

MeetingDOW072106NON.txt

VIDEOTAPED
DOW AFFIDAVIT TESTIMONY

July 21, 2006

—, Court Reporter

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2 PARTICIPANTS

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Dow/Conalco/Spectrulite Employees:

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2 IT IS STIPULATED AND AGREED by and between
3 SimmonsCooper, LLC and Pohlman Reporting Company that
4 the July 21, 2006 Dow Affidavit Testimony will be
5 transcribed to the best of their ability by a Court
6 Reporter.

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10 —: I'm —. We are here
11 at SimmonsCooper on July the 22nd -- the 21st, 2006
12 for the Dow Affidavit Meeting. And before we start I
13 certainly would like to thank everyone who's here. In

14 spite of the fact that 450,000 people in St. Louis
15 lost their power and half of us still don't have
16 power, everybody made it today and I think that's a --
17 just a tremendous testimony to the dedication of all
18 the people who are here and how much we believe in the
19 cause that we're fighting for. And so I -- I want to
20 say how much I appreciate that to everybody.

21 Before we get started to introduce
22 ourselves what I'd like to do is start around from
23 that end of the table and go around. And for each
24 person if you would give your full name and actually
25 spell your last name so the court reporter can get

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1 that down for the record. And then what I'd like each
2 person to do is to mention the job they had and
3 basically the years that you began and ended your
4 careers at -- at Dow. And then pass the mike on to
5 the next person, and we'll just go around the table
6 and get started. So why don't we start. The little
7 microphone should be pointing up I think is the --

8 yeah. That's fine.

9 —: My name is —

10 and I worked at SCI. I started out in the -- in the

11 shipping and worked in extrusion and worked in metal

12 form for a while. And I worked -- went to work there

13 in 1973 to —. And my name is —

14 —

15 —: Thank you, —.

16 — —: Hello. My name is—

17 —. And the way you spell that is

18 —. I started at Dow Chemical in

19 — of 1953, and I retired in —

20 —. I worked in various production jobs. I was a

21 roller on the finishing mills. I was an assistant

22 roller on the hot mill, and I worked in various other

23 capacities. And so I was exposed to radioactive

24 material in 1955 and 1966. —

25 That's it.

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1 —: That's good. All right.

2 Thank you.

3 —: My name's —.

4 I hired into Dow in — of 1961, and I retired

5 from Spectrulite —. I hired in as an

6 extrusion finisher helper. I did various jobs in

7 extrusion. In the meantime I bid over in the rolling

8 mill, worked on the -- on the mills and as a roller

9 and assistant roller. Then my last ten years I bid

10 into maintenance. My job at various departments

11 carried me through different kinds of the jobs. Like

12 I said, I retired —.

13 —: Okay. Thanks very much.

14 —: I'm —. I

15 started down there under Dow in 1961. I retired in

16 — I had —years in the rolling mill and — years

17 in maintenance. I worked throughout the whole plant,

18 and that's all the different jobs almost they had down

19 there. So that's what I did.

20 —: Thank you, —.

21 —: My name's —,

22 —. I hired in at Spectrulite in —

23 of 1989 as a — in the casting department.

24 In 1996 I became — of the casting

25 department until retirement in — 2002. My

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1 entire tenure there was spent in the casting

2 department.

3 —: Thank you, —.

4 —: Okay. My name is —

5 —. And I hired in at Dow —

6 of 1965 as a finisher helper. Then I was a press

7 helper until I got -- I went over in the rolling mill

8 in 1969 as a crate builder. Then I went back to

9 extrusion 1976 as a finisher, and then I was a press

10 operator on the 7 Press and 8 Press. And I retired in

11 —.

12 —: Okay. Thanks.

13 —: My name is —,

14 —. I started at Dow Chemical in —1952

15 and I retired from Spectrulite in —. I was

16 -- I rolled on 1, 2, 3, 4, and 7 Mills -- and 5 and 7

17 Mills. And at the end I was driving mostly a

18 forktruck in the rolling mill. My whole time spent

19 was with the rolling mill.

20 —: Okay. Thank you.

21 —: My name's —,

22 —. I hired in at Dow in 1955 —. I

23 retired from Spectrulite in —. I

24 worked -- my whole time was in the casting department

25 and that's where it was all at.

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1 —: My name is —,

2 —. I hired in — 1960. I retired in

3 -- from Spectrulite in —. My career was in the

4 casting department and the aluminum unit and magnesium

5 floor, but I did work in --

6 COURT REPORTER: What magnesium floor?

7 —: Magnesium, it's in casting. I

8 have worked in the rolling mill, extrusion, but most

9 of the time in casting. That's about it.

10 —: Okay.

11 —: My name is —,

12 —. I started in — '54 and started

13 in the casting department as a metal caster, a melter,
14 and a crew leader. In 19 -- I retired in -- that was
15 1954 and in -- I retired. And I spent my whole time
16 in the -- in the pot room. There's two sections of
17 the casting department -- there are three actually,
18 the aluminum unit, and the casting warehouse, and the
19 -- and a pot -- what we called a pot room.

20 —: Thank you.

21 —: My name is —,

22 —. I -- I started in the plant at --61

23 to the present. And I worked in extrusion most of my
24 time in various jobs going back and forth. Every time
25 we got bumped up or we got bumped down we went to

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1 another department and did a different job. And that
2 was basically my career.

3 —: And when did you retire,

4 —? I didn't hear.

5 —: I -- I retired when they

6 shut the plant down and put me out.

7 —: What year was that?

8 —: That was '—.

9 —: '— . Okay. All right.

10 —: '—.

11 —: All right.

12 —: —. And I

13 started in —'65 with Dow in the extrusion

14 department. In '71 I went to the maintenance

15 department and ended my illustrious career in —,

16 very happy to do so.

17 —: All right. Well, thank you

18 very much. I want to also introduce — --

19 that's — -- who's helping me kind of

20 coordinate the meeting this morning.

21 So first off before we get into the actual

22 affidavits I -- I want to say a word about —

23 who number one I want to thank for helping to assemble

24 everybody here this morning. And we feel all of us

25 quite privileged -- and I mean that -- to have you men

1 who really know how that plant operated better than
2 anybody else in the world. So I think we have the
3 best people we can get to talk about the things we
4 want to put on the record this morning.

5 So — we really thank you for that.

6 The other thing I want to thank is—and — and
7 — and -- and —and everybody who helped with
8 the — story which aired on Channel 5
9 recently. And I thought that was really a terrific
10 introduction for the public to what you men did, the
11 sacrifices you made, the fact that you were exposed to
12 radioactivity and not told about it adequately. And I
13 think you did both yourselves and your coworkers and
14 the public a great service by participating in that.
15 I think — really did a wonderful job of that.

16 So that's -- that's the best kind of thing that TV can
17 do.

18 So before we get into the numbered
19 affidavits — has some information that I want him
20 to read into the record that has to do with
21 destruction of records and also the way the film
22 badges were handled.

23 So —, why don't you go on and get your

24 information in.

25 —: Okay. I, — and —

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1 — (phonetic) was working in the pot room. We

2 went out to talk to —, —, and

3 —. It was then J— told —

4 —to get rid of all the badges that we wore as

5 they were all radioactive. —put them in a

6 five-gallon bucket, then he threw them in to the

7 dumpster. —, —, and —

8 — they're all dead now. But —is here to, you

9 know, verify it. And I've got his signature and my

10 signature on this.

