Monsanto

FROM (NAME—LOCATION—PHONE) P. R. Michael - N1E (4-4838)

DATE : June 26, 1984

SUBJECT : PROPOSED RESEARCH ON TRANSFORMER FIRES

REFERENCE :

cc. W. E. Gledhill - N3A
F. D. Hileman - 1250
W. B. Papageorge - B3NA
J. D. Wilson - G3WG

TO : J. H. Craddock - B3NA
J. G. Nassif - E2ND

The following items summarize the research projects on transformer fires we have discussed over the last several days.

Study	Est. Cost
I. Thermal Degradation Studies at University of Dayton Research Institute (UDRI)	
A. Thermal decomposition profile, product identification and yield for 1,2,4 trichlorobenzene 3 temperatures 1 second residence time 3 reaction atmospheres	25k (based on UDRI proposal 5/10/84)
B. Repeat of A. using Aroclor® 1242 Analytical work would include quantitation of several PCDD & PCDF isomers and determination of total homolog yield, i.e., total tri, tetra, penta ...	30k
C. Repeat of A. using Aroclor 1254	30k
D. Repeat of A. using two transformer fluids representative of fluids in actual incidence of fire; actual samples if possible.	50k
II. Thermal Degradation of Wiring Insulation	
A. Solicit proposal from UDRI - Experimental design as in I.A.	25k per insulation type

PCB-ARCH-EXT0379707

III. Formation of PCDD and PCDF in Transformers From Arcing

A. Solicit proposal from C. Rappe - determine if formation is enhanced by epoxides or other additives. Study trichlorobenzene, Aroclor 1242, Aroclor 1254, transformer fluid. ?

IV. Determination of Reaction Conditions and Source of Combustion in PCB Transformer Fires ?

Co-sponsor with EPRI, GE/Westinghouse, ...

The cost of studies III and IV are not known at this time. However, because they appear to be more appropriate for the late 1985-1986 time frame, we have time to obtain estimates if we wish to pursue them.

Paul Michael

P. R. Michael

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JUN 27 1984

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IN - 10 (REV. 8/77)

PCB-ARCH-EXT0379709

III. Formation of PCDD and PCDF in Transformers From Arcing

A. Solicit proposal from C. Rappe - determine if formation is enhanced by epoxides or other additives. Study trichlorobenzene, Aroclor 1242, Aroclor 1254, transformer fluid. ?

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PCB-ARCH-EXT0379710