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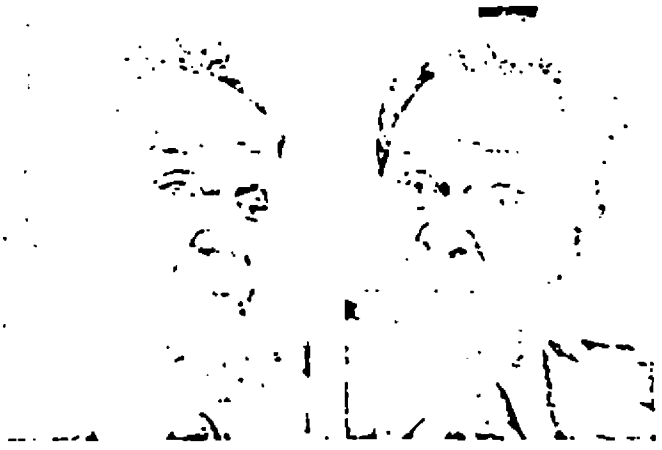
Suskind Talks About Monsanto Study

Editor's Note: The herbicide 2,4,5-T was widely used for 30 years to control vegetation on farms and forest lands. It was in Agent Orange, which was heavily sprayed in Vietnam to deprive Communist troops of cover. It was a popular weed-killer. For 20 years — until 1969 — it was manufactured at the Monsanto plant in Nitro.

In recent years the product has been linked with a number of health problems. Investigations have revealed that the manufacture of the herbicide creates a poisonous byproduct, dioxin. This February, the Environmental Protection Agency banned most uses of 2,4,5-T pending further study.

Dr. Raymond R. Suskind of the University of Cincinnati College of Medicine is currently conducting a study of Monsanto workers who were exposed to 2,4,5-T, particularly those workers who received heavy exposure to dioxin during a 1949 accident at the plant. He was interviewed about his study by reporters Richard Grimes, Steve Mullins and Robin Toner.



MONSANTO STUDY — Dr. Raymond R. Suskind of the University of Cincinnati College of Medicine responds to questions concerning a study of Monsanto workers who have been exposed to herbicide 2,4,5-T and heavy doses of the poisonous byproduct, dioxin.

TONER: I guess the first question, Dr. Suskind, is what brings you to town?

DR. SUSKIND: Well, I think you already know what brings me to town, and that is to conduct a study of workers who were involved in an exposure to the 2,4,5-T process and its contaminants between the years 1948 and 1968 in a Monsanto Chemical Plant in Nitro, W.Va.

TONER: You're under contract with Monsanto, right?

DR. SUSKIND: We don't have a contract with Monsanto at the moment. We made an agreement and it was a gentleman's agreement. . . I have been interested and have been studying the original group that was affected back in 1949 and followed them until 1955 . . . I had a continuing interest in problems of chlorinated hydrocarbon acne, as well as the effects of chlorinated hydrocarbons on other organ systems. [We felt] it would be a good idea to go back and study that group that we are now studying.

TONER: The reason I ask this question is that as you know the steel workers [union] have invited Mount Sinai to come in and do a similar study. There have been some who have said that they would look with some suspicion on a study that is being paid for by Monsanto.

DR. SUSKIND: Well, I can't really comment on that because the study — whether it's done by myself or others who are expert in the field — it has to be paid by somebody. Now my department is largely funded — the department itself — is largely funded through federal research grants.

TONER: You mean at the University of Cincinnati?

DR. SUSKIND: At the University of Cincinnati. Eighty percent of our budget is from federal sources. This is largely from [the] National Institutes of Health, including the National Institute of Environmental Sciences, the National Cancer Institute, and others of the experience we know that there was skin effects. These were more or less acute insofar as the skin was concerned. They had acne and they had abscesses and they had lots of problems which were both cosmetic and somewhat disabling in the skin. We wanted to know what happened to the skin in the meantime.

GRIMES: You mean up to now?

DR. SUSKIND: Up to now. Did they still have changes in the skin? Did they have scars? Did they still have new cysts? Did they still have problems that had to be treated surgically? We found back in 1949 that some of these people had transient liver effects. They were identified in terms of changes in the way the liver functions. So the liver functions were abnormal. Back in 1952 when we came back again and repeated these liver tests they looked normal. OK? We want to know whether or not there were any long term liver effects on these people. Did they have any higher incidents of hepatitis or higher incidents of cirrhosis, and very frankly, from animal experiments which demonstrate that in rats, dioxin is capable of producing liver cancer, was there any risk for liver cancer?

