IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS

MARIE B. SOIGNET, et al., Plaintiffs,	)	CIVIL ACTION
vs.	)	FILE NO. B-86-1193
MONTELLO, INC., Defendant.	)	

- - -

Deposition of DR. HILTON C. LEWINSOHN, taken on behalf of the Plaintiffs, in accordance with the Federal Rules of Civil Procedure, before Janet K. Wilson, Certified Court Reporter and Notary Public, at Marriott Airport Hotel, Room 922, Atlanta, Georgia, on the 9th day of March 1989, commencing at the hour of 2:00 p.m.

BROWN REPORTING, INC.
1100 SPRING STREET, SUITE 750
ATLANTA, GEORGIA 30309
(404) 876-8979

INDEX TO EXAMINATIONS

- - -

APPEARANCES OF COUNSEL:
On behalf of the
Plaintiffs: DANIEL J. CARUSO, Esq.

On behalf of the
Defendant: HENRY G. GARRARD, III, Esq.
JOSEPH GUYTON, Esq.

Also Present: Ms. Christina Berk

- - -

MR. CARUSO: This deposition is being taken for all purposes allowed under the Federal Rules of Civil Procedure. All objections except to form of the question are reserved until the time of trial.

Dr. Lewinsohn, you have a right to read and sign this deposition or you can waive. What is your pleasure with that regard?

THE WITNESS: I'd like to read it.

MR. CARUSO: Make a note that the doctor would like to read the deposition.

May I ask to whom should the deposition be sent for getting him to read it?

MR. GARRARD: Directly to him; and it's agreeable with me if he signs it in front of any notary.

DR. HILTON C. LEWINSOHN,

having been first duly sworn, was examined and testified as follows:

CROSS-EXAMINATION

BY MR. CARUSO:

Q. Would you state your name for the record, please.

A. Full name is Hilton Cecil Lewinsohn, L-e-w-i-n-s-o-h-n.

Q. And by whom are you presently employed, Dr. Lewinsohn?

A. By Union Carbide Corporation.

Q. And in what capacity?

A. I'm the medical director for the Chemicals and Plastics Group.

Q. How long have you had the position of medical director for the Chemicals and Plastics Group at Union Carbide?

A. Since 1986, I believe.

Q. Did you hold another position with Union Carbide before 1986?

A. Yes. I was then assistant corporate medical director.

Q. How long did you hold that position?

A. I joined Union Carbide in July of 1982.

Q. So from July of '82 until '86 you were the assistant corporate medical director, and now you're the medical director?

A. Well, not exactly.

Q. What exactly?

A. I was assistant corporate medical director; I'm now medical director of the Chemicals and Plastics Group, which is a business group of Union Carbide.

Q. And when you were assistant medical director, who was the corporate medical director?

A. Dr. Thomas Lincoln.

Q. And while you were assistant corporate medical director, was there a medical director for the Chemicals and Plastics Group?

A. We were differently structured in those days, and there was an assistant medical director -- assistant corporate medical director -- who had responsibilities for the Chemicals and Plastics Divisions; but there was no business group as such. You know, it's all to do with the corporate structure.

Q. Let's just talk about that for a second. You got to Union Carbide in 1986; correct?

A. 1982.

Q. Excuse me. And when you arrived at Union Carbide, since you were the assistant corporate medical director, I take it there was a Corporate

Medical Department?

A. That's right; and there were other assistant corporate medical directors. I was not the only one.

Q. As assistant corporate medical director in 1982, were you responsible for any particular division of Union Carbide?

A. Yes. I had responsibility for -- I'm trying to think back -- Carbon Products Division, for the Home and Automotive Division, Battery Products Division, and Specialty Polymers and Composites Division.

Q. Did any of those divisions you just mentioned have anything to do with the asbestos products of Union Carbide?

A. No.

Q. Who was it that had that responsibility when you got there?

A. That was Dr. Fortney, F-o-r-t-n-e-y.

Q. Is that Guy Fortney?

A. That's the one.

Q. Does he still work for Union Carbide?

A. He does, yes.

Q. What is his position?

A. He's corporate medical director.

Q. And you held the position of assistant corporate medical director from 1982 until 1986?
A. Right.
Q. And then in 1986 you became a medical director for the Chemicals and Plastics Group?
A. That's correct.
Q. And Dr. Fortney, somewhere along the way, became the corporate medical director?
A. About the same time.
Q. What happened to Dr. Lincoln?
A. He retired.
Q. Does that mean in the overall chain of command here you somehow report to Dr. Fortney or --
A. No, I don't report to Dr. Fortney. He is at the corporate level; I'm in a business group.
I report to the director of Occupational Health, Product Safety and Liability in the Chemical Plastics Group.
Q. Does Union Carbide still make any products or sell any products that have an asbestos component, to your knowledge?
A. Not as far as I'm aware.
Q. So between 1982 and 1986, it would have been Dr. Guy Fortney -- if I'm right about this -- who was involved with the asbestos products?

A. Yes; it was his division.
Q. What division was that?
A. I think it was Metals Division in those days.
Q. You do have some experience with asbestos; do you not?
A. Yes, I do.
Q. And it goes back, as I understand it, to the 1960s --
A. It does.
Q. -- when you were a member of the Pneumoconiosis Medical Panel in England?
A. In Manchester, England.
Q. Can you tell us what that panel was all about? What did it do?
A. Well, the panel was part of the ministry of pensions and national insurance, as it was known in those days, and its functions were twofold, basically.

One was to review claims made by workers in different industries for -- I'm trying to think of the word -- for what the benefit was called -- industrial insurance injuries benefits.
Q. Like a Workers' Compensation?
A. Like a Workers' Compensation. They made

the claims. The lay administration then decided if they had to be reviewed or not by members of the panel; and then the members of the panel would examine the claimants, review their cases, and make a diagnosis upon which the lay administration then determined what amount of compensation should be paid.

The second function of the panel was to carry out initial and periodic medical examinations under the provisions of the Industrial Insurance Injuries Act. So we went to asbestos factories, we went to quarries, potteries, and examined newly hired employees and active employees periodically to determine, first of all, in the case of newly hired employees, whether there was any reason why they should not do that particular job because of any medical or physical reason; and in the case of active employees, to determine whether they were suffering from any work-related effects which would entitle them either to compensation or prompt us to suspend them from that aspect, because we had that priority.

Q. Since the title of this panel was the Pneumoconiosis Panel, I take it one of the things you were looking for was asbestosis in the workers?

A. In the asbestos workers, we were looking for two things.

In the initial examination, we were looking to see that people newly hired in the industry didn't have any medical contraindications if they were potentially exposed; and examining the workers to see if they weren't suffering from any ill effects.

