

IN THE CIRCUIT COURT OF THE  
FOURTH JUDICIAL CIRCUIT, IN AND  
FOR DUVAL COUNTY, FLORIDA.

ERNEST D. McDONALD,  
Plaintiff,

VS.

CASE NO: 93-03937-CA  
DIVISION: CV-D

CSX TP-WSPORTATION, INC.,  
a corporation,  
Defendant.

STATE OF FLORIDA  
COUNTY OF DUVAL

DEPOSITION OF: MARK E. BADDERS, CIH

TAKEN: Pursuant to Notice  
Instance of Plaintiff

DATE: Tuesday, August 9, 1994

TIME: Commencing at 1:25 p.m.

PLACE: 500 Water Street  
Jacksonville, Florida 32202

BEFORE: RONALD E. ROHRER  
Stenographic Court Reporter  
and Notary Public, State of  
Florida at Large

ASSOCIATED STENOTYPE REPORTERS  
904/356-0401

ORIGINAL

## A P P E A R A N C E S

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Appearing on behalf of Plaintiff.

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Appearing on behalf of Defendant.

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## EXHIBITS

[No Exhibits Were Marked]

1                                   MARK E. BADDERS,  
2 the Deponent herein, being first duly sworn, was examined  
3 and testified as follows;

4                                   DIRECT EXAMINATION

5 BY MR. SHAPIRO:

6                   Q My name is Rick Shapiro and I represent the  
7 plaintiff, Ernest McDonald, in a case that's pending here  
8 in Jacksonville State Court. I'm going to be asking you  
9 some questions, Mr. Badders, and if you don't understand  
10 anything I ask or the question seems ambiguous, I'll be  
11 happy to rephrase it. Just ask me, okay?

12                   A Okay.

13                   Q Also I want to state at the beginning here that,  
14 as you know, I'm going to be asking questions that pertain  
15 to Ernest McDonald's case pending here. But a number of  
16 the questions will deal with policies or procedures of the  
17 entire railraod with respect to silicosis or silica dust or  
18 the general matters in the case. So if I ask a question  
19 about what the defendant has done or what CSX has done,  
20 I'll be referring to not something they've done just for  
21 Mr. McDonald but anything the railroad has done on the  
22 particular issue of silicosis or silica dust.

23                                   Do you understand that, or try to at least?

24                   A We'll try.

25                   Q Mr. Badders, what is your position with CSX

1 Railroad?  
2 A Director, industrial hygiene.  
3 Q Are you certified as an industrial hygienist?  
4 A Yes.  
5 Q By what body?  
6 A The American Board of Industrial Hygiene.  
7 Q when did you first become a certified industrial  
8 hygienist?  
9 A 1990.  
10 Q Was that the first time that you attempted to  
11 become certified?  
12 A Yes.  
13 Q I had requested a copy of your resume.  
14 Is that something that you can produce through  
15 your lawyer at the first break we have?  
16 A Yes.  
17 Q It would have made some things quicker, but since  
18 I don't have it in front of me let me ask you, are you a  
19 college graduate?  
20 A Yes.  
21 Q Where did you graduate?  
22 A Indiana State University.  
23 Q What year was that?  
24 A Actually graduated from there twice, 1975 and  
25 1978.

1 Q Indiana State University, is there one campus at  
2 that school or is it located in several cities in Indiana;  
3 in other words, what campus did you graduate from  
4 initially?

5 A Terre Haute, Indiana.

6 Q And what was your degree?

7 A Life sciences and environmental health.

8 Q Is that the name of the degree or was that a  
9 minor? I mean what was the degree?

10 A The degree was in life sciences and the second  
11 degree was in environmental health.

12 Q Was the second degree the one that was 1970 what?

13 A 1978.

14 Q Was that an undergrad degree or graduate degree?

15 A Undergraduate.

16 Q Were you going full time up until 1975 and then  
17 you got your first degree?

18 A Yes.

19 Q All right.

20 How old were you when you got that degree in  
21 1975, approximately?

22 A 22, 23.

23 Q And you attended full time for the years  
24 preceding 1975, that one school?

25 A Yes.

1 Q were you working between 1975 and 1978 or were  
2 you just attending school?

3 A i was working during part of that time, attending  
4 school part of that time.

5 Q What kind of job were you doing during the period  
6 75/78?

7 A Working in a lumber yard.

8 Q So it wasn't really related to industrial hygiene  
9 or anything like that?

10 A No.

11 Q Life sciences degree in 1975 and in 1978 it was  
12 environmental, did you say health?

13 A Yes.

14 Q Do you have any other postgraduate degrees?

15 A No.

16 Q What was the first experience you had that  
17 related to the industrial hygiene field once you were  
18 graduated from college?

19 A As far as work, it was with the state of  
20 Wisconsin. They were doing a study on formaldehyde in  
21 mobile homes.

22 Q What was your position with the state?

23 A I don't recall. I worked for the health  
24 department. I was one of their technicians, I guess you'd  
25 say.

1 Q Did you do some sampling or anything like that or  
2 testing or what kind of technician work did you do?

3 A I did air sampling and also performed pulmonary  
4 function tests and other testings associated with the, with  
5 that research program.

6 Q Did you have any other jobs before you came to  
7 CSX to work?

8 A No, other than internships associated with  
9 school.

10 Q What year did you begin with CSX?

11 A 1980.

12 Q And what was your first position with CSX?

13 A Industrial hygienist.

14 Q All right.

15 Now, naturally you've been deposed previously.  
16 First let me ask you this: Have you been deposed in any  
17 case where a plaintiff was claiming any claim relating to  
18 silicosis or silica dust in the past?

19 A Not that I can recall.

20 Q I'm familiar with some other depositions I've  
21 seen. Not necessarily on silica. But you haven't been  
22 deposed in the last year involving silicosis or silica  
23 dust?

24 A Not that I recall that was specifically on  
25 silica. They may have asked a question or two during a

1 deposition regarding it but not on silica itself, no.

2 Q Isn't there another case pending in Florida where  
3 Marty Jackson or the firm of Jones and Groenjay (phonetic)  
4 has a silica claim?

5 A I don't know.

6 Q You don't recall?

7 A No.

8 Q I'm interested in looking at some of your prior  
9 testimony.

10 Do you keep any record of when you are deposed?

11 A No.

12 Q Well, to attend a deposition do you have to fill  
13 out any paperwork that indicates that you'll be sitting in  
14 a deposition?

15 A No.

16 Q When was the last time you were deposed, last  
17 week, a month ago?

18 A It was probably a month ago, maybe six weeks.

19 Q What case was it?

20 A I don't recall.

21 Q How can we go about getting you to produce the  
22 name of that case? What will you have to refer to?

23 MR. LEACH: If he knows.

24 BY MR. SHAPIRO:

25 Q In other words, not necessarily this moment, but

1 I'll probably ask your attorney to provide me with the  
2 information.

3 How would you have to go about finding it? Would  
4 you just have to look at your calendar for a certain day to  
5 see the reference or what?

6 A I'd have to look at my calendar to see what I had  
7 and I would not normally reference a case, I'd reference  
8 the attorney that I've been dealing with on that particular  
9 case.

10 Q So you'll have certainly the name of the defense  
11 lawyer, Mr. Leach or whoever, right?

12 A Yes.

13 Q I would ask you if you could provide any  
14 depositions that you've testified in over the last 12  
15 months through your lawyer; is that something that you can  
16 put together within a few days?

17 MR. LEACH: Let me just object. That's something  
18 we would object to producing in that it's not  
19 something regularly kept by Mr. Badders. I think that  
20 he just testified that he doesn't keep deposition  
21 transcripts.

22 MR. SHAPIRO: No, not the transcripts, I just  
23 want the reference to the cases Mr. Badders has  
24 testified in.

25 MR. LEACH: He doesn't create any documents that

1 has references to cases.

2 MR. SHAPIRO: He knows the cases he's testified  
3 in. I'm going to ask that you produce the names of  
4 the cases or the defense lawyer on any cases he's  
5 testified in in the last 12 months. I'm not asking  
6 that it be produced today, but I'm going to ask for  
7 it.

8 MR. LEACH: I'm just telling you we're going to  
9 object to it. That's okay.

10 BY MR. SHAPIRO:

11 Q The last case that you testified in -- I'll take  
12 as long as you all want me to on this. We can make it real  
13 quick and you can agree to do it or else I'm going to go  
14 into what the case was about, when he testified, and we can  
15 make it hard, we can make it easy.

16 Do you want to tell me about the last deposition  
17 you had, what the case was about?

18 A I don't recall specifically what the deposition  
19

20 MR. LEACH: Let me just say on the record, Mr.  
21 Badders is deposed routinely in cases. He's testified  
22 he doesn't keep records of the names of the cases and  
23 he doesn't have deposition transcripts. I don't  
24 understand --

25 MR. SHAPIRO: Most of the rules now provide that

1 the plaintiff or the defendant is entitled to the  
2 names of the cases that the witness has testified in  
3 in the last three years, particularly the federal  
4 rules. It's relevant. The judge is going to let me  
5 know, if he doesn't know the style of a case, Eric,  
6 all he's got to do is tell you the defense lawyer and  
7 what he knows about it and I can call the defense  
8 lawyer and try to obtain the transcript. But I'm  
9 goint to go down that road. I don't want to waste an  
10 hour going into it now if you all agree --

11 MR. LEACH: It's up to you. It's your time.

12 BY MR. SHAPIRO:

13 Q Mr. Badders, when you testified a few weeks ago,  
14 who was the defense lawyer in the case?

15 A This is on a deposition, right?

16 Q Yes. Any deposition.

17 MR. LEACH: If you know.

18 A I don't recall for sure, exactly.

19 Q Was it here in this building?

20 A Yes, it was probably here.

21 Q And was it a case involving a lung disease or  
22 just involving an industrial accident, what was it about?

23 A It probably involved hearing loss.

24 Q Who was the defense lawyer? Is your memory  
25 coming back to you?

1           A     No.  
2           Q     But you'll have a reference to it on your  
3 calendar,     right?  
4           A     I hope to have it on my calendar. I don't  
5 necessarily keep calendars for extended periods of time  
6 either.  
7           Q     Do you usually meet with the defense lawyer  
8 before you're deposed in a case?  
9           A     Sometimes.  
10          Q     You met with Mr. Leach before this deposition,  
11 didn't you?  
12          A     Yes.  
13          Q     Was that yesterday? Well, I'm not going to ask  
14 you what you talked about, but I want to know the times you  
15 met with him specifically to prepare for this deposition.  
16          A     I met with him yesterday.  
17          Q     Did you meet with him on prior occasions to  
18 discuss silicosis cases?  
19                MR. LEACH: Let me object. That's work product  
20 and I'm going to instruct him not to answer any  
21 questions about conversations he may have had with me.  
22                MR. SHAPIRO: I agree. But I'd like to know the  
23 dates and how many different times he's met.  
24                MR. LEACH: I'm going to instruct him not to  
25 answer that question. You can take that up with the

1 Court.

2 MR. SHAPIRO: So you're going to instruct him not  
3 to tell me the different dates that he's met with you.

4 MR. LEACH: Correct.

5 MR. SHAPIRO: On what basis.

6 MR. LEACH: If you want to know when he met with  
7 me in preparation for this deposition, I don't have  
8 any problem with that.

9 MR. SHAPIRO: That's what I said. But when he  
10 met with you and, say, Mr. Ringer, that had to do with  
11 this case, if you dealt with all the silicosis cases.

12 MR. LEACH: Again I'm going to object on  
13 attorney/client privilege grounds and work product  
14 grounds and instruct him not to answer that question.

15 MR. SHAPIRO: Why was I able to ask him if he met  
16 with you yesterday?

17 MR. LEACH: Because I think you're entitled to  
18 know what he's done to prepare for this deposition.  
19 The fact that he's met with me, I think that  
20 potentially could be relevant.

21 BY MR. SHAPIRO:

22 Q Well, you know, Mr. Badders, what do you remember  
23 about that last deposition you had besides the fact it was  
24 hearing loss?

25 MR. SHAPIRO: We can play hide the ball all day,

1 it's just that we're going to be here until evening.

2 MR. LEACH: Let me object to the continual  
3 badgering of the -- that's a ridiculous question.  
4 He's been deposed in hearing loss cases , toxic  
5 encephalopathy cases, other cases that have absolutely  
6 nothing to do with this case.

7 MR. SHAPIRO: It's up to me to decide whether it  
8 has something to do with it, Eric. If it will lead  
9 me to discoverable evidence. I mean --

10 MR. LEACH: You've already asked him, does he  
11 have any transcripts or any records indicating which  
12 depositions have been taken of him and he said no.

13 MR. SHAPIRO: No. I'm not asking about  
14 transcripts. I don't care if he ever has one  
15 transcript. I want the names of the cases or what he  
16 recalls. Now, if you all want to say he doesn't  
17 recall anything, I'll just continue to ask the  
18 questions to find out what he recalls.

19 MR. LEACH: It's up to you.

20 MR. SHAPIRO: Okay.

21 BY MR. SHAPIRO:

22 Q What do you remember about the last deposition,  
23 Mr. Badders?

24 A The best I can recall it was a hearing loss case.

25 Q Was it a case pending here in this court, do you

I reinember?

2 A I don't know where the case was pending.

3 Q were you questioned by the Plaintiff's lawyer in  
4 the case?

5 A Yes.

6 Q Do you remember who he was?

7 A No.

8 Q What was the last deposition before that  
9 deposition that you testified in?

10 A Again probably another hearing loss case.

11 Q Did you meet with the defense lawyer before that  
12 deposition?

13 A I'm sure I did.

14 Q Do you keep a calendar?

15 A I keep -- I keep a calendar, but I don't  
16 necessarily keep it for very long. I may keep it for a  
17 month or so.

18 Q Do you keep your calendar on a computer or a hard  
19 copy in a regular book?

20 A I normally keep it on, either in a daytimer,  
21 usually in a daytimer.

22 Q Do you have a computer calendar? Our firm has  
23 one on computer now. I was just wondering.

24 A No.

25 Q So it's all manual?

1 A Yes.

2 Q Do you schedule your own appointments or do you  
3 have a secretary?

4 A I have a secretary, but usually depositions are  
5 scheduled through me, although some have been scheduled  
6 through her.

7 Q You've had no prior deposition on a case that was  
8 primarily involving a silicosis claim; that's your  
9 testimony, correct?

10 A I don't recall any deposition that I have ever  
11 given before on silicosis.

12 Q When you attended Indiana State University, did  
13 you take course work on industrial hygiene?

14 A No. It was environmental health and it had  
15 probably some mention of some of the areas that included  
16 industrial hygiene, but not specifically industrial  
17 hygiene, no.

18 Q Did you have any courses that dealt with any  
19 industrial hygiene matters?

20 A As I just said, the courses at Indiana State  
21 touched on areas that included industrial hygiene, but no  
22 specific classes on it.

23 Q Did you have any textbooks at college that were  
24 typical industrial hygiene textbooks?

25 A No, not from Indiana State.

1           Q    Subsequent to those degrees, what training have  
2 you had in industrial hygiene?  
3           A    I have taken graduate courses in industrial  
4 hygiene at the University of Minnesota.  
5           Q    When did you do that?  
6           A    I did that in 78/79.  
7           Q    You just took course work, you didn't get a  
8 degree?  
9           A    Yes.  
10          Q    What were those courses, just best you recall  
11 some of the names of the courses?  
12          A    The course work was actually in environmental  
13 health, but the course work included courses on industrial  
14 hygiene, toxicology, epidemiology, sampling methods used in  
15 industrial hygiene.  
16          Q    Was this graduate school or undergrad?  
17          A    Graduate.  
18          Q    And it was University of Minnesota?  
19          A    Yes.  
20          Q    What city is that?  
21          A    Minneapolis.  
22          Q    Can you recall any of the textbooks that you  
23 utilized in any of those courses, because some of those, I  
24 take it, you may still use occasionally?  
25          A    There's a textbook called The Industrial

1 Environment, Its Evaluation and Control.

2 Q Any others?

3 A There was a textbook on Industrial Ventilation.

4 Q Is that the title, as best you recall?

5 A Yes, as far as I can recall that's the name of  
6 it.

7 Q Any other textbooks that you studied, say at the  
8 University of, was it Minnesota?

9 A Yes.

10 Q University of Minnesota that you have found  
11 useful as you've gotten much more involved in it?

12 A I also have an industrial ventilation manual that  
13 I used at Minnesota. As far as the other books, I can't  
14 recall any other books specifically that I had. There were  
15 a number of books that we used out of the libraries.

16 Q Did you take any other courses after you went to  
17 the University of Minnesota, that was during 78/79?

18 A Yes.

19 Q Did you take any other course work on industrial  
20 hygiene after that?

21 A I regularly attend short courses and seminars  
22 associated with industrial hygiene conferences.

23 Q Are any of those listed on your resume that  
24 you're going to provide through your lawyer?

25 A No.

1 Q Do you have a regular, like as a CIH, do you have  
2 to attend a certain amount of credit per year or anything  
3 like that? What's involved?

4 A I have to maintain certification points. Part of  
5 those certification points include attending or can include  
6 attending classes, professional development classes and  
7 things such as that.

8 Q Flipping back to when you were at University of  
9 Minnesota: After that you took a number of different  
10 courses, how many different courses did you take there,  
11 about?

12 A Probably at least 20.

13 Q Over a two-year period?

14 A It was actually one calendar year.

15 Q Did you ever study Paddy (phoenetic) industrial  
16 hygiene? He's got an industrial hygiene textbook out.  
17 It's been out for a number of years.

18 A Well, we didn't use it as a textbook. It was one  
19 of the reference books in the library that we used quite  
20 frequently and I have used that book, yes.

21 Q I noticed that you, through your production in  
22 this case, included just a short excerpt of the book, do  
23 you recall that?

24 A No. But I may have copied something out of  
25 Paddy's, we use Paddy's.

1 Q That's one you use from time to time, I take it?

2 A Yes.

3 Q Do you consider that a recognized industrial  
4 hygiene textbook?

5 A I think it's generally recognized as an  
6 industrial hygiene source of information.

7 Q Let me ask you this: What's your definition of  
8 industrial hygiene?

9 A Well, there are a number of definitions out  
10 there. I guess the one that I relate to the most is the  
11 art and science of -- relating to going into the workplace,  
12 looking at how people do their work, determining if there's  
13 exposures that need evaluation, making those evaluations  
14 and then recommending control measures when appropriate.

15 Q What are the control measures designed to  
16 accomplish?

17 A To reduce the exposure of the individual to  
18 whatever agent I'm trying to reduce exposure from.

19 Q Such as a harmful substance or a bad chemical  
20 that could cause health hazard, something like that?

21 A Well, it could be from a chemical or it could be  
22 from noise. It could be from any physical or chemical  
23 agent that I have done the evaluation on.

24 Q All right. When you first started with CSX you  
25 mentioned you were an industrial hygienist at that time,

1 which was 1980 or 1981?

2 A 1980.

3 Q Were there any other industrial hygienists  
4 working for CSX?

5 A No.

6 Q Was it CSX Transportation, Inc. then or was it a  
7 different actual title of the railroad?

8 A It was actually a different company.

9 Q What was the name that you worked for then, which  
10 named railroad?

11 A When I was hired I worked initially for Seaboard  
12 Coastline Industries, Incorporated.

13 Q And that predated the existence of CSX  
14 Transportation, right?

15 A Yes.

16 Q What states did that railroad serve generally?

17 A It served, primarily, the southeast United  
18 States. So that would include Louisiana, Mississippi,  
19 Alabama, Kentucky, Tennessee, the Carolinas, Georgia,  
20 Florida, also went up into the Midwest and included  
21 Illinois and had some trackage in Indiana. I can't recall.  
22 I don't think they had anything in Ohio.

23 Q So it was Seaboard Coastline Railroad at that  
24 time in 80 or 81; is that what you said?

25 A Well, Seaboard Coastline Railroad didn't -- I

1 don't think it existed in 81.

2 Q What was the exact title then? I'm sorry.

3 A Seaboard Coastline Industries was who I was  
4 working for at the time.

5 Q Did they have any industrial hygienists on staff  
6 prior to you coming on board?

7 A No.

8 Q So it was a new full-time position with the  
9 railroad?

10 A Yes.

11 Q I take it prior to that time they had people that  
12 were in titles like health or safety or something like that  
13 but no one who was actually at this titled industrial  
14 hygienist?