GRIMES: . . .Robin first asked you whether or not you had a contract with Monsanto. You indicated, I forget your exact words, but you indicated not yet. . .

DR. SUSKIND: We have an agreement with them to do this study.

GRIMES: Is there going to be a point where you're going to have a contract with them?

DR. SUSKIND: Well, I think that we really haven't discussed this. All we wanted to make sure of was that Monsanto knew that the design of the experiment and the implementation of the experiment was the responsibility of the University of Cincinnati, under my direction, and that they were absolutely not to influence in any way the design or the implementation of it. And you know we have contracts with industry like that all the time and that's how they read. And they also read that in no way ever will I represent myself as a representative of the company. Or in no way will the company ever represent themselves as speaking for me. Or representing me.

The other thing which is part of an agreement which we usually have with our supporters is that the data of this study belongs to the investigating group, so it's the University of Cincinnati and we will make available this

"Hey, you need tighter controls" or "Hey you ought to look into this a little more?"

DR. SUSKIND: As a matter of fact a parallel study was done by the Department of Environmental Health at the University of Cincinnati. . . we sent our engineers in, we sent our analytical chemists in and they sampled the material from the runaway reaction, which is often called the accident or the incident. They sampled material from the pot in which trichlorophenol was being made. They sampled 2,4,5-T before it became ground up and afterwards put into bags. They sampled all of that and they wanted to find out what the workers were being exposed to in any part of that process. And they did.

TONER: What year was this?

DR. SUSKIND: Oh, this was — they were brought in in about 1951. We had to be asked to come in. We recognized that in that era there were problems probably unrelated to the health aspects which we could not interfere with. Nevertheless it was a situation in which we were eventually called in and when we were called in to look we made recommendations as to how the plant should be — how the hygienic problems should be handled and there are two reports to that effect. I believe that as a result of that, as a result of our study, a new building was built to make trichlorophenol as well as 2,4,5-T. That was probably done in 1953.

TONER: Did they follow all of your recommendations?

DR. SUSKIND: I really don't know. I have no idea.

MULLINS: Was one of your recommendations to cease production?

DR. SUSKIND: No. You have to understand that in 1949 we did not know about dioxin. We knew it was something [related to trichlorophenol] . . . But we didn't know that it was dioxin. And it wasn't until 1957 — eight years later — that dioxin was identified as the agent causing acne and causing liver problems and causing the results.

TONER: At that point did you go to Monsanto and say, "Hey, perhaps you'd better stop production on this material?"

DR. SUSKIND: No, at that time we were doing work of our own and we were not further consulted by Monsanto. There was a continuous correspondence about it and the problem was not discontinuing the production, because

DR. SUSKIND: Well, I think that the only thing that I know about this — and I'm only commenting about 2,4,5-T and dioxin and that's about all I can really comment about — I know that there was a process which was in place from 1948 to 1968 and I do know that the industry, whether as a result of our industrial hygiene survey and our medical study or not, did make some changes in the process. They got rid of the building. This was building 41. They . . . attempted to alter their process so that eventually when they knew it was dioxin, the dioxin was reduced. They built a whole new building for it, which at the time was a building which I would judge represented their best efforts for a relatively safe process.

Now, there is no absolute safe process. . . when I start talking to doctors or toxicologists about hazards I start by saying, "Look. There are no safe chemicals, there are only safe ways of using them. And that's true. You know water can be hazardous. You can drown in it. And water in Vietnam caused any amount of disability of soldiers because they developed a immersion foot, which swelled the soles of their feet and peeled off . . . and that was water being hazardous. So there are no safe chemicals, there are only safe ways of using them. Whether it's in a food or medicine.

. . . To get back to the answer to your question, which is a good one, did they do everything possible? . . . our industrial hygiene group did look at the new building when it was built and they felt that it was a safe way of producing trichlorophenol. However, then in 1953 there was no opportunity to know how much dioxin was in [the process]. Because it wasn't even identified. . . .

