

Px 1247

Monsanto

FROM: J. C. McPhillips - B3SC

DATE: April 18, 1979

SUBJECT: CHLOROPHENOL/DIOXIN MEETING

REFERENCE:

TO: File

D. B. Edwards
E. L. Head
T. L. Gossage
R. C. Manring
V. T. Matteucci
J. S. Metcalf
M. E. Miller
R. G. Pier
D. P. Roman
J. D. Wilson

Attendees

M. E. Miller
J. D. Wilson
D. P. Roman
D. B. Edwards
J. S. Metcalf
J. C. McPhillips

Purpose of Meeting

- Review "tentative" findings on dioxins in chlorophenols (J. D. Wilson 4/10/79 memo)
- Outline and assess the key marketing concerns related to findings.
- Establish timetable for finding conclusive results on:
 - o The 32+ samples sent to Dayton for analysis
 - o Operation of the S-I complex without caustic in still pot and effect on quality.

Summary of Meeting

- Key Findings on Chlorophenol Analyses
 - o SANTOPHEN I - The first results show that there is no 2,3,7,8 TCDD in SANTOPHEN I. However, there are about 25 ppm of mono, di, and trichlorodebenzodioxins in the samples analyzed. These results are in conflict with analyses we made over a year ago where dioxins were "non-detectable" by the same test.

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- o 2,4 DCP 93% - On one sample analyzed to date, we found 200 ppb of material that could be the 2,3,7,8 TCDD isomer. This is of great concern since: a) the limit established for 2,3,7,8 TCDD in 2,4,5-T was 100 ppb and the product was banned and b) the way we make 93% creates the high probability of TCDD formation since we do not distill after chlorination. Additional samples are going to be analyzed to confirm our first analysis.
- o Still Bottoms - The chlorophenol still bottoms contain ppm levels of many chlorinated dioxins.
- Steps to Eliminate Dioxins
 - o It is the opinion of R&D and Manufacturing that the only potential way to eliminate dioxins in the chlorophenols we have available today is by not adding caustic to the still pot before distillation. This process change is to start this week and be run for at least two weeks. Samples of the finished products will be sent to Dayton almost immediately and our first test results should be made available to us by mid-May.

Outline and Assessment of Two Key Marketing Concerns

- SANTOPHEN I

- o Lehn & Fink - The major concern at L&F on LDC (I, II, III) is the environmental issue on phenolics. Everybody in the meeting agreed that if there are any detectable dioxins in SANTOPHEN I - once we notify L&F, they would discontinue the use of SANTOPHEN almost immediately in LDC. The key question discussed in the meeting was whether we should notify L&F now or wait until mid-May. It was the position of the attendees to await the test results due mid-May on samples of S-I produced without the use of caustic in the still pot. This decision was based on: a) the levels of dioxins found in the samples recently analyzed does not present an "imminent hazard," and b) there is some questions whether the recent analysis is "typical" since our results of over a year ago showed "no detectable" levels of dioxins.
- o Hospital Disinfectant Market - A decision was made not to notify our I&I customers until we have more conclusive results in May. Marketing concern is that since there are substitutes available in the marketplace, if we find any "dioxins" in SANTOPHEN, it would also "eventually" lead to discontinuance in the market.

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- o 2,4 DCP 93% - The major concern is the level of impurity that could be the 2,3,7,8 isomer found in one sample analyzed. If this is "typical" and cannot be eliminated, we would have to notify our customers and might lose 2,4 DCP as a product. In this case, SANTOPHEN would have to absorb an additional \$800M incremental gross profit. We would also have to assess whether this would be an 8e case.

The data we have to date is hardly conclusive, therefore, the position is currently not to notify "all" customers, but to notify Fallek-Lankro who has asked if our 2,4 DCP contains dioxins. The letter will state: a) the results of the one sample analyzed; b) our surprise that the 2,3,7,8 TCDD was found; c) Monsanto will check additional samples and at the same time, change the process which may prevent the formation of dioxins; and d) if the 2,3,7,8 is found in additional samples and cannot be eliminated, Monsanto will need to consider whether or not sales of 2,4 DCP should be continued.

Action To Be Taken

- Manufacturing to start immediately (if not done already) producing 2,4 DCP, PCP without caustic added. After system is flushed, samples should be collected on all products and forwarded to R&D. R&D to have "initial" samples analyzed ASAP and advise the results by mid-May.
- D.B. Edwards is to discuss with DMEH the possibility of having WGK workers blood tested for dioxins as a result of recent Sturgeon findings. Also, to discuss with Environmental Group what should be done in notifying Rollins that dioxins are in the still bottoms.
- J.C. McPhillips to draft letter notifying RCI and Vulcan that there are dioxins currently in the OCP/C being shipped. Must be reviewed by Legal.
- J.S. Metcalf is to write a letter to Fallek-Lankro. Review by Legal.
- D.P. Roman will try to find the chlorophenol samples tested over a year where no dioxins were detected and have re-analyzed.
- R. Kaley of our analytical group will discuss with EPA Region VII their methodology on how they can detect parts per trillions of dioxins. Protective Order.
- D.B. Edwards will advise what the status is at WGK regarding FDA's investigation of dioxins in a five mile radius of