

1 IN THE COMMONWEALTH COURT OF PENNSYLVANIA
2 PENNSYLVANIA DEPARTMENT OF :NO. 284 M.D. 1990
GENERAL SERVICES, :
3 PENNSYLVANIA DEPARTMENT OF :
TRANSPORTATION, PENNSYLVANIA :
4 PUBLIC UTILITY COMMISSION :
PENNSYLVANIA EMERGENCY, :
5 MANAGEMENT AGENCY AND :
PENNSYLVANIA DEPARTMENT OF :
6 STATE :

Plaintiffs :

7
vs. :

8 UNITED STATES MINERAL :
9 PRODUCTS COMPANY, :
CERTAINTED CORPORATION :
10 COURTAULDS AEROSPACE, INC. :
CHEMREX, INC., PHILIPS :
11 ELECTRONICS NORTH AMERICA :
CORPORATION, ADVANCE :
12 TRANSFORMER COMPANY & MONSANTO :
COMPANY, :

13 Defendants :
14

* * *

15 Monday, January ²⁵~~10~~, 2000
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22 ESQUIRE DEPOSITION SERVICES
15th Floor
1880 John F. Kennedy Boulevard
23 Philadelphia, Pennsylvania 19103
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ESQUIRE DEPOSITION SERVICES

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Oral deposition of JOHN P. WOODYARD,
P.E., taken pursuant to notice, held at the Offices
of White and Williams, One Liberty Place, 1650
Market Street, 18th Floor, Philadelphia,
Pennsylvania 19103, beginning at 10:00 a.m., on the
above date, before Deborah L. Reyers, a
Professional Reporter, Commissioner of Deeds, in
and for the Commonwealth of Pennsylvania.

* * *

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A P P E A R A N C E S (Continued.)

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I N D E X

Testimony of: JOHN P. WOODYARD, P.E.

BY MR. MC CLAIN: 7, 164

BY MR. NEAL: 144

E X H I B I T S

EXHIBIT NUMBER	DESCRIPTION	PAGE MARKED
Woodyard 1	G-B Duct Literature	38
	Bates Stamped CT-00078	
	through CT-00083	
Woodyard 2	Fabrication Instructions	38
	for Rectangular Duct	

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NONE

Stipulations

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Question Marked

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NONE

1 MR. GOUTMAN: For the record,
2 David Langfitt, counsel for the Courtaulds
3 called and is on his way. Given the
4 weather conditions, I think we should
5 proceed since we all might want to get
6 home earlier, rather than later.

7 (Whereupon a discussion was held
8 off the record.)

9 * * *

10 THE COURT REPORTER: Usual
11 stipulations?

12 MS. HERSCHEL: Yes, read and sign.

13 MR. GOUTMAN: Read and sign.

14 MR. MC CLAIN: That means he's
15 going to have to read and sign before he
16 takes the stand, so maybe that's tomorrow,
17 maybe that's the next day.

18 * * *

19 (It is hereby stipulated by and
20 among counsel for the respective parties
21 that sealing, filing and certification are
22 waived; and that all objections, except as
23 to the form of the question, are reserved
24 until the time of trial.)

* * *

JOHN P. WOODYARD, P.E., after
having been duly sworn according to law,
was examined and testified as follows:

* * *

EXAMINATION

* * *

BY MR. MC CLAIN:

Q. Mr. Woodyard, my name is Ken Mc Clain.
And we've seen each other in the Court before.
I'm here to take your deposition on this
supplemental report that you prepared on December
7th of 1999.

Do you have a copy of that with
you?

A. Yes, I do.

Q. Have you prepared any further reports
since the time of this supplemental record on
December 7th?

A. No, I have not.

Q. Has anyone asked you to perform any
further work since the time of this report?

A. No.

Q. Have you done any?

1 A. No.

2 Q. Mr. Woodyard, I looked at your C.V. that
3 you had accompanied with your first report. And
4 I have a couple questions regarding the
5 supplemental report and your background.

6 What is your background in
7 chemistry? Can you provide it to me? Do you
8 have any background in chemistry?

9 A. I've had several courses -- college level
10 courses in chemistry, as well as physics.

11 Q. As an undergrad?

12 A. Correct.

13 Q. Your Master's, I saw, was in mechanical
14 engineering; is that right?

15 A. That's true.

16 Q. Were there any chemistry courses in
17 completing your Master's?

18 A. In a matter of speaking, yes. Actually,
19 my Master's was focused on environmental back
20 when you could not get an environmental degree.
21 So a lot of my course work related to topics like
22 air sampling, air chemistry, waste water
23 treatment, all of which have something to do with
24 chemistry, so it's embedded pretty much in the

1 course work.

2 Q. Do you consider yourself an expert in
3 chemistry?

4 A. Yes, I do.

5 Q. What specific then course work would you
6 point to that gives you the expertise in
7 chemistry?

8 A. All the work I just mentioned, the
9 specific chemistry courses, included course work
10 in organic chemistry.

11 Q. And how many courses in organic chemistry
12 did you have?

13 A. One full semester.

14 Q. One undergraduate course in organic
15 chemistry?

16 A. Yes.

17 Q. And what other chemistry courses did you
18 have, besides organic chemistry? Any?

19 A. I mentioned I had several. The course
20 preceding that was physical chemistry, which is
21 much broader and, of course, the chemistry
22 components of the other environmental courses
23 that I took.

24 Q. Describe those in more detail, if you can.

1 I know that you have described that there were
2 some. But can you tell us exactly what it was in
3 those other courses? Which courses did you take
4 that had a chemistry component and what aspect of
5 chemistry did you study in taking those courses,
6 if you can tell us?

7 A. I had a course in thermodynamics that
8 focused, in large part, on combustion.
9 Combustion is, basically, a chemistry course, in
10 and of itself, dealing with how things burn, how
11 to control combustion, what happened if you burn
12 certain materials.

13 I also took course work in air
14 pollution control, in air emission testing, an
15 entire semester course in air emission testing,
16 including doing a variety of different types of
17 testing techniques, all of which is pretty much
18 lab chemistry in the field.

19 Q. So what did that cover? What specifically
20 did you learn in that course that --

21 A. How to sample for gases, particulates,
22 both ambient testing as well as stack testing on
23 power plants and the like.

24 Q. And what techniques did you utilize? Can

1 you tell us? Did you use a gas chromatograph as
2 an example in that course work?

3 A. Gas chromatographs are the tools used to
4 analyze the samples.

5 Q. Yes.

6 A. The air pollution monitoring or measuring
7 course work related to the collection of the
8 samples.

9 Q. So you learned techniques of collection of
10 samples?

11 A. That's correct.

12 Q. What techniques did you learn then? Can
13 you tell us?

14 A. Different types of particle collection
15 devices that could be used for sampling,
16 different types of gas or vapor devices that
17 could be used for sampling.

18 Q. Tell us about those, specifically. Can
19 you? What were the precise techniques that you
20 learned in your course work?

21 A. I can't remember exact names. We're
22 talking about different types of fiber filters,
23 paper filters. Different types of gas sorbents,
24 bubbling devices which entails putting the gas

1 through a water bath, instead of through a
2 sorbent of some type.

3 Q. So these would be collection devices,
4 typically used had by industrial hygienists?
5 Would that be a good handle to put on these?

6 A. The collection devices or equipment is
7 applicable to many different things. And the
8 principles are part of the course, understanding
9 how filters are used to collect particles and how
10 different types of materials are used to collect
11 gases and so forth.

12 Q. And those would, typically, be used by an
13 industrial hygienist of some type in the field?

14 MR. GOUTMAN: Objection.

15 THE WITNESS: They could be used
16 by industrial hygienists. They could be
17 used by engineers, like myself, in tuning
18 up a power plant, for example. They apply
19 broadly. The same techniques are used for
20 a lot of different purposes.

21 BY MR. MC CLAIN:

22 Q. And are you an industrial hygienist?

23 A. No, I'm not.

24 Q. Ever sat for the certified industrial

1 hygienist exam?

2 A. No, I have not.

3 Q. Do you collect samples, such as that, that
4 you've talked about in the field? Do you
5 actually collect samples on your own, Mr.
6 Woodyard?

7 A. Personally, I haven't done it in a while.
8 But I have done it, yes.

9 Q. How many times have you done it?

10 A. Dozens.

11 Q. How many years ago was the last time you
12 did it?

13 A. Perhaps, ten.

14 Q. And this was in relation to tuning up a
15 power plant as you mentioned?

16 A. No. It would have been in relation to a
17 clean-up in some fashion.

18 Q. Of PCBs?

19 A. Yes.

20 Q. And so you took dozens of samples
21 regarding PCBs?

22 MR. GOUTMAN: Objection to the
23 form of the question.

24 THE WITNESS: Yes. PCBs and,

1 perhaps, other contaminants that might be
2 present.

3 BY MR. MC CLAIN:

4 Q. Were these bulk or white samples? I mean,
5 excuse me. Air or white samples?

6 A. Both.

7 MS. HERSCHEL: Objection to form.

8 BY MR. MC CLAIN:

9 Q. Both?

10 A. (Witness nods.)

11 Q. Was this on a particular project or more
12 than one?

13 A. It would have been more than one.

14 Q. How many?

15 A. I don't know. Many projects.

16 Q. I saw in your Resume a listing of a number
17 of projects.

18 Did any of them involve clean-up
19 of a high-rise building?

20 A. Yes, they did.

21 Q. Which ones?

22 MR. GOUTMAN: Do you want to show
23 him his Resume?

24 MR. MC CLAIN: Sure.

1 BY MR. MC CLAIN:

2 Q. Mr. Woodyard, I'm showing you a C.V. that
3 was provided on one of the depositions this one
4 is highlighted. I don't know the significance of
5 the highlighting.

6 But, if you'll look at that, and
7 tell me which of those projects involved work in
8 high-rise buildings.

9 A. The project for Florida Power and Light
10 involved a high-rise building, the project
11 involving the CERCLA, C-E-R-C-L-A, project in EPA
12 Region 7. The project for the City of Austin
13 Electric Utility; the project for the Northwest
14 Lumber Company; the project for the City of New
15 York, Bureau of Water Supply. I believe the
16 project at an operating electrical component
17 facility. The project involving a specialty
18 chemical plant. Several of the projects I've
19 listed under this emergency spill and fire
20 response, category one for Owens-Illinois;
21 another for Pennsylvania Power and Light, the
22 electrical equipment work for the State of
23 California. There are also a number that aren't
24 listed here. This is not a complete list, nor

1 was it intended to be. A bank building in
2 downtown Chattanooga, Tennessee. A GE Aerospace
3 facility here in Philadelphia. I believe it was
4 a high-rise. An apartment building in Reims,
5 R-E-I-M-S, France.

6 There may be others I can't think
7 of. There were also several, I think, litigation
8 support projects I worked on involving buildings
9 that may or may not be high-rises, like the State
10 of New Mexico Transportation Building, the San
11 Francisco, One Market Plaza Project. I can't
12 think of others. Perhaps, as we go along.

13 Q. Let me ask you: What was your role in the
14 State of New Mexico case?

15 A. I worked as an expert, representing the
16 Public Service Company of New Mexico.

17 Q. They were the defendant in the case?

18 A. I also represented General Electric. They
19 were defendants in separate aspects of the same
20 case.

21 Q. Both were defendants?

22 A. Correct.

23 Q. In the One Market Plaza case, what was
24 your role in that case?

1 A. I was working, I believe, on behalf of one
2 of the contractors involved in the clean-up.

3 Q. At that point, the contractor was a
4 defendant?

5 A. I believe so.

6 Q. Being sued for an inadequate clean-up?

7 A. No, not at all. I think there were simply
8 some disputes over charges associated with the
9 project.

10 Q. In the bank building, who did you
11 represent?

12 MR. GOUTMAN: I don't know what
13 you mean by "represent".

14 BY MR. MC CLAIN:

15 Q. Who were you retained by?

16 A. My client was the building owner.

17 Q. What was the nature of the litigation?

18 MR. GOUTMAN: Objection. It
19 hasn't been established that there was
20 litigation.

21 THE WITNESS: The first two that
22 we talked about a moment ago, Sante Fe and
23 San Francisco were litigation or an
24 arbitration. These are actual spills

1 where clean-up was involved.

2 BY MR. MC CLAIN:

3 Q. So you were retained by the building owner
4 in regard to the bank building?

5 A. Yes. That's correct.

6 Q. How big was the building?

7 A. I believe ten stories, 15 stories.
8 Something in that neighborhood.

9 Q. Were white samples taken in the building?

10 A. Yes, they were.

11 Q. What levels were found in the building?

12 A. The levels in the building were found to
13 be low background levels that were not attributed
14 to the fire that had occurred.

15 Q. And did you prescribe a level of clean-up
16 for that building?

17 A. Yes, I did.

18 Q. And what level of clean-up did you
19 prescribe for that building?

20 A. The targets were the EPA Spill Policy
21 standard of ten micrograms for the occupied
22 space. And there were also standards set for
23 dioxin furan.

24 Q. And what were those?

1 A. I can't recall, exactly.

2 Q. If they were a background, was there any
3 clean-up then performed?

4 A. Only on minimal amount in the vicinity of
5 the transformer that failed.

6 Q. Were any levels greater than one found
7 throughout the building?

8 MR. GOUTMAN: "One", what?

9 BY MR. MC CLAIN:

10 Q. One microgram per one hundred cubic
11 centimeters?

12 MR. GOUTMAN: Are you talking
13 about air surface?

14 MR. MC CLAIN: Centimeters.

15 MR. ZIEGLAR: Square centimeters.

16 THE WITNESS: I don't recall.

17 BY MR. MC CLAIN:

18 Q. What about the GE Aerospace building?

19 MS. HERSCHEL: What about it?

20 Objection to form.

21 BY MR. MC CLAIN:

22 Q. Tell me about it. What was your role
23 there? Who were you retained by?

24 A. Our client on that project was GE

1 Aerospace. They were in the process of
2 renovating or selling their facility and had
3 identified PCB contamination in the building
4 somewhere and expanded the investigation to make
5 sure that the building was safe for transfer and
6 reoccupancy.

7 Q. Can you tell me, in regard to that, did
8 you prescribe a clean-up level in regard to that
9 building?

10 A. Yes, I believe so.

11 Q. What was it?

12 A. Ten micrograms per hundred square
13 centimeters.

14 Q. Was that the level the building was
15 cleaned to?

16 A. I believe so.

17 Q. Was it cleaned beyond that on any other
18 levels?

19 A. I don't think so.

20 Q. And GE didn't prescribe a more stringent
21 clean-up in that building?

22 A. No.

23 Q. How many stories was it?

24 A. I don't recall exactly. It's a large

1 complex.

2 Q. Do you remember, after you were involved,
3 if GE did additional clean-up?

4 A. No, I don't.

5 Q. Do you know whether GE, upon transfer of
6 that building, was sued because of an inadequate
7 clean-up?

8 A. No.

9 Q. What about the apartment building in
10 Reims?

11 MR. GOUTMAN: What about it?

12 Could you ask a specific question?

13 BY MR. MC CLAIN:

14 Q. What was your role in that building?

15 A. I was retained by the French government
16 through their utility to help prepare a clean-up
17 plan for a PCB transformer fire that occurred in
18 the building, in the basement.

19 Q. What levels of PCBs were measured in the
20 building?

21 A. PCB levels were fairly high. It was a PCB
22 transformer that had failed. I don't recall the
23 exact numbers. But I'm sure it was well above
24 ten micrograms per hundred square centimeters.

1 Q. What level clean-up did you prescribe in
2 that instance?

3 A. I believe it was ten micrograms for PCBs.
4 There was also dioxin furan compounds present and
5 there were separate clean-up levels for that.

6 Q. What about the Penn Power and Light
7 Building, how many stories was that?

8 A. I believe it was on the order of six or
9 seven stories.

10 Q. And what was the nature of the project
11 there?

12 A. There had been, again, a transformer fire
13 that had released PCBs in the basement to other
14 parts of the building.

15 Q. And what levels were measured in the
16 building?

17 A. Levels in the basement area well in excess
18 of the ten microgram standard. Throughout the
19 building, there was, perhaps, some levels above
20 that.

21 Q. Did you prescribe a clean-up level in that
22 building?

23 A. Yes, we did.

24 Q. What did you prescribe?

1 A. Ten micrograms for PCBs.

2 Q. What about Owens-Illinois?

3 A. Owens-Illinois involved a transformer fire
4 in a glass bottle manufacturing plant in
5 California.

6 Q. And what was your role in that incident?

7 A. My role was to help develop and implement
8 a clean-up plan for the PCBs that were released
9 and, in this case, the dioxens and furans that
10 were formed.

11 Q. And what was the clean-up standard applied
12 in that situation?

13 A. The surface standard for PCBs, I believe,
14 was ten micrograms for a hundred square
15 centimeters.

16 Q. What was the standards you employed for
17 air?

18 A. There was no air standard for clean-up.

19 Q. Was this a multi-story building?

20 A. Yes, sir.

21 Q. How many stories?

22 A. I'm guessing, it was 75 to a hundred feet
23 high. We didn't measure it.

24 Q. So between seven and ten stories,

1 something like that?

2 MR. GOUTMAN: Objection.

3 THE WITNESS: I don't know.

4 MR. GOUTMAN: Objection.

5 BY MR. MC CLAIN:

6 Q. You mentioned a specialty chemical plant
7 that you were involved in with a multi-story
8 building. Where was that plant?

9 A. That plant was in New Jersey.

10 Q. And what was the name of it?

11 A. The owner -- I don't know if the plant
12 itself had a name. The owner was Avon Products.

13 Q. Was there an office building attached to
14 that or a high-rise building?

15 A. There was a high-rise, I think, a six or
16 seven story building that was part of the main
17 structure where the contamination had been
18 identified.

19 Q. Was it an office structure or what was it?

20 MS. HERSCHEL: Six, seven stories.

21 THE WITNESS: Yeah. The
22 multi-story portion of the building was
23 mixed use, warehouses, shops. No
24 manufacturing. There may have been

1 offices in there. I don't recall.

