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San Francisco, CA 94105
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June 3, 1995

Robert M. James
c/o LeBoeuf, Lamb, Greene & MacRae
601 Grant Street
Pittsburgh, Pennsylvania 15219-1819

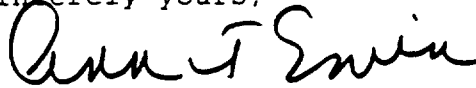
Attn: Jeffrey Reed, Esq.

In Re: Rotolo v Abex

Dear Mr. James:

Your deposition taken in the above matter has been transcribed. This deposition will be available at our office for reading and signing by you for a period of thirty-five (35) days, after which time the original will be sealed and sent to the office which noticed the deposition, in accordance with Section 2025(s)(1) of the California Code of Civil Procedure.

Sincerely yours,



Tooker & Antz

cc: All Counsel

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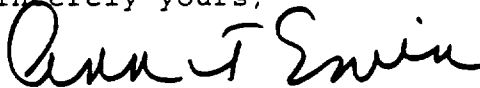
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cc: All Counsel

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 FOR THE COUNTY OF SAN FRANCISCO

3 ---o0o---

4
5 CERTIFIED COPY

6 SAM ROTOLO,

7 Plaintiff,

8 V.

No. 958038

9 ABEX CORP., et al.,

10 Defendants.

11 -----/

12
13 DEPOSITION OF

14 ROBERT M. JAMES

15 * THURSDAY, JUNE 8, 1995

16
17
18
19
20
21 ANN T. ERWIN, CSR 3190

22
23 TOOKER & ANTZ
24 Certified Shorthand Reporters
25 131 Steuart Street, Suite 201
San Francisco, CA 94105
(415) 396-0650

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I N D E X

EXAMINATION BY MR. WAGNER 4

---o0o---

E X H I B I T S

A Notice of Taking Deposition and 11
Request for Production of Documents

B Re-Notice of Deposition and 11
Request for Production of Documents

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D D-1 to D-12 Miscellaneous 70
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A P P E A R A N C E S

BRAYTON, GISVOLD & HARLEY, 999 Grant Avenue,
Novato, California 94948, represented by ERIC R. WAGNER,
Attorney at Law, appeared as counsel on behalf of
plaintiff.

LeBOEUF, LAMB, GREENE & MacRAE, 601 Grant Street,
Pittsburgh, Pennsylvania 15219-1819, represented by
JEFFREY REED, Attorney at Law, appeared as counsel on
behalf of Aluminum Company of America.

JACKSON & WALLACE, One Maritime Plaza, 32nd floor,
San Francisco, California 94111, represented by JOEL H.
FENER, Attorney at Law, appeared as counsel on behalf of
Plant Insulation and M. Slayen & Associates.

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1 BE IT REMEMBERED that on Thursday, June 8, 1995
2 commencing at 10:00 at the offices of Tooker & Antz, 131
3 Steuart Street, San Francisco, California, before me, ANN
4 T. ERWIN, a Certified Shorthand Reporter, personally
5 appeared

6 ROBERT M. JAMES,
7 a witness, who having been first duly sworn by me was
8 examined and testified as follows.

9
10 ---o0o---

11
12 EXAMINATION BY MR. WAGNER

13 Q. Sir, could you state your full name for the
14 record, please.

15 A. Robert M. James.

16 Q. And your middle name is?

17 A. Morrison.

18 Q. Have you had a deposition taken before?

19 A. Yes.

20 Q. On how many occasions?

21 A. I have had two previous depositions.

22 Q. When was the last one before today?

23 A. It would have been a year ago last, around
24 Easter, the week of Easter. Not this last Easter but
25 prior to that.

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1 Q. Easter of '94?

2 A. Yes.

3 Q. In what location was that deposition?

4 A. New Haven, Connecticut.

5 Q. Can you recall what the issue was at the time
6 of your deposition?

7 A. Excuse me. I don't believe it was New Haven.
8 It was somewhere in Connecticut. That's where Yale is.
9 I'm not sure where in Connecticut it is.

10 Q. Just generally speaking can you recall the
11 substance of your testimony?

12 A. Yes, it was some regulatory matter with MSHA,
13 Mine Safety and Health Administration, concerning one of
14 our facilities in Point Comfort, Texas. Primary thrust
15 dealt with mercury exposures and toxicity.

16 Q. Can you recall any discussion of aluminum
17 exposure or toxicity at the time of that deposition?

18 A. Not directly, but indirectly.

19 Q. What do you mean by that?

20 A. There was discussions around the scope of
21 Alcoa's industrial hygiene program. So there would be an
22 indirect inference around aluminum exposures.

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23 Plus we did measurements of different jobs and that
24 data was used to try to show the magnitude of the hygiene
25 exposures at the plant. So it's kind of a marker for what

1 kind of hygiene practices were ongoing.

2 Q. Was that a one-day session?

3 A. There was several of us deposed. I can't
4 recall how long I actually was deposed. But the
5 deposition lasted more than one day. I can't recall how
6 long I actually testified.

7 Q. Were there other industrial hygienists on
8 behalf of Alcoa that were deposed?

9 A. No.

10 Q. Can you recall the name of any of the parties
11 to that lawsuit?

12 A. Well, we were -- it was the Mine Safety and
13 Health Administration. It was against the government,
14 government agency.

15 Q. Who was making the claim?

16 MR. REED: Objection, we don't know that a claim
17 was made.

18 MR. WAGNER: Q. Do you know of any type of a claim
19 was made in that matter by a party or an individual?

20 A. I don't believe there was a claim.

21 Q. Would you have a copy of that deposition
22 transcript?

23 A. With me?

24 Q. Would you have ever been provided a copy of
25 the deposition transcript?

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1 A. As I recall I was asked to look it over
2 subsequent to the deposition.

3 Q. Did you retain a copy?

4 A. I don't recall.

5 Q. Would you know where one would be located?

6 A. Well, I presume you could find one in the,
7 through MSHA.

8 Q. But you wouldn't know if you have one in your
9 possession?

10 A. I don't recall.

11 Q. Before that when was it that you were last
12 deposed?

13 A. I can't recall the exact time frame. It was
14 several years prior to that. The year escapes me. It
15 would be conjecture as to the exact time.

16 Q. Within the decade of the '90s would it be?

17 A. Could be '90s or late '80s. I'm not sure.

18 Q. Can you recall where that occurred?

19 A. Yes.

20 Q. Where was?

21 A. That was in Pittsburgh.

22 Q. Can you recall the name of any of the parties
23 involved in that matter?

24 A. No.

25 Q. Was Alcoa a defendant in that case?

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- 1 A. Yes.

2 Q. Generally speaking, can you recall what the
3 issue was at the time of your deposition?

4 A. The issue had to deal with a property, I
5 believe, that was located in Edgewater, New Jersey that
6 Alcoa had owned at some previous time.

7 Q. Again, just generally can you recall the
8 substance of your testimony?

9 A. Had to deal with my knowledge and awareness
10 of PCB exposures that could have occurred in that
11 facility.

12 Q. Can you recall any testimony concerning
13 aluminum or aluminum oxide exposures at the time of that
14 deposition?

15 A. Not specifically related to aluminum.

16 Q. Would there have been to your recollection
17 any testimony generally applicable to aluminum or aluminum
18 oxide exposures or hazards at the time of that deposition?

19 A. Yes. Well, it was kind of, yes, in the
20 indirect context that they were kind of reviewing the
21 state of Alcoa's industrial hygiene programs, how we
22 managed issues and policies were issued, how did we follow
23 up. So in an indirect context it dealt with kind of in a
24 broader way industrial hygiene issues and toxicological
25 issues.

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1 Q. Do you know who was making a claim in that
2 case?

3 A. I do not recall.

4 Q. Was that an individual?

5 A. No, I don't believe so. I think it dealt
6 with a property, a real estate transaction, potential
7 liabilities around, you know, who, who was accountable for
8 environmental or chemical issues.

9 Q. Would you have a copy of that deposition
10 transcript?

11 A. I can't recall.

12 Q. Can you recall any of the attorneys involved
13 in that matter?

14 A. I believe there was attorneys representing
15 Citicorp. I can't recall offhand the names of the other
16 attorneys that were involved. Of course, I knew our
17 attorneys. Alcoa's attorneys were there.

18 Q. Do you know if that case had been filed in
19 New Jersey?

20 A. I don't know the details.

21 Q. And these are the only two times you have
22 been deposed prior to today. Is that true?

23 A. Yes, sir.

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24 Q. Have you ever testified in a court of law?

25 A. Well, on a personal level I was involved in

1 an arbitration case over a real estate transaction.

2 Q. Had nothing to do with your work with
3 Alcoa --

4 A. No.

5 Q. -- or exposures of hazards?

6 A. Correct.

7 Q. Let's go ahead and run through the ground
8 rules and background that goes with the deposition. You
9 have done this on two prior occasions, but just so we are
10 both on the same page.

11 I will ask you to be sure to speak audibly in
12 responding to a question. If you shake your head or nod
13 your head that is problematic for the reporter.

14 It's also important that we not speak at the same
15 time. If I'm asking a question, please allow me to finish
16 it before you start your answer. Of course, I'll do the
17 same with you. You need to finish your answer before I
18 start my next question. If I ever cut you off, let me
19 know that and I'll stop.

20 It is also important that you understand each of
21 the questions I ask. If you answer a question that I've
22 asked you, I will assume you understood it. Is that fair
23 enough?

24 A. Yes.

25 Q. You also are aware that you are under oath

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1 and are obligated to testify truthfully. Your testimony
2 carries the same force and effect as testimony in a court
3 of law.

4 A. Yes.

5 Q. At the conclusion there will be a
6 transcription of the testimony given today which will
7 include all of the questions and all of the answers. You
8 will have an opportunity to make changes to your testimony
9 at that time. If you do that, however, you need to be
10 aware that that is subject to comment by any of the
11 attorneys involved in this case. Do you understand that?

12 A. Yes.

13 Q. Is there any reason why we can't proceed with
14 your deposition here today?

15 A. No.

16 Q. We have an informal setting in the sense if
17 you want to take a break any time, let us know, get a cup
18 of coffee or just for any reason at all. Okay?

19 A. Yes.

20 (Exhibit A was marked)

21 MR. WAGNER: Just as a couple of housekeeping
22 matters, before the deposition began we marked as exhibit
23 A the notice of deposition captioned in the Sam Rotolo
24 case.

25 (Exhibit B was marked)

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1 Exhibit B is the renote of the taking of
2 deposition in the Sam Rotolo case, noticing the deposition
3 for today's date and time.

4 (Exhibit C was marked)

5 Exhibit C is somewhat unrelated to the anticipated
6 substance of your deposition testimony. Your attorney
7 produced this to me prior to the deposition and it refers
8 back to the deposition of Ray Sauer previously given on
9 behalf of Alcoa in the Sam Rotolo case. That deposition
10 occurred on April 27, 1995.

11 And an issue arose at that time concerning one or
12 more of the exhibits that were produced. There were code
13 references to the entity FMC Corp. Exhibit C appears to
14 be the code definitions related to the customer numbers of
15 FMC Corp.

16 Is that a fair representation?

17 MR. REED: That is correct. There are actually two
18 customer numbers on the page in the upper left-hand
19 corner. The top number is the number, the top number on
20 these pages appears in various places on exhibit G of the
21 Ray Sauer deposition. That number relates to the address
22 that is set forth immediately below the two numbers.
23 Below the top number is the same number on all of these
24 pages and that number ends in the digits 116 and it is a
25 general code number for FMC Corporation as a whole.

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1 MR. WAGNER: Thank you. Also appears those would
2 be the same references that appear on exhibit F as well.

3 MR. REED: That's correct.

4 MR. WAGNER: Also as a housekeeping matter, we
5 discussed before your deposition a couple of issues that
6 arose at the time of Mr. Sauer's deposition. And we had
7 met and conferred concerning my request referring to
8 exhibit G from Ray Sauer's deposition for the remaining
9 years '74 through '92 summarizing sales by Alcoa to FMC
10 Corp. in a summary form, not in the detailed printout form
11 of exhibit G. That was one request that I discussed.

12 Another request was for any competitor listings
13 generated by the sales departments of Alcoa concerning
14 estimated sales and marketing projections concerning
15 competitors of Alcoa that would have been in the market of
16 selling aluminum or aluminum oxide products to FMC Corp.
17 I believe you indicated you would take a look to see if
18 those documents can be located.

19 MR. REED: Yes, sir, I neglected to do that after
20 the last deposition and you have my apologies.

21 MR. WAGNER: The first issue we met and conferred
22 on, one is the asbestos study. I believe that discussion
23 occurred at page 70 of Mr. Sauer's deposition. He
24 indicated there was at one point in time a survey that had
25 been conducted by Alcoa that indicated it had not

C60777 0017

1 manufactured asbestos-containing products. I think you
2 indicated you had conducted a search for such a document
3 and were unable to locate it.

4 MR. REED: So far that is correct. As ideas occur
5 and we think of new places to look, we will continue to
6 look. But it's been a long time since that study was
7 completed.

8 MR. WAGNER: All right, sir. I apologize for all
9 that, but we will now move on to your deposition.

10 Q. Can you tell me when you graduated from high
11 school.

12 A. 1966.

13 Q. Do you have any formal education beyond high
14 school?

15 A. I have an under -- well, B.S. degree from
16 Vanderbilt University in biology. Graduated in 1970.

17 Also have a graduate degree in toxicology which I
18 completed -- actually, I was in the working world, but I
19 completed in, I believe it was October of 1978.