11 That was casting, in the casting. And

12 then in the Number 1 Building -- it was just before

13 — retired. It was —, —

14 —, and myself was replacing lights in the

15 basement of Number 1 Building when — and

16 — was throwing away all personal files into

17 scrap tubs and then removing them, putting them in the
18 dumpster. There was a lot of records that were
19 destroyed. The signatures on that is —,
20 —, —, and —, myself.
21 —: —, let me ask you a
22 question. For the -- the episode with the badges, can
23 you put an approximate date on that?
24 —: I can't really say exactly.
25 It was in the, say, middle '90s.

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1 —: Middle '90s.
2 —: Yeah. They had --
3 —: Okay.
4 —: They were running radioactive
5 material and they had the government in there
6 watching. And everyone had to wear badges at that
7 time.
8 —: All right.
9 —: And I -- I'm not for sure of
10 the time.

11 —: So this was during the SCI
12 era pretty late in the game?
13 —: Yes.
14 —: And -- okay. And how about
15 the other episode about the records being thrown away?
16 Do you know approximate time for that?
17 —: —said he left in
18 '95?
19 —: Yeah.
20 —: '95. So it was a couple of
21 months before he retired.
22 —: Okay.
23 —: I won't say why I remember it
24 was a couple of months, but --
25 —: I do.

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1 —: Okay. Well, that's very
2 good. So okay. Well, that's terrific.
3 —: On the badges, sir, on the --
4 —: Yeah.

5 —: On the badges it had to be --

6 —: Now this is —,

7 right?

8 —: No. —.

9 —: No. —. Okay.

10 —: The -- the badge part had to

11 be before '95 because we had to wear them when we were

12 maintenance. Every maintenance person had to wear one

13 when we went in to the pot room to work --

14 —: Okay.

15 —: -- over in the casting

16 department. But when we would come out of the casting

17 department we just threw them in a box. We never did

18 anything else with them.

19 —: And just to follow up on

20 that. So what I've heard -- and I'm going to play a

21 role of sort of telling you what I've heard, and then

22 you correct me and see if I'm right or wrong. But

23 before the Spectrulite era in, say, 1986 very few

24 people wore badges. But after that quite a few people

25 wore them, right?

1 —: True.

2 —: So is that a fair statement?

3 —: Yes.

4 —: Okay. All right. Okay.

5 —: But we used the same badge

6 over and over and over.

7 —: And I guess -- right. But

8 did you or anybody else -- while we're talking about

9 that did you ever get any reports of what your

10 badge --

11 —: No. None of us did.

12 —: Do you think they were read

13 or do you think --

14 —: No. They were not read.

15 —: Okay. All right.

16 —: Hell, no. They were thrown in

17 a box and when you went back in you got another one.

18 You just picked it up out of the same box.

19 —: So -- so that episode that

20 you're talking about was repeated many times; is that

21 right?

22 —: Absolutely.

23 —: Okay.

24 —: Absolutely.

25 —: All right.

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1 —: —.

2 —: Yeah.

3 —: —. The only

4 time that I came into contact with a badge from 1989

5 until 2002 is when we did some of the thorium cleanup

6 in the pot room, and that was in '92, '93. We wore

7 badges for several days only, handed them in. And I

8 don't know really what happened to them. That might

9 be the incident where — was referring to about

10 — telling him to throw them away.

11 —: All right. Thank you, —

12 And so let me just add a footnote that as -- as you

13 all know to get our special exposure cohort which is

14 what we're trying to do and to make NIOSH therefore

15 not -- not have to do your dose reconstructions one of

16 the things that we have to show is that NIOSH does not
17 possess individual radiation monitoring data for you
18 men. And so I just want you to understand why you're
19 signing these privacy act releases.

20 So one of the things I just did was --
21 there's a company name, Landauer, L-A-N-D-A-U-R (sic)
22 that is and was for a long time one of the major
23 companies in the United States that read film badges.
24 And so I contacted Landauer and they assured me that
25 they had data on every single film badge that had ever

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1 been read by their company of all time.

2 And so they did a preliminary search
3 through their database for both people from Granite
4 City at -- at General Steel and also from Dow Madison.
5 And they couldn't find any recorded data there. So
6 they also asked could we supply them with some
7 specific people's Social Security numbers because
8 that's the way they have that information cataloged.
9 And so I did send them the other day 60 Dow names of

10 people who already had signed privacy act releases.

11 And so they will search those numbers
12 against their database, and we'll have a -- and we'll
13 have a reading very soon I'm sure as to whether there
14 were any film badge readings there. And you know, I
15 sent them 32 people from GSI, so we'll find out about
16 them as well.

17 So we're -- we're trying hard with this
18 kind of information to show NIOSH that we either did
19 or didn't have the data. If we have it, well, that's
20 the way it is. I think from everything you all have
21 said we're probably not going to turn up with very
22 much recorded data. So that's just a -- a footnote on
23 that issue.

24 So let's turn to some of the specific
25 affidavits. And before we get into that I have a

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1 statement that I wanted to read about a visit we made
2 recently to the Illinois Division of the Environmental
3 Protection Agency.

4 And the Illinois EPA has air pollution
5 permits two years apart dating back to 1973 that
6 characterize Dow, Conalco -- that's C-O-N-A-L-C-O --
7 and Spectrulite as -- as quote, secondary smelters and
8 refiners of aluminum and magnesium, end quote, only.
9 Interestingly, neither beryllium nor thorium are
10 mentioned in any of the reports on the air pollution
11 permits. The air permit application contains a field
12 that asks, name all of the sources of particulates at
13 your facility.

14 Numerous Dow workers have stated that both
15 thorium and beryllium operations at the Madison,
16 Illinois site included one on-site storage of large
17 amounts, in parenthesis, tons of both beryllium and
18 thorium; two, that both metals were extruded, milled,
19 and cast as alloys from 1951 through about 1998; and
20 three, that beryllium and thorium dust fumes were
21 abundant in the plant.

22 And the reason of course that I want to
23 enter this into the record is that it seems to me at
24 least that beryllium and thorium certainly should have
25 been included on the air permits and should have been

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1 inspected for all that period of time from 1973 up

2 through -- they had reports up through 2004.

3 All right. Affidavit 1, so what we're

4 going to do is go through individual topics and then

5 we'll open the floor up for anybody who has anything

6 to contribute about that topic. So the first

7 affidavit has to do with this: Was uranium work at

8 Dow confined to 1957 through 1960 or '61 in Building 6

9 doing extrusion and rod straightening under contract

10 with the Mallinckrodt Chemical Works?

11 And that is the official line from the

12 Corps of Engineers and the Atomic Energy Commission

13 and Department of Energy under the FUSRAP Program,

14 F-U-S-R-A-P. So how about that? Do you guys -- is

15 that a fair statement that the work with the uranium

16 only involved Building 6?

17 —: Well, I got a comment on that.

18 —: —. Uh-huh.

19 —: The thorium was stored in --

20 in the casting department behind the pot room.

21 —: Now we're talking -- we're

22 talking -- for this one I'm talking just about

23 uranium.

24 —: Just uranium.

25 —: Just uranium from

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1 Mallinckrodt.

2 —: Not the thorium itself?

3 —: No. Thorium was a completely

4 different metal.

5 —: Well, we -- it was stored all

6 over the plant.

7 —: I'm just talking about the

8 uranium from Mallinckrodt that came over.

9 —: Oh, that.