Q. One of which would have been asbestosis?

A. Yes.

Q. And what years are we talking about? 1963 --

A. 1963 to 1966.

Q. What was it about a person that would disqualify them from working in an asbestos environment under the guidelines of the Pneumoconiosis Panel?

A. Any preexisting chest disease that might have made them more susceptible or less able to cope in a dusty job or a job where there was potential for dusty exposure.

Q. Such as --

A. Such as tuberculosis, active tuberculosis, or severe chronic bronchitis, severe heart disease in which the lungs were likely to be

comprised and not able to function effectively because of a heart problem; things like that.

Q. So you did not want a person whose either lung function or heart function was already comprised to be working in an asbestos environment?

A. Correct; or somebody who already had worked previously in an environment of that kind, coal mines or any other dusty job which could also have comprised them.

Q. So a person, for example, coming from, say, a coal mine in Wales into an asbestos factory in Manchester --

A. -- would be carefully looked at.

Q. Would he have to exhibit some type of dust-related disease before you would have disqualified him, or would the history alone disqualify him?

A. No, the history alone would not disqualify him. He had to have some evidence of being impaired in some way.

Q. Is it fair to say that, to your knowledge, in a period of time 1963 to 1966 that asbestosis was a recognized disease associated with asbestos?

A. Yes.

Q. Was there at that time, in 1963 to 1966, a recognized association -- by that I mean one which would be recognized by people with your expertise -- between asbestos exposure and lung cancer?

MR. GARRARD: I'm going to object to your question. Dr. Lewinsohn is not here as a state of the art witness, was not employed by Union Carbide at that time, and that is a question that is outside any relevance of his testimony whatsoever.

Q. You can answer the question.

A. Can you just repeat it please?

Q. My question inartfully stated was -- if I can try to recall it -- was that in this period, from 1963 to 1966, did experts in the occupational disease area such as yourself at the time recognize an association between asbestos exposure and lung cancer?

MR. GARRARD: Same objection.

Q. And I mean bronchiogenic carcinoma.

MR. GUYTON: I'll further object. This witness has not been listed as an expert witness in this case.

A. I'm going to make a comment. At that time I would have hardly had been an expert in that area; but to answer your question, I believe that

in -- by that time the association between asbestos exposure and the development of lung cancer had been recognized, although perhaps not universally accepted.

Q. Was there a time in the late sixties or early seventies -- we keep going back in time, okay -- but when there was an acceptance of the association between lung cancers and exposure to asbestos?

MR. GARRARD: I object to your question again, because he is not here as an expert on state of the art matters. I think that's what you were inquiring into. And I'm going to direct the doctor not to answer the question.

MR. CARUSO: Well, the question goes to what everybody knew about asbestos at a particular time, which in turn relates to what each individual company's obligation is to warn; and secondly, to the question of whether or not this product under the law is unreasonably dangerous for its intended use. Where he was is of no consequence.

MR. GARRARD: He was not an employee of Union Carbide at the time. What he may or may not have thought at that time is not relevant as to Union Carbide.

MR. CARUSO: Well, I'm not asking him what he thought; I'm asking him --

MR. GARRARD: He is also not put forward as an expert on state of the art matters by Union Carbide, has not been listed as an expert, and I think it's outside the field of inquiry permissible as to this witness.

MR. CARUSO: I'm going to reserve my right to go back to that and possibly call the Judge.

Q. Doctor, over the years you have studied and kept up, I take it, with information dealing with asbestos and its association with various lung diseases?

A. Up to a point in time.

Q. Would it be fair to say, then, in the late 1960s and early 1970s this was a subject that you were keeping abreast of, the relationship between asbestos and asbestos-related diseases?

A. Yes, that's fair enough.

Q. And it is true, is it not, Doctor, that in that period of time between the late 1960s -- we'll talk about, say, 1965 up until about 1975 -- articles were published by various individuals and groups demonstrating the association of asbestos

with certain illnesses?

A. Yes, there was literature containing such articles.

Q. And there were articles that were published at that time that linked asbestos with asbestosis; is that correct?

A. Yes.

Q. And there were articles that were published that linked asbestos with lung cancer?

A. Yes.

Q. And there were publications that came out as early as 1960 by Dr. Wagner linking asbestos exposure with a disease process known as mesothelioma; is that correct?

A. I prefer the use of the word "associated" rather than "linking"; yes.

MR. GARRARD: Excuse me. Did you say chrysotile asbestos?

MR. CARUSO: No; I said asbestos.

Q. In the articles associating asbestos with mesothelioma which appeared in the sixties -- the early sixties, did those articles draw a distinction between crocidolite and chrysotile as a cause of mesothelioma, if you can recall?

MR. GARRARD: I'm going to object to your

question unless you tell him what articles you are talking about. There is a lot of literature in the time frame that you are mentioning. Also, I further object that he is not listed as an expert, and you are at this point in time doing nothing but a state of the art examination of this witness.

He is not a state of the art expert in this case. He also was not an employee of Union Carbide at that time.

Q. I don't even know what that means, okay; but I'll do it this way.

After you left the Pneumoconiosis Panel in 1965 or -'6 --

A. '66.

Q. -- you went to work for an outfit called Turner Brothers?

A. Turner Brothers Asbestos Company, Limited.

Q. And where is Turner Brothers Asbestos Company, Limited, located?

A. In Rochdale, Lancashire, England.

Q. And what was your job with Turner Brothers Asbestos Company, Limited?

A. When I went there I went as a medical officer.

Q. And what were your job duties as a medical officer?

A. To do initial and periodic examinations of employees working with asbestos and -- also to see any other workers that needed my advice and counsel.

Q. You were what we call the company doctor?

A. That's right; I ran the medical department.

Q. There was a doctor there also named Knox?

A. Dr. Knox retired in 1965.

Q. And did you, in essence, take his position when you went there?

A. Yes -- not fully. I took the title of medical officer; Dr. Knox had had the title of chief medical officer.

He remained on as a consultant even after retirement, so there was still another notch on the ladder.

Q. You said Turner Brothers Asbestos Company. What was the business of Turner Brothers Asbestos Company? Did it make asbestos products?

A. Turner Brothers Asbestos Company in Rochdale, plant in Rochdale, manufactured asbestos textiles.

Q. So it was a textile manufacturing plant?
A. In Rochdale, yes.
Q. Now, was there another Turner Brothers plant that wasn't in Rochdale that did something else?
A. There was another one in Hindley Green, also in Lancashire, which made asbestos textiles; also made -- they made -- there was glass fiber there; it was a glass fiber plant. And there was a plant in Dungannon, which is in Northern Ireland, which made glass fiber.
And there was a plant in the south of England in, S-l-o-u-g-h, I think it was in Slough, that also made glass fiber.
Q. Now, were you the medical officer for all these plants?
A. Well, I was the medical officer for Turner Brothers Asbestos Company, Limited; and as such I had, if you like, oversight or supervisory responsibilities for all these plants, yes. I didn't go to all these plants to perform my hands-on duties there.
Q. You had other doctors --
A. There were other part-time -- mostly part-time -- contract positions.

