

Monsanto

FROM, NAME LOCATION PHONE G. E. Paget Dept. of Medicine & Environmental Health A2SD-4-4666

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DATE: June 11, 1979 cc George Roush, Jr., M.D. -A2SA

SUBJECT: Chlorinated Dibenzo Dioxins

REFERENCE

TO
C. F. Callis-B2SA
W. D. Carpenter-C2NA
G. L. Jesse-A2SD
J. P. Mieure-T3B
W. B. Papageorge-G4WA
P. S. Park-E2NE
J. D. Wilson-N3A

Attached are minutes of our discussion on Friday, June 8, on subject. I recognize that in one or two places I have assumed explicit agreement by individuals to do things we all thought sensible and which, therefore, I assumed these most sensibly available would accept as an agreed task. Please feel free to comment as freely as you wish. If we can have all comments by 9:00AM Tuesday, it may be possible to distribute an agreed document at or before MCT's meeting on Wednesday.

G. E. Paget
G. E. Paget
Signed in his absence

MO
Att.

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SUBJECT TO FACTS AND ORDER

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CHLORINATED DIBENZO DIOXINS

(referred to loosely as "dioxins")

An Agreed Position Statement

This sets out the agreements reached in a discussion of this subject on June 8, 1979.

Analytical Position

J. Mieure stated that in his view the reported detections and identifications of specific tetrachloro dibenzo dioxin isomers at levels of ppt were incorrect and that in general those making such reports claiming beyond what had been achieved motivated by other than wholly scientific disinterest. It was suggested that in that case these reports should be challenged, both by internal circulation within Monsanto and by open, suggested criticism in the scientific literature. Mieure undertook to circulate within Monsanto a statement agreed by these experts in the field within the Monsanto analytical community setting out a best estimate of the state of the art in this area. Mieure conceded that the proposals raised by D. Dahm would materially advance Monsanto's abilities in this area, and would indeed take us into the forefront of the field. All present agreed that it was sound policy that Monsanto should be equipped with this level of skill in this area, and recommended that Dahm should be authorized to proceed on the lines set out in his memorandum on this subject.

State of Toxicological Knowledge

G. E. Paget briefly reviewed the outlines of the state of toxicological knowledge stressing the wide range of toxicity between various isomers and the considerable species variation in sensitivity. He stated that Dr. R. Neal, a member of the Biohazards Committee, was an acknowledged and active expert in the area of the toxicological biochemistry of chlorinated dioxins. He agreed to try and arrange for Dr. Neal to give a seminar to a small group of interested parties on this subject in the near future.

Products with Potentiality for the Presence of Dioxins

Considerable anxiety was expressed about the possibility that a "witch hunt" would be instituted about the presence of dioxins in products, leading to the banning of products that are in fact entirely safe. P. Park and W. Carpenter were particularly concerned about this question, although all recognized the reality of the possibility. It was agreed that during the time analytical skill was being developed, considerable thought should be devoted to the generation of a policy setting out the circumstances and constraints under which ultra trace dioxin analysis would be applied to a particular product, particularly considering the reality of any hazard that might be disclosed and the consequences of any findings of uncertain significance, but that might make the product vulnerable to unfounded attack. All recognized the validity of this concern and Carpenter and Park agreed to develop a discussion document on this subject over the next few months.

Since, even with a dedicated facility fully trained and equipped, the number of ppt analyses that can be carried out will be strictly limited, and since Dahm will require guidance as to what types of sample he will be required to analyze, it is obvious that a priority list should be drawn up. This should consider all processes that have the potential for generating chlorinated dioxins in the resulting products. A list of these products by Carpenter, Callis, and Papageorge will be drawn up setting out present knowledge of dioxin content circumstances and extent of use, and any other fact relevant to the question of dioxin hazard. This list will be submitted to DMEH.

DMEH will apply a "worst case" analysis to these products, and it is expected that on this basis many products will be shown to have no possibility of generating a significant hazard from dioxins. Where such analysis does not give complete assurance to product will be listed as substitute for further study. Particular attention will be paid to food grade products if study should disclose any as being in the potentially trace dioxin containing category. (This is thought highly unlikely).

Processes and Worker Safety

The study referred to above will disclose processes from which dioxins might contaminate the workplace. Mieure stated that acceptable methods of air sampling for dioxins were available. DMEH will consider for what processes maximum dioxin levels in the workplace should be established. DMEH would also consider what, if any, additional health monitoring of workers in these workplaces should be implemented,

Effluents and Wastes

Similar considerations will also govern effluents and wastes to those set out above. Potentially dioxin contaminated effluents and wastes will each need separate consideration, and on occasion it will be appropriate to set an upper limit to total dioxin content (since it will never be practicable to monitor specifically for the most toxic isomers).

Inspections, Spills and Other Mishaps

Perhaps the most important function of our new analytical capability when in place will be to enable us to speak with authority on the subject of dioxins to outside authorities and experts. Until that skill is available within Monsanto it is essential that Monsanto personnel be instructed always to take parallel samples to those taken by others, and to arrange through EPA (usually Industrial Hygiene, but otherwise appropriate DEO or Product Acceptability Manager) to have the sample analyzed at a center approved as being "state of the art" by Dahm.

Krummrich Plant

We do not have sufficient information yet available to make sensible discussions about the operation of the chlorphenol plant or the demolition of the old penta building. This information may be available when the samples taken by Brian Ward on June 6, 1979 are analyzed and the situation will be reviewed in the light of that knowledge.