2 BY MR. MC CLAIN:

3 Q. And what was your role in regard to that
4 Avon Products building?

5 A. My role was to develop and implement a
6 clean-up plan for the plant property.

7 Q. And what was the clean-up surface level
8 standard adopted there?

9 A. The surface standard there, I believe, was
10 ^{EPA Ken} ~~particular~~ micrograms per hundred square
11 centimeters.

12 MR. GOUTMAN: Ken, what's the
13 relevance of what the standards were on
14 these products, in terms of this
15 supplemental report? He doesn't discuss
16 clean-up levels in his report.

17 MR. MC CLAIN: That's true.
18 However, he says that his opinions are
19 based on his education, training and
20 experience as well as his knowledge. And
21 I'll trying to plumb just what experience
22 he would have had from any of these
23 projects that would have been formed about
24 tape and duct work.

1 MR. GOUTMAN: You haven't asked
2 him about tape and duct work in any of the
3 material. You're asking him about
4 clean-up levels.

5 MR. MC CLAIN: I'm going to go
6 through these various facilities and then
7 I'm going to ask him a question about that
8 subject.

9 MR. GOUTMAN: I'm asking what the
10 relevance of the clean-up levels of these
11 projects pertain to his report.

12 MR. MC CLAIN: I don't know what.
13 I'm taking a discovery deposition. On the
14 basis of his statement that his opinions
15 are based upon his experience.

16 MR. GOUTMAN: I understand that.
17 I think that the Judge ordered that you
18 can take a deposition about the
19 supplemental expert report and these
20 questions have no relation to that, so I
21 object.

22 MR. MC CLAIN: Well, we'll be done
23 with these fairly quickly.

24 BY MR. MC CLAIN:

1 Q. Tell me about this operating electrical
2 facility, what was that facility? A power plant?

3 A. No. It was a manufacturing facility that
4 made capacitors that were used in light ballasts.

5 Q. And what was your role in that job?

6 A. My roll was to develop a clean-up plan for
7 the plant.

8 Q. And did you adapt a level of clean-up for
9 surfaces in that plant?

10 A. Yes. I believe it was ten micrograms in
11 that case as well.

12 Q. What about the project, Bureau of Water
13 Supply, was that a multi-story building?

14 A. Yes, it was.

15 Q. What was your role there?

16 A. To develop a clean-up plan for the inside
17 of the building.

18 Q. And what was the level adopted there?

19 A. I believe it was also ten micrograms for
20 PCB.

21 Q. What about Northwest Lumber Company, a
22 multi-story building?

23 A. Yes, sir.

24 Q. What was your role?

1 A. To develop a clean-up plan.

2 Q. And can you tell me what the clean-up
3 level prescribed there was?

4 A. Again, I believe for PCBs, it was ten
5 micrograms.

6 Q. Austin Electric utility, a multi-story
7 building?

8 A. Yes, sir.

9 Q. An office building or another type of
10 building?

11 A. It was a mixed use facility. It was a
12 power plant, shop and office.

13 Q. And can you tell, at the Austin Electric
14 Utility, did you develop a clean-up plan?

15 A. Yes.

16 Q. And what level was prescribed there?

17 A. I believe it was ten micrograms per
18 hundred square centimeters there as well.

19 Q. The CERCLA site, what is that?

20 A. That is actually two high-rise buildings
21 in Kansas City that, at one time, had been used
22 by a PCB service company to store drums and
23 electrical equipment. It has since been
24 converted to other uses and now is being cleaned

1 up or will shortly.

2 Q. And what levels have been prescribed for
3 the clean-up?

4 A. The target level has been ten micrograms
5 in discussions with EPA. The final clean-up
6 level has not been established on that project.

7 Q. Has a different clean-up level been
8 discussed?

9 A. No. No.

10 Q. The EPA hasn't suggested to you a lower
11 clean-up level be appropriate?

12 A. No, they have not.

13 Q. The use of this building is -- where is
14 this building, in the Bottoms -- in the river,
15 Bottoms?

16 A. I think one of them is, if I remember
17 correctly. I don't know the local terminology
18 for the parts of town. It's close to the Hyatt.
19 About a mile from downtown. And there's another
20 building on the Kansas side as well that was used
21 also for storage -- supplemental storage for the
22 operator ten or 20 years ago.

23 Q. And the use of this building is going to
24 be, what?

1 A. It is currently being used for a variety
2 of purposes. There's offices there. There's
3 print shops. There's other light industrial
4 activities in the buildings. They're being
5 considered for redevelopment at this time.

6 Q. They're being considered for loft
7 apartments?

8 MS. HERSCHEL: Objection.

9 THE WITNESS: That may be. There
10 have been newspaper articles that have
11 described a number of potential uses
12 because the area is older and quaint and
13 being redeveloped for ^{Commercial}~~personal~~ uses.

14 BY MR. MC CLAIN:

15 Q. Has the EPA recommended the NIOSH level in
16 regard to a residential use at that site to you,
17 Mr. Woodyard?

18 MS. HERSCHEL: Objection to form.

19 THE WITNESS: No, sir.

20 BY MR. MC CLAIN:

21 Q. Florida Power and Light. What was that
22 job?

23 A. Florida Power and Light again was clean-up
24 of a multi-story building following an electrical

1 equipment fire.

2 Q. And how many stories is that building?

3 A. Perhaps, four or five. It was an office
4 arrangement and a high bay facility, so I don't
5 recall the exact height.

6 Q. No recollection of how many stories. More
7 than five? Less than five?

8 A. I think it was around five, for discussion
9 purposes.

10 Q. And what was the clean-up level that was
11 adopted there?

12 A. The clean-up level for PCBs, I believe,
13 was also ten micrograms.

14 Q. Now, in any project, whether you've
15 mentioned them or not, have you mentioned the
16 NIOSH level as a clean-up standard?

17 A. No, sir.

18 Q. On any of the other jobs that you've
19 worked on, has the NIOSH standard been use
20 utilized to clean-up any of these buildings?

21 A. The only time the NIOSH standard has been
22 used on projects I've been involved in is when
23 there has been a transformer fire. There are
24 dioxins and furans present and that has driven

1 the PCB level lower as a -- what we call a
2 surrogate test.

3 Q. And where has that been?

4 A. I think that was the case in Sante Fe and
5 San Francisco, are the two that come to mind
6 immediately. I don't recall if that was the case
7 in some of these other incidents.

8 Q. It could have been in some of these other
9 incidents as well?

10 MR. GOUTMAN: Objection.

11 THE WITNESS: It would have only
12 occurred in situations where there had
13 been an operating electrical equipment
14 fire, where the byproducts were formed.

15 BY MR. MC CLAIN:

16 Q. You mentioned a couple of these where that
17 was the case. There was an electrical fire in
18 the Reims' apartment building. You mentioned
19 that one?

20 A. Yes, sir.

21 Q. And was the Bank Building such a scenario?

22 A. Yes.

23 MS. HERSCHEL: Objection to form.

24 What do you mean "such a scenario?"

1 MR. MC CLAIN: They had a fire.

2 MR. GOUTMAN: A transformer fire
3 fire?

4 MR. MC CLAIN: Um-hum.

5 BY MR. MC CLAIN:

6 Q. And Owens-Illinois, another plant as well?

7 A. Yes.

8 Q. Do you know whether or not, in those
9 instances, the NIOSH level was the prescribed
10 level for the clean-up?

11 A. In all of those situations, there was
12 testing done to determine if dioxins and furans
13 were present from the equipment fire. In some
14 parts of those buildings, I believe it was
15 identified or detected at levels, indicating that
16 there had been some PCB destruction or dioxin
17 formation. And that was used to drive the risk
18 assessment which, in turn, was used to create,
19 perhaps, a lower standard on some of those floors
20 in some locations.

21 Q. So, on some of those, you do have a
22 recollection that the level was set at the NIOSH
23 level; do you not?

24 MR. GOUTMAN: Objection to form.

1 MS. HERSCHEL: Objection.

2 THE WITNESS: No, I don't recall
3 exactly. But that's the protocol we
4 practicing in the industry have always
5 used.

6 BY MR. MC CLAIN:

7 Q. When you find dioxins and furans?

8 MR. GOUTMAN: Objection.

9 THE WITNESS: That's correct.

10 BY MR. MC CLAIN:

11 Q. Now, let me ask you this --

12 MR. GOUTMAN: I'm objecting. You
13 said when he found dioxins it was after
14 the transformer fire.

15 MR. MC CLAIN: He didn't say that
16 you.

17 MR. GOUTMAN: Is that what you
18 meant, Mr. Woodyard?

19 MR. MC CLAIN: You can ask him
20 whatever questions you want when I'm done.

21 MR. GOUTMAN: Is that what you
22 meant?

23 *Woodyard:*
~~MR. MC CLAIN:~~ I mean after a
24 transformer fire which is the context

1 we're talking.

2 *By Mr. McClain:* I ask that that colloquy be
3 stricken. It's inappropriate.

4 BY MR. MC CLAIN:

5 Q. Now, the question I want to ask that
6 relates, specifically: In any of these buildings
7 that you've been involved in, have you examined
8 the issue of PCBs and the relationship to
9 ductboard in duct work? That's a bad question.

10 MS. HERSCHEL: Yes.

11 BY MR. MC CLAIN:

12 Q. In any of these buildings, have you
13 examined the issue of PCBs use and application in
14 ductboard used for HVAC installation in
15 buildings?

16 A. No. I don't believe so.

17 Q. Have you had any experience in regard to
18 the manufacturer of ductboard ducting systems?

19 A. Yes, I have.

20 Q. In what regard?

21 A. I spent my college summers making duct
22 work -- working in a company that fabricated it
23 and sold duct products to ventilation
24 contractors.

1 Q. Which companies did you work for during
2 the summer?

3 A. A company by the name of Dunphey-Smith
4 Company in North Jersey.

5 Q. And were they a local manufacturer of duct
6 systems?

7 A. No. They were a local supplier of
8 ventilation -- ventilation supplies to
9 contractors. And their products included
10 fiberglass ductboard as well as fabricating metal
11 ductboard for specific projects. It was a custom
12 shop. And I worked both in the shop and in
13 handling the supplies.

14 Q. And in that work, did you actually
15 fabricate fiberglass ductboard?

16 A. Not that I can recall.

17 Q. Did you ever use heat sensitive tape in
18 your work at that job?

19 A. Not that I can recall, specifically.

20 Q. Did you ever watch any individuals utilize
21 fiberglass ductboard and heat sensitive tape?

22 A. I may have.

23 Q. Do you recall?

24 A. Not specifically, no.

1 Q. So you wouldn't consider yourself an
2 expert in the application of thermal tape and
3 fiberglass ductboard, would you?

4 A. Yes, I would. I've reviewed a number of
5 documents from Certainteed that describe exactly
6 how the duct is fabricated and how the tape is
7 applied.

8 Q. So based upon those documents, you
9 consider yourself to be an expert?

10 A. Yes, sir.

11 Q. Have you brought those documents with you?

12 A. Yes. I have through --

13 MR. MC CLAIN: Could we have them,
14 which ones he actually reviewed?

15 MS. HERSCHEL: Yes.

16 MR. MC CLAIN: They're
17 specification documents. I meant to get
18 these ordered in piles, but no secretary
19 this morning. So these are all the same,
20 two sets of specification documents.

21 MR. MC CLAIN: Are these for me?

22 MS. HERSCHEL: No. One is for the
23 court reporter and for everybody else.

24 MR. MC CLAIN: That's what I mean.

1 They're for using here?

2 MS. HERSCHEL: Yes. In that
3 sense, they are for you, Mr. Mc Clain.

4 BY MR. MC CLAIN:

5 Q. Mr. Woodyard, I'm going to hand you what
6 we'll ask the court reporter to mark Woodyard 1
7 and 2, which are documents that Miss Herschel
8 provided to me.

9 (Whereupon Exhibit Herschel 1 and
10 2 were marked for identification.)

11 BY MR. MC CLAIN:

12 Q. Mr. Woodyard, we've marked as --

13 MR. GOUTMAN: Hold on a second.
14 I'm sorry.

15 MS. HERSCHEL: Do you want
16 everything at once? These are the ones
17 that deal with fabrication of the
18 ductboard.

19 MR. GOUTMAN: I thought Ken asked
20 for the documents that he reviewed that
21 form a basis for this test.

22 MS. HERSCHEL: Do you want them
23 all at once, Ken?

24 MR. MC CLAIN: May as well.

1 Let's not confuse the record.
2 What we marked before as Exhibit 1 is
3 marked already at Certainteed -- DCT
4 Exhibit 11. And the other one is marked
5 already as DCT 49.

6 BY MR. MC CLAIN:

7 Q. I'm going to hand you what I've been
8 provided as DCT 38 and ask, is that a document
9 that you also reviewed?

10 A. Yes, sir.

11 Q. I'm going to hand you DCT 32.

12 Is this a document you reviewed?

13 A. Yes, sir.

14 Q. I'm going to hand you DCT 88. Is that a
15 document you also reviewed?

16 A. Yes, sir.

17 MR. GOUTMAN: That's what?

18 MS. HERSCHEL: DCT 88. What did
19 you say?

20 MR. GOUTMAN: You said 38 and I
21 think it's 138.

22 MR. MC CLAIN: No. I said 88.

23 MR. GOUTMAN: I'm sorry.

24 MR. MC CLAIN: DCT 88. The one

1 before that was 32. The one before that
2 was2-

3 MS. HERSCHEL: No ,the one before
4 that -- no, you're right. I'm sorry.

5 MR. MC CLAIN: And the one before
6 that was DCT 38. So 38 and 88 are
7 different exhibits.

8 BY MR. MC CLAIN:

9 Q. The next one is DCT 95. Did you review
10 that one?

11 A. Yes.

12 Q. DCT 105. Did you review that one?

13 A. Yes.

14 Q. DCT 113. Did you review that one?

15 A. Yes.

16 Q. DCT 23. Did you review this one?

17 A. Two copies, yes.

18 Q. DCT 104?

19 A. Yes.

20 Q. DCT 20?

21 A. Yes.

22 Q. DCT 137 is the last one that I have. Did
23 you also review that one?

24 A. Yes.

1 Q. Now, did you have these in your possession
2 or were they provided to you by one of the
3 lawyers here?

4 MS. HERSCHEL: Objection to form.
5 Go ahead.

6 THE WITNESS: I had copies of
7 these documents a year or two ago.

8 BY MR. MC CLAIN:

9 Q. But you didn't utilize them in rendering
10 your opinions in this case?

11 MR. GOUTMAN: Objection, vague.
12 Which report are you referring to?

13 MR. MC CLAIN: I'm just wondering
14 what use he made of these.

15 BY MR. MC CLAIN:

16 Q. Were these utilized for both your original
17 report and your supplemental report?

18 MR. GOUTMAN: Objection to form.

19 THE WITNESS: I reviewed these
20 before I prepared by original expert
21 report. I don't recall relying on them,
22 except for background information, in
23 developing that report. I relied on them
24 specifically in developing this one.

1 MR. GOUTMAN: "This one", meaning
2 what?

3 THE WITNESS: "This" meaning the
4 supplemental report.

5 BY MR. MC CLAIN:

6 Q. You've mentioned that the first two
7 documents, as I understood it, were the ones that
8 gave you expertise in heat tape. Did I get that
9 right?

10 MR. GOUTMAN: Objection to the
11 form.

12 MS. HERSCHEL: Object to the form.

13 BY MR. MC CLAIN:

14 Q. That is DCT 11 and DCT 49.

15 A. They gave me expertise in how
16 Certainteed's products was fabricated in the
17 field.

18 Q. And so was there anything else, other than
19 your experience with Dunphey and Smith? Was that
20 it?

21 A. Close enough.

22 Q. Anything besides these two documents and
23 your work with Dunphey and Smith that makes you
24 an expert in heat sealing tape?

1 MR. GOUTMAN: Objection to the
2 form of the question .

3 THE WITNESS: Nothing, other than
4 just common uses of heat sensitive
5 applications, like lettering on football
6 jerseys and things like that.

7 BY MR. MC CLAIN:

8 Q. So you've done that, too? You applied
9 letters to football jerseys?

10 A. Actually, in my case, I have a six year
11 old daughter. It was to her Indian princess vest
12 to show what she tribe she was a part of.

13 Q. So you did this with a home iron and heat
14 sensitive lettering?

15 A. That's correct.

16 Q. So that gave you expertise to render an
17 opinion in this case?

18 A. No. It just reinforced what I had learned
19 from reading these documents.

20 Q. So this was a recent experience that you
21 had?

22 A. That's correct.

23 Q. And it was after you wrote your report?

24 A. I don't recall.

1 Q. Was it at or about the time that you wrote
2 your report?

3 A. It could have been. It's possible. But
4 it's not the only time I've ever applied heat
5 sensitive things to clothing, for example.

6 Q. Tell me about those.

7 A. I wish I could remember them all.

8 Q. Tell me any ones that you can remember.

9 A. Dating back to ironing patches on to jeans
10 when I was in college. Any number of situations
11 like that.

12 Q. So it's the work that you did at Dunphey
13 and Smith, these two documents and the experience
14 with your daughter's Indian princess costume,
15 ironing patches on jeans. Anything else that
16 makes you an expert in heat sensitive tape?

17 A. No, nothing I can recall.

18 Q. By the way, have you actually been to the
19 Gustin-Bacon plant in Kansas City?

20 A. No, I have not.

21 Q. Certainteed plant?

22 MS. HERSCHEL: Objection to the
23 form. I don't think Gustin-Bacon exists
24 there anymore.

1 MR. MC CLAIN: There is a
2 Certainteed plant; is there not?

3 MS. HERSCHEL: I think there is.
4 There was.

5 MR. MC CLAIN: The last time they
6 were still there. Plastics manufacturing,
7 I think.

8 BY MR. MC CLAIN:

9 Q. Now, what in these two documents,
10 specifically, do you rely upon to tell you the
11 about use of heat ceiling tape? Can you show me,
12 that is, in exhibits. First start with Exhibit
13 DCT 11. Just tell me the paragraph that formed
14 your opinion in this regard.