10 —: Yeah.

11 —: I don't know -- I didn't know

12 anything about that in the casting department.

13 —: Okay. All right. As far as

14 we know in the official line uranium was only
15 extruded, that's the only thing that was done with it.
16 Any --
17 —: No.
18 —: I don't know the year, but
19 — (phonetic) rolled uranium on 7 Mill.
20 —: You have to have your mike
21 and give your name for the first couple of times.
22 —: My name is —,
23 —.
24 —: All right.
25 —: We rolled -- —

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1 was a roller. I was one of the three or four helpers.
2 We also had electricians standing by, possibly a
3 millwright, and an oiler. We rolled uranium on Number
4 7 Mill in the '50s. I don't know what year it was.
5 And I know — -- well, — is dead, —is
6 dead, — (phonetic) dead. So I guess I'm
7 the only survivor. Rolling uranium in the '50s on

8 Number 7 Mill. My name is —.

9 —: —, so help me understand

10 because I -- I don't really -- I'm not sure. So

11 uranium in those days, they were trying to figure what

12 they could do with it, could they extrude it, could

13 they -- you know, just what kind of operations could

14 they perform. So in rolling it, you would roll it

15 from what form, from an ingot or a bar? I just --

16 you're going to have to explain that for me a little

17 bit.

18 —: It's not a slab, a large

19 slab. It was a small slab. I think it's about two

20 inches thick when it started out on 7 Mill which is

21 the sheet mill.

22 —: Okay.

23 —: And we pushed it through the

24 7 Mill, then carried it around. And then when it got

25 longer we put it over the top of the roll and we gave

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1 it -- those were called passes. We gave it numerous

2 passes. And it was heated. They had a -- an oven in
3 the vicinity real close to 7 Mill. It was heated
4 between. After it was heated it was -- we would make
5 eight, ten passes or more.

6 —: Now, was it a hard metal?

7 Was it --

8 —: It was a hard metal.

9 —: Did you have to make a lot of
10 passes?

11 —: I don't think I finished. It
12 was about one foot to two feet wide, a little bit
13 longer than it was wide, and it was a couple inches,
14 one to two inches thick.

15 —: Okay. And by the time it was
16 finished rolling with all those passes it was still
17 just as thick?

18 —: No. No. No. No.

19 —: It just got thinner and
20 thinner. That was the point, right?

21 —: It got thinner and thinner
22 and longer and longer.

23 —: And longer and wider. Okay.

24 —: And we even rolled it

25 sideways to get -- to make it wider than it originally

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1 was.

2 —: So you were making flat sheet

3 in other words. That was the end product.

4 —: That is correct.

5 —: And about how thick would

6 that flat sheet be? I mean, a quarter of an inch, an

7 eighth of an inch or something? I know you all

8 probably did it in thousandths but, you know, roughly.

9 —: Yeah. It was -- it was

10 probably a half inch to -- or a little bit less than a

11 half inch when it was finished.

12 —: Okay.

13 —: And we had to wear coveralls.

14 We did not wear a badge, I'm almost positive of that,

15 a -- you know --

16 —: Right.

17 —: -- for radiation. There was

18 the technicians from where -- where they were from I

19 do not know. But they had these I guess Geiger
20 counters that they carried around. And when we went
21 in they put paper all around the mill. Well, first of
22 all it was cleaned up. They put paper around. And at
23 four o'clock when we got off work we had to go to the
24 door of Number 2 shower room. We had to take off our
25 clothes outside, and we didn't have anything on except

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22

1 our shorts when we went in to the shower. And the
2 coveralls were all gathered up by whoever was in
3 charge of this and taken to some place.

4 —: Do you think the men that

5 were watching you -- were they from Dow, or could they
6 have been from Mallinckrodt?

7 —: They -- they were not --

8 there was Dow people there, Dow supervisors.

9 —: Right.

10 —: But there was not -- they

11 were from some place other than Dow.

12 —: And did -- and while you were

13 doing that rolling operation did they -- did they

14 mention that -- that the metal as uranium? That was

15 clear?

16 —: They -- we knew it was

17 uranium but we didn't know anything else about it.

18 —: But I mean did they actually

19 use -- the reason I bring that up is we know from work

20 at Mallinckrodt in another special exposure cohort

21 that at least through the -- through World War II they

22 used code names for -- for uranium and they wouldn't

23 even let the workers mention that name. But -- but at

24 this time -- so this is a little bit later now where

25 they -- they told you that the metal was uranium.

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1 —: They were -- everybody knew

2 it was uranium.

3 —: Okay.

4 —: There was -- they didn't hide

5 it at all.

6 —: Okay.

7 —: And everybody knew it. And

8 another one that was there is —. I'm pretty

9 sure he was there at the time too. He was a foreman,

10 and -- and he's still living in — or somewhere.

11 —: How would you spell his last

12 name? How would you spell his last name?

13 —: —.

14 —: Okay.

15 —: —. And my name is —

16 —.

17 —: Right.

18 —: We also rolled on that mill

19 titanium, and it was almost the same process. They

20 told us what it was, but they didn't -- and we did

21 have to put the paper on the floor, gather up all the

22 scraps. The pieces that broke off, we had to go down

23 in the pit and get every little piece because they

24 were -- the weight that they came in with they wanted

25 to go out with the same weight.

1 —: And -- and on the -- on the
2 uranium did anybody mention at that time that it was
3 radioactive?

4 —: Well, I think I sort of knew
5 it was, but I didn't -- I did not worry about it at
6 that time. While I was young, I didn't worry about
7 anything in those days.

8 —: Okay. Okay.

9 —: I guess I knew from reading
10 books on the atom bomb and stuff that uranium is
11 radioactive. Yes. I did know.

12 —: Okay. But -- but I guess
13 what I'm really after is besides your own personal
14 knowledge from your own reading. I'm interested
15 whether anybody from Dow Chemical came in and
16 announced to you all that you were working with
17 uranium and that it was radioactive and that there was
18 any risk associated with that.

19 —: We knew it was uranium, but
20 they worried more about safety glasses and -- and
21 asbestos pads on your hands was -- the uranium -- the
22 radiation part, it was just slighted over. Nobody

23 worried about it at all. The foremen and the company

24 guys didn't worry about it either.

25 —: Let me ask you this question.

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1 So once those sheets were finished now you've --

2 you've made many passes and you got them to their

3 final form. How -- how were they handled after that?

4 Were -- did people wear gloves? Did they --

5 —: Yes. We --

6 —: Just how did they move them

7 around? That's another thing. They were probably

8 pretty heavy I guess.

9 —: Yes. It was heavy. Of

10 course, they were small. They put them in wooden

11 boxes. And by then I'd gone to the shower. I don't

12 know how they moved them to a truck or what they used

13 to take them away.

14 —: Okay.

15 —: I didn't see it.

16 —: Do you remember how they came

17 in to the plant?

18 —: No. I do not.

19 —: Okay. Anybody else got any

20 comments? —.

21 —: My name is —,

22 and I worked -- worked in extrusion on a band saw. It

23 was in 1992 or '93 that we cut some metal like what

24 he's talking about, the ends off from it. It was

25 about two inches thick and a six inches square and

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26

1 probably four foot long. We cut each end off so they

2 could take it back to the rolling mill and roll it.