Q. How long did you hold this job at Turner Brothers?

A. Well, I was -- I became -- I was with the Turner and Newall group of companies in which Turner Brothers Asbestos Company was a subsidiary for a period of approximately ten years; from 1966 to 1976. Then I became the group medical advisor to Turner and Newall Company, I think about 1969; but I don't remember the dates offhand. Maybe later; I just don't remember.

Q. Now, in that period of time, between 1966 and 1976, since you were a medical officer for an asbestos-related concern, I take it it was up to you to keep abreast of what was going on in the medical and scientific community regarding asbestos and the possible health effects associated with asbestos; is that fair?

A. Yes; that was expected.

Q. The type of asbestos fiber that was being used by Turner Brothers in this period of time, what type was it? Do you know?

A. Turner Brothers?

Q. Yes.

A. They basically were using chrysotile asbestos fiber; but they also used some crocidolite.

Q. You said Turner Brothers, and you nodded your head at me. Was there some other one of these plants that was using something else besides --

A. Well, we talked about Turner Brothers Asbestos; not about Turner and Newall as a corporation.

Q. Were they doing something different than Turner Brothers Asbestos?

A. Yeah. They were a large corporation and involved in other areas of the asbestos business.

Q. Like --

A. They had mining business and they had asbestos cement interests.

Q. Now, where were their mines?

A. When I first went there, of course, they were still operating the mine in Southern Rhodesia, which is now Zimbabwe. Then Rhodesia declared its unilateral declaration of independence, and that source of supply was cut off.

They had mines in north British Columbia, Cassiar, and there was a mine in Swaziland.

Q. Now, did you have anything to do with these mines by way of your medical directorship?

A. Well, I knew about them, and I visited both of them. I didn't visit Rhodesia because of

the political situation.

Q. Was there a medical person at the mines who was reporting to you?

A. Not reporting to me, no; reported to my management. I didn't really have very much direct contact with the people overseas.

Q. So you were not being given any reports or anything about any incidents of illnesses or deaths or anything arising from the mine operations?

A. I wasn't, no.

Q. Your medical responsibilities at Turner Brothers and then with Turner and Newall dealt mostly with the asbestos-manufacturing aspect as opposed to the mining aspect?

A. That's hard to say. Basically, my duties were in the United Kingdom in the mines there; but I also gave advice and service to all of the corporation, which included all its operations worldwide. I didn't, again, necessarily get involved in the day-to-day problems of those organizations.

Q. Were you ever questioned -- or your advice sought is probably a better way to ask that question -- by the corporation of Turner Brothers and/or Turner and Newall with regard to the health

effects associated with asbestos exposure?

A. I believe I was.

Q. Do you know, how did that come to pass?

A. How?

Q. Yes.

A. Well, as part of my job I sat on a committee known as the Health Committee where these matters were regularly discussed.

Q. Was the question of asbestos as a possible cause of mesothelioma ever discussed?

A. Yes, it was.

Q. And do you know approximately when that would have been?

A. Well, when I joined Turner Brothers in 1966, by that time I believe that the issue had already arisen.

Q. Did you ever advise anyone at Turner Brothers or Turner and Newall between 1966 and 1976 that chrysotile asbestos would not cause mesothelioma?

MR. GARRARD: I'm going to object to your question in terms of what, if anything, he advised Turner Brothers or Turner and Newall, which is not relevant; they're not a part of this lawsuit.

Just object; it's not relevant to any

issue in this case. And I ask you, Doctor, if you try to recollect anything back that far, I ask you not to speculate in terms of whatever may have been said or done.

A. I have no intention of speculating on what I specifically advised or didn't advise at that point in time. Unless you could refresh my memory, I would prefer not to speculate.

Q. Well, Doctor, do you think in the period of time between 1966 and 1976 that the body of medical science available to you as a director of medical services at Turner Brothers would have allowed you to tell your company that chrysotile asbestos had been eliminated as a cause of mesothelioma in man?

MR. GARRARD: I again object to that because you begin trying to play state of the art with this doctor who has not been listed as a state of the art expert and was not an employee of Union Carbide at that time. I also do not think it is an answerable question in its current form.

Q. Can you answer it?

A. If those are the words that you think I would use, no, I can't.

Q. I'm not saying that's the word you would

use; I'm asking can you answer that question as I've posed it?

A. I just don't believe it's a question that's -- that is answerable. I think it's badly framed and to me somewhat unintelligible.

MR. CARUSO: Let's see what's unintelligible about it. Read it back, please.

(The record was read by the reporter.)

A. I still don't think I can commit myself to answer a question like that. I just don't believe that it's giving me a viable opportunity to tackle the issue, it really isn't.

Q. What's wrong with the question?

A. I think you're using words and you're making a definitive statement, which I'm not prepared to argue about because I don't think it's valid or viable.

Q. What isn't valid or viable?

A. Well, you use words like "eliminated"; I don't know what that means. Can you tell me what that means?

Q. Well, I haven't got a dictionary here; but "eliminate" generally means that you've taken it out of the picture, you've taken it away, you've eliminated it.

A. But you know for yourself that that's not the case; there is even today debate as to whether chrysotile is involved in the production of mesothelioma.

Q. So you would agree with me that even as of today there is still a debate going on as to whether or not chrysotile is or is not associated with mesothelioma?

A. There is -- yeah, I would say that there is a debate going on, you know, between experts.

Q. And is that debate today more intense than it was back in the late sixties, early seventies, middle seventies?

A. I think the debate today has served to clarify a number of the -- what in the early sixties and seventies were rather vague assumptions.

Q. Do you know a man named I. C. Sayers, S-a-y-e-r-s?

A. No, I do not. No.

Q. I'm going to show you a document that is entitled Asbestos as a Health Hazard in the United Kingdom by I. C. Sayers -- and you say you don't know the man. Let me ask you if you've ever seen this document before?

A. Yes, I've glimpsed at this document; I

haven't read it.

Q. You say you've glimpsed at it. In what context were you called upon to glimpse at that document?

A. I believe among some of the items I was shown by Mr. Garrard here in preparation for this deposition, this is one of the documents produced; but I haven't read it.

Q. Did Mr. Garrard represent to you that this document was a Union Carbide document?

A. No; he gave me no indication as to where that document originated or what its purpose was.

Q. Had you never seen this before Mr. Garrard showed this to you today?

A. That's correct.

Q. So you don't know whether or not this document which is referred to as Asbestos as a Health Hazard in the United Kingdom is, in fact, a Union Carbide document?

