Message

From: [redacted]
Sent: 3/10/2015 7:06:44 PM
To: FARMER, DONNA R [AG/1000] [redacted]
CC: HEYDENS, WILLIAM F [AG/1000] [redacted]
Subject: RE: Glyphosate Overview.

Donna and Bill

You will have received my earlier blackberry email with the final evaluation. The initial recommendation of the experimental cancer sub-group was inadequate/limited. This morning they brought forward a revised document recommending 'limited'. On questioning from the mechanisms sub-group as to why they were circumspect on certain studies, they came back with a final recommendation of 'sufficient'. This was voted in with no votes against.

[redacted]

From: [redacted]
Sent: Monday, March 09, 2015 6:25 PM
To: FARMER, DONNA R [AG/1000]
Cc: HEYDENS, WILLIAM F [AG/1000]
Subject: RE: Glyphosate Overview.

They have said that there are enough positive findings in the US, Canadian and Swedish case-control studies to warrant a limited evaluation. I would have given much more weight to the negative AHS study. Other votes haven't been taken but the experimental animals group have recommended limited. This would give 2B. But the mechanistic group are saying that they can support a higher evaluation which would give 2A. We shall see tomorrow.

[redacted]

From: FARMER, DONNA R [AG/1000] [redacted]
Sent: Monday, March 09, 2015 6:14 PM
To: [redacted]
Cc: HEYDENS, WILLIAM F [AG/1000]
Subject: RE: Glyphosate Overview.

[redacted]

What is the basis for a 2A? The Swedish studies?

Donna

-----Original Message-----
From: [redacted]
Sent: Monday, March 09, 2015 1:05 PM
To: FARMER, DONNA R [AG/1000]
Cc: HEYDENS, WILLIAM F [AG/1000]
Subject: RE: Glyphosate Overview.

Donna and Bill

We are at the end of day. TCVP has been classifies as 2B, parathion as 2B and malathion as 2A (limited for human data for both NHL and prostate cancer).

Human data for glyphosate classified today as limited for NHL (on unanimous vote) and final classification tomorrow is likely to be 2A.The Working Group seemed to believe in those early Swedish case-control studies even though the NHL hypothesis gets no support from the AHS.

[redacted]

From: [redacted]
Sent: Friday, March 06, 2015 7:05 PM
To: FARMER, DONNA R [AG/1000]
[redacted]

Subject: RE: Glyphosate Overview.

Donna and Bill

We are at the end of day 4. A lot of bad news which will not be consistent with what you know about glyphosate and a small amount of good news. I will start with the bad news. The sub groups have now made their preliminary proposals to the whole group, and prepared revised documents of their summaries of the data. These recommendations are to be discussed by the whole group (glyphosate on Monday) and things can move up or down.

Current proposals

Glyphosate
humans: limited for NHL (based on case-control studies not AHS)
animals: limited or inadequate
mechanisms: strong data that agent is genotoxic, can induce oxidative stress and can induce chronic inflammation

Diazinon
humans: limited for NHL, leukaemia, lung
animals: limited
mechanisms: strong data that agent is genotoxic, can induce oxidative stress, and can induce chronic inflammation

Malathion (on track for 2A)

humans: limited for NHL, prostate
animals: sufficient
mechanisms: strong data that agent is genotoxic, can induce oxidative stress, can induce inflammation, can modulate receptor-mediated effects, and can alter cell proliferation/death or nutrient supply.

TCVP

humans: inadequate
animals: sufficient
mechanisms: (unclear to me)

Parathion

humans: inadequate
animals: sufficient
mechanisms: moderate data that agent can alter cell proliferation/death or nutrient supply

The good news is that glyphosate almost got 'limited in humans' for multiple myeloma as well, on the basis of the case-control studies, but when the Chair put up a summary summary table of the epi findings he only had RRs of 1.1 and 2.6 from the De Roos 2005 study. I intervened to say that there was another report from the AHS. He looked at me rather blankly and I said Sorahan 2015. He reluctantly agreed to add RRs of 1.1 and 1.2 from my report. This led to some questions from the other experts, as to how this all came about (they clearly had not read my paper). Aaron then said 'it is inadequate' and everyone silently agreed. The Chair announced to the whole group later in the afternoon,there is no evidence in the AHS for multiple myeloma. It was clear to me that me being was helpful to the panel.

[redacted]

From: [redacted]
Sent: Thursday, March 05, 2015 6:01 PM
To: FARMER, DONNA R [AG/1000]
Cc: william.f.heydens@monsanto.com
Subject: RE: Glyphosate Overview.

