Monsanto

FROM (NAME & LOCATION): E. E. Stewart, W. G. Krummrich Plant

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SUBJECT: POLYCHLORINATED BIPHENYLS AND THE ENVIRONMENT

REFERENCE:

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During the past three years, varied actions have been implemented at the W.G. Krummrich manufacturing facilities to restrict and reduce Polychlorinated Biphenyls (PCB) entrance into the environment.

Major activities can be summarized as follows. More details related to the specified areas are attached.

I. The total production of Aroclors at the W.G.K. Plant reached a peak in 1970 and has since decreased by 16%.

II. Production of the higher chlorinated homologues, (Aroclor 1248 and above) has decreased about 60% since 1969.

III. Manufacturing facilities were installed to produce a more biodegradable homologue in the chlorinated biphenyl series, Aroclor 1016. Expect about 60% of the 1972 total production to be Aroclor 1016. ($970,000)

IV. Container alterations made (heavier metal drums).

V. Product labeling changes were made to reflect possibilities of environmental contaminant, restrictions for use of therminol and opportunities for waste disposal by incineration.

VI. Installation of facilities to permit reworking and/or incinerating PCB's returned from the customer as a means of waste disposal. ($790,000)

VII. Have replaced all Therminol units and hydraulic systems outside the manufacturing department which had contained polychlorinated biphenyls with non PCB type fluids. ($80,000)

VIII. Equipment modifications and installations were made to restrict and contain knowing losses of PCB's to the lowest technical achievable level within the manufacturing department. ($170,000)

IX. An educational program is being directed to the operating personnel related to good housekeeping and the need for care to control and contain Aroclor wastes in the manufacturing areas.

X. Developed and implemented automatic stream sampling stations to closely monitor the PCB content in effluent streams from the manufacturing facilities and the incinerator area.

XI. Laboratory equipment was purchased and plant expertise was developed to analyze streams for PCB's in the parts per billion range.

Needless to say, such activities as listed above to control and contain PCB losses, require a dynamic action control program. Many people are involved from the operators, first line supervision and superintendents at the operating level to the technicians, chemists and engineers in the laboratory, environmental control and engineering departments. Total manpower requirements related specifically to the loss control program of containment and control are conservatively estimated at 20 man-years since 1969 ($400,000).

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