A. I don't know the origin or the purpose of it, no.

Q. And you've never heard of I. C. Sayers before this deposition?

A. (Witness shakes head negatively.)

Don't know who he is.

Q. Now, this document has a date on it of 1967, okay? So now we're going back another time capsule again to 1967 --

MR. GUYTON: I'll object to that. From what I can see on the front of that, that 1967 is not printed in any fashion. Somebody apparently has written that on that.

Q. Let's assume it's written in 1967, subject to counsel's objection here. And in this document there is a paragraph which is numbered 6.1 under the title Moral Issues, and it says: "There seems little doubt that the toxic effects of our Coalinga product is still largely unknown. There is a general inference that crocidolite is more liable to produce mesothelioma. Exoneration of chrysotile has not been made, however. A discussion with Dr. W. Taylor with the Department of Social Medicine, Queens College, two years again revealed that concern over asbestosis is still increasing and that chrysotile is definitely implicated along with other types of asbestos."

Now, with regard to the statement contained in that report -- this is 1967, okay -- "there is a general inference that crocidolite is more likely to produce mesothelioma. Exoneration of

chrysotile has not been made, however."

Does that generally, to your recollection, reflect accurately the state of knowledge at that time of the difference between crocidolite and chrysotile as an associated fiber with mesothelioma?

MR. GARRARD: I'm going to object to your question in that your question, once again, goes to a state of the art question; and this doctor is not put forward as a state of the art expert, nor was he an employee of Union Carbide in 1967.

MR. CARUSO: I am not asking him for an expert opinion.

MR. GARRARD: But you asked him if that comports with his opinion as to what the literature showed at that time.

MR. CARUSO: This man was working in the field at that time.

MR. GARRARD: He was not an employee of Union Carbide.

MR. CARUSO: Doesn't make any difference.

MR. GARRARD: Yes, it does.

MR. CARUSO: Makes no difference whatsoever.

MR. GARRARD: You're not entitled to

elicit opinions from him unless he is listed as an expert to give opinions; and that's the problem I've got, is he's not. He is here as a factual witness in relation to his experience with Union Carbide.

MR. CARUSO: That's why you brought him here, but that's not why he's here. I can ask him anything I want.

MR. GARRARD: No. He's not here as an expert.

MR. CARUSO: I'm not asking for an expert opinion.

MR. GARRARD: I think that's an expert opinion.

MR. CARUSO: It's not. If I was asking for his expert opinion, I would ask him that.

I have a man here who is a historical reference. He was working with this stuff at that time, and I want to know if based on what he can recall at that time is this statement made by this fella at Union Carbide, whoever he may have been, accurately reflecting what the state of the medical knowledge was in 1967. He's a doctor; he should know.

MR. GARRARD: Which is his opinion.

MR. GUYTON: I'll object on the same

basis, because it is asking his opinion of what the opinion was; and that calls for an expert opinion based upon his reference to all the knowledge as stated at the time. It also asks him to speculate about what someone else knew or what someone else had written.

MR. GARRARD: I don't want to unduly object; it's not my style. I'm going to let him answer the question; but if you keep going on that, then I'm going to stop him from answering questions on that.

He is not here as an expert -- I'm not trying to be difficult, but he is not here as a medical expert to render opinions.

Go ahead.

Q. If there is any possible way you can remember the question, can you answer it or would you like to hear the question again?

THE WITNESS: I'd like to have it read.

Q. The question I'm trying to ask you is this: If you and I had been back in 1967 together and I would have handed you this piece of paper and said, Dr. Lewinsohn, would you take a look at this Paragraph 6.1, 1 -- which you can do now, by the way, if you want to look at it again -- would you

take a look at that; and when they're talking about crocidolite being implicated as a cause of mesothelioma and chrysotile has not been exonerated, would you agree with that as of 1967?

MR. GARRARD: Same objections without restating them.

MR. CARUSO: Fine.

A. The reason I hesitate to give you an answer is because you're trying to condense into one question and to base on -- you know, on one person's opinion a yes-or-no answer where there isn't a yes-or-no answer possible.

In order to answer your question, I would have to go back and review a great deal of the literature at that moment in time to tell you whether in 1967 there was -- this was a valid statement to make. It's very difficult to answer it.

However, you know, if I give it my best shot, then what this seems to be saying is that in 1967 there was a belief in some sectors -- and it doesn't say whose belief it was, whether it was a majority opinion or a minority opinion or whether it was a consensus of opinion -- that there was a gradation or effect somehow or another between the

association of different types of asbestos fiber in the production of mesothelioma and that at that moment in time in 1967 this individual who wrote the report believed that crocidolite was more liable to produce mesothelioma, but that chrysotile had not been eliminated as a cause, to use your word.

That's the best I can answer it.

Q. Now, you came aboard at Union Carbide in 1982?

A. Yes, that's correct.

Q. By corporate medical?

A. Yeah.

Q. And have you ever since coming aboard with Union Carbide been involved with the asbestos products between 1982 and the present in any way?

MR. GARRARD: What do you mean by "involved"?

MR. CARUSO: Well, whatever, in his job category with any of the asbestos product divisions or anything like that.

A. Only in view of the fact that when I joined Union Carbide it was known that I had spent a lot of time working in the asbestos industry. From time to time I would be asked for assistance, yes.

Q. And who would ask you for that

assistance?

A. Well, that varied. It might be Dr. Fortney, who wanted to know how to respond to an inquiry; or it might have been somebody in the management of the division that wanted to talk to me about asbestos or chrysotile asbestos or matters of that kind.

Q. Were you ever called upon for assistance by a man named Harrison Rhodes?

A. I'd more likely call on him for assistance; but I did know Harry Rhodes, yes.

Q. During the course of your tenure with Union Carbide between 1982 and the present, were you ever involved in any discussions with a man from Montello Corporation, Ken Campbell?

A. Don't know him.

Q. Don't know him?

A. (Witness shakes head negatively.)

Q. Let me show you this Materials Safety Data Sheet from the Calidria Corporation that's dated 12/13/84. Let me ask you first of all: What is the Calidria Corporation?

A. That was the name of the part of the Metals Division that mined and marketed the Coalinga fiber.

Q. It's a part of Union Carbide?

A. It was a part of Union Carbide.

Q. Now, could you tell us, if you know, what is the function of a Materials Safety Data Sheet?

A. The Materials Safety Data Sheet basically is to provide information to people handling or using a product relating to its physical properties, its health hazards, first aid treatment in the event of acute exposures, and any other relevant matters in order to insure the safety of the product.