3 And that -- we had to -- everything had to be cleaned

4 up. All the dust and everything cleaned up to cut

5 this metal. And it was so hard you'd use five or six

6 blades trying to cut three or four pieces. And they

7 had people in there with suits on there watching us --

8 or watching me cut it. Then when we got done cutting

9 it we had to sweep it, all the chips and everything up

10 in a pile. And it all had to be put in a box, and it

11 all had to be kept together. But the machine and
12 everything had to be cleaned up and all the scrap kept
13 in this box.

14 —: —, let me -- let me ask

15 you the -- the reason I'm making such a big point of
16 asking if you are sure it was uranium was did anybody
17 tell you that or --

18 —: No.

19 —: Okay. Why do you -- well,

20 let me ask you -- that's probably the wrong way to ask

21 a question. Why do you think it was uranium?

22 —: It was -- it was so hard.

23 —: Okay.

24 —: You couldn't hardly -- you

25 just couldn't hardly cut it.

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27

1 —: But now how about thorium for

2 example, was that not hard too or --

3 —: I -- I -- I don't know what

4 it was.

5 —: Okay.

6 —: They didn't tell us nothing.

7 —: Okay.

8 —: And about two weeks later

9 after they took this metal to the rolling mill and --

10 and rolled it out to sheets something like what he was

11 talking about they brought it back over there and we

12 run it through the Lindbergh oven.

13 —: Okay.

14 —: It had to be run through the

15 heat treat. And when they took it out they had a ice

16 cream freezer truck there. And we had to get it as

17 soon as we possibly could and put it in the ice cream

18 freezer truck so they could freeze it.

19 —: A freezer, okay.

20 —: And they'd take it back to

21 the rolling mill and stretch it while it was froze.

22 —: Okay. — has a

23 comment. Let's hear from — first and then we can

24 get some follow up. —.

25 —: —, he worked on

1 the ovens over there too. He probably remembers when
2 we had that.

3 —: —, do you remember

4 working on the uranium?

5 —: My name's —.

6 What — is referring to is what came from the

7 stealth bomber from Allied Metals. And we ran it

8 special there, and we banded each one through. And

9 then when we took them -- they came out they was like

10 -- kind of like thin -- like real thin maybe strips.

11 And then they would be banded up special. Then they

12 quenched them and they'd put them in the -- excuse me

13 -- in the refrigerator when they ran them out. And

14 then they took them over to the rolling mill to

15 stretch them.

16 —: But -- but that -- so if it

17 was on the stealth bomber, that probably was not

18 uranium then, right, or do you know?

19 —: No. I don't know --

20 —: I don't know.

21 —: -- remembering what it was.

22 —: Okay.

23 —: Because they just had a

24 certain amount of time they put it though and it

25 wasn't set up like paperwork for it there.

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29

1 —: And -- and what time -- what

2 time frame are we talking about for the stealth bomber

3 work?

4 —: I don't know. That was when

5 it was just getting started there, they were making

6 it.

7 —: No. But I mean, what year

8 are we talking about?

9 —: This was 1993.

10 —: 1993. Okay. That's pretty

11 good. All right. Okay. Yeah.

12 —: I'm not sure whether the

13 --

14 —: Give your name for -- yeah.

15 Sorry to have you all do that, but we don't want you

16 to say something and not have it recorded. So --

17 —: My name is —

18 —. It's—.

19 —: Okay. Thanks.

20 —: And I'm not sure whether

21 this was uranium or not. But anyway, I was a -- a

22 roller on the finishing mills and I was assigned to 5

23 Mill with this metal. And there was five technicians

24 came in from Dow Rocky Flats, they did tell me that.

25 And I asked them what was this. And they -- they said

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30

1 well, don't you know, and I said no, I don't know.

2 They said well, it's an experiment. So they had a --

3 a slab. This was a 36-inch mill, and it was about 24

4 inches long, and it was about two inches thick.

5 And so then one fellow -- each technician

6 was assigned to a different project on it. So we

7 covered everything with paper, and they made us wear

8 coveralls and a hair net and shoes, covered our shoes.

9 And so then they instructed us to go ahead

10 and make different passes on it. So -- and on one of
11 these passes when we were getting way down one of the
12 fragments cracked and hit another employee, —
13 —. It's —. And it -- it
14 punctured him so they sent him to the hospital. And
15 then I went to see him that night, and he was in
16 isolation. And all you could do is see him through
17 the window, they wouldn't let us in. So anyway,
18 whenever we got done with the experiment --

19 —: Do you remember what hospital
20 that was? Sorry to interrupt.

21 —: Yes. That was St.
22 Elizabeth's Hospital in -- in --

23 —: St. Elizabeth's in
24 Belleville?

25 —: -- Granite City.

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□

31

1 —: In Granite City?

2 —: In Granite City. Yeah.

3 —: Okay. All right.

4 —: And so then whenever we
5 finished the experiment they had us take everything,
6 all the splinters and everything and then they rolled
7 all the paper up. And they made us first wash the
8 mill down. And they had a Geiger counter, and they
9 would keep going over it. And especially the billy
10 (phonetic) roll, we spent about two hours cleaning
11 that up. And they said Tide was the only detergent
12 that would clean it. And then whenever it got down to
13 where they wanted it then they said it's all right.
14 So then they rolled everything up and boxed it up and
15 that was it.

16 —: Listen, that's very
17 important. We -- later on we have a particular
18 affidavit that concerns Rocky Flats. So I may get you
19 to tell us a little bit more about that when that
20 comes. But that's -- that's very important. So --

21 —: But they -- they did say
22 it was -- they were from Rocky Flats and --

23 —: I understand.

24 —: -- it was five different
25 technicians, and each one was assigned to a different

□

32

1 job.

2 —: But while you're saying this

3 I -- you said something very interesting to me. You

4 said they were from Dow Rocky Flats. Now, Rocky

5 Flats, I'm sure everybody knows, was -- was and is a

6 great big Department of Energy nuclear weapons site.

7 And what the question that's relevant for us is did

8 Dow in Madison -- Dow Chemical have a contract -- a

9 standing contract with Rocky Flats. So when you say

10 Dow Rocky Flats, do you think that there were Dow

11 people at Rocky Flats?

12 —: I think they were.

13 —: Okay. All right. All right.

14 And so they were coming back to the Madison site

15 because of your rolling mill? Is that --

16 —: That's correct.

17 —: Okay. All right. Fine. All

18 right.

19 —: And they brought the

20 material in.

21 —: All right. That's good. All

22 right. —, —.

23 —: —. Go back to the

24 uranium on the rod straightening.

25 —: Yes.

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33

1 —: They shipped a lot of rods

2 over into the rolling mill and put them on the ovens

3 over there to be straightened.

4 —: Okay.

5 —: I started over there in the

6 rolling mill in '62. I was working with —

7 (phonetic) and I can't think of the other one's name

8 right offhand. But they were talking about running

9 the rods for straightening them.

10 —: Uh-huh.

11 —: That was uranium. And that

12 was on the flattening ovens in the -- in the rolling

13 mill.

14 —: Now, let me ask you this.

15 When -- when they came and did the cleanup in 2000 --

16 1999/2000 there was some question about did they

17 really survey all the areas in which uranium was used.

18 So I guess the question is so the -- the -- you know,

19 so they know that they extruded the uranium.

20 —: Uh-huh.

21 —: But they also straightened

22 the rods. Now, where -- where was the straightening

23 work done, what building?

24 —: Well, some of it was in

25 extrusion and -- but some of it went to the rolling

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□

34

1 mill.

