Tucker Dep. Exhibit 14

The handwritten notes and underlining in this exhibit were made by OMC's counsel.

For a clean copy of the exhibit, see the produced documents.

E. S. Tucker - R&D Laboratories - South Second Street

July 28, 1969

W. R. Richard - GO
R. E. Keller - Res. 1

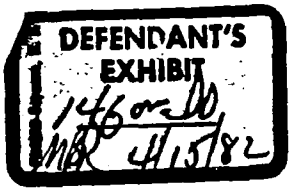
RESIDUE ANALYSIS - BIO-TEST FOUR DAY FISH TOXICITY STUDIES ON SEVEN MATERIALS - IBT NO. A7204

E. P. Wheeler
General Offices

Here is the table, requested Thursday, to be sent to Bio-Test. I think this tells the story fairly well. When we go to Chicago Thursday, I will have Xerox's of appropriate chromatograms to include with the table.

E. S. Tucker

db
Encl.



0001053

HARTOLDMON0013102

RESIDUE ANALYSIS

Bio-Test Four Day Fish Toxicity Studies on Seven Materials

IBT No. A7204

Test Material	Conc. (PPM) Added To Water	Hours	Conc. (PPM) Found In Water	No. Fish Dead	No. Fish Analyzed	Wt. Fish Analyzed(g)	Conc. (PPM) Found In Fish
Aroclor 1242(BG)	0.1	24	0.078(1242)	0	-	-	-
Aroclor 1242(T)	100	24	0.477(1242)	0	-	-	-
Aroclor 1242(T)	100	96	NA	0	7	11.40	746(1242)
Aroclor 1254(BG)	0.1	24	0.004(1254)	0	-	-	-
Aroclor 1254(BG)	0.18	24	0.014(DDT)	0	-	-	-
Aroclor 1254(BG)	0.32	24	0.007(DDT)	0	-	-	-
Aroclor 1254(BG)	0.32	48	0.005(1254) 0.031(1242)	0	-	-	-
Aroclor 1254(BG)	0.32	72	0.007(1254) 0.047(1242)	0	-	-	-
Aroclor 1254(BG)	0.32	96	0.008(1254) 0.053(1242)	0	10	37.00	53.6(1254)
Aroclor 1254(BG)	0.56	24	0.014(DDT)	0	-	-	-
Aroclor 1254(BG)	1.0	48	0.070(1254)	6	6	2.52	16.9(1254)

HARTOLDMON0013103

RESIDUE ANALYSIS

Bio-Test Four Day Fish Toxicity Studies on Seven Materials

IBT No. A7204

Test Material	Conc.(PPM) Added To Water	Hours	Conc.(PPM) Found In Water	No. Fish Dead	No. Fish Analyzed	Wt. Fish Analyzed(g)	Conc.(PPM) Found In Fish
Aroclor 1254(BG)	1.0	72	0.018(1254) 0.022(1242)	3	3	1.45	196.4(1254)
Aroclor 1254(BG)	1.0	96	0.020(1254) 0.035(1242)	1	1	0.51	156.8(1254)
Aroclor 1254(BG)	100	24	3.72(1254)	NS	-	-	-
Aroclor 1254(T)	100	24	7.19(1254)	0	-	-	-
Aroclor 1254(T)	100	24	2.98(1254)	0	-	-	-
Aroclor 1254(T)	100	48	1.82(1254)	0	-	-	-
Aroclor 1254(T)	100	72	1.69(1254)	0	-	-	-
Aroclor 1254(T)	100	96	1.07(1254)	0	10	17.02	<96.2(1254)
Aroclor 1260(BG)	100	24	5.62(1260)	0	-	-	-
Aroclor 1260(BG)	100	96	NA	0	10	5.58	81.9(1260)
Aroclor 1260(T)	100	24	14.5(1260)	0	-	-	-
Aroclor 1260(T)	100	96	NA	0	10	13.70	2052(1260)

HARTOLDMON0013104

RESIDUE ANALYSIS

Bio-Test Four Day Fish Toxicity Studies on Seven Materials

IBT No. A7204

Test Material	Conc. (PPM) Added To Water	Hours	Conc. (PPM) Found In Water	No. Fish Dead	No. Fish Analyzed	Wt. Fish Analyzed (g)	Conc. (PPM) Found In Fish
Tech. DDT (BG)	0.0056	24	0.038 (DDT)	0	-	-	-
Tech. DDT ( )	0.0056	72	ND (DDT)	0	-	-	-
Tech. DDT (BG)	0.0056	96	0.002 (DDT) 0.005 (1254)	0	10	31.70	0.785 (DDT)
Tech. DDT (BG)	0.01	24	ND (DDT) 0.007 (1254)	10	NS	-	-
Tech. DDT (BG)	0.01	48	ND (DDT) 0.005 (1254)	-	-	-	-
Tech. DDT (BG)	0.01	72	ND (DDT) 0.006 (1259)	-	-	-	-
Tech. DDT (BG)	0.01	96	ND (DDT) 0.007 (1254)	-	10	42.19	1.35 (DDT)
Tech. DDT (T)	0.0056	24	0.012 (DDT) 0.031 (1242)	0	-	-	-
Tech. DDT (T)	0.0056	48	0.021 (DDT) 0.033 (1242)	4	NA	-	-
Tech. DDT (T)	0.0056	96	0.016 (DDT) 0.059 (1242)	2	NA	-	-
Tech. DDT	0.01	24	0.010 (DDT) 0.016 (1242)	6	6	2.02	>0.401 (1254)

