Monsanto

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FROM (NAME & LOCATION) E. S. Tucker - R&D Laboratories - 1700 So. Second

DATE March 4, 1969

SUBJECT AROCLOR - WILDLIFE: INCINERATION OF NCR PAPER

REFERENCE

cc R. E. Keller - Res. 1
E. P. Wheeler - GO

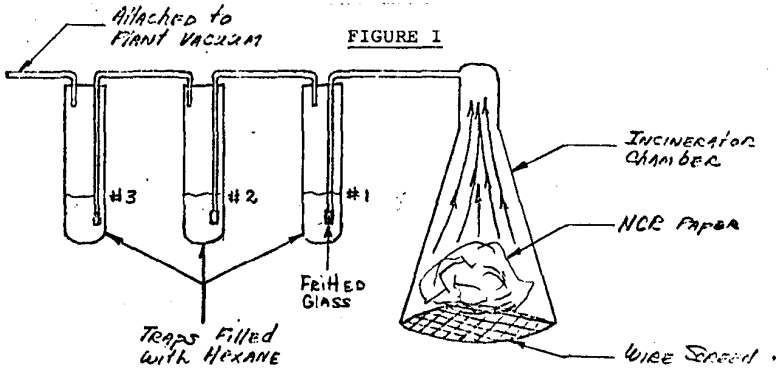
TO W. R. Richard - GO

It has been proposed from the observed distribution of polychlorinated biphenyls in tissue samples taken from marine organisms that global eco-distribution of these materials occurs via aerial transport (wind currents, airborne particulate matter, etc.).

A qualitative experiment has been performed with the objective of determining if Aroclor in N.C.R. paper is destroyed or volatilized when the paper is disposed of by burning.

The experiment was carried out in the following manner. Approximately 3g. (1 sheet) of paper (CB 15# white, 8-1/2 X 11, long grain, F-3468-4-24-64, The N.C.R. Company) was placed in the incinerator chamber of the apparatus shown in Figure I.

FIGURE 1



At this point the vacuum was turned on and the paper ignited. After the paper had completely burned, the hexane in each trap, and hexane extracts of the ash and the walls of the incinerator chamber were analyzed for the presence of Aroclor by EC/GC. Hexane samples from trap #1 were also analyzed after extraction with base and acid to remove any oxidized materials.

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Conclusions:

Under the conditions of this experiment:

1. Aroclor is easily volatilized when N.C.R. paper is burned.

2. Aroclor undergoes little, if any, decomposition when burned.

3. Unfortunately, it appears that significant air pollution can occur via burning of N.C.R. paper or other Aroclor containing materials even under more strenuous conditions.

E. S. Tucker

db



FIG. 2

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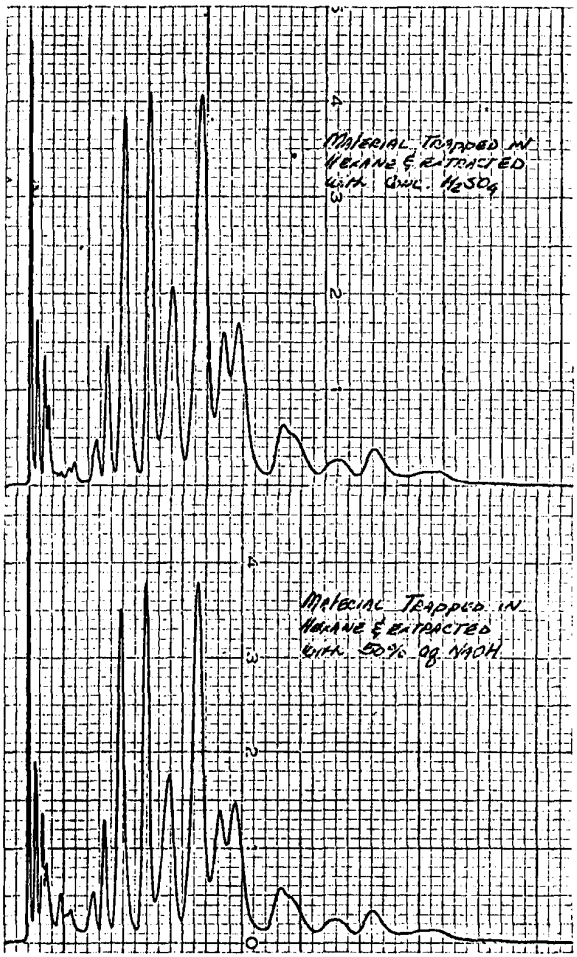


Fig 3

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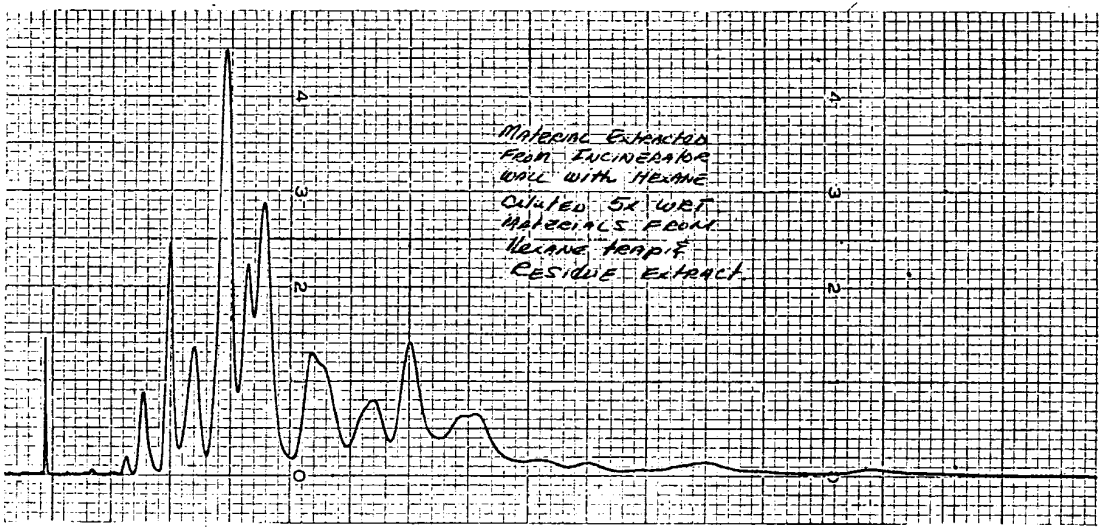

MATERIAL EXTRACTED
FROM INCINERATOR
WALL WITH HEXANE
CALIBRATED 5X WRT
MATERIALS FROM
HEXANE TEMP'E
RESIDUE EXTRACT
4
3
2
0
4
3
2
0

FIG. 4