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MONSANTO POLYMER PRODUCTS CO.
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167
Phone: (314) 884-1000

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Dr. Myron Weinberg
Weinberg Consulting Group, Inc.
2828 Pennsylvania Avenue N.W.
Suite 301
Washington, D.C. 20007

Dear Myron:

I must apologize for being slow in answering your letters these past two weeks. With the setting of the Nitro trial date and the increased activity due to our discussions in Washington, I have found myself looking forward to the weekends as a chance to get caught up. In any event, I will try and answer your questions not necessarily in the order you presented them:

- 1) Taking note of your September 2 letter to Dr. Roush: I think that there is general agreement in the literature that the differences between internal administration of TCDD and dermal administration are in terms of the strength and timing of the effect and not in terms of the effect itself. I discussed this with Bob Greenlee at CIIT last week when Jim Wilson and I visited him and he agreed. I might add that Dr. Greenlee and his group are actively pursuing a number of leads in the area of biochemical response, so I consider him a real find in terms of consulting expertise. We must talk more about our visit to CIIT when you have time, but add that Greenlee believes that once the cytosol receptor complex is formed with TCDD's that a branching occurs with one mechanism leading to enzyme induction and one to other responses including mutagenic behavior.

In the same letter you suggest that antibody formation might be used to determine dioxin exposure. I find two problems with this. First, in order for a low molecular weight material like TCDD to generate an immune response, it must react with a higher molecular weight material, classically protein albumin. This hapten albumin reactant then acts as the antigenic material. TCDD is so unreactive that it is hard to see it acting as a hapten. Dennis Flaherty immunologist at our Environmental Health Lab has indicated that