Monsanto INDUSTRIAL CHEMICALS CO.

FROM (NAME & LOCATION) W. M. Mees - T2F

DATE December 20, 1972

SUBJECT ANALYSIS OF WESTINGHOUSE WATER SAMPLE FOR PCBs

REFERENCE

cc: P. G. Benignus - B2SC
R. E. Keller - T1B
R. H. Munch - T1B
W. R. Richard - T3A
E. S. Tucker - T2F

TO : W. B. Papageorge
B2NA

A second set of three water samples from Westinghouse Electric Corporation were analyzed for PCBs. The samples are from an evaluation of using a centrifuge to separate PCBs from capacitor wash water. The results were as follows:

| | | | |
|---|---|---|---|
| No. 1 | Standard (wash water) | 110 ppm | Calculated as Aroclor 1016 |
| No. 2 | DeLaval Separator, 300 cc for 16 sec. at 1200 RPM | 6 ppm | Calculated as Aroclor 1016 |
| No. 3 | DeLaval Separator, 300 cc for 30 sec. at 1200 RPM | 4 ppm | Calculated as Aroclor 1016 |

While the DeLaval separator is an improvement over the Sharples Centrifuge tested earlier (twenty-five fold vs five fold decrease), the PCB level still seems too high if direct discharge is anticipated into any waterway.

W. M. Mees

db

DSW 152883

Westinghouse water samples

| | | | | | |
|---|---|---|---|---|---|
| Blank | 0.45 ng | 7 µl | 1 ml | | |
| W-1 | 1.5 ng | 3 µl | 5 ml | 1:50 | 1:10 2:10 |
| W-2 | 0.54 ng | 2 µl | 5 ml | 1:10 | 1:25 |
| W-3 | 1.26 ng | 3 µl | 5 ml | 1:10 | 1:10 |

Blank

$$\frac{0.45}{7\,\mu l} \times 1\,ml = 0.064\,\mu g.$$

Det limit $\frac{0.064 \times 2}{60}$ µg/g = 0.001 ppm or 1 p.p.b.

W-1

$$\frac{1.5}{3} \times 5 \times \frac{250}{56.9} = 110 \text{ ppm}$$

W-2

$$\frac{0.54}{2} \times 5 \times \frac{250}{60.3} = 5.6 \text{ ppm}$$

W-3

$$\frac{1.26}{3} \times 5 \times \frac{10^2}{60.2} = 3.5 \text{ ppm}$$

DSW 152884

Little Battle

Water Samples

W-1

117.78
61.90
56.88 g

W-2

120.95
60.61
60.34

W-3

121.28
61.06
60.22

DSW 152885

Westinghouse Electric Corporation Power Systems

Distribution Apparatus Division

Box 341
Bloomington Indiana 47401
(812) 332 4421

November 1, 1972

Dr. E. Scott Tucker
Monsanto Company
Building G2F
800 N. Lindbergh Blvd.
St. Louis, Missouri 63166

Ref: Separation of Aroclor & Water With Centrifuge

Dear Dr. Tucker:

Since the first test, using a centrifuge to separate the PCB from the capacitor wash water, produced unsatisfactory results it was necessary to repeat the test using another type of centrifuge. Therefore, I am taking the liberty of sending you three samples of wash water to determine the effectiveness of a DeLaval separator, St. Louis. Please determine the PPM of Aroclor in each sample.

The samples are identified as:

W- 1 Standard
2 300 cc/16 sec } 1200 RPM
3 300 cc/30 sec }

Thank you for your service and if a charge is necessary I shall be glad to accommodate you.

Yours very truly

WESTINGHOUSE ELECTRIC CORP.
Bloomington, Indiana

Ray Luzer
Manufacturing Planning

RL:ld
cc: Paul Benignus, 800 N. Lindbergh Blvd.
St. Louis, Missouri 63166

DSW 152886

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