Q. In the Union Carbide operation, who would receive from Union Carbide copies of the Material Safety Data Sheet, if you know?

MR. GARRARD: Doctor, if you know.

A. I don't believe I'm qualified to answer that.

Q. Now, this publication, which is of 1984, has two parts I'd like to ask you about.

MR. GARRARD: Which section are you referring to?

MR. CARUSO: Chronic Effects of Overexposure.

Q. It says: "Overexposure to chrysotile asbestos has caused damage to lungs (Asbestosis, lung cancer, and mesothelioma of the pleura and the

peritoneum.)"

Mr. Rhodes testified in his deposition that this entry that was placed into this Materials Safety Data Sheet was made after discussions with you.

Let me ask you first of all, is Mr. Rhodes' recollection correct about that?

A. I know I was involved in the drafting of this particular section, yes.

Q. Who else was involved in it besides yourself?

A. That I don't remember; but -- I think at that time this was -- may well have been partly drafted by somebody in our Toxicology Information Services Group under Mr. Marvin Huffman and that it could have been referred to me from them; or it could have been referred to me from somebody at the division. But I know that the final form of this is probably designed by Mr. Marvin Huffman's group.

Q. Marvin Huffman?

A. Yeah.

Q. And you say "Mr. Marvin Huffman's group." Who was Mr. Huffman?

A. Well, he works in the -- in those days I think it was still called Corporate Applied

Toxicology; he worked in that area. It doesn't really matter how he fits into it, but he -- his group, which now is down to himself and someone else, they basically assist the divisions in formatting the Material Safety Data Sheet and do a lot of the literature reviews and that sort of thing.

Q. Was it you who suggested that mesothelioma be placed in that paragraph dealing with chronic effects of overexposure?

A. I don't know whether, you know, I would put it -- it was I who suggested it. I can only say that this is a combined effort; but probably my input was significant.

Q. And do you agree with it as it's written, that overexposure to chrysotile asbestos has caused damage to lungs, (Asbestosis, lung cancer, and mesothelioma of the pleura and the peritoneum)?

A. I think that in 1984 when this was written -- bearing in mind this is sort of a generic type of statement talking about chrysotile asbestos and not distinguishing in any way between the types of chrysotile, bearing in mind the state of knowledge at the time when this was drafted -- there was by that time some evidence basically from the

Canadian chrysotile mines and mills -- and I think possibly from elsewhere; I'm not sure, from Cypress -- of cases of mesothelioma that had been described in persons who had, as far as could be ascertained from, historically worked with chrysotile asbestos.

So in that context, I think that at that moment in time it was probably a reasonable statement to make.

Q. Would it have been reasonable --

MR. GARRARD: Did you finish your answer?

A. I think that if this were to be rewritten now, evidence which has come to light within the last four years probably might make one want to modify that statement; because it would appear from -- as I understand the few articles that I've kept up with -- it would appear now that the likelihood of pure chrysotile inducing a mesothelioma is very small, if any, and that most chrysotile which has been incriminated in the Canadian people and in Cypress is contaminated with an amphibole fiber known as tremolite; and so it would probably be written differently today.

In other words, it would be -- it's

unlikely that chrysotile asbestos would cause mesothelioma of the pleura in the light of this evidence.

Q. You would just take mesothelioma out of this statement today if you were writing this?

A. I don't think I would take it out; I think you'd have to give some descriptive explanation as to why this particular product would be unlikely to cause it.

Q. But you wouldn't take it out yet?

A. I wouldn't take it out; but I'd have to qualify it, I'd have to give a qualifying statement.

Q. Would you take out the part about asbestosis where it says, Overexposure to chrysotile asbestos --

A. No.

Q. Would you take out the part of lung cancers?

A. No.

When I'm talking about chrysotile --

Q. Right; the chrysotile this is directed to, this Coalinga chrysotile.

A. No, I'm not saying that. I think this particular statement is a generic statement that was written in -- because there was no way I believe of

writing a statement like this specifically for Coalinga; so the statement was written as is not uncommon in Material Safety Data Sheets to cover chrysotile asbestos.

This was to serve the purpose of the Material Safety Data Sheet, which is as a health warning. And if subsequently it were to be shown that Coalinga fiber had the same potential properties as any other form of chrysotile asbestos, then this would be an acceptable statement.

Q. Well, are you saying, then, that Coalinga chrysotile --

A. No, I'm not saying anything about --

Q. -- is different than any other chrysotile?

A. Yes, it is.

Q. Okay.

A. That's not what I'm saying at the moment. What I'm saying at the moment is in preparing a Material Safety Data Sheet where the evidence is not always complete for the particular chemical or substance that you're writing the Material Safety Sheet, if there is other evidence in the literature for products of a similar kind, then it's reasonable to adapt that in a health hazard

statement, which is really what has taken place here.

Q. So if you're going to make a mistake --

A. But there are certain differences between Coalinga fiber and other forms of chrysotile asbestos.

Q. What are the differences?

A. It's a very unique fiber, as I understand it and as I understood it when I was involved. It's -- it really doesn't require any mining; it's almost a surface deposit. And it's -- again, as I understand it and from what I've been told, a form of chrysotile fiber which is purer in the sense that it isn't contaminated by amphiboles, and it has a very characteristic fiber size and shape. It's unusual in that it's a short fiber for a chrysotile and it's a thin fiber. I believe that most of the fibers are less than 5 microns in length; and I don't know what the diameter is but the diameter is certainly very small.

Q. You're not saying all of the fibers are less than 5 microns?

A. I'm saying the majority.

So that has certain implications with regard to the carcinogenic properties of this fiber.

Q. Well, in 1984 when you all wrote this Material Safety Data Sheet, you were trying, I take it, to give as accurate a description as possible of the product that you were selling; were you not?

A. In that the product that was being sold was a form of chrysotile asbestos, and given the deficiency on specific health information related to that product, a statement was devised which appeared to be an appropriate health warning.

Q. Now, have you developed any information between 1984, the time this was written, and today that shows that the Coalinga chrysotile does not cause asbestosis?

A. Huh-uh. I've had no involvement -- I haven't developed personally any information.

Q. What about the company?

A. As far as I'm aware, that particular company no longer belongs to Union Carbide; so I don't know what they've done.

Q. Have you seen any studies that shows that Coalinga chrysotile is not associated with lung cancer?

A. I haven't seen any studies that say it is.

Q. Have you seen any that says it isn't?

A. I haven't seen either.

Q. So the statements that you made here in this 1984 Material Safety Data Sheet, as far as we know through today, are accurate?

MR. GARRARD: Hold it. I object to the form of your question in that he has already indicated to you that as to mesothelioma he would change that today; and I think that's a misstatement of what he said. I'm sure you didn't mean to do that, but I object to the form because that's not what he said.