15 MR. GOUTMAN: Objection. I don't
16 think the witness should limit himself to
17 a paragraph. And I think the witness
18 already said he used this document to
19 inform him on the fabrication of the
20 ductboards. And you are continuing to say
21 he used it for some other purpose. And I
22 think the witness' testimony speaks for
23 itself.

24 BY MR. MC CLAIN:

1 Q. You tell me does this tell you anything
2 about heat ceiling tape?

3 A. It told me about how heat ^{sealing}~~ceiling~~ tape is
4 applied in the fabrication of duct work.

5 Q. Show me where that is.

6 A. On the last page, CT 83, the top paragraph
7 reads all duct work shall be fiberglass duct with
8 aluminum casing as manufactured by Gustin-Bacon
9 Manufacturing Company. Duct shall be fabricated
10 and assembled as per manufacturer's instructions.
11 All joints shall be sealed by use of two inch
12 Mactac tape as manufactured by Morgan Adhesive.
13 The tape's joint shall be permanently heat sealed
14 by use of approved heat sealing tool as specified
15 by Gustin-Bacon.

16 BY MR. MC CLAIN:

17 Q. So that's the sample specification that's
18 attached at page 83 which has given you
19 expertise, at least in part, in heat sealing
20 tape; is that right? That information that you
21 just read to me?

22 A. That text, coupled with the drawings that
23 are in this.

24 Q. Show me the drawings that you rely upon.

1 A. On CT 81, there is a series of cartoons
2 that explain how the duct is prepared for
3 folding, how the heat sealing tape is applied
4 along the access of the duct and then how the
5 joints are prepared for assembly when you join
6 two ducts together.

7 Q. On this last page, anything else in this
8 document that you rely upon?

9 A. There is information in my expert report
10 relative to how this material was applied. There
11 is a sizing and packaging chart on that diagram
12 that shows the different sizes of board,
13 thickness and weight, et cetera. And that was
14 included in my report as well.

15 Q. Do you know in the design -- in the
16 considerations number five on this document that
17 was provided to me, where it says, right there on
18 the last page, on page 83, number five, air
19 temperature within G-B duct should not be excess
20 of 250 degrees Farenheit height.

21 Do you see that?

22 A. Yes, sir.

23 Q. Do you know why that was? Why that design
24 consideration was placed in that brochure?

1 A. No, I don't. Given that the performance
2 specification allows for heating and testing of
3 the duct at much higher temperatures, I assume
4 itself just a precaution.

5 Q. A precaution for what?

6 A. To make sure like a speeding limit that,
7 if you say, don't use 250 degrees, that somebody
8 won't use 500 degrees in that same duct work.

9 Q. What would happen if you did?

10 A. I don't know. Nobody tests the duct at
11 500 degrees, but three, 400 degrees, it works
12 great.

13 Q. For how long?

14 A. Certainly 30, 40 years, based on what I
15 saw in the T and S building.

16 Q. So you believe that, within the T and S
17 building that temperatures in excess of three,
18 hundred to four hundred degrees were obtained?

19 MR. GOUTMAN: Objection.

20 MS. HERSCHEL: Objection.

21 THE WITNESS: Not at all. Your
22 question was whether or not I believe that
23 how long I thought the duct would last in
24 so many words. And I told you that I had

1 seen the duct. I had seen testimony about
2 the duct that says it was working just
3 fine and intact.

4 BY MR. MC CLAIN:

5 Q. You said that the duct work was heated at
6 between -- I think your number was between three
7 hundred and four hundred degrees and it did just
8 fine. Words to that effect.

9 MS. HERSCHEL: Objection to form.
10 That's misleading.

11 BY MR. MC CLAIN:

12 Q. What did you say in that regard?

13 A. What I said was that, as part of the
14 quality control testing, the duct was heated to
15 350 degrees. As part of manufacture, it was
16 dried and cured at temperatures up to four
17 hundred degrees.

18 Q. How long did that occur? How long was the
19 curing process and how long was the heating
20 process. Break them down if the number is
21 different?

22 A. The quality control test was for 72 hours.
23 The heating, for curing purposes, for drying was
24 done at a rate, I believe, of 20 feet per minute

1 and we have a ten foot board. So I would say at
2 least 30 seconds.

3 Q. So in regard to heating it for -- when you
4 were responding -- when you said it worked great
5 for 30 years, it didn't work great at 30 years at
6 three hundred to four hundred degrees heat; am I
7 right?

8 MR. GOUTMAN: We'll stipulate to
9 that. The duct was never exposed to that
10 temperature in the building.

11 BY MR. MC CLAIN:

12 Q. Is that what you're telling me?

13 A. Yes.

14 Q. So you don't know what length of time the
15 duct work would have held up at three hundred to
16 four hundred degrees, am I right, beyond 72
17 hours?

18 A. No. My experience in the T and S building
19 was that it never got above 85, more like 60 to
20 75 degrees.

21 Q. I'm not asking you about anything about
22 that right now. You didn't opine on that in your
23 report, did you, in either report?

24 MS. HERSCHEL: Opine on what? Now

1 I'm confused.

2 BY MR. MC CLAIN:

3 Q. The temperature of the duct work.

4 A. I'm pretty sure I did. Do you want a
5 specific citation?

6 Q. Can you hand me that back, my copy of the
7 report. On what page?

8 MR. ZIEGLAR: 28, 29.

9 THE WITNESS: The last paragraph
10 on page 28, although it's not quite that
11 specific does refer to only slightly
12 elevated temperatures common to the
13 ventilated duct work versus the extremely
14 high temperatures. In Ewing's report
15 which were lower than any temperatures
16 we're talking about here.

17 BY MR. MC CLAIN:

18 Q. Now, anything else besides these two
19 documents which -- the next document is DCT 49
20 and the -- what about this document gave you
21 expertise about the heat sealing tape?

22 MR. GOUTMAN: Objection to form of
23 the question.

24 THE WITNESS: This document also

1 contains different versions of the same --
2 the cartoons explaining how to prepare and
3 fabricate the duct work. One of the
4 differences in this document on page CT
5 211, second line from the bottom, the far
6 right, it talks about heat sealing,
7 specifically, saying, that to heat seal,
8 you run the heat sealing tool over the
9 entire tape surface, making sure the heat
10 ~~seat~~^{seal} application is uniform and thorough.
11 This will activate the tape to vulcanize
12 it to the aluminum jacket.

13 BY MR. MC CLAIN:

14 Q. Is there any estimate of the time needed
15 to do that in any of these documents?

16 A. Not specifically. The word "run" stuck
17 with me as a pretty good indication that it was a
18 relatively quick application, much like ironing
19 at home and ironing those patches on that that I
20 talked about.

21 Q. So it's on the basis of ironing your
22 patches that you get an time estimate?

23 MR. GOUTMAN: Objection.

24 MS. HERSCHEL: Objection.

1 THE WITNESS: It's on the basis of
2 the use of the term "run".

3 BY MR. MC CLAIN:

4 Q. So you never saw it applied in the field?

5 A. Not that I can recall.

6 Q. You never talked to anybody that applied
7 it in the field?

8 A. "It" being the heat sealing tape.

9 Q. Yes.

10 A. No, not that I can recall.

11 Q. You don't know what it means as
12 Gustin-Bacon intended to make sure the heat seal
13 is uniform and thorough; am I right?

14 MS. HERSCHEL: Objection to form.

15 MS. HERSCHEL: Did you hear the
16 question or did I talk over it?

17 THE WITNESS: The question was --

18 BY MR. MC CLAIN:

19 Q. Why were those words included; do you
20 know? Do you know why Gustin-Bacon felt it was
21 necessary to include those instructions in regard
22 to heat sealing the joints?

23 A. I didn't ask that question specifically,
24 no.

1 Q. Now, there was some questions I started
2 out with about your chemical background that we
3 got side-tracked all this way.

4 Have you ever had training in,
5 other than entry level chemistry courses in
6 microscopy?

7 MR. GOUTMAN: Objection.

8 MS. HERSCHEL: Objection.

9 BY MR. MC CLAIN:

10 Q. Have you had any courses specifically in
11 microscopy?

12 A. I've had courses in which on microscopy
13 was involved. Yes.

14 Q. Optical microscopy?

15 A. Yes.

16 Q. Anything in regards to electron
17 microscopy?

18 A. Yes.

19 Q. Have you had training in that regard?

20 MR. GOUTMAN: Training, as opposed
21 to formal education? What do you mean?

22 BY MR. MC CLAIN:

23 Q. What is your experience with optical
24 microscopy?

1 A. I used optical microscopy, typically, in
2 biology courses.

3 Q. So you used a microscope, like we might
4 use in a college level biology course?

5 A. Yes.

6 Q. Anything else that you did with an optical
7 microscope?

8 A. Yes. I've also used optical microscopes
9 in looking at a number of structural material
10 samples, different types of metal, for example.

11 Q. When?

12 A. In undergraduate and graduate school.

13 Q. Do you commonly use a microscope in
14 performing your work?

15 A. Not commonly. Occasionally.

16 Q. And when was the last time you used an
17 optical microscope?

18 A. I don't recall.

19 Q. Sometime ago?

20 A. It was sometime ago.

21 Q. What about an electron microscope, did you
22 use one in college?

23 MR. GOUTMAN: What does this have
24 to do with his supplemental report?

1 MR. MC CLAIN: I believe it goes
2 to his expertise to render the opinions
3 he's rendering?

4 MR. GOUTMAN: What opinions
5 related in his report to microscopy?

6 MR. MC CLAIN: I believe that the
7 opinions that he talked about were any
8 measurable levels of PCB that were
9 released from the glue matrix during the
10 installation requires the expertise in
11 microscopy. How in the world else would
12 he know those things?

13 MR. GOUTMAN: Okay. I object
14 because you don't use microscopy to detect
15 PCBs. But in any event, I don't see the
16 relevance of this at all. And you haven't
17 explained it. Do you intend to dwell on
18 this?

19 MR. MC CLAIN: I intend to ask all
20 the questions I can think of on this
21 subject.

22 BY MR. MC CLAIN:

23 Q. Go ahead, Mr. Woodyard. What experience
24 have you had with electron microscopy?

1 MR. GOUTMAN: I object unless --
2 and instruct the witness not to answer,
3 unless you can lay a foundation that this
4 microscopy had something to do with the
5 measurement of PCBs in the ductboard.

6 BY MR. MC CLAIN:

7 Q. Mr. Woodyard, did you have you ever -- are
8 you going to follow your counsel's instruction in
9 that regard?

10 A. Yes, sir.

11 MR. MC CLAIN: I'm not being
12 provided with the opportunity that I
13 thought I was to take this exam. You, of
14 course, were given great leeway with
15 Mr. Ewing, so I'm disappointed that you've
16 decided to instruct my carefully thought
17 out questions.

18 MR. GOUTMAN: I've asked you to
19 lay the proper foundation.

20 MR. MC CLAIN: I have. I don't
21 need to do that for a deposition and you
22 know it.

23 MR. GOUTMAN: I think you have to
24 explain the relevancy to the narrow area

1 of inquiry that this report covers and
2 that is the supplemental report. And I've
3 asked you to explain the relevancy of
4 microscopy to this supplemental report.
5 You've explained it and I've said that has
6 nothing to do with this. I'm asking you
7 to lay a foundation for that witness.

8 MR. MC CLAIN: You're the
9 arbitrator of what's relevant and what's
10 not, is that right, in regard to discovery
11 in this case?

12 MR. GOUTMAN: No, I think the
13 Judge is the arbitrator.

14 MR. MC CLAIN: And so if you want
15 to bother him with this kind of pollution,
16 we can call him up and talk to him about
17 it. I don't think he'd appreciate it.

18 MR. GOUTMAN: If you'd like to
19 call him, please do so. All I'm asking
20 you to do is lay a foundation.

21 BY MR. MC CLAIN:

22 Q. Are you going to follow his instructions
23 to you, Mr. Woodyard?

24 A. Yes, sir.

1 Q. Mr. Woodyard, have you used gas
2 chromatography in your work?

3 A. I used gas chromatography routinely to run
4 PCB samples in my projects.

5 Q. Are you trained to do that?

6 A. In a matter of speaking, yes. I'm
7 familiar with gas chromatographs. And I've been
8 walked through the lab and shown exactly how the
9 equipment worked.

10 Q. Can you read them? Gas chromatographs.
11 Can you read them?

12 A. I can interpret gas chromatographs, sure.

13 Q. What training have you received to be able
14 to interpret gas chromatographs?

15 A. Again, experience working with chemists
16 who trained me on the differences between
17 different PCB Aroclors, for example.

18 Q. Explain the training that you received in
19 that regard.

20 A. I've worked with chemists for 20 years on
21 PCB clean-ups who have shown me time after time
22 chromatographs on the basis for making the
23 determination that they made, as to what PCB
24 levels and what types of PCBs were present.

1 Q. Tell me when, who and what you were told
2 about PCB gas chromatographs.

3 MR. GOUTMAN: Objection. He said
4 it's happened time and time and time
5 again. After 20 years?

6 MR. MC CLAIN: Yeah.

7 THE WITNESS: I have worked on
8 over a hundred PCB clean-ups. And I have
9 been provided for data packages for
10 probably every one of those that included,
11 in most cases, a gas chromatograph as part
12 of the data package and had those
13 explained to me by probably a hundred
14 chemists, directly or indirectly.

15 BY MR. MC CLAIN:

16 Q. Were you asked for your opinion on those
17 chromatographs or did they simply explain to you
18 to you how they reached their opinions?

19 A. Typically, they were explained to me how
20 they reached their opinions.

21 Q. So you were simply informed about their
22 opinion and told how they reached their opinions;
23 is that correct?

24 MR. GOUTMAN: Objection.

1 MS. HERSCHEL: Objection.

2 THE WITNESS: I'm sorry. Could
3 you repeat your question, please?

4 BY MR. MC CLAIN:

5 Q. Have you ever written a report,
6 Mr. Woodyard, that says this is my opinion about
7 whether or not PCBs are here in the type of
8 *Arvelor*
~~Arvelor~~ exists on these gas chromatogrpahs? Have
9 you ever done that?

10 A. Yes. I look at PCB sources in just about
11 every situation I get involved in. And
12 understanding the data and trying to interpret
13 the data, questioning the analyst on these issues
14 is routine.

15 Q. So could you point me to a report where
16 you have rendered an opinion that this is a gas
17 chromatograph which demonstrates PCBs are present
18 and the type of PCBs that are present?

19 A. I can't think of a report where I would
20 have written that.

21 Q. So you've never done that in a written
22 report, as far as you can recall?

23 MR. GOUTMAN: Objection. Go
24 ahead.

1 THE WITNESS: Not that I can
2 recall, no.

3 BY MR. MC CLAIN:

4 Q. Typically, you would rely upon expert
5 chemists to render such opinions; am I right?

6 MR. GOUTMAN: Objection. That
7 wasn't his testimony. I object.

8 THE WITNESS: Typically, I use
9 chemistry laboratories and analysts to do
10 the analytical work for me.

11 BY MR. MC CLAIN:

12 Q. Has there ever been a situation where you
13 have not used an analytical chemical laboratory
14 and their analysts to run gas chromatographs?

15 A. To run the equipment itself?

16 Q. Yes, sir.

17 A. No. I think I've always used laboratory
18 to do that for me.

19 Q. Have you ever not received a analytical
20 interpretation of those gas chromatographs from
21 the laboratory which you sent the samples to?

22 A. As far as I can recall, I've always
23 requested and received an interpretation.

24 Q. And have you ever not transmitted that

1 interpretation of the laboratory to your client
2 that you can recall?

3 A. No. I've always transmitted an
4 interpretation of the data to the client.

5 Q. And you have never then, given them a
6 different interpretation than you were provided
7 to the laboratory regarding the gas
8 chromatographs which were produced by the
9 laboratory; am I right?

10 MR. GOUTMAN: Objection to form.

11 MS. HERSCHEL: Objection to form.

12 THE WITNESS: In situations where
13 I take issue with the analytical results
14 for some reason, I will always take that
15 issue up with the analyst. So what the
16 client sees is the end result of that
17 discussion or interaction. Not every
18 iteration of what the lab generates.

19 BY MR. MC CLAIN:

20 Q. But the lab generates the report. You
21 don't; am I right?

22 MS. HERSCHEL: Objection.

23 MR. GOUTMAN: What report are we
24 talking about? Objection.

1 MR. MC CLAIN: A report on gas
2 chromatographs, results of PCB analysis.

3 BY MR. MC CLAIN:

4 Q. You told me that you can't recall in
5 writing, producing your analytical results to a
6 gas chromatograph. Am I right about that?

7 MR. GOUTMAN: Objection to form.

8 THE WITNESS: We've used the term
9 report in two different contexts here, one
10 relates to the data generated from the
11 laboratory, the other a report to my
12 client on interpretation of the results.
13 I have not, as I said before, generated a
14 lab report directly from the gas
15 chromatograph to interpret the data. I
16 have generated hundreds of reports to
17 clients where I've taken the result of
18 discussion with the laboratory and
19 interpreted that for the benefit of
20 forwarding a clean-up.

21 BY MR. MC CLAIN:

22 Q. Well, let me just make sure I have an
23 understanding.

24 Have you ever, in a written

1 report, differed with the laboratory analysis
2 provided to you by the analytical chemists
3 regarding the type or quantity of ^{Aroclor} ~~Aerclor~~ found
4 at a PCB clean-up site?

5 MS. HERSCHEL: Objection to form.

6 BY MR. MC CLAIN:

7 Q. That you can recall?

8 A. There have been a number of occasions
9 where I have pointed out to a client that it was
10 not clear exactly what type of ^{Aroclor} ~~Aerclor~~, for
11 example, or what level was there and the reasons
12 for that. So in some cases, yes. I have taken
13 issue with the laboratory results.

14 Q. And have you provided your own
15 interpretation of the laboratory results to your
16 client where you found the data reported by the
17 laboratory not to be clear?