20 Q. Is it true that you attended Vanderbilt
21 University continuously from 1966 to 1970?

22 A. Yes.

23 Q. And you obtained a B.S. in biology from
24 Vanderbilt in 1970?

25 A. Yes.

C60777 0018

1 Q. Your graduate degree in toxicology, you
2 obtained that in October of 1978?
3 A. Yes.
4 Q. From what --
5 A. University of Kansas --
6 Q. -- institution?
7 A. -- Medical Center.
8 Q. What was the name or designation of that
9 degree that you obtained?
10 A. I can't recall. Probably would have been an
11 M.S. degree in pharmacology. But in those days it was
12 really synonymous with toxicology.
13 Q. That was not a Ph.D.
14 A. No, it was a master's degree.
15 Q. When was it that you attended University of
16 Kansas?
17 A. It was in -- I'm not sure of the exact start
18 date. Probably a year and a half prior to graduating in
19 1978.
20 Q. Did you attend that schooling full time?
21 A. No.
22 Q. During the period of time --
23 A. I was working.
24 Q. Is it fair to say, then, from approximately
25 early to mid 1977 through October of 1978 you attended on

C60777 0019

1 part-time basis the University of Kansas in furtherance of
2 your M.S. degree?

3 A. Yes.

4 Q. Now, aside from the B.S. and the M.S. degrees
5 that you have identified for us, do you have any other
6 formal education, whether you obtained a degree or not?

7 A. I went to medical school at Vanderbilt for
8 two years from 1970, I think through '72 but had no
9 interest in continuing so I just discontinued that.

10 Q. Did you complete two full years of the M.D.
11 program at Vanderbilt?

12 A. Yes. I think I was actually in my third and
13 that's when I decided I wasn't going to pursue it.

14 Q. Can you recall what the projected duration of
15 that M.D. program was at Vanderbilt? How much longer did
16 you have to do?

17 A. It would have been another probably two
18 years.

19 Q. Did you complete any portion of the third
20 year?

21 A. No.

22 Q. Was there any study of toxicology or
23 toxicological effects that you can recall during the
24 course of study at Vanderbilt?

25 A. Well, you take your basic sciences in

C60777 0020

1 biochemistry, anatomy, physiology, pathology. So, it's
2 kind of indirectly related to toxicology.

3 Q. Can you recall any course of study that had
4 as a topic the toxicological effects of aluminum or
5 aluminum oxide at the time you were at Vanderbilt studying
6 for your B.S. in biology?

7 A. I don't recall.

8 Q. Generally speaking can you describe the
9 course of study in furtherance of your toxicology degree
10 obtained from University of Kansas.

11 A. Yes. It was courses in pharmacology. But
12 then a lot of courses in toxicology related issues,
13 industrial toxicology, courses in neurotoxicity. My
14 graduate thesis was a study of pesticide distribution.
15 I actually looked at the carbamate insecticides.

16 Q. During this study at University of Kansas can
17 you recall any study involving the toxicological effects
18 of aluminum or aluminum oxide?

19 A. Yes.

20 Q. Can you describe for us what you can recall
21 in that regard.

22 A. It would have been just -- we took sections
23 of studies that dealt with metals, the toxicology of **C60777 0021**
24 metals and aluminum. Aluminum I'm sure would have been
25 reviewed, not probably in depth but as one of the metals

1 we looked at.

2 Q. Can you recall any of the materials that you
3 would have studied that would have addressed that issue?

4 A. Oh, the key reference that would come to mind
5 would be Cassarett and Doull's textbook on toxicology.
6 That was kind of a basic textbook we used.

7 Q. The title was what?

8 A. I don't recall the title. I do remember the
9 authors. It was Cassarett and Doull.

10 Q. Do you know when that was published?

11 A. No.

12 MR. REED: Excuse me a moment. Do you know how to
13 spell the authors?

14 THE WITNESS: C-a-s-s-a-r-e-t-t. That may not be
15 accurate. I know Doull is D-o-u-l-l.

16 MR. WAGNER: Q. Do you know if that would have
17 been a publication that came out sometime in the decade of
18 the '70s?

19 A. I can't recall with accuracy.

20 Q. Would you be able to recall any other course
21 materials that would have addressed the toxicological
22 effects of aluminum or aluminum oxide? And I'm still
23 focusing on the period of time at the University of
24 Kansas.

25 A. I don't recall any other specific studies of

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1 it during when I was in grad school. I just recall
2 references to metal toxicity in that textbook.

3 Q. Can you recall any study of metal toxicology
4 at the time that you were participating in the M.D.
5 program at Vanderbilt?

6 A. No, not related to aluminum.

7 Q. Aside from the M.D. program, the B.S. program
8 and the M.S. program that you identified for us, have you
9 participated in any other formal education beyond high
10 school?

11 A. When I decided I wasn't going to continue in
12 the med school I looked for some time to go into the Ph.D.
13 program in biology. I started it. And in about a month
14 or so I said this is of no interest to me. Because I had
15 been in the med school so they could automatically
16 transfer me over there. But I had no interest in it. I
17 was there for probably a month and said no.

18 Q. When was that?

19 A. That would have been probably -- I don't
20 recall the exact time frame.

21 Q. About 1972?

22 A. Shortly thereafter. Somewhere in there. I'm
23 not recalling the exact time frame.

24 Q. That would have been at the university of
25 Vanderbilt?

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1 A. Yes, Vanderbilt University.

2 Q. Aside from the courses of study that you have
3 identified for us on the record here today, can you
4 identify any other formal education that you have obtained
5 beyond high school?

6 A. How do you define education?

7 MR. REED: Or formal?

8 MR. WAGNER: Q. Formal education. I'm just
9 focusing on institutes of higher education that you have
10 attended.

11 A. I have board certifications but it's not
12 formal education. I didn't go to school to get them.

13 Q. What licenses or certifications do you
14 possess?

15 A. I'm board certified in industrial hygiene and
16 I'm also board certified in toxicology.

17 Q. What board certification do you have in
18 industrial hygiene?

19 A. It's what they call the comprehensive
20 practice.

21 Q. When did you first obtain that?

22 A. I can't recall the exact date. It's in,
23 probably my best guess would be around 1980, somewhere in
24 that time frame.

25 Q. Have you held that certification continuously

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1 since that time?

2 A. Yes.

3 Q. What is the name of the certifying agency
4 that certified you in industrial hygiene?

5 A. That's the American Board of Industrial
6 Hygiene.

7 Q. Was there an educational requirement for that
8 board certification?

9 A. Yes. You had to meet certain minimum
10 undergraduate and/or graduate curriculum in order to sit
11 for the exam. Plus you had to have, oh, a minimum year's
12 experience in the field practicing industrial hygiene.

13 Q. And you sat for the exam in 1980?

14 A. I don't recall the exact date.

15 Q. During what period of time have you been
16 board certified in toxicology?

17 A. I don't recall the exact date. It probably
18 was several years subsequent to that I took the boards in
19 toxicology. But I don't recall the exact date. I want to
20 say probably somewhere between 1980 to '83, somewhere in
21 there I took it.

22 Q. What board issued that certification?

23 A. That was the American Board of Industrial
24 Hygiene.

25 Q. Can you recall the educational requirements

C60777 0025

1 for the board certification in toxicology?

2 A. I do not recall.

3 Q. And you would have sat for that exam in the
4 early 1980s. Is that what you indicated?

5 A. That's my best recollection.

6 Q. Do you have any other licenses or
7 certifications?

8 A. No. I'm a member of Phi Beta Kappa, if that
9 is relevant.

10 Q. Do you have any other professional
11 organization memberships or affiliations?

12 A. Yes.

13 Q. What are those?

14 A. Well, I'm a member of the American Industrial
15 Hygiene Association. I was the past of the AIHA
16 toxicology committee. Still serve on that committee.

17 Q. During what period of time have you been a
18 member of an American Industrial Hygiene Association?

19 A. Probably started with my first job in hygiene
20 in '74.

21 Q. And you have been continuously since 1974 a
22 member of the American Industrial Hygiene Association?

23 A. Yes.

C60777 0026

24 Q. And the committee within that association,
25 the IAHA, is a committee for which you were the president.

1 Is that true?

2 MR. REED: I think it's the AIHA. Not the IAHA.

3 MR. WAGNER: Q. When were you president of that
4 committee?

5 A. I do not recall the exact dates. It goes
6 back probably five, seven years ago. Somewhere in that
7 time frame.

8 Q. When was it when you were president, when was
9 that?

10 A. I believe it was two-year -- excuse me -- one
11 year. I can't recall. Either one year or two years.

12 Q. Have you had any other professional trade or
13 organization memberships?

14 A. I'm a member of the local section of AIHA,
15 Pittsburgh section of the AIHA, which is kind of the
16 chapter affiliate.

17 I'm the past president of the Industrial Hygiene
18 Council which was in Pittsburgh.

19 I have served on other committees, ACGIH continuing
20 education. These come to mind.

21 Q. Can you recall any other committees you have
22 served on?

23 A. Well, we have committees through our
24 associations, like the Aluminum Association. But they are
25 more internal as opposed to, you know, out, external

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1 professional groups.

2 Q. You are a member of the Aluminum Association?

3 A. Well, yes, Alcoa is.

4 Q. How long have you been a member of that
5 association?

6 MR. REED: Objection, misstates the witness's
7 testimony. Alcoa is a member of the association.

8 MR. WAGNER: Q. You don't individually have a
9 membership?

10 A. No.

11 Q. Who are the members of the Aluminum
12 Association?

13 A. I don't know the full extent of that.

14 Q. Would that be all aluminum manufacturers?

15 A. I don't know to answer that.

16 Q. Do you know how long Alcoa has been a member
17 of the Aluminum Association?

18 A. No.

19 Q. Have you personally been a member of any
20 other professional organizations or groups aside from
21 those you have identified?

22 A. I can't recall any others offhand other than
23 I've given you.

24 Q. Aside from those that you have identified for
25 us do you have any other certifications or licenses?

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1 A. I can't recall any other.

2 Q. Is there a continuing education requirement
3 for your industrial hygiene board certification?

4 A. Yes.

5 Q. To your recollection what is that
6 requirement?

7 A. Well, you must accrue a certain number of
8 what they call points per year. And on a six-year cycle
9 you have to accrue enough points to re-establish your
10 certification. So if you are not in active practice and
11 you don't attend the right number of training seminars,
12 then you could lose your certifications.

13 Q. Is it your testimony that you have complied
14 with that requirement --

15 A. Yes.

16 Q. -- continuously from '80 to the present?

17 A. Yes.

18 Q. And similarly, is there a requirement for
19 continuing education with regard to your toxicology board
20 certification?

21 A. Yes.

22 Q. Have you complied with that requirement?

23 A. Yes.

24 Q. Were you employed during the period of time
25 that you were going to school at Vanderbilt for your B.S.

C60777 0029

. 1 in biology?

2 A. No.

3 Q. Upon graduation in 1970 were you employed?

4 A. No. Well, I worked as an intern -- or what
5 do you call it. I had like a school related job working
6 in, doing surgery on dogs. I don't recall the exact title
7 of the job. It was like a grant through the school.

8 Q. What was your next job after that?

9 A. Well, my first professional job was, started
10 with OSHA in 19, let's see February of 1974. And I was an
11 industrial hygienist.

12 Q. That was your title at that time?

13 A. Probably would have been compliance officer.
14 I don't know what the exact title was.

15 Q. You were at this time a board certified
16 industrial hygienist, however?

17 A. No.

18 Q. What duties did you have with OSHA as a
19 compliance officer?

20 A. I conducted inspections of many different
21 industries. I had supervision by more senior resources,
22 but I conducted compliance inspections.

23 Q. What industries can you recall having
24 responsibility for when you were a compliance officer with
25 OSHA?

C60777 0030

. 1 A. Oh, multiple industries. Refineries, steel
2 mills, many different types.

3 Q. And focusing on steel mills, for example, as
4 a compliance officer what duties would you have?

5 A. Oh, we would go in and do inspections, either
6 employee complaints or general inspections. We would
7 quite often be taking air samples, measuring various
8 physical and/or chemical agents.

9 Q. How long was it that you acted as a
10 compliance officer for OSHA?

11 A. I left that job, I was probably there about
12 14 months.

13 Q. What was the location of your employment
14 during that period of time?

15 A. Kansas City, Missouri.

16 Q. And in what geographical area can you recall
17 conducting inspections?

18 A. Well, each office had a region. I can't
19 recall the extent of my territory. It was primarily
20 Kansas. Primarily Kansas. There may have been other
21 contiguous states we looked at. Kansas, Missouri, I
22 recall going into those geographic areas.

23 Q. Can you recall inspections at any aluminum
24 manufacturing sites?

25 A. I can't recall. .

C60777 0031

1 Q. During that period of time when you were a
2 compliance officer with OSHA can you recall any
3 regulations in place with regard to aluminum manufacturing
4 sites?

5 A. Yes.

6 Q. Can you recall the name of those guidelines
7 or regulations?

8 A. Key ones would have been the OSHA TLVs, which
9 dealt with various chemical substances, would have been
10 germane, nuisance dust limits, et cetera.

11 Q. What are the TLVs?

12 A. Those are the threshold limit values.

13 A better acronym would be PELs, which would be the
14 permissible exposure limits.

15 Q. As a compliance officer with regard to your
16 inspections, part of your duty would be ensuring
17 compliance with the TLVs?

18 A. I wouldn't say ensuring compliance. It's
19 gauging companies, whether they are in compliance, not to
20 ensure they are there. It's a measurement of are they
21 doing compliance related activities or not.

