Tucker Dep. Exhibit 1

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.

ORGANIC CHEMICALS DIVISION, R&D LABORATORIES, ST. LOUIS

# APPLIED SCIENCES SECTION

PHYSICAL CHEMISTRY · ANALYTICAL CHEMISTRY · SPECTROSCOPY · INSTRUMENT RESEARCH

COMPUTER TECHNOLOGY · STATISTICS

## MONTHLY SUMMARY

January and February, 1970

For

Functional Fluids

Circulate:
1) D. Olson (Do ask to be put on the distribution list)
2) F H Langenfeld
3) [illegible]
4) [illegible]
5) [illegible]
6) [illegible]
7) H S Bergen

DE Roach Pg 2+3+5

MS
Arodor
Toxicity
PJ

Distribution

| To: | From: | Others: |
|---|---|---|
| J. W. Baker | R. F. Brooks | T. M. Patrick |
| J. F. Herber | M. W. Dietrich | H. S. Bergen |
| D. R. Miller | E. M. Emery | W. R. Papageorge |
| R. H. Munch | L. Fowler | Members of Applied Sciences |
| W. R. Richard | J. D. Hinchen | |
| L. R. Stark | R. E. Keller | |
| Q. E. Thompson | | |

a lot of work here
- Let's be sure its all worth while

DEFENDANT'S EXHIBIT
7 or 8
MRR 4/15/82

0001387

REV 1/68

This document contains confidential information which is the property of Monsanto Company. Only those portions of the document relevant to a duly authorized [illegible] need to know may be excerpted for him. The report must not be sent outside the company without written approval and the authorized recipient is accountable for its safekeeping, excerpting or otherwise disclosing of its content, and for its proper disposal. Destroy this report within two months.

AROCLOR DEFENSE

As per our earlier agreement, the Wisconsin Research Alumina Foundation has submitted to us, for mass confirmation, five cleaned up extracts of composite fish samples taken from the Manistee River (Michigan), Burns Ditch (L. Michigan), Manitowoc River (Wisconsin) and the Kewaunee River (Wisconsin). The fifth sample is a human biopsy fat specimen. All samples are estimated to contain ppm levels of PCBs along with other chlorinated hydrocarbons (DDT, DDD, DDE, BHC, and Dieldren).

An effluent sample taken from the fifth settling pond at the [redacted] was analyzed for PCBs. The effluent contained about 10 ppm of apparent PCBs which were not identical to either Aroclor 1242 or Aroclor 1248 but like a mixture of the two. The alteration of the electron capture chromatogram could be due to the use of 1248 as make up in reclaimed 312, some biological alteration of 1242, or the presence of other electron capturing materials in the sample. It was suggested that more samples be examined.

The initial biologically populated river water (Meramec River) degradation study of Aroclors 1221, 1242, 1248, and 1254 has been completed. The results indicated that only Aroclor 1221 was significantly degraded. Aroclors 1242, 1248, and 1254 were unaffected after an exposure period of eight weeks. A report will be issued.

The semi-continuous activated sludge degradation studies carried out in St. Louis confirm the river water results in that the major isomers in Aroclor 1221 were readily degraded. Additionally, some slight degradation of the lower chlorinated isomers in Aroclors 1242 and 1248 was observed. The Aroclor 1221 and 1248 exposures have been discontinued to free two of the four semi-continuous units, being operated, to study the effect of biphenyl accumulation on the degradation of Aroclor 1242 and the degradation of Arobrom 1228, a potential Aroclor substitute.

The applicability of extending the analytical techniques developed to monitor Aroclors, Bromo Aroclor 1242, Arobrom 1228, and tri-tetra chlorobenzenes has been established. Only slight modifications are necessary.

Samples of Bromo Aroclor 1242, Arobrom 1228, and two blends of Aroclor 1142 have been sent to Ruabon, U.K., for biodegradation studies.

Plans have been made to determine the feasibility of incineration as a means of disposing of non-reclaimable Aroclor and Aroclor containing waste. Three materials, Aroclor 1242, waste Intereen, and Aroclor 1260, will be tested at 1600°F, and 2000°F. The tests will be carried out by John Zink Company in Tulsa, Oklahoma on March 10th. Provisions have been made to sample the stack gases for PCBs.

0001388

WATER_PCB-SD0000041419