18 A. Yes.

19 Q. Can you cite me to a report, such as that?
20 Tell me which one -- in what report you did that?

21 A. I can't recall one, offhand. I'm sorry.

22 Q. Could you provide me one?

23 MR. GOUTMAN: Objection.

24 Discovery is over.

1 MR. MC CLAIN: I'm trying to find
2 out whether he's an expert and his
3 assertion that he has done this, may go to
4 his expertise. And to the extent that you
5 won't provide me that data, I think, goes
6 to what I'm here to discover. And so if
7 you choose not to give it to me, then I
8 will have no choice but to ask the Judge
9 for it or to move that he be excluded on
10 this subject. Because, you know, he can't
11 remember the report that it's in. He's
12 somewhat vague about what he did. I'd
13 like to know what it was.

14 MR. GOUTMAN: The witness has
15 testified that he has been doing this for
16 over 20 years, has done it over a hundred
17 times. And a request like this the day
18 before he's supposed to take the witness
19 stand is unreasonable in addition to which
20 the discovery ended a year and a half ago.

21 MR. MC CLAIN: Since this is the
22 only day I've been given to depose him
23 and --

24 MR. GOUTMAN: Ken, I think our

1 positions are clear. Why don't we just
2 get on with it. Because I think the back
3 and forth is not going to move this
4 forward.

5 MR. MC CLAIN: It may not move it
6 forward, but it let's you know clearly
7 that I'd like that report. And I'll ask
8 the Court for it in the morning, if you
9 can't see your way clear to find it or
10 tell me that it doesn't exist. Because,
11 frankly, my suspicion is, is that the
12 witness' recollection on this would
13 different from the written word. That's
14 my belief.

15 MR. GOUTMAN: That's really
16 insulting.

17 MR. MC CLAIN: It's not insulting.
18 I'm giving you the basis I'm making the
19 request.

20 MR. GOUTMAN: Excuse me. You are
21 calling this witness a liar.

22 MR. MC CLAIN: No, sir. I'm not.

23 MR. GOUTMAN: Why don't you ask
24 the next question because we're not

1 getting anywhere.

2 MR. MC CLAIN: What I'm saying is,
3 I'd like to see what the witness is
4 referring to so I can frame the question
5 based upon what is actually written.

6 MR. GOUTMAN: Next question.

7 BY MR. MC CLAIN:

8 Q. Do you consider yourself to be a material
9 scientist, Mr. Woodyard?

10 A. A material scientist?

11 MR. GOUTMAN: Objection.

12 BY MR. MC CLAIN:

13 Q. Yes.

14 A. Yes.

15 Q. And in what fashion do you consider
16 yourself to be a material scientist?

17 A. Based first, on course work in college
18 relative to material sciences, construction
19 materials, properties and materials for
20 construction and other uses. I've also taught
21 graduate level courses in metallurgy, plastics
22 and material science at the University of
23 Illinois.

24 Q. And what courses, specifically, were

1 those; do you remember?

2 A. The course at the time was entitled
3 Mechanical Engineering 234, I believe. And it
4 dealt specifically with heat treatment of
5 different types of materials, metal as well as
6 strengths of materials, such as metals and
7 plastics.

8 Q. And when did you teach this course?

9 A. 1974 and 1975.

10 Q. And was that when you were getting your
11 Master's degree?

12 A. That's correct.

13 Q. Were these undergraduate courses?

14 A. Yes, ME 235 is an undergraduate course.

15 Q. Any work since that time in the field of
16 material science?

17 A. I'm not clear on what you mean.

18 Q. Have you taught any courses in material
19 sciences since then?

20 A. No, I have not.

21 Q. Have you done actual bench chemistry work
22 in material science since that time?

23 A. I don't know. It's a broad -- the term is
24 a very broad term. And I don't -- I mean what

1 we're talking about here, in some respect, is
2 material science. We're talk about physical
3 property, chemical properties of materials.

4 Q. Outside of the litigation realm, have you
5 done it for your clients or have you relied upon
6 other laboratories?

7 MS. HERSCHEL: Objection to form.

8 THE WITNESS: Other laboratories
9 to do testing?

10 BY MR. MC CLAIN:

11 Q. Materials failure testing, heat, heating
12 of elements, et cetera.

13 MR. GOUTMAN: Objectin to form.

14 BY MR. MC CLAIN:

15 Q. Have you done it yourself or relied upon
16 laboratories to do that work?

17 MR. GOUTMAN: Don't answer the
18 question phrased. Objection to the
19 question. I don't know what you mean by
20 "et cetera".

21 THE WITNESS: Nor do I.

22 BY MR. MC CLAIN:

23 Q. Mr. Woodyard, what work have you done
24 since graduate school in testing and analyzing

1 the materials subject to heat?

2 A. I've done a lot of work related to
3 analyzing material subject to heat.

4 Q. What, specifically, in regard to PCBs have
5 you done?

6 A. Every project that I've worked on here
7 involving transformer fires, for example results
8 in the movement of PCBs. It results in the
9 creation of combustion by-products under some
10 conditions.

11 Q. So you've taken samples at those sites; is
12 that right?

13 A. Yes, sir.

14 Q. And sent them to laboratories for
15 analysis; is that true?

16 A. Yes, sir.

17 Q. Anything else that you've done in regard
18 to those events that you've just told me about?

19 MR. GOUTMAN: Objection. What do
20 you mean by "what else have you done in
21 regard to those events?"

22 BY MR. MC CLAIN:

23 Q. Did you analyze the samples?

24 A. Did I do the lab work?

1 Q. Yes.

2 A. No, I did not.

3 Q. Any other PCB heat related work that
4 you've done?

5 A. I've been involved for ten years in a
6 research project for the gas industry to look at
7 the behavior of small amounts of PCB in gas
8 pipelines.

9 Q. And you've written about those?

10 A. Yes, I have. It's in my Resume.

11 Q. And the work that you've done there, has
12 shown that PCBs released in part of the system
13 can be transferred many miles away in a gaseous
14 state; isn't that true?

15 MR. GOUTMAN: Objection.

16 MS. HERSCHEL: Objection to form.

17 THE WITNESS: No. Actually, in
18 the context of your other question, what
19 our research showed conclusively was that,
20 the movement of PCBs over many, many miles
21 of pipelines was entirely as a liquid.

22 BY MR. MC CLAIN:

23 Q. But you demonstrated that it moved many
24 many miles in pipeline; am I right?

1 MR. GOUTMAN: Objection to form.

2 MS. HERSCHEL: Objection to form.

3 THE WITNESS: That wasn't our
4 objective, no. We were simply testing
5 physical properties of PCBs in a gas
6 environment, a high pressure, low pressure
7 gas environment.

8 BY MR. MC CLAIN:

9 Q. You demonstrated in your experiment or you
10 observed that PCBs were transferred over many
11 miles; did you not?

12 MR. GOUTMAN: Objection to form of
13 the question.

14 THE WITNESS: No, we did not.

15 BY MR. MC CLAIN:

16 Q. Have you ever performed any experiments
17 with heating PCBs and testing whether or not they
18 will off-gas under heating conditions -- heat
19 conditions?

20 MR. GOUTMAN: Objection to form.
21 It's overbroad.

22 MS. HERSCHEL: Objection to the
23 form.

24 BY MR. MC CLAIN:

1 Q. Have you ever done an experiment like
2 that?

3 A. Well, off-gassing has a specific meaning
4 in the building products business. If you're
5 asking if I've done any testing to see what the
6 vapor pressure of PCBs would be, for example.

7 Q. Yes.

8 A. We did some of that testing in our gas
9 industry research, yes.

10 Q. Did you do any for this case?

11 A. No, I did not.

12 Q. Have you ever done any test to determine
13 off-gassing from fiberglass ductboard, wherein
14 PCBs were applied to an adhesive?

15 MR. GOUTMAN: Objection to the
16 form of the question.

17 THE WITNESS: No, I have not.

18 BY MR. MC CLAIN:

19 Q. You mentioned Mr. Ewing's report before
20 and you reviewed that, I take it?

21 A. Yes, I did.

22 Q. You were never asked to perform such a
23 test in this case; am I right?

24 A. No, I was not.

1 Q. You never performed such a test in regard
2 to heat sealing tape, did you?

3 A. No, I did not.

4 Q. In regard to -- your report mentions vapor
5 pressure.

6 MS. HERSCHEL: You mean
7 supplemental report?

8 MR. MC CLAIN: Yeah.

9 BY MR. MC CLAIN:

10 Q. Mentions PCB vapor pressure. What source
11 of information do you rely upon for the vapor
12 pressure of PCBs?

13 A. I can't recall the specific reference
14 book. But I have several that I would have
15 consulted.

16 Q. Would you rely upon Doctor Erickson's book
17 in regard to vapor pressure from PCBs?

18 A. That would have been one of the sources,
19 yes.

20 Q. Did you review any literature about the
21 performance of adhesives before rendering your
22 report?

23 MS. HERSCHEL: Other than the
24 documents you already have?

1 MR. MC CLAIN: Um-hum.

2 THE WITNESS: Not that I can
3 recall, no.

4 BY MS. HERSCHEL:

5 Q. Are you familiar with any literature on
6 adhesives?

7 MS. HERSCHEL: Objection. That's
8 too broad. Overbroad.

9 BY MR. MC CLAIN:

10 Q. Do you recall any articles on adhesives
11 that you reviewed in your career?

12 MS. HERSCHEL: Objection to form.
13 Go ahead.

14 THE WITNESS: No, I can't recall.

15 BY MR. MC CLAIN:

16 Q. I take it, you've never written about the
17 performance of adhesives, at least there's
18 nothing listed on your C.V.?

19 A. No. I don't believe I have.

20 Q. You mentioned this literature from
21 Certainteed. Let's look at the rest of these
22 documents and you tell me what you took from
23 these documents, if you could.

24 MR. GOUTMAN: Which one are we

1 looking at now?

2 MR. MC CLAIN: DCT 38.

3 THE WITNESS: 38 included a
4 specification for adhesive to be used in
5 fabricating the duct work or ductboard.
6 Included in that specification is a test
7 for temperature resistance which, I
8 believe, is on CT 183, item E. Little E at
9 the top. It states that "there shall be
10 no failure of the adhesive bond when
11 tested at 350 degrees F for 72 hours
12 according to tests described in G-B ST-67.

13 BY MR. MC CLAIN:

14 Q. So you relied upon this document; is that
15 right?

16 A. Yes, I did.

17 Q. This was provided to you by counsel; is
18 that right --

19 A. Yes, sir.

20 Q. -- for you to rely upon?

21 MS. HERSCHEL: Objection to form.

22 BY MR. MC CLAIN:

23 Q. Is that right?

24 A. I'm sorry. I missed the question.

1 Q. As you understood it, it was for you to
2 rely upon?

3 MS. HERSCHEL: Objection to form.

4 THE WITNESS: It was for me to
5 review in developing my expert report.

6 BY MR. MC CLAIN:

7 Q. And you did rely upon it in rendering your
8 report it?

9 A. Yes, I did.

10 Q. It's true, isn't it, that this document
11 refers to ^{Aroclor}~~Aerclor~~ 1254 as being the ^{Aroclor}~~Aerclor~~ used
12 in the adhesive?

13 A. That's true. Yes.

14 Q. Was ^{Aroclor}~~Aerclor~~ 1254 used in the adhesive in
15 this duct work, as far as you know?

16 MR. GOUTMAN: In the duct work in
17 the T&S Building?

18 MR. MC CLAIN: Yes.

19 THE WITNESS: No, it was not.

20 BY MR. MC CLAIN:

21 Q. Does ^{Aroclor}~~Aerclor~~ 1254 have a different vapor
22 pressure than ^{Aroclor}~~Aerclor~~ 1262?

23 A. Yes, it does.

24 Q. Do you know whether or not Certainteed

1 ever used ^{Aroclor} ~~Aroclor~~ 1254 in the manufacture of its
2 ductboard?

3 MS. HERSCHEL: Other than what it
4 says in the document. His person
5 knowledge, are you asking?

6 MR. MC CLAIN: No.

7 BY MR. MC CLAIN:

8 Q. Do you know whether or not, in fact, that
9 was a ^{Aroclor} ~~Aroclor~~ that was utilized by Certainteed in
10 its duct work?

11 A. I believe so, based on the information I
12 was provided. Yes.

13 Q. Now, in regard to DCT 32, what did you
14 rely upon in this document?

15 A. Again, this document makes reference to
16 the temperature resistance standard, in this case
17 using three hundred degrees as the testing
18 temperature. But again, it's a resistance to
19 failure of the bond between the adhesive and the
20 foil.

21 Q. And this one was -- the length of this
22 test, as you understood it, was how long?

23 A. 72 hours.

24 Q. And the utilization you make of this

1 document is, what?

2 A. Is that --

3 MS. HERSCHEL: Objection to form.
4 Go ahead.

5 THE WITNESS: The importance of
6 this document to my opinions is, again,
7 that it provides for temperature
8 resistance specifications for yet another
9 adhesive later on in the history of
10 manufacturing of these products at
11 Certainteed.

12 BY MR. MC CLAIN:

13 Q. Looking at DCT 88 --

14 MS. HERSCHEL: Is that the next
15 one or last one?

16 MR. MC CLAIN: I'm looking at the
17 next document.

18 BY MR. MC CLAIN:

19 Q. DCT 88. What use did you make of this
20 document?

21 A. Likewise, this is a 1965 document. It
22 again references the temperature resistant^{ce}
23 standard and the test used to measure that
24 standard, in this case being three days at 350

1 degrees F.

2 Q. What does it mean when it says "failed
3 foil of 19 pounds, average of three adhesive
4 strength"?

5 A. I believe that would be just a strength
6 test where they were. Some weight is applied to
7 try to remove the adhesive from the foil.

8 Q. So would 19 pounds of resistance get
9 pulled apart, essentially? Is that how you would
10 read it?

11 MS. HERSCHEL: Objection to form.

12 THE WITNESS: With 19 pounds of
13 weight applied to some measure --

14 BY MR. MC CLAIN:

15 Q. 19 pounds of force. That would be a
16 better use of the term, right?

17 A. Yes. Thank you.

18 Q. DCT 95. What's the use you made of this
19 document?

20 A. Again, this is another document. This one
21 dated 1962 for another adhesive where the
22 temperature resistant^{ce} standard is again
23 referenced and the test, in this case, is again
24 72 hours of exposure at 350 degrees F.

1 Q. Do you know what ^{Aroclor}~~Aorclor~~ was utilized in
2 this adhesive?

3 A. I don't recall.

4 Q. And do you know then -- I take it, you
5 don't know what vapor pressure the ^{Aroclor}~~Aorclor~~ in
6 this adhesive would have?

7 A. No. Because I don't know what the ^{Aroclor}~~Aorclor~~
8 is.

9 Q. Exhibit 103. What use did you make of
10 this document?

11 A. This is a 1963 document referencing yet
12 another adhesive and, again, citing the
13 temperature resistant^{ce}~~le~~ standard of 350 degrees at
14 72 hours.

15 Q. And, once again, the ^{Aroclor}~~Aorclor~~ is not
16 specified?

17 A. No, it's not.

18 Q. The previous question about vapor pressure
19 would apply to this document as well? You don't
20 know what vapor pressure on this adhesive is?

21 A. That's correct.

22 Q. Exhibit 113. The same questions. Is this
23 document any different from the last one or just
24 another test?

1 MS. HERSCHEL: Objection to form.

2 THE WITNESS: This document

3 references another adhesive blend dated

4 1964. It references the same temperature

5 resistance standard I used before.

6 BY MR. MC CLAIN:

7 Q. But you don't know what the formulation of
8 that adhesive was?

9 A. Not offhand, no.

10 Q. Or the vapor pressure?

11 A. No, sir.

12 Q. What use did you make of DCT 23?

13 A. The documents we've just been going
14 through refer to the quality control testing that
15 was done on the duct to insure that the adhesive,
16 indeed, adhered to the foil. This document talks
17 instead about the production process that was
18 associated with actually curing the adhesive on
19 the ductboard.

20 Q. And this is where you got the idea that it
21 would run through the process and take -- I can't
22 remember what time you put on it. What was the
23 time?

24 A. I believe the production rate for this

1 material or heating rate was 20 feet per minute.
2 And I believe that's cited somewhere in these
3 documents.

4 MS. HERSCHEL: There's a second
5 document that relathe to this.

6 THE WITNESS: Excuse me. At the
7 bottom of 115 reference is made to 25 feet
8 per minute. And up, above in the third
9 paragraph, it references 20 feet per
10 minute, so I've used the 20 number.

11 BY MR. MC CLAIN:

12 Q. Which one has the 20 number?

13 A. CT 115, paragraph three. It shows a 20
14 foot per minute oven speed, as they call it. And
15 the last paragraph in that same -- on that same
16 page references a test at 25 feet per minute.

17 Q. And from that, you determined that the
18 average drawing speed was, what?

19 A. What I determined referencing your earlier
20 question is, that the average piece of duct would
21 be exposed to this temperature for 30 seconds at
22 20 feet per minute.

23 Q. Okay. Any other use you made of this
24 document?

1 A. This document, along with, I believe DCT
2 137, described the actual heating temperatures
3 themselves as used in the curing process. CT 115
4 sites two hundred degrees as the curing
5 temperature used in this particular test of
6 drying.

7 DCT 137 sites yet, another series
8 of tests, between two hundred and four hundred,
9 to determine the appropriate temperature for
10 actual production, in that range again, from two
11 hundred to 4 hundred degrees which is cited in my
12 report.

13 Q. Look at DCT 20. What use did you make of
14 that document?

15 MS. HERSCHEL: Hold on a second,
16 please.

17 THE WITNESS: DCT 20 is yet
18 another memorandum regarding the drying
19 temperature that was to be used in
20 production and, again, it references a
21 temperature of up to four hundred degrees.

22 BY MR. MC CLAIN:

23 Q. And what about DCT 104? And is that the
24 only use you made of that document?

1 A. Yes. I believe so.

2 Q. What about Exhibit 104?

3 A. I believe 104 is another in that series of
4 laboratory reports that cited the temperature
5 resistant standard 350 degrees at 72 hours for
6 the adhesive and foil.