22 Q. Were you a compliance officer throughout the
23 period of time that you worked at OSHA for those 14
24 months?

25 A. Yes.

C60777 0032

1 Q. Did you have any other duties from those that
2 you have identified for us?

3 A. Not that I can recall.

4 Q. Can you recall any training that you had at
5 OSHA during that period of time?

6 A. Yes.

7 Q. Can you describe generally speaking what
8 training you can recall.

9 A. I recall attending about a month-long course
10 in Chicago that dealt with a myriad of different OSHA
11 compliance issues.

12 Q. Was that in 1974?

13 A. To the best of my recollection.

14 Q. Do you recall any other training that you had
15 at OSHA?

16 A. No.

17 Q. What was your next job after you left OSHA?

18 A. I went to work for Farmland Industries in
19 Kansas City, Missouri.

20 Q. What was your title?

21 A. I was the industrial hygienist. I worked in
22 the safety department but had accountability for all
23 industrial hygiene for Farmland.

24 Q. What type of company was Farmland at this
25 time?

C60777 0033

1 A. Farmland was a diverse manufacturing company
2 that basically supported the agricultural business. They
3 did everything from making ammonium fertilizer, to
4 formulating pesticides, to producing ammonia, to running
5 grain elevators. It was a broad, diverse manufacturing
6 organization.

7 Q. Was there any involvement of Farmland at that
8 time to your knowledge in the manufacture of aluminum or
9 aluminum alloys?

10 A. We had some welding operations. But I can't
11 recalling what alloys were welded on.

12 Any type of industry will have some maintenance
13 welding involving aluminum --

14 MR. REED: Listen to the question. Did they
15 manufacture aluminum?

16 THE WITNESS: No, they did not manufacture
17 aluminum.

18 MR. WAGNER: Q. Did your responsibilities as an
19 industrial hygienist at Farmland involve in any way
20 industrial hygiene activities involving aluminum or
21 aluminum oxide or alloy products?

22 A. Not from a direct manufacturing context.

23 Q. Did you have any responsibility with regard
24 to those products as the industrial hygienist for
25 Farmland?

C60777 0034

1 A. The only connection that would come to mind
2 would be maintenance operations where people would weld,
3 where they might weld on or with aluminum.

4 Q. Can you recall any regulations or guidelines
5 in place at Farmland during that period of time with
6 regard to those activities?

7 MR. REED: Objection, whose regulations?

8 MR. WAGNER: Q. Any that you can recall in place.

9 A. I do not recall specific regulations that are
10 germane to aluminum when I was at Farmland.

11 Q. Is it accurate to say you began with Farmland
12 in about the middle of 1975?

13 A. To the best of my recollection.

14 Q. And you continued with Farmland for how long?

15 A. I went from Farmland to Alcoa in April of
16 1979.

17 Q. Throughout the period of time you worked for
18 Farmland what was the location of your employment?

19 A. Kansas City. North Kansas City, Missouri.

20 Q. Throughout that period of time, '75 to '79,
21 were you continuously employed as an industrial hygienist
22 for Farmland?

23 A. Yes.

24 Q. What was your job title when you first went
25 to work for Alcoa?

C60777 0035

1 A. Either staff industrial hygienist or staff
2 industrial hygienist and toxicologist. I do not recall
3 the exact title.

4 Q. Were you board certified in either industrial
5 hygiene or toxicology at the time you first went to work
6 for Alcoa?

7 A. No.

8 Q. What were your job duties when you first went
9 to work for Alcoa?

10 A. They were various. I was involved in field
11 service for industrial hygiene. I coordinated the FDA
12 compliance program. I was involved in writing MSDSs and
13 product labels. I was accountable for the urinary
14 chloride surveillance program. Those are the ones that I
15 recall.

16 Q. When you first went to work for Alcoa what
17 was the location of your employment?

18 A. Pittsburgh, Pennsylvania.

19 Q. Have you been continuously employed at that
20 same location since 1979?

21 A. Yes.

22 Q. What is the address of your employment there?

23 A. Aluminum Company of America, 1501 Alcoa
24 Building, Pittsburgh, PA 15219.

25 Q. What field service duties did you have at

1 Alcoa when you went to work as a staff industrial
2 hygienist?

3 A. Well, it was to go out in to the plants and
4 work with them on program development, industrial hygiene
5 compliance issues, establishing programs with a focus on
6 industrial hygiene.

7 Q. What type of plants can you recall visiting
8 at that time?

9 A. Very diverse group. Smelting operations,
10 alumina production, rolling mills, extrusion plants,
11 closure plants. I'm sure there's many more.

12 Q. Can you recall regulations or guidelines in
13 place concerning exposure or hazards relating to aluminum
14 exposure?

15 MR. REED: Again, regulations authored by whom?

16 MR. WAGNER: Q. Any regulations in place at the
17 time you were a field service staff industrial hygienist.

18 MR. REED: Objection, I don't know what a
19 regulation is. I don't know what you mean there. It's
20 vague and ambiguous.

21 MR. WAGNER: Q. Are you able to respond, sir?

22 MR. REED: Are you?

23 THE WITNESS: Well, when I came to work, obviously
24 I quickly became involved with understanding OSHA
25 compliance activities related to aluminum.

1 MR. WAGNER: Q. Had you been familiar with those
2 at the time you were employed with OSHA?

3 A. I can't recall.

4 Q. Aside from OSHA regulations or guidelines
5 that you can recall, do you recall any other regulations
6 or guidelines which pertained in any way to exposure
7 related to aluminum?

8 MR. REED: Object to the form. The last question
9 was, I believe that the last question, Rick, you stated
10 that it was regulations concerning the production of
11 aluminum. Now you have asked about the exposure of
12 aluminum.

13 MR. WAGNER: Q. Did the OSHA regulations pertain
14 to exposure or hazards related to aluminum that you can
15 recall?

16 A. Yes. But very indirectly.

17 Q. What do you mean by that?

18 A. Well, aluminum metal was considered a
19 nuisance particulate. Therefore, OSHA had no specific
20 limits on aluminum. So the regulatory activity that would
21 apply to aluminum was indirect through what we call a
22 nuisance dust standard.

23 Q. To your knowledge has that nuisance dust
24 standard ever changed since that time?

25 A. This is somewhat convoluted but I'll take you

1 through the discussion. It may be difficult to follow.

2 Aluminum has never been viewed by OSHA as not being
3 a nuisance dust. During the middle to late '80s there was
4 an activity that OSHA went through to try to incorporate
5 the ACGIH TLVs as their standard for exposure into the
6 OSHA standard, which the nuisance dust limit for aluminum
7 was 15. The ACGIH number for particulates was 10. There
8 was a period of kind of a flip-flop between whether the
9 nuisance limit was 15 or 10. There has been subsequent to
10 that extensive litigation where now we're really back,
11 from a regulatory compliance standard perspective, to
12 dealing with 15.

13 Q. Has the limit ever been 10 to your knowledge?

14 A. I don't believe that when the incorporation
15 of the ACGIH took place, I do not know legally since it
16 was a, in the nuisance category, whether it was
17 incorporated by OSHA as a defined limit for aluminum. It
18 would have fallen under the nuisance particulate. And I'm
19 not sure OSHA had regulatory jurisdiction to cite under
20 that.

21 Q. What is ACGIH?

22 A. American Conference of Governmental
23 Industrial Hygienists.

24 Q. When you say 10 or 15 as being the limit,
25 what increment are you referring to? What measurement?

1 10 what is this?

2 A. This is a measurement of the dust that would
3 be suspended in the air. The particulate suspended in the
4 air.

5 Q. What measurement are you referring to?

6 A. I'm not clear on the question.

7 Q. When you say 10, what do you mean by 10?

8 MR. REED: Is it 10 pounds, 10 tons, 10 ounces?

9 THE WITNESS: 10 milligrams --

10 MR. WAGNER: Q. Just so clear we're clear.

11 A. -- per cubic meter of air.

12 Q. What responsibility did you have with regard
13 to generating MSDS at the time you were a staff industrial
14 hygienist beginning in 1979?

15 A. Prior to any OSHA HazCom activity, it was not
16 uncommon for us to have MSDSs developed for certain
17 aluminum and/or Alcoa products.

18 Q. What was your participation with regard to
19 generating the MSDS?

20 A. I was responsible for, with input from
21 others, to coordinate the development of those sheets and
22 particularly as related to the content of the health
23 hazards section.

24 Q. Was the 15 exposure limit incorporated in the
25 MSDS to your recollection at that time?

1 A. I believe so.

2 Q. Can you ever recall participating in
3 generating a MSDS that had the 10 exposure limit
4 incorporated?

5 A. Yes.

6 Q. When did that occur?

7 A. I can't recall the exact date.

8 Q. What is the current exposure limit that is
9 incorporated in the MSDS?

10 A. We list probably two.

11 Q. Two as being the limit?

12 A. No, no, we list two different limits. We
13 will list, because of the court litigation around the OSHA
14 incorporating the ACGIH, we will list the 15. In addition
15 to that we will also list the ACGIH limit of 10.

16 Q. When was that policy adopted?

17 A. I can't recall the exact time frame. It
18 probably -- this is speculation, would probably be the mid
19 '80s. But I don't recall the exact.

20 Q. Do you have an opinion as to the appropriate
21 exposure limit?

22 MR. REED: Objection, this witness is not here as
23 an expert witness and I will not allow him to answer that
24 question.

25 MR. WAGNER: Q. What participation did you have

1 with regard to generating product labels as a staff
2 industrial hygienist beginning in 1979?

3 A. I was involved in creating labels for select
4 products at that time.

5 Q. Did you have any involvement with aluminum
6 product labels at that time?

7 A. I can't recall the exact time when I got
8 involved with aluminum labels but it could very well have
9 been in that time frame.

10 Q. What involvement can you recall with aluminum
11 labels?

12 A. Well, I have a clear memory when the OSHA
13 Hazard Communication standard came in place, which was in
14 the mid '80s, that we were then creating labels for all
15 different types of aluminum products.

16 Q. What was the OSHA Hazard Communication
17 standard adopted in the mid '80s? What were you referring
18 to there? Would you define that for us.

19 A. Well, OSHA passed a regulation that required
20 MSDSs and product labels for numerous products that were
21 listed in their OSHA PELs and/or other documents, ACGIH.

22 Q. Is it your recollection that before that time
23 aluminum was not required to have an MSDS or labeling
24 under OSHA requirements?

25 A. Yes.

1 Q. Do you have any understanding as to why
2 aluminum was added to that requirement by OSHA for an MSDS
3 and labeling?

4 MR. REED: Objection, I think we need to establish
5 whether aluminum itself was added to that particular list.

6 MR. WAGNER: Q. Was aluminum itself added to that
7 list?

8 A. As my memory serves me, they incorporated the
9 existing lists that were already out there which included
10 nuisance particulates as well as other compounds.

11 Q. So at this time was it just a reference to
12 nuisance particulates that was added for requirement of
13 MSDS and labeling?

14 A. Well, if the substance was subject to
15 coverage then you discussed the health effects. And in
16 those time frames we viewed aluminum as a nuisance
17 particulate.

18 Q. What was your next title with Alcoa after you
19 were staff industrial hygienist?

20 A. I was promoted to a senior staff position.

21 Q. When was that?

22 A. I don't recall the exact date.

23 Q. Would that have been in the decade of the
24 1980s?

25 A. Yes.

1 Q. Early '80s?

2 A. Probably within a year or two of coming on I
3 would have probably gone to that position. So it should
4 have been in the early '80s.

5 Q. What was your title at that time, senior
6 staff industrial hygienist?

7 A. Yes, and/or toxicologist. I don't recall the
8 specifics. Probably was senior staff industrial hygienist
9 and toxicologist.

10 Q. How long did you hold that title?

11 A. I don't recall the exact time frame.

12 Q. Would you be able to estimate whether that
13 was, for example, through the mid '80s?

14 A. My best recollection was a couple years and
15 then I was promoted to a manager's title.

16 Q. What was your title at that time?

17 A. I don't recall the exact title. It was
18 manager of -- I don't recall the exact nomenclature.

19 Q. What responsibilities did you have?

20 A. Similar to what I had had in the past but I
21 was picking up some supervisory responsibilities.

22 Q. What responsibilities did you have as senior
23 staff industrial hygienist?

24 A. Not terribly different than what I had before
25 except just the job was growing in scope. I now had, as I

1 recall, one or two people working with me to help me on
2 different elements of the program.

3 Q. What was your next title with Alcoa?

4 A. My best recollection is I was promoted to
5 manager of health and safety compliance. That occurred
6 probably, I'm saying, my best recollection is five, four
7 to five years back.

8 MR. REED: Four to five years ago or four to five
9 years after your previous promotion?

10 THE WITNESS: Cut it either way, you are going to
11 get to the same point.

12 MR. WAGNER: Q. About 1990?

13 A. Somewhere in that time frame I became manager
14 of health -- no, it was a little later. Be probably in
15 the '92 range. In the manager level prior to that I had
16 several promotions. I don't recall if my title really
17 changed but I was being promoted along pretty fairly well.

18 Q. You first had a manager's title in
19 approximately mid 1980s?

20 A. To the best of my recollection.

21 Q. Until 1992 what job responsibilities did you
22 have throughout those manager title jobs?

23 A. Well, my supervisory responsibility grew
24 steadily through that. I picked up reporting
25 relationships to most of the hygienists. So my

1 administrative or subordinate reporting relationships grew
2 through that time frame.

