

MONSANTO

PLAINTIFFS MEMORANDUM AS TO
DEFENDANT MONSANTO'S KNOWLEDGE
ABOUT MANUFACTURING PROCESS,
DIOXIN AS CONTAMINANT DETECTION METHODS,
RISK REDUCTION METHODS,
AND HEALTH HAZARDS ASSOCIATED
WITH EXPOSURE TO DIOXIN

Perhaps the most malevolent participant in the Chemical Company conspiracy to withhold from the Government and the general public the toxic effects of the dioxin content in their 2,4,5-T is the Monsanto Chemical Company.

It was in 1949, at their Nitro, West Virginia plant that Monsanto was first alerted to the existence of a contaminant present in their 2,4,5-T process. As a result of the "process upset", (Monsanto's term), workers participating in the refinement of sodium trichlorophenol (the precursor of 2,4,5-T) were exposed to the product. Ultimately, more than 200 workers in the 2,4,5-T department began to develop manifestations of toxic exposure.

Multiple workers' compensation claims were filed in which there were made acute complaints of liver damage, peripheral neuropathy, chloracne and severe systemic effects.

As a matter of fact, R. Emmet Kelly, M.D., for many years the Director of the Monsanto Medical Department and the person whose responsibility it was to investigate and supervise Nitro workers' complaints, in his deposition, acknowledged the causal relationship between 2,4,5-T exposure and claims of peripheral neuropathy, nerve demyelination, chloracne, and even "the possibility of liver involvement".

As was reported in the confidential Monsanto final report on 2,4,5-T terminating January of 1969:

"The incidence of chloracne has been almost universal among personnel engaged in the manufacture of 2,4,5-trichlorophenol (TCP) and 2,4,5-trichlorophenoxy-acetic acid (2,4,5-T). The most severe cases have occurred in individuals involved in the clean up of uncontrolled autoclave batches (hydrolysis of

tetrachlorobenzene). However, cases of varying severity have occurred consistently among operators primarily employed around the 2,4,5-T work up equipment - filtration, acidification, drying, etc.

In 1969, Dr. Oettel at Badische expressed the opinion that tetrachlorodibenxodioxane (TDD) was the chloracnegenic material. In 1969, Dow presented an analytical method for the determination of TDD to representatives of Monsanto and Hercules Power and presumably to other interested parties. With the availability of the analytical method, Monsanto began to monitor various process streams in the Nitro plant. This program has continued to the present date."(1)

So serious was the problem that even in 1968, 50 years following the incident, after the medical director was informed that there had been no new chloracne cases since October of the previous year, he responded to that information by asking "I don't want to be cynical, but are there any employees in the department who don't have chloracne already?" (2)

Through the 1950's, Monsanto continued to be alerted to the problem of worker 2,4,5-T exposure. A 1955 confidential memorandum acknowledged widespread employee toxic reaction. It stated, "You also know that the 2,4,5-T problem has not been solved and chloracne remained as the outstanding problem of the Nitro plant in dealing with hourly personnel" (3)

In 1964, Monsanto sent to Dow for analysis; Monsanto's 2,4,5-T. The dioxin content of the sample showed three to ten ppm's. (As high as this amount was, it was nowhere near the huge amount of toxic contamination of the Monsanto product that further analysis was about to reveal.) On the 24th day of February, 1965, the Medical Director, Kelly, spoke to his Dow counterpart, V.K. Rowe. Rowe acknowledged that Dow had 20 cases of chloracne and admitted that he was sure that dioxin was the cause. (4) The Memorandum clearly reveals that Dow's motivation for its secret March meeting was hardly salutary; since Dow suggested a "crash meeting with all the producers"

in an attempt to eliminate the contamination before the "PHS got into the act." (4) Of course the Public Health Service couldn't get into the act unless they found out about the toxic contaminant, a discovery that the conspiring chemical companies mightily tried to avoid. It was only one month later that V.K. Rowe wrote the infamous March 19 secret communication to certain 2,4,5-T manufacturers in which he alluded to the dioxin content of 2,4,5-T as "certain highly toxic impurities". (5)

How toxic was Monsanto's 2,4,5-T? Enormously so. In a September 14, 1965, interdepartmental memo which was then filed in the "Confidential Folder," Monsanto admitted that "during April, 1965, production of TDD rose to an all-time high and remained much higher than its previous norm-current ~ 50 ppm normal ~ 10 ppm". (6) That amount was 50 times greater than the one ppm dioxin which Dow claimed was safe (although plaintiff's evidence establishes that even 1 ppm is toxic).

Did Monsanto remove this acknowledged enormously toxic contaminant from 2,4,5-T? No. In a confidential communication dated almost four years later, Monsanto acknowledged that their 1968 experience showed a content of 40 ppm and that even in 1969, their contamination ranged from 5 to 7 ppm. (7)

Monsanto knew for 20 years before 1969 that the 2,4,5-T that they produced contained toxic impurities that were clearly and dramatically hazardous to humans. Their knowledge emanated from their own personal experiences, from the reports of industrial problems from other chemical companies producing the same product and from confidential exchanges from the manufacturers.

At the very time that they first began to produce Agent Orange, Monsanto discovered and was able to isolate dioxin as the toxic ingredient. There is no question that Dioxin was viewed by all as highly toxic. They knew that the 2,4,5-T sold by them to the government was being used in Viet Nam. Did Monsanto ever inform any

governmental officer with regard to the risks of dioxin contamination associated with Agent Orange or the methods of dioxin control? No.

In their Verified Answer to the Plaintiffs' Interrogatories, Monsanto has admitted that they were not responsible for, familiar with, or participating in any warnings to the United States Government. (8) (Supplemental Answer to Interrogatory 2B(vi)).

Respectfully submitted,

YANNACONE AND ASSOCIATES

BY: _____