7 Q. Once again, you can't tell which ~~Aerclor~~^{Aroclor}
8 was utilized here?

9 A. No, not specifically for this one. No.

10 Q. Or whether any ~~Aerclor~~^{Aroclor} was used at all?

11 A. I believe I have other documentation that
12 identified different ~~Aerclors~~^{Aroclors} used in different
13 blends. I did not use that as the basis for this
14 supplemental report.

15 Q. So sitting here, you can't tell us which
16 ~~Aerclor~~^{Aroclor} was used or whether any ~~Aerclor~~^{Aroclor} was used
17 in the documents that I've been provided; am I
18 right?

19 MR. GOUTMAN: Objection.

20 MS. HERSCHEL: Objection.

21 THE WITNESS: No. From my review
22 of other documents, I believe every
23 example I've provided you here was an
24 ~~Aerclor~~^{Aroclor} containing adhesive.

1 BY MR. MC CLAIN:

2 Q. But you don't have any documents to show
3 that with you?

4 A. No, I don't.

5 Q. Have you ever seen one of these irons that
6 they depict in the cartoons?

7 A. Only the version or versions that I see in
8 the pictures in the literature.

9 Q. So you've never measured the temperature
10 that one actually achieves on the iron; am I
11 right?

12 A. No, I have not.

13 Q. It's true, is it not, that at room
14 temperature ^{Aroclor} ~~Aerclor~~ 1262 will vaporize?

15 MR. GOUTMAN: Objection to form.

16 BY MR. MC CLAIN:

17 Q. Isn't that true?

18 MR. GOUTMAN: Are you talking
19 about just a cup of ^{Aroclor} ~~Aerclor~~ 1262?

20 BY MR. MC CLAIN:

21 Q. In Doctor Erickson's book, does he provide
22 values for vaporization of ^{Aroclor} ~~Aerclor~~ 1262 at room
23 temperature?

24 A. I believe he does.

1 Q. So ~~Aerclor~~^{Aroclor} 1262 will vaporize at room
2 temperature; will it not?

3 MR. GOUTMAN: Again, we're talking
4 about just a cup of pure ~~Aerclor~~^{Aroclor} 1262? Is
5 that the question.

6 MR. MC CLAIN: You tell me. I'm
7 asking -- I don't need the interruption.
8 I'm asking the question. If the witness
9 has any question --

10 MR. GOUTMAN: I'm instructing him
11 not to answer because I don't understand
12 the meaning of the question.

13 Are you talking about a cup of
14 ~~Aerclor~~^{Aroclor} 1262 --

15 BY MR. MC CLAIN:

16 Q. Under what conditions does -- well, does
17 it change? Does ~~Aerclor~~^{Aroclor} 1262 not vaporize
18 because it's put in glue?

19 A. ~~Aerclor~~^{Aroclor} 1262 doesn't vaporize without the
20 glue. It has almost no vapor pressure. So
21 adding it to the glue simply reinforces the bond
22 and further impedes it from any chance of
23 evaporating.

24 Q. So it's your testimony that in Doctor

1 Erickson's book, he posits that there's no vapor
2 pressure from ^{Aroclor}~~Aerclor~~ 1226?

3 MR. GOUTMAN: Objection. He said
4 virtually no vapor pressure.

5 BY MR. MC CLAIN:

6 Q. Is that your testimony?

7 A. No. My testimony was that there was
8 virtually no vapor pressure for ^{Aroclor}~~Aerclor~~ 1262.

9 Q. Have you calculated how much ^{Aroclor}~~Aerclor~~ 1262
10 would vaporize from the duct work at room
11 temperature? Have you done that?

12 A. No, I have not.

13 Q. You could do that, couldn't you?

14 A. Yes, I could.

15 Q. You talked about in your supplemental
16 report, the heat sealing tape was only two inches
17 wide.

18 Have you attempted to calculate
19 the total square inches of heat sealing tape
20 applied on the ductboard during the installation
21 process?

22 A. No, I have not.

23 Q. You could do that, too, couldn't you?

24 A. Yes, I could.

1 Q. Let's try to do that together, shall we?
2 Got a pen?

3 The ductboard, by your
4 calculation, in your report was ten feet by four
5 feet wide; am I right?

6 A. Yes, sir.

7 Q. And the ductboard was folded in to a
8 rectangle and the sealing tape was used to seal
9 the open side; am I right?

10 A. It was used to seal the joints between
11 duct sections.

12 Q. The open side of the duct, right?

13 MS. HERSCHEL: Objection to form.

14 BY MR. MC CLAIN:

15 Q. If you look at the diagram, it shows you
16 how it was made; does it not? If you look back
17 at Exhibit 73 -- or I mean DCT 11?

18 A. Yes. I'm familiar with it.

19 Q. As it's folded on the diagram, the heat
20 sealing tape seals the open side; does it not?

21 MS. HERSCHEL: Objection to form.

22 THE WITNESS: It seals the joint
23 after you fold the duct over the four
24 sides, yes.

1 BY MR. MC CLAIN:

2 Q. We're using different terminology. But it
3 seals the duct on one side; am I right?

4 A. Yes. That's correct.

5 Q. And this is done every ten foot length of
6 ductboard; is that correct?

7 MS. HERSCHEL: Objection to form.

8 BY MR. MC CLAIN:

9 Q. Isn't that true according to the
10 specifications?

11 A. The tape is applied along the long ^{apex} ~~access~~
12 to the duct which is, approximately, ten feet.

13 Q. So how would we then go about making the
14 calculation of the square inches of heat sealing
15 tape along a ten inch length of ductboard. Would
16 we take ten feet, times 12 inches per foot, times
17 a two inch width to make that calculation?

18 A. Yes. That's correct.

19 MR. GOUTMAN: Just a second.

20 Excuse me.

21 MS. HERSCHEL: Mr. Mc Clain, we
22 have an objection to your having the
23 witness do a calculation here. He is not
24 going to present this calculation. If you

1 have an expert somewhere who's going to
2 present the calculation, fine. But this
3 witness is not going to present this
4 calculation.

5 MR. MC CLAIN: Are you instructing
6 him not to do the calculation?

7 MS. HERSCHEL: I am. I don't want
8 to have him do it off the top of his head
9 as he sits here.

10 MR. MC CLAIN: We need to get the
11 Court on the phone then because he says in
12 his report that, because it's only a two
13 inch piece of tape, that there wouldn't be
14 any release, even if you assume that it's
15 at 250 degrees Farenheit.

16 MS. HERSCHEL: Which is what Mr.
17 Kominsky posited.

18 MR. MC CLAIN: Mr. Kominsky didn't
19 reach that conclusion. And in fact, I
20 think that if we do the calculation, we
21 can find out how much material we're
22 looking at. And I think taht I have a
23 right to ask the witness about that.

24 MS. HERSCHEL: And I'm instructing

1 the witness not to answer on the grounds
2 that it's not a calculation he's done for
3 his report. It's not a calculation he's
4 going to do. And I don't want him sitting
5 here doing it off the top of his head. If
6 you've got that calculation, fine.

7 MR. MC CLAIN: He's told me that
8 he's capable of doing it.

9 BY MR. MC CLAIN:

10 Q. You're capable, aren't you? You're a
11 scientist, aren't you, Mr. Woodyard?

12 MS. HERSCHEL: You mean can he
13 add, multiply, subtract and divide?

14 MR. MC CLAIN: Yeah. Absolutely.
15 And he knows what these dimensions are.
16 He supplies them in his report.

17 BY MR. MC CLAIN:

18 Q. Isn't that true, Mr. Woodyard?

19 MS. HERSCHEL: Same instruction,
20 Mr. Woodyard. I don't think that it is
21 proper for Mr. Mc Clain to ask you to do
22 this. And I don't think it's your
23 responsibility to create expert data for
24 Mr. Mc Clain.

1 MR. MC CLAIN: Let's call the
2 Judge then, because this is important.

3 MR. GOUTMAN: Call him.

4 * * *

5 (Whereupon a brief break was
6 taken.)

7 (Whereupon a discussion was held
8 off the record.)

9 MR. GOUTMAN: This should be on
10 the record.

11 MS. HERSCHEL: Yes, Your Honor.
12 As a general matter, he would. He would
13 certainly be answer that question -- be
14 able to answer that question. The only
15 thing I don't want to ask him to do and I
16 don't think it's fair to do it is, to try
17 to come up with a specific number.
18 Obviously, there were lots of feet of tape
19 in that building.

20 THE COURT: I understand that.

21 MS. HERSCHEL: Your Honor, maybe
22 we have a compromise here.

23 MR. MC CLAIN: If Miss Herschel
24 will stipulate that there are over two

1 million square inches of duct tape in that
2 building, then we don't have to ask the
3 witness about.

4 THE COURT: I think before we get
5 in to that, we're getting in to another
6 area of examination when we talk about the
7 linear feet.

8 The question that I'm concerned
9 about is the one I just posited, as to
10 whether or not the fact that there is a
11 considerable length of running feet, does
12 that change his views on the emission of
13 PCBs into the atmosphere?

14 MS. HERSCHEL: It would not, Your
15 Honor.

16 THE COURT: That's the question.
17 But I don't know that he answered that
18 question.

19 MS. HERSCHEL: I would certainly
20 not object to that question, Your Honor.

21 MR. MC CLAIN: He didn't, Your
22 Honor. But even if he were to say, no, it
23 wouldn't effect it, I think to challenge
24 his opinion, the number of square inches

1 is relevant.

2 MS. HERSCHEL: Then let Mr. Mc
3 Clain to calculate that for him, Your
4 Honor. I don't think Mr. Woodyard can
5 barely be asked to do that.

6 MR. MC CLAIN: Your Honor, the
7 court allowed this supplemental report
8 which is only a page and a half with no
9 back up provided, with no cites to any
10 outside sources. I'm being handed the
11 documents here. I'm allowed to ask him
12 questions and the court can rule tomorrow
13 whether they're relevant.

14 THE COURT: He has indicated that
15 this tape applied the duct work. The duct
16 work is what had the PCBs in it, as I
17 understand it.

18 MS. HERSCHEL: The duct work has
19 PCBs in glue that attach the foil to the
20 fiberglass, as Your Honor knows.

21 THE COURT: What I'm saying is
22 that, the question is, when the heat is
23 applied to this duct tape does that emit
24 PCBs into the atmosphere?

1 MS. HERSCHEL: Correct. Mr.
2 Kominsky posited that it did and, in fact,
3 he's the one who put in a length of duct
4 in the building and Mr. Woodyard is
5 responding to that, based on the procedure
6 that was used with the sealing iron and
7 the properties of PCBs and the nature of
8 the glue.

9 THE COURT: To the court, the
10 question involved is, would this change,
11 regardless of the number of running feet
12 that this duct tape was applied to over
13 the PCB containing duct work?

14 MS. HERSCHEL: Correct. And that
15 would be a fair question, Your Honor.

16 THE COURT: And, if that's the
17 case at this point, unless the plaintiff
18 wants to come in to challenge that which
19 is -- may be an opening for the plaintiff
20 to do. I'm not going that far at this
21 point. But the only question that we have
22 here is, whether or not his opinion would
23 change.

24 Now, you can challenge that by an

1 expert if one would be admissible at this
2 point, because it's new matter. I don't
3 know. But the point is, I think having
4 the calculations then, is drifting from
5 the issue and becoming instead of factual,
6 sensational by using the number of running
7 feet of tape.

8 And to that extent, the Court
9 would sustain the objection as to the fact
10 that -- as to the specific calculations.

11 Now, as I say, you can posit the
12 question as to the facts that there are
13 significant number of running feet. And
14 I'm not putting the words in your mouth as
15 to how to phrase the question and ask him
16 whether that would change his opinion and,
17 certainly, you can cross-examine him in
18 that fashion. But to do the specific
19 calculation now at the time of the
20 deposition, I think puts an undue twist on
21 the subject matter for which the discovery
22 is intended.

23 MR. GOUTMAN: Your Honor, I
24 noticed you used the word drift. Is that

1 because of the weather outside?

2 THE COURT: Maybe that has a
3 subconscious affect. And we're seeing what
4 happening with these drifts.

5 MR. GOUTMAN: Your Honor, on
6 another issue, does the Court know whether
7 we will be sitting tomorrow?

8 THE COURT: I was hoping that we
9 had a chance to talk because I'm much
10 concerned about tomorrow and the fact that
11 we're getting more sn ow this week,
12 according to the Weather Bureau. I'm sure
13 you've had the chance to listen to the
14 weather channels.

15 MS. HERSCHEL: The roads in Jersey
16 are awful, Your Honor.

17 THE COURT: Yes. And as I say,
18 I'm concerned about the fact that we're
19 due for one, if not two days more of snow
20 flurries or snow accumulation. I have no
21 way of knowing. And I'm concerned because
22 of getting the jury in, could be most
23 difficult.

24 MR. GOUTMAN: I guess, Your Honor,

1 it would be my preference is to try to go
2 ahead because we have an expert in town,
3 but I share your concern about the jurors.
4 So we'll go whatever way the court wants
5 to on that.

6 THE COURT: I know that each of
7 you have been put out and you've been made
8 to stay over and, of course, mother nature
9 has her own view points on how things
10 should occur.

11 MR. GOUTMAN: Mother nature
12 usually has the last word, Your Honor.

13 THE COURT: I agree with you. And
14 what I would hate to do is keep all of you
15 in town, not that we don't enjoy your
16 company, but keep you all in town when
17 there may be a window opening to get back
18 to your various hometowns.

19 MR. GOUTMAN: Is the court
20 suggesting that we recess for the week?

21 THE COURT: I'm posing that as a
22 question for counsel to consider. You
23 don't have to make up your mind right now.

24 MR. MC CLAIN: What does the court

1 want to do about tomorrow? What I mean
2 take us one step at a time. I don't know
3 what the rest of the week will bring.

4 THE COURT: I think tomorrow is
5 going to be even worse navigating because
6 this weather will have a chance to freeze.
7 And I don't know how easy it will be for
8 people taking public transportation to get
9 out and I visualize the jury. And we know
10 that composition and does it appear to you
11 that they would be able to easily navigate
12 the weather conditions to get to the
13 court? I don't know.

14 How was it coming in for each of
15 you? Mc Clain, you're in Center City.

16 MR. MC CLAIN: Yeah. I was here
17 so I just walked over.

18 MR. GOUTMAN: Yeah. I'm in Center
19 City.

20 THE COURT: Is Henderson there?

21 MR. GOUTMAN: No. He's not here
22 yet.

23 MS. HERSCHEL: He's in Pittsburgh.

24 MR. GOUTMAN: He's in Pittsburgh.

1 THE COURT: I always admired him.

2 MS. HERSCHEL: We don't have any
3 jurors from Jersey, Your Honor. But, as I
4 said, my husband drove me into the
5 High-Speed Line. And it was tough going.

6 THE COURT: That's what I'm
7 concerned about. And if you work until
8 four o'clock and it freezes over all over
9 again, I'm really thinking about recessing
10 for the week. But I don't want to impose
11 it on you if you think that that would be
12 inappropriate.

13 MR. GOUTMAN: If I could just
14 suggest, could we call the Court back in
15 about ten minutes after we have a chance
16 the exchange views on this?

17 THE COURT: Talk it among
18 yourselves.

19 MR. GOUTMAN: Very good. We'll
20 call you back in about ten minutes and
21 we're sorry for disturbing your
22 peaceful --

23 THE COURT: You're not disturbing
24 me. I'm glad that you called because I

1 wanted to talk to you and pose these
2 questions to you.

3 MR. GOUTMAN: Very well. We'll
4 call you right back as soon as we can
5 figure out what would be the best course
6 of action from our perspective.

7 MR. GOUTMAN: Thank you, Your
8 Honor.

9 THE COURT: Thank you. Good-bye.

10 BY MR. MC CLAIN:

11 Q. Mr. Woodyard, have you made an estimate of
12 how many square inches of tape there are in the
13 building?

14 A. No, I have not.

15 Q. Would you agree that there was a
16 substantial amount of tape in the building?

17 MR. GOUTMAN: Objection to form.

18 THE WITNESS: I don't know. What
19 does "substantial amount" mean?

20 BY MR. MC CLAIN:

21 Q. Over two million square inches of tape in
22 the installation of the duct work.

23 MR. GOUTMAN: Objection.

24 THE WITNESS: I don't know. I

1 haven't done the calculation.

2 BY MR. MC CLAIN:

3 Q. And you could do the calculation?

4 MS. HERSCHEL: Objection to form.

5 THE WITNESS: Yeah, given some
6 other information.

7 BY MR. MC CLAIN:

8 Q. If there were over two million in square
9 inches of tape in the building, would it impact
10 your opinion in regard to the release of PCBs
11 from this duct work system?

12 A. No.

13 Q. So you don't believe that even applying
14 heat of over 250 degrees to two million square
15 inches of tape throughout this building, would
16 release significant amounts of PCBs; is that
17 correct?

18 MR. GOUTMAN: Objection. Assumes
19 fact not in evidence. You can ask him.

20 THE WITNESS: Could I have the
21 question again.

22 BY MR. MC CLAIN:

23 Q. It's your opinion that, if you applied an
24 iron at over 250 degrees Farenheit to over two

1 million square inches of this duct work, that it
2 would not release a substantial amount of PCBs.

3 Is that your testimony?

4 MR. GOUTMAN: Same objection.

5 MS. HERSCHEL: Same objection.

6 THE WITNESS: That's correct.

7 BY MR. MC CLAIN:

8 Q. At what temperature do you believe that
9 PCBs would be released from this duct work, Mr.
10 Woodyard?

11 A. I don't have any experimental results I
12 would rely on for the PCBs in the adhesive
13 material. So I can't say in this context where
14 we have the ductboard.

15 Q. Now, you did review Mr. Ewing's work?

16 A. Yes, I did.

17 Q. You could have done an experiment of your
18 own, could you not have? Could you have done
19 your own experiment?

20 A. I don't know. There's no standard tests
21 that can be used for this particular experiment.

22 Q. So you don't think you are qualified to
23 have run an experiment?

24 MR. GOUTMAN: Objection. That

1 wasn't his testimony.