MR. CARUSO: You're right.

Q. With regard to the asbestosis and the lung cancer, that statement in this Material Data Sheet of 1984, if you were writing it today, you'd write it the same?

A. I don't know whether I would; because I know a little bit more about the fiber now than I did then. I also know from my own personal observation of the employees at the King City mine that no evidence has been found to date of -- at least as of the time when I last was involved -- no evidence had been found of asbestosis among the miners. And as far as I'm aware, no excess cancers of the lung had been found, either. So it may well

be that with developing knowledge over the last five years since 1984 it might even be possible to modify the statements with regard to lung cancer and asbestosis; not that I could say that asbestosis or lung cancer will not occur, because I haven't got sufficient evidence for that; but that -- based upon what I do know, it's unlikely that they would occur.

Q. Well, you wouldn't be willing to make a statement like that just based on an informal statement -- survey of workers that worked at that mine; would you?

A. No, no --

MR. GARRARD: Let him finish.

MR. CARUSO: I'm letting him finish; just relax.

A. I would not make a statement based purely on that one issue alone. I think that the statement that the information goes further than that is experimental evidence available -- as well as I'm not sure that I was aware of in 1984 but I now am aware of in which this fiber has been shown not to produce significant -- a significant incidence of tumors in the animals.

Q. Well, there is also medical evidence that shows that chrysotile fibers does produce tumors in

animals; isn't it?

A. Yes; but I am talking of the Coalinga fiber as opposed to chrysotile asbestos in general. It is a unique fiber, it's different, and it has been studied on its own.

Q. In 1966 you all sent some of this stuff over to Mellon for survey. Have you ever seen this report before, the Mellon Institute?

A. I don't remember whether I was shown this or not.

Q. Take a look at that.

MR. GARRARD: Take your time, Doctor.

(A recess was taken.)

A. May I just ask you if these codes refer to -- CMS 100 is what?

Q. I don't know. It's not my report.

MR. GARRARD: I can't answer that question, Doctor.

(A discussion ensued off the record.)

Q. You looked at this report. Were you able to identify which fibers were fibers from the Coalinga mine?

A. No.

Q. You can't tell from looking at this?

A. No; I don't know where these fibers come

from.

Q. Mr. Rhodes testified in his deposition that the Coalinga fibers -- a sample of the Coalinga chrysotile was sent to the Mellon Institute and they acted just like every other chrysotile fiber. And I asked what does that mean, and he said they produced tumors.

You don't know about that?

A. No.

Q. Let me ask you about this thing here. What is this "Warning: Cancer Hazard" over here in precautionary statements? What is that for?

MR. GARRARD: If you know, Doctor.

Q. If you know.

A. You know, I had no part in, I don't think, in writing that, and I don't know how these warnings were developed. Must have been some convention that they use when they write these Material Safety Data Sheets as to whether they have -- "Warning: Cancer Hazard" or "danger" or different terms that are used in these things.

Q. What is Union Carbide saying? Is this what they want to be put on the bags that the men would actually receive?

MR. GARRARD: Doctor, if you know an

answer, give him an answer; but do not speculate.

A. I don't know the answer. This is a Material Safety Data Sheet. Labels are something that are dealt with by a specialized group of people who design and wordsmith the labels. I don't have anything to do with that.

Q. So this wording here under "Special Precautions" would not necessarily appear on the bags of the product that the men were receiving?

A. I don't -- I just don't know.

Q. You don't know?

A. No.

Q. Are you still at this time in your life a subscriber to the Lagg Aphroism?

A. Uh-huh.

Q. Would you tell the ladies and gentlemen of the jury what Lagg Aphroism is?

A. Which one? There are four of them.

Q. I'll read you one which I like.

"Every worker should know something of the materials that he works with and to which he is exposed and the hazards of such materials and not find out for himself, sometimes at the cost of his life."

A. Yes, I agree with that.

Q. Is chrysotile asbestos a carcinogen?
A. Yes, I believe it's classified as a carcinogen.
Q. When did it first get that classification? Do you know?
A. That I don't know; because it would -- it depends on who classified it. And I can't tell you -- it's classified as a carcinogen.
Q. You said "it depends on who classified it." How many different entities --
A. International Agency for Research and Cancer, and the EPA, and -- you know, everybody has their own ideas about classification. I'm not quite sure when it would uniformally be classified, especially in the United States of America.
Q. When you got to Union Carbide in 1982, had it been classified as a carcinogen, if you know?
A. I don't know. If you're asking me officially, in any official way, I don't know.
Q. When you got to Union Carbide in 1982 and took the position as medical director -- excuse me, assistant medical director -- is that right in 1982?
A. Assistant corporate medical director.
(A discussion ensued off the record.)
Q. When you took that job as the assistant

corporate medical director in 1982, did you have an opinion at that time as to whether or not chrysotile was a carcinogen?

A. Yes.

Q. What was your opinion?

A. Chrysotile is a carcinogen.

Q. Now, we talked just a second ago about the Lagg Aphroism, which I think is A-p-h-r-o-i-s-m; and in comparing the material which is contained in the Safety Material Data Sheet, the information and a warning label, which has been represented to us to have been on the Coalinga product handled by the Plaintiff in this case, Mr. Soignet, can you tell us, Doctor, whether or not this labeling in light of what's on your Material Safety Data Sheet and the information contained in the Material Safety Data Sheet fulfills Lagg's Aphroism?

MR. GARRARD: I'm going to object to the question. He is not here as an expert testifying about warning labels nor their contents, and I'm going to instruct him not to answer the question.

MR. CARUSO: That's an instruction not to answer?

Q. Doctor, if you have a man who is handling a carcinogen and you do not warn that person

directly that the product he is handling is a potential carcinogen, in your view, Doctor, has the corporation fulfilled its duty to warn that individual of the risks associated with the use of that product?

MR. GARRARD: I'm going to object to that question in that you're again asking him for opinions, number one, in terms of whether someone has fulfilled a duty; and number two, you are blankly asking him his opinion concerning the contents of a warning. And I'm going direct him not to answer the question.

MR. CARUSO: Please note that we're reserving all objections to his objections for discussion with the Judge. I'm reserving my right to retake this deposition if I have to retake it during the course of this trial.

Q. Were there ever any discussions that you know of that took place at Union Carbide to identify the Coalinga asbestos product as a carcinogen on its labels?

MR. GARRARD: Could you read that back? I'm --

Q. Let me ask you again.

From the time you arrived at Union

Carbide until the time the mine was sold and Union Carbide got out of the business, were there ever any discussions in which you participated where it was discussed that a label should be put on the bags containing the Coalinga product identifying it as a possible carcinogen?