2 —: In what building was it? I

3 want you to --

4 —: In 6 Building.

5 —: 6 Building for the extrusion,

6 right?

7 —: 6 Building extrusion.

8 —: All right. But how about the
9 straightening operations, where was that?
10 —: When they put it on the ovens
11 it was in 5 Building.
12 —: 5 Building?
13 —: Yeah.
14 —: Well, I want you all to know
15 now here's -- here's why this kind of information is
16 so important. In none, zero of the cleanup documents
17 is there any mention of doing any work inspecting or
18 monitoring the 5 Building. So when they went in there
19 they inspected the 4 Building, but they absolutely did
20 not go into 5. And so if we can give testimony that
21 that -- that, you know, it was processed in other
22 areas, that's -- that's -- they admit that the
23 straightening was done, they know that. But
24 apparently they didn't get it straight where it was
25 done. So that's extremely important. —, what --

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□

1 —: —. I think

2 you answered or you referred to what I was about to

3 say. I think probably a moot point, but the cleanup

4 took place only in the extrusion and part of 4

5 Building --

6 —: Right.

7 —: -- which was immediately

8 outside of the extrusion department. No other cleanup

9 work was done in any other part of the plant.

10 —: Right. That's right. That's

11 -- that's very important. Okay. I'm sorry. ---

12 —

13 —: My name is —,

14 —. It was common knowledge in the rolling

15 mill at least Rocky Flats was Dow Chemical. Dow

16 Chemical had -- — could tell you the name. One of

17 our Dow people who went out there and he liked it so

18 much in Colorado he stayed there, a colored guy from

19 —, —. I know you'll come up with his

20 name.

21 —: —.

22 —: Oh, okay.

23 —: —, correct. Anyhow, he

24 liked it so much he stayed there and he didn't even

25 come back to —. But Dow Chemical and Rocky

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36

1 Flats were the same outfit.

2 —: That -- that's --

3 —: Everybody thought that Dow

4 Chemical and Rocky Flats were the same.

5 —: Okay. That's very important

6 then. Well, just as a comment we're going to have to

7 find that contract and -- but knowing that it existed

8 makes it a lot easier. So yeah. Okay. —, yes.

9 —: — was transferred out

10 there. He got a transfer to go out to Rocky Flats

11 when he left the shear crew. I worked with him that

12 last week he worked there.

13 —: So when you -- but -- but

14 that's important too. When you say a transfer, that

15 means a transfer within Dow.

16 —: Yes.

17 —: An intracompany transfer.

18 —: Yes. I agree.

19 —: So that was wasn't taking a
20 new job. That was a -- just transfer like to another
21 department except it happened to be in Colorado at
22 another Dow site.

23 —: Yes.

24 —: Okay. That's very important.

25 So I think we do need to get this on the record. So

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37

1 one way to put that would be actually Dow was -- I
2 mean, part of Dow was acting as a DOE site. All of
3 Rocky Flats was a Department of Energy nuclear weapons
4 site, no exceptions. I mean, that's true. Okay.

5 Well, that's very interesting. All right.

6 Like I say, there's one more item about
7 that which if you think of other things, we can come
8 back to.

9 The second affidavit has to do with -- now
10 we're switching gears away from uranium and we want to
11 talk about thorium which is really the metal that you
12 all worked with for a very long time over there. And

13 -- and what this gets at is where the thorium was
14 stored and worked on among the different Dow plant
15 buildings.

16 —: My name is —,

17 —.

18 —: Okay, —.

19 —: And the -- the thorium was

20 stored in the casting -- it was brought in on the dock
21 in casting and stored in the back part of the pot room
22 in the storage area.

23 —: All right. Now, you want

24 give the buildings when you're mentioning that.

25 —: I don't know the building

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38

1 number.

2 —: Okay.

3 —: Seven.

4 —: Was that 7?

5 —: Castings was 7?

6 —: Casting, I -- I don't know.

7 —: Seven and 8.

8 —: Seven and 8.

9 —: And they -- it was right on

10 the dock and we brought it in the stored it there.

11 And as a crew leader I brought the thorium into the

12 pot room for charging it.

13 —: Okay.

14 —: So it was always stored back

15 in there. Plus there was scrap mixed in there too

16 from the thorium that was cast in the rolling mill.

17 They'd mark it with a marking pen HM 21 and HK 31.

18 And we used it right out of there and charged it. As

19 a matter of fact, we charged thorium back in with

20 other metals just to get rid of it. We'd be on AZ 31B

21 or ZK 60, they'd -- they'd mix it in with that and

22 charge it just to get rid of it.

23 —: Okay. So --

24 —: So it was --

25 —: So just -- I've got to -- you

1 know, this is elementary for you guys, but I need to
2 understand it. The pot room was in which -- which
3 building?

4 —: It's -- it was 7. It was
5 attached to it.

6 —: Okay. All in 7?

7 —: Yeah. The pot room was kind
8 of separate from the warehouse.

9 —: Okay.

10 —: And then the dock was down
11 there. And then they had the aluminum unit in the --
12 in the south end.

13 —: Okay.

14 —: But there was --

15 —: So -- so just so I'm sure I

16 understood what you said. So you're saying the HM and
17 HK thorium metals, those alloys --

18 —: Right.

19 —: -- that sometimes they were
20 mixed in --

21 —: They were mixed.

22 —: -- with the aluminum alloys.

23 —: These other guys that worked

24 could tell you that also.

25 —: Okay. All right.

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40

1 —: Yeah. And but I -- I worked

2 with the thorium from the first time they run it to

3 the last time they ran it when I retired in '90. And

4 during those times we ran it we had just bib overalls

5 and things like that with the thorium. We didn't have

6 anything -- any special equipment at all.

7 —: All right.

8 —: And the first few -- first few

9 times that we wore it we took our clothes off. The

10 guys that used it with the thorium threw them in the

11 baskets in the warehouse mixed with the people in the

12 warehouse. And I guess when Spectrulite came in is

13 the first time we started wearing the badges. Up to

14 that time we never wore the badges. But then we --

15 then we separated. We had a certain hamper we put our

16 clothes in from the pot room, and they were bib

17 overalls with the denim shirts.

18 —: Okay. Okay. So—.

19 —: On this thorium my son had a

20 -- a project for Boy Scouts where he had to put all

21 different kinds of metal together. I went over to

22 alloy, and I've never -- I've only been to alloy a

23 couple of times in my life. One time I went over and

24 I got to the bin where he's talking about and there

25 was piles. It was segregated with -- with little

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41

1 fences. And I walked in there and I picked up a piece

2 of thorium. I still have it at home. I picked up a

3 piece of manganese, I still have it at home but I

4 can't quite find it because I wanted to bring it here.

5 And I had it on my display.

6 And I understand alloy would take a coal

7 shovel and shovel a bucket. I picture a small water

8 bucket. And they would carry it to their pots and mix

9 it in with the -- with the magnesium. I also

10 understand that at night when it was dark they would

11 throw this -- it's the size of a small chocolate

12 Easter egg, that's pretty close to the size. It's

13 gray in color. And they would throw it across the

14 floor just to see the sparks flying.

15 —: Now, this was the manganese

16 or thorium?

17 —: No. This was the thorium.

18 And one guy -- — could tell you his name -- got some

19 of it on his arm, and when he died he had a scar on

20 his arm here. What's the name, —?

21 —: —.

22 —: —. And he worked

23 at the --

24 —: And how would you spell that

25 last name? Just a second.