2 THE WITNESS: That's a different
3 question. If there were a standard, I
4 believe I would be qualified to run it.

5 BY MR. MC CLAIN:

6 Q. Do you believe that it's necessary in
7 order to run a valid scientific experiment, to
8 have a standard available from someone else?

9 MS. HERSCHEL: Mr. Mc Clain, this
10 is way outside of the very --

11 MR. MC CLAIN: No. He said he
12 reviewed Mr. Ewing's testimony.

13 MS. HERSCHEL: And that was a
14 question that was way outside the contours
15 of what the Judge said this deposition
16 could be about.

17 MR. MC CLAIN: It's about his
18 supplemental report.

19 MS. HERSCHEL: It's not about his
20 supplemental report. Show me where
21 it's --

22 MR. MC CLAIN: It's about his
23 supplemental report and I don't need these
24 interruptions in regard to my questions.

1 MS. HERSCHEL: But we have a right
2 to insist that you take a deposition
3 within the bounds that the Judge said.

4 BY MR. MC CLAIN:

5 Q. Isn't it true, Mr. Woodyard, that based
6 upon Mr. Ewing's test, PCBs were released above a
7 hundred degrees Farenheit? That's true, isn't
8 it?

9 MR. GOUTMAN: Objection. Where in
10 the report is that reference? Where does
11 he reference Ewing's testimony?

12 MR. MC CLAIN: That's in his
13 previous report.

14 MR. GOUTMAN: We're not here to
15 talk about his previous work.

16 MR. MC CLAIN: It is about his
17 education, training and experience as well
18 as my knowledge about the T&S Building and
19 review of documents and two site visits
20 that he bases his opinion on in this case.

21 MS. HERSCHEL: You're going to say
22 any question you want to ask him under the
23 sun fall under that report.

24 MR. MC CLAIN: No. I'm asking him

1 about this heat tape right now and try to
2 explore the basis of why he doesn't
3 believe that a 250 Farenheit heated iron
4 would release PCBs from this duct work?

5 MS. HERSCHEL: Ask him that.

6 MR. GOUTMAN: Is there a question?

7 BY MR. MC CLAIN:

8 Q. Yes. That's the question since she said
9 that's the one she wants me to ask. Go ahead.

10 A. Repeat it, please.

11 Q. Why don't you believe that at 250 degrees
12 Farenheit, PCBs would be released from this duct
13 work?

14 A. Because the PCBs were bound in the glue
15 bond. They were locked in. They would not
16 vaporize and enter the building space.

17 Q. And what data do you rely upon to reach
18 that conclusion? Can you cite me some study,
19 some test?

20 A. For example, going back to Mr. Ewing's
21 testimony, he, himself, stated having done some
22 of these tests, albeit incorrectly, that PCBs
23 would not have been released or measured in that
24 building based on room temperature exposure.

1 Q. We're not talking about room temperature,
2 sir. My question was 250 degrees Farenheit. At
3 250 degrees Farenheit, you believe, do you not,
4 that PCBs would be released from this ductboard?

5 MR. GOUTMAN: Objection.

6 THE WITNESS: No, I don't.

7 BY MR. MC CLAIN:

8 Q. So even heating it to 250 degrees, you
9 don't believe that it would release PCBs?

10 A. No.

11 Q. And I asked you what data do you rely upon
12 in reaching that conclusion? Can you give that
13 to me?

14 A. Mr. Ewing's test at lower temperatures
15 showed that PCBs would not be released at room
16 temperature, which tells me that -- or reconfirms
17 my opinion that, if even a molecule of PCBs
18 somehow escaped from that adhesive, it would
19 immediately attached to the fiberglass and stayed
20 within the ductboard. At any temperature up to
21 conceivably the boiling temperature of PCBs which
22 is in excess of 800 degrees.

23 Q. How is it then that PCBs were driven off
24 at a hundred degrees Farenheit in Mr. Ewing's

1 test?

2 MR. GOUTMAN: Objection.

3 MS. HERSCHEL: Objection to form.

4 MR. GOUTMAN: I instruct the
5 witness not to answer.

6 MR. MC CLAIN: He said he relied
7 upon Mr. Ewing's finding in reaching his
8 conclusion.

9 MR. GOUTMAN: You've misstated his
10 finding.

11 BY MR. MC CLAIN:

12 Q. What do you understand Mr. Ewing's
13 findings to be, at what temperature? Mr. Goutman
14 is taking issue with the temperature that PCBs
15 were driven off.

16 MR. GOUTMAN: You're asking him to
17 repeat the information in Ewing's report?

18 MR. MC CLAIN: If he recalls what
19 temperature Mr. Ewing heated the duct work
20 to.

21 THE WITNESS: Mr. Ewing conducted
22 tests that, in no way, simulated how the
23 duct work is constructed into that
24 building. So his experiment was flawed

1 and that's not what I'm relying on.

2 I just stated that his testimony
3 was that, based on the results of his
4 tests, you would not find PCBs in the
5 building based on room temperature
6 exposure of the duct work.

7 BY MR. MC CLAIN:

8 Q. We're not talking about room temperature,
9 sir. I said at 250 degrees Farenheit. At that
10 temperature, what data do you have that no PCBs
11 would be driven off from this duct work? What
12 data? Any?

13 A. There's no evidence that any was driven
14 off by the duct work.

15 Q. Sir, answer my question. Is there any
16 data that you rely upon, any test that has been
17 done? Anything in Doctor Erickson's book? What
18 is it that gives you this opinion, sir?

19 MS. HERSCHEL: Other than what he
20 says in his supplemental report?

21 MR. MC CLAIN: Yes.

22 MR. GOUTMAN: Excuse me. Can you
23 please keep your voice down? You're now
24 yelling at the witness. And I don't think

1 that's appropriate.

2 MR. MC CLAIN: Oh, give me a
3 break.

4 BY MR. MC CLAIN:

5 Q. Can you answer my question?

6 A. I said the boiling point of PCBs is well
7 in excess of eight hundred degrees. That's the
8 temperature at which PCBs might want to become a
9 vapor. Up to that point, it's locked in the glue
10 matrix. It's stable. It's not going to go
11 anywhere.

12 Q. What test data do you rely upon in
13 reaching that conclusion?

14 MR. GOUTMAN: He just said it.

15 Other than that you mean?

16 BY MR. MC CLAIN:

17 Q. Yeah. Other than what the boiling
18 temperature of PCBs are?

19 A. There was no test performed on the duct at
20 250 degrees.

21 Q. And you don't have any data?

22 A. I just cited to you the sciences behind my
23 paper.

24 Q. Even though you recognize in Doctor

1 Erickson's book that PCBs will vaporize at room
2 temperature; am I right?

3 MR. GOUTMAN: Pure PCBs we're
4 talking now, as opposed to PCBs in glue?

5 BY MR. MC CLAIN:

6 Q. Is it your testimony that placing the PCBs
7 in glue completely immobilizes them and subjects
8 them to no vaporization? Is that your testimony?

9 A. Yes, sir. No significant vaporization.

10 Q. What do you mean by "no significant
11 vaporization"? At what rate will it vaporize
12 from glue? Do you have any data on that?

13 A. No, I don't.

14 Q. No tests that you performed?

15 A. No, I don't.

16 Q. And so the only data that you have is on
17 pure PCBs; is that correct?

18 A. The only reference material citations that
19 you would argue would be relevant are the PCB
20 vaporization rates. But those do not apply to
21 the glue.

22 Q. Let's go to the tests that you have cited
23 in regard to the glue, the heating of the duct
24 work.

1 Did anyone measure whether PCBs
2 were driven off at those temperature, between two
3 hundred and four hundred degrees?

4 A. No.

5 Q. So based upon that data, you can't tell us
6 whether or not PCBs were driven off during that
7 process; am I right?

8 MS. HERSCHEL: Objection to the
9 form.

10 THE WITNESS: The test was to show
11 the continued integrity of the glue as
12 applied to put the fiberglass against the
13 foil. If the PCBs were driven off, the
14 whole duct would have deteriorated.
15 Obviously, it didn't. That's the whole
16 point of the ^{test}~~defendant~~.

17 BY MR. MC CLAIN:

18 Q. And any PCBs that were driven off would
19 have caused the glue to fail after 72 hours. Is
20 that your testimony?

21 A. The glue is the plasticizer. It was
22 designed to keep the glue together. I mean the
23 PCBs are the plasticizer. They're designed to
24 keep the glue together. If they left this

1 adhesive material, the adhesive would
2 deteriorate, the duct would come apart. We did
3 not see that happen.

4 Q. How would we determine whether it would
5 deteriorate? What would we physically see in
6 regard to this glue?

7 A. We would see delamination. We would see
8 evidence that the duct was coming apart.

9 Q. The glue would become hard?

10 A. Not necessarily, no.

11 Q. That would be one sign that the PCBs would
12 be driven off; am I right?

13 A. No. That's not true.

14 Q. So if the glue becomes hard, that doesn't
15 mean that the plasticizers have left it? Is that
16 your testimony?

17 A. No.

18 MR. GOUTMAN: Are we talking about
19 plasticizers or PCBs? Are you changing
20 the question here on the witness?

21 MR. MC CLAIN: No. The witness
22 said that the PCBs were added as
23 plasticizer.

24 BY MR. MC CLAIN:

1 Q. Am I right?

2 A. Yes.

3 MR. GOUTMAN: Has that been
4 established that that was the only
5 plasticizer.

6 BY MR. MC CLAIN:

7 Q. That is the plasticizer in this mastic;
8 isn't that true?

9 A. That's correct.

10 Q. Is it's true, is it not, that one of the
11 goals of the plasticizer is to keep it pliant?

12 A. Yes. Flexible is the word I would use.

13 Q. And when it becomes hard, it's no longer
14 flexible, is it?

15 A. No longer as flexible. I don't have test
16 data to say otherwise.

17 Q. And so you would not view it that if it's
18 hard as opposed to pliant or flexible, that any
19 PCBs have been driven off; is that true?

20 MS. HERSCHEL: Objection to the
21 form of the question. There's no evidence
22 in this case that the glue in the
23 ductboard was brittle.

24 MR. MC CLAIN: Review

1 Mr. Kominsky's testimony.

2 MS. HERSCHEL: It's not there, Mr.
3 Mc Clain.

4 MR. MC CLAIN: It is, too. Go
5 ahead.

6 THE WITNESS: The adhesive, as it
7 was manufactured and applied, was only 60
8 percent or so solids. There was a lot of
9 other material in there that would come
10 off in this evaporation that you're
11 talking about. That has anything to do
12 with PCBs. The PCBs stayed there. Water
13 evaporated. Other solvents that were
14 included in these constituents.

15 BY MR. MC CLAIN:

16 Q. What tests did you perform to determine
17 that the PCBs had stayed in the glue? Any? Did
18 you perform any tests?

19 A. No. I relied on the tests that were done
20 by Certainteed to show that the integrity was
21 maintained.

22 Q. And those tests did not measure the
23 amounts of PCBs, both before and after the test,
24 did they?

1 A. Not to not to my knowledge, no.

2 (Whereupon a brief break was

3 taken.)

4 BY MR. MC CLAIN:

5 Q. Do you know how many PCBs would have been
6 driven off before there would have been a loss of
7 performance of the glue?

8 MR. GOUTMAN: Objection to form.

9 THE WITNESS: No, I do not.

10 BY MR. MC CLAIN:

11 Q. In your report, you say that absent the
12 fire, there would have been no vaporization of
13 the glue between a temperature -- between room
14 temperature and the temperature of a fire, at
15 what point will the glue vaporize, do you know?

16 MR. GOUTMAN: PCBs in the glue
17 mastic?

18 MR. MC CLAIN: Yeah.

19 THE WITNESS: As I said, the
20 boiling point of the PCBs is in excess of
21 800 degrees.

22 BY MR. MC CLAIN:

23 Q. So are you saying that until it boils no,
24 PCBs will vaporize from the glue? Is that your

1 opinion?

2 A. My opinion is that no appreciable amount
3 of PCBs will ever leave the glue, until it's
4 destroyed.

5 Q. Even at the boiling point?

6 A. The boiling point is a point at which the
7 glue is destroyed.

8 Q. By "appreciable", what do you mean? How
9 much PCBs is released before it's appreciable in
10 your view?

11 A. As my report says, it did not result on
12 any concentration of PCBs ~~everywhere~~^{settling on} in the building
13 surfaces which is a measurement based statement.
14 So there's no measureable PCBs leaving that duct
15 work.

16 Q. No measureable meaning, nothing above the
17 NIOSH level?

18 MR. GOUTMAN: Objection.

19 THE WITNESS: No. It has nothing
20 to do with the NIOSH level. We're talking
21 molecules even leaving the adhesive. And
22 as I've said, that would be trapped by the
23 fiberglass.

24 BY MR. MC CLAIN:

1 Q. Does the fiberglass increase or decrease
2 the surface area of PCB containing material
3 subject to vaporization?

4 MS. HERSCHEL: Objection to form.
5 Go ahead.

6 THE WITNESS: I don't know that it
7 would make a difference.

8 BY MR. MC CLAIN:

9 Q. If PCBs are vaporized on to the
10 fiberglass, does that not increase the surface
11 area of PCB containing material available to the
12 air stream in the building?

13 MR. GOUTMAN: Objection.

14 THE WITNESS: No. That's not
15 true.

16 BY MR. MC CLAIN:

17 Q. Is it not true that the fiberglass has a
18 greater surface area than the fiberglass
19 ductboard?

20 A. But you're not claiming the fiberglass is
21 evaporating. You're claiming the PCBs are
22 evaporating.

23 Q. And reabsorbing on to the fiberglass in
24 your scenario; am I right?

1 MR. GOUTMAN: Objection.

2 MS. HERSCHEL: That's what you
3 said.

4 MR. GOUTMAN: Objection.

5 MS. HERSCHEL: Objection to form.

6 MR. ^{Woodyard}~~MC CLAIN~~: If a molecule of
7 PCB leaves the surface of that glue and
8 attaches itself to a piece of fiberglass
9 directly adjacent to it, which is what
10 we're talking about here, there is now a
11 molecule of PCB on the fiberglass. There
12 is a molecule of PCB missing from the
13 adhesive. There's no increase.

14 BY MR. MC CLAIN:

15 Q. Is that molecule of PCBs, which is now
16 attached or resting on the fiberglass, available
17 for resuspension of the building?

18 MR. GOUTMAN: Resting? He didn't
19 say it was resting on top of the
20 fiberglass. He said it was within the
21 fiberglass. Object to the form of the
22 question.

23 MS. HERSCHEL: Object to the form.

24 THE WITNESS: That molecule is

1 stuck to the fiberglass. It's,
2 essentially, part of the fiberglass. It's
3 at room temperature. It's not going
4 anywhere.

5 BY MR. MC CLAIN:

6 Q. What about when it's heated above room
7 temperature?

8 MR. GOUTMAN: Objection.

9 MS. HERSCHEL: I'm sorry. What
10 was the end of your question. I missed
11 it.

12 MR. MC CLAIN: When it's heated
13 above room temperature.

14 MR. GOUTMAN: Objection to form of
15 the question.

16 THE WITNESS: It wouldn't be
17 heated above room temperature.

18 BY MR. MC CLAIN:

19 Q. Is it not contained within the duct work?

20 A. Yes. But the evidence is that the duct
21 work carried air that was between 60, 75 degrees.
22 No more than 85.

23 Q. Are you an expert in temperature,
24 Mr. Woodyard?

1 MR. GOUTMAN: Objection. I don't
2 know what an expert in temperature is.

3 MR. MC CLAIN: You put forward
4 this fellow DeChiara who you claimed was
5 an expert in temperature.

6 MR. MC CLAIN: Are you an expert
7 in temperature.

8 MR. GOUTMAN: I never put forth an
9 expert in temperature in my life. An
10 expert in HVAC system.

11 MR. MC CLAIN: And the temperature
12 obtained within the HVAC system, according
13 to you.

14 MR. GOUTMAN: Right.

15 MR. MC CLAIN: Are you an
16 expert --

17 MR. GOUTMAN: As I recall, you had
18 a CIH testify as an expert in that field.

19 MR. MC CLAIN: Yes, I did.

20 MR. GOUTMAN: Is there a question?

21 BY MR. MC CLAIN:

22 Q. Are you an expert in the temperature of
23 air passing through duct work?

24 A. Yes. I've had design courses in HVAC

1 design before.

2 Q. And did you take any measurements in this
3 building of the temperature in the building or
4 are you relying upon the testimony of others?

5 A. I'm relying on my review of the
6 specifications for how the HVAC system is
7 supposed to work, how it was designed to work and
8 how, according to Mr. Buhey (phonetic), it
9 continued to work throughout the life of the
10 building.

11 Q. And where do you opine on that subject in
12 your report? In your first report?

13 MR. GOUTMAN: We've been through
14 this.

15 BY MR. MC CLAIN:

16 Q. You're saying that that's contained in
17 your first report?

18 A. I'm saying that's my opinion.

19 MR. GOUTMAN: Page 28.

20 BY MR. MC CLAIN:

21 Q. At page 28. So that's the opinion that
22 you're rendering in this case, is the one that's
23 contained on page 28 of your first report?

24 MR. GOUTMAN: Objection. The

1 opinion that he's rendering are the
2 opinions that you're soliciting in this
3 deposition.

4 MR. MC CLAIN: No. I am not
5 allowed to inquire on that first report
6 according to you, unless you're opening up
7 the whole deposition so I can inquire on
8 the first report. So you can't expand his
9 testimony into an area that he didn't
10 opine on in the first report.

11 MR. GOUTMAN: You took that chance
12 when you asked him those questions. And I
13 think it's pretty clear from Mr. Jones
14 (phonetic) that if you inquire in the
15 matter of his deposition, it's fair game.

16 MR. MC CLAIN: No. It's not --
17 this is not a matter of gamesmanship where
18 you can try to slip in little things from
19 the first report, and then prevent me from
20 examining him on his first report. I
21 didn't ask him anything, except where in
22 your report does it say that. You cited
23 to page 28 and that's the opinions that
24 he'll be held to, I believe.