Now it so happens that dioxin is so toxic that even very small amounts of it — and we didn't know that until later — even very small amounts of it can be toxic, can cause acne and may even be able to cause other things.

MULLINS: Are there any restrictions on your study group at Monsanto as far as medical records?

DR. SUSKIND: We made one of the agreements that Monsanto had to make available to me and to my group all the work records of all the people we were examining. And they did even more than that. They made available all of the work records that we had to choose from. All of their health records from the medical department and all of their compensation records. . .

GRIMES: Is there a possibility that there are a lot of people who were avid gardeners who have used [weed killers containing 2,4,5-T] who might have some of the same problems these people have had?

DR. SUSKIND: Well, I have to be very frank with you. There are no obvious effects but it hasn't been studied. Also, you know the same thing is true for Agent Orange. I've had many calls asking why aren't you doing a study of the Vietnam Veterans, and it's a perfectly good question. If I know something about this field why am I not studying the veterans? And the answer was, well, I'm already beginning to study a group and it might be that we could get our answer from this group, because if it's dioxin we're concerned with and 2,4,5-T we're concerned with, these people probably were more heavily exposed than anybody in Viet Nam.

MULLINS: More heavily exposed?

DR. SUSKIND: I think so. And it's a well constituted group. To get the information about who was exposed to what in Vietnam is [illegible] Force is going [illegible]

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[illegible] at the chemical. [illegible] and it was a [illegible] agreement. I have been interested and have been studying the original group that was affected back in 1949 and followed them until 1953. I had a continuing interest in problems of chlorinated hydrocarbon acne, as well as the effects of chlorinated hydrocarbons on other organ systems. [We felt] it would be a good idea to go back and study that group that we are now studying.

TONER: The reason I ask this question is that as you know the steel workers [union] have invited Mount Sinai to come in and do a similar study. There have been some who have said that they would look with some suspicion on a study that is being paid for by Monsanto.

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TONER: You mean at the University of Cincinnati?

DR. SUSKIND: At the University of Cincinnati. Eighty percent of our budget is from federal sources. This is largely from [the] National Institutes of Health, including the National Institute of Environmental Sciences, the National Cancer Institute, and others of the national institutes — there are any number of them. We have grants, individual grants from those other institutes, to study birth defects, to study problems of pulmonary disease. For example we have a grant to study occupational asthma. Now this is a grant that is sponsored by the National Heart, Lung and Blood Institute. So we are largely supported by federal funds. Some of these federal funds come from EPA [the Environmental Protection Agency]. Some of those federal funds come from NIOSH [The National Institute of Occupational Safety and Health].

This is an aside, but I'm telling you that my department is not an industrially-supported department. We do have some grants from industry where we happen to be interested in the problems of that particular industry. . .

In this instance I, myself, came to Monsanto and said, "Look, you have a large population [that was exposed to dioxin] and should be studied." Literally said, "The world needs it." You know, I don't want to be immodest about this but. . . it is an important study. (In 1973, Suskind said he attended a meeting of scientists concerned about dioxins and related chemicals.)

. . . Many of us were there and asked ourselves, "What do we [illegible] know that we don't know?" And [illegible] 1973 one of the things that was [illegible] obvious we needed to know was [illegible] to those eight populations which were exposed to dioxin and we all said to each other, "Well, you know, something should be done about it. We should follow it. And we should study it. That time we didn't really identify, although we tried to, all of the research gaps, all of the information gaps that could be filled, bridged with new data, new information from human studies. . . It took a meeting of the World Health Organization in 1978 to do just that.

GRIMES: Basically at Monsanto you're going to study the period from '48 to '68 right? To the layman what can you really do with that? After you assemble that information what are you going to do with it?

DR. SUSKIND: Well, I think we will know better, probably, what to expect of the people who have been exposed to dioxin. For example, from the previous [illegible] from animal experiments which demonstrate that in rats, dioxin is a cause of producing liver cancer, was there any risk for liver cancer?

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The other thing which is part of an agreement which we usually have with our supporters is that the data of this study belongs to the investigating group. So it's the University of Cincinnati and we will make available this data to them and discuss the data as it's being evolved but the interpretation of the data and the publication of this information is the soul responsibility of myself as the representative of the University of Cincinnati.

MULLINS: How much of what you find is going to be made public?