15 MR. LEACH: Object to the predicate. If you  
16 know.

17 BY MR. SHAPIRO:

18 Q Is that true?

19 A There was a safety department beforehand.

20 Q When you came on board, what department did you  
21 get put into?

22 A Hazardous Materials Control.

23 Q That was an existing department?

24 A Yes.

25 Q Who was considered your immediate superior?

1           A    Peter Gill.  
2           Q    Peter Gill?  
3           A    Yes.  
4           Q    What was his function or title?  
5           A    He was manager of Hazardous Materials Control.  
6           Q    What was his background and training?  
7           A    Mainly in fire prevention.  
8           Q    He didn't have an industrial hygiene background  
9   per se, did he?  
10          A    No.  
11          Q    What railroad and when did Seaboard merge with  
12   next?  
13          A    Okay. I really don't understand.  
14          Q    When was the next merger? I want to move forward  
15   as quickly as I can to when you became CSX Transportation,  
16   Inc. but when was the next, datewise when was the next  
17   merger of Seaboard with any other railroad? Some of this  
18   gets into -- I want to follow up is where the industrial  
19   hygienists came from and who was there certain dates. In  
20   other words, after 1980 or 81, you were employed by  
21   Seaboard.  
22          Q    When was the next merger where the name changed  
23   at all?  
24          A    Okay. 1981 the railroads, meaning the L&N  
25   Railroad, the Georgia Railroad, the Clinchfield Railroad,

1 the Seaboard Coastline Railroad merged under one company  
2 name, although I think the individual railroads maintained  
3 their legal names at this time, Family Lines System.  
4 Somebody figured out six months after that that they forgot  
5 a railroad, so they made it Family Lines Rail Systems six  
6 months after that.

7 Then in about 1984, I believe, maybe 85, Seaboard  
8 System Railroad was created which merged all the railroads.  
9 And I think at that time the railroads actually lost their  
10 individual identities, and as far as the formation of CSX,  
11 exactly when that happened on a high corporate level, I  
12 have no idea when the actual papers were actually signed.  
13 When it became effective that I was working on the system  
14 was probably late 86, early 87.

15 Q When these mergers started happening, now, I'm  
16 not asking you exact years or whatever, and there were a  
17 number of railroads that were merged, soon after you joined  
18 Seaboard did any of those other smaller lines in the first  
19 couple of mergers have an industrial hygienist on staff?

20 A No.

21 Q So all those ones you mentioned between 80 and  
22 85, those various mergers, you were the only IH or  
23 industrial hygienist, right?

24 A Yes.

25 Q When does Chessie come in? I didn't hear the

1 name Chessie. Wasn't there one of the mergers involving  
2 Chessie?

3 A When CSX Transportation was formed, that was a  
4 result of the merger of the Chessie System and Seaboard  
5 System Railroads. That occurred around 86, 87.

6 Q So after 85 when Chessie got involved and merged,  
7 Chessie did have an industrial hygienist somewhere on their  
8 staff, didn't they?

9 A Yes.

10 Q Who was the industrial hygienist at the time when  
11 the merger happened with Chessie?

12 A Jay Rupp.

13 Q Do you know where Jay Rupp is now?

14 A He's in the Baltimore area.

15 Q Is he still working or is he retired?

16 A He's still working.

17 Q What does he do?

18 A He's an industrial hygienist.

19 Q You're chief industrial hygienist, or what is  
20 your relation to him on the hierarchy?

21 A He doesn't work for CSX.

22 Q I'm sorry?

23 A He doesn't work for CSX.

24 Q What happened to him when the mergers occurred?

25 A He resigned and stayed in the Baltimore area.

1 Q So he hasn't been working for CSX Transportation  
2 since the merger or did he have a buy out soon after the  
3 merger or what?

4 A Soon after the merger he resigned. I don't know  
5 if he had a buy out, but he left the company.

6 Q Do you know how long he had been with Chessie  
7 approximately from what your understanding is?

8 A I think he was there about three or four years.

9 Q That was his whole tenure there?

10 A Yes.

11 Q About how old was he, is he now?

12 A I would guess probably in his mid 40s.

13 Q Did you all ever interact together at any time to  
14 coordinate anything after this merger?

15 A We talked on the phone occasionally and  
16 beforehand we worked on a committee where we were combining  
17 the personal protective equipment catalogs.

18 Q That would have been about what year?

19 A Probably 86.

20 Q And that was, well, that was several years after  
21 you had done your initial reporting on silica dust testing  
22 in the early 1980s, correct?

23 A Yes.

24 Q Had Chessie done any silica dust testing of any  
25 kind that you're aware of?

1           A     I'm not aware that Chessie had done any  
2 themselves, no.  
3           Q     What are you aware of, any other railroad that  
4 they absorbed had done any silica dust testing?  
5           A     No.  
6           Q     Is that a topic that you and Mr. Rupp ever  
7 discussed at any time prior to his resignation?  
8           A     We probably discussed at one time the testing  
9 that had been done.  
10          Q     By you?  
11          A     No.  
12          Q     By who?  
13          A     We probably did discuss what testing I had done,  
14 yes.  
15          Q     Well, are you aware of any other testing that Mr.  
16 Rupp had any supervisory authority over of silica dust?  
17          A     No.  
18          Q     What do you remember about your discussions with  
19 him about silica dust testing by 1986?  
20                MR. LEACH: Object. It's over broad.  
21          A     We had -- I'm sure we had talked at least some  
22 regarding my test results that I had done in the early 80s.  
23          Q     Right. Well, had he done -- had he conveyed to  
24 you that he had done any silica dust testing or any of the  
25 Chessie lines or its acquired railroads had done any silica

1 dust testing, whether in locomotive cabs, sandblasters or  
2 track maintenance workers?

3 A He didn't indicate that he had any sampling  
4 results like that. I don't recall ever seeing any sampling  
5 results that indicated that.

6 Q Well, you've said that you had some discussion  
7 with him about coordinating, I presume, the respiratory  
8 protection manuals because you were merging the railroad,  
9 correct?

10 A The personnel protective equipment catalog is what  
11 I think I specifically mentioned.

12 Q Okay. Did he give any input about personal  
13 protective equipment for workers exposed to ballast or  
14 silica dust, if you recall?

15 A I don't recall that he stated anything specific  
16 about that, no.

17 Q You can't be sure or -- I don't want to  
18 characterize your testimony, but I want to get it on the  
19 record.

20 You're saying you have no knowledge of whether  
21 Mr. Rupp had supervised any silica dust testing?

22 A I don't recall seeing any data that Mr. Rupp had  
23 created when he was working for Chessie System regarding  
24 exposure to silica dust on the railroad.

25 Q Who do you report to? Who is your immediate

1 supervisor now?  
2 A Dr. Goldman.  
3 Q Is he in the medical department?  
4 A Yes.  
5 Q What is his title in the medical department?  
6 A Chief medical officer.  
7 Q How recently has he become chief medical officer?  
8 A He started about a month ago.  
9 Q What is Dr. Tomasino's status?  
10 A He is one of the staff physicians.  
11 Q Why has there been a change? What's your  
12 understanding?  
13 A The company hired a new chief medical officer.  
14 Q Is Dr. Tomasino near retirement or is there any  
15 other reason you're aware of why he would be removed as  
16 chief medical officer?  
17 MR. LEACH: Let me object. Don't speculate on  
18 anything. That calls for speculation.  
19 MR. SHAPIRO: Right, I don't want him to guess.  
20 BY MR. SHAPIRO:  
21 Q If you're aware of the reasons?  
22 A I'm not aware of any specific reasons.  
23 Q What is Dr. Goldman's first name?  
24 A Steve.  
25 Q Prior to a month ago you reported to Dr.

1 Tomasino?

2 A No.

3 Q Who was in charge of you?

4 A Dr. Cook (phoenetic).

5 Q And he's associate or what's his title?

6 A He is associate chief medical officer.

7 Q There's a job description somewhere for your job,  
8 isn't there, a piece of paper in writing?

9 A Yes, I'm sure there is.

10 Q Can you produce that through your lawyer? I have  
11 seen a prior deposition where I believe you produced it.  
12 Is that something you can produce through your lawyer?

13 A I think our manager of medical administration is  
14 the one that has that and I think she's out today.

15 Q No. I don't mean this minute, but through your  
16 lawyer can you come up with it in the next couple of days  
17 so you can produce it for me?

18 A We can come up with it. I don't know what the  
19 reason is this person's out. They may be out on vacation  
20 or something, so I don't know until they get back. Her  
21 files are locked up.

22 Q You don't keep a copy of your own job  
23 description?

24 A I'm pretty sure I don't have a copy of it.

25 Q You started with the railroad, what was the month

1 and the year?

2 A January of 1980.

3 Q What caused you to decide to do silica dust  
4 testing in 1981? There had to be something that made you  
5 decide to test.

6 A Actually I think it was as a result of  
7 observation that I had seen in operation where they were  
8 dumping ballast.

9 Q Were you just out patrolling the troops, so to  
10 speak, or what caused you to go and look?

11 A I was becoming familiar with various railroad  
12 operations, and when I saw that particular operation I  
13 thought it needed to be evaluated so I did.

14 Q And what was it that you saw that made you decide  
15 to evaluate it, was it the clouds of dust coming up?

16 A I saw that it was dusty, at least when unloading  
17 ballast.

is Q Tell me what you visually saw that made you  
19 decide to do the testing?

20 A It was 13 years ago so I can't tell you exactly  
21 but it was probably that I probably saw clouds of dust as a  
22 result of unloading ballast.

23 Q Before I get too far out of something I started  
24 to ask you before, I was asking you about some industrial  
25 hygiene textbooks. You said that Paddy on Industrial

1 Hygiene is one that you certainly refer to. You have it  
2 here in your office, right?

3 A Yes, I have used it. Also when you asked earlier  
4 about some of the reference books, there's a book on  
5 toxicology by Cassert and Douel that I used.

6 Q Casserat?

7 A Cassert.

8 Q How do you spell that?

9 A I think it's C-a-s-s-e-r-t and Douel, D-o-u-e-l,  
10 I think. It's on toxicology.

11 MR. LEACH: That was back in school?

12 BY MR. SHAPIRO:

13 Q That was University of Minnesota or more  
14 recently?

15 A I used that at Minnesota.

16 Q Do you still refer to that?

17 A I haven't looked at it in a while because it's  
18 kind of dated.

19 Q What about Fundamentals of Industrial Hygiene,  
20 Plogg; is that something you have?

21 A I don't recall if that's the name of the book.  
22 There's a book called Fundamentals of Industrial Hygiene  
23 that's put out by the National Safety Council and that may  
24 be the one.

25 Q Is that the one you're referring to (indicating

1 document)?

2 A Yeah, that's the one, the National Safety  
3 Council.

4 Q Is that the one you refer to you have in your  
5 library?

6 A I have a copy of that in my library.

7 Q Is it a generally accepted textbook on industrial  
8 hygiene?

9 A I don't know if I could say, you know, if it's  
10 generally accepted. But it is one of the textbooks that's  
11 used in industrial hygiene.

12 Q Did you mention the one by Drinker and Hatch  
13 called Industrial Dust? Is that one you have ever seen?

14 MR. LEACH: Are you talking now back in school?

15 MR. SHAPIRO: Yes.

16 BY MR. SHAPIRO:

17 Q At University of Minnesota?

18 A I don't recall seeing it.

19 Q Is that one you've used presently?

20 A I don't recall using it but I may have.

21 Q You've heard of it? This is the cover sheet.

22 A No. I probably didn't use a book that was  
23 published in 1936.

24 It probably has some reprints.

25 MR. SHAPIRO: You want a take a break for a

1 couple minutes?

2 (Whereupon, a short recess was taken.)

3 BY MR. SHAPIRO:

4 Q Referring to the time when you started with the  
5 railroad, I think back to the time actually the next year  
6 when you started to do this silica dust testing, once you  
7 saw the problem that you said you wanted to test relating  
8 to the ballast dust, at that time what did you know about  
9 the disease silicosis?

10 A I think I just knew some general parameters,  
11 basically that silica exposure, regular silica exposure at  
12 fairly high concentrations at fairly long periods of time  
13 can lead to a disease called silicosis in sensitive  
14 individuals.

15 Q Had you heard about any of that in any of the  
16 industrial hygiene course work that you had before or do  
17 you recall how you knew that?

18 A It may very well have been mentioned in some of  
19 the course work. I don't recall specifically.

20 Q I looked at your report and I'm going to pull it  
21 out and go through a few things, questions on that.

22 You referred to the disease in the first report  
23 that you wrote. What did you use to write your notes about  
24 the disease, do you remember?

25 A I don't remember offhand. It could have been the

1 toxicology books from Cassert and Douel. It could have  
2 been any number of references.

3 Q You had those available then, though, naturally,  
4 to refer to them?

5 A Those were my personal books, so, yes I had  
6 those.

7 Q What was the second one you mentioned?

8 A The Industrial Environment, Its Evaluation and  
9 Control.

10 Q Do you know who writes that?

11 A Actually it's a book that has a number of  
12 different authors. I think it comes out from -- I think  
13 it's published by the government, probably by NIOSH,  
14 N-I-O-S-H.

15 Q Is that the one you're talking about (indicating  
16 document)?

17 A Yes.

18 Q I noticed that a number of these textbooks,  
19 they're sort of a cross between a medical and, I don't know  
20 what you'd call it, medical and industrial text. They get  
21 into some medical discussions is what I'm trying to say.

22 Do you have any others that are sort of the  
23 medical side?

24 A No. When it gets very heavy into the medical  
25 side, I defer to a doctor.

1           Q Now, as a general -- there are some general  
2 principles that apply to industrial hygiene techniques once  
3 you have a hazard or a health problem that you're trying to  
4 control; is that correct?

5           A There are some general principles or techniques,  
6 most of which were developed in a fixed facility type of  
7 environment. some of those techniques are not applicable  
8 or are very difficult to implement on a global work force  
9 like the type work force I deal with.

10          Q Sure.

11                 Wouldn't it be fair to say that every health  
12 hazard has a different set of controls that may be  
13 required?

14          A Well, it's not only the health hazard but it's  
15 how the work is performed. Most of the techniques were  
16 developed in fixed facilities where you have some kind of a  
17 physical plant and you've got a person working at a fixed  
18 point. They may move around inside that plant but you know  
19 pretty much where they're at. And they're not dealing with  
20 several thousand miles of track and trying to track people  
21 down all over the place. So you might have to use slightly  
22 different techniques.

23          Q Clearly it's more difficult due to the mobile  
24 mature of the work to apply some of those principles?

25          A In some cases I'd even go beyond the point to say

1 that is was extremely difficult and possibly in some cases  
2 not even possible to do.

3 Q Well, when we're talking about these general  
4 principles, would you agree that there's a hierarchy of  
5 industrial hygiene principles that generally would start  
6 with engineering controls would normally be the best  
7 industrial hygiene method to first attempt to control  
8 whatever health hazard you're dealing with?

9 MR. LEACH: Let me just object to the question as  
10 to vagueness. I think we're here to talk about  
11 maintenance of way workers and silicosis. I think we  
12 need to be a little more specific.

13 MR. SRAPIRO: Well, at this moment I'm asking him  
14 about the general then we're going to the specific.

15 BY MR. SHAPIRO:

16 Q I asked the question, to summarize the question  
17 was, as a general principle of industrial hygiene when  
18 we're talking about control of whatever, a health hazard,  
19 isn't it a generally accepted principle that engineering  
20 controls are the first and best control to attempt? I  
21 didn't say that it would work every time. I said to  
22 attempt. Isn't that generally accepted?

23 MR. LEACH: Same objection. Doesn't define the  
24 work being performed, the workers and the type of  
25 controls.

1           Go ahead if you can answer it. If not . . .

2           A    As far as a control measure, if you can develop

3           an effective engineering control that will work in the type

4           of work environment that you're dealing with and with the

5           personnel that you're dealing with, that that is more

6           effective and more desirable to put an engineering control

7           in place when possible.

8           Q    Would the next best generally accepted industrial

9           hygiene control be an administrative method?

10          MR. LEACH: Same objection as to vagueness.

11          MR. SHAPIRO: I understand.

12          A    Again it's dependent on how well you can

13          implement the administrative control. But if the

14          administrative control can be implemented, based on the

15          type of work that's being done and where it's being done

16          and all the work conditions, then that's probably the most

17          -- that's the next most acceptable control measure.

18          Q    What would be the last preferable industrial

19          hygiene control method?

20          A    Kind of the last control method that you have is

21          usually the use of personal protective equipment.

22          Q    Such as a respirator or mask?

23          A    Yes.

24          Q    And the reason that is considered the least

25          effective is because it is subject to the fact that the

1 worker may or may not use it in a proper fashion, for one  
2 thing, it may not fit the worker in the proper fashion and  
3 all those other types of situations that are controlled by  
4 the worker himself?

5 MR. LEACH: Same objection. We're dealing with  
6 silica and maintenance of way exposure. I think you  
7 could be a little more specific.

8 But if you can, answer the question.

9 A The problem with personal protective equipment of  
10 any kind is that you're depending on the people who are  
11 using it to use it properly.

12 Q Now, in your experience since you've been with  
13 the railroad in 1981, tell me what jobs -- I guess I just  
14 should ask the question broadly in terms of what types of  
15 jobs on the railroad do you perceive as involving possible  
16 exposure to silica dust?

17 MR. LEACH: I'm not going to object to that  
18 question. But to the extent you ask questions that  
19 deal with outside silica maintenance of way exposure,  
20 we've got a pending objection as to the discovery of  
21 those matters. But I think as to that question that  
22 would be fine.

23 A The areas where I think we may have some exposure  
24 to silica would include the -- some machine operators in  
25 the maintenance of way department. We may have some heavy

1 equipment operators who are part of the engineering  
2 department, trackmen during certain activities, primarily  
3 when they're dumping ballast, mechanical forces when  
4 they're sanding locomotives at certain locations, and on  
5 very rare occasions you will find it in transportation.

6 Q Well, I guess there's still some sand applied in  
7 locomotives, isn't there?

8 A Yes.

9 Q For traction?

10 A Yes.

11 Q Is that the kind of possibility you're referring  
12 to?

13 A That's a possibility, yes.

14 Q I didn't ask this so I better ask this now:

15 Prior to you doing the test in 1981 on the  
16 ballast regulators and the trackmen unloading ballast rock  
17 from rock trains, did you check or determine whether any of  
18 the railroads that you were working for, I say plural  
19 because around that time there was a combination of these  
20 railroads, did you check to see whether they did any silica  
21 dust testing at any time prior to that time that you did  
22 yours?

23 MR. LEACH: As to maintenance of way workers?

24 MR. SHAPIRO: As to anybody.

25 MR. LEACH: We would object. That's the subject

1 of a pending objection that the Court has not ruled on  
2 yet. We're not going to be answering any questions  
3 that relate to crafts other than maintenance of way  
4 workers today. So I would object and instruct him not  
5 to answer. But that has not been deemed reasonably  
6 calculated to lead to admissible evidence by the  
7 Court.

8 MR. SHAPIRO: What you're saying is the defendant  
9 has decided arbitrarily that it's not --

10 MR. LEACH: Well, I think the Court has decided  
11 that in the prior order.

12 MR. SHAPIRO: There has not been an order that  
13 has limited your response to maintenance of way. You  
14 objected.

15 MR. LEACH: I think that's the subject of your  
16 pending motion to compel in this case. So that is --

17 MR. SHAPIRO: You know the federal court has  
18 already said that you're going to have to turn it  
19 over, so what's the big deal?

20 MR. LEACH: I'm just telling you in this case  
21 that's not what Judge Beverly said.

22 MR. SHAPIRO: Your objection deals with written  
23 documents, Eric. I'm asking the man if he knows  
24 whether there was any testing. Now, if you can get a  
25 ruling that you don't have to turn it over in the

1 state court, that's fine.

2 MR. LEACH: You weren't at the hearing but the  
3 Court --

4 MR. SHAPIRO: Let's go off the record.

5 MR. LEACH: I want to go on the record because I  
6 want to make sure it's clear as to what the Court  
7 ruled.

8 MR. SHAPIRO: All right.

9 MR. LEACH: And the Court distinguished between  
10 silica maintenance of way exposures and other  
11 potential silica exposures. Mainly I believe we were  
12 dealing with sandblasters at the hearing. And she was  
13 of the opinion that that would not reasonably lead to  
14 admissible evidence.

15 So that's our objection but I wanted to place  
16 that on the record.

17 We can worry about that at another hearing  
18 another day. I'm just telling you that's our  
19 objection.

20 MR. SHAPIRO: I understand your objections there.  
21 And I'm certainly preserving your right to object to  
22 any portion of the deposition that you can get the  
23 Court to agree with you on. But I asked him if he  
24 knew of any silica dust testing prior to his 1981  
25 testing.

1 MR. LEACH: And as that relates to maintenance of  
2 way workers, I would ask him to answer that. Go ahead  
3 as it relates to maintenance of way workers.

4 A No, I'm not aware of any.

5 MR. SHAPIRO: But you've directed your witness  
6 not to answer beyond that knowing that I'm going to  
7 ask for costs and fees if I have to come back to  
8 Florida for that point.

9 MR. LEACH: That would be perfectly fine. It is  
10 our objection and I'm instructing him not to answer  
11 any questions that deal with exposures other than  
12 silica maintenance of way workers.