Donna and Bill

We are at the end of day 3. The epi panel went through the first draft of the epi document this morning. [redacted] led the discussion and it was clear from his comments and comments from Aaron Blair that they accept the main conclusions of my multiple myeloma paper. They have written it up as if De Roos had already agreed to this in his reply to your 2005 letter and that I merely confirmed what he had already said. This isn't quite the case, as we know, but the important thing is that Aaron is not arguing that the AHS paper is positive for multiple myeloma. I proposed that the Landgren et al 2009 paper on

MGUS also be included. Aaron was keen for this which again argues against a positive multiple myeloma classification.

At the end of this session they concluded that there was no suggestion of an NHL problem in the AHS, but that they had four positive case-control studies. The errors in the meta analysis that Elizabeth identified have been corrected for Hardell (2002) and Eriksson (2008). Aaron said he thought the evidence was inadequate, no-one responded and the conversation moved on. Andrea t'Mannetje thought there was limited evidence for multiple myeloma in the case-control studies, again the conversation moved on without conclusion They will be coming back to their proposed evaluations tomorrow.

The afternoon moved on to summaries for TCVP, parathion and diazinon. The proposed evaluations are inadequate for TCVP, inadequate for parathion and limited for diazinon (NHL and lung cancer).

Important day tomorrow.

[redacted]

From: [redacted]
Sent: Wednesday, March 04, 2015 5:36 PM
To: FARMER, DONNA R [AG/1000]
Cc: william.f.heydens@monsanto.com
Subject: RE: Glyphosate Overview.

Donna and Bill

We are at the end of day 2. Some good news and some bad news. The good news. [redacted] from the IARC meta-analysis came in to the epi subgroup to discuss what parts of their review could go into the monographs. This gave me a suitable opportunity to mention the problems that Elizabeth Delzell had identified about selection of RRs for glyphosate. She took it away and came back to me to say that errors had been made for Hardell (2002) and Eriksson (2008), and she is going to re-run her programs tomorrow. The revised findings will go in the monograph as "The Working Group carried out its own calculations..."

The bad news is they started to discuss their evaluation of malathion. There were three case-control studies for NHL giving a significant excess risk when you added them up. The AHS on the other hand had no excess risk (RR=0.9) and the dose-response was as 'flat as a pancake', to quote one of the experts. It was also bigger than the three case-control studies put together. But it seems they are going to recommend 'limited for NHL and malathion'. There was a 'signal' apparently. On this basis anything can be classified as limited. My prediction (it may be pointless to predict) is that as many of the five chemicals as possible are going to be classified as limited human evidence for NHL.

I was wrong about the glyphosate epi section. It was drafted by [redacted] from Italy. Glyphosate for discussion tomorrow.

[redacted]

From: [redacted]
Sent: Tuesday, March 03, 2015 5:54 PM
To: FARMER, DONNA R [AG/1000]
Cc: william.f.heydens@monsanto.com
Subject: RE: Glyphosate Overview.

Donna and Bill

Thanks for the document. We are at the end of day 1. Aaron Blair is the chair of the whole thing. The epi subgroup comprises Aaron, John McLaughin (Canada), [redacted] (France), [redacted] (Italy and chair of epi sub-group), and Andrea t'Mannetje (New Zealand). The epi sub-group has now been through the drafts on TCVP (written by Aaron), parathion (written by John M) and malathion (written by [redacted]). There was much discussion on what sort of things should be in tables and what should be in the text. The discussion on the individual studies lacked insight I thought and the experts seemed to have little to add to what had been drafted. In fact most of the experts didn't seem to have studied the papers for the chemicals they didn't have to write about. The sub-group did not take a straw poll of how they would vote, but TCVP is on the way to being inadequate, and parathion will be inadequate or limited.

Drafts of glyphosate have been circulated. All the draft says about [redacted] paper is that "The re-analysis conducted by Sorahan (2015) confirmed that the excess risk was present only in the subset with missing information". Poor science, to put it mildly. I suspect the glyphosate epi section was written by Andrea M but this hasn't been announced yet.

Glyphosate (all sections) is due for discussion on Thursday morning, but the epi section may well be reviewed tomorrow afternoon. Bizarely, the Schinasi and Leon review has not been written about in any of the five chemicals under review, but that will change.

Tom Sorahan

From: FARMER, DONNA R [AG/1000] [donna.r.farmer@monsanto.com]
Sent: Tuesday, March 03, 2015 3:05 PM
To: [redacted]@de.adama.com'
Subject: Glyphosate Overview.

Please find attached a brief summary of glyphosate.

I have included information on ADME (absorption, distribution, metabolism and excretion), the toxicological profile, human exposure and epidemiology.

Again please don't hesitate to contact me if you need any additional information.

I hope your travels went well.

How is the first day of the meeting going? Have you seen any of the drafts yet on glyphosate?

Regards,

Donna