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□

42

1 —: — is —.

2 —, his first name was —, —.

3 —: Now, —, when he got

4 his thorium -- I mean, it couldn't have stayed on his

5 skin very long, did it?

6 —: Yeah. 30 years or so.

7 —: It stayed on his skin?

8 —: Huh?

9 —: But I mean the metal itself.

10 It could --

11 —: Oh, no, no.

12 —: It just bounced off his arm?

13 —: It burned his arm.

14 —: It burned his arm?

15 —: It burned his arm.

16 —: Okay.

17 —: And he went to —

18 (phonetic), and — told him that ain't

19 nothing. But when he died 30 years later he still had

20 it.

21 —: Now, this -- this must have

22 been hot thorium though, right?

23 —: I think it was warm --

24 —: You wouldn't get burned --

25 —: -- not hot. But I think it

1 was --

2 —: It was splashing out of the

3 pots.

4 —: From the pots, okay.

5 —: And these alloy guys would

6 know more about it than I know.

7 —: But I mean, as -- as a

8 physician, you know, the only burn that would show up

9 years later would be a third degree burn. So it had

10 to be a severe burn that went all the way through his

11 skin. Then you would have a scar that would last

12 forever.

13 —: Well, he told -- he's the one

14 that discovered, you know, that they had this program

15 or he's the first one that told me.

16 —: Okay.

17 —: He went to — in the

18 first aid and — said it's nothing so it

19 couldn't have been terrible.

20 —: Uh-huh.

21 —: But — said just

22 forget about it.

23 —: Uh-huh.

24 —: And he didn't forget about

25 it.

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44

1 —: One of the things you

2 mentioned that's very interesting and a really

3 important thing, you mentioned that some of the pieces

4 were about the size of an Easter egg.

5 —: About that big. Smaller than

6 that though. But these guys in alloy -- it's about

7 that big.

8 —: We'll talk about that.

9 —: And I could give you their

10 name.

11 —: Did anybody ever call that a

12 pellet?

13 —: It would be close to a

14 pellet, but --

15 —: But I mean, was that word --

16 did you ever hear that word used to describe it?

17 —: No. You'd better ask these

18 alloy guys. I don't really know.

19 —: That -- that's okay.

20 —: It's common knowledge.

21 —: Okay. My name's —.

22 Okay. On the thorium that he's talking about I was

23 burnt with thorium metal in 1962, somewhere in there.

24 —: Okay. Uh-huh.

25 —: And it -- it was burned on my

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□

45

1 foot. It went down my boot.

2 —: Uh-huh.

3 —: And the doctor at first aid,

4 it was just a blister. Within three days it had ate

5 through like a quarter of an inch of my foot.

6 —: Wow.

7 —: And they sent me to St. Louis,

8 and I had skin grafted completely on my foot.

9 —: Now again, was this -- is

10 this a kind of hot, molten stuff?

11 —: This is like 12 to 1,300

12 degree metal.

13 —: Oh, boy. Okay. All right.

14 —: And then the other part of the

15 thorium besides being stored we kept it outside. It

16 was a waste dross or a sludge.

17 —: Right. Okay. Well, that's

18 what -- that's what really this is getting at. So it

19 was used in Building 7. And now, the extrusion

20 presses were in what building?

21 —: Six.

22 —: Six.

23 —: Extrusion, was that 10? I

24 don't know.

25 —: I think they were in 6. Is

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□

1 that correct?

2 —: Extrusion's in 6

3 Building.

4 —: Six.

5 —: All I know is 5.

6 —: Okay. So it was used 7 and

7 6. Now, you're talking about a different site. Now

8 you're talking about --

9 —: Outside.

10 —: -- outside, right?

11 —: Yeah.

12 —: And I've heard that as being

13 near the castings department; is that correct?

14 —: Pretty far out. It was at the

15 end of that property out there.

16 —: Okay. It was -- and I've

17 also heard that area referred to as a 40-acre plot.

18 But I mean, it was a specific part of the grounds.

19 —: They had signs out there that

20 said radiation.

21 —: Okay. And -- and what's

22 interesting about that area is apparently after Dow

23 Chemical closed and leased the property to

24 Phelps-Dodge and even to Conalco and so forth

25 apparently up -- all that sludge or that dross was

□

47

1 maintained out there until 1992. And then a company
2 called ERG or The Environmental Restoration Group came
3 and cleaned it up. So that -- that's what you're
4 talking about, right?

5 —: Yeah. But they used to send
6 people out there every year or so to go through it and
7 pick the metal out of it --

8 —: Separate it.

9 —: Oh, my goodness.

10 —: -- and we separate it. And
11 we'd separate that and dig the metal out of it and put
12 it in boxes.

13 —: By -- with your bear hands?

14 —: Hell, yeah. Pick it up.

15 —: Well, yeah. You pick it up,
16 but we had gloves.

17 —: Well, let's make sure we get
18 that down. You said hell, yes, right?

19 —: Yes.

20 —: Just to be clear.
21 —: I'm sorry.
22 —: Okay. That's good.
23 —: Yes. We did pick it up out
24 there and load it in boxes --
25 —: Now, I must stop you.

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48

1 —: -- and then charge it.
2 —: And -- and at no time did
3 anybody from Dow tell you that that was dangerous to
4 do that?
5 —: No.
6 —: Shouldn't -- shouldn't do it?
7 Okay.
8 —: That was in the '60s.
9 —: Okay.
10 COURT REPORTER: You guys are over --
11 talking over each other quite a bit, so I need you to
12 -- one at a time please so I can get everybody down.
13 —: So that was —, right?

14 COURT REPORTER: Why don't you ask the
15 question again.

16 —: All right. So -- yeah. So
17 we want to get -- make sure she got that straight. So
18 you're talking about thorium dross or a sludge some
19 people have called it.

20 —: Sludge.

21 —: And so it's taken outside,
22 it's buried. And then every year as I understand it
23 somebody or people would go out there, look through
24 that, and pick out the -- the pieces of thorium metal
25 that were large enough and then collect that and bring

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□

49

1 it back into the plant. Is that the basic --

2 —: Yes.

3 —: -- gist of your testimony?

4 Okay. And -- and —, you -- you would agree

5 with that idea; is that right? Do you have anything
6 to add?

7 —: About the sludge you mean?

8 —: Yes. Uh-huh.

9 —: Yes, I would. Yeah. But they

10 came in and cleaned that up in a certain year. What

11 was it?

12 —: The '90s.

13 —: In '90?

14 —: 1992 is the record that I

15 have.

16 —: They took -- they worked two

17 years of cleaning that up.

18 —: Right.

19 —: And I don't know what they did

20 with it after they --

21 —: Well, they took -- they --

22 they collected apparently a thousand railroad cars

23 full and took it out to Envirocare in -- in Utah.

24 —: Another thing, it's not clear

25 to some about all those pots we had ten, 6,000 pound

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□

1 pots in each unit.

2 —: Right.

3 —: We had two units of slab and
4 the billet. And they heated up most all of them to
5 1,300 degrees before you alloyed the thorium into it.

6 —: Right.

7 —: Now, want you to go into the
8 what the thorium did, how we --

9 —: No. Not right now. We'll go
10 into it in a minute.

11 —: All right.

12 —: But that's fine.

13 —: But I agree with him what he
14 said about that because we didn't get out to the dump.
15 I didn't be assigned out there. So I -- I agree with
16 that.