13 BY MR. SHAPIRO:

14 Q As you know, I'll be taking your deposition on  
15 another federal case in a few weeks and I'll simply ask the  
16 same question and get it. It might save time in the  
17 future, but that's fine, we can handle it this way:

18 With respect to the work areas that you mentioned  
19 as having a possible exposure to silica dust, based on what  
20 you know now, do you think or is it your belief that if the  
21 workers in the area of the track maintenance jobs that you  
22 just gave an opinion about, the machine operators and the  
23 guys unloading the ballast rock, if those workers were  
24 exposed long enough to the silica dust in those jobs, do  
25 you think that could lead to silicosis disease, if they had

1 no protection whatsoever?

2 A If they had exposure on a regular basis, regular  
3 meaning daily or at least several times a week at exposures  
4 -- and that would be for several years, that they may be at  
5 an increased risk of developing silicosis.

6 Q Is that one of the reasons that you did the  
7 testing, to start trying to figure out what controls might  
8 need to be taken to protect the workers, right?

9 A Well, initially the testing was to determine what  
10 the exposure was and following that determination then  
11 control measures were recommended.

12 Q Have any of your texts that you generally refer  
13 to discussed what the effect of workers smoking cigarettes  
14 may be combined with their being exposed to silica dust in  
15 their job?

16 A I don't recall that being mentioned in any of the  
17 texts that we've talked about earlier. But I have heard --  
18 I have heard that there is possibly some added effects but  
19 I don't recall specifically what source I heard it from.

20 MR. LEACH: Object to the predicate. It calls  
21 for a medical conclusion.

22 BY MR. SHAPIRO:

23 Q Nothing that you have in your text that you  
24 generally refer to, I take it? It would be something you  
25 heard about from the medical side?

1           A    I don't recall specifically where I heard it. I  
2 may have heard it at a conference. I may have heard it in  
3 some conversations.

4           MR. LEACH: Same objection. It's a medical  
5 question.

6 BY MR. SHAPIRO:

7           Q    How do you generally keep abreast of health and  
8 safety in industrial hygiene issues in your day-to-day job?

9           A    Most of it actually occurs at the conferences  
10 that I go to, although I also receive the American  
11 Industrial Higiene Association Journal and a magazine,  
12 Occupational Safety and Health. Also if --

13          Q    Is it called Occupational Safety and Health  
14 journal or magazine or what?

15          A    Occupational Safety and Health.

16          Q    And what was the first publication that you just  
17 mentioned?

18          A    Journal of the Industrial Hygiene Association.

19          Q    What about computers? Do you have a computer on  
20 your desk?

21          A    Yes.

22          Q    And are you on line with any services that  
23 provide information in your field?

24          A    I'm not on line with any services, no.

25          Q    Do you have a modem where you can hook up to any

1 services that provide information?

2 A I have a modem.

3 Q What are some of the computer services that you  
4 can tap into?

5 A I don't really know what's out there as far as  
6 being able to tap in remotely. I don't routinely tap into  
7 remote sources because you have to subscribe to services  
8 for that.

9 Q You don't have any that you subscribe to?

10 A No.

11 Q Does anyone in your department have a  
12 subscription for any of those?

13 A No.

14 Q Are there any other industrial hygienists now  
15 that work for the railroad besides yourself?

16 A Yes.

17 Q Who are they?

is A Bill Combs and Ben Rupinta.

19 Q How long have any of those guys been with the  
20 railroad?

21 A They started, Bill started in 1990, Ben started,  
22 I think, in 1973.

23 Q The fellow who started in 1973, what's his name?

24 A Ben Rupinta.

25 Q How does he spell his last name?

1           A     R-u-p-i-n-t-a.  
2           Q     Which railroad did he start with in 1973?  
3           A     I think he started with Seaboard Coastline  
4     Railroad.  
5           Q     I thought you said that when you started in 80 or  
6     81 you were the only industrial hygienist that -- I must  
7     have misunderstood.  
8           MR. LEACH: I don't believe he was an industrial  
9     hygienist back then, with respect to Ben.  
10          MR. SHAPIRO: Let me ask the questions.  
11     BY MR. SHAPIRO:  
12          Q     I must have misunderstood your prior answer when  
13     you said you were the only industrial hygienist in 80 or  
14     81.  
15          A     That's correct.  
16          Q     Mr. Rupinta was the only other one?  
17          A     No. Mr. Rupinta was not working as an industrial  
18     hygienist during that time.  
19          Q     What was he doing from 1973 to 80 or 81?  
20          A     I don't know that I can tell you everything he  
21     did, but I know he worked as a machinist and worked as a  
22     shop engineer.  
23          Q     You said he first became an industrial hygienist  
24     when? I take it he went and got course work after he was  
25     already with the company?

1           A    He started working in the industrial hygiene  
2 department and was doing industrial hygiene work starting  
3 in 1990.

4           Q    Mr. Rupinta, Mr. Combs?

5           A    Combs.

6           Q    C-o --

7           A    M-b-s.

8           Q    When did he start working as an industrial  
9 hygienist?

10          A    He started working for CSX as an industrial  
11 hygienist in 1990.

12          Q    But prior to you in 1980 or 81 coming on board,  
13 there was no other industrial hygienist?

14          A    No.

15          Q    We were talking about how you keep abreast in the  
16 industrial hygiene field. You mentioned the Journal of  
17 American Industrial Hygiene, American Industrial Hygiene  
18 Association, Occupational Safety and Health magazine?

19          A    Yes. And also if there are articles of interest  
20 in the Journal of Occupational Medicine, usually the chief  
21 medical official or one of the medical officers will share  
22 that with me.

23          Q    They'll put you on a circulation list, right?

24          A    Yes.

25          Q    What about the Occupational and Safety Health

1 Reporter? Is that something that you tend to look at?  
2 A I subscribed to that in the past.  
3 Q Are you subscribing to it now?  
4 A No.  
5 Q Who is subscribing to it now, the medical  
6 department or another department?  
7 A I'm not sure if there are any departments who are  
8 currently subscribing to the occupational and Safety Health  
9 Reporter.  
10 Q When did you stop?  
11 A A little over a year ago.  
12 Q Why is that?  
13 A We went with another service. We went Regscan  
14 (phoenetic), and Regscan does have a monthly electronic  
15 news letter, so I do use that to help on keeping abreast.  
16 Q That comes in through your computer?  
17 A It comes in on a disk.  
18 Q And it brings you abreast to all the current  
19 regulations and things that are going on in industrial  
20 hygiene and the occupational safety area?  
21 A Primarily talks about regulatory developments.  
22 Q You stopped the OSHR, the reporter, last year.  
23 Did you keep that from the time you started with the  
24 railroad until last year?  
25 A No. I started it sometime in, I think, about the

1 mid 80s and stopped it about a year ago, maybe a little  
2 more than a year ago.

3 Q How do you keep up with Occupational Safety and  
4 Health Administration regulations? Is it just through  
5 Regscan or do you have any other source that particularly  
6 advises you about OSHA?

7 A Primarily through Regscan, but also when  
8 attending conferences and things like that there's often  
9 discussions of current regulatory developments.

10 Q Are you on a circulation list also with the  
11 medical department of certain articles?

12 A I'm in the medical department. I don't know that  
13 I'd say I'm on a circulation list. If there are articles  
14 that the physicians see in some of their journals that they  
15 think may be of particular interest to me, they'll pass  
16 those along.

17 Q What national organizations are you a member of?

18 A Member of the American Industrial Hygiene  
19 Association, the American Academy of Industrial Hygiene,  
20 the Florida section of the --

21 Q Have you been a member of those organizations  
22 since 1981?

23 A Finishing my last answer: the Florida section of  
24 the American Industrial Hygiene Association.

25 As far as 1981, I became a member -- I was a

1 member of the American Industrial Hygiene ASSOCIATION in  
2 1981. I became a member but I wasn't a member of the other  
3 organizations at that time.

4 Q American Academy of Industrial Hygiene, when did  
5 you first start becoming a member?

6 A 1990.

7 Q I'm going to turn my attention to the testing you  
8 did in November of 1981. Was this the first, this ballast  
9 regulator silica testing, was this the first testing that  
10 you had done for any silica dust?

11 A I can't remember if I did the ballast regulator  
12 first or the ballast dumping first. It was one of the two.

13 Q I think this was it. Who actually put the device  
14 on the regulator operator to do the test?

15 A I did.

16 Q Did you calibrate the actual machine?

17 A Yes.

18 Q So you were the actual technician also?

19 A Yes.

20 Q or one of the technicians?

21 A I was the technician.

22 Q What product did you use to do the test?

23 A I think it refers to it in the report.

24 Q I see it says you did NIOP Procedure P and  
25 CAM106. I don't see the name of the product that you used.

1 Do you remember?

2 A The sampling pump was a Bendix, probably a BDX44.

3 Q BDX44? Did you use any other type of machinery  
4 to take these samples in the field first of all?

5 A Well, I used the Cyclone that was mentioned there  
6 and I think that was probably a Bendix Cyclone.

7 Q Any other products involved with taking in the  
8 samples?

9 A I don't remember the brand of the filter that was  
10 used but it was -- the filter was probably supplied by the  
11 lab. That's normally where I get them.

12 Q You mentioned, is it Stauffer Chemical Company,  
13 as doing some analysis for you? If not in this one, it was  
14 in the one that was a couple months later?

15 A Stauffer Chemical did do some analysis of dust  
16 exposure.

17 Q I have not seen the raw data. And is there a  
18 reason it has not been produced?

19 MR. LEACH: We didn't produce it. It was testing  
20 done on L&N slag that was used only on the L&N line,  
21 on some branch lines, I believe.

22 MR. SHAPIRO: I'm referring to the November 1981  
23 testing on the ballast regulator.

24 MR. LEACH: I understand, but the results of  
25 those, I'm telling you you can ask him about that,

1           were for the only thing --  
2           MR. SHAPIRO: You're not making an objection  
3           here, let him go ahead and testify.  
4           MR. LEACH: That's my objection. That's why we  
5           didn't produce the document, not Mark. I'm just  
6           telling you why. You asked him why. I'm giving you  
7           the answer. If you want to ask Mark what that testing  
8           encompassed, he can tell you.  
9           MR. SHAPIRO:  
10          Q       My question is: this is a report. I have looked  
11          at a lot of your different testing. I generally know what  
12          raw test data looks like. There is no raw data in this  
13          November 10th, 1981 report. How come I don't see the  
14          particular listings?  
15          MR. LEACH: I thought you were asking about  
16          Stauffer Chemical. I'm sorry.  
17          A       You're asking why you don't see the sampling data  
18          sheets?  
19          Q       Sure.  
20          A       They're in the employee's medical files. And at  
21          that time I put them strictly in the employee's medical  
22          files and did not attach them to the report.  
23          Q       Can you produce those?  
24          A       No.  
25          Q       You don't know where they are?

1           A    No.

2           Q    How many tests did you take? You refer to, okay,

3 it was breathing zone of a ballast regulator operator.

4                    Was this a single person that you tested?

5           A    Yes.

6           Q    So this whole report deals with one person's

7 exposure on a particular day?

8           A    Yes.

9           Q    What month and year did you start with the

10 railroad? I probably asked you that twice. I apologize.

11 I didn't write it down.

12           A    January of 1980.

13           Q    Between January and this date, have you done

14 other types of testing and given reports to the chief

15 medical officer?

16           A    No, probably not.

17           Q    Was this your first time you did a major report

18 like this?

19           A    This is the first time -- I don't know -- that's

20 not the first time I did a report for the chief medical

21 officer, no.

22           Q    A report of testing, actual testing out in the

23 field?

24           A    No, that's not the first one.

25           Q    You were referring to results of your silica

1 testing here under results. And you present the sample in  
2 a certain way where you have ten over percent, I guess  
3 that's silica dioxide, 10/2 equals time waited average?

4 A Yes.

5 Q Where did you obtain that formula right there  
6 from?

7 A From the OSHA permissible exposure limits.

8 Q Why did you refer to the OSHA permissible  
9 exposure limit in 1981 when you were testing the silica  
10 dust?

11 A Well, it was identical to the threshold limit  
12 value from the American conference of Industrial  
13 Hygienists, so I used the same value. I don't know that I  
14 actually pulled it from OSHA. I may have used a CPIH  
15 recommended value. Those were the only exposure  
16 calculations I was aware of.

17 Q You said that the ballast regulator was  
18 overexposed to silica, that the results indicate an  
19 exposure of 69 in 456 percent greater than the calculated  
20 time waited average for silica.

21 once you did this test, what concerns did you  
22 have as to the ballast regulator's exposure to silica?

23 A Well, if you'd let me look at the document, I'm  
24 sure that I stated it in the document.

25 Q Sure.

1           A     Well, based on that exposure measurement, I  
2 recommended that control measures should be implemented to  
3 reduce the exposure to an acceptable level.

4           Q     And as we discussed earlier, the first control  
5 that you recommended was an engineering control, correct?

6           A     That's correct.

7           Q     And what is an engineering control? We didn't  
8 really define it and I want to hear what you consider an  
9 engineering control, particularly with reference to silica  
10 dust.

11          A     Well, in reference to the ballast regulator  
12 operator, it would involve isolating the cab of the ballast  
13 regulator operator from the immediate environment where the  
14 silica dust was being generated.

15          Q     Such as enclosing the cab, air conditioning it so  
16 the silica dust could not get inside to the pressurized  
17 cab?

18          A     Right. It would also have to be pressurized.

19          Q     What do you mean pressurized?

20          A     That the pressure inside the cab is slightly  
21 greater than the atmospheric pressure outside so that if  
22 there is any leakage, it blows material out of the cab  
23 instead of allowing it to be pulled into the cab.

24          Q     That would take a pretty good seal inside the  
25 cab, right?

1           A    The better the seal the more likely you're going  
2 to be able to do that.

3           Q    That's why you recommended in your report here  
4 having some sort of covers over the controls so that the  
5 dust did not seep in that gap, right?

6           A    I recommended that they look at those and see if  
7 they could be installed.

8           Q    In fact it was a number of years before CSX ever  
9 put in any air conditioned ballast regulators, wasn't it?

10          A    Yes.

11          Q    What was the first year that CSX actually  
12 introduced any, wasn't it 1990s?

13          A    Yes, it was in the 1990s.

14          Q    But those were commercially available, I mean  
15 they were being sold by Kershaw by 1981, weren't they?

16          MR. LEACH: Let me object to the speculation.

17          A    I don't know if they were or not.

18          Q    Didn't you investigate it? You've referenced in  
19 here that air conditioning be installed?

20          A    I referenced it to the engineering department to  
21 investigate it.

22          Q    Didn't you check into that?

23          A    No.

24          MR. LEACH: I object.

25          MR. SHAPIRO: Your objection is stated.

1 BY MR. SHAPIRO:

2 Q You didn't personally check into that?

3 A No.

4 Q You recommended respirators in 1981 in your  
5 report, didn't you?

6 A Yes.

7 Q Now, you particularly mentioned the 3M brand 8710  
8 respirator and you said it would cost, at that time, \$275 a  
9 year.

10 How did you figure out the annual cost?

11 A Again that's quite a long tiine ago, but I think I  
12 based it on the cost of the respirator and how much it  
13 would cost to have that respirator provided to the employee  
14 based on the number of days that he worked per year.

15 Q But were you talking about a replacement every  
16 day?

17 A Probably actually more than once a day. Probably  
18 at least twice a day.

19 Q At that time wasn't the cost of the mask  
20 approximately 60 cents apiece or less to the railroad?

21 MR. LEACH: Object to the predicate.

22 If you recall.

23 A I don't recall. I don't know what the cost was  
24 at that time.

25 Q At \$275 a year, how 'many work days a year were

1 you figuring for your typical worker?

2 A Again I don't recall the calculations. That's an  
3 approximate value. That's not exact.

4 Q Well, a typical worker has something in the area  
5 of 260, 240 work days?

6 MR. LEACH: Let me object. He's answered the  
7 question. He doesn't recall how he came up with his  
8 calculations.

9 MR. SHAPIRO: I'm asking a different question.

10 BT MR. SHAPIRO:

11 Q I'm asking now, men working in the railroad now.  
12 How many work days a year does the typical maintenance of  
13 way worker have, do you know?

14 A No, I couldn't tell you.

15 Q Would a worker need -- if a ballast regulator  
16 operator needs protective equipment under your  
17 recommendation here, this was a type of mask, describe that  
18 8710 mask.

19 A It's a single-use, disposable dust respirator.  
20 It has elastic straps. There's no adjustment on the head  
21 straps whatsoever. You put it on your face. There's a  
22 metal, a piece of metal across the top that's soft and you  
23 can bend it around the bridge of your nose.

24 Q Sort of a papery material on the inside and on  
25 the outside it has a little bit, I don't know if it's a

1 plastic or foam material.

2 Does that describe it?

3 A It's a paper-like material that, as I recall, 3M  
4 has an electrostatic charge on it.

5 Q What's the significance of an electrostatic  
6 charge?

7 A Helps make it -- helps attract particles to the  
8 filter itself as opposed to allowing it to pass through.

9 Q That's a disposable mask like a disposable  
10 lighter. If it's used up, you throw it away and you get  
11 another one, right?

12 A I don't know if I would call a respirator like a  
13 lighter, but it's disposable. When it gets dirty or it  
14 becomes difficult to breathe through, you throw it away.  
15 We don't ask them to clean them.

16 Q In the sense that you don't clean it?

17 A That's right.

18 Q That type of mask, a 3M 8710, doesn't have a  
19 solid pressurized fit upon the face, does it?

20 A I don't know exactly what you mean by a solid  
21 pressurized fit.

22 Q Well, it won't create a negative pressure inside  
23 the mask all the time, will it?

24 A It's regarded as a negative pressure respirator.

25 Q Well, you will agree it certainly doesn't create

1 as solid a fit as a more durable plastic face mask  
2 respirator that there's a fit test to be sure that there's  
3 no leakage in the seal?

4 A There's a fit check that you can perform with  
5 that respirator and it -- and also it can be -- but it does  
6 not have the -- it's not the type of respirator that you  
7 could use to do a positive or negative pressure fit check.

a Q That's because it sort of looks like a painter's  
9 mask, doesn't it? If someone has perspiration or a  
10 moustache, maybe even if the mask edge is bent from  
11 improper use you can have a little gap coming in through  
12 some portion of the mask, correct?

13 A I wouldn't think that particular mask you could  
14 easily deform. It would be more likely to be able to  
15 deform one of your plastic masks you were talking about,  
16 having it sit in a truck and let the sun beat on it for a  
17 little while, have a crescent wrench on top, you probably  
18 would bend that plastic mask more than you would them.

19 Q But I guess the bottom line is what you mentiond,  
20 you can't get a positive or negative pressure test on a  
21 disposable 3M 8710 mask, can you?

22 MR. LEACH: Object to the characterization of the  
23 testimony.

24 A You can't do a positive, negative pressure fit  
25 check on that mask. The fit check that you'd do for that

1 one is slightly different.

2 Q Are you aware of why the railroad didn't go to  
3 air conditioning in the ballast regulator until the 1990s?

4 MR. LEACH: Object to the predicate.

5 MR. SHAPIRO: What's the objection? He already  
6 testified they didn't start until the 1990s.

7 MR. LEACH: Are you asking if he knows why?

8 MR. SHAPIRO: I'm asking if he's aware why the  
9 railroad didn't start using an air conditioned ballast  
10 regulator until the 90s.

11 MR. LEACH: If you know.

12 A I don't know.

13 Q You had recommended it by 1981?

14 A Yes.

15 Q Now, in your report you said that the silica -- I  
16 guess you're referring to the silica dust that you tested  
17 during the ballast regulator dust test -- you said comes  
18 from the ballast rock used as ballast.

19 You did this test in Tampa, right, Hookers Point,  
20 Tampa, Florida?

21 A If that's what it says on the report.

22 Q Was that a representative area of track line in  
23 that -- was the ballast there typical of ballast on the CSX  
24 line? I'm sorry. At that time it wasn't CSX. It was  
25 Seaboard.

1           A    It was ballast typical of that area and it was  
2 granite ballast. And when I talked with the engineering  
3 department they said that they used granite ballast on a  
4 substantial percentage of the track. They didn't tell me  
5 what that meant.

6           Q    Well, it's been confusing for me. Hopefully you  
7 can settle this for me. As of 1981 when it was Seaboard,  
8 was granite the specified rock for the ballast at that time  
9 for Seaboard based on your investigation?

10          A    I don't know if -- I don't know that that's the  
11 case and I don't recall specifically asking if there was a  
12 standard. I know granite was one of the types of rock that  
13 was used as ballast and there were other -- there was other  
14 material also used as ballast.

15          Q    What other types of rock were used? I'm talking  
16 about 1981, that time period. Did you say lime?

17          A    I think limestone was used in part of the  
18 railroad and there was also slag that came out of, I  
19 believe out of the steel industry, although I'm not exactly  
20 sure. I don't recall exactly where that slag came from.  
21 That was used on some of the branch lines and some of the  
22 smaller industrial yards.

23          Q    Not on the main line of the railroad?

24          A    No.

25          Q    When you did this test with the ballast regulator

1 operator I take it it was during dry conditions. It wasn't  
2 raining?

