Monsanto

COMPANY CONFIDENTIAL

PATENT DEPARTMENT - GENERAL OFFICES E2NB

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PATENT STATUS OF HALOGENATED PHENYLPHENYLMETHANES

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Business Group interest continues in halogenated phenylphenylmethanes (HPPM) as biodegradable PCB replacements not only as dielectric fluids but also as heat transfer fluids, hydraulic fluids, plasticizers or possible dye solvents.

Looking ahead to possible outside evaluations of HPPM, you asked for a status report on the following:

(a) What has already been published by Monsanto on the single ring substitution concept by way of issued foreign patents?

(b) What is the current U.S. patent status on the Monsanto invention?

The first foreign patent has issued on this invention. It is Belgian 842,266 which issued only a few months ago. The concept of improved biodegradation through single ring substitution of HPPM is therefore in the literature. Despite this newly issued Belgian patent, however, the single ring substitution concept is still not broadly known. Careful handling of this invention in dealing with third parties is therefore still advisable.

The U.S. patent application (Case No. 43-21-4280A) is still under prosecution. As you know, the HPPM compounds are in the public domain, hence our original claims were directed to the use of HPPM in capacitors, transformers, etc.

Unfortunately, Frank Clark of General Electric (in his U.S.P. 2,012,302) long ago disclosed trichlorodiphenylmethane in which the three chlorine atoms are attached to one phenyl group. The Examiner applied the Clark reference on the theory that Clark's trichlorodiphenylmethane would inherently possess the improved biodegradation disclosed and claimed in the Monsanto (R. H. Munch and Q. E. Thompson) case.

To advance the U.S. prosecution, therefore, we were forced to restructure the use claims to recite the intentional non-substitution of one aromatic ring which provides the superior biodegradability but which was not understood or appreciated by the cited GE reference.

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See the attached claim which is now before the U.S. Examiner and which we intend to aggressively prosecute. Allowance of such a claim would probably represent the extent of what we have disclosed as the inventive contribution.

We shall keep the Business Group advised of the progress of the U.S. application on HPPM.

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Enc.

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