Rough Draft

Conclusion

POLYCHLORINATED BIPHENYL WASTE CONTROL & DISPOSAL

With increasing evidence that some polychlorinated biphenyls are being found in the environment and indications that some species of birds and marine animals are being affected, extreme care must be taken to prevent any entry into the environment of these materials through spills, leakage, use, disposal, vaporization or otherwise. Suggestions are offered below for effective containment of PCB's.

Liquids

1. Every effort must be made to prevent the mixing of PCB with water, thereby measurably reducing the opportunity for PCB's to enter a water system; e.g. sewer, creek, river or lake.
2. All liquid handling systems must be designed and maintained to assure that leaks and spills are a rarity. If they do occur, corrective measures should be taken immediately and the PCB's be properly contained.
3. All areas in which spills and leaks could occur should be paved, curbed and properly drained. In some instances such as under pumps or sampling points, drip pans or catch basins may be appropriate. These, however, must be drained properly into waste collecting systems.
4. Drainage systems should contain interceptor basins to trap the heavy PCB for subsequent recovery.

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5. If PCB's are present in waste water streams, these streams must be treated before release to the environment. Detergent emulsions must be broken, free PCB must be removed after phase separation and dissolved PCB can be reduced by absorption on activated carbon.
6. Waste liquid PCB's can be destroyed by incineration at temperatures above 800°C. Temperatures below this level will result in vaporization to the atmosphere, or in the possible formation of severely toxic oxygen-containing materials. The stack gases from incineration must be scrubbed to remove the resulting HCl gas and then neutralized before disposal to plant effluent.
If incineration facilities are not available, waste liquid containing PCB may be shipped to Monsanto for disposal. Cost has been tentatively set at 3 cents per pound of material to be disposed and does not include container and freight costs. Material returned to Monsanto should be addressed to: Attention Supervisor Department 246, W. G. Krummrich Plant, Monsanto Company, Sauget, Illinois.

Vapors

1. Vapor generation should be reduced by limiting the heating of PCB to the lowest temperature required for the process.
2. The vapor handling facilities should be designed and maintained to assure no vapors escape to the atmosphere. The use of liquid vent seals, condensers and entrainment separators are recommended. Interconnection of vent

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lines to contain vapors within the system helps.

Solids

1. Solids contaminated with PCB must be segregated from other plant solid wastes.
2. Disposal may be made in a properly operated landfill which is not located near any water system.
3. Ordinary burning of these materials must be avoided. Steel or copper wastes may be reclaimed in high temperature furnaces.
4. Steel drums which contained PCB should not be reused for any other material.

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