3 Q. Was there any other change in your job
4 responsibilities during that period of time up until 1992?

5 A. I was much more involved in management
6 decisions. I was on all different types of steering
7 teams. Just much more involvement in policy and
8 direction. It was kind of the growth they were giving me
9 and then having people below me, reporting associates do
10 more of the hands-on. But I was still very active in the
11 technical side of it.

12 Q. Then in 1992 when you became manager of
13 health and safety compliance, how did your job change?

14 A. Well, that's kind of what I was referring to.
15 I was more involved now in policy and direction.

16 Basically, I stayed pretty much in the hygiene
17 area, the tox area and the FDA management and the MSDS
18 labeling. All those activities I have pretty much been
19 fairly well contiguous with and had involvement with up
20 until very recently.

21 Q. What responsibilities did you have with
22 regard to FDA management?

23 A. I coordinated all program development
24 throughout the corporation on food and drug compliance.

25 Q. What specifically would that involve?

1 A. Well, Alcoa is very big in making materials
2 that go into the food industry as far as packaging. We
3 make beer and beverage can sheets. We make bottle caps.
4 We sell aluminum in products that get into certain
5 markets. It's a very regulated area. So there is a lot
6 of, lot of activity.

7 Q. Have your job title or duties changed at all
8 since 1992 when you became manager of health and safety
9 compliance?

10 A. Yes.

11 Q. What was the next change?

12 A. Probably about, probably about two years back
13 I was promoted to manager of industrial hygiene and
14 toxicology. And then I have been promoted since then.
15 Last month, or actually, this month.

16 Q. Congratulations. What was the promotion to?

17 A. I don't know if it was a promotion. No,
18 it's, I'm like a group leader now and I oversee both
19 people and safety. But I oversee health and I also
20 oversee medical people, nurses and environmental people
21 with a focus on technical consultation. In other words,
22 providing technical consultation throughout the
23 corporation.

24 The other thing I should point out, when I was
25 promoted to the manager of industrial hygiene and

1 toxicology, I also assumed the responsibilities for what
2 we call our environmental health laboratory which does all
3 analysis for hygiene samples.

4 Q. And that's also located at the Pittsburgh
5 location where you are employed?

6 A. No.

7 Q. Where is that?

8 A. It's in our technical center in New
9 Kensington.

10 Q. In what state?

11 A. Pennsylvania.

12 Q. What is your title at present?

13 A. I'm still called manager of industrial
14 hygiene and toxicology. I don't know whether they will
15 change it. I don't know if they caught up with that.

16 Q. Vice president it sounds like?

17 A. No.

18 MR. WAGNER: Let's go ahead and take a break.

19 (Break in proceedings)

20 MR. WAGNER: Q. I would like to direct your
21 attention to exhibit A. Have you seen this document
22 before today?

23 A. Yes.

24 Q. When was the first time you saw this
25 document?

1 A. I don't recall the exact date. I don't
2 recall the exact date.

3 Q. Excluding anything you may have talked about
4 with your attorney, were you asked to conduct a search for
5 any documents identified or called for in this document?

6 A. Excuse me, can you repeat the question.

7 Q. Yes. I'm just excluding anything you would
8 have talked about with your attorneys. Can you tell me if
9 anybody else asked you to look for any documents
10 identified in this exhibit A?

11 A. No.

12 Q. Did you talk to anybody aside from your
13 attorneys about this exhibit A?

14 A. Yes.

15 Q. Who was that?

16 A. Well, it's people in my organization that
17 helped or did searches subsequent to my attorney asking me
18 to get involved.

19 Q. Can you identify on page four of exhibit A
20 any search for documents that you conducted responsive to
21 category number 16?

22 A. I don't recall making any searches.

23 MR. REED: I'm going to object to that. We have
24 already responded to that in our formal written response
25 to this request for production of documents. And our

1 objection and response is on page eight of our formal
2 response. In essence it states several objections which I
3 won't go into here. And then it says, Alcoa has no
4 knowledge of any Workers' Compensation claims filed
5 against it related to loss of pulmonary function due to
6 aluminum exposure.

7 The reason I'm jumping in, other persons in the
8 corporation are more involved in what Workers'
9 Compensation claims were made.

10 MR. WAGNER: Q. Sir, do you have any knowledge as
11 to whether the statement just made by the attorney here is
12 accurate?

13 I just want to know if you know have there been any
14 pulmonary impairment claims made by any workers of Alcoa
15 related to exposure to aluminum to your knowledge?

16 A. I'm just thinking. I do not recall any.

17 Q. Would you know the name of the individual or
18 individuals at Alcoa who would be most knowledgeable as to
19 whether any such claims had ever been made?

20 Again, I'm just focusing on category number 16.

21 A. Well, there would be several people because
22 it depends on your time frame.

23 Q. What individuals would that be?

24 A. Currently it would be our corporate medical
25 director, Dan Jaffe. Prior to him it would have been Dean

1 Belk or Barbara Peters.

2 Q. Do you know how you spell Dan's last name?

3 A. J-a-f-f-e.

4 Q. What is his title?

5 A. He's the director of corporate health
6 services.

7 Q. And at what location is he employed?

8 A. Pittsburgh.

9 Q. How long has he been in that position?

10 A. Slightly over two years. I believe it will
11 be three years in August.

12 Q. And you believe he would be most
13 knowledgeable concerning any claims that potentially were
14 made responsive to category number 16 during that two year
15 period?

16 A. Yes.

17 Q. How do you spell Dean's last name, Belk?

18 A. B-e-l-k.

19 Q. And he works out of the Pittsburgh location?

20 A. No.

21 Q. Did he ever work out of that location?

22 A. Yes.

23 Q. When was that?

24 A. I can't recall his exact starting date.

25 Probably a year or two before '79 would have been his

1 start date. And he left the company approximately three
2 and a half years ago, something like that. Three or four
3 years ago.

4 Q. Is he currently employed to your knowledge?

5 A. It's my understanding that he has another
6 job.

7 Q. Where does he work?

8 A. I do not know.

9 Q. What is the basis of your understanding that
10 he has another job?

11 A. Hearsay feedback from associates that he's,
12 he's got employment.

13 Q. What have they told you in that regard?

14 A. That he was back in family practice somewhere
15 in the southeast part of the U.S. Carolinas or somewhere.

16 Q. Is he a medical doctor?

17 A. Yes.

18 Q. Is Dan Jaffe a medical doctor?

19 A. Yes.

20 Q. Is Barbara Peters still with Alcoa?

21 A. No.

22 Q. When did she leave?

23 A. In the comparable time frame to Dean Belk.

24 Q. Do you know when she first worked for Alcoa?

25 A. A similar time frame to me, at least in the

1 job she had.

2 Excuse me, let me back up. She was affiliated with
3 the health and safety organization probably in a similar
4 time frame to myself.

5 Q. That would be what?

6 A. I can't be specific. I would say through the
7 '80s she worked in the health and safety group. I don't
8 recall the exact time frame. She got, she got -- she used
9 to be involved in coordinating Workers' Compensation, you
10 know, paperwork.

11 Q. When was it she left?.

12 A. Approximately the same time frame as Dean
13 Belk, but I do not know the exact date.

14 Q. Is she a medical doctor as well?

15 A. No.

16 Q. Do you know her current whereabouts?

17 A. No.

18 Q. Do you know if she was employed upon leaving
19 Alcoa?

20 A. I have no knowledge of her since she left the
21 company in terms of employment.

22 Q. Would you know if she's still in the
23 Pittsburgh area?

24 A. Ironically I saw her in the building a couple
25 days ago. So I don't know if she still lives here or was

1 coming back to visit. I don't know what her intent was
2 but I did see her coming back in the building. I didn't
3 talk to her, though.

4 Q. Are there any other individuals currently
5 employed with Alcoa or previously employed with Alcoa that
6 you could identify as individuals that would be
7 knowledgeable if there had ever been aluminum related
8 pulmonary impairment claims made against Alcoa by its
9 workers?

10 MR. REED: Do you know anybody, is the question.

11 THE WITNESS: Yes.

12 MR. WAGNER: Q. What other individuals do you
13 believe would be knowledgeable as to whether such claims
14 had ever been made?

15 A. It would depend on the time frame of when you
16 would want to know.

17 Q. How about the time frame before Mr. Belk and
18 Ms. Peters left.

19 A. The only person that I had firsthand
20 knowledge of that might be a contact person would be Burt
21 Dinman.

22 Q. Is he still with the company?

23 A. No.

24 Q. How do you spell his name?

25 A. D-i-n-m-a-n.

1 Q. Do you know his current whereabouts?

2 A. When he retired from Alcoa, I believe he's

3 affiliated with the University of Pittsburgh in some

4 capacity but I don't know exactly what capacity that is.

5 Q. When did he work for Alcoa to your knowledge?

6 A. I don't know exactly when he started. He was

7 there when I was there from '79 through -- I'm not sure of

8 the exact date that he left. It would be conjecture as to

9 when he departed.

10 Q. Would that be in the decade of the 1980s?

11 A. It's late '80s or 90s he left. I don't

12 recall the exact dates.

13 Q. Is he a medical doctor as well?

14 A. Yes.

15 Q. Nobody has ever told you that Alcoa has had a

16 Workers' Compensation claim made against it for a

17 pulmonary function impairment related to aluminum exposure

18 of its workers. Is that true?

19 A. Would you repeat the question.

20 (Following question read:

21 Q. Nobody has ever told you that

22 Alcoa has had a Workers'

23 Compensation claim made against it

24 for a pulmonary function impairment

25 related to aluminum exposure of its

1 workers. Is that true?)

2 THE WITNESS: I do not recall such an event.

3 MR. WAGNER: Q. With regard to category number 18
4 on page four of exhibit A, do you have that before you?

5 A. Yes.

6 Q. Have you conducted any search for any such
7 writings?

8 MR. REED: Again, object based upon the response to
9 category number 18, the term aluminum exposure here with
10 category 18 is not defined. Plus there's some other
11 objections that are written in our formal response which I
12 incorporate into this deposition by reference.

13 But ask the question again. I'm sure the witness
14 will try to answer it.

15 MR. WAGNER: Q. Have you conducted a search for
16 any documents you believe to be responsive to category
17 number 18?

18 A. Yes.

19 Q. What search was conducted?

20 A. Well, having worked there for so many years
21 it's just, we have a vast library of documents on the
22 literature of aluminum. I was constantly privy and
23 involved in that process.

24 To say a search, it's wasn't a search to go through
25 every document that we have that could be related to

1 aluminum. But it was an attempt to go back and capture
2 key compendiums and summaries that reflect the state of
3 the knowledge.

4 Q. Who participated in that attempt to compile
5 those documents?

6 A. Several people who work for me. Karen Crawl.
7 Chris Dickson Ernst. Felicia Baird. Those are three
8 individuals who report to me.

9 We also have outside resources who work with us and
10 monitor the literature and the state of the knowledge of
11 aluminum. And I have contact with them on a periodic
12 basis. And in this particular incident search I was
13 involved with them as well.

14 Q. What group or individuals is that?

15 A. Key, the key person or the person that I made
16 direct contact with was a Dr. Jonathan Borak.

17 Q. Is he a medical doctor?

18 A. Yes.

19 Q. What group or business is he affiliated with?

20 A. It's my understanding that he runs his own
21 company.

22 Q. What company is that?

23 A. I don't have the exact title. It's Jonathan
24 Borak & Company or something like that.

25 Q. What type of business is that, to your

1 knowledge?

2 A. He's a, does consulting work relative to
3 health issues of different, different projects.

4 Q. Was this the exclusive source of outside
5 resources that you were just referring to that you
6 consulted?

7 A. No.

8 Q. What other outside resources did you consult
9 to identify documents or information responsive to this
10 category?

11 A. Well, I went back to one of my associates,
12 professional associates who works for other aluminum
13 companies, just refreshing my chronology of what has been
14 done in welding studies on aluminum.

15 Q. Who was that individual?

16 A. His name is Homer Cole.

17 Q. How do you spell his last name?

18 A. C-o-l-e.

19 Q. Where does he work?

20 A. Reynolds Metals.

21 Q. What other outside resources did you consult?

22 A. Well, we did some contacting of different
23 associations historically that would have had knowledge of
24 aluminum welding in the early years.

25 Q. What association?.

C60777 0058

1 A. I did not contact the associations directly.
2 People in my staff made contact with, to the best of my
3 knowledge, the American Welding Society.

4 Q. Are you aware of any other associations that
5 were contacted?

6 A. I went back in time to find out, we contacted
7 the ACGIH, which is the American Conference of
8 Governmental Industrial Hygienists, to find out when back
9 in time they started publishing limits on chemical
10 exposures. I did not make direct contact. Somebody on my
11 staff did.

12 Q. Who was that?

13 A. Chris Dickson Ernst.

14 Q. Who made the contact with the American
15 Welding Association or Society?

16 A. To the best of my knowledge it was Chris.

17 Q. Were any other associations contacted?

18 A. I don't recall any at this time.

19 Q. Aside from the search of the library by
20 Ms. Crawl, Ms. Dickson Ernst and Ms. Baird as well as
21 consultation of outside resources that you have
22 identified, are you aware of any other search that was
23 conducted for information or documents responsive to
24 category number 18?

25 A. Yes.

C60777 0059

1 Q. What additional search was conducted?

2 A. We made contact with people at our technical
3 center who had worked in what we called the joining
4 welding group, technical group for many years. One person
5 is still gainfully employed by Alcoa. His name is Ross
6 Grimes, G-r-i-m-e-s.