0001056

RESIDUE ANALYSIS

Bio-Test Four Day Fish Toxicity Studies on Seven Materials

IBT No. A7204

Test Material	Conc.(PPM) Added To Water	Hours	Conc.(PPM) Found In Water	No. Fish Dead	No. Fish Analyzed	Wt. Fish Analyzed(g)	Conc.(PPM) Found In Fish
Tech.DDT (T)	0.01	48	0.006(DDT) 0.039(1242)	3	NA	-	-
Tech.DDT (T)	0.01	72	0.007(DDT) 0.035(1242)	1	NA	-	-

0001057

EST:db
7-28-69

HARTOLDMON0013106

Water Aroclor 1254

	0.1	0.18	0.32	0.56	1.0	100
24	0.0043 0.0782 **	<0.0005	<0.0005	<0.0005	○ **	2.98 7.19 3.72 0.477 ** 5.62 * 14.52 *
48			0.0048		0.0697	1.82
72			0.0067		0.0178 0.0224 ** $\boxed{<1.7}$ Sloman change	1.69
96			0.0080 $\boxed{53.6}$		0.0195 0.0350 **	1.07 $\boxed{<96.2}$ T Sloman change $\boxed{74.6}$ ** $\boxed{81.9\ (1254)}$ * $\boxed{2052}$ *

** - 1242

* - 1260

○ - Bluegill deaths

$\boxed{53.6}$ - Fish residues

0001058

HARTOLDMON0013107

questions / needs

1.) 0 hour water control samples
(to show if make-ups was in water phase
or on equipment — true exposure level,
Will help on expt design

2.) We can't explain low conc. — absorbed by equip
low make-ups or fish?

0001059

Water Samples

Material	Species	Conc (ppm)	Time (hrs)	Amt found (ppm)	# Dec.
Aroclor 1254	Bluegill	0.1	24	0.0045 (1254)	0
"	"	"	0.18	24	0.0143 (DDT)	0
"	"	"	0.32	24	0.0067 "	0
"	"	"	"	48	0.0048 (1254) 0.0309 (1242)	0
"	"	"	"	72	0.0067 " 0.0471 "	0
"	"	"	"	96	0.0080 " 0.0534 "	(0)
"	"	"	0.56	24	0.0137 (DDT)	0
"	"	"	1.0	48	0.0697 (1254)	(6)
"	"	"	"	72	0.0178 " 0.0224 (1242)	3
"	"	"	"	96	0.0195 " 0.0350 "	1
"	"	"	100	24	3.72 (1254)	?
"	"	Trout	100	24	7.19 (1254)	0
"	"	"	"	24	2.98 "	0
"	"	"	"	48	1.82 "	0
"	"	"	"	72	1.69 "	0
"	"	"	"	96	1.07 "	(0)

0001060

HARTOLDMON0013109

Fish Samples

Material	Species	Conc (ppm)	Time (hrs)	Amt. found (ppm)		# Dead	
Tech. DDT	Bluegill	0.0056	96	0.7850	(DDT)	10	0
"	"	"	0.01	"	1.35	"	10	10
Tech DDT*	Trout	0.01	24	>0.4010	(1254)	10	6
Aroclor 1242	Trout	100	96	7.46	(1242)	(7+?) 7	0
Aroclor 1254	Bluegill	0.32	96	53.6	(1254)	5	0
"	"	" *	1.0	48	<~~7.61~~ 16.9 (1254)	10	6
Aroclor 1254	Trout *	100	96	<96.2	(1254)	5	0
Aroclor 1260	Bluegill	100	96	81.9	(1254)	5 ✓	0
Aroclor 1260	Trout	100	96	20.52	(1260)	5	0
A	54	BG	1.0	72	19.4	(54)		3
A	54	"	"	96	15.8	(54)		1

HARTOLDMON0013110

Water Samples

Material	Species	Conc (ppm)	Time (hrs)	Amt found (ppm)	# Dec.
Aroclor 1242	Bluegill	0.1	24	0.0782 (1242)	
Aroclor 1242	Trout	100	24	0.4770 (1242)	
Aroclor 1260	Bluegill	100	24	5.62 (1260)	
Aroclor 1260	Trout	100	24	14.52 (1260)	

0001062

HARTOLDMON0013111

Water Samples

Material	Species	Conc (ppm)	Time (hrs)	Amt. found (ppm)	# Dead
Tech DDT	Bluegill	0.0056	24	0.0381 (DDT)	0
" "	"	"	72	below detect. limit < 0.0005	0
" "	"	"	96	0.0019 (DDT) 0.0050 (1254)	0
" "	"	0.01 X	24	N.D. " 0.0068 "	10
" "	"	"	48	N.D. " 0.0052 "	–
" "	"	"	72	N.D. " 0.0055 "	–
" "	"	"	96	N.D. " 0.0071 "	–
" "	Trout	0.0056	24	0.0121 (DDT) 0.0308 (1242)	0
" "	"	"	48	0.0210 " 0.0332 "	4
" "	"	"	96	0.0160 " 0.0593 "	2
" "	"	0.01 X	24	0.0097 " 0.0158 "	6
" "	"	"	48	0.0058 " 0.0386 "	3
" "	"	"	72	0.0073 " 0.0351 "	1

✓ .0056 Tech DDT Blue Gill 96 hrs
✓ .032 54 " ~~Trout~~ 96 hrs
~~[illegible]~~ Trout
✓ 100 1242 96 hrs ✓
✓ 100 1260 Trout 96 hrs ✓
Blue Gill 96

0001063

HARTOLDMON0013112