3 A That's correct.

4 Q And you said that while the ballast regulator was  
5 sweeping, the operator closed the doors and the dust was  
6 enough that it completely hid the ballast regulator from an  
7 outside observer. I take it you meant standing at a  
8 distance you couldn't even see the machine in the cloud of  
9 dust?

10 A I had observed him brooming one time while I was  
11 outside the cab. And at that time when he was brooming it  
12 obscured most of the machine and possibly at times even all  
13 the machine during the brooming operations.

14 Q That brooming operation is one typical operation  
15 of the ballast regulator when he does his job, isn't it?

16 A That's one of the things that a ballast regulator  
17 does, yes.

18 Q You also mentioned the other respirator option,  
19 air power hood, cost of \$350, a nickle cadmium rechargeable  
20 battery which supplies power and an annual replacement of  
21 \$150 at that date.

22 What do you mean by air powered hood?

23 A It's a powered air purifying respirator.

24 Q So there's an actual oxygen source separate from  
25 the outside air for that particular hood?

1           A    No.  
2           Q    It filters the outside air and pumps it through  
3 the hood?  
4           A    Yes.  
5           Q    There's an attachment that was produced with some  
6 of the documents that showed some 3M products but these  
7 photos didn't include the air powered hood, right, that you  
8 were suggesting?  
9           A    Go to the next page it does.  
10          Q    So it was this 3M brand air hat helmet that you  
11 were referring to and I guess you attached that with your  
12 memo?  
13          A    Yes.  
14          Q    And those were available in 1981, weren't they?  
15          A    Yes.  
16          Q    Did the railroad adopt your suggestion?  
17          A    I gave them several options on the  
18 recommendations. They decided to go with the disposable  
19 dust mask respirator.  
20          Q    It was less money, wasn't it?  
21                MR. LEACH: Object to the characterization.  
22                MR. SHAPIRO: I'm just asking him the question,  
23 Eric. What did I characterize? I said did it cost  
24 less.  
25                MR. LEACH: Go ahead.

1           A     It cost less the first year but it cost more in  
2     the subsequent years, because in a two- to three-year  
3     period it equalized out in cost or actually started  
costing     4     less.  
5           Q     Did you explain that to the chief medical doctor  
6     Mead?  
7           A     I don't recall discussing that with Dr. Mead. I  
8     do recall discussing it with the engineering department,  
9     Mr. Richardson.  
10          Q     And what was their reaction?  
11          A     Well, apparently they decided they wanted to go  
12     with the dust mask respirator because that's what they  
went       13     with.  
14          Q     But in fact it's less protection and over the  
15     long haul it would cost more, wouldn't it?  
16          A     over the long haul it would cost more. As far  
as         17     the lesser protection, the problem -- one of the concerns  
18     they had about using a powered air purifying respirator,  
19     and I brought this out when I was talking to Mr.  
Richardson     20     as well, is the fact that you're depending on the people  
to         21     check the flows on a daily basis, to make sure that they  
22     have the battery fully charged. There was a problem with  
23     battery life, with nickle cadmium batteries at the time,  
24     that they wouldn't last for ten hours like our normal  
work       25     day is.

1                   So there were other problems associated with it  
2 that they would have to use in addition to the powered air  
3 purifying respirator, they would also occasionally have to  
4 use the single-use disposable dust mask as well. So  
5 instead of having two respirator systems they elected to go  
6 with one.

7           Q       Why would they have to use the 8710 on certain  
8 occasions?

9           A       The battery would get down to a level that the  
10 flow wouldn't be sufficient for the use of the air hat.

11          Q       And the Ni-Cad battery has to be like plugged in  
12 to recharge in a regular outlet or something normally?

13          A       As I recall they had a regular -- the battery  
14 charger needs to go in a regular outlet, yes.

15          Q       There was a replaceable filter in the air supply,  
16 whatever you want to call it, air powered hood also, right?

17          A       Yes.

18          Q       Is that a disposable filter or is that cleaned  
19 out or how did that work?

20          A       It's disposable.

21          Q       But it would still come out possibly cheaper over  
22 the long haul with that disposable filter?

23          A       Yes.

24          Q       Have they ever adopted for any track maintenance  
25 workers this air powered helmet?

1           A    We did try it out on three ballast regulator  
2 operators about three years ago.

3           Q    What happened with those tests?

4           A    They worked out fine. And the operators didn't  
5 have any problems using it and they were consistently good  
6 at checking the air flows and doing the things that they  
7 should have done. That would have been perfectly  
8 acceptable except the engineering department, through their  
9 work with Kershaw, the supplier of the ballast regulators,  
10 come up with a modification to our ballast regulators that  
11 could be done where we could air condition the cabs and  
12 pressurize them. And as you stated before, that's a better  
13 control measure.

14          Q    When did the railroad start working with Kershaw  
15 to do that? How early after 1981 did they go to Kershaw  
16 and start doing this?

17               MR. LEACH: Object to the predicate. You're  
18 asking about what another department did.

19               MR. SHAPIRO: I'm asking what he knows.

20 BY MR. SHAPIRO:

21          Q    Do you know?

22          A    I don't know specifically. It was either  
23 probably early 90s or late 80s.

24          Q    Who with the railroad in the engineering  
25 department was working with Kershaw toward this solution,

1 if you know?

2 A I don't know specifically who was working on it  
3 in the engineering department. I know at one time Roger  
4 Cross had some involvement with it.

5 Q What's his title with the engineering department?

6 A They've changed titles recently. I don't know  
7 what his title is.

8 Q He's in the engineering department?

9 A Yes.

10 Q Is he here in Jacksonville?

11 A Yes.

12 Q Whols in charge of the engineering department as  
13 of the last few years?

14 A Mr. Schmidt.

15 Q Is he involved at all in supervising this?

16 A I don't know if he had any direct involvement in  
17 this or not.

18 Q But you're aware that Mr. Cross was dealing with  
19 Kershaw at some time on it?

20 A I'm aware that Mr. Cross was -- had some  
21 involvement with Kershaw but I think he was involved  
22 somewhat with this as well.

23 Q You then did a similar memo February 10th, 1982  
24 directed to Dr. Mead and you tested the ballast unloading  
25 process, the unloading of rock out of the train cars.

1                   What caused you to to evaluate that? Was it just  
2 that initial assessment that you had done where you were  
3 looking at the track maintenance work?

4                   A     Actually, as I recall, as I was driving back from  
5 doing the ballast regulator work. I was driving along a  
6 highway that had a railroad parallel and I think I saw them  
7 unloading ballast at the time.

8                   Q     Saw clouds of dust?

9                   A     Well, I saw them unloading ballast and there was  
10 some dust present.

11                  Q     Now, at this time you had Stauffer Chemical  
12 Company involved in this analysis with you?

13                  A     No. Stauffer Chemical did their sampling for  
14 their own reasons.

15                  Q     Was this on their property or something?

16                  A     No. They did it on L&N property.

17                  Q     What were they testing for?

18                  A     They were testing for crystalline silica.

19                  Q     I don't understand why they were interested in  
20 the results. Was there a side track that went to their  
21 property or something or what?

22                  A     No. They didn't have -- well, they may have a  
23 side track going to their property. But that wasn't the  
24 reason they were interested in it.

25                  Q     What was the reason?

1           A     They sold us slag.  
2           Q     okay.  
3                 calcium silicate slag, that's some of the stuff  
4     that you used on the ballast line?  
5           A     That's some of the stuff that was used in some of  
6     the branch lines and also in some of the smaller yards.  
7           Q     Are you aware of generally what percentage silica  
8     was found to be in the calcium silicate slag? Not the  
9     respirable, but in the composition of the actual slag?  
10          A     I don't recall.  
11          Q     You don't recall approximately?  
12          A     It was low.  
13          Q     Lower than that in granite?  
14          A     Yes.  
15          Q     You did the actual respirable dust surveys  
16     yourself again? It mentions you had some other people  
17     there, though.  
18          A     I think I mentioned that I had contact with some  
19     other people and they assisted me.  
20          Q     Who are Mr. Pregnal, Freeman and Lamb (phonetic)?  
21          A     I think they were in the division engineer's  
22     office on the Tampa division.  
23          Q     Actually did you go to Louisville, Kentucky,  
24     Baldwin, Florida and Loughman, Florida to do these tests?  
25          A     I went to Baldwin and Loughman.

1 Q Who took the other one for you?  
2 A The other one was done by Stauffer Chemical on  
3 the L&N. I'm trying to remember. I'd have to look at the  
4 report. I can kind of recall where T did the actual  
5 sampling. Okay. I did the sampling in Florida both at  
6 Baldwin and Loughman. The Louisville sampling was done by  
7 Stauffer.  
8 Q Did they use the same type of equipment that you  
9 generally had described that you used before, the Bendix  
10 equipment?  
11 A I don't know if they used Bendix sampling pumps  
12 but they used personal sampling pumps.  
13 Q I take it you calibrated the machinery before you  
14 did the test?  
15 A Yes.  
16 Q You said the samples and suitable blanks were  
17 sent to a certified industrial hygiene lab for analysis.  
18 Have you turned over those results to us?  
19 A No. I'm not sure that I have those results any  
20 longer.  
21 Q Do you recall definitely one way or the other?  
22 A I recall looking for them and couldn't find them.  
23 Q Under your results you distinguished  
24 significantly between wet and dry ballast. Clearly dry  
25 ballast rock is the rock that would tend to have the higher

1 levels of silica in the dust, correct? Or dust, period, I  
2 guess. The higher level of any dust, right?

3 A When it was wet there was less dust present.

4 Q Sure. And you talk about OSHA and the PELs. I  
5 take it that you were utilizing the occupational and Safety  
6 Health Administration reference levels as your guideline?

7 A Yes. Although, as I said earlier, it's also the  
8 threshold limit of value was the same at that time.

9 Q For OSHA and for who?

10 A The recommended level, the threshold level of  
11 value from American Conference of Governmental Industrial  
12 Hygienists.

13 Q Is this the same, this formula that you have here  
14 on the top of the second page, is that the same as the  
15 present OSHA formula for silica?

16 A Under the general industry standard the standard  
17 is different.

18 Q Okay. Explain that.

19 A Under the general industry standard --

20 Q You're talking about OSHA general industry  
21 standard, right?

22 A OSHA general industry standard it's .1 milligrams  
23 per cubic meter of air.

24 Q What other standard would there be besides the  
25 general industry standard?

1           A     There's a construction industry standard which is  
2 actually what would be applicable here. And that's -- well

3

4           MR. LEACH: Go ahead and finish.

5           MR. SRAPIRO: Go ahead.

6           A     I think it's 20 million particles per cubic foot,  
7 I think is the standard. I'd have to look it up.

8           Q     You referred to two different standards.  
9                 When did the two different standards come into  
10 effect?

11          A     The two standards were always there. At this  
12 time I was using strictly the general industry standards.  
13 Although based on experience over the last several years  
14 since that time, I have found that that area is actually  
15 covered under the construction standards as opposed to the  
16 general industry standards.

17          Q     What OSHA standard deals with construction  
18 industry, do you know the sections?

19          A     29 CFR 1926.

20          Q     I didn't know that railroad track work was  
21 construction.

22                 Can you enlighten me as to how you make that  
23 determination?

24          A     Well, whenever we've dealt with OSHA regarding  
25 track maintenance activities, if they've cited any standard

1 it's been under the construction standard. So I'm assuming  
2 that's where OSHA feels that it is the applicable standard.  
3 our law department has a debate with them about their  
4 applicability anyway.

5 Q When you said OSHA cited, has OSHA ever cited CSX  
6 or its predecessor railroads with any violation relating to  
7 silica dust at any time, anyplace?

8 MR. LEACH: Again we would allow him to answer as  
9 to maintenance of way workers.

10 MR. SHAPIRO: You're telling him to withhold any  
11 answer besides maintenance of way workers?

12 MR. LEACH: Correct.

13 A We haven't been cited by OSHA for -- under the  
14 silica exposure, permissible exposure level.

15 Q What have you been cited by OSHA under?

16 A For the maintenance of way employees we were  
17 cited on the availability of material safety data sheets on  
18 site, part of the hazard communication program.

19 Q Where was that? Where did the violation arise  
20 from?

21 A I think it was in Georgia.

22 Q And what particular area in Georgia?

23 A I think north Georgia somewhere.

24 Q When was that violation cited?

25 A I want to say it was 1992.

1 Q And the railroad first instituted a hazard  
2 communication program when?

3 A The railroad first instituted hazard  
4 communication program for maintenance of way employees in  
5 the actually spring or first quarter of 1992.

6 What was the nature of the program?

7 A We had videotapes that were used in the first  
8 quarter training and they went over the hazard  
9 communication regulation, what a material safety data sheet  
10 is, how to read it. The fact they could go to their  
11 supervisor and obtain a material safety data sheet.

12 Q That's referenced in the videotape?

13 A Yes.

14 Q Do you have a copy of that videotape available in  
15 your office?

16 A I don't think I have one in my office but I have  
17 one available I can get.

18 Q Can you produce that through your attorney?

19 A Yes.

20 Q Has there been a videotape for the years 93 and  
21 94 also for maintenance of way workers?

22 A The same videos have been used.

23 Q So it's one videotape. What about written  
24 handouts? In the request for production materials that  
25 were turned over by your lawyer I did obtain, I think, two

1 different two- or three-page handouts. One was called  
2 Silica -- let's see. Make sure I have all the program  
3 materials. This one here, Silica Program Outline.

4 When was that first provided? Was that provided  
5 in 92 or later?

6 A Well, this particular thing was never provided to  
7 employees.

8 Q Was that provided to -- note for the record it's  
9 entitled Silica Program Outline. It's a one-page document.

10 Was that an outline for supervisors or what was  
11 that?

12 A It's an outline that we -- that I wrote to work  
13 on a training video for silica.

14 Q Have you promulgated or distributed that for use  
15 yet to the track maintenance workers?

16 A No, but that's currently under production. We're  
17 working on the script currently.

18 Q Let me show you another document that was  
19 produced by your lawyer. It's one, two, four pages.

20 Is that something that was part of any of the  
21 programs that began in 1992 or later?

22 A No. This is the first draft of the video that  
23 we're talking about.

24 Q So referring back to we've been talking about the  
25 hazard communication standard. You said in 1992 that's the

1 first time the railroad began a hazard communication  
2 program?

3 A With the maintenance of way employees. That's  
4 the first time that it was included in first quarter  
5 training. There may have been aspects of that program  
6 discussed at earlier times, but that's the first time that  
7 I know that it was done in first quarter training.

8 Q You'll produce that videotape, as you said, but  
9 was there any discussions specifically of silica or  
10 silicosis in the videotape?

11 A I think the only mention that there was of  
12 silica, silicosis, is in a portion of the tape involving  
13 sandblasting.

14 Q Did you give to the maintenance of way workers  
15 beginning in 1992 any material safety data sheets that were  
16 from any distributors to the railroad of products  
17 containing silica?

18 A No, but they were available upon request.

19 Q If the worker knew about it to ask?

20 A In the printing program we specifically told them  
21 that they could ask.

22 Q So in other words there's a general reference  
23 that if you want to see a material safety data sheet on  
24 some specific product you can ask and get a copy?

25 A That's correct.

1           Q    No reference to silica is in the videotape except  
2           with reference to sandblasters and their particular trade,  
3           correct?

4           A    Yes.

5           Q    You're in the process of changing that and you're  
6           going to be producing another videotape that deals with  
7           silica for maintenance of way workers?

8           A    It will certainly include maintenance of way  
9           workers. A large portion of the video involves maintenance  
10          of way work.

11          Q    I was provided also in connection with this  
12          particular case something called an information sheet which  
13          I think was actually given to the track maintenance  
14          workers. And I'm referring to these two documents. One is  
15          entitled Information Sheet - Silica Exposure and it says  
16          1/1/94 at the top of the page. It's a one-page document.  
17          And then there's another document entitled Ballast Dust and  
18          below that What You Should Know. It's a one-page document.  
19          Are you familiar with those two pages?

20          A    Yes.

21          Q    Mr. Badders, I have shown you two documents here  
22          and I -- you had just said you recognized them.  
23          Were those first provided to the track  
24          maintenance type workers in 1994?

25          A    No. The first one was.

1 Q The one entitled Ballast Dust?  
2 A The one entitled Ballast Dust and What You Should  
3 Know was presented during the first quarter training in  
4 1992 and it was actually read by the trainers.  
5 Q All right. So it was not handed out but it was  
6 read?  
7 A That's correct.  
8 Q What about the other one, the one entitled  
9 Information Sheet - Silica Exposure? It's dated January 1,  
10 94. Was that the first time it came out or a revision?  
11 A That's when it was created. It actually didn't  
12 get distributed until a little bit later than that. And  
13 some of the earlier classes didn't have this as a handout.  
14 We published a book with additional material safety data  
15 sheets that went out to the engineering department and this  
16 was included in that book, which is at every engineering  
17 work department worksite.  
18 Q When was that distributed out?  
19 A This second one?  
20 Q The information sheet, yes.  
21 A This year, 94.  
22 Q So doesn't the hazard communication standard as  
23 you understand it require the railroad to give written  
24 information to the workers of whatever the particular  
25 health hazard may be?

1           A    No. If an employee requests a material safety  
2 data sheet it has to be readily available.

3           Q    So your understanding of the program is what?

4           A    You need to have a written program that says how  
5 you're going to accomplish the goals of a hazard  
6 communication program and you have to have a mechanism  
7 where the employees can obtain copies of appropriate  
8 material safety data sheets. And then you do training  
9 regarding the hazards associated with exposure to various  
10 materials. You can use general categories, which is what  
11 we have used.

12          Q    As respect to silica dust and the track  
13 maintenance personnel, was the first time that you began  
14 the program in 1992 with the videotaping and what not?

15          A    In 1992 during the first quarter training we read  
16 the document that's identified as Ballast Dust, What You  
17 Should Know. During 1992 that was discussed at the first  
18 quarter training meetings. At that time the material  
19 safety data sheets would have been available to anyone who  
20 requested it.

21          Q    Where would they be maintained?

22          A    They're maintained on a PC that has access -- our  
23 electronic mail system anywhere on the system.

24          Q    So if a track maintenance worker, like a trackman  
25 working somewhere in Virginia, some small town, says to his

1 foreman, I want to see a material safety data sheet, where  
2 does he go?

3 A The foreman would go to the nearest terminal, CSX  
4 mainframe computer terminal, which is normally within about  
5 30 or 40 miles, and he would submit the request. The PC  
6 program reads the request periodically, about every five  
7 minutes, processes it and drops the message, which is the  
8 material safety data sheet, back to the originator's  
9 electronic I.D. number and then he prints it out.

10 Q So he can see it on the screen or print it out?

11 A Yes. He can do either one.

12 Q Does every track, like maintenance hole, all the  
13 guys call it, or terminal, do all of them have a computer?

14 A I think they all do now because that's where they  
15 receive a lot of their information.

16 Q As of what year did those very small terminals  
17 and things have a computer like that?

is A I don't know.

19 Q Prettyl recently, the last few years?

20 A Again, I don't know. Because when you talk about  
21 -- you talk about the hole, I talk about a terminal. That  
22 terminal is probably a train yard. In that train yard  
23 they've had computer terminals there for a very long time.  
24 He would have had access. He could have gone up to the  
25 yard office or something like that.

1           Q    Are there written copies maintained at each of  
2 those offices, too, or just on the computer?

3           A    Just on the computer.

4           Q    When did you get the program in place that all  
5 the material safety data sheets were actually on line on  
6 the computer?

7           A    I think they actually went on line in 19- -- it  
8 was either 87 or early 88.

9           Q    Even the track maintenance material safety data  
10 sheets with respect to silica dust?

11          A    Yes.

12          Q    Do you have any recollection as of that time what  
13 material safety data sheets, 88, you had received at the  
14 railroad on silica products?

15          A    I don't know specifically. And I don't -- you  
16 know, when we talk about the material safety data sheets on  
17 that computer system, I don't know if in that first group  
18 of MSDSs that went an that system that there was one for  
19 ballast. I think there was but I'm not absolutely sure.

20          Q    Well, I have looked at a number of things that  
21 your lawyers produced, some of which I have gotten from  
22 other subpoenas, and I see there are MSDSs from all the  
23 rock quarries by a certain time.

24                Did you have those by 1988?

25                MR. LEACH: Let me object. I think he answered

1 the question already.

2 MR. SHAPIRO: I think I asked something a little  
3 different.

4 BY MR. SHAPIRO:

5 Q The MSDSs from rock quarries, I have seen every  
6 one by now. What I'm getting at, when did they start  
7 giving them to the railroad? Do you have a general  
8 understanding of when you had gotten material safety data  
9 sheets from the major rock quarries?

10 A I started receiving some material safety data  
11 sheets in the rock quarries in the late 80s. And I don't  
12 know that I have received material safety data sheets from  
13 every single rock quarry. But I have safety data sheets  
14 for granite ballast and for limestone ballast.

15 Q The railroad is a member of the American  
16 Association of Railroads; is that correct?

17 A CSX is a member of the Association of American  
18 Railroads.

19 Q Does that by virtue of their membership allow you  
20 to participate in any particular groups or sub committees  
21 or whatever in the AAR?

