Monsanto

FROM (LOCATION): H.A. VODDEN - RUABON.

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REFERENCE : HAV/bjo'g.

TO : R.A. BAXTER - RUABON.
W.B. Papageorge - ST. LOUIS.

Organic Chemicals - PCBs. Environmental Studies - Europe

Business Situation.

1. A "popular" article in the December issue of the "Ecologist" reviewed, somewhat inaccurately, the PCB situation.

2. Numerous press enquiries have resulted from the "Ecologist" article. In all cases reviewed to date we have received favourable press comment in the UK and in many cases have been praised for our voluntary withdrawal programme.

3. Incineration alternatives have been reviewed. Purle Brothers can now offer a service for liquid and filter earth wastes at approximately one cent per pound plus freight. They are also prepared to put in equipment to handle solids, such as capacitor windings and cans.

4. We aim to establish a service for incineration in the UK by March.

5. Our reclamation programme has been reviewed with Daltons to establish the reclamation of Pydrauls ex continent and Pyroclor/Aroclor ex UK.

6. The Norwegian Government is attempting to establish a plan whereby the five Nordic countries (Norway, Sweden, Finland, Denmark and Iceland) would ban the dumping of certain toxic wastes, including chlorinated hydrocarbons, in the North Sea.

Environmental Studies.

MCS 1016 was introduced at Liljeholmens, Sweden and Nokia, Finland. Apparently, Liljeholmens were not very enthusiastic despite the fear of legislative action in Sweden. This may be due to their suspicion that legislation will be aimed against specific uses of PCBs rather than against particular products. We still have no definite news of the proposals for legislation, but it is believed that these await recommendations from the Swedish National Environment Protection Board. Nokia, however, were much more impressed with the significance of the product from the environmental aspect and will be interested in its development.

Press reaction in the UK to recent events has been linked with news concerning the voluntary ban on sales of PCB products in the UK. Much of this press comment is favourable to Monsanto.

We have been approached by the Association of River Authorities (UK) to give a talk on PCBs to their Standing Panel on Chemical Pollution. This is being considered.

Biodegradation.

Some progress has been made towards quantifying the residues after biodegradation of commercial mixtures of PCBs. Relative response factors for a number of isomer peaks in the chromatograms have been determined. These show that simple "area under the curve" determination is not enough even for order-of-magnitude quantification.

The workers at University College, Bangor have selected a number of cultures which appear to be growing on Aroclors 1242 and 1254 as sole carbon sources. Some of the more active of these are now being grown at Ruabon for further study. The biphenyl culture, C_3, isolated at Bangor has been used for degrading 1242 and some PCB isomers. Preliminary results suggest that some degradation of 4-4' dichloro biphenyl has occurred, but this needs confirmation. If this is true it suggests that most low chlorine isomers may be degraded if suitable cultures are available.

H.A. VODDEN.