

Monsanto

MONSANTO INDUSTRIAL CHEMICALS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
Phone: (314) 694-1000

February 16, 1979

Mr. Harry U. Gilmer
Master Host Inn, Room 128
900 Vandiver Drive
Columbia, Missouri 65201

Dear Mr. Gilmer:

The attached tabulation gives the additional data we have developed on our reserve sample of the o-Chlorophenol, Crude involved in the spill at Sturgeon, Missouri. Also shown are data on a purified o-Chlorophenol sample.

Dr. R. G. Kaley, the Monsanto scientist responsible for the development of these data, gave me the following information relative to this work:

"We have completed the subject determinations on crude o-chlorophenol GATX 12932-KL1-8001, dated 1/7/79. We used the methodology previously described in the reference memo*. Measurement was by Selected Ion Monitoring (SIM) GC/MS using authentic standard for quantitation.

"One of the tetrachlorodibenzo-p-dioxin isomers has a retention time similar to 2,3,7,8-TCDD. This does not, however, constitute unequivocal confirmation of the presence of 2,3,7,8-TCDD. This same ambiguity was acknowledged by J. Carter Cook at the University of Illinois in his efforts to determine TCDD in soil from Sturgeon spill site."

Some additional comments relative to the last paragraph above and the footnote about the TCDD results on the table are in order.

*Attached to my letter to you dated February 12, 1979.

COOSS

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February 16, 1979
Mr. Garry U. Gilmer

Our contacts with Doctors Fairless, Kleopfer and Cook, all of whom were named in the EPA press release dated February 11, 1979, indicate that none claimed the presence of 2,3,7,8 TCDD was confirmed in the studies done at the University of Illinois. Their evidence was the same as ours; that is, one of the isomers seen had a retention time similar to that of the 2,3,7,8 TCDD isomer.

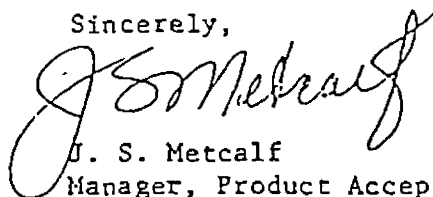
This is evidence that the 2,3,7,8 isomer might be present, but certainly does not constitute proof that it is. For example, there are 22 possible isomers of TCDD. The mass spectrometer work done at Illinois would not distinguish between any of these. Further, the odds that one or two would have the same approximate retention time as 2,3,7,8 TCDD under the analytical conditions employed are large.

It is unfortunate that the work done at the University of Illinois, which we think was excellent in quality and correctly reported, was apparently misunderstood and misquoted by those who prepared the EPA press release.

We certainly hope that this same mistake will not be made with our data.

Let me know if you have any questions.

Sincerely,



J. S. Metcalf
Manager, Product Acceptability
Detergents & Phosphates Division

/dmw

Attachment

B1 ps to copyees:

I called Gilmer at Sturgeon about 1 PM on 2/16 but didn't have a chance to discuss the data or the Press Release error because he was leaving to supervise additional soil sampling. He will probably call me this weekend.

J.S.M.

ppb Levels of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans

Sample	# Chlorines/Molecule							
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4*</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
9020701								
Sample 1								
Dioxins	~380 (1)	200 (2)	210 (2)	34 (3)	ND<100	ND<10	ND<20	ND<1
Furans	14 (2)	8.2 (2 or 3)	ND<5	ND<5	ND<5	ND<10	ND<20	ND<1
9020701								
Replicate 1								
Dioxins	~230 (1)	180 (2)	180 (2)	40 41 (3)	ND<10	ND<10	ND<20	ND<1
Furans	-	-	-	-	-	-	-	-
9020701								
Replicate 2								
Dioxins	-	-	-	36 44 (3)	-	-	-	-
Furans	22 (2)	11 (2 or 3)	ND<5	ND<5	ND<5	ND<10	ND<20	ND<1
OCP Fisher Sci. Co. Lot 776410 11/72								
Dioxins	ND<5	ND<5	ND<5	ND<5	ND<10	ND<10	ND<20	ND<1
Furans	ND<5	ND<5	ND<5	ND<5	ND<5	ND<10	ND<20	ND<1

ND = None Detected, less than the stated value

() = # isomers observed in SIM chromatogram

~ = Approximate concentration - no standard available

* = One of the isomers has a retention time similar to that of 2,3,7,8-TCDD. This does not, however, constitute unequivocal confirmation of the presence of 2,3,7,8-TCDD.

- = Sample not analyzed for this component.

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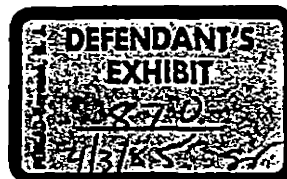
SUBJECT TO PROTECTIVE ORDER.

37 pfb - underlin

EPA - Reg. VII asked for analysis of spilled material to determine concn. to tons of - - - driver present - by telephone from Harry Gilmer

First sign of exposure to dioxin is chloracne.
(This is an acute toxicity ~~sublethal~~ effect)
Chronic effects of dioxin exposure is not known.

Mitchell will telephone Harry Palmer, tell him
our analysis is complete, we found
37 ppb in material.



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