22 A I have had some interactions with the AAR.

23 Q Do they put out publications of any kind on a  
24 monthly or annual basis?

25 A They put out publications periodically.

1 Q What kind of publications?

2 A Large number of different types. Some on  
3 engineering matters, some on -- mostly technical. Industry  
4 wide standards so that if something goes from CSX and we  
5 switch it off to Southern Pacific so that everything fits  
6 together the same. They have manuals for how you make  
7 various types of equipment, specifications for various  
8 types of equipment. They also have -- they publish  
9 emergency action guides which involve some of the chemicals  
10 that we transport.

11 Q I skip around a lot in discovery deposition in  
12 case you haven't noticed.

13 Going back to the February 10th, 1992 memo on the  
14 second page, I guess the last complete paragraph at the  
15 bottom. You took or had processed ten samples in various  
16 places unloading ballast rock. Two thirds of the samples  
17 exceeded the OSHA permissible exposure levels that you were  
18 using as a reference guide; is that correct?

19 A Actually on two thirds of the air samples when it  
20 was dry ballast was being unloaded exceeded the calculated  
21 PEL.

22 Q The wet ballast, of course, being there's almost  
23 no dust coming off wet ballast, right?

24 A There was no silica detected on the filter so the  
25 exposure was -- you put zero down at the bottom the

1 exposure becomes 5 milligrams per cubic meter of air based  
2 on that calculation.

3 Q And naturally the direction of wind when the  
4 workers are unloading ballast rock comes into play,  
5 correct?

6 A Certainly can in some cases.

7 Q And you obtained information about this time that  
8 when the ballast was wet that very small amounts of dust  
9 were generated.

10 You learned that at that time, right?

11 A That's what some of the employees told me when  
12 they were unloading the wet ballast at Baldwin.

13 Q And you basically agree with that analytical  
14 comment by the workers?

15 A Those are the people who do the work so I assume  
16 that they've seen wet rock from time to time. I trust --

17 Q But that's been born out by oodles of tests that  
18 you've done, that wet ballast would generally generate far  
19 less dust than dry ballast, right?

20 A I wouldn't say oodles of tests, but I would say  
21 that I can count on employees being able to tell me that  
22 they can look at it and say it's less dusty when the  
23 ballast was wet as opposed to when the ballast was dry.

24 Q But to clarify I'm asking you a second question:  
25 Since that day you have actually done a lot of

1 testing through a contractor called Techcon and you've  
2 found that wet ballast rock will generate far less dust  
3 than dry ballast rock?

4 A We have done testing and Techcon is one of my  
5 contractors. And the sampling when done with wet rock does  
6 produce lower dust concentrations than with dry rock.

7 Q You could have said yes, but okay, you explained  
8 it.

9 A It depends on how many cars you're unloading that  
10 day and any number of things. You're not just talking  
11 ballast is wet or dry. It's all the other conditions, too.  
12 But if it's wet, it's usually less dust.

13 Q I knew it would kill you to say yes. Anyway,  
14 I've got another point here:

15 You said normally ballast is unloaded when a  
16 section of track will be serviced by a system T&S crew, or  
17 a division surfacing crew. According to several road  
18 masters this activity is done about every five or ten years  
19 depending on local conditions. Here's my question:

20 It may be that that activity of a specific length  
21 of rail is actually -- I don't know what you would call it  
22 -- reballasted, but where they come in and reballast a  
23 whole area every five or ten years. But a trackman who is  
24 moving around the track to the locations where the railroad  
25 wants the ballast unloaded, could be in fact unloading

1 ballast every few days for a month on end, couldn't he? In  
2 other words, he's not doing it every five to ten years,  
3 that's not what you're trying to say, right?

4 A No. An individual who works on a section gang,  
5 and the way that we handle unloading of materials, the  
6 section gang is going to that area, the section gang  
7 unloads it. When they're unloading for that particular  
8 timbering and surfacing gang could come by once every five  
9 to ten years, they may unload for several days, maybe even  
10 two or three weeks. They may unload ballast at least part  
11 of the time during that day, each one of those days.

12 Q What if the rail master moves them a hundred  
13 miles down the track to another area where the rock trains  
14 are coming to unload ballast rock, they could then go  
15 another month, couldn't they, if they were moved?

16 A You can't do it. Those are bid-in section jobs.  
17 Once he bids in on the section, that's where he stays  
18 unless he bids and rolls onto another section. A section  
19

20 Q There are section gangs --

21 MR. LEACH: Hold on. Let him finish his answer.

22 MR. SHAPIRO: I'm sorry. Go ahead.

23 A A section gang is a bid-in job. It's for a  
24 specific area of track called a section, a section of  
25 track.

1 Q A lot of times trackmen actually get placed in  
2 with T&S gangs and might work with a T&S gang and then they  
3 may get located to another area, right?

4 A You can have trackmen who bid onto a job with a  
5 T&S gang and they would move with the T&S gang; however,  
6 they're not the ones unloading ballast typically. The  
7 section gang that's assigned to that particular area is the  
8 one who unloads ballast.

9 Q Have you taken any of the track maintenance or  
10 T&S individual workers and analyzed how often they've  
11 unloaded ballast rock over a period of a year? Have you  
12 taken any actual employees and looked at their job?

13 A Not specifically with individual employees. I  
14 have talked with some supervisors and asked on a typical  
15 section how often would you expect to unload ballast.

16 Q And what answers have you gotten?

17 A They say it will range depending on what the  
18 maintenance has been on that track. If you just had a T&S  
19 gang through there like the year before, they're probably  
20 not going to be doing all that much ballast unloading  
21 because the track's in real good shape. If it's been a  
22 number of years and you've got undercutters coming in and  
23 you're replacing or cleaning up rock in a particular area  
24 where you have poor drainage, they may dump ballast for a  
25 few days at a time, maybe five or six times a year. If

1 they're changing out switch points or changing out a switch  
2 or a frog, which is associated with a switch, they may dump  
3 one or two cars of ballast at that time.

4 Q As far as taking --

5 A So we're talking maybe a total of 15 or 16 times  
6 a year that they're unloading ballast. And each one of  
7 those times usually is going to be for a day or less than a  
8 day. And, however, if they have a timbering and surfacing  
9 gang in their area that's going to be doing work, they may  
10 be unloading ballast for a slightly longer period during  
11 that time.

12 Q Well, isn't that a real rough average not based  
13 on any particular employee that you've reviewed the  
14 records?

15 A There's something in the neighborhood of about 3-  
16 or 4000 employees. It would be pretty hard to do  
17 individual. I'm giving you a general idea of the  
18 experience of road masters who have years of experience  
19 that say that their crews unload ballast and I'm depending  
20 on that.

21 Q Wouldn't that have to be to a specific person's  
22 own experience?

23 MR. LEACH: Let me just object. I believe he  
24 answered your question and talked about experience of  
25 the masters.

1 BY MR. SHAPIRO:

2 Q Well, we have some plaintiffs, including the  
3 fellow whols in this case, he's testified that -- my  
4 memory, I can't recall if he testified to it or if it's in  
5 one of my discussions with him because it's been a while  
6 since his deposition. But he estimated on separate days a  
7 couple hundred times he's unloaded ballast rock. If you're  
8 talking about any part of one day over a 18- or 20-year  
9 period, he's estimated hundreds of days he's unloaded  
10 ballast rock.

11 A Well, over a 20-year period if he unloaded 200  
12 days that's ten days a year.

13 Q You're right. Well, just depends on the  
14 particular person.

15 A In fact my estimate was higher than yours. We'll  
16 use your estimate if you want to.

17 Q Each person has a different exposure is what  
18 we're saying, I suppose.

19 You mention in your recommendations as  
20 administrative controls wetting the ballast?

21 A Yes.

22 Q After you did the report, did the railroad go out  
23 in 1982 and fill up any of the rock train cars with water  
24 and see what it would do?

25 A They looked at what would be involved in wetting

1 down the cars. And as I recall the discussions, because I  
2 never saw any written material on it, as I recall the  
3 decisions, they had, number one, had problems wetting the  
4 cars and then getting the cars actually out to the site  
5 where they were going to be dumped and keeping the rock  
6 wet. Because it takes, if it has to move 20, 30, 40, 50  
7 miles from the place where it's wet, where you wet down the  
8 car, it may take a train like a work train a day or two to  
9 get there. And in south Georgia sun, high temperatures,  
10 that can dry out pretty quick. Also these cars are not  
11 sealed on the bottom and the water's going to drip out so  
12 you're not going to have any residual in there. So they  
13 had some problems with actually delivering it at the site  
14 wet.

15 The cars that I did in Baldwin, we had a real  
16 nasty thunderstorm the day before and it had dropped, it  
17 was my understanding it had dropped a lot of water in the  
18 area where those cars were. This was actually surmised  
19 between the trackman and I because I asked him. The other  
20 ones I had seen had been dry. He said, oh, yeah, we had a  
21 thunderstorm yesterday. And they already had the cars  
22 spotted out on the track on the siding so it didn't take  
23 very long from the time that the rain was applied,  
24 compliments of mother nature, to where they could unload  
25 the rock. It isn't like we had it in a facility and you

1 had to flood the cars and then move them for a day or two  
2 to get to the point where they were going to be unloaded.  
3 By that time you'd have at least some drying and probably  
4 most of the rock would be dry by that time.

5 So there was a problem with the delivery of the  
6 rock and getting it to the place where it was going to be  
7 unloaded wet. We still have that problem.

8 Q So after February of 82, was there any testing of  
9 wetting the ballast rock in 1982?

10 A Again, they looked at it.

11 Q Did they look at it with any of the rock quarries  
12 that deliver rock to the railroad?

13 A What they did with the rock quarries, that's a  
14 whole different matter. What they did with the rock  
15 quarries, they went back to our suppliers of rock and  
16 emphasized to them that we wanted our ballast washed when  
17 it was being loaded to reduce the fines that would be in  
18 the rock when it was delivered to us.

19 Q Where are those letters? I have not seen one  
20 letter from 1982 for a number of years to a rock quarry.

21 A I have not seen anything from the engineering  
22 department either. I don't know if they've kept those  
23 letters.

24 Q Because I requested anything that deals with this  
25 type of issue and I don't remember if it's one of your

1 answers or one of Mr. Ringer's answers in another case  
2 against CSX but there was an answer that said we asked the  
3 quarries. There was some discussion about wetting the rock  
4 but I have no idea when it is.

5 MR. LEACH: You're asking Mark about documents  
6 that engineering would have. I think he's telling you  
7 he doesn't know.

8 MR. SHAPIRO: Well, my production request was not  
9 to a particular department, with all due respect. It  
10 was to the railroad. I would just like, if there is  
11 something, let's make an inquiry and produce it if  
12 there is something. Is that fair enough?

13 MR. LEACH: Again you're asking Mark. You should  
14 be asking me.

15 MR. SHAPIRO: I am to both of you.

16 MR. LEACH: I haven't seen any of those documents  
17 so I'm not sure if they exist or not but we can  
18 certainly take another look.

19 MR. SHAPIRO: Off the record.

20 (Whereupon, there was a discussion held off the Record.)

21 BY MR. SHAPIRO:

22 Q So when you make an inquiry to check on any  
23 documents relating to discussing with the quarries about  
24 wetting ballast rock --

25 MR. LEACH: Again I'm going to ask Mark not to

1           make an inquiry because he's extremely busy and he's  
2           already made a very thorough search of his files for  
3           any documents.  If you're asking us to go back and  
4           talk to engineering to see if there are any letters,  
5           we will do that.

6           MR. SHAPIRO:  All right.

7           BY MR. SHAPIRO:

8           Q    Referring to the February report, I want to make  
9           sure of something because we've gone back and forth here a  
10          couple times.

11          on the wet ballast test that was from Baldwin, I  
12          see the column here where it says exposure of milligrams  
13          per cubic meter.  I'm seeing .12, .10.  Is this the column  
14          that should be .1 or less under the OSRA PEL or am I  
15          reading this wrong?

16          A    No.  What you're reading is the respirable dust  
17          concentration.

18          Q    Oh, that's just respirable dust?

19          A    Right.  That's not silica.

20          Q    Which one is the silica?

21          A    Well, it was a calculated permissible exposure  
22          limit at that time.  So using the percent silica and the  
23          above formula, the OSHA PEL, the calculated PEL for the  
24          first sample is .5 and the exposure was 3.8.  And that's  
25          for the respirable dust.

1           Q    You didn't break it down by just crystalline  
2 silica here?

3           A    No, it wasn't broken out. At that time the  
4 analytical methods didn't break out crystalline silica.

5           Q    It included respirable dust total.

6           A    You took a sample where you obtained your  
7 percentage of silica. And then using that bulk sample you  
8 then calculated what your permissible exposure limit was  
9 and that permissible exposure limit was what it would be  
10 for that partuclar dust sample. And in this case it was  
11 .50 milligrams per cubic meter and our exposure was 3.8.

12          Q    That first was way over the limits. But in other  
13 words, this test didn't have a time waited average at that  
14 time?

15          A    Yes, that's the time waited average.

16          Q    Oh, it is. What has changed? You said there's a  
17 separate one for the construction industry. But hasn't the  
18 basic one changed also for crystalline silica for general  
19 industry?

20          A    For general industry it has changed. Yes. It's  
21 now .1 milligrams per cubic meter of air.

22          Q    What is it for construction?

23          A    I think it's 20 million particles per cubic foot.

24          Q    And you're saying that the construction  
25 standards, which are obviously more lenient or you wouldn't

1 have brought them up, went into effect later, right?

2 MR. LEACH: Let me object. I haven't said  
3 anything a couple of times. We don't need any  
4 editorial comments. If you want to ask questions,  
5 he'll answer them. I don't want to sit here and move  
6 to strike all your comments. He mentioned them, I  
7 think he said, because OSHA had specifically  
8 referenced those to CSX.

9 BY MR. SHAPIRO:

10 Q When did those go into effect, those construction  
11 standards?

12 A I think the construction standards were in effect  
13 back in the 70s sometime.

14 Q Why didn't you refer to them in 1982?

15 A Because at the time I was generally working in  
16 shops and was most familiar with general industry standards  
17 and did not -- did not know that the construction standards  
18 would have been the appropriate standards to compare  
19 against at that time. So I used the general industry  
20 standards, which also agreed with the threshold limit value  
21 from the American Conference of Governmental and Industrial  
22 Hygienists. So it was an acceptable standard to me so  
23 that's the one I used.

24 Q By the way, you agree to produce the OSHA  
25 citations or violations from 1992?

1 MR. LEACH: Ask him about it because it has  
2 nothing to do with this case.

3 Tell him about the OSHA violation for the HazCom  
4 in northern Georgia.

5 A It involved a material, a tie plugging compound.

6 Q A tie plugging compound?

7 A Yes. And we did not have a material safety data  
8 sheet on site for the tie plugging compound and also the  
9 operator was not using impervious gloves. He was using  
10 leather gloves. We were cited by OSHA for that.

11 Q Was this a maintenance of way operation?

12 A It was a maintenance of way production gang.

13 MR. SHAPIRO: Well, I would request that your  
14 lawyer produce it.

15 MR. LEACH: When you make a request, I'll take a  
16 look at it and see if that comes within discoverable  
17 material.

18 BY MR. SHAPIRO:

19 Q So referring back to these limits, Mr. Badders,  
20 on the February 82 report, explain something to me here.

21 Why is the OSHA PEL for these Baldwin tests 5.0,  
22 but the other test -- oh, it's based on the -- so in other  
23 words, you couldn't detect a silica in that sample so PEL  
24 goes to this number there?

25 A Yes.

1 Q That's pretty bizzare. Okay, I see.  
2 Does that mean that you are still in violation of  
3 the PEL?  
4 A No.  
5 Q oh, right, right. Way under the PEL. Okay.  
6 Can you tell me what this document is, please?  
7 A I had this in my file.  
8 Q It appears to be silica dust testing from 1982  
9 but there's nothing with it to explain it or what not.  
10 A It is silica dust testing. It's not any testing  
11 that I had done and not any testing that had been done on  
12 the, at that time, Family Lines Rail System. I think this  
13 may have been testing that was done by the state of  
14 Maryland.  
15 Q You weren't merged with the Chessie line yet,  
16 were you? What part of the line was for Maryland at that  
17 time?  
18 A This was part of the Chessie system and I have  
19 the files from the Chessie industrial hygienist.  
20 Q When you merged, you merged the records together  
21 also?  
22 A Yes.  
23 Q So when we talked about Mr. Rupp earlier, this  
24 may have been something that could have tied in with the  
25 type of work that he had done?

1           A    He could have done this, but as I recall when I  
2 talked with him he said this was -- I think he said this  
3 was done by the state of Maryland. He didn't have any --  
4 there was no report or anything. Just the information  
5 that's provided there.

6           Q    And this is, for identification, at the top of  
7 the page it says Dust Sampling Parameters and Results Table  
8 3. Date seems to be from 1982.

9           You have not had occasion to discuss this with  
10 Mr. Rupp at all? We may take his deposition, by the way.

11          A    I don't know if I discussed this specifically  
12 with him or not. I think I probably did.

13          Q    Did he say the state of Maryland had -- do they  
14 have a state OSHA department that came in and did some  
15 testing or what?

16          A    Actually at that time the state of Maryland had a  
17 railroad safety section of their -- I think the Department  
18 of Health. And the individual whols in the railroad safety  
19 section at that time was a good friend of Mr. Rupp. And I  
20 think he is the one who did the sampling.

21          Q    Was it on Chessie personnel or other personnel?

22          A    Again in the particulars, I'm not absolutely  
23 positive. I think it was on Chessie personnel.

24          Q    He may know more about it?

25          A    He may know more about it.

1 MR. SHAPIRO: We're off the record here.  
2 (Whereupon, there was a discussion held off the Record.)  
3 BY MR. SHAPIRO:

4 Q When did you first take part in the silica  
5 working group under the AAR?

6 MR. LEACH: Let me object to any contacts,  
7 conversations or any dealings that Mr. Badders had in  
8 anticipation of silicosis litigation to be filed or  
9 filed against CSX. I don't know if that question  
10 deals with issues that are unrelated to litigation,  
11 but I'm going to instruct him not to answer any  
12 questions that invade the work product doctrine.

13 So that's my objection. I'm going to instruct  
14 him not to answer.

15 MR. SHAPIRO: I would think your objection could  
16 only get down to any questions where he's getting into  
17 -- well, the question's been raised in another case  
18 also. And I want to find out if there were any  
19 attorneys present at these meetings.

20 MR. LEACH: Again I'm going to instruct him at  
21 this time not to answer any questions that deal with  
22 any conversations, conferences or dealings he's had  
23 with anybody in anticipation of silicosis litigation  
24 filed or to be filed against CSX.

25 BY MR. SHAPIRO:

1           Q     When was the first time that you -- did you form  
2 the silica working group in the AAR? Your name was listed  
3 on a document as being the coordinator who telefaxed  
4 information to other parties.

5           MR. LEACH: Same objection. I'm going to  
6 instruct him not to answer.

7           MR. SHAPIRO: Eric, it doesn't even get into work  
8 product. He's got to answer whether he was involved  
9 in it. I'm not asking him what they talked about.

10          MR. LEACH: I think it invades --

11          MR. SHAPIRO: The judge is going to make him tell  
12 me the basics. If it gets to a question about what  
13 they talked about, it's one thing. I've already got  
14 the documents. How can you claim a privilege? The  
15 document's already out.

16          MR. LEACH: We've claimed the privilege and I  
17 have instructed him not to answer any questions that  
18 invade the work product doctrine or attorney/client  
19 privilege.

20          MR. SHAPIRO: I asked him when he first was  
21 involved with the silica working group. Are you  
22 trying to say that that is privileged?

23          MR. LEACH: I believe that it may be. I don't  
24 need to get into a discussion with you. I'm just  
25 raising an objection and instructing him not to answer

1 any questions that deal with that group.

2 MR. SHAPIRO: You're saying I can't ask him any  
3 questions about the silica working group, period?

4 MR. LEACH: Correct. I think that deals with  
5 matters that are covered by the attorney/client and/or  
6 the work product doctrine.

7 MR. SHAPIRO: Were you present at any of the  
8 meetings or was an attorney for CSX present at any of  
9 the meetings?

10 MR. LEACH: I have raised my objection. If you  
11 want to continue off the record, I guess we can.

12 MR. SHAPIRO: Let's go off the record.

13 (Whereupon, there was a discussion held off the Record.)

14 BY MR. SHAPIRO:

15 Q Have you created any videotapes, photographs or  
16 any other media depicting any of the track maintenance  
17 processes that may generate dust?

18 MR. LEACH: Other than this anticipation of  
19 litigation, you can answer the question.

20 MR. SHAPIRO: I specifically want to know if they  
21 have any videos, photos or media that the railroad  
22 intends to -- I want to know first of all if they have  
23 knowledge of the creation of any of those documents  
24 for purposes of presenting their side of the case.  
25 Now, if you're just going to look at it for your own

1 purposes of your attorney, that's fine. But if they  
2 have any intention of using it in litigation as  
3 evidence, I want to know about it.

