

FROM  
(NAME-LOCATION-PHONE)

Lyle L. Gingerich - 1920  
Dept. of Medicine & Environmental Health

DATE : February 22, 1985  
SUBJECT : EPA Toxicology Branch/Roundup  
REFERENCE :  
TO : T. F. Armstrong - C2SC  
E. E. Debus - C2SC  
F. S. Serdy - C2SC

cc. C. T. Dickerson, Jr./File  
F. R. Johannsen - G2WD

*Copies for  
GTL/TWF/TJL*

Re: Meeting February 21, 1985

Present: Bill Burnam, Assistant Chief,  
OPP Toxicology Branch  
Ted Farber, Branch Chief  
Lyle Gingerich  
Fred Johannsen  
Frank Serdy

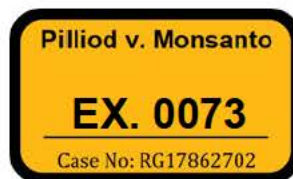
The meeting mood was relaxed, informal and open. The toxicology branch had decided on a course of action on February 11. However, it was a split decision and a very close call either way. Farber and Burnam both openly discussed their concerns, listened closely to our comments, and seemed to be making an honest effort to reach the best solution.

Our objectives were to:

- (1) see if we could respond to their concerns before any unnecessary comments became a part of the Roundup permanent file.
  - (2) determine exactly what their concerns are.
  - (3) gauge the level of their concern.
1. Written review in permanent file.

The final review is expected to be sent to Bob Taylor in a week or two. There will also be a written response to our recent letter.

If the communication between the toxicology branch and the registration division were going to be an informal memo, I would suggest that we try to work around it. Since the communication is a common administrative procedure, we need to be careful to avoid the perception of acting inappropriately. However, a delay in issuance of such a review is probably not without precedent.



2. Concerns of Toxicology Branch

Dr. Farber opened the meeting by reciting the conclusions of the toxicology branch internal peer review:

- Oncogenic in mouse, IARC ranking "c".
- "Possible Human Carcinogen" - one of the weaker ones by that system.
- Company's letter was too weak to be convincing.
- Biologically significant rare tumors.
- Statistically significant at .05 level (cited Tyrone at NTP). *Tyrone*  
*JNCT 62:957-974, 1979*
- Historical controls not helpful.
- Will ask to re-section tissues, consider crystal formation, etc.

Responding to question from FJ, Dr. Farber said that it was an extremely close call and that the EPA remains open to any new information that would make their decision easier.

A 90-day study to look at crystal formation was discussed. Drs. Farber and Burnam said that they still consider Treflan to be an oncogen. Pointing out a secondary cause of the glyphosate tumors would move the chemical lower on the scale of group "c", but would not remove it from that category.

Dr. Farber indicated that a substantial re-look at tissues may cause the EPA pathologist to change his position. If no carcinomas are found the second time, our arguments about "only benign" tumors would be stronger. I read this to mean that the EPA pathologist (Kasza) is open to persuasion.

FJ asked about Tyrone's report from NTP. The question of using .05% statistical confidence with zero in the controls can be pursued.

Dr. Farber indicated that the Q\* generated by Bert Litt was very favorable. He felt that the "risk managers might still allow the use of the chemical". The Q\* for aquatic uses was unclear at the meeting. FJ agreed that there probably would be a low magnitude of risk calculated if the effects were called treatment related, but that the label of carcinogen is simply too hard in this case.

FJ asked the direct question whether the EPA had looked at the differences between sexes, since the females had 20% more consumption than males. Dr. Farber made a general case that many chemicals show differences between sexes. However, Dr. Burnam took extensive notes on this discussion. Perhaps the EPA did not consider the difference in consumption between sexes. Dr. Farber mentioned ? Fishers exact ? and the ? <sup>chi</sup> pi square ? being positive.

*was not positive*

FJ summarized Monsanto's position forcefully and well.

I asked Dr. Farber if he had heard anything today that would cause him to desire an additional meeting with Monsanto scientists. He said no.

I asked FJ if he had detected any areas where we would obviously want to come in quickly and discuss. He said no.

FJ asked Dr. Farber what the EPA would be likely to do if we re-sectioned and found no carcinomas. Dr. Farber said that it would force them to get the internal peer review group together again.

Dr. Farber said that the committee had a hard call. When the case is presented to Mr. Schatzow, Dr. Farber hopes to point out how weak the call is, how difficult the decision was, and where the weak and strong arguments lie.

Mr. Schatzow has not been formally briefed on Roundup. There have been some hallway conversations and informal briefings.

FJ asked, "Short of a new study or finding tumors in the control groups, what can we do to get this thing off of group "c"?"

Dr. Farber mentioned the 90-day study looking for crystals, but Dr. Burnam said that would not get it off of group "c".

Dr. Farber noted that the mutagenicity studies all looked valid and the results favorable. He continued to suggest an outside consultant or have a statistician work harder on the appropriate "p" value.

It was noted that Reto Engler is coordinating the peer review of this product.

3. Level of EPA concern

The toxicology branch does not have a great deal of concern over the potential hazard or risk from glyphosate. Steve Schatzow will be formally briefed in two weeks or so. If this product were to go through the routine registration standard process before this question was addressed, there may be no action for months.

However, we know that pressure has been applied by a congressman for an IR-IV registration for tomatoes. This could force an FR notice with all the calculations and concerns listed.

The marijuana eradication program may also be driving this to a premature public discussion.

The Office of Drinking Water may be involved in some way.

I have been told on a separate occasion that this is a "serious matter".

Lyle L. Gingerich

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