hygiene, as practiced at this plant, is sufficient to avoid any adverse effects.

In the OSHA standards TLV for Chloro diphenyl 42% is given as 1.0 mg/m³; 52% is given as 0.5 mg/m³.

Q6. How is Monsanto controlling PCB emissions.

A. More detail on this subject is contained in Attachment (2) 'Polychlorinated Biphenyl'. As far as emissions to atmosphere is concerned, the process is essentially a closed system. The principal off gas stream is cooled and scrubbed with a high boiling (low vapor pressure) Aroclor. A high efficiency mist eliminator removes any entrained material and the gas passes to another manufacturing process where it is absorbed. A small amount of air in the gas stream is removed through a water scrubber.

The material has a very low vapor pressure and a nitrogen blanketing system is in use on storage vessels.

Q7. How is Aroclor being used.

A. Presently the sole use for Aroclor is in the electrical industry as a dielectric fluid.

Very truly yours,

Clarence F. Buckley

Clarence F. Buckley,
Engineering Specialist,
Environmental Control

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attach. (1) Monsanto Methodology for Aroclors
(2) Polychlorinated Biphenyl (PCB)