7 We also had contact with a gentleman named Paul
8 Dickerson, who has subsequently retired from Alcoa but had
9 worked with welding and welding practices in aluminum for
10 many years prior to his retirement.

11 We -- I have talked to them myself. Karen Crawl
12 has also talked to them. Trying to get some of the more
13 historical documents that talk about potential hazards,
14 primarily related to welding.

15 Q. In addition to the resources that we have
16 just discussed, was any other search conducted for
17 writings or information responsive to category 18?

18 A. It's my -- we looked through our, what we
19 call our archive files which are files which have been
20 boxed and sent off.

21 No, I correct that. That was primarily done in an
22 attempt for another reason.

23 Q. A different --

24 A. Not for this.

25 Q. Would that be a different category of this

C60777 0060

1 deposition notice?

2 A. Yes.

3 Q. Which one was that?

4 A. I don't recall which category it was.

5 Q. Was that for material safety data sheets?

6 A. It would have been primarily, it looks like
7 category number 20.

8 Q. With regard to category number 18, aside from
9 the search that you have identified so far on the record,
10 can you recall anything else that was done to collect
11 information or writings responsive to that category?

12 A. Well, we have, we have our own personal files
13 that have a lot of toxicology data on aluminum. And we
14 have our own library, health library that keeps many of
15 the old reference books and documents on kind of a, oh,
16 rifled approach. I asked Chris and perhaps others to
17 chronologically capture key documents that would reflect
18 our state of knowledge of aluminum over time.

19 Q. Aside from what you have just identified for
20 us can you recall anything else that was conducted to
21 identify documents or information responsive to category
22 number 18?

23 A. We probably touched base with our
24 environmental health lab to see if they might have had
25 some records. I can't recall for sure whether that was

C60777 0061

1 done. But it's possible they were contacted to see if
2 they may have stored records that weren't at the welding
3 group or something.

4 Q. Aside from everything you have identified can
5 you recall any other search that was conducted for
6 documents or information responsive to category 18?

7 A. It's possible that Chris went on to, say, a
8 computer line, like an ATSDR or a Toms system, and pulled
9 out the latest compendium. That is our online tox search
10 that we have. That would -- I expect, it wouldn't be a
11 surprise. I can't be sure of that. But I had one that
12 she pulled up that made reference to an ATSDR. That could
13 have been to go online and look.

14 Q. What is the ATSDR?

15 A. It's an acronym. I probably can't -- Agency
16 for Toxic Substance Disease Registry. It's an EPA group
17 that puts together profiles on chemicals.

18 Q. Aside from all that you have identified can
19 you recall any other search for information or writings
20 responsive to category 18?

21 A. Not at this time.

22 Q. With regard to category 18, what are you
23 aware of Karen Crawl having done to identify information
24 or writings responsive to that category?

25 A. Key activity for her was to try to -- let me

C60777 0062

1 take that back. I'm not aware of anything that she did
2 specifically related to 18.

3 Q. She was involved in a different category
4 search?

5 A. Depends on how you define the categories but
6 she was more directed toward category 20.

7 Q. With regard to any of the categories can you
8 identify what Karen Crawl's participation was in
9 identifying documents or information?

10 MR. REED: If you know.

11 THE WITNESS: Karen was primarily asked to search
12 the Boyer's caves, not to physically search but to contact
13 that group and find out what do we have in there about
14 labels, product labels.

15 She also made contact with the tech center trying
16 to define what they may have in their files.

17 Those were the key activities.

18 It's quite possible she was also overlapping into
19 18.

20 MR. WAGNER: Q. The Boyer's cave, is that what you
21 said?

22 A. Yes.

23 Q. What is that?

24 A. Oh, it's a -- at certain times we store **C60777 0063**
25 documents that, you know, after certain periods of time.

1 It's a place where documents that must be retained
2 forever, or at least for extended periods of time, are
3 kept. And you have index files that you can go in and
4 look. I'm sure that she was in that trying to develop
5 something around, you know, warnings relative to MSDS and
6 labels.

7 Q. Where is that located?

8 A. I do not know.

9 Q. Is that in Pittsburgh, to your knowledge?

10 A. In close proximity if not in Pittsburgh.

11 Q. Is that a third-party outside service to your
12 knowledge?

13 A. I don't know for sure.

14 Q. In any event, that is a document archive
15 area. Is that true?

16 A. They could have changed their name. I knew
17 them as Boyer's cave. It's possible it's under new
18 management or been relocated.

19 I don't get involved in that much detail. But a
20 process where documents can be stored and retrieved.

21 Q. When you spoke to Jonathan Borak, what
22 information did he convey to you?

C60777 0064

23 A. Well, he and I worked together for several
24 years. We just talked about -- since he does compendiums
25 on a periodic basis I was refreshing myself whether there

1 was anything that had not come to my attention that I
2 should be aware of that he was aware of around aluminum
3 toxicity.

4 Q. Where is his company located?

5 A. Connecticut.

6 Q. When was it you worked together?

7 A. We worked together for several years.

8 Q. Was he employed with Alcoa?

9 A. No. He's a consultant to Alcoa.

10 Q. When you say you worked together, he was
11 employed as a consultant --

12 A. Yes.

13 Q. -- for Alcoa during that time?

14 A. I didn't mean to interrupt. Excuse me.

15 Q. Did he provide you any information that you
16 were not already aware of?

17 A. He provided me several bits and pieces that
18 were documents I may not have seen.

19 Q. What information was that?

20 A. He provided me a recent update on ozone that
21 I had asked a question relative to ozone.

C60777 0065

22 He also provided me a couple literature references
23 that he had come across that -- those were the three
24 documents, couple, two or three documents that come to
25 mind that I wasn't intimately familiar with or hadn't seen

1 that were helpful to me.

2 Q. Do you know at what location Homer Cole works
3 for Reynolds?

4 A. He is in their corporate office in Richmond,
5 Virginia.

6 Q. What information did he provide to you?

7 A. Homer had worked in industrial hygiene
8 several years longer than I. The primary reason I called
9 him was to get an update on some of the studies that had
10 been done on welding and aluminum prior to my coming on
11 board with Alcoa. I wanted to make sure I had in my mind
12 the chronology of studies that may be relevant to our
13 industry.

14 Q. Had Homer Cole ever been employed by Alcoa to
15 your knowledge?

16 A. No, he has not been employed by Alcoa.

17 Q. Did he in fact provide you copies of those
18 studies?

19 A. No.

20 Q. Did he identify any studies for you?

21 A. He identified nothing that I was not already
22 aware of.

23 He was helpful in telling me the time frame for one
24 study that I was, I was aware of but I didn't know exactly
25 when it was done or completed..

C60777 0066

1 Q. At what location does Ross Grimes work?
2 A. He works at Alcoa Technical Center in New
3 Kensington.
4 MR. REED: Just for the record, I believe his name
5 is Ross Grimm.
6 MR. WAGNER: Grimm?
7 THE WITNESS: I can't be sure.
8 MR. WAGNER: Q. You said Grimes or did I write it
9 wrong?
10 MR. REED: He said Grimes.
11 MR. WAGNER: Q. Did you speak to him personally?
12 A. Yes.
13 Q. When was that?
14 A. Relative to gathering information in the
15 last, oh, week or so we have communicated.
16 Q. What information did he provide to you at
17 that time?
18 A. Ross had worked with Alcoa for many, many
19 years. We were interested in learning in the older time
20 frames what kind of publications, et cetera, had been
21 communicated to perhaps our customers and what their state
22 of the knowledge was around time issues on aluminum and
23 welding and when people were cognizant of hazards. Those
24 sorts of issues.
25 Q. What information did he provide to you in

C60777 0067

1 that regard?

2 A. He cited two key pieces of information.

3 Q. What information is that?

4 A. One, he let us know that Paul Dickerson even
5 though retired was still in the area and actively,
6 actively involved in welding, which was helpful.

7 He also was cognizant of some of the different AWS
8 publications that had occurred over time and was helpful
9 in giving us some leads as to where we would find some of
10 those historical documents.

11 Q. Did you speak to Paul Dickerson personally?

12 A. Yes.

13 Q. Where does he reside?

14 A. Somewhere in the Pittsburgh area. He is in
15 the Pittsburgh area code but I don't know exactly where.

16 Q. Is he employed there -- I thought you said he
17 was still actively involved with welding in some capacity.

18 A. He might have some relationship still with
19 Alcoa on a consulting basis but he is retired from Alcoa.

20 Q. Is he in the city of Pittsburgh?

21 A. I do not know.

22 Q. Where was it that you contacted him?

23 A. I contacted him through area code 412.

24 Q. Just called Information?

25 A. No. Ross was able to give us his phone

C60777 0068

1 number. I had known Paul from before.

2 Q. What information did Paul give you?

3 A. Paul is very knowledgeable about the history
4 of aluminum in the aluminum industry going back quite a
5 long ways in time.

6 Q. What can you -- go ahead, I'm sorry.

7 A. He was helpful in giving us knowledge about
8 where we could get AWS documents and when they were
9 written.

10 He was helpful in giving me inside certain time
11 frames when certain health control practices were
12 implemented in the welding industry.

13 He was helpful in giving us information around
14 documents that Alcoa had prepared about welding aluminum
15 and safety precautions that go back quite far in time.

16 He knows a lot -- he personally had worked at FMC
17 over many years and was knowledgeable of the processes.
18 So he gave us, gave me some information that was helpful
19 to me prior to when I picked up the knowledge --

20 Q. When --

21 A. -- curve.

22 Q. Sorry?

23 A. The knowledge curve. When I came on the
24 curve.

25 Q. Did he indicate when he had worked for FMC?

C60777 0069

1 A. He did not work for FMC. He worked for Alcoa
2 but was a, a technical resource to FMC on welding and
3 helping them develop that, the welding business for
4 aluminum. He did not work for FMC to my knowledge.

5 Q. Did he indicate at what location or locations
6 he had assisted FMC?

7 A. He indicated that he had worked directly with
8 the facility in San Jose.

9 Q. During what time period?

10 A. He could not recall when I asked him the
11 exact dates. But he worked for Alcoa for 42 years. He
12 retired in the late '80s. So he felt that he was probably
13 involved with FMC at San Jose as far as back as the '50s.

14 Q. Did he indicate whether he had ever known an
15 individual by the name of Sam Rotolo?

16 A. No.

17 Q. Did he give you any information about the
18 welding practices at that location?

19 A. Yes.

20 Q. What did he provide to you as far as
21 information in that regard?

22 A. Well, he indicated that welding occurred
23 there. It was what one would refer to in our vernacular
24 as production welding. And that welding was done in, was
25 done on various military apparatus, and that welding C60777 0070

1 involved aluminum, and welding was conducted within
2 confined, what we call confined spaces.

3 Q. Did he cite you any documentation concerning
4 FMC at that location?

5 A. No.

6 Q. Did he identify any other individuals
7 knowledgeable about activities at that FMC location?

8 A. Yes.

9 Q. What individual or individuals did he
10 identify?

11 A. The only name that I recall that stuck in my
12 head there was an individual named Schultz or something
13 close to that who was an FMC employee who had been a
14 member or representative on the American Welding Society
15 committees that Paul and others were affiliated with. He
16 indicated that since 1969 FMC had had people involved
17 directly in these various AWS committees which were
18 involved in setting standards around welding and safe work
19 practices.

20 He also mentioned to me the names of Alcoans who
21 were sales individuals who serviced FMC in San Jose. I do
22 not have those names with me.

23 Q. You kept a note of them, however?

C60777 0071

24 A. I don't recall whether I wrote them down.
25 But he mentioned the sales rep. that was with Alcoa and he

1 recalled their names. I don't know if I wrote them down
2 or not. But me mentioned several sales office -- salesmen
3 for Alcoa who worked in close contact with FMC.

4 Q. Do you recall the current whereabouts of any
5 of those individuals?

6 A. He did indicate that the first sales contact
7 he had passed away literally like in short, shortly after
8 Paul and he had gone to San Jose to build FMC. That
9 somebody else had replaced that sales manager. I don't
10 recall the status of that individual.

11 Q. To the best of your understanding he
12 identified two Alcoans responsible for servicing FMC in
13 the San Jose area?

14 A. Yes.

15 Q. Without calling Paul back would you be able
16 to come up with the name of that second individual?

17 A. I might have jotted it down on a piece of
18 scratch paper. I only discovered that contact in a
19 discussion with him very recently. So I might have that
20 name.

21 Q. Do you know if that individual is in the
22 state of California still?

23 A. I do not know.

24 Q. Do you know that individual's last known
25 whereabouts?

C60777 0072

1 MR. REED: Do you know?

2 THE WITNESS: No.

3 MR. WAGNER: Q. By last known whereabouts, I mean
4 where Paul Dickerson last knew him to be located.

5 A. I don't recall specifically.

6 He did mention that there was a San Francisco sales
7 office that might have got moved to Seattle. It wasn't
8 clear whether it was the first guy that got transferred up
9 there or whether perhaps it was the second. But that's
10 the extent of whereabouts that I recall. It was a mention
11 of a San Francisco Alcoa sales office and Seattle sales
12 office.

13 Q. Why don't we go through the documents you
14 have produced here today. They appear to be in an order
15 that would be recognizable to you. Is that true?

16 A. Yes.

17 Q. Why don't we go then to the documents in
18 whatever order is convenient to you.

19 The first group of documents is in a folder here
20 and I would like you to identify what is contained within
21 this folder.

