

MITSUBISHI MONSANTO CHEMICAL COMPANY

FROM LOCATION : Tokyo

DATE : July 8, 1971

SUBJECT : AROCLOR REFINING

REFERENCE : Your Memo July 1, 1971

TO : Mr. W. B. Papageorge
St. Louis, Mo.

cc: Messrs.

P/ G. Benignus

H. S. Bergen

D. Danna

T. L. Gossage

T. Katayama

R. E. Keller/E.S. Tuck

R. H. Munch

W. R. Richard

S. Uneno

E. P. Wheeler

This will acknowledge receipt of your memo and the attached 15 reports, all relating to the biodegradability and toxicity of Aroclors.

At MMK, we are under substantial critical pressure from both national and prefectural ministries, because the available data have been insufficient to satisfy them on the improved biodegradation of Aroclor 1016. Even though it is obvious that the data show comparatively rapid removal of chlorinated isomers in the lower range, the presence of Cl₄ and higher chlorinated compounds is criticized -- even if these may be only one-tenth of the concentration in Aroclor 1242. I suppose this is a natural fear of persistence. Since the effluent from the Yokkaichi plant, where our Aroclor unit is located, discharges into a large bay which is extensively used for fishing and oyster cultivation, reduction of higher chlorinated biphenyls to an economic level in 1016 is still considered a potential threat. We shall need any additional degradation data on Aroclor 1016 before we can introduce Aroclor 1016 as an improved product over Aroclor 1242.

My congratulations also on your expanding responsibility. I am sorry we were not able to get together while I was in St. Louis.

Best regards,

John
J. R. Durland

JRD:fu



NEV 025473

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BIODEGRADATION TEST PROGRAM

Provide Degradation Rates of Material Submitted for Testing

Business Group	Product (In order of Priority)	Testing Procedure	Location	Method of Analysis	Start Up Date	Estimated Completion Date
Functional Fluids	MCS 1043	1. Activated Sludge	St. Louis	EC/GC	8-10-70	2-71
	MCS 1016	2. River Die-Away	St. Louis	EC/GC	11-3-70	1-4-71
	Aroclor 1242	3. Shake Flask	Ruabon	EC/GC	Underway	?
	Aroclor 1254					
	Aroclor 5432	1. Activated Sludge	St. Louis	?	Holding until further analytical method development work is completed	
	Aroclor 5442	2. River Die-Away	St. Louis	?		
	Arobrom 5465		St. Louis	?		
	Trichloro- benzene	1. Activated Sludge	St. Louis	EC/GC	10-27-70	4-71
		2. River Die-Away	St. Louis	EC/GC	11-3-70	1-4-71
	Gulf 200	1. Activated Sludge	St. Louis	FID/GC	12-1-70	6-71
	Bright Stock	2. River Die-Away	St. Louis	FID/GC	12-1-70	2-2-71
	Neville					
	Uniclor 40					
	MCS 717	Shake Flask	Ruabon	EC/GC	Underway	?
	MCS 762					
	penta-Biphenyl Isomers					
	hexa Biphenyl Isomers					
	NC Phosphate	Materials to be incorporated into program as equipment and manpower become available.				
	Cresyl Diphenyl Phosphate					
	Tributyl Phos- phate					
	Tricresyl Phos- phate					
	Diphenyl Sulfone					
	Tolyl Xylyl Sulfone					
	Trichloro Di- phenyl Ether					
	Monobromodi- chlorobenzene (Cont'd)					

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NEV 025474

<u>Business Group</u>	<u>Product (In order of Priority)</u>	<u>Testing Procedure</u>	<u>Location</u>	<u>Method of Analysis</u>	<u>Start Up Date</u>	<u>Estimated Completion Date</u>
Functional Fluids Cont'd)	2,2'-dichlorodiphenyl ether Cumylphenol Isopropylphenyl Phosphate Orthoxenyldiphenyl Phosphate Xylyl Phosphate Ester (Fyrquel 220)					
Plasticizers	MIPB HB-40	1. Activated Sludge 2. River Die-Away	St. Louis St. Louis	UV and FID/GC	5-27-70 8-31-70	Initial work completed; report to be issued
	Aroclor 5460	1. Activated Sludge 2. River Die-Away	St. Louis St. Louis	?	Holding until further analytical method development work is completed	
	Aroclor 1221	1. Activated Sludge 2. River Die-Away	St. Louis St. Louis	EC/GC EC/GC	10-27-70 11-18-70	4-71 1-19-71
	Santicizer 711M	1. Activated Sludge 2. River Die-Away	St. Louis St. Louis	?	Holding until analytical method development complete	
	IN-425 IN-420	1. Activated Sludge 2. River Die-Away	St. Louis St. Louis	Hold -	Potential economic and acute toxicity problems	

(Cont'd)

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NEW 025475

Provide Degradation Rates of Material Submitted for Testing

<u>Business Group</u>	<u>Product (In order of Priority)</u>	<u>Testing Procedure</u>	<u>Location</u>	<u>Method of Analysis</u>	<u>Start Up Date</u>	<u>Estimated Completion Date</u>
Food and Fine Chemicals	3,4,4'-Trichloro- carbanilide	1. Activated Sludge 2. River Die- Away	St. Louis St. Louis	UV UV	7-27-70 8-28-70	Initial work completed; report to be issued
	3,3',4-Tri- chlorocarbanil- ide 3,3',4,4'-Tetra- chlorocarbanil- ide Santophen I	River Die-Away	St. Louis	UV	8-28-70	Initial work completed; report to be issued
General Chemicals	p-Nitrochloro- benzene o-Nitrochloro- benzene p-Chloroaniline nitrated orthene	1. Activated Sludge 2. River Die- Away	St. Louis St. Louis	?	Analytical method development work to be initiated 11-23-70.	

NEW 025476

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