17 —: All right. So what I -- what
18 I want to ask next is so -- so we've got the outside
19 area, we've got Building 7, Building 6. And then I've
20 also heard that thorium was stored. And I believe
21 some people have said it was stored in barrels on the
22 dock and in the warehouse and some people even
23 mentioned an oven.

24 —: Right. They brought it in --

25 —: Can you fill us in on that?

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51

1 —: They brought it in in the

2 barrels.

3 —: Now this is — again.

4 —: They brought it in the

5 barrels. —. They brought it in

6 the dock, then they brought to store it in -- in the

7 pot room there's a storage area behind the pot room

8 for it.

9 —: In -- in Building 7?

10 —: And the -- the barrels was --

11 one of them's about 14 inches wide and maybe about

12 three or four foot high. And the thorium come in bars

13 at that time.

14 —: Okay.

15 —: It was notched bars like maybe

16 six, eight notches on the bar about, what, maybe --

17 they were real -- they were real light to a -- to a

18 bar.

19 —: No. To a barrel.
20 —: To a barrel it probably was
21 because they weighed four or five pounds. And we'd --
22 we'd weight it on the scale and then put it in the
23 pots to alloy it up within specifications.
24 —: Okay.
25 —: But then later on we got it in

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□

52

1 pellets form. And I don't recall how that came in
2 unless it came -- probably came in in barrels because
3 the barrels were all marked danger, radiation on all
4 the barrels.
5 —: Oh, they were?
6 —: Yes.
7 —: Okay.
8 —: And at the time when we -- the
9 first time we ran it I questioned the supervisor, I
10 don't remember who it was at the time. And I said,
11 you know, because I was in -- I went through Hiroshima
12 certainly a few months after the bomb was dropped, and

13 I know what radiation can do to you. And they son,
14 you got to --you don't have to worry about it, you'd
15 have to handle this a thousand years before it will
16 ever affect you, it won't do anything for you. And
17 that was the answer I got. And we didn't -- you know,
18 that was it.

19 —: Which I think this is a
20 little bit out of order, but I need to ask it while
21 you're on a roll. Did anybody mention where that
22 thorium came from?

23 —: The one barrel, the big one I
24 know came from England.

25 -e: I think you had mentioned

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□

1 that at the previous meeting.

2 —: Yeah. That -- now, the
3 pellets I don't -- I'm not -- don't recall where they
4 come from. But those bars, they came from England.

5 —: There is a big nuclear
6 processing plant in England called Sellafield. Did

7 anybody mention that word?

8 —: That could have possibly --

9 the pellets could have possibly came from there also.

10 —: Well, I mean but -- but

11 somewhere in England?

12 —: Yeah.

13 —: Okay. All right.

14 —: —, do you have

15 anything?

16 —: Yeah. —.

17 —: Back in the '80s I was

18 working in the yard crew down there at the -- for --

19 at Spectrulite, and we'd go out there and cut weeds

20 around the -- this dump that they're talking about out

21 there. If we happened to be out there when it would

22 rain there would be smoke coming up from the ground.

23 —: That's the dross burning.

24 COURT REPORTER: Sorry.

25 —: That's the --

1 —: The dross.

2 —: The dross.

3 —: Dross is D-R-O-S-S. Right.

4 —: That doesn't necessarily mean

5 it's thorium. That could be any metals.

6 —: Okay. And why would -- just

7 for a novice why would rain start something to burn?

8 —: It would disintegrate it.

9 —: It would disintegrate it.

10 Okay. All right. All right. —, about --

11 we're talking about thorium locations now.

12 —: I was going back with where it

13 came -- some of it came from.

14 —: Oh, good. That's fine.

15 Yeah.

16 —: They had some barrels that had

17 Midland -- Midland, Texas on it --

18 —: Okay.

19 —: -- from a Dow plant down

20 there. And another on --

21 —: I just wanted to mention I

22 visited the Dow plant. I went to Texas City

23 Chemicals, and Midland and Texas City are right next
24 to each other. So that's still a huge Dow Chemical
25 plant, the same place right now.

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55

1 —: And as far as thorium used in
2 what buildings, there isn't a building down there that
3 it didn't get into.

4 —: Okay.

5 —: 1 Building they tested from
6 the spec lab. 2 Building, it was stored out there for
7 a while, 5, 9, 10, 6, 7, and 8. There isn't a --
8 there is not a building there that isn't -- you know,
9 that it wasn't stored in --

10 —: That's very important.

11 —: -- at one time or -- or
12 produced in.

13 —: Okay.

14 —: Like in the mill -- the
15 rolling mill they rolled it. And every -- in between
16 each rolls they had to sand it down with all the dust

17 blowing all over the place. And then you stencil it

18 and everything else and ship it.

19 —: Okay.

20 —: So that's where that was at.

21 —: That's terrific. I mean,

22 that's very important.

23 —: —.

24 —: —. The

25 thorium barrels that came into the alloy department

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56

1 had on them also that not to have undeveloped photo

2 film within 36 feet of the barrel. That was written

3 on the barrel.

4 —: 36 feet.

5 —: I think it said 36 feet.

6 —: .Wow.

7 —: I may be a little bit off on

8 that, but it was pretty close.

9 —: Okay. —, did you have a

10 comment?

11 —: —. —,

12 you said undeveloped film?

13 —: Uh-huh.

14 —: What was the film possibly

15 in that area for?

16 —: We didn't have it. It was

17 just a warning that was on the barrel. We weren't

18 supposed to have cameras in there or anything like

19 that.

20 —: Okay. So no x-ray film

21 or --

22 —: They were just saying it --

23 that it would expose x-ray film at a distance of 36

24 feet. So --

25 —: That's what I was trying to

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57

1 figure out if --

2 —: It didn't specify x-ray film.

3 It just said undeveloped film.

4 —: Film, photographing film.

5 —: I was simply trying to find

6 if there was x-ray film on the site.

7 —: Well, that's excellent. I

8 mean, so that's really what I was getting at. It was

9 everywhere basically.

10 —: Every -- every building.

11 —: Every building. Okay.

12 —: —.

13 —: Yes, sir.

14 —: —. —

15 had a comment maybe about film.

16 —: —. Back in the --

17 I don't know if it was the '80s or so they brought a

18 trailer in next to the building and they kept it

19 outside, the trailer. And they had x-ray machine

20 stuff because we would take pieces of the metal that

21 would be cut off and take it out and put it in front

22 of this trailer. And then they'd do whatever they did

23 with it. But we never did go in the trailer.

24 —: Uh-huh.

25 —: And I don't know whose trailer

1 it was. It was some kind of x-ray trailer.

2 —: Let me mention at --

3 —: —.

4 —: -- at General Steel they --

5 let me just finish with this. Did you ever notice the

6 name on the trailer?

7 —: No, sir. I didn't.

8 —: Okay. —.

9 —: —. I -- I

10 want to expand on that just a little bit. That

11 trailer was brought in from —, a

12 radiographer I think from —, Illinois. I'm

13 not at all sure, but down in that area somewhere. And

14 he had a cobalt source in the back of that trailer. I

15 think it was maybe a -- a very small pill, four or

16 five Curie. And he would x-ray primarily the ZK

17 metal. When we made the ZK billets and every test

18 slice that was taken off of there he would x-ray. And

19 we -- we'd test -- we took a test slice on I think on

20 every seven billets if I'm not mistaken. They were

21 about one inch, an inch an a quarter thick. And they

22 were taken to him, and he would x-ray them for
23 impurities.