22 MR. REED: Look through it, first.

23 (Break in proceedings)

C60777 0073

24 MR. WAGNER: Sir, on the break we had a chance to
25 mark for identification purposes the groups of documents

you produced here today, each of which is contained within a folder. The folders we have marked as exhibits D through I.

Within each of the folders appear to be groups of documents that collectively have been stapled or bound together and within each of the folders we will mark the collective groups of documents numerically,

For example, in folder D, exhibit D-1, first group, D-2, the next group of documents, and we will refer to those as such in the deposition.

We have also reached an agreement that counsel for Alcoa will take possession at the conclusion of this deposition of the original exhibits to the deposition, make a copy of these originals and return that copy to the court reporter for inclusion within the record here.

Is that acceptable?

MR. REED: Yes, it is. Thank you.

MR. WAGNER: Of course, you have agreed to keep these in the original form, not to remove any of the documents that are attached at this point as exhibits to the deposition.

MR. REED: I do indeed.

(Exhibit D was marked)

MR. WAGNER: Q. Sir, can you identify for us what the first document is within the exhibit D. And this is

1 document D-1. Can you identify for us what D-1 is.

2 A. Yes.

3 Q. What is that?

4 A. Actually, you have two documents combined.
5 What these are is the American Conference of Governmental
6 Industrial Hygienists continually monitors the toxicity
7 and health effects of chemicals that they track. And the
8 two in our possession here are aluminum and aluminum
9 oxide.

10 And the purpose of these is for -- these -- this is
11 excerpted from what is called documentation of threshold
12 limit values. So as new information surfaces around the
13 health effects or toxicity of a compound, these things are
14 updated constantly, and if evidence comes along to suggest
15 that the limits need to be lower because there are health
16 concerns, then this agency will propose a lowering of the
17 TLV. People from industry or government or academia can
18 comment. And based upon the signs they see they make
19 decisions about whether limits should change or not.

20 So these are the documents that, the 1994
21 documentations for both aluminum and aluminum oxide. What
22 they do, they list for you what limits are acceptable in
23 an occupational setting for exposure. This first one is
24 for a metal dusts, what we call welding fumes, and the
25 other one covers aluminum oxide.

C60777 0075

1 Q. And this reflects the current TLVs as of 1994
2 for aluminum are what?

3 A. For the welding fumes defined as aluminum,
4 and, of course, aluminum oxide, which is more of the
5 particulate. It's like a white powder that is used in
6 smelting aluminum.

7 Q. This would also reflect the historical TLVs?

8 A. Yes. The thing below shows you the
9 chronology of compounds, when they began to track them.
10 For instance, in the case of aluminum it was in 1977 that
11 they begin to codify a limit. The reason you don't see an
12 earlier limit is there is probably nothing to suggest a
13 concern that would drive you to go to a lower number.

14 In the case of aluminum oxide, I can't tell you why
15 they started tracking it at an earlier date, or having
16 limits established at an earlier date. They started in
17 1946.

18 The thing that is of interest is over time aluminum
19 has never dropped. And that suggests no concerns around
20 toxicity or health.

21 Q. The threshold limit has remained constant at
22 what?

C60777 0076

23 A. Well, this gets a little convoluted. The
24 ACGIH essentially recommends for nuisance particulates a
25 level of 10. OSHA stays at 15. Within our company we use

1 basically 10. I mean, and that's fairly standard in
2 industry today, to go with a 10 milligram per cubic meter
3 limit for a nuisance dust. So the distinction between 15
4 and 10 is really -- it's not a science base. It's just
5 how nuisance dusts were defined by different groups at
6 different times.

7 Q. Do you know how long Alcoa has gone with the
8 10 limit?

9 A. We made the conversion I think formally to
10 the best of my recollection in the mid '80s. But prior to
11 that we would have probably used 15.

12 Q. For aluminum oxide what limits are in place
13 at present?

14 A. We use the 10. 10 milligrams per cubic
15 meter.

16 Ironically, you can see where the drop between the
17 15 and 10 occurred. 50 correlates with 15 and somewhere
18 people began to shift to 10, the current OSHA limits, if
19 memory serves me right, when they lost the ability to cite
20 ACGIH at 15 for particulate.

C60777 0077

21 Q. Do you know what the reference is to the
22 statement here, "containing no asbestos and less than one
23 percent crystalline silica," what is referred to there?

24 A. Well, I think the, the best way to describe
25 this is in certain select isolated cases in a multiple

1 process environment, for instance, like in the presence of
2 crystalline silica in the early days Shaver's disease was
3 reported which is a pulmonary type fibrosis. Because the
4 aluminum oxide was present but it was also present with
5 other materials. It was present with, say, asbestos or
6 crystalline silica.

7 What they are trying to say, if you have a work
8 environment to make the nuisance limit applicable to
9 aluminum oxide you have to be free of other toxic
10 contaminants that are considered to be more of a concern
11 than the aluminum oxide, or toxic, whereas aluminum oxide
12 is not.

13 Is that clear?

14 Q. Do you know if Alcoa has processed or sold
15 aluminum oxide products that contained asbestos
16 previously?

17 A. No, we would not. That would not be an
18 issue.

19 Q. What type of aluminum oxide products would
20 contain asbestos, to your knowledge?

21 A. None. Unless there was some process
22 contamination. I'm not aware of any aluminum oxide that
23 contains asbestos. Nor am I aware of any aluminum oxide
24 that would contain greater than one percent crystalline
25 silica?

C60777 0078

1 Q. But historically you would be aware of
2 aluminum oxide. Is that fair?

3 A. I'm sorry, would you repeat your question.

4 MR. REED: Let me try. Was there ever a time when
5 aluminum oxide in any industry application throughout
6 history included either asbestos or silica?

7 THE WITNESS: The aluminum oxide did not contain to
8 my knowledge any asbestos or crystalline silica. It could
9 have been used in an industrial process where those
10 materials might have been, might have been present and
11 created some confusion about what the source of the
12 exposure was. Is that clear?

13 MR. WAGNER: Q. To your knowledge it has not been
14 used in such a setting by Alcoa in any time?

15 A. Yes, that is my knowledge.

16 An example here to illustrate is important. In mid
17 1940s, there was a, there was a disease referred to as
18 Shaver's disease. And when you made what was called
19 corundum abrasives you took mixtures of different
20 chemicals which included aluminum oxide and you formed
21 this abrasive corundum. They then went back and said what
22 is causing that problem. And the experts came to a
23 conclusion there was, a lot of crystalline silica was
24 present.

C60777 0079

25 So when they saw fibrosis in the lung of some of

1 these workers, they felt that it was not the aluminum
2 oxide but it was related to other contaminants or
3 co-contaminants. When you make aluminum oxide you do not
4 produce or you do not have those materials present. But
5 in the industrial process there could be mixtures or other
6 things. That's probably why they made this distinction
7 because of the literature around Shaver's and other
8 things.

9 Q. Are you aware of any industrial process using
10 aluminum oxide and asbestos?

11 A. No.

12 Q. What is the next group of documents, exhibit
13 D-2?

14 A. We on a periodic basis have outside people
15 review the literature from over time and put together
16 position papers around, gee, is there anything that we
17 should be concerned with.

18 What this represents, this is a document prepared
19 by Dr. Jonathan Borak which reviewed the scientific
20 literature on aluminum and its ability to cause lung C60777 0080
21 fibrosis or pulmonary fibrosis. So what it is is kind of
22 a white paper of sorts which discusses that subject in
23 detail. It includes references that go back over time.

24 For instance, here is a discussion around Shaver's
25 disease. The summary of this, this was recently published

1 by him. And we worked with him because we know a lot of
2 the industrial processes. But the bottom line was that
3 there is no evidence today linking aluminum with
4 occupational pulmonary fibrosis.

5 Q. Do you know when this article was published?

6 A. I can't recall the exact date. It's been
7 within the last -- it's got to be within the last couple
8 of years.

9 MR. REED: If I can, can you tell us what you mean
10 by published.

11 THE WITNESS: Oh, this is not published in a
12 journal. This is a -- what this represents is a review of
13 the literature that talks about aluminum. This is a
14 critical review of the literature and coming back to us
15 and saying is there anything in there that we from our
16 industry should be concerned with. And I think the
17 summary here may be of interest.

18 MR. WAGNER: Q. Referring to page eight of exhibit
19 D-2, in the summation statement: There is no evidence
20 that alumina and other aluminum compounds other than
21 pyropowder are able to cause fibrosis in the lungs of
22 exposed workers.

23 What is pyropowder?

C60777 0081

24 A. Pyropowder refers to a very unique process of
25 producing a fine aluminum powder that is used in rocket

1 propellants, like in space craft. What happened is during
2 World War II in Europe there were a couple reported cases
3 of these pyropowders being linked to fibrosis. The issue
4 that was identified was they had changed the lubricants to
5 coat the, what we call the pyropowders. And once the
6 conversion came back to the stuff that was always used in
7 the States that problem has never been reported. Only
8 been reported during the war and they had to make some
9 production changes how they produced powders.

10 Q. Are you talking about a powder to increase
11 flame temperature, something like that?

12 A. Actually a powder used, I've seen it used in
13 some kind of paint pigments. Also used in rocket fuel
14 propellants.

15 Q. This is not the same as --

16 A. This is a very unique subclass of a certain
17 process in aluminum is what I'm referring to.

18 Q. Do you know if Alcoa has ever manufactured or
19 distributed or sold pyropowder?

20 A. We had an operation years ago that produced
21 what we call aluminate paste/powder. Yes, we do have a
22 powder operation.

23 Q. Was that to your knowledge ever sold to FMC
24 in San Jose?

C60777 0082

25 A. I have no knowledge of those products being

. 1 sold to them.

2 Q. The application of those products would just
3 be for paint coating materials?

4 A. I'm not an expert on the commercial markets
5 of pyropowder but I do not -- I can't -- I'm not an expert
6 on the commercial markets.

7 Q. So you wouldn't know one way or the other
8 whether pyropowders were ever sold to FMC in San Jose --

9 A. That's correct.

10 Q. -- by Alcoa?

11 A. I do not know the answer to that.

12 Q. What is D-3?

13 A. Oh, somebody in my group probably went in and
14 said give me an update on -- this is from a, an
15 environmental health criteria document on aluminum, 1994.
16 Looking to see if there is anything in there that was of
17 concern. Kind of an update document.

18 Q. What information is reflected in this?

19 A. Well, I think the only thing that is
20 highlighted is there are kind of isolated case incidents
21 of where aluminum might have been related to some kind of
22 an issue. And they just highlighted one here that we had
23 been aware of, of course. It was done, goes back to 1962.

24 Q. That looks like it's the second page of **C60777 0083**
25 exhibit D-3. What is the conclusion there that you are

1 referring to?

2 A. This is one of those type of powder issues
3 that we were talking about. This was an isolated case.
4 Has no statistical validity in terms of any kind of risk
5 issue.

6 Q. What is the next document, D-4?

7 A. It's another probably critical review
8 document that somebody went in and pulled up on aluminum
9 for me to scan.

10 Q. Whose writing is at the top of that?

11 A. I believe, fairly confident that is Chris
12 Dickson Ernst.

13 The one that is highlighted here is that, is the
14 Shaver's disease, which we have already talked about.

15 There is also reference, the same thing that John
16 Borak referenced, a couple isolated cases where
17 aluminum -- well, the Herbert one I'm familiar with
18 where -- and a single employee reported a certain type of
19 lung condition where aluminum plus other chemicals --
20 excuse me -- yeah, aluminum plus other chemicals were
21 involved.

22 Here again, it's just like an isolated incidence of
23 that. We try to track those as well as, of course, the
24 big studies just so we're aware of them.

25 Q. And the next group of documents, D-5 I

C60777 0084

1 believe.

2 A. This looks like it came from Chris Dickson
3 Ernst, ATSDR tox profile. Here again, just synopsis of
4 literature, compendiums of health effects and aluminas.

5 Q. Let's go ahead and continue with the list.
6 What is the next group of documents?

7 A. This is a document on pulmonary fibrosis that
8 was linked to a process where aluminum oxide was also
9 present.

10 Q. I think we're up to exhibit D-6. Can you
11 identify what this is?

12 A. I told you earlier that I talked to John. I
13 said, John, are you aware of any old studies or anything I
14 should be aware of around aluminum. He brought this one
15 to my attention." He had written previously a critique of
16 this study, as well as the one previously, refuting the
17 connection to aluminum.

18 Q. Whose writing is this on this document?

19 A. That's some writing I put on there.

20 Q. What does that indicate, the writing?

21 A. It's raising a couple points.

22 There's only nine potential people out of a
23 thousand who are identified as having any kind of a, **C60777 0085**
24 quote, lung question. And only three of those were even
25 biopsied. So the statistical power of this study would be

. 1 questionable.

2 In other words, nine out of a thousand is less
3 than, what, one percent. And then you have three out a
4 thousand that might even have something.

5 Plus the other point, these people were working
6 with all kinds of different chemicals. They weren't just
7 working with aluminum, aluminum oxide.

8 Q. What type of workers were they?

9 A. I'm not really sure what these guys were
10 doing. They were in a process here where there was
11 abrasive preparation for their processing bauxite.

12 Bauxite is the precursor to making aluminum oxide.
13 You can have crystalline silica issues with it. They talk
14 about doing all kinds of different things. Organic resin,
15 binding wheels. When you have that kind of heterogeneous
16 environment you certainly look at the studies but you try
17 to make, make an assessment as to whether they have any
18 significance to your industry.

