

Monsanto

1369

DEC 20 1979

FROM (NAME & LOCATION)

James D. Wilson - N3A - 4-5274

DATE : December 20, 1979

SUBJECT : Methods for Chlorodibenzodioxin Analysis

REFERENCE

TO : T. A. Taulli
NID

*Pro: file
OCP/C
Pep
Santophen
2,4-DCP*

cc D. Armstrong/E. Fay - 1740
D. Dahm - 1250
D. B. Edwards - B3SD
E. L. Head - B3SB/F. A. Provorny - B3N
F. Hileman - 1250
H. J. Horner - 1740
H. W. Kilbourne - N3A
G. J. McEwan - N3A
J. C. McPhillips - B3SC
E. J. Malec/G. F. Brautigam-NID
J. S. Metcalf - N3A
D. Metherd/P. Kirk - 1740
J. P. Mieure-N3A/R. G. Kaley-T3B
W. W. Morgenthaler-N3A /D.P. Roman-N2E
J. N. Rapko - N2B/W. B. Bennet-N2B

This will outline my understanding of what your group has achieved on the "dioxin" analysis program to date, and what we have agreed to do in the near future, following meetings with D&P R&D and W&K personnel.

Status:

*Kneut
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1. A method capable of analyzing Santophen®-1 for 2,3,7,8-tetra-chlorodibenzodioxin and materials with similar analytical characteristics has been developed and proved. It has a lower limit of detection below 1 ng "TCDD" per g S-1, and is reliable to ±1 ng in the range 1-20 ng/g. Because LC/UV methods can provide only presumptive species identification (not positive identification), this method yields only an upper limit to the possible concentration of 2,3,7,8-TCDD in Santophen. We would like to obtain better interlaboratory confirmation of this method, but we will probably not do this until the MRC trace analysis lab is in full operation, sometime in 1980.

2. Ten lots of Santophen produced in the last five months have been analyzed by this technique. Nine showed no detectable TCDD; one showed a trace (<1 ppb); the identity of this material has not been confirmed.

3. The technique has been extended to para-chlorophenol and "OCP-Crude". Recent production shows no detectable tetrachlorodibenzodioxin. (Five lots of each product have been examined.)

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Plans:

1. Extend the methodology to 93% 2,4-DCP, modifying it if necessary.
2. Attempt to develop comparable methodology capable of estimating TCDD's in chlorophenols still residues with a detection limit of at least 1 µg TCDD/gm residue, and an accuracy of ±1 µg/g at that level.

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