

CBW: Rose

THE OPEN UNIVERSITY

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Our ref: SPRR/EMG.

Your ref:

From Professor Steven Rose
Department of Biology.

Matthew Meselson Esq.,
Harvard University,
The Biological Laboratories,
16 Divinity Avenue,
Cambridge,
Massachusetts 02138,
U.S.A.

Monday,
16th February, 1970.

Dear Mat,

Firstly, in reply to your questions about the contaminant in the 2,4,5T we were very pleased to see the piece in the New Yorker which confirms much of our current concern. So far as the questions which you ask concerning accidents here are concerned the laboratory in question has quoted me the following reply, which I enclose verbatim.

" The explosion we had, had nothing to do with the actual problem. It was an overheating of the reaction mixture and the vapours from the reaction vessel ignited. However this explosion drew out attention to the presence of the dioxine and we only found that this substance is extremely toxic after the explosion.

The dioxine is only formed from the 2,4,5, Trichlorophenol if it is in a strongly alkaline solution. Heating the free phenol does not form the dioxine and even heating of the sodiumsalt of the Trichlorophenol does not form the dioxine. Only if the sodiumsalt is dissolved as it is the case in the reactionmixture is the dioxine formed when heated. I do not think that the dioxine is formed from the Trichlorophenol photochemically, but I have no experimental proof. I believe alkaline conditions are essential.

It is comparatively easy to produce a 2,4,5 Trichlorophenol free of dioxine. We have a GLC method with which we can determine the presence of the doxine down to less than one part per million. We have now tested Trichlorop henol which we produced before the explosion and after the explosion and the samples are free of dioxine.. However the dioxine is present in the residue.....

The effects in South Vietnam are either due to the 2,4,5-T itself or that the 2,4,5-T has been used in much larger concentrations than is usually the case or it is due to the dioxine. I personally believe that if a 2,4,5-T free of dioxine is used in the right concentration then it is harmless"

continued..... (P.T.O)

I think that this will answer the specific technical points which you raised but we are still waiting for the results of our animal experiments to provide further data on the toxicity of the orange which Bert Pfeiffer sent.

I now turn to your letter about our proposals concerning a statement to be signed by British, American, Russian, etc. scientists.

I have noted the points that you make in your letter to John Humphrey and will be happy to see them incorporated in the final draft of the letter. Meanwhile I should be very happy for you to discuss the proposal with whomever seems appropriate to you, although I must emphasise that I have not heard subsequently from the Russians as to their views on the draft that we prepared. This is primarily due to a time lag in the delivery of mail in the Soviet Union, I believe, as exchanges of letters seem to take around at least a month in my experience.

With best wishes,

Yours sincerely,

Queen Rose

nb. I liked your letter in the Times.

5