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April 2, 1990

TO: Cate Jenkins, Lennart Hardell

FROM: Carol Van Strum

DATE: April 2, 1990

Attached is a copy of a retyped version of Table 9 from Zack & Gaffey's 1983 study that was inserted in the copy of the study sent to me by David Snively, Monsanto's lawyer. Apparently it was included inadvertently. It has no exhibit number, and Rex Carr, attorney for the Sturgeon plaintiffs, did not recognize it as having been in the record of the lawsuit when I described it to him on the phone. (I have also attached a copy of Table 9 as it appears in the published study.)

Apparently the document is from an internal Monsanto review of the Zack & Gaffey data. At the top left is a partly obscured handwritten note: "Zack/Gaffey -- had given NIOSH study prior to protocol & had given it publicly at meeting prior to NIOSH". At the top right is another handwritten note: "Re-eval. per NIOSH criteria take accid. group out of non-exposed".

These notes suggest that NIOSH had pointed out to Monsanto the erroneous inclusion and reclassification of highly exposed workers from the 1949 accident in Zack & Gaffey's unexposed group. It would be extremely interesting to know how and when this NIOSH alert occurred (e.g., before publication? The handwritten note seems to suggest this, as it refers only to Zack & Gaffey giving the study at a meeting, perhaps the first International Symposium on Chlorinated dioxins and Related Compounds, Oct. 25-29, 1981 in Arlington Va., at which the study was presented; the Monsanto press release announcing the study, however, is dated October 9, 1980. The press release is also attached.)

Another interesting item is the typed note at the bottom of the "Cause of Death" column: "My analysis

FAX Memo

Date: 10/16/94 Time: _____
To: Eddie Roth
Location: _____
FAX #: 314 231 9480
From: CVS
Location: _____
Phone #: _____
FAX #: _____

Pages

showed 65 deaths." If the seven additional deaths (over Zack & Gaffey's 58) do not include the erroneously included accident group workers (indeed, the title of this version of Table 9, unlike the published version, specifically says, "Not Including Deaths from TCP Incident) it would be interesting to know who they were and what the causes of death were.

A further curiosity is that the anonymous reviewer has changed (adjusted?) the non-exposed columns on the table (finding a total of 89 deaths from all causes instead of Zack & Gaffey's 104), but has not changed Zack & Gaffey's figures for the exposed group at all, simply added the note, "My analysis showed 65 deaths" at the bottom.

In the middle of the page are handwritten notes:

"(1) N/NTS

(2) Misclassif. could alter

(3) Chance factor large

(4) Characterization of exposure is possible error."

These obviously refer to some text that we don't have.

Beyond the tantalizing shifts of data, the big questions the "revised" Table 9 raises are: when did NIOSH review the Zack & Gaffey study, and what recommendations did NIOSH make? If NIOSH suggested changes and corrections that were confirmed by an internal Monsanto reviewer before the study was published, then publication of the uncorrected study was clearly a deliberate act of deceit.

I have written to Mr. Snively, asking him about this document. I will let you know what his response is, if any.

CAROL VAN STRUM

CVS:pem

enc. (letter to D. Snively, Monsanto Co.)