

Monsanto

FROM (NAME & LOCATION)

St. Louis - General Office

DATE

March 17, 1969

CC:

SUBJECT

REGIONAL WATER QUALITY
CONTROL BOARD

REFERENCE

Their letter to you of March 7
from Mr. Fred H. Dierker

TO

TO : H. S. Bergen - HBERG

*Hold
Thus end*

About Aroclor used in the dielectric area, we respond to items 4, 5, 6, and 7 of Mr. Dierker's letter as follows:

- 4) The solubility of Aroclor in tap water at 25°C. is as follows:

<u>Product</u>	<u>Solubility in Water</u>
Aroclor 1242	203 $\pm$ 10 ppm
Aroclor 1248	106 $\pm$ 14 ppm
Aroclor 1254	50 $\pm$ 2 ppm

element C

Although the solubility of Aroclor 1260 has not been determined, the above data certainly serves to indicate that the more highly chlorinated Aroclors such as 1260 are the least soluble in water. Accordingly, it is quite reasonable to say that the solubility of Aroclor 1260 in water would be significantly lower than 50 ppm.

- 5) Aroclor 1242 and a small amount of Aroclor 1254 are used in hermetically sealed capacitors. The hermetically sealed can construction is of aluminum, mild steel, and stainless steel. These capacitors are used imbedded in asphalt in fluorescent lighting systems. They are used for power factor correction on utility lines. They are also used as motor run capacitors for air conditioning systems.

Attached are the specifications for Aroclors 1242, 1254, 1248, and 1260, which describes the physical properties of these materials.

Aroclor 1260, and to a lesser extent Aroclors 1242 and 1254, are used as components in transformer fluids of the askarel type. In general, the amount of Aroclor used in the transformers fluid ranges from 45 percent to 60 percent.

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On the West Coast in 1968, about 300,000 pounds of Aroclor was contained in the transformer askarel fluid used in that region to make transformers.

These askarel transformers are also hermetically sealed, non-breathing apparatus. Very little of the fluid is used to replace spent fluid. Askarel transformer failure that would require replacement of the fluid is very rare. For example, the Edison Electric Institute found that the incident of such failure is in the range of 0.05 percent.

- 6) No Aroclor capacitors are made on the West Coast.

Transformer manufacturers on the West Coast who handle Aroclor containing fluid include:

Federal Pacific - Santa Clara, California
Hill Magnetics - Redwood City, California
H. K. Porter - Bellmont, California
Sierra Transformer - Redwood City, California
Spokane Transformer - Spokane, Washington

- 7) In the normal use of capacitor or transformer fluid containing Aroclor, Monsanto advises the capacitor and transformer manufacturers to avoid breathing vapors that would be emitted from the fluid if it were heated to elevated temperatures. Monsanto also advises the user of the fluids to avoid continuous contact with the skin. If clothing becomes saturated, the workman is advised to launder it before wearing it again. If there has been spillage on the skin, it should be removed by washing with soap and water. Normal, ordinary good housekeeping practice is recommended.

Normal filtration of the fluid as done in the electrical industry has not presented health hazard provided that ordinary normal cleanliness is followed.

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The amount of Aroclor dielectric fluid discarded is indeed relatively small. However, such relatively small amounts have been discarded in drums by removal to dumping areas. In rare instances, when a significant amount has become available for disposal, Monsanto practices having the fluid sent back to our plant for reworking and reuse in non-electrical areas.

We would suggest answering Mr. Dierker's questions about Aroclor dielectrics in accordance with the above.

As he also seeks our views on PCB materials used in non-electrical areas such as hydraulic fluid, heat transfer media, plastics, etc., may I assume that you have asked people handling those areas to submit their views?


P. G. Benignus

/ecd
Enclosures

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