4 MR. LEACH: The way I would respond is we would  
5 object to the question as it relates to materials that  
6 were prepared in anticipation of any litigation as  
7 opposed to any videos --

8 I think you've already testified about a video  
9 that was to be used in the general course of business.  
10 With those parameters you can answer.

11 But I will instruct him not to answer about any  
12 materials that were prepared in anticipation of any  
13 litigation, potential, threatened or to be filed  
14 against CSX.

15 Other than that you can answer.

16 A As far as the videos, we're writing the script.

17 Q I'm not asking any questions about a safety  
18 video. I'm saying are you aware of any videotapes that you  
19 have shot showing the ballast unloading process or ballast  
20 regulator operators or any other machine operators that you  
21 want to bring them into a trial to show this is what the  
22 operation looks like?

23 MR. LEACH: First of all, Mr. Badders doesn't  
24 decide what's brought into a trial.

25 MR. SHAPIRO: I'm asking if he shot them. He

1 might not decide.

2 MR. LEACH: I've instructed him not to answer any  
3 questions that relate to materials that may have been  
4 produced or created in anticipation of litigation or  
5 to assist in the litigation process.

6 MR. SHAPIRO: What I'm saying is, Eric, I'm not  
7 asking him for anything that you guys might want to  
8 look at, and it could be for anticipation of  
9 litigation. But if you have prepared anything, just  
10 like if you had taken a photograph of the scene of an  
11 accident and you think you're going to use it, that's  
12 what I'm asking about.

13 MR. LEACH: And my point was until a photograph,  
14 it is determined that the lawyer is going to use that  
15 photograph at trial, is work product, just like the  
16 creation of a video or other materials would be work  
17 product. So we've raised our objection and I instruct  
18 him --

19 MR. SHAPIRO: It's a speaking objection, number  
20 one. And number two, I'm not going to be revealed  
21 anything if he says yes. The Court would still have  
22 to rule on it. But you're cutting off the whole  
23 process by saying don't answer the question.

24 MR. LEACH: I'm instructing him not to answer the  
25 question. Go ahead. We can argue about it but I'd

1           rather continue on.

2           A     I haven't been involved in shooting any videos as  
3 far as for anticipation of litigation.

4           Q     I don't even really want to know that. I was  
5 just wanting to know -- .

6           MR. LEACH: I think he's just short circuiting  
7 the process.

8           A     If your question was have I shot videos for  
9 training purposes or general business purposes, no, not  
10 yet.

11          Q     But you've said you're in the process of doing a  
12 video for training?

13          A     Yes.

14          Q     Do you have any training in administering, like,  
15 mobile pulmonary function tests?

16          A     No, not specifically. I mean I have done some  
17 pulmonary functions tests many, many years ago.

18          Q     Was that when you were at Wisconsin?

19          A     Yes.

20          Q     Are you like a registered tech to do those kinds  
21 of things now?

22          A     No.

23          Q     What technicians has CSX -- or let's go back to,  
24 say, 81 when you started with the railroad, the predecessor  
25 railroads:

1                   What technicians has the railroad used to do any  
2 mobile pulmonary function testing of track maintenance  
3 workers?

4                   A    As far as the pulmonary function testing of track  
5 maintenance workers, we have hired an outside firm that  
6 uses respiratory therapists.

7                   Q    Is that Quality Services?

8                   A    Yes.

9                   Q    Have you used any other company besides Quality  
10 Services that you're aware of?

11                  A    We've used our occupational health nurses to do  
12 some of the testing as well.

13                  Q    That work for the railroad?

14                  A    Yes.

15                  Q    That's been the exception, not the rule, right?  
16 In other words, you've done that on many less occasions  
17 than you've used QSI, right?

18                  A    We've used Quality Services when our nurses could  
19 not cover that particular training site where we were doing  
20 the pulmonary function testing of the track maintenance  
21 employees.

22                  Q    When was the first time you did any pulinonary  
23 function testing on track maintenance or T&S gangs?

24                  A    I don't know if I can tell you when the first one  
25 occurred because I don't know if the chief medical officer

1 may have ordered it for a specific employee in the past.

2 Q Generally I guess on a -- not an individual  
3 person but a group basis, when did you start doing that?

4 A The first group was in 1992.

5 Q What about actual administration of chest x-rays  
6 on a mobile basis, well, not necessarily mobile, but on a  
7 group basis of any track maintenance or T&S workers, when  
8 did you first begin doing that on a group basis?

9 A 1992.

10 Q What caused you to start both of those tests in  
11 1992?

12 A We were starting a medical surveillance program  
13 for employees potentially exposed to silica. And the  
14 decision as to what tests were done and utilization of  
15 those tests was made by the chief medical officer.

16 Q Was that some reference to OSHA regulations?

17 A There are no actual OSHA regulations regarding  
18 medical surveillance for silica, so no.

19 Q Is there any other external reason that you're  
20 aware of that they began in 1992?

21 A It was the decision of the chief medical officer  
22 based on my sampling results that we needed to start a  
23 medical surveillance program, so he did.

24 Q The group chest x-rays, who had those -- have  
25 those all been sent to -- we're talking about the group

1 chest x-rays that began in 1992.

2 As far as the initial analysis or radiological  
3 review, has it all been that firm in Tampa, the radiology  
4 group in Tampa, Florida?

5 A I'm not sure if Quality Services may have used  
6 someone else. It was a reader that Quality Services  
7 provided for reading the chest x-rays. I know one of them  
8 is in Tampa, I don't know if they have any others.

9 Q Do you know where the chest x-ray films are being  
10 maintained?

11 A Yes.

12 Q Where, here in the medical department?

13 A The 1992 ones are in the medical department.

14 Q And the 1993 ones also?

15 A There were none taken in 1993.

16 Q How often are you planning on doing those?

17 A Every two years.

18 Q Have you consulted or retained any toxicologist  
19 with reference to the silica dust issues?

20 MR. LEACH: Let me raise an objection. Work  
21 product to the extent, as I said, Mr. Badders has  
22 information or was involved in any conversations in  
23 anticipation of this litigation and other silica  
24 related litigation, I would instruct him not to  
25 answer. If you want to know prior to the beginning of

1                   this type of litigation  
2                   MR. SHAPIRO: I don't want to know about the  
3                   specific case if you've talked or consulted with  
4                   someone to prepare the defense with your lawyer. I  
5                   want to know since 1981 you've had any dealings with  
6                   any toxicologists to analyze anything.  
7                   MR. LEACH: Prior to litigation?  
8                   MR. SHAPIRO: Yes.  
9                   A        No.  
10                  Q        All right.  
11                            What about petrographic or geological analysis?  
12           I think I have seen some documents involving that.  
13                  A        We had asked the suppliers of our rock to send us  
14           an analysis of their rock.  
15                  Q        And when did you first do that?  
16                  A        I think I did it like 1992.  
17                            All right. That's a pretty good guess.  
18                            What were you looking for? I saw the letter and  
19           you wrote the same letter to a lot of the quarries?  
20                  A        Yes.  
21                  Q        And I think you asked specifically about  
22           cristobalite, right?  
23                  A        Yes.  
24                  Q        You're asking about cristobalite and trying to  
25           find out if the quarries could show that there was no

1        cristobalite in the granite, for example, correct?

2            A    I don't know that I specifically asked that they  
3        could not show. I wanted to know if the cristobalite was  
4        present. I think that's how I stated it. If you show me  
5        one of the letters I can tell you if that's what I wrote  
6        because it was a form letter that I used.

7            Q    You said something in the letter about that's one  
8        of the worst or more, I don't remember what your phrase  
9        was, but it was one of the kinds that you didn't want to  
10       have if you could avoid it, basically. Now, what was your  
11       thinking in doing that?

12           MR. LEACH: Can he have the letter? Can you look  
13        for it now?

14           MR. SHAPIRO: I don't need the letter. I just  
15        asked him a question: what was his thinking behind  
16        the letter. Because he doesn't say that in there.

17           MR. LEACH: He asked you to take a look at the  
18        letter so he could tell you what his thinking was.

19           MR. SHAPIRO: Can you go ahead and answer without  
20        the letter? I'll look for it, but I thought we were  
21        trying to be expedient here and it might take me a few  
22        minutes to find it.

23           A    As far as the letter that went out, is that one  
24        there?

25           Q    Here's one. That was produced by Vulcan.

1                   What was your thinking behind writing the  
2 letters?

3           A    If we were looking for suppliers that were  
4 providing ballasts that had cristobalite, and if as a major  
5 constituent of their ballasts and if that was the case we  
6 were going to ask that they be either switched to another  
7 quarry or eventually they could actually be removed from  
8 our materials and purchasing system.

9           Q    How many different quarries were supplying rock  
10 in 1992? Just approximately. I think we have a list, but  
11 I wanted to ask you the question.

12          A    I want to say about a dozen, but there may have  
13 been a few more, plus or minus.

14          Q    Did you find that any of them had cristobalite in  
15 their granite?

16          A    Most of them reported there was no cristobalite  
17 but I think there was one or two that reported very small  
18 quantities.

19          Q    There's a different permissible exposure level  
20 for cristobalite in the cristobalite-type of silica as  
21 opposed to other types of silica, isn't there?

22          A    There's a different permissible exposure level,  
23 yes.

24          Q    It's half the level, right?

25          A    Yes.

1 Q A person can develop silicosis even if they've  
2 never been exposed to cristobalite, though, couldn't they,  
3 if the exposure was long enough and of a significant amount  
4 of silica dust, right?

5 MR. LEACH: objection, calls for a medical  
6 conclusion.

7 A Well, a person whols exposed to crystalline  
8 silica for an extended period of time at levels  
9 considerably higher than the permissible exposure limit I  
10 believe may be at increased risk of developing silicosis-  
11 related diseases.

12 Q Let me show you this. This is a July 88 cover  
13 letter from Davidson Mineral Properties I guess introducing  
14 their material safety data sheet. And this was something  
15 that you produced.

16 Have you seen that before?

17 A Looks familiar.

18 Q Scan through that material safety data sheet.  
19 It's from a rock quarry.

20 Does the type of warnings that were outlined  
21 there seem rather similar to several that were produced by  
22 the actual rock quarries that did send material safety data  
23 sheets around that time?

24 A As I recall there was not a rush of material  
25 safety data sheets that came in from the suppliers.

1 Q In other words, they didn't all come in the same  
2 month. They were spread out over a few years even,  
3 possibly, right?

4 A They've been spread out over a period of time,  
5 certainly.

6 Q When you saw that one in 1988, did it impart any  
7 information to you in the warnings that you were not aware  
8 of with respect to silica?

9 A No, I don't think it gave me any additional  
10 warnings.

11 Q You knew about those general warnings since the  
12 time you had written the memo in 1981 when you described  
13 silica and silicosis, didn't you?

14 A Yes.

15 Q This was in the materials that you produced also.  
16 And it says NIOSH at the top, Recommended Standards. The  
17 only thing I wanted to ask you about that one was: I  
18 couldn't find a date and I wanted to know if you had any  
19 idea when that may have been, within a year or two, when  
20 you think you obtained that or if you know where it came  
21 from.

22 MR. LEACH: Just for the record, we didn't  
23 produce these, to my knowledge.

24 MR. SHAPIRO: This was in the documents you  
25 produced.

1 MR. LEACH: Maybe one of the other cases.  
2 MR. SHAPIRO: No, no, no. It was in the stack.  
3 I specifically brought the stack.  
4 MR. LEACH: Well, you can ask Mark. He can tell  
5 you better than I could.  
6 A This was not sent to me from NIOSH.  
7 Q It looks pretty old. That's why I --  
8 A I can't recall specifically who sent it. I think  
9 one of the quarries, when they sent out some of their  
10 information they included the NIOSH recommended standards.  
11 So I'd say late 80s, early 90s.  
12 Q Do you know what this Refractories Institute is?  
13 This is something you guys produced. Is that like a  
14 national-organization-type thing or what?  
15 A I'm not exactly sure. I know that it was sent by  
16 -- it was either sent by one of our suppliers of sand or by  
17 one of the suppliers of ballast rock as part of the  
18 informational material that they sent.  
19 Q Do you know approximately when this was received?  
20 A Again, it's probably early 90s sometime,  
21 possibility of late 80s, but more than likely early 90s.  
22 Q Apparently you or someone just copied a couple  
23 pages from this book just to show you had this textbook on  
24 silica entitled Dangerous Properties of Industrial  
25 Materials.

1 MR. LEACH: I don't recall us producing that.  
2 MR. SHAPIRO: It was in the very bottom of the  
3 documents.  
4 MR. LEACH: Is that something that came from your  
5 files?  
6 THE WITNESS: I have this reference book and I  
7 don't specifically recall copying this, but I could  
8 have. I have that reference book.  
9 BY MR. SHAPIRO:  
10 Q Now, I have some quick questions about this.  
11 This was produced. I'm not sure where this came from. I  
12 don't remember if this was in your stack or not. This was  
13 the rock quarry list and I was able to decipher the -- it  
14 looks like it's done by year down here and it lists all the  
15 -- have you ever looked at this before? I don't want to  
16 ask a lot of questions for nothing. It lists a lot of the  
17 rock quarries. This was produced by CSX. It may have been  
18  
19 MR. LEACH: That's by a different department.  
20 A This is from a different department. I'm not  
21 sure --  
22 Q The only thing that I wanted to ask you: do you  
23 know if this column, one of these is, I presume, total rock  
24 and one might be payments to the quarry or do you know?  
25 A I don't know.

1 Q Let me ask you this, though:  
2 Currently who are the largest rock quarries,  
3 three or four rock quarries that CSX buys its granite rock  
4 from? I can sort of tell from here, but I want to be sure.  
5 MR. LEACH: If you know.  
6 A As far as the top three or four, I'm not sure,  
7 other than I think Vulcan is in that group.  
a Q What about Davidson Mineral Properties?  
9 A They're one of the major suppliers. They may  
10 still be. The rock quarries tend to change as far as who  
11 the major supplier is depending on where we're doing track  
12 maintenance.  
13 Q Are most of the track -- what part of the track  
14 currently is made up of granite, do you know?  
15 A I don't know a percentage but I think most of our  
16 main line track and most of our major yards are granite.  
17 That's been my observation.  
18 Q And based on -- do you have or -- do you have a  
19 research and testing department with the railroad?  
20 A There's a test lab.  
21 Q What's the title? Is it called --  
22 A It's test lab for the mechanical operations  
23 group.  
24 Q Is that located in Georgia?  
25 A Yes.

1 Q What city is that in?

2 A Waycross.

3 Q Is there a manual or a standard for the purchase  
4 of ballast rock?

5 MR. LEACH: object to the predicate.

6 If you know.

7 BY MR. SHAPIRO:

8 Q For this railroad?

9 A I believe there's a standard for the purchase of  
10 the rock but I believe that comes out of either the  
11 engineering department or the materials and purchasing. I  
12 think materials and purchasing will probably have a copy of  
13 it.

14 MR. SHAPIRO: I'm going to ask Mr. Leach to  
15 produce a copy of that. In my litigation with  
16 Southern they have a seven-page ballast rock  
17 specification. I am presuming that there must be one  
18 for CSX. I saw a couple documents that refer to  
19 certain ballast didn't meet the standard. I'm sure  
20 they have it.

21 BY MR. SHAPIRO:

22 Q In any case, have you reviewed any documents from  
23 the time you started with the railroad to now that have  
24 analyzed, I guess you'd call it technically, the  
25 petrographic analysis or composition of the granite that

1 you're buying from the various quarries?

2 A I have seen the results that the quarries that  
3 responded to my letter sent back.

4 Q From some documents that I have seen it appears  
5 that within maybe 5 percentage points one way or the other,  
6 the typical composition of the granite that's being  
7 purchased is somewhere in the 60 percent of silica; is that  
a your understanding?

9 A I don't think it's quite that high but I'd have  
10 to look at the documents.

11 Q What did you think it was?

12 A I thought it was more down around 25 percent.

13 Q Total silica in the granite rock?

14 MR. LEACH: You want to look at the documents,  
15 did you say?

16 MR. SHAPIRO: Off the record.

17 (Whereupon, there was a discussion held off the Record.)

18 BY MR. SHAPIRO:

19 Q Is this one of the petrographic analyses that  
20 were done on some granite from CSX? I'm handing you a  
21 document. First page is with Tarmac dated October 5, 1992?

22 A This is one of their responses. I think this is  
23 one we may have provided you.

24 Q What percent silica was the granite that was  
25 submitted to you from this particular quarry, Tarmac?

1           A    The pink granite particles consisted of 10 to 15  
2 percent clear quartz, 60 to 70 percent potassium and sodium  
3 feldspar, which is not crystalline silica.

4           Q    Quartz is a type of silica, correct?

5           A    Right.

6           Q    And then 20 to 30 percent for the granodiorite,  
7 20, 30 percent quartz and the rest of it is feldspar and  
8 the ferromagnesium metals. And pyrite or dark pink quartz  
9 was 10 to 15 percent, which is about in the range that I  
10 recall. But I didn't write down a table to average them or  
11 anything like that.

12          Q    I only saw this one. I might not have brought  
13 every document. As a matter of fact, I picked through and  
14 I didn't bring every one.

15                But you got one of these from every one of your  
16 quarries?

17          A    Some of the quarries did not respond.

18          Q    If you haven't produced every one of these, will  
19 you produce the rest for me through your counsel?

20                MR. LEACH: Just for the record, I've gone  
21 through and we produced every petrographic analysis.

22          A    Every one that I have I produced to -- I gave to  
23 Mr. Leach.

24          Q    Is Martin Marietta one of your quarries, also?

25          A    I don't know off the top of my head.

1 Q I've seen them listed. For example I'm looking  
2 at something that they produced to Norfolk Southern. Which  
3 I'm not saying you have. I just want to comment on here  
4 and see if we get anywhere.

5 It said that they supplied -- total silica  
6 content for granite type rock is generally in the range of  
7 60 to 75 percent. Quartz is significantly less. The SIO-2  
8 content of these two locations are as follows, and the  
9 numbers. You see right there? This is a letter to Dick  
10 Zimmerman of Norfolk Southern that was written by Martin  
11 Marietta.

12 But again, as I said, the same quarries supply  
13 rock to CSX?

14 MR. LEACH: Are you asking him about it or  
15 telling him?

16 MR. SHAPRIO: I'm asking.

17 BY MR. SHAPIRO:

18 Q Do you see how those were from those various  
19 quarries. Do you know if you all got any rock from any of  
20 those quarries, Martin Marietta?

21 A I don't know specifically if we have or not, no.

22 Q Do you notice that he makes the comment that -- I  
23 don't want to misphrase it. He said total silica content  
24 for granite type rock generally ranges 60 to 75 percent.  
25 Free silica in the form of quartz is significantly less.

1 Quartz is one type of silica, correct?  
2 A Quartz is a chrystalline silica, which is what  
3 we're talking about.  
4 Q All right.  
5 A The other items are silicates, which is a major  
6 component of the earth's crust and not all of those are  
7 chrystalline.  
8 Q Those other types then wouldn't have a  
9 permissible exposure level like quartz?  
10 A That's correct.  
11 Q You said that the department in Georgia that does  
12 the testing of rock is called the testing department or --  
13 MR. LEACH: Let me object. It mischaracterizes.  
14 He didn't say for the testing of rock. He said they  
15 had a testing laboratory in Waycross.  
16 MR. SHAPIRO: All right. I'm sorry. Whatever.  
17 BY MR. SHAPIRO:  
18 Q What's the name of that laboratory?  
19 A It's the Waycross test laboratory in the  
20 mechanical operations group.  
21 Q What testing, if any, have they done that  
22 respects silica in any of the ballast rock?  
23 A None.  
24 Q So your railroad hasn't done any of its own  
25 compositional testing of ballast rock?

1 A I'm not aware that we have, no.  
2 Q Whols the head of the testing department in  
3 Georgia?  
4 A Mr. K. E. Davis.  
5 Q Whols Mel Hicks?  
6 A I don't know a Mel Hicks.  
7 Q You don't? Do you know a Mr. Hicks?  
8 A Yes.  
9 Q And is he with the testing lab?  
10 A No.  
11 Q What does he do with the railroad?  
12 A The Mr. Hicks that I know is head of the  
13 environmental operations group for mechanical operations.  
14 Q Where is his office?  
15 A Here in Jacksonville.  
16 Q I saw some correspondence between Martin Marietta  
17 and Mr. Hicks regarding dust supporession or ballast rock  
18 or what not.  
19 Are you aware of any --  
20 A That may be a different Hicks, too.  
21 Q Do you know a Sam Carter?  
22 A No.  
23 Q But Mr. K. E. Davis is head of the testing  
24 laboratory?  
25 A Of the mechanical operations test laboratory,

1 Waycross.

2 Q Are they the department that supervises the specs  
3 of ballast rock?

4 A No.

5 Q Who does that?

6 A It would be the engineering department.

7 Q well, just so we don't go in the wrong area here,  
8 the research lab or the testing laboratory really would  
9 have nothing to do with the ballast rock composition or the  
10 testing or issues of silica dust?