19 The conclusion here was that wasn't the case.

20 Q. Next group of documents --

21 A. D-7. This is Jonathan Borak's critique --

22 MR. REED: Wait. I'm sorry, I'm going to pull this
23 one, a letter from Jonathan Borak to me. I'm going to
24 have to pull this as privileged work product and
25 attorney-client material. Or as a report of an expert.

C60777 0086

1 Isn't timely to be produced.

2 MR. WAGNER: You don't represent here that you are
3 the attorney for John Borak.

4 MR. REED: No. But I do represent that I was
5 working with a subcontractor of Alcoa and he at my
6 direction did undertake an investigation for me and he was
7 responding to my questions.

8 MR. WAGNER: We'll go on to the next document.

9 MR. REED: If you like, I can still mark this as
10 D-7. It's up to you.

11 MR. WAGNER: Why don't we call it D-7. It's a two
12 page document, if it comes up we intend to compel on that.

13 MR. REED: And I will put into the document folder,
14 I will put in a sheet that remarks that D-7 was removed at
15 my request because of my assertion of attorney work
16 product and other privileges.

17 MR. WAGNER: Okay, fair enough.

18 Q. The next group of documents, call that D-8.

19 A. This is a case or a publication of an
20 individual that had some, some link issues. It's an
21 isolated one person case. Apparently the person had done
22 some welding in his life and it was just published in the
23 literature.

24 As I said before, we just track these things and
25 keep an eye on them.

C60777 0087

1 Q. This indicates that it was faxed from
2 Mr. Borak.

3 A. Yes, that is correct.

4 Q. Is this your notation here?

5 A. Yes.

6 Q. What does that indicate?

7 A. Single isolated case. And what we're
8 referring to there, it's not like a study where you went
9 in and studied a hundred guys who were welding and there
10 is a statistical correlation with a pattern. It's just an
11 isolated case that somebody reported in the literature.

12 Q. Does that all go together here?

13 A. Yes.

14 Q. The next group of documents, D-9, what is
15 this?

16 A. This is just a publication from the, looks
17 like a Scandinavian Environmental and Health. Scand
18 Journal of Work Environmental and Health

19 What they are doing here, people are interested in
20 tracking bio-uptake of welding fumes. This is a study
21 looking at trace concentrations of different welding fume
22 particulates from welders who were welding stainless steel
23 and aluminum. They are trying to see if they get any
24 investigative power out of using some sort of assessed
25 exposure.

C60777 0088

1 It doesn't -- as my memory serves me, there aren't
2 any issues around aluminum causing any kind of a concern.
3 It's more of a gee, how can we develop a correlation
4 between fumes and blood concentration.

5 Q. Do you know the result of that?

6 A. Basically said that there is so much
7 variability, it's tough to make any sense out of it.

8 The other thing that was of interest to me it said
9 the concentration of zinc and magnesium in the breathing
10 zone of workers working on aluminum is low. It's, that's
11 of interest to me.

12 Q. D-10 I believe is the next one.

13 A. This is just a kind of publication of
14 Environmental Health Perspectives. What we're trying
15 to -- we just pulled Environmental Health Perspectives
16 kind of a regular prestigious review thing that looks at
17 compounds. And this is a synopsis of aluminum that was
18 published in 1974. And it kind of reiterates our feelings
19 concerning aluminum.

20 Q. Do you know who the author of this study is?

21 A. No, I do not know. This was probably in a
22 book, a compendium of authors.

23 Q. The next document, D-11?

C60777 0089

24 A. This is a document that was published by the
25 American Welding Society apparently under a research grant

1 to look at the welding environment. And the section of
2 interest to us is the hygiene considerations of welding
3 fumes and gases.

4 And I think the important thing too, they put
5 together a process kind of flow diagram around the
6 different, the different constituents in welding fumes.
7 And they basically said that the aluminum particulate that
8 comes from welding with aluminum, they place the aluminum
9 in the harmless category or relatively harmless category.
10 It didn't fall over to a side linked with asbestos,
11 silica, asbestos or beryllium.

12 Q. Which side is that identified on in this
13 graph on page 10 of exhibit D-11. Is there a side with --

14 A. What I'm saying, they looked at particulates,
15 looked at what they call, classify as the pneumoconioses,
16 and they claim as harmful, the ones you would be concerned
17 about their toxicity or health and the one they considered
18 to be, quote, relatively harmless. And you will notice
19 that aluminum appears on the harmless list. Whereas
20 something like silica, beryllium or asbestos falls out in
21 a different cut.

22 Q. The next document, D-12,

C60777 0090

23 A. What this is, this is, I just said why don't
24 we go to the library and find out when people started to
25 be knowledgeable about hazards of welding and when people

1 were taking precautions. And this was a publication
2 prepared by the U.S. Public Health Service, Industrial
3 Hygiene, NIOSH, talking about standard practices for
4 welding. And particularly relevant to making sure that
5 adequate ventilation was present when people welded.

6 Q. Was this 1943 publication in the library of
7 Alcoa?

8 A. Yes.

9 Q. Do you know when it was first included in
10 that library?

11 A. Oh, I have no idea when it made it to our
12 library. It's very possible it was there from people who
13 practiced hygiene years ago. Our library is fairly
14 extensive.

15 Q. Does that conclude exhibit D folder? That
16 concludes what was in exhibit D. Is that true?

17 A. Yes.

18 (Exhibit E was marked)

19 Q. The next folder, exhibit E. Can you identify
20 the contents of that folder.

21 A. This talks about ozone and also two studies
22 that Alcoa in conjunction with the Aluminum Association
23 have published on the hazardous releases when you weld on
24 aluminum.

25 Q. The first one we will call E-1. Why was it

C60777 0091

1 that --

2 MR. REED: That's not all one document.

3 MR. WAGNER: Oh, isn't it?

4 THE WITNESS: There's actually two documents here.

5 MR. WAGNER: Q. Let's call the first document E-1.

6 Why was this produced?

7 A. Well, aluminum is not considered a health
8 hazard from welding. In the aluminum welding process you
9 do generate a gas called ozone which is a lung irritant.
10 And what this does is document what we know about the
11 concerns around ozone.

12 Q. What is the date of this document?

13 A. This is -- it's a good question. We don't
14 have a date on it. I presume it's probably -- I can't
15 speculate.

16 I can tell you where it came from.

17 Q. Would you know if 1987 is the date?

18 A. I'm not sure that's the date.

19 Yeah, I think you are right. Maybe it is. I don't
20 know. I can't answer that.

21 Q. Where did it come from?

22 A. This is a, from the American Conference of
23 Governmental Industrial Hygienists documentation of TLV.

24 Q. This would be excerpted from a larger
25 publication?

C60777 0092

1 A. Yes. That is a publication that lists
2 multiple different contaminants that exposure limits have
3 been established for, one of which is ozone.

4 Q. Let's identify what the next document is,
5 exhibit E-2.

6 A. What this was, I wanted to kind of review in
7 my own mind what was known about ozone. And this, John
8 Borak shared this document with me. This is a review of
9 ambient air quality standards for ozone that was published
10 by EPA. And the bottom line was that there's no studies
11 in man to show that ozone is linked to any kind of lung
12 fibrosis.

13 Q. Is that, whose writing is that in the column
14 on the second page of exhibit E-2?

15 A. This was on it when it came to me from John
16 Borak. I don't know who put that on there, whether he did
17 or one of his colleagues or contacts. But it's not my
18 writing.

19 Q. What is exhibit E-3?

20 A. This is a study that Alcoa funded through the
21 auspices of the Aluminum Association to study what are the
22 different gases that come off in aluminum welding, both
23 particulate and gases.

24 Q. And the date of this study?

25 A. This study is dated 1991.

C60777 0093

1 Well, excuse me. Looks like the study was prepared
2 October 15, 1990. I don't know why this date is '91. But
3 it may have been when it was officially codified.

4 Q. The reason why this was produced?

5 A. Well, we have an interest in aluminum welding
6 and making sure we understand in detail the potential
7 issues around it. So we periodically do studies looking
8 at what comes off a particulate, what kind of gases.

9 Another key issue of interest was the alloy agents
10 we use in aluminum. We are interested in knowing whether
11 they come off in levels that are of potential interest.
12 So we occasionally do studies.

13 I believe in this study if my memory serves me, we
14 were looking for things that, alloys that had lithium in
15 them and other constituents, and how much, was there
16 enough there to come off, to be something we ought to be
17 concerned with as a corporation.

18 Q. And what is the next document?

19 A. This is a similar document, just done earlier
20 in time. This was done, this report was done in the early
21 '80s. Once again, it was a study of potential offgasing
22 and particulate evolution from aluminum welding processes.

23 Q. I think we're up to E-5, I think.

24 MR. REED: E-4.

25 MR. WAGNER: You are right.

C60777 0094

1 Q. Second study is E-4.

2 And what is the final document in the folder?

3 A. Unfortunately there is no date on it but I
4 remember what drove me. I said, Chris why don't you go
5 back into like the '60s, I believe this is published in
6 the '60s, and see what people knew about ozone in that
7 time frame. This was to kind of regauge what we knew
8 about ozone.

9 Q. Would you know what publication this was
10 excerpted from?

11 A. No, I don't know. Apparently we don't have
12 the other page.

13 Q. We have reviewed the entire contents of
14 exhibit E. Is that true?

15 A. Yes.

16 (Exhibit F was marked)

17 Q. Go to next folder, exhibit F. Again call the
18 first group of documents F-1.

19 Can you identify what exhibit F-1 is.

20 A. Let me see what all is here first.

21 What we have here is a series of specifications
22 that are published by the American Welding Society that
23 talk about both welding in general but also have separate
24 publications that talk about aluminum and welding.

25 The key thing is these publications which go C60777 0095

1 back -- this one happens to be 1969.

2 Q. We're looking at F-1 now?

3 A. Right. And it talks about precautions that
4 one should take when welding to ensure that no hazards
5 exist. It defines the proper labeling for welding
6 electrodes. And it gives people precautions about what
7 they should be doing when they work in welding and
8 particularly with aluminum.

9 And it's kind of a, from what I understand, it's
10 kind of a subset document that also goes hand in hand with
11 the generic safety welding documents.

12 Q. And that in this group would be exhibit F-4.
13 Is that right, that is the fourth --

14 A. No, these start here.

15 Q. I'm sorry. Exhibit F-3 and F-4.

16 Let's address exhibit F-2 now. This one.

17 A. What this is, this is the earlier, an earlier
18 version of that document.

19 Q. Exhibit F-1.

20 A. This F-2 is the 19 -- I believe, if you give
21 me a moment -- was issued in 1957 by the American Welding
22 Society. But it also is a specification document on
23 aluminum welding processes.

C60777 0096

24 The reason I pulled this up was to show that even
25 as early as 1957 our industry was sensitive to potential

1 hazards in welding. And we had very tight controls to
2 make sure that beryllium was carefully controlled in
3 welding wire. Because we knew beryllium, if there were
4 high enough levels could be of concern. So we were very
5 interested in regulating issues on a very proactive basis.
6 There was no OSHA regulation at that time but it was just
7 an attempt on our part to.

8 Q. You are referring in part to the fourth page
9 of exhibit F-2?

10 A. We had a specification that beryllium in
11 electrode wire should not exceed 0.00078 percent by
12 weight.

13 Q. As reflected on the next page of the exhibit?

14 A. Yes.

15 Q. When you say the industry was sensitive, are
16 you including Alcoa in that?

17 A. Oh, absolutely, yes.

18 Q. Exhibit F-3 is what?

19 A. This is the, is the 1973 version of the
20 American Welding Society's Safety in Welding and Cutting.
21 What is in here, it has lengthy discussions about safety
22 and precautions to take in welding. It goes into issues
23 around ventilation, proper ventilation, labeling.

24 I want to make sure before I say something.

25 Talks about the fact that you should control

C60777 0097

1 concentrations against those limits, some of the limits we
2 have showed you before. It talks about labeling. Proper
3 ventilation. And --

4 Hold a moment. I was looking for something else.

5 It also discusses alloying constituents that are
6 viewed as of concern.

7 For instance, you will see listings for compounds
8 like working in confined spaces. It tells you what, for
9 instance, ventilation is a prerequisite to working in
10 confined spaces. And it says, see section eight for more
11 details. Well, if you need anything else, there's all
12 kinds of information in here.

13 Then talks about some of the constituents in
14 welding that are not necessarily aluminum. It's not
15 concerned about aluminum but concerned about things like
16 beryllium, zinc, et cetera.

17 This is broader than just aluminum and welding.

18 Q. And exhibit F-4?

19 A. These are earlier versions of that document.
20 This is the 1957 version, whichever, and 1967 version
21 which was a revision of the 1958 version. And of
22 particular interest is, these documents talk about
23 standard practices in the industry around health
24 protection and ventilation. They talk about ventilation
25 in confined space areas. They talk about medical

C60777 0098

1 surveillance that were industry practices at that time.

2 Q. And has the '58 version been produced as
3 well?

4 A. Yes.

5 Is that the same one? Yeah, it's all one.

6 This one is the 1958 -- excuse me.' Yes, I believe
7 that's the correct date. Let me double check.

8 This is the 1958, 249.1. That's the code you will
9 see referenced.

10 Let me see that just a second.

11 This is the 249.1 1958 version of the American
12 Welding Society's Safety in Welding and Cutting.

13 Q. And that is exhibit F-5?

14 A. The key thing to point out is back even in
15 that time frame people were talking about standard
16 practices for welding in confined spaces. This section,
17 seven and eight, are key to where the industry was
18 supposed to be relative to welding in general.