A. I don't recollect participating in any such discussions personally.

Q. Do you know of any such discussions having taken place in which you did not participate personally?

A. That, again, I can't tell you; I don't know.

Q. Mr. Rhodes told us that he thought there were discussions around 1970 about that question.

Did you ever --

A. I wasn't there then.

Q. I know that; but did you ever see any memoranda, documents, or anything dealing with the question of whether or not to identify this product as a possible carcinogen?

A. No.

Q. Does Union Carbide today sell any products that have been classified as a carcinogen?

A. Probably.

Q. Do you know what they are?

A. (Witness shakes head negatively.)

Well, you said "sell products"; that I don't know, okay? We have probably in our manufacturing facilities products that might be used in formulations, et cetera, that are classified as carcinogens.

For example, I believe one chloride is classified as a carcinogen, and there are a number that are suspected as being carcinogenic.

Q. With regard to the ones that are suspected as being carcinogenic, are the people who work with those substances warned by Union Carbide of the potential carcinogenicity?

A. I believe everyone who works with these substances knows of the hazards associated with them.

Q. Where do they get that knowledge from?

A. They get it through their training, through their job safety data sheets, and through the free availability of the Material Safety Data Sheets to all employees.

Q. So they actually are getting some of it from the manufacturers of the substance?

A. If it happens that the carcinogen is one

you can buy from someone else, then the vendor's Material Safety Data Sheet would be part of the information. If the substance is one of our own product, then it would be our Material Safety Data Sheet. But there is also active employee training continuously going on.

Q. Do you all label it, put a label on the --

A. That I don't know. There is a labeling system, you know, the diamond with different things in it; that's basically I think what I've seen.

Q. Do you know or know of a man named C. U. Darnehl?

A. Dr. Darnehl?

Q. Yes.

A. I have met him on one occasion.

Q. Do you know what his relationship to Union Carbide was or is?

A. He had long since retired by the time I got there, and I believe that he had some -- he had an appointment as a medical director; I don't know exactly what his title was.

Q. Let me show you a letter of June 7th, 1967, which appearS to have been penned by Dr. Darnehl to a Mr. Hall, T. J. Hall, Union Carbide,

Europa, and ask you if you've ever seen this letter before?

A. No, I haven't seen this letter before. It's barely ledgible.

Q. I know.

Do you know who Mr. Hall is?

A. No.

Q. While you were on the Pneumoconiosis Panel in England, did you have an opportunity to note an increase in lung cancer associated with people suffering from asbestosis?

A. Did I have an opportunity? If you ask it that way, I have to say no; because I wasn't doing any studies.

Q. What about the panel itself? Did the panel perform a study?

A. Well, the panels published their findings annually -- they were usually about two years behind -- in which it was shown that the incidence of asbestosis was increasing, or diagnosed cases of asbestosis by the panels in certain regions was increasing, and also that the -- now, I don't know whether they actually showed the instance of lung cancer to be increasing as well; I can't remember that. But I know that there was this report that

came out every year in which the latest statistics were given. I know they were concentrated on asbestosis.

The reason was that asbestosis was a prescribed disease; in other words, you could get compensated for asbestosis. Lung cancer in an asbestos worker was not a prescribed disease, because it was a requirement for compensation that asbestosis also be present. So consequently, they didn't tally up the lung cancer cases; they tallied up the asbestos cases.

Q. Were you familiar with a report submitted by Dr. Buchannon at the 1964 Academy of Sciences Conference in New York which indicated that in the experience of the cases diagnosed by the pneumoconiosis medical panels in Brittain as suffering from asbestosis, 50 percent of those died of lung cancer as well?

A. Right; that was the prerequisite of asbestos and lung cancer. That was a paper that was presented by Dr. Buchannon. I'm familiar with that. The one problem with that paper is that A, it was not a controlled studied, there were no controls; and B, smoking histories were unavailable.

As you know, there is a synergistic effect between asbestos exposure and cigarette smokers, and asbestos workers who smoke cigarettes have a greater chance of developing lung cancer than those who don't.

Q. Just to make sure we're on the same page here, you testified that it was your belief that there was possibly a difference between the Coalinga chrysotile and all other chrysotile.

I want to make sure I'm getting this right. Is that correct?

MR. GARRARD: I've got to object to the form of your question. He didn't say there possibly was; he said there was a difference.

A. In the physical properties.

Q. Insofar as the disease-causing aspects of these fibers, does chrysotile asbestos, chrysotile, in your view, cause asbestosis?

A. Chrysotile asbestos as a generic term?

Q. Right.

A. Yes.

Q. Does the Coalinga chrysotile cause asbestosis?

A. All I can say is that -- and I'm only going on my personal experience -- is that I haven't

seen it.

Q. Does chrysotile, generic chrysotile -- let's change again -- is chrysotile associated with lung cancer?

A. Yes, it is.

Q. Is Coalinga associated with lung cancer?

A. Again, I must answer the same way. My personal experience, I haven't seen it.

Q. Now, how long did Union Carbide have that mine? Do you know?

A. I don't know for sure; but I believe it was started up sometime in the sixties. I just don't know for sure.

Q. So it would be fair to say that as of 1985 when Union Carbide got rid of the mine that since that's only a 20-year period that there might be cases of asbestosis and lung cancer that would come in years to come based on the latency of those diseases; isn't that true?

A. Well, whether it's true or not I don't know; but there is a possibility that followup of that population over a long period of time, if there were going to be an effect might reveal it because of the latency.

Q. Now, with regard to the issue of

chrysotile asbestos and mesothelioma, my question to you is: Is there an association at this point in time of any kind between chrysotile and mesothelioma?

A. The number of cases of mesothelioma in the literature attributed to exposure to chrysotile asbestos is extremely small; and in a recent -- well, let's put it this way: These cases have recently been reviewed by a number of people, and it would appear that the consensus of opinion is that the production of mesothelioma by chrysotile is consistent with the -- is consistent with the contamination of chrysotile by an amphibole fiber known as tremolite.

Furthermore, the cases that have been associated and reviewed in the literature following alleged chrysotile exposure only in most instances have been shown to have been probably heavily exposed as indicated by the lung burden of chrysotile fibers; and particularly where -- in the later reports that I've seen, it's possible to look at both tremolite and chrysotile and look at the ratio of the tremolite to the chrysotile in the lung, and the chrysotile disappears from the lung; it doesn't stay in the lung very readily. But the

tremolite is there, and this ratio of tremolite to chrysotile is a good indicator of the extent of exposure. If there is a lot of tremolite, there has been a heavy exposure to chrysotile.

But I think to answer your question, the census of opinion today is that any mesothelioma allegedly due to exposure to chrysotile have probably more likely resulted from the contamination of the chrysotile with tremolite.