11 A To the best of my knowledge, they've never been  
12 involved in it.

13 Q What about the engineering department, have they  
14 been involved at all?

15 MR. LF-ACH: If you know.

16 A As far as testing the rock, I'm not aware that  
17 they've done any tests. I'm not aware of any tests they've  
18 run.

19 Q Who checks the specs of the ballast rock, like to  
20 make sure the fines, grit, whatever, who does that?

21 A That's strictly done by the engineering  
22 department. And they're basically looking at, what I  
23 understand they're looking at, at the size of the rock.  
24 And basically its physical characteristics and not its  
25 chemical characteristics.

1                   What about wetting ballast rock in the ballast  
2 trains, would that fall under their purview along with  
3 yours?

4                   A    Well, since they don't wet rock, I don't know  
5 that it does.

6                   Q    I mean coordinating it with the quarries, if  
7 there was any effort to do that?

8                   A    They would normally contact the quarries through  
9 the materials and purchasing department, I believe. But  
10 you'll need to talk to somebody in engineering and  
11 materials and purchasing as to how they do their  
12 coordination.

13                  Q    Are you aware of who in materials and purchasing  
14 has looked into wetting the rock or dust supression issues  
15 from the rock quarries?

16                  A    No. It probably would be the purchasing agent if  
17 anyone has done it recently.

18                  Q    And who would that be as far as the quarries are  
19 concerned?

20                  A    I'm not sure whols assigned to that now. It used  
21 to be Mr. McKeithan.

22                  Q    Is it M-c-K-e-i-t-h --

23                  A    Your spelling guess is probably as good as mine.

24                  Q    Is it McKeithan?

25                  A    Yes.

1 Q What's his first name?

2 A I want to say it's Billy, but I'm not sure.

3 Q What about with engineering, who would have had  
4 some involvement with you and someone else with silica  
5 issues, controlling, dust suppression, ballast regulators,  
6 anything like that?

7 A Well, as far as silica exposure control, I have  
8 talked to Jim Cashwell.

9 Q What's his title?

10 A Director, safety.

11 Q Okay.

12 A And I've also spoken to Roger Cross.

13 Q What's his title?

14 A As I told you earlier, they've changed. I'm not  
15 sure what his current title is.

16 Q What's his general field?

17 A I think he's one of the regional managers of  
18 engineering operations.

19 Q Isn't there a specific, like, maintenance of way  
20 department also? There are so many departments I can't  
21 keep them straight. Is there a maintenance of way division  
22 of the engineering department?

23 A To be honest, they've reorganized so much I don't  
24 know for sure, you know, if there's an individual  
25 maintenance of way department. There's someone whols over

1 all maintenance of way activities.

2 Q Have you coordinated anything with them on the  
3 silica area in trying to find remedies?

4 A I've talked to the people that --

5 Q Engineering you just mentioned?

6 A In engineering that I just mentioned. I also  
7 talked with the man who runs our engineering shop in  
8 Richmond, Virginia.

9 Q With respect to the ballast regulators?

10 A Where they're doing the ballast regulators.

11 Q Who is that?

12 A George White.

13 Q I know these people are going to hate you for  
14 giving their name out, but don't worry. They'll survive.

15 What is his title?

16 A He's general -- I think he's general manager or  
17 general supervisor, work equipment.

18 Q Why is he based there, you just have a particular  
19 office there?

20 A That's where the maintenance of way equipment is  
21 repaired. That's our big repair shop.

22 Q Is that that new shop where you all are doing  
23 your own modifications to some of this equipment? I hear  
24 there's a new something, that they're doing equipment  
25 repairs or modifications or something?

1           A    it's our new work equipment shop.

2           Q    Is it actually in Richmond?

3           A    Yes.

4           Q    They're doing some of these modifications there  
5 to the ballast regulators?

6           A    Yes.

7           Q    Do you go up there and visit and see how they're  
8 doing these repairs or modifications?

9           A    Not specifically for that but I've been to the  
10 Richmond facility.

11          Q    What was the occasion of your visit?

12          A    Basically general industrial hygiene and  
13 occupational safety and health issues with their exposures  
14 at that shop while making the repairs.

15          Q    Have you ever seen this booklet before, this  
16 NIOSH Respirator Decision Logic booklet?

17          A    I think I have seen it at like a conference.

18          Q    Not something you keep in your office, though?

19          A    No.

20          Q    What would you refer to when you had a particular  
21 possible health hazard, silica dust, whatever, and you were  
22 trying to determine what masks or respirators would be  
23 appropriate for a worker with a particular exposure?

24          A    Well, with my training and experience I have a  
25 pretty good idea of what's used in most cases. For those

1 few cases I wouldn't have an idea what to use, I have a  
2 guide from 3M where they talk about specific chemicals and  
3 what kind of respirator's recommended.

4 Q Do they reference OSHA or NIOSH, what do you call  
5 it, approval codes or whatever?

6 A Since it's a 3M book they mostly reference 3M  
7 products.

8 Q I mean as far as whether it meets certain  
9 standards of OSHA or NIOSH.

10 A I don't recall in that book that they  
11 specifically mention it. I think they use -- they may have  
12 the NIOSH approval numbers somewhere in the sections.

13 Q I reviewed a large stack of information which is  
14 this Technical Safety and Health Consulting, Inc. testing.  
15 I noticed that the first document that was produced was  
16 from March of 1990.

17 Why is it that this group started doing their  
18 testing in 1990 as opposed to say a couple years before  
19 that or some other time?

20 A The main reason is before that time they were  
21 working in our mechanical facilities and in 1990 I expanded  
22 their scope of work to include the engineering department  
23 operations.

24 Q You mean maintenance of way work and stuff like  
25 that?

1           A    The mobile operations including maintenance of  
2 way.  
3           Q    So how long had they been doing work for CSX or  
4 its predecessors?  
5           A    The first work that they did I believe was in  
6 1987.  
7           Q    Was there a different outfit before them that was  
8 doing the testing?  
9           A    No.  
10          Q    So in 87 they started doing some things that were  
11 not maintenance of way and then you expanded it in 1990 to  
12 the maintenance of way?  
13          A    Yes.  
14          Q    What I'm trying to drive at here is was there any  
15 silica dust testing of the maintenance of way workers done  
16 between the 1982 testing that you were intimately involved  
17 with and the Techcon in 1990?  
18          A    No, I don't think so.  
19          Q    Why not?  
20          A    In 1982 I had gone out and had sampled the  
21 operations, had recommended control measures. And at that  
22 time I was the only industrial hygienist, as you've pointed  
23 out, and that once I had addressed a problem I went on to  
24 something else, which is what I did.  
25          Q    Did you think that the safety concerns were

1 completely solved by virtue of the -- between 1982 and  
2 1990?

3 MR. LEACH: As to the workers that --

4 MR. SHAPIRO: As to workers in the maintenance of  
5 way with silica dust.

6 A Well, you say completely solved, I don't know  
7 that you can ever say completely solved. However, I  
8 thought that the major exposures to crystalline silica had  
9 been identified and that the employees who were doing those  
10 operations were being offered adequate protection using the  
11 respiratory protection that we provided.

12 Q Which was what?

13 A Dust mist respirator. Although some people  
14 actually used dust mist fume respirators.

15 Q You're saying if someone requested a more  
16 protective type respiratory equipment, they could get that?

17 A Yes.

18 Q If they had asked for an NiCad fancy hood thing  
19 that we talked about with the powered air supply, would you  
20 have gotten it for them?

21 A In fact part of the reason why we did the test in  
22 1990 with the air purifying respirators was as a result of  
23 the operators on that particular division asking if they  
24 could try those out. So, yes.

25 Q Isn't there a requirement that's pretty strictly

1 enforced that workers can't use a respiratory device that's  
2 not on an approved list by CSX?

3 A If there's a device that's not on the approved  
4 list, then they have to go through either me or one of the  
5 safety directors so that they could obtain the material for  
6 tests and then eventually use it for their own exposure  
7 control.

8 Q So a typical trackman would have to go to his  
9 foreman or to a supervisory person who would have to  
10 contact you about a particular item that was not on the  
11 approved list? I think that's what the memo said, didn't  
12 it? There were memorandums when the new manual was put out.  
13 There were a couple. I'm not going to go hunt for them.  
14 It said workers are supposed to use this particular -- the  
15 particular devices on the attached list. If you want an  
16 exception you have to do a couple of things.

17 Isn't that what the gist of it was?

18 A Generally the employees will use the personal  
19 protective equipment that's been identified in our personal  
20 protective equipment catalogue. However, there are any  
21 number of mechanisms under which they can obtain alternate  
22 personal protective equipment. And in fact some of the  
23 equipment that's been in the catalogue or has been placed  
24 in there has been a result of an employee request.

25 Q Getting back to my original question now, which

1 was they would have to go to a supervisory person who would  
2 have to contact you to get an exception, right?

3 A That's one of the mechanisms, yes.

4 Q What other one would there be if it wasn't on  
5 your list of approved equipment? They can't just get it  
6 and use it. That would be a violation, wouldn't it?

7 A They cannot go and get that equipment by  
8 themselves. Because it has to be evaluated by somebody who  
9 can look at the equipment and determine if it's the proper  
10 equipment.

11 Q What was the other route they could take besides  
12 going to the supervisor and you?

13 A The easiest route that they would have would be  
14 to talk to their safety committeemen, of which there are  
15 several safety committeemen.

16 Q And they can contact you?

17 A They can contact me or they can go through their  
18 contact versus like the director of safety for engineering  
19 and he could approve their purchase of the respiratory  
20 protective equipment. Usually if it involves respirators,  
21 whoever ends up with the request, it will eventually get to  
22 me.

23 Q Where would a trackman go to find a respirator in  
24 1984 if he was working on a ballast regulator?

25 A He'd go to his supervisor.

1 Q Held go to a foreman, or you mean a gang  
2 supervisor or foreman or what?  
3 A Either be a foreman or in some cases it may be a  
4 road master or an assistant road master.  
5 Q Is there a standard place that respirators were  
6 kept?  
7 A A lot of times they were kept actually on the  
8 trucks that the section gangs took out.  
9 Q To get to the worksite you mean?  
10 A Yes.  
11 Q And so there'd be a box of the respirators. How  
12 many come in a box? Those 3M 8710s were used for a long  
13 time, right?  
14 A I think there's 20 of those in a box. There may  
15 be ten. I don't recall.  
16 Q Is that still the mask used by ballast regulator  
17 operators and people unloading ballast rock trains?  
18 A No.  
19 Q You've switched. Is that Moldex now or which one  
20 are you using now?  
21 A We're using a number of respirators.  
22 Q What kinds?  
23 A Using a 3M 8715.  
24 Q What's the differences in that and 8710?  
25 A Has a broader piece of foam across the nose

1 bridge which aids in the sealing of the respirator. We use  
2 a Moldex 2200.

3 Q Let's get the year on each of these changes.  
4 The 8715, when did that go into effect, just  
5 approximately, 90s or later? I mean 1990 or later?

6 A I'm going to say late 80s.

7 Q What about the Moldex?

8 A Moldex 2200, early 80s.

9 Q That was offered as an alternative to the 8710 or  
10 did it replace it?

11 A Alternative.

12 Q And are there any other ones?

13 A Moldex 2300.

14 Q What's that?

15 A That's a dust mist respirator with an exhalation  
16 valve.

17 Q What would be the purpose of using that over the  
18 others?

19 A You're not having to exhale back through the  
20 filtering element of the respirator. You exhale out the  
21 valve.

22 Q Is it better?

23 A It reduces the work of breathing so it's more  
24 comfortable.

25 Q Is that standard operating equipment for a

1 ballast regulator operator or do they have to request that?

2 A Well, they have any of those respirators  
3 available to them. They just ask for which one they like.

4 Q Where are they available to them?

5 A As far as I know, yes.

6 Q They're available at the local terminal or who  
7 makes it available? What's the standard procedure?

8 A They obtain it through their supervisor.

9 Q But at the present time which -- you mentioned, I  
10 think, the 8715 3M brand, the Moldex, two models.

11 All three of those are currently available?

12 A Yes. However, at any one particular location  
13 they may only have one or two versions of those respirators  
14 because those are the only ones that the employees are  
15 requesting. If they want something else, they have to ask  
16 for it.

17 Q Now, what about before 1981? There were no masks  
18 at all being used by anyone that's a ballast regulator  
19 operator or someone unloading a rock train, right?

20 A I don't know that that's the case.

21 Q If they made a specific request, they could  
22 probably get one, but there was no company procedure before  
23 1981 that said these folks are supposed to be using a mask,  
24 right?

25 MR. LEACH: object to the predicate.

1                   If you know what the various departments and  
2 supervisors and foremen were doing, you can answer it.

3           A       Before my 1981 memo I don't know of anyone else,  
4 although there may have been in isolated locations.

5           Q       It was not an usual procedure for them to wear  
6 masks before you got on board, right?

7           A       Again before 1981 I don't know if they used it or  
8 not. And I don't know if it had been available other than  
9 if they asked for it.

10          Q       And was there a respiratory -- like equipment  
11 catalogue in existence before 1980?

12          A       There was a publication put out by the safety  
13 department that I think had some respirators in it and it  
14 may have been around before 1980.

15          Q       Was that produced by you guys in your response?

16          A       I don't know if it even exists any more. I  
17 haven't seen a copy of it in a long time.

18          Q       I want to make sure that there's a position that,  
19 hey, these guys were supposed to use one before that date,  
20 and if it's in that manual I'd like to have it. I don't  
21 think I've seen anything like that.

22               MR. LEACH: Are you addressing that to me or to  
23 Mark?

24               MR. SHAPIRO: Both.

25               MR. LEACH: I don't think Mark would know, but

1           there may be. We can take a look. I don't know what  
2           the procedure was out in the field. It may have been  
3           that they were available and made known to the  
4           employees.

5           (Whereupon, a short recess was taken.)

6           BY MR. SHAPIRO:

7           Q       Going back to the wetting of the ballast rock and  
8           efforts to examine wetting the rock trains at the quarry.  
9           You talked before about some of the problematic areas in  
10          doing that.

11          Are you aware of any efforts of anyone with the  
12          railroad to examine wetting of the rock and the rock trains  
13          in coordination with any quarries?

14          A       other than just the general coordination that the  
15          materials and purchasing does with the rock quarries where  
16          they say one of the specifications is that they wash the  
17          ballast.

18          Q       I have some documents in other litigation,  
19          Southern, where they were doing a lot of tests starting in  
20          92. And I know that you know about that from the off  
21          limits area that your lawyer won't let you talk about.  
22          What I'm asking you, for CSX have you done any of that that  
23          you're aware of, and your answer is no?

24          A       No.

25          Q       Simple.

1                   Does CSX own any what they call a water truck?  
2 It holds water and it's like a water cannon. Does CSX own  
3 any of those?

4                   A     I'm not aware that they do.

5                   Q     Have you ever seen one before?

6                   A     No. The only water cannons I have ever seen  
7 have been associated with fire departments.

8                   Q     What other efforts has CSX taken to try to  
9 control the track maintenance workers' exposure to silica  
10 besides the areas that we've talked about? I'll try to hit  
11 a few of them, and if I miss, let me know. We talked about  
12 ballast regulator change in the cab, in the air  
13 conditioning. We've touched on wetting the ballast rock.  
14 We've touched on the personal respiratory equipment.

15                   Can you think of anything else of a nature of  
16 health or safety that you've looked at since 81?

17                   A     We have purchased remote control ballasts on  
18 loading cars for our large-scale ballast unloading which  
19 can allow the employee whols unloading the ballast to stand  
20 back from the area where the dumping is actually occurring.

21                   Q     When did you first hear about those remote  
22 controls?

23                   A     I want to say about 1992 is when I heard that  
24 they were looking at purchasing it. I think we obtained it  
25 either late 92 or 93, the first set of cars.

1 Q And that will allow someone -- that cuts down the  
2 total personnel to have to unload the cars plus they can  
3 stand a distance away, correct?

4 A I don't know if it reduces the number of  
5 personnel needed to unload the car. It may. But it does  
6 allow for the person whols doing the unloading not to have  
7 to stand right next to the car while the unloading is  
8 occurring.

9 Q Anything else besides the remote control ballast  
10 cars? Were those available in the 80s?

11 A I'm not aware they were available in the 80s.

12 Q Anything else you can think of?

13 A No.

14 Q Has the general constitution of the ballast on  
15 the CSX lines stayed the same, as far as you know, since  
16 the early 80s?

17 A As far as I know, yes.

18 Q Did it change during the 70s in any material way?

19 A I don't know. Not that I know of.

20 Q The railroad's been using basically the same type  
21 of granite on the lines for years on this railroad, as far  
22 as you know?

23 MR. LEACH: Object to the predicate. Prior to  
24 1980 I think you said.

25 BY MR. SHAPIRO:

1 Q Well, at least in the 70s, as far as you know?  
2 A I'm not aware of any changes but then that was  
3 before my time.  
4 Q This Techcon testing that started in 1990, why  
5 didn't they start doing this testing in 1983?  
6 A Techcon didn't exist in 1983.  
7 Q Why didn't another company do some testing and  
8 surveying of what the exposures were after you did your  
9 tests in 81 and 82?  
10 A I did not have any outside consultant that could  
11 do the testing. I was the only industrial hygienist doing  
12 the testing at the time.  
13 Q There were a lot of contractors around. You  
14 could have found one, couldn't you?  
15 MR. LEACH: He's asking you was there a need to  
16 do testing. Did you feel there was a need to do  
17 testing.  
18 BY MR. SHAPIRO:  
19 Q Well, I'm just probing, examining your thinking  
20 here.  
21 MR. LEACH: Are you talking about ballast  
22 regulator operators?  
23 BY MR. SHAPIRO:  
24 Q I'm talking about ballast regulators, unloading  
25 the ballast rock trains. You did it extensively starting

1 in 90. But I'm saying why not in 83 or 84?

2 A I had done the sampling in 82 and we had found  
3 silica exposure, had addressed that silica exposure using  
4 the respirators. And as I stated earlier, there were other  
5 parts of the railroad I needed to look at so I thought that  
6 problem was pretty well resolved so I went on and tested  
7 and looked at other areas of the railroad.

8 Q If that makes sense, why are you going and doing  
9 everything in the world or every area starting in 1990 but  
10 not in 1983? What changed?

11 A The biggest change is I had more manpower to be  
12 able to do the work. And we were looking more at creating  
13 an exposure data base to determine what is a wide-spread  
14 exposure that we have.

15 Q Starting in 90 you produced records where there  
16 was testing just a lot of different areas of the line.

17 Is there a rhyme or reason what Techcon did? Are  
18 they trying to hit every general area of the track  
19 maintenance operation over the course of a few years or  
20 what is the rhyme or reason to these locations and places?

21 A Most of the locations that they selected were  
22 where timbering and surfacing gangs were doing their work.  
23 So the location is very dependent on where the timbering  
24 and surfacing gangs were assigned to do work at the time  
25 that the testing was done.

1           Q    But I guess during, let's say calendar year 1990,  
2 were you trying to get some testing of every T&S gang on  
3 the railroad? It's just a matter of where they were or how  
4 were you doing it?

5           A    Basically what I told Techcon was that I wanted  
6 some testing of timbering and surfacing gangs and I wanted  
7 X number of tests this year, and had them set up with the  
8 engineering department, meet those gangs wherever they were  
9 doing the work at the time that Techcon was going to do the  
10 testing.

11          Q    But the goal was not oriented to try to get  
12 testing on every single track maintenance worker. In other  
13 words, you weren't looking at your A to Z list of all your  
14 workers and saying let's go to each area and make sure we  
15 get each one of these guys tested?

16          A    No.

17          Q    Well, what was the reason that you did the  
18 testing starting in 1990? Was it for the safety of the  
19 workers?

20          A    Well, it certainly involved the safety of the  
21 workers. It gave me more information regarding the  
22 exposure of workers to silica. And also in the late 80s  
23 there was a publication by IARC, the International Agency  
24 for Research on Cancer, where they indicated that it may be  
25 a possible carcinogen. And based on that I wanted to have

1 more sampling data to get a better characterization of what  
2 our exposures actually are on the railroad.

3 Q I went through every one of these between 1990  
4 and 1994. And is it fair to say that on certain occasions,  
5 not every occasion clearly, but on some of these occasions,  
6 a handful, I don't remember exactly how many, there were  
7 exposures that were over the OSHA referenced limits to  
8 various workers doing ballast regulating, for example, or  
9 unloading rock trains in dry conditions on some occasions?

10 A on some occasions when the exposure measurements  
11 for persons unloading ballast or operating a balance  
12 regulator did exceed the permissible exposure limit.