1 MR. GOUTMAN: Thank you, Your
2 Honor.

3 MR. MC CLAIN: I haven't asked him
4 anything beyond what's in his report.

5 MR. GOUTMAN: I think the
6 questions and answers are a matter of
7 record.

8 MR. ZIEGLAR: For the record, the
9 testimony was given by Mr. Goutman and not
10 the witness.

11 MR. GOUTMAN: What testimony?

12 MR. ZIEGLAR: That it was at page
13 28. Whatever the reference was.

14 MR. GOUTMAN: That was from
15 earlier in the deposition, about an hour
16 ago.

17 MR. MC CLAIN: If a Court allows
18 him to wander into that, then we'll see
19 what has to be done about it. It may go
20 swimmingly for you as Mr. DeChiara did.
21 That's what the reports were.

22 BY MR. MC CLAIN:

23 Q. Anyway, back to the foil issue. And by
24 the way, Mr. DeChiara thought so.

1 In regard to the foil issue, you
2 mentioned that the foil somehow --

3 MS. HERSCHEL: You discussed his
4 testimony with our expert, didn't you,
5 Mr. Mc Clain?

6 MR. MC CLAIN: Mr. DeChiara walked
7 up to me in the middle of the courtroom
8 and told me what a great job I had done
9 three times, to Mr. Goutman's
10 consternation.

11 MR. GOUTMAN: I object to that.

12 BY MR. MC CLAIN:

13 Q. The foil issue in regard to the report,
14 you state that the foil somehow impacted this --
15 or mediated the heating process within the duct
16 work?

17 MS. HERSCHEL: Objection to form.

18 MR. GOUTMAN: Objection to form.

19 BY MR. MC CLAIN:

20 Q. Do you recall that?

21 MR. GOUTMAN: What are you
22 referring to?

23 THE WITNESS: No. That's not
24 correct.

1 BY MR. MC CLAIN:

2 Q. It says in addition, there are two layers
3 of foil and one layering of heat sealing tape
4 between the iron and the PCB containing glue. Do
5 you see that?

6 A. Yes, I did.

7 Q. Would not the added layer of foil conduct
8 heat, Mr. Woodyard?

9 A. Yes. Yes. The aluminum ~~number~~⁹ is a good
10 heat conductor. But in answer to your question,
11 this isn't in here because it's intended to show
12 it's -- whether it's somehow slowed down heat
13 transfer. It's in this to illustrate that
14 there's a barrier on the other side of this heat
15 sealing process that would not allow PCBs to
16 escape through the foil.

17 Q. But it would increase the heat? Would it?

18 MS. HERSCHEL: Objection to form.

19 THE WITNESS: Not at all. The
20 heat conduction doesn't increase the heat.
21 It just doesn't resist it.

22 BY MR. MC CLAIN:

23 Q. So the heat conduction would continue,
24 even though there was an aluminum backing in

1 regard to the duct; am I right?

2 A. Yeah. Two layers, actually.

3 Q. Now, Mr. Woodyard, let me what experiments
4 do you have or data do you have to support the
5 last bullet point, assuming for the sake of
6 argument, that the 250 degree temperature at the
7 PCB containing glue to which Mr. Kominsky
8 testified, released a few molecules of PCBs.
9 These PCBs would cool and condense immediately
10 under the fiberglass installation? Do you have
11 any data or tests to demonstrate that?

12 A. Again, the evidence in the case shows that
13 the air on the other side of ^{insulation} ~~installation~~ is at
14 or very close to room temperature. This
15 fiberglass is an insulating material. Clearly,
16 as soon as that one molecule that we're talking
17 about leaves that mastic, as it should, it's
18 immediately going to get a much cooler surface,
19 condense and stay there permanently.

20 Q. Any data that you have to support that,
21 Mr. Woodyard?

22 MS. HERSCHEL: That PCBs condense
23 at room temperature?

24 MR. MC CLAIN: Or the idea that

1 PCBs release what we condense on to
2 another surface and stay there.

3 BY MR. MC CLAIN:

4 Q. Do you have any data to support that idea?

5 A. I didn't need to do an experiment. It's
6 basic science as I just said.

7 Q. Do you have any data?

8 MR. GOUTMAN: I instruct the
9 witness not to answer. He answered the
10 question. You're not entitled to answer
11 twice.

12 MR. MC CLAIN: He didn't cite me
13 to any data. And I want to be sure that
14 he doesn't have any.

15 BY MR. MC CLAIN:

16 Q. Do you have any data to site me to that
17 opinion?

18 MR. GOUTMAN: Instruct the witness
19 not to answer. He already answer that
20 question. He said it was basic science.

21 MR. MC CLAIN: Well, basic science
22 does not inform me as to what he's relying
23 upon.

24 MR. GOUTMAN: If you want to know

1 what he means by basic science, why don't
2 you ask him that. Don't keep asking him
3 the same question hoping to get a
4 different answer.

5 MR. MC CLAIN: I'm not asking for
6 a different answer.

7 BY MR. MC CLAIN:

8 Q. I just want to know is there any data that
9 he could cite me to. Cite me to your basic
10 science data that supports this opinion?

11 A. *Araclo*
 ~~Araclo~~ 1262, by itself, is a sticky
12 resin, essentially a solid at room temperature.
13 And it is mixed with a bunch of other material
14 into a material that solidifies further and
15 attaches to the foil.

16 Q. How is the 1262 utilized in the glue as a
17 sticky resin or as a liquified material; do you
18 know?

19 A. It was used as a solid.

20 MR. GOUTMAN: Objection to the
21 form.

22 BY MR. MC CLAIN:

23 Q. It was used as a solid when it went into
24 the adhesive. Is that your testimony?

1 A. It's a solid when it's used and it's a
2 solid when it's done, except in the case of being
3 an additive, there were other solvents that were
4 used. Toluene to dissolve it. So that it could
5 be added and mixed, then the toluene is
6 dissolved.

7 Q. So it went into solution with the toluene;
8 is that right?

9 A. I don't know that. Possibly.

10 Q. How is it applied in -- how does it
11 supposed to go into the mix to make the adhesive;
12 do you know?

13 A. As a -- I would assume as a liquid mixture
14 with toluene.

15 Q. Did that influence its vapor pressure?

16 A. Absolutely not.

17 Q. So mixing 1262 with toluene does not in
18 any way change it's vapor pressure; is that
19 correct?

20 A. That's correct.

21 MS. HERSCHEL: Asked and answered.

22 BY MR. MC CLAIN:

23 Q. Does it change the way that it vaporizes
24 if PCBs are suspended in toluene?

1 A. No.

2 Q. What would you rely upon to reach that
3 conclusion? Are there experiments or tests that
4 have been done to show that?

5 A. Again, it's basic science. Mixing two
6 chemicals like that has no effect on the vapor
7 pressure of either one.

8 Q. Does it effect its releasability.

9 MS. HERSCHEL: Objection to the
10 form.

11 THE WITNESS: I've never heard
12 that term before.

13 BY MR. MC CLAIN:

14 Q. Have you read Doctor Erickson's book?

15 A. No. I own it and I've referred to it.

16 Q. You've never read it?

17 A. Not in the way I read a novel, no.

18 MS. HERSCHEL: You mean from cover
19 to cover?

20 BY MR. MC CLAIN:

21 Q. So you don't know whether he's opined on
22 that subject of mixing PCBs with other solvents
23 and what effect that has on the releasability of
24 the PCBs; is that correct?

1 A. I don't know, offhand.

2 Q. You would rely upon his opinions in that
3 regard; would you not?

4 A. No, not necessarily.

5 Q. Are you more expert than Doctor Erickson
6 in regard to the chemical properties of PCBs?

7 A. I don't understand the "more expert".
8 It's basic science. I learned this in school.
9 Doctor Erickson, I'm sure, learned it in school.

10 Q. So you are as qualified as Doctor Erickson
11 to opine on the chemical properties of PCBs. Is
12 that your testimony?

13 A. No. I'm talking about your specific
14 question related to how toluene might have
15 somehow enhanced the vapor pressure of PCB.

16 Q. Come back to the question.

17 Do you or do you not rely upon
18 Doctor Erickson's book to render opinions about
19 the physical properties of PCBs?

20 A. Not typically, no.

21 Q. You don't -- and you don't find it to be
22 authoritative; is that correct?

23 A. I don't know. I probably not. I haven't
24 read the whole book.

1 Q. So Doctor Erickson, in your view, is not
2 an authoritative expert on PCBs; is that true?

3 A. No. We're talking about his book.

4 Q. You don't find his book to be
5 authoritative; am I right? Is that your
6 testimony?

7 A. I have not read his whole book.

8 MR. GOUTMAN: Do you want to cite
9 him to a specific portion?

10 MR. MC CLAIN: No. I'm just
11 asking because you stood up before the
12 jury and said this is the Bible. I want
13 to know whether this witness --

14 THE WITNESS: No, he didn't.

15 MS. HERSCHEL: Mr. Rue (phonetic)
16 said that.

17 MR. GOUTMAN: Excuse me. If I can
18 just finish my statement without
19 interruption.

20 MR. MC CLAIN: Go ahead.

21 MR. GOUTMAN: If you want to show
22 him a book and ask him whether A, he's
23 familiar with that passage; and B, whether
24 he finds it authoritative, that's fine.

1 But you can't ask a witness who's just
2 told you he hasn't the entire book,
3 whether everything in the book is
4 authoritative.

5 BY MR. MC CLAIN:

6 Q. Is it a standard work in the field of PCB
7 related research?

8 A. I'm sorry. I don't know what a standard
9 work is.

10 Q. So you don't find it to be authoritative
11 as a whole; am I right?

12 MR. GOUTMAN: Objection.

13 MR. MC CLAIN: Doctor Erickson's
14 book that has been shown to the jury --

15 MR. GOUTMAN: Objection.

16 MR. MC CLAIN: -- by defense
17 counsel repeatedly.

18 MR. GOUTMAN: He said he hasn't
19 read the entire book. How could he
20 possibly answer that question?

21 BY MR. MC CLAIN:

22 Q. What books have you read on PCB related
23 analytical chemistry? Then tell me.

24 A. I probably have never read a book on PCB

1 chemistry from cover to cover. And I've referred
2 to probably dozens of them as reference works,
3 just like Doctor Erickson.

4 Q. So do you refer to Doctor Erickson's book
5 as a reference work or not?

6 A. Yes, I do.

7 Q. And what other books do you find -- do you
8 refer to as reference works?

9 A. For PCB related issues?

10 Q. Yes.

11 A. There are many. I have files and so forth
12 all over my office about this.

13 Q. Just tell me which ones you recall.

14 A. I can't recall one specifically off the
15 top of my head. Some of it is also technical
16 articles from scientific journals where people
17 have done.

18 Q. Do you recall any other than Doctor
19 Erickson's book?

20 A. Not specifically. I'm sorry.

21 Q. So other than Doctor Erickson's book, you
22 can't cite us to any reference that you would
23 rely upon; is that correct?

24 MR. GOUTMAN: Objection. It's

1 been asked and answered. Don't answer the
2 question. You're not entitled to ask the
3 same question over and over again.

4 BY MR. MC CLAIN:

5 Q. Is that true?

6 MR. GOUTMAN: Don't answer the
7 question.

8 BY MR. MC CLAIN:

9 Q. Do you even rely upon your own works?
10 Would you find them to be authoritative?

11 A. As far as the first part of your question,
12 I, of course, go back to different papers and
13 other documents I've written as references.

14 Q. And you would find those to be
15 authoritative, wouldn't you?

16 A. Certainly, the portions I'd look at I
17 would depend upon, yes.

18 Q. You wrote them, didn't you?

19 A. Absolutely.

20 Q. What parts didn't you look at within your
21 own articles?

22 MR. GOUTMAN: Objection. Overly
23 broad.

24 MS. HERSCHEL: Objection.

1 THE WITNESS: I don't know. Are
2 we talking about a specific review that I
3 did or in general?

4 BY MR. MC CLAIN:

5 Q. Are there any parts of your own articles
6 that aren't authoritative, that you don't rely
7 upon?

8 A. No. I don't believe so.

9 Q. Tell me, Mr. Woodyard, does the surface
10 area influence the amount of PCBs that are
11 vaporized -- the surface area exposed containing
12 PCBs?

13 MR. GOUTMAN: Are you talking
14 about pure PCBs now?

15 MR. MC CLAIN: PCBs that are pure
16 and a mixture. It doesn't matter.

17 MR. GOUTMAN: I object. It's a
18 compound question. You said it doesn't
19 matter.

20 THE WITNESS: For pure PCBs,
21 vaporization rates are based on units of
22 surface area, that's correct.

23 BY MR. MC CLAIN:

24 Q. Do you believe that that changes when it's

1 in solution or does that still -- that principle
2 of basic science still apply?

3 A. You're using the term in solution. What
4 we're talking about here is in solid, which is
5 not solution.

6 Q. It went into solution before it became a
7 solid; did it not?

8 MS. HERSCHEL: Objection to form
9 of the question.

10 BY MR. MC CLAIN:

11 Q. And it's a semi solid if it's in glue,
12 isn't it?

13 MS. HERSCHEL: Objection to the
14 form of the question.

15 THE WITNESS: No. Apparently,
16 you've misunderstood.

17 What is true is that the material
18 was or may have been delivered for mixing
19 as a solution with toluene. It was then
20 mixed, the product was treated, the
21 toluene was driven off. It's a solid
22 material.

23 BY MR. MC CLAIN:

24 Q. And can you tell us whether or not the

1 surface area that is exposed affects the
2 vaporization of even a solid material or not?

3 MS. HERSCHEL: Objection to form
4 of the question.

5 MR. GOUTMAN: Vaporization of PCBs
6 in a solid material; is that right? Is
7 that the question? You're nodding your
8 head yes?

9 MR. MC CLAIN: Yes.

10 THE WITNESS: I don't know. It's
11 going to be a function of what the solid
12 material was. In this case, my opinion is
13 that it was locked in and that it's not
14 available for vaporization.

15 BY MR. MC CLAIN:

16 Q. Any -- no matter what the surface area of
17 the material that it's found in; is that true?

18 A. That's correct.

19 Q. So the surface area of a solid, you think
20 does not matter in regard to vaporization of
21 PCBs? That would be your testimony?

22 MR. GOUTMAN: Objection to the
23 form of the question.

24 MS. HERSCHEL: Objection to the

1 form.

2 MR. GOUTMAN: How is that question
3 different than the question you just
4 asked?

5 MR. MC CLAIN: I don't need this
6 colloquy back and forth.

7 MR. GOUTMAN: I don't need you to
8 sit here and ask the same question over
9 and over.

10 MR. MC CLAIN: I'm not asking the
11 same question. He was answering the
12 question. He was about to expand upon his
13 answer and you've interrupted him. Can
14 you read him the question back?

15 MR. GOUTMAN: Excuse me. You had
16 just asked the question same question you
17 had just asked. Now you've begun it
18 again.

19 (Whereupon the court reporter read
20 back the requested question.)

21 MR. MC CLAIN: That's the
22 question.

23 THE WITNESS: And I answered that
24 before, by saying pure PCBs or other

1 liquids, vaporization is often exposed as
2 a function of surface area, but not in a
3 solid material which is what the 1262 is,
4 not in a solid matrix we're talking about,
5 not in the glue.

6 BY MR. MC CLAIN:

7 Q. Tell me what principles of basic science
8 forms your opinion about that? Why would that
9 change, depending upon whether that was now a
10 solid as opposed to a pure liquid or pure PCBs?

11 A. Most solids don't evaporate.

12 Q. At all?

13 A. At any appreciable rate. It's not
14 measurable for most solids. It doesn't happen.

15 MR. GOUTMAN: This table has been
16 evaporating during this deposition.

17 BY MR. MC CLAIN:

18 Q. It does, as a matter of fact? Doesn't it?
19 Doesn't this table evaporate? Is there an
20 evaporation rate of even this table?

21 A. This table is made up of a lot of
22 different things. What part are you talking
23 about?

24 Q. Let's talk about the varnish on the

1 exterior of it. That evaporates, doesn't it?

2 A. It may.

3 Q. It has an evaporation rate?

4 A. I don't know. I'd have to look it up.

5 It's a solid.

6 Q. And can you tell me whether or not in your
7 view then, PCBs found in solids will have any
8 evaporation rate or simply not an appreciable
9 one, to use your words?

10 A. I don't know. My opinion is, it has no
11 vaporization.

12 MR. MC CLAIN: No vaporization?

13 Okay. Doctor Erickson, that's all I have.

14 MS. HERSCHEL: Woodyard.

15 MR. MC CLAIN: Woodyard.

16 * * *

17 EXAMINATION

18 * * *

19 BY MR. NEAL:

20 Q. You indicate in your report that you had
21 two site visits to the Transportation and Safety
22 Building; is that correct?

23 A. My original report?

24 Q. No. You're supplemental report. On the

1 first page, last sentence?

2 A. Yes, sir. You're correct.

3 Q. When was the first visit?

4 A. I'm sorry. I don't remember the exact
5 date. It was 1997, I believe.

6 Q. Do you remember what month what portion of
7 the year?

8 A. No, not off the top of my head. I'm
9 sorry.

10 Q. You don' know whether it was the early
11 part of the year or latter part of the year?

12 A. If I hazard a guess, it's summer or fall.

13 Q. Okay. It's all right. But it was in
14 1997?

15 A. That's correct.

16 Q. And on the first visit, what were you
17 there for?

18 A. To tour the occupied floors of the
19 building -- what were termed the occupied floors
20 of the building.

21 Q. You were taken on a tour of the occupied
22 floors?

23 A. Yes, sir.

24 Q. Were they occupied at the time?

1 A. No, they were not?

2 Q. Did you go above the ceiling?

3 A. Yes, I did.

4 Q. And how many places?

5 A. Two or three, perhaps.

6 Q. The same floor? Two or three different
7 floors?

8 A. I don't recall. I think it was two or
9 three different floors.

10 Q. And did you have to wear any kind of
11 protection?

12 A. No.

13 Q. You just looked above the ceiling; is that
14 correct? You looked at the duct work?

15 A. That's correct.

16 Q. And how long was that visit?

17 A. It was for a day.

18 Q. Other than going onto the floor and
19 looking above the ceiling, did you do anything
20 else with regards to your visit? I'm talking
21 about in 1997.