19 And there's statements I was going to show you,
20 like working in confined spaces, ventilation is a
21 prerequisite to work in confined spaces. Then they talk
22 about ventilation requirements. Okay.

23 Q. Reference to use of asbestos flame proof
24 aprons.

25 A. Then they talk about -- it's how to, you

C60777 0099

1 know, recommendations around ventilation. Once again,
2 they stress the importance of having adequate ventilation
3 when working in confined spaces.

4 Q. It appears this was received by facsimile
5 from the American Welding Society?

6 A. Yes, that's true. We could not retrieve this
7 document in our historical files but we did contact them
8 to find it.

9 Q. Where are they located?

10 MR. REED: New York, New York. Address is on
11 second page of deposition exhibit F-4.

12 MR. WAGNER: Q. Is that where this was faxed from,
13 to your knowledge.

14 A. I'm not sure where this came from. Somebody
15 in my office retrieved it.

16 Q. The next document, F-6, what is that?

17 A. Well, this shows you how far back in time
18 they went with concerns about safety in welding. This is
19 I think the precursor of the AWS Safety in Welding. This
20 was an American war standard published in 1944 that talks
21 about the need to use certain precautions in welding,
22 welding safety. Talks about work in confined spaces.

23 These documents just built on themselves as they
24 went through time. This was the first version and then
25 they upgraded and published it in I guess '58 and '67.

C60777 0100

1 Here again they make reference to, for instance,
2 under section seven, work in confined spaces, ventilation
3 is a prerequisite for work in confined spaces. For
4 recommendation see 8.3. And you go to 8.3 and they talk
5 about that.

6 The other thing that is interesting is even back in
7 those days they were talking about making sure that fumes
8 were controlled to threshold limit type numbers. In other
9 words, long before regulatory OSHA came out standard
10 documents published, the welding industry was making
11 recommendations around what levels of exposure you should
12 control.

13 Q. That appears to conclude the documents in
14 exhibit F.

15 Can you identify those contained in exhibit G.

16 (Exhibit G was marked)

17 A. Make sure what I'm telling you I'm looking
18 at.

19 Q. Let's's just focus on the first one for now.
20 What is exhibit G-1?

21 A. This is a chronology of product labels that
22 Alcoa used on their electrodes that they sold
23 commercially.

24 Q. And the date of each of these warnings is
25 indicated where?

C60777 0101

1 A. For the first one, this is an indication that
2 a label -- I wouldn't necessarily state that this label
3 was not present prior to this time, but this is a
4 codification that the label was clearly around in 1971.
5 Follow?

6 Q. July 23rd, 1971?

7 A. I can't read that one number. That looks
8 like a perhaps it's an eight. It's hard to read.

9 Q. Can you tell when the next label would have
10 been in use?

11 A. Well, these are some notes that, 8/23/71
12 showing that, hey, there was a label. There was a label.
13 This is the same, looks like to me the same date as this,
14 if I had to look.

15 As you can see, they are warning about inhalation
16 of fumes and gases and the need to take precautions.

17 And I think these are just some notes. This is the
18 man that I preceded -- I mean, I took his job.

19 Q. Who is this individual?

20 A. This is gentleman named Robert Carter. I
21 replaced him in Alcoa.

22 Q. Did he retire?

23 A. Yes.

24 Q. Where is he currently located?

25 A. I do not know.

C60777 0102

1 This just shows some of the evolution of labels
2 over time. This is 1981. Appears to be May of 1985.

3 Q. What would the next group of documents be,
4 G-2?

5 A. This is just an indication we found as we
6 were rummaging through our files, we came across the
7 document that back in 1958 that Massena Operations where
8 we used to make wire, we were aware that some of the
9 alloys in aluminum could be of interest to detect
10 beryllium, lead, zinc. I have no knowledge of what, what
11 this document was. It was probably used in the plant to
12 protect employees. Some management document.

13 Q. Would you know who authored the document?

14 A. No.

15 Q. It looks like it has been cut off at the top
16 on the second page. Do you know what was cut off there?

17 A. No.

18 MR. REED: Want us to try to get a better copy?

19 MR. WAGNER: Yes, would you? I can't read the top.
20 Looks like it was cut off there.

21 THE WITNESS: I think the message that is
22 communicated here is that in, that while the aluminum is
23 not a concern there are select alloys that, where you
24 might have other materials in there that you would be
25 interested in.

C60777 0103

1 MR. WAGNER: Q. And that would be the four
2 indicated there at the top of page two?

3 A. Well, it's four that, you know, toxicologists
4 would have an interest in.

5 Q. What are those four?

6 A. Beryllium, lead, bismuth and zinc.

7 This is not what would be in an electrode. This is
8 just a common alloy. This would not be used, you wouldn't
9 put those things in aluminum welding electrodes. It just
10 would never happen because of concerns around their
11 toxicity.

12 I mean, at least -- I shouldn't say all. There are
13 some that have zinc. You can control that. But beryllium
14 and lead, as I said earlier we controlled beryllium years
15 ago to almost, quote, zero, end of quote.

16 Q. Next group of documents?

17 A. This is just a pile chronologically, to my
18 understanding this is the MSDSs that may have been sent to
19 FMC for their products.

20 MR. REED: My understanding, Mr. Wagner is those
21 are the MSDSs covering all of the alloys for all of the
22 products covered in the sales printout that is exhibit G
23 to Ray Sauer's deposition. So these are all of the MSDSs
24 for those column number compounds and those products. **C60777 0104**

25 MR. WAGNER: Q. For sales to FMC in San Jose for

1 '68 to '73 time period?

2 MR. REED: Yes.

3 MR. WAGNER: We'll just make all of these
4 collectively exhibit G-3 next in order.

5 MR. REED: That's it, all that in that folder.

6 THE WITNESS: What you have, probably data sheets
7 starting back, as far as --

8 MR. REED: I'm sorry, I misspoke. It's not all
9 that is in the folder. Go ahead.

10 THE WITNESS: I was just going to say, before OSHA
11 HazCom we were preparing data sheets on certain products
12 that were of interest to us.

13 MR. WAGNER: Q. Are there any documents in exhibit
14 G-3 that would be different from those reflecting products
15 sold to FMC in San Jose? Is that what the whole group is
16 that you just identified?

17 MR. REED: I believe that to be correct.

18 Now, the material safety data sheet that you are
19 looking at is, and one reason I have just begun to
20 tentatively exclude it from exhibit G-3, is that the
21 material data sheets that he's holding and labeling as G-3
22 were made in response to an OSHA Hazard Communication
23 standard. The material safety data sheet that you are
24 currently looking at was not made in response to that
25 standard. Predates that.

C60777 0105

1 I'm not satisfied that those are the only material
2 safety data sheets that were so created. I discovered
3 that that was the only data sheet included in the package
4 of materials that I brought with me. I had intended to
5 bring more and I will go back and get more. You and I can
6 discuss what you want me to do with those additional
7 sheets if I find them.

8 MR. WAGNER: Q. And that's your understanding as
9 well?

10 A. Well, I don't have any knowledge of whether
11 or not these sheets would have been sent to FMC. And
12 someone else may have records to indicate that.

13 When Hazard Communication came into being we
14 computerized and know where we sent sheets. I'm not aware
15 what records were maintained at that time documenting when
16 sheets were sent to customers.

17 So these sheets, as my memory serves me, were
18 provided on request. They were not necessarily provided
19 from a, as were the ones under OSHA HazCom.

20 Now, having said that there may be received
21 evidence or records that may suggest that these sheets
22 were sent to FMC.

23 MR. WAGNER: We'll identify these additional sheets
24 as G-4 collectively.

C60777 0106

25 Q. Listening to the conversation it seems that

1 this was something that Ray Sauer and you worked on.

2 MR. REED: He and I have discussed it in the past.

3 THE WITNESS: Ray was involved in a lot of the
4 customers' interfaces on product safety.

5 MR. WAGNER: Q. And that was the other person you
6 were referring to as perhaps somebody knowledgeable as to
7 whether these were sent to FMC?

8 A. Yes.

9 Q. That concludes exhibit G.

10 What is the exhibit folder H? What is contained in
11 there?

12 (Exhibit H was marked)

13 A. These are very early-on documents dated 1945
14 and 1948. What these are is Alcoa prepared welding and
15 brazing manuals for our customers about aluminum welding
16 and brazing.

17 The important thing to note is the time frames,
18 1945, 1948, and these contain the section called Safety
19 Practices. And safety practice talk about precautions to
20 take in welding, i.e., ventilation in confined areas, et
21 cetera.

22 Q. And these would have been provided to
23 customers of Alcoa?

24 A. Yes.

25 They are, our understanding in discussions with

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1 Paul Dickerson who was involved in this process is that
2 these documents were in the sales offices and they were
3 widely distributed to our customers who were involved in
4 welding. Not only to talk about welding and how to do it
5 but also obviously to point out safety concerns.

6 Q. Did he have any, to your knowledge, express
7 recollection of this being provided to FMC in San Jose?

8 A. Yes.

9 Q. He did?

10 A. Yes.

11 Q. And he conveyed that to you during your
12 conversation with him?

13 A. Yes.

14 Q. Did he indicate who at that company had
15 possession of these documents?

16 A. No. The only comment, he said they were
17 widely distributed within that organization.

18 Q. Was he referring to the specific document
19 that we have had marked as exhibit H?

20 A. I can't say which document, whether it's '45,
21 '48. There is a whole chronology of them that occurred
22 over time.

23 To say his awareness was that these documents were
24 distributed, since they started in the '40s, he said they
25 were widely distributed, when they were published

1 distributed to our customers. If FMC became a customer of
2 Alcoa in whatever time frame they should have had copies
3 of those documents.

4 Q. Specifically with regard to what he told you,
5 he did not indicate what year he was aware of FMC first
6 receiving welding and brazing Alcoa Aluminum manuals?

7 A. I did not ask him that question.

8 Q. And he did not voluntarily provide that
9 information?

10 A. He said when these documents were published
11 they were widely distributed to our customers. So if, in
12 the time frame that FMC became an Alcoa customer, the
13 assumption or the impression I had was they would have had
14 it at that time to say when they actually had a copy, I'm
15 not able to answer that with total precision.

16 Q. Because he didn't indicate that information
17 to you. Is that true?

18 A. I asked him -- I did not ask the question
19 specifically as to: Do you know what year they first
20 received this document.

21 He said: They received this document long ago,
22 over time. And had many copies throughout their
23 facilities, throughout their facility in San Jose.

24 Q. But he didn't provide anything more
25 definitive to you as far as a specific year and time

1 period when they would have first received these?

2 A. I did not ask that question.

3 Q. All right, make the 1945 manual H-1, the 1948
4 manual H-2. And that's the contents of exhibit H.

5 What is exhibit I?

6 (Exhibit I was marked)

7 A. Give me a moment to look at it before I
8 answer.

9 This is a series of documents. The first one is
10 dated 1954. These are publications by Alcoa Aluminum
11 which is a continuation of the previous exhibit about
12 welding Alcoa aluminum. First one is dated 5/9/54.

13 Second one --

14 Q. Call the first one exhibit I-1 and the next
15 one is I-2.

16 A. It is dated 1955. It's the second printing.

17 Then you have one dated 1958.

18 Q. Call that I-3.

19 A. Then you have one dated 1967.

20 Q. That will be I-4.

21 And the final one I-5, what is that?

22 A. Dated 1972.

23 Q. Again, why was it that these were produced?

24 A. These were produced to not only convey to our
25 customers technical issues around aluminum welding --

1 MR. REED: I think he means why were they brought
2 here today.

3 THE WITNESS: Oh, to show that Alcoa over long
4 periods of time was communicating to our employees
5 recommendations about safe practices in welding. Things
6 around proper ventilation when working in confined spaces
7 and other safeguards to take when welding.

8 MR. REED: May I just jump in with a question?

9 I believe, Mr. James, you stated that we intended
10 for the employees. The documents produced in folder I,
11 were they, do you know whether they were given to
12 customers?

13 THE WITNESS: It is my understanding in discussions
14 with Paul Dickerson and others who were involved with this
15 process at the time, these documents were distributed to
16 our sales offices which in turn distributed them to our
17 customers.

18 He also had specific recollection that FMC in San
19 Jose had these documents. Whether they had every single
20 one I cannot testify to that. He said he had seen these
21 documents.

22 MR. WAGNER: Q. He had seen documents of the type
23 identified as exhibits I-1 through I-5 but not the
24 specific dates?

25 A. I did not ask him which specific version he

1 had, you know, he had seen.

2 Q. So, for example, he couldn't tell you or he
3 did not tell you that FMC in San Jose had exhibit I-1.

4 A. That is correct.

5 MR. WAGNER: Okay. I think that's all the
6 questions I have. Thank you very much, sir.

7 MR. REED: We'll read and sign.

8 (Time is 1:35)

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(Signature of Witness)

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CERTIFICATE OF DEPOSITION OFFICER

I, ANN T. ERWIN, duly authorized to administer oaths pursuant to Section 2093(b) of the California Code of Civil Procedure, hereby certify that the witness in the foregoing deposition was by me duly sworn to testify the truth, the whole truth and nothing but the truth in the within-entitled cause; that said deposition was taken at the time and place therein stated; that the testimony of the said witness was reported by me and thereafter transcribed by me or under my direction into typewriting; that the foregoing is a full, complete and true record of said testimony; and that the witness was given an opportunity to read and correct said deposition and to subscribe the same.

I further certify that I am not of counsel nor attorney for either or any of the parties in the foregoing deposition and caption named, or in any way interested in the outcome of the cause named in said caption.

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