13 Q There were days when they were below the limits,  
14 too?

15 A Yes.

16 Q And then you also tested for modification of  
17 equipment to see how that was working out, also, right?

18 A Yes.

19 Q You also sent some of the samples to some labs.  
20 Let me make sure I'm understanding what labs you used.  
21 Besides Techcon do you know the names of any outside labs  
22 that you actually sent samples to?

23 A I didn't actually send any samples to any labs.

24 Q So Techcon did?

25 A Right.

1 Q so in other words, you didn't organize any of  
2 that. This R. J. Lee group was retained by Techcon?  
3 A Yes, although I did talk with R. J. Lee.  
4 Q What was your understanding of what this lab  
5 report was looking at?  
6 A They were looking at respirable particulates and  
7 crystalline silica.  
8 Q What did this show that was not on their regular  
9 reports?  
10 A On whose regular reports?  
11 Q Techcon's. They talked about the PELs and the  
12 levels they found in most of their reports.  
13 In other words, what was the necessity of this?  
14 A Those were the analytical results that were  
15 provided to Techcon that were then entered into the  
16 sampling data sheet.  
17 Q Every time Techcon did something they had to send  
18 it off to one of these groups before they would prepare  
19 their report?  
20 A Yes.  
21 Q Did they use this R. J. Lee group repetitively,  
22 as far as you know?  
23 A Yes.  
24 Q Which location were they using, do you know?  
25 A I don't know. But if you're looking at the

1 sampling data sheet, I'll read it off for you.

2 Q That has a number of locations on it and I didn't  
3 know.

4 Is it the Manassas, Virginia?

5 A I'm pretty sure it was Manassas, Virginia.

6 Q You said you talked to them. What did you talk  
7 to them about?

8 A I talked to them at one of the conferences  
9 regarding analysis for silica. Because one of my  
10 consultants, I think it was Techcon, had mentioned that  
11 they were looking at sending those samples to that lab and  
12 I know of other railroads that are sending their samples to  
13 the lab.

14 Q This particular lab?

15 A Yes.

16 Q Which column of this, referring to this R. J. Lee  
17 Group, Inc. lab report, does it have a date on there, March  
18 4, 1994?

19 A Right.

20 Q Which column on there is the one that is the OSHA  
21 PEL or, I'm sorry, the final level of free silica after all  
22 the breakdowns?

23 A Well, here on the bottom they have the dust  
24 concentrations.

25 Q Right.

1           A     They have the quartz. Cristobalite, which was  
2 nondetectable. Tridymite, which was nondetectable.  
3 Respirable dust.

4           Q     I guess you're primarily looking at the quartz  
5 and cristobalite and, well, tridymite, but those are the  
6 three columns you're looking at, right?

7           A     We don't even record the tridymite. The ones  
8 we're really looking for are the nuisance dust, which is  
9 the respirable dust, the quartz and the cristobalite.

10          Q     So it looks like some of these levels were  
11 certainly very low or nondetectable but a few were over the  
12 -- this one I'm pointing to here, is that over the OSHA  
13 PEL?

14          A     Depends on how long that sample was taken, but I  
15 would guess that it probably was.

16          Q     In other words, every time a sample was done, to  
17 know whether that's over the PEL you have to know how long  
18 that sample was taken?

19          A     Yes.

20          Q     So if it was taken over eight hours or an  
21 eight-hour period, it's obviously over, right?

22          A     Yes.

23          Q     What if it was taken for an hour, what does that  
24 tell you?

25          A     If it was taken for an hour and there was no

1 additional exposure during that day, then their exposure  
2 would be below the permissible exposure limit as an  
3 eight-hour time waited average.

4 Q How do you tell that from the printout?

5 A You don't from that printout.

6 Q Who would have the record say on this one as to  
7 how long a period of time that was taken over?

8 A That's on the Techcon sampling data sheet.

9 Q Does that usually appear on the reports that they  
10 were producing?

11 A Yes.

12 Q I'm looking at one here from, it might have been  
13 one of their first ones, March 90. This is it up here,  
14 right? Start time and stop time under the air sampling  
15 record?

16 A Yes.

17 Q So are they automatically breaking it out based  
18 on the time waited average? This was 7:30 in the morning  
19 to, what, 1:15? Does it automatically bring it in to this  
20 printout or do you have to do another computation?

21 A To calculate the eight-hour time wait average, I  
22 would actually have to take the exposure time and divide by  
23 480 and then multiply that times each sample result to  
24 actually get the eight-hour time waited average.

25 Q So you have to take which number, total?

1           A    Total time.  
2           Q    Which here, for example, is 465?  
3           A    Divide that by 480.  
4           Q    Okay. And then what?  
5           A    And then multiply it.  
6           Q    Is that the minutes in an eight-hour day or  
7 something?  
8           A    Yes. Then multiply that times the air  
9 concentration. If this gang worked four ten-hour days then  
10 I may divide it by ten hours, which would be 600 minutes.  
11          Q    And then you take that total time divided by 480  
12 or 600 times, you said. Then what do you do with it, times  
13 the air concentration category?  
14          A    Right.  
15          Q    Which normally you would look at quartz, right?  
16          A    Right.  
17          Q    And that would give you -- that gives you the  
18 number you need.  
19                So why is this even printed out in that format  
20 then?  
21          A    This shows the actual exposure rate during the  
22 time that the sample was running.  
23          Q    But if you're going to make a reference to a time  
24 waited average, you always have to do a computation on that  
25 number, right?

1 A Yes.  
2 Q Unless that covers an eight-hour period, right?  
3 A We typically do full-shift samples.  
4 Q Right. But that's not, right? The one that was  
5 right here, because it was less than 480.  
6 Are you assuming zero for the remainder of the  
7 time?  
8 A Yes.  
9 Q You're assuming zero for the remainder of the  
10 time?  
11 A Yes.  
12 Q So that particular exposure on that particular  
13 day was well in excess of the exposure limit, correct, for  
14 quartz?  
15 A For quartz.  
16 Q Even assuming zero for the remaining time?  
17 A Yes.  
18 Q Prior to your starting with the railroad and when  
19 you took over all the data and whatever industrial hygiene  
20 department materials you had, did they already have any  
21 data collected on the dangers of silica dust in your  
22 department when you took over?  
23 You said you brought a certain amount of  
24 knowledge from your prior schooling. But I'm saying in  
25 your department when you came to work, had they collected

1 any material that you were aware of prior to your coming on  
2 board with respect to silica or silicosis that you became  
3 aware of?

4 MR. LEACH: If you know. Don't guess.

5 A Not that I'm aware of.

6 Q Those respiratory protection catalogues, where  
7 are those kept for say a guy's a track maintenance worker  
8 in North Carolina. Where does he go to see one of those  
9 catalogues?

10 A Well, the personal protective equipment catalogue  
11 will be kept by supervisors who can actually do the  
12 ordering.

13 Q That's not something the trackmen actually see?

14 A No, although they may see it.

15 Q It would be unusual?

16 A No, it wouldn't be unusual at all.

17 Q Where would they see it?

18 A A number of places. The supervisor may actually  
19 take it out there with them and say, well, which one do you  
20 want? At that point he'll say, I like that respirator.

21 Q They don't get the manuals as part of their  
22 materials when they work for CSX, though, the trackmen,  
23 that is, right?

24 A No, we don't send the trackmen copies of the  
25 personal protective catalogue.

1 Q Have you assumed ever since 1981 that OSHA  
2 permissible exposure limits applied to the railroad?

3 MR. LEACH: Objection. Calls for a legal  
4 conclusion.

5 MR. SHAPIRO: No, it doesn't. I'm asking him his  
6 assumption as per his work place.

7 MR. LEACH: You're asking him to guess. It's a  
8 legal conclusion.

9 MR. SHAPIRO: No, I'm not.

10 MR. LEACH: If you can, answer, Mark, if you know  
11 the answer to the question.

12 A I have always used the OSHA permissible exposure  
13 limits as guidelines. However, it's been my understanding  
14 from just about the first day I started with the railroad  
15 through now that there's some question regarding where OSHA  
16 has jurisdiction and where FRA has jurisdiction.

17 Q Well, you've certainly learned that OSHA has had  
18 jurisdiction over all the shops, because that's already  
19 been -- well, I saw that in one of your prior depositions,  
20 quite honestly, and you've assumed it applied to your  
21 shops, haven't you?

22 A There are several areas in the shops that OSHA  
23 has jurisdiction. There are certain areas of the shop  
24 where they do not.

25 Q That hazard communication standard, you said that

1 in 1992 you started the safety program videos.

2 Were you aware of the hazard communication  
3 standard regulations being passed in the mid 1980s?

4 A They were passed in the mid 1980s for certain  
5 industries up through SIC Code 39. And they didn't become  
6 applicable to the railroads until later on when they  
7 expanded the SIC codes.

8 Q To all industries?

9 A To additional industries. I don't know that they  
10 still include all industries.

11 Q So you heard about it but didn't understand that  
12 it applied to the railroad until when?

13 A It was either 86 or 87 when it became applicable  
14 to the railroad. I think it was 87. May have been 88.

15 Q What about those years in between then, in 1982?  
16 Why was there a delay in getting the silica dust into the  
17 safety program?

18 A As far as what, why silica wasn't included in it?

19 Q Right.

20 A We were not doing the maintenance of way  
21 employees at that time.

22 Q You just weren't including them in the program?

23 A No.

24 Q You mean you agree you were not including them in  
25 the program? When you said no, I don't know what you mean.

1 You mean, yes, you were not including them in the program  
2 until 92?

3 A We did not do the training for the maintenance of  
4 way employees until the first quarter of 1992. We had the  
5 material safety data sheets available to anyone who asked  
6 for them from about 1987 on.

7 Q Some of those applied to silica, I mean they --  
8 those are some of the ones that were from the rock quarries  
9 or whatever you're referring to?

10 A I don't recall if material safety data sheets  
11 from the rock quarries had come in at that time. If they  
12 were, they would have been in the first batch.

13 Q But you had something that applied to silica or  
14 sand dust as of 1987?

15 A I think I might have had something for sand but I  
16 don't know for sure if I had something for crushed stone.  
17 I think crushed stone came in later. But there may have  
18 been one in 1988. If I had a safety data sheet for it, I  
19 would have added it into the system at that time.

20 Q You said that the MSDSs that you got in '87, '88,  
21 whatever it was, I'm not holding you to the exact year,  
22 didn't add anything new to your knowledge of silica disease  
23 or silica dust from 1981 until that time you knew it?

24 A As far as knowing that silica exposure -- routine  
25 silica exposure on an unprotected individual exposed day in

1 and day out for a number of years puts them at risk for  
2 silicosis.

3 Q That didn't change?

4 A That didn't change.

5 Q You also certainly knew by 1981 that granite rock  
6 such as in ballast contained silica because that was in  
7 your memorandum, right?

8 A Yes.

9 MR. SHAPIRO: I think that's all I've got.

10 MR. LEACH: Just a few follow-up questions, Mr.  
11 Badders.

12 CROSS EXAMINATION

13 BY MR. LEACH:

14 Q CSX doesn't mine or supply its only ballast rock;  
15 is that correct?

16 A That's correct.

17 MR. SHAPIRO: I'm sorry. Repeat that question.

18 BY MR. LEACH:

19 Q CSX doesn't mine or supply its own ballast rock?

20 A That's right.

21 Q In your opinion would the suppliers of CSX's  
22 ballast rock be in the best position to test the  
23 composition of their ballast rock?

24 A Yes.

25 Q Would there be any reason for CSX to conduct

1 independent testing separate and apart from their suppliers  
2 that you can think of?

3 A No, not as far as a breakdown of the  
4 constituents.

5 Q Your testimony today, and I'm paraphrasing now,  
6 was that regular heavy exposure to ballast dust at  
7 exposures much higher than the OSHA permissible exposure  
8 limits could put susceptible employees at an increased risk  
9 of developing silicosis related diseases; is that right?  
10 Just paraphrasing.

11 A Yes. I think that's a paraphrase of what I said.

12 Q Based upon your experience working in this  
13 industry and in conversations with knowledgeable  
14 individuals in our company and also your knowledge of  
15 railroad operations, in your opinion were any of CSX's  
16 maintenance of way employees exposed to regular heavy  
17 exposures of silica dust at levels much higher than OSHA  
18 permissible exposure limits?

19 A At times. But when they were, they were in areas  
20 where respirators were required, at least since 1981.

21 Q You're talking about the ballast regulator  
22 operators and the folks that were unloading ballast?

23 A Yes.

24 Q Recognizing that they had -- and I believe the  
25 testing showed that there were some exposures that exceeded

1 the OSHA permissible exposure limits.

2 Based upon your experience, would ballast  
3 regulator operators and individuals unloading ballast be  
4 doing that type of work day in, day out throughout their  
5 railroad career?

6 A No.

7 Q I presume that CSX has had maintenance of way  
8 employees working at the present time and for predecessor  
9 railroads for many, many years?

10 A Yes. They take care of the track.

11 Q And they have for many decades?

12 A Probably at least many decades.

13 Q If CSX maintenance of way workers were developing  
14 the industrial disease silicosis from exposure to ballast  
15 dust, is that something that would have come to your  
16 attention in your current job position?

17 MR. LEACH: I'm going to object to the question  
18 because it totally calls for speculation. It doesn't  
19 mean -- a worker could retire. Held never hear from  
20 the man and he could have silicosis. It's totally  
21 speculative. But with that objection, go ahead.

22 A If it was reported or came to the knowledge of  
23 the chief medical officer, then I would probably be aware  
24 of it.

25 Q And in your review of industrial hygiene -- well,

1 strike that.

2 CSX in fact performs medical monitoring on  
3 maintenance of way employees in 1992; is that correct?

4 A In 1992 we did monitoring or medical surveillance  
5 of our most highly exposed groups, which are production  
6 gangs.

7 Q Did the results of that medical monitoring reveal  
8 any cases of confirmed silicosis diagnosis?

9 MR. SHAPIRO: I'm going to say for the record  
10 here I'm going to object to any introduction of that  
11 evidence. But getting it on the record that I am  
12 objecting to it as evidence that's purporting to show  
13 an absence of injuries and it doesn't involve the  
14 Plaintiff in this case.

15 MR. LEACH: Go ahead.

16 A I have not been told of any reported silicosis.

17 Q The recommendation that was provided in the early  
18 1980s relating to respiratory protections for certain  
19 employees, was that a preventive recommendation as opposed  
20 to what you would consider a reactive recommendation?

21 MR. SHAPIRO: I'm going to object to the  
22 question. It has no meaning. It can't be defined  
23 what the word -- there's no predicate. What's the  
24 word reactive mean and what's preventive?

25 BY MR. LEACH:

1 Q Were you reacting to a known problem or  
2 recommending a preventive measure at that time?

3 A Well, I was reacting to the results of my  
4 sampling data that indicated that I had the possibility of  
5 exposures to silica above the permissible exposure limit.  
6 And to reduce that exposure I recommended respirators,  
7 which was a control measure that we used to reduce that  
8 employee exposure, or those employee exposures.

9 Q You were asked about alternative control  
10 measures.

11 Were you satisfied with the use of respirators as  
12 a control measure for ballast regulator operators and  
13 individuals dumping ballast?

14 MR. SHAPIRO: Well, the objection is if he was  
15 satisfied doesn't matter because it isn't probative of  
16 any issue about whether the Plaintiff in this case was  
17 protected.

18 But go ahead and answer.

19 BY MR. LEACH:

20 Q In your opinion was that a reasonable control  
21 measure?

22 A Yes, particularly for dumping ballast because  
23 it's an infrequent operation. With a ballast regulator  
24 operator it was adequate and acceptable for the time. And  
25 as we were able to obtain necessary engineering from the

1 manufacturers of the ballast regulators to either purchase  
2 new or modify our existing regulators so they could be  
3 climate controlled, which would be a better control  
4 measure. That is more acceptable now.

5 Q In fact you talked about some of the problems  
6 with wetting the ballast as a control measure.

7 Would the recommendation as to air conditioning  
8 of cabs be something that was handled in your department or  
9 something that would have been handled by another  
10 department?

11 A They would have been handled by another  
12 department to determine the engineering feasibility.

13 MR. LEACH: That's all I have.

14 MR. SHAPIRO: I have a couple quick ones because  
15 of the questions you answered.

16 REDIRECT EXAMINATINO

17 BY MR. SHAPIRO:

18 Q Let me ask you this, Mr. Badders: Do you feel  
19 that if the Plaintiff in this case had stopped working  
20 let's say in January 1992, which he didn't, because I think  
21 this particular guy is still working. But if he had  
22 stopped working in January 1992, do you think any of the  
23 testing of exposure levels amongst track maintenance  
24 workers done by this testing outfit after that date would  
25 be relevant to his case?

1           MR. LEACH: Object to the predicate. Asking for  
2 a legal conclusion.

3           MR. SHAPIRO: No. I want to probe what he means  
4 if he thinks it is.

5 BY MR. SHAPIRO:

6           Q     What would it show that would tend to help or  
7 hurt either side if it was after the date he stopped  
8 working?

9           A     Well, the exposure information collected from  
10 1990 on may be reduced for the ballast regulator operators  
11 because we have some modified ballast regulators now.  
12 Where we had the unmodified ballast regulators, the  
13 exposures that we measured may actually be higher than what  
14 they were in the past. Because it's my understanding that  
15 the production gangs are having more on-track time than  
16 what they formally had had.

17          Q     So I guess what I'm saying is -- well, I saw some  
18 of the testing here and there's a problem with the air  
19 conditioning. If the guy's not keeping it on it was  
20 actually worse and they didn't realize it, and there's all  
21 these problems. But I guess you're working those out,  
22 right?

23          A     We've instructed the ballast regulator operators  
24 that if -- the only reason that they will be excused from  
25 the mandatory respirator requirement for operating a

1 ballast regulator is if a ventilation system is on.

2 Q Didn't the testing show if it was off it was  
3 actually -- the level would be very high inside the cab?

4 A No. I don't think they showed that they were  
5 very high but they were above the permissible exposure  
6 limit. They may have been as high as double the  
7 permissible exposure limit.

8 Q But once it's running and it's pressurized  
9 properly, it did reduce the levels in the cab?

10 A Usually below the limits of detection.

11 Q Last point, the respirators:

12 My Plaintiff in this case says that even though  
13 CSX may have put out a memo in the early 1980s that said  
14 the respirators should be used, that in fact nobody was  
15 enforcing the requirement until the late 1980s; is that  
16 true?

17 MR. LEACH: Object to the predicate. You're  
18 asking him to comment on the credibility of your  
19 Plaintiff.

20 MR. SHAPIRO: Well, I want to probe the issue. I  
21 mean I'm just asking if it's true.

22 A At times in the 80s when I used to do a lot more  
23 traveling and would go along side the railroad where  
24 certain highways would run, I have seen ballast regulator  
25 operators. And since they were close to the road and since

1 I was interested in seeing if they were indeed using the  
2 respirators, because they had nobody around them to make  
3 sure that they use them when they're supposed to, in fact  
4 every time that I observed it they were using respirators.  
5 Q Okay. Well, that's good.  
6 However, Mr. McDonald says that none of the  
7 foremen were enforcing the rule until the late 1980s when  
8 supervisors told them that people would be marked up for  
9 not using the respirators.  
10 Have you ever heard that?  
11 MR. LEACH: Objection. Calls for speculation on  
12 his part as to what somebody else may or may not have  
13 done.  
14 MR. SHAPIRO: Well, I'm asking if he ever heard  
15 that that was happening.  
16 A No.  
17 MR. SHAPIRO: That's it.  
18 MR. LEACH: We'll read.  
19 THE WITNESS: Yes. I'd like to read that.  
20 (Witness Excused)  
21 (Whereupon, the deposition concluded at 5:40 p.m.)  
22  
23  
24  
25

1 REPORTER'S CERTIFICATE WITH ACKNOWLEDGMENT

2 STATE OF FLORIDA

3 COUNTY OF DUVAL

4 I, Ronald E. Rohrer, a duly authorized Court  
5 Reporter and Notary Public in and for the State of Florida  
6 at Large, certify that I was authorized to and did  
7 stenographically report the foregoing proceedings; and that  
8 the transcript is a true and correct transcription of my  
9 computer stenotype notes and/or electronic recording taken  
10 at the time and place indicated therein.

11 I further certify that am not related to any of  
12 the parties or their counsel; nor interested in the outcome  
13 of the foregoing litigation, either financially or  
14 otherwise.

15 Dated this 17th day of August, 1994.

16

17

Ronald E. Rohrer

18

19 STATE OF FLORIDA

20 COUNTY OF DUVAL

21 The foregoing certificate was acknowledged before  
22 me this 17th day of August, 1994, by Ronald E. Rohrer, who  
23 is personally known to me.

24

25

ic, State of Florida-

CHARLES E.O'CONNOR  
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CERTIFICATE OF OATH

STATE OF FLORIDA  
COUNTY OF DUVAL

I, the undersigned authority, certify that Mark  
E. Badders was duly sworn by me.

WITNESS MY HAND AND SEAL this 17th day of August,  
1994.

Ronald E. Rohrer, Notary  
Public.

NOT.  
CON  
EXP.