Monsanto
CHEMICALS LTD

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Speciality Products - R & D - Europe.

1. Dielectrics.

A programme for the investigation of the effects of process parameters on the penta/hexachloro-biphenyl content of Aroclor 1242 is in progress. We have been increasing our capacity to make detailed quantitative analyses of plant samples so that the effects of varying process parameters can be followed quickly. Initial problems in setting up the extra g.l.c. equipment necessary now seem to have been overcome.

A technical visit to Romania was made to investigate a complaint of low breakdown strength in Aroclor 1248 used for capacitor impregnation. Our investigations showed that this was probably due to high water content in one lot of the Aroclor delivered. Although, technically, this Aroclor could be improved to a satisfactory condition, the customer was unwilling to do this, maintaining that it was Monsanto's responsibility.

At the C.I.G.R.E. meeting in Paris, Prodelec have again promoted a new capacitor askarel, Chloralkylene 12. This seems to be a blend of chlorinated alkyl biphenyl with dichloro biphenyl as a permittivity improver. It is being promoted as an impregnant for polypropylene capacitors and as, potentially, safe environmentally. Its price is high, about double that of a conventional askarel on a volume basis.

2. Penta/Santobrite.

Catomance have expressed satisfaction with our statements on dioxin content of Penta.

We are investigating the use of Monsanto plasticisers as co-solvents and anti-blooming agents in Penta formulations. D.B.P., Santiciser 160 and Santiciser 148 show some promise; although 50:50 w/w solutions are not possible with these, 33:67 w/w seems satisfactory.

3. Environmental Studies (PCB).

There has been an upsurge in concern over the toxicity of PCBs following recent publicity, particularly in Sweden, of the Japanese Yusho incident.

A special meeting of the O.E.C.D. has been arranged for next week to discuss health hazards of PCBs and to promote common action among the O.E.C.D. nations to control the uses of PCB.

The Japanese position paper being circulated for this meeting apparently begins with the statement that over one million people in Japan have been affected by Yusho!

The U.K. delegation will propose action on the basis that control can be exercised through the manufacturers of PCBs restricting supplies to controlled applications; they appear reluctant to introduce legislation.

Following problems in maintaining one of the two species of fish (golden orfe) in the ponds at Reabon, we have decided to use only common goldfish, at present, in the experiment. After adjustment of pH, which was rather high, the remaining fish look healthy and ponds have been dosed with Aroclors 1016, 1242 and 1254. First analyses show some accumulation, but we do not yet have enough data to indicate trends.

The Inveresk study using marine and freshwater aquaria is progressing. Work so far has been aimed at establishing background levels and toxic effects on some of the intermediate stages of the aquatic systems. It is interesting that, contrary to literature reports, they have not found Aroclors 1242 and 1254 to be toxic to the local (Musselburgh) shrimp at levels up to 100 p.p.b.

A visit to the Purle-Cunis incinerator at Rainham, Essex, has confirmed that handling of liquid type PCB wastes is effective. They have not yet installed the volatiliser for handling solids such as capacitor elements, but this is being progressed and should be operating in about two months time.

H.A. VODDEN