Q. So does that mean that in your own mind you have eliminated pure chrysotile as a cause of mesothelioma?

A. No.

Q. Pure uncontaminated chrysotile?

A. I haven't eliminated; because I think that there is one factor that still needs consideration in that a population of -- has not been studied exposed to pure chrysotile, if there is a pure chrysotile that is suitable for study.

Q. Union Carbide contends that this material is pure uncontaminated chrysotile. Mr. Soignet was one of the folks -- type of person who worked in the oil fields in southeast Louisiana and onshore warehousing who was in contact with this product.

How many people would it take to make up

a cohort of people similarly situated to Mr. Soignet to begin a study on this question, if you know?

MR. GARRARD: Can you rephrase your question? I'm not sure when you say "to begin a study" that it's an answerable question. And I'm not trying to tell you how to ask your question; you may mean to do a study. I mean, you can begin a study with anything --

MR. CARUSO: You're absolutely right; you're much smarter than I am. To do a study, right.

Q. If I wanted to do a study, how many guys like Blackie Soignet would I have to go get to make up the cohort?

A. Well, a study on asbestos workers were about 300; but at that time he wasn't limiting himself to looking at any particular effect; he was looking at asbestos workers because it had been brought to his attention that they were suffering from asbestosis.

I think it depends on what you want to do. I think this is a question for an epidemiologist. And the number of -- the fact that mesothelioma is a very rare tumor still and that its incidence in the general population is only about

one in a million, its natural incidence. In order to do a study which has any power of reaching statistical significance would require quite a large population. But that's my humble, you know, opinion.

Q. So we would be looking for people in the thousands?

A. I don't know.

Q. You don't know; but it would take a lot of guys?

A. I think that would also depend on the potency of the substance that you're looking at. If you had a material that was a very potent carcinogen, you would need fewer people, because you would have more of them affected.

Q. We're talking about studying chrysotile, this product, okay?

A. I think as far as this product is concerned, you'd probably look forever and not find any.

Q. Well, I've already found one.

MR. GARRARD: Objection.

A. That's your opinion.

MR. CARUSO: Thank you. That's all the questions I have.

DIRECT EXAMINATION

BY MR. GUYTON:

Q. Doctor, when you said that asbestos has been classified by others generally speaking as a carcinogen, you do not mean by that that --

MR. GARRARD: Chrysotile, you mean?

MR. GUYTON: Let me restate that question.

Q. Did you state previously that chrysotile had been classified as a carcinogen by someone?

A. I believe that's correct, yes.

Q. You didn't mean by that that chrysotile was a carcinogen in every particular type of cancer or circumstances; did you?

MR. CARUSO: I object to the leading form of the question.

A. I'm not sure what you mean "in every type of --"

Q. Well, chrysotile, for instance, doesn't cause skin cancer; does it?

A. Oh, I see what you mean.

Well, no, not in general. What I was referring to was lung cancer.

Q. Specifically it has been classified as a carcinogen as lung cancer?

A. Well, it's classified a carcinogen based upon the fact that it has been demonstrated to cause lung cancer in humans.

MR. GUYTON: Pass the witness.

RECROSS-EXAMINATION

BY MR. CARUSO:

Q. Are you a stockholder in Union Carbide?

A. No.

Q. Have you seen this before, a copy of the 1987 10K from Union Carbide, a copy of the 1987 stockholder's report? Have you ever seen those before?

A. I may have seen some of them; but I don't get them.

Q. You don't get those, though?

A. (Witness shakes head negatively.)

MR. CARUSO: I have nothing else. Thank you.

Having concluded this deposition, at this time I reserve the right to reconvene it after I've had an opportunity to receive a transcript and argue the objections that were made by Mr. Garrard, particularly with regard to his particular

///

instructions to the witness not to answer certain questions.

(Deposition concluded at 3:55 p.m.)

C E R T I F I C A T E

STATE OF GEORGIA:

COUNTY OF FULTON:

I hereby certify that the foregoing transcript was taken down, as stated in the caption, and the questions and answers thereto were reduced to typewriting under my direction; that the foregoing pages 1 through 63 represent a true, complete, and correct transcript of the evidence given upon said hearing, and I further certify that I am not of kin or counsel to the parties in the case; am not in the regular employ of counsel for any of said parties; nor am I in anywise interested in the result of said case.

This, the 10th day of March 1989.

Janet K. Wilson

JANET K. WILSON, CCR-B-1108
My commission expires on the
29th day of September, 1990.

DEPOSITION OF DR. HILTON C. LEWINSOHN/JAN

I do hereby certify that I have read all questions propounded to me and all answers given by me on March 9, 1989, taken before Janet K. Wilson, and that:

____ 1) There are no changes noted.
____ 2) The following changes are noted:

Pursuant to Rule 30 (7)(e) of the Federal Rules of Civil Procedure and/or Georgia Code Annotated 81A-130 (B)(6)(e), both of which read in part: Any changes in form or substance which you desire to make shall be entered upon the deposition...with a statement of the reasons given...for making them. Accordingly, to assist you in effecting corrections, please use the form below:

Page No.___ Line No.__ should read:
_____
_____
_____
And the reason for the change is:_____
_____

Page No.___ Line No.__ should read:
_____
_____
_____
And the reason for the change is:_____
_____

Page No.___ Line No.__ should read:
_____
_____
_____
And the reason for the change is:_____
_____

Page No.___ Line No.__ should read:
_____
_____
_____
And the reason for the change is:_____
_____

Page No.___ Line No.__ should read:
_____
_____
_____

DEPOSITION OF DR. HILTON C. LEWINSOHN/JAN

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

And the reason for the change is:____________________

Page No.____ Line No.__ should read:

DEPOSITION OF DR. HILTON C. LEWINSOHN/JAN

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

And the reason for the change is:______________

Page No.___ Line No.__ should read:

DEPOSITION OF DR. HILTON C. LEWINSOHN/JAN

And the reason for the change is:_____

_____

Page No.___ Line No.__ should read:

_____

_____

_____

And the reason for the change is:_____

_____

If supplemental or additional pages are necessary, please furnish same in typewriting annexed to this deposition.

_____

DR. HILTON C. LEWINSOHN

Sworn to and subscribed before me,
this the ___ day of _____, 1989.

_____

Notary Public.
My commission expires: _____

AMENDED CERTIFICATE

STATE OF GEORGIA:

COUNTY OF FULTON:

I hereby certify that in addition to the certification made on Page 64 of the transcript, this deposition is being filed pending the witness' right to review said deposition within 30 days, which time has not elapsed.

This, the 10th day of March 1989.

Janet K. Wilson

JANET K. WILSON
Certified Court Reporter and
Notary Public.