22 MS. HERSCHEL: Objection to the
23 form.

24 THE WITNESS: Do you have specific

1 dates in mind?

2 BY MR. NEAL:

3 Q. Other than touring the floors themselves
4 and going up, above the floors on two or three
5 different occasions, did you do anything else
6 besides just tour the facility?

7 A. I, on several occasions, opened and
8 inspected the floor troughs.

9 Q. Anything else?

10 A. Not that I can recall, unless you have a
11 particular activity in mind.

12 Q. No. That's why I'm asking you. I just
13 wanted to find out.

14 Did you do any testing?

15 A. No. I did not take any samples.

16 Q. Was it just you?

17 A. No.

18 Q. Who else was there?

19 A. There were several other construction
20 experts with me.

21 Q. Do you recall who they were?

22 A. I believe Mr. DeChiara was one of them. I
23 don't remember the other names.

24 Q. After that, when was the second visit you

1 made?

2 A. Again, I don't recall. I think it was
3 later that year.

4 Q. What was the purpose of that visit?

5 A. The purpose was largely to inspect bags of
6 debris that were on the six floor.

7 Q. Who gave you that task? And by inspecting
8 bags of debris, you mean just opening them up and
9 taking a look what's inside?

10 A. Yes. If I recall, that material was
11 slated for removal at that point. And since it
12 was in sealed bags, we wanted to, at least, take
13 a look through and see what types of material
14 were there.

15 Q. And they left it up to you for the dirty
16 work?

17 A. And another individual.

18 Q. Did you take anything from the debris, any
19 samples of anything from the waste?

20 A. No, I did not.

21 Q. How long were you there?

22 A. In that case, half a day, probably an hour
23 on the six floor.

24 Q. Half a day, an hour on the sixth floor?

1 A. Half a day at the site at the building.

2 An hour actually in there doing bag opening, an
3 hour or two. I also walked around the sixth
4 floor, trying to look at the fire damage.

5 Q. So was the day really involved the sixth
6 floor -- that half a day involved with the sixth
7 floor?

8 A. I'm not certain. We may have gone to the
9 fifth floor or another floor that same day.

10 Q. All on the contained floors?

11 A. I believe so. I believe so.

12 Q. You didn't do any testing other than
13 looking at what the debris that was in the
14 different bags, correct?

15 A. That's correct.

16 Q. Now, in your report on the first bullet
17 point, you indicated the process of sealing the
18 tape placed the iron over any several inch
19 section of the tape for a few seconds only.

20 What do you mean by "any several
21 inch section?"

22 Q. It's Probably an awkward way of saying
23 that the iron was applied pretty much uniformly
24 to all the ducts and any particular section of

1 duct would have only seen the iron for a few
2 seconds.

3 Q. We'll get to that. But as far as when
4 you're doing the actual heat sealing, they seal
5 the entire length of the tape; is that correct?

6 A. That's true.

7 Q. So when you say over any several inch
8 section, you don't mean by that, that it was just
9 sealing just a couple of inches?

10 A. No. On the contrary, I think the other
11 language that was in some of the Certainteed
12 exhibits referred to the thorough -- I forgot,
13 thorough and complete was, perhaps, the language.
14 It implied that it would be uniformly applied
15 across all the tape.

16 Q. So you mean by that, and I don't want to
17 put words in your mouth, that when the iron is
18 placed over any several inch section of the tape
19 for a few seconds only, it means running the
20 length of the tape over the sealing of the joint,
21 correct?

22 A. That was my intent, yes. As I said, it
23 was not worded as clearly as it might be.

24 Q. And am I correct that you testified

1 earlier that where you got this for a few seconds
2 only, you got that from one of the exhibits which
3 was CT 49, on page CT 00211.

4 A. Yes. That's correct.

5 Q. And in this particular incident, you
6 equated running the sealing tool over entire tape
7 to mean a few seconds?

8 A. Yes, sir.

9 Q. And by "a few seconds", what do you mean
10 in terms of time span?

11 A. A couple. To me that means one to two,
12 three seconds, perhaps.

13 Q. So from one to three seconds?

14 A. If you want to tie it down, that's what I
15 meant by a few.

16 Q. I'm just trying to understand what you
17 mean by what you have in your report?

18 A. I understand it's not a very precise term.

19 Q. But other than what was contained in what
20 I just referred you to, which is DCT 49, there's
21 nothing else that you read that indicated how
22 long it should take to heat seal properly the
23 duct tape -- the sealing tape?

24 A. That's correct.

1 Q. Now, you in bullet point 3, you talked
2 about as part of the testing, that the ductboard
3 adhesive that these samples were heated up from
4 three hundred degrees Farenheit to 350 degrees
5 Farenheit in 72 hours; is that correct?

6 A. Yes, sir.

7 Q. What was the purpose for that and why was
8 that important to you?

9 If that's a compound question,
10 I'll ask the first one.

11 MR. GOUTMAN: That's okay.

12 BY MR. NEAL:

13 Q. What was the purpose of doing that?

14 A. The purpose of this test is to guarantee
15 the integrity of the product. It's to make sure
16 that at least that temperature at that severe --
17 extremely severe treatment, it doesn't come
18 apart.

19 Q. And I think you indicated, transfer one
20 that whatever that said, it was DCT 38, the
21 specification.

22 A. I don't recall the order. There were
23 several.

24 Q. Okay. You also referring to the lab

1 reports -- the several lab reports?

2 A. Yeah. There were several lab reports.

3 There was a specification.

4 Q. Would you just pick out the first couple
5 of lab reports which are DCT 32 and, let's say,
6 88.

7 Do you have both of those?

8 A. 32.

9 Q. DCT 32 and DCT 88.

10 A. Yes, I have them.

11 Q. This is, as you understand it, is a test
12 run or conducted by whom?

13 A. Who conducted this test?

14 A. The laboratory.

15 Q. For whom?

16 A. Gustin-Bacon.

17 Q. And Gustin-Bacon subjected to certain
18 conditions -- and do you see under determination?

19 I'm looking at the June 20, 1962 memo.

20 A. Okay.

21 Q. And it says tack time. What does tack
22 time mean?

23 A. I don't know.

24 Q. What does open time mean?

1 A. I don't know.

2 Q. It says plasticizer migration. Do you
3 know what they doing when they were testing for
4 that?

5 A. I asked the same question. It, apparently
6 these adhesives did not work well, specifically,
7 with vinyl or did not adhere well to vinyl. And
8 there was a test that they performed specific to
9 vinyl which is cited here to see how you per
10 formed for that particular application.

11 Q. And in the second DCT 88, again, they use
12 the same kind of language. We're talking about
13 tack time, open time, et cetera; is that correct?

14 A. Yes, sir.

15 Q. Again, it talks about plasticizer
16 migration. Do you have any idea now what that's
17 referring to? Was it referring to the same
18 thing?

19 A. It's exactly the same test.

20 Q. One is June 20th, 1962. That was the
21 earlier memo and this is 10/19/65.

22 Do you know if they're still doing
23 it for vinyl, to see if it is adhesive with
24 vinyl?

1 A. Today?

2 Q. Yeah.

3 A. No, I don't know.

4 Q. Now, you indicated you asked about
5 plasticizer migration.

6 Who did you ask about that?

7 A. Mrs. Herschel.

8 Q. But you didn't talk to anybody in
9 Certainteed?

10 A. No, I did not.

11 Q. Now, there's a second part of it, on the
12 third bullet, In addition during the
13 manufacturing process, the ductboard was heated
14 to between two hundred degrees Farenheit and four
15 hundred degrees Farenheit to dry the adhesive; is
16 that correct?

17 A. Yes, sir.

18 Q. What is the purpose of drying the
19 adhesive?

20 A. As we discussed earlier, it's blended as a
21 mix of liquid or semi liquid materials with about
22 a 60 percent solid content. So the drying
23 process is to remove water and presumably light
24 solvent like, like toluene which we discussed,

1 and allow the material to solidify and set up,
2 again, the two materials itself holding the
3 fiberglass and the board.

4 Q. When the plasticizer is utilized is it in
5 its dry state or doesn't it contain at this
6 particular point the toluene and other solvents?

7 MR. GOUTMAN: I didn't understand
8 the question. What is utilized?

9 MR. NEAL: When the actual end
10 adhesive.

11 MS. HERSCHEL: You said
12 plasticizer.

13 BY MR. NEAL:

14 Q. When it's used as plasticizer.

15 MR. GOUTMAN: PCBs.

16 BY MR. NEAL:

17 Q. When the PCBs are used as a plasticizer in
18 the adhesive, is the adhesive, before it's
19 applied, in a solid state, a dry state? What
20 kind of state is it in?

21 A. I would assume it's somewhat fluid which
22 is why it's mixed with these other materials to
23 allow it to be spread and then it's dried in
24 these ovens at these temperatures for the time

1 rate we talked about to remove water, to remove
2 solvents.

3 Q. Have you seen the plasticizer utilized in
4 ductboard?

5 A. Have I seen it applied to make this
6 happen?

7 Q. Yes.

8 A. No, I have not.

9 Q. Now, the next bullet point that you have
10 is, the evidence in this case is that the
11 rectangular ductboard had neither delaminated nor
12 suffered any significant damage in the more than
13 30 years that it was in the T&S Building.

14 What evidence are you referring
15 to?

16 A. First, my own inspection. Second,
17 testimony from Mr. Buhay about the condition of
18 the ductboard or duct work, in general, as well
19 as the report and testimony of Mr. Kominsky which
20 showed, among other things, photographic evidence
21 of the intact ductboard itself.

22 Q. How many photos are you talking about of
23 Mr. Kominsky's?

24 A. How many photos?

1 Q. You said there were photographs of the
2 ductboard?

3 A. Yes, sir. They were in his expert report,
4 if I recall.

5 Q. So what's contained in his expert report
6 are the photos that you looked at and indicated
7 that that is part of the evidence that this -- it
8 had part of the laminate; is that correct?

9 A. Yes, sir.

10 Q. And Mr. Buhay's testimony was the duct
11 work was in pretty good condition?

12 MS. HERSCHEL: Object to the form.
13 He didn't say it was in pretty good
14 condition.

15 THE WITNESS: I don't recall his
16 exact words, but he said it was ^{good.} ~~better~~.

17 MS. HERSCHEL: He said in good
18 condition.

19 BY MR. NEAL:

20 Q. And on his first visit is where you went
21 on up, above the ceiling and looked at the duct
22 work; is that correct?

23 A. Yeah. I found no reason to dispute any
24 testimony of the photographs I had seen.

1 Q. Now, the next bullet point you talked
2 about the PCBs in the adhesive were bound into
3 the matrix of the glue and except under extreme
4 changes of temperature, such as those created by
5 a fire, would have remained there.

6 MS. HERSCHEL: Objection to the
7 form of the question.

8 THE WITNESS: What I'm referring
9 to when I say that is, the temperature it
10 would be exposed to in a fire situation.

11 BY MR. NEAL:

12 Q. So it would have to be a situation, such
13 as a fire which, in your opinion, would release
14 the PCBs?

15 A. Yes, sir.

16 Q. And you got the second to the last bullet
17 point you say that you don't believe there are
18 any measureable levels of PCBs released from the
19 glue matrix during the installation; is that
20 correct?

21 A. Yes.

22 Q. Is that based -- I got a little lost in
23 the earlier part of your testimony. You did not
24 conduct any testing in that regard, is that

1 correct, of any kind of levels of PCBs under the
2 conditions of heat ceiling? You, personally.

3 A. You're referring to testing during the
4 application of it?

5 Q. To see if there were any measurable
6 releases of PCBs?

7 A. No. I did not do that type of testing.

8 Q. When you say measurable level, what do you
9 mean measurable?

10 A. Levels that could be measured by the types
11 of precise analytical and testing devices that
12 are available.

13 Q. So you say it would be below the level of
14 detection?

15 A. Well below, yes.

16 Q. Do you believe there is some level that is
17 released? And I'm talking about release of PCBs?

18 A. No. I have no reason to believe there's
19 any PCBs released from there.

20 Q. Do you have any other evidence or basis
21 for making that statement, that you do not
22 believe there are any measurable levels of PCBs?

23 MS. HERSCHEL: Other than what's
24 in his report?

1 BY MR. NEAL:

2 Q. Other than what's in your report?

3 A. His report? My report?

4 Q. Your report?

5 A. Referring to this report.

6 Q. Referring to your supplemental report.

7 That's all I'm talking about.

8 A. No. I think the bullets here pretty much
9 sum up why that's the case.

10 Q. And your last bullet point about -- even
11 if for the sake of argument 250 degree
12 temperature released a few molecules of PCB
13 containing glue to which Mr. Kominsky testified
14 released a few molecules of PCBss, these PCBs
15 would cool and condense immediately onto the
16 fiberglass insulation?

17 What do you mean by a few
18 molecules?

19 A. Between one and three. I think is my
20 testimony.

21 Q. So is it's between one and three as it is
22 one and three seconds. It's one and three
23 molecules. That's about a molecule a second?

24 A. I'm referring to an extremely small

1 number.

2 Q. And the basis for that statement is, what?

3 MR. GOUTMAN: What statement?

4 MR. NEAL: The last bullet point.

5 The statement that only a few molecules of
6 PCBs would be released and would cool and
7 condense.

8 BY MR. NEAL:

9 Q. I think you talked about cool and condense
10 being basic science, I understand that.

11 MR. GOUTMAN: He says assuming a
12 few molecules.

13 MR. NEAL: I'm not arguing with
14 that.

15 BY MR. NEAL:

16 Q. In the last bullet point you state
17 assuming, for the sake of argument, there would
18 be a few molecules and that they would cool and
19 condense immediately; is that correct?

20 A. Yes.

21 Q. And I'm asking you is, what is the basis
22 for the basis that even assume a molecules would
23 be released?

24 MS. HERSCHEL: I truly don't

1 understand that question. Would you
2 rephrase it?

3 BY MR. NEAL:

4 Q. I'm trying to understand what you mean
5 when you say, let's talk for the sake of argument
6 that 250 degree temperature releases some PCBs?
7 You say, in your opinion, there would be only a
8 few molecules.

9 MR. GOUTMAN: He's saying he's
10 assuming they would release a few
11 molecules.

12 BY MR. NEAL:

13 Q. What do you basis it on?

14 MR. GOUTMAN: It's an assumption.

15 BY MR. NEAL:

16 Q. You're assuming that it's a few molecules
17 as opposed to a lot of molecules as opposed to 50
18 molecules? I'm trying to get at why you say only
19 a few molecules. You assume that only a few
20 molecules. Why would you not assume that only
21 ten or 15 molecules could you also would be
22 released?

23 A. Because there no evidence that there were
24 any molecules release. That's my opinion.

1 Q. When you talk about condense, you mean
2 changing from a vapor state to a liquid state?

3 A. Yeah, or in this case a solid, sticky
4 resin.

5 MR. NEAL: I have no further
6 questions.

7 * * *

8 EXAMINATION

9 * * *

10 BY MR. MC CLAIN:

11 Q. You mentioned that the adhesive dries or
12 the document talks about the adhesive drying? Do
13 you remember that document?

14 A. Yes, sir.

15 Q. When the adhesive dries, are none of the
16 PCBs vaporized in the glue? Is that your
17 testimony?

18 A. Yes. That's correct.

19 MR. MC CLAIN: Okay.

20 MR. GOUTMAN: For the record, I
21 think when we were going back and forth on
22 an objection, I said something to the
23 effect that the ductboard never
24 experienced temperature to three hundred

1 and foujr hundred degrees. Of course, I
2 meant under normal operating conditions.
3 And we all know during the ductboard what
4 occurred was a higher number -- higher
5 temperature during the fire. I just want
6 to clarify that because I want the record
7 to be complete.

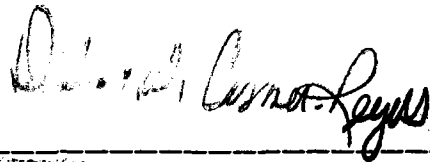
8 * * *

9 (Whereupon the deposition was
10 concluded at 1:45 p.m.)

11 * * *

C E R T I F I C A T E

I hereby certify that the witness
was duly sworn by me and that the
deposition is a true record of the
testimony given by the witness.



DEBORAH L. CASMER-REYERS

Commissioner of Deeds

Commonwealth of Pennsylvania

My Commission expires

October 2, 2003

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ERRATA SHEET

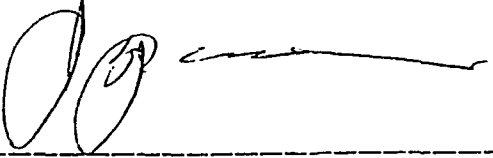
PAGE	LINE	CHANGE
121	6-13	They answer, not Mr McClain
		Proctor / Deplin misspelled
		throughout
114	16	should be "point of the test"
34	23-24	Attribute answer to
35	1	
		WOODYARD
135	2-3	Attribute to McClain
119	12	change "cetera in" to
		"settling on"
128	9	delete "number"
25	10	"particular" should be
		"EPA ten"
30	13	"personal" should be
40	3	"commercial"
46	3	"ceiling" should be
52	40	"Sealing"
52	10	"Seal" should be "seal"
80	22	"resistant" should be
		resistance
81	22	"
82	13	"
91	11	"access" should be "axis"
129	13	"installation" should be "insulation"

ESQUIRE DEPOSITION SERVICES

155 16 "better" should be "good"

ACKNOWLEDGMENT OF DEPONENT

I, John Woodyard do hereby
certify that I have read the foregoing pages,
_____ and that the same is a correct
transcription of the answers given by me to the
questions therein propounded, except for the
corrections or changes in form or substance, if
any, noted in the attached Errata Sheet.



DATE: 1/21/00

Subscribed and sworn to before me this

_____ day of _____, 199__.

My commission expires: _____

Notary Public