DR. SUSKIND: Everything.

MULLINS: What form? How will you make that public?

DR. SUSKIND: Well, as a scientific group it's really our responsibility to make this information known in a scientific fashion and when it's ready, when the data is ready for release, when we're satisfied that the data that we're going to represent is significant, then we're going to publish it in peer review journals. That's something which is best understood by the scientist and the professional. When we want to publish anything, we submit a paper or series of papers to a scientific journal and the scientific journal receives it, and then sends it out for review to people who know the field we're working in. . .

You know there are some instances in which scientists send a scientific paper to a journal and it's turned down.

GRIMES: Isn't one of the problems in dealing with new chemicals that we're always about 20 years behind?

DR. SUSKIND: Look, I'm on the blue ribbon committee for Love Canal and I know what that's about. When the stuff was being dumped by the chemical companies in the Love Canal they didn't recognize . . . firm of all the city of Niagra gave them permission to do it. Oh? And they sold the land to the city of Niagra for building a school on and eventually for development but they were really not aware that this material was going to seep out and get into the drainage system in the area and get into people's homes when it was used as a site of a housing development. They weren't aware of it.

TONER: Dr. Suskind, in the 2,4,5-T incident — the incident in 1949 — you said you went in there, and that you saw these guys had skin problems and that they had some liver problems and a variety of other health problems. This is 1949 and yet the production of that chemical went on for year after year. Didn't you go to Monsanto and say, [illegible] with [illegible] it was a situation in which we were eventually called in and when we were called in to issue our many recommendations as to how the plant should be — how the workplace problems should be handled and there are two reports to that effect. I believe that as a result of that, as a result of our study, a new building was built to make trichlorophenol as well as 2,4,5-T. That was probably done in 1953.

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TONER: At that point did you go to Monsanto and say, "Hey perhaps you'd better stop production on this material?"

DR. SUSKIND: No, at that time we were doing work of our own and we were not further consulted by Monsanto. There was a continuous correspondence about it and the problem was not discontinuing the production, because the Germans didn't discontinue production, the Dutch didn't discontinue, the English didn't discontinue it. It was attempting to reduce the dioxin level in the trichlorophenol.

GRIMES: After you assemble this [data from the Monsanto study] how long will it probably take to analyze it?

DR. SUSKIND: You know, I wish you'd hadn't asked that question. . [There's] an enormous amount of laboratory data, there's X-ray data, there's EKG data. I would assume that from a number of items that we're going to have to put into the computer and then finally retrieve and then try to assemble in some significant relationship, we probably won't see any of this in any significant form before the fall of this year. That's not so bad, by the way. I'm being very optimistic.

MULLINS: Are you going into this with any expectations? Do you have any idea what you're going to find at all.

DR. SUSKIND: Well, I know that we're probably going to find evidence that these people had chloracne. That we're going to find. The other, I cannot tell you. And the reason I can't is that the information which we already have from these eight populations is so diverse and so contradictory. For example, in the German study they thought they found an increased number of people with heart disease.

MULLINS: Is that a similar situation to this?

DR. SUSKIND: It's quite similar. I think the exposure was much higher. In the Czechoslovakian study the exposure was overwhelming. They had a severity of chloracne and a severity of the neuritis that we never saw. . .

However, in the New Jersey population which is now dispersed, this is the Diamond Alkaline group there was no evidence of any increase of cardiovascular disease. In talking with the Dow Chemical physicians — I think they probably have the best continuous records — they don't find any increase in cardiovascular disease. .

TONER: Dr. Suskind, in your medical opinion has Monsanto been remiss in safeguarding the health of their workers or in informing workers of the dangers involved in chemicals that they're handling?

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MULLINS: More heavily exposed?

DR. SUSKIND: I think so. And it's a well constituted group. To get the information about who was exposed to what in Vietnam is quite a task. Now the Air Force is going to do that for pilots. They're going to do it for pilots.

MULLINS: I only have one more question. How does your study differ from the study proposed by Mount Sinai?

DR. SUSKIND: Well, I wish I could tell you but I don't because I really don't know what the Mount Sinai group did. All I know is that they came here for two or three days and they studied as many people as they could in a group and then they left and I really don't know what the protocol was. I know what my protocol is.

000521