24 He did not have any identifying marks on
25 his trailer. The trailer had a film developer and a

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59

1 -- and a small cobalt source in it. And he would
2 develop the film so we would have immediate knowledge
3 of whether the metal was getting dirty or not.

4 —: So -- so that was in some
5 time during the 1980s, is that accurate would you say

6 or --

7 —: Well, he was -- from the
8 time that I began working there until the time that I
9 retired he was in there every time we ran ZK. And we
10 ran ZK -- probably every two and a half to three
11 months we would run an order of ZK. And he was there
12 prior to my coming in there. I don't know when he
13 started coming in, but I knew the gentleman. I knew
14 him from the 1960s when he worked for St. Louis
15 Testing Labs.

16 —: Okay. So -- so that was a

17 routine procedure then for ZK alloy?

18 —: That's correct.

19 —: And -- and ZK was thorium,

20 right? Zinc? Zirconium?

21 —: Zirconium.

22 —: Was that the Z --

23 —: Right.

24 —: -- part? And the K was the

25 thorium?

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□

60

1 —: I don't know what the K

2 was. Was the K thorium?

3 —: What's that?

4 —: We're trying to --

5 —: The K in ZK, was it

6 thorium?

7 —: Oh, no. That's -- I just was

8 going to say this wasn't a thorium alloy, ZK.

9 —: No. It was zirconium.

10 —: What's the K stand for?

11 —: Huh?

12 —: What does the K --

13 —: The K?

14 —: -- stand for in that alloy?

15 If Z is for zirconium, what's the K for?

16 —: I still don't -- don't follow

17 you.

18 —: ZK, what did the K stand for?

19 —: Oh, zinc.

20 —: No. The Z was for zinc. K

21 was for hardener, right?

22 —: The K was for hardener.

23 Right.

24 —: For hardener?

25 —: Yeah.

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□

1 —: Okay.

2 —: I think H is thorium.

3 —: H is the thorium. Okay.

4 —: H is thorium because HK is for

5 30 percent thorium and one percent -- no. Three

6 percent thorium -- my mind's getting bad.

7 —: HK 31, would that be three

8 percent thorium.

9 —: Three percent thorium and one

10 percent zirconium.

11 —: Okay. Right. All right. So

12 did --

13 —: HM was 21, thorium and

14 manganese.

15 —: That was two percent --

16 —: Two percent thorium and one

17 percent manganese.

18 —: Manganese. Okay. Very good.

19 Excellent. Which gets me to -- I think we've been

20 over some of this for thorium. But Affidavit Number 3

21 talks about what forms of thorium and beryllium were

22 used at Dow. And I think we've -- for thorium we've

23 certainly mentioned that there were at least pellets

24 and billets. I'm not sure about the slabs.

25 But maybe we could talk a little bit about

□

62

1 thorium, other things. But we haven't talked at all
2 about the forms of beryllium metals. So we really
3 need to get that as well on the record. So why don't
4 we -- why don't we start first with anybody who knows
5 about beryllium.

6 —: — -- —,

7 —. Now, the beryllium was used on PE and

8 AZ 61 I think. Am I sure about that?

9 —: Yeah.

10 —: And AZ 61, what -- what --

11 that's an aluminum?

12 —: That's six percent beryllium.

13 It'd be six percent beryllium, wouldn't it? I'm not

14 quite sure. It's been a long time. I've been retired

15 15 years.

16 —: I understand.

17 —: And -- and on the PE we used

18 -- that was a blend alloy. I mean, a pure mag and

19 then we'd blend it in. But we used a lot of

20 beryllium. That beryllium came in 55-gallon drums.

21 And what did -- they weighed about 25 pounds a piece,

22 didn't they? Five pounds a piece?

23 —: Five maybe.

24 —: And we used a -- they'd use

25 more beryllium on that aluminum unit than we used in

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□

63

1 the mag. But we used an awful lot in the mag floor.

2 I forget the amount.

3 —: —, tell -- tell me

4 about the -- the beryllium though. What -- I know it

5 was five pounds, but what shape was it?

6 —: What? I can't -- see, I can't

7 hear out of one ear.

8 —: What shape was the beryllium?

9 —: It was just a bar about that

10 long and --

11 —: A bar.

12 —: -- kind of rounded on the top

13 --

14 —: Okay.

15 —: -- and flat on the bottom.

16 —: Okay.

17 —: Yeah. And we -- sometimes

18 we'd put 60 or 70 pounds of beryllium in a pot and

19 it'd run for eight hours straight for seven days a

20 week once you got the casting going.

21 —: Okay. So -- so for beryllium

22 so far we've got a bar. Were there any other kinds of

23 beryllium that anybody saw?

24 —: It was all in a bar form,

25 metal form. Solid, its all in a solid form that we

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64

1 used.

2 —: Okay. And this isn't exactly

3 in this affidavit, but I guess I -- I need to develop

4 some more information about beryllium. From your

5 guys' point of view from who made the alloys what --

6 what -- what property of beryllium was important? In

7 other words, what was it doing for the alloy? Did it

8 make it softer, harder, or I don't know, stronger?

9 What --

10 —: No. The zirconium makes it

11 shinier. Beryllium did too. Yeah. Well, I got in

12 trouble one time because I brought zirconium instead

13 of beryllium, and they cast a slab on it. So -- so I

14 know that was wrong. I -- it's -- it was a hardener

15 more than anything.

16 —: It -- beryllium was a

17 hardener?

18 —: Beryllium was a harder. Yes.

19 Uh-huh.

20 —: Okay. All right. Very good.

21 So I -- I guess I'm not sure. I want to make sure we

22 get on the record how frequently. Let's just talk

23 about that a little bit longer. So from your point of

24 view, —, the beryllium, how long was it used

25 at Dow? In other words, over what span of time?

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1 —: Well, I remember using

2 beryllium from when I started and the 36 years I was

3 there.

4 —: All right. The whole time?

5 —: The whole time. Yes.

6 —: Okay.

7 —: And you know, it's hard to

8 determine how many -- how much we used over a period

9 of 30-some years.

10 —: But I mean it was in use

11 pretty regularly --

12 —: Right.

13 —: -- off and on the whole time.

14 —: When you run those -- well, we

15 didn't run the same alloy all the time.

16 —: Yeah.

17 —: But sometime we'd run it a

18 month or two at a time.

19 —: Okay.

20 —: Depends on how much orders

21 they had for it.

22 —: Uh-huh. Well, I -- I mean

23 that -- that's -- that's very important. And do we

24 know anything about where the beryllium came from?

25 —: I have no idea. Maybe — can

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66

1 answer that.

2 —: —.

3 —: —. We used beryllium

4 all the time on the aluminum unit.

5 —: Okay.

6 —: From the time it started to

7 the time they probably shut the unit down between five

8 to ten pounds per furnace.

9 —: Uh-huh.

10 —: And it -- the cans always said

11 it came from England.

12 —: From England. Okay.

13 —: And it was like 50-pound cans,

14 and it was five-pound bars. And it was stored in the

15 warehouse, but most of the time it just stayed on the

16 units.

17 —: And -- and where in the

18 warehouse -- what -- where was the warehouse? Was it

19 in a --

20 —: It was --

21 —: Was it a stand-alone

22 building, or was it a named building.

23 —: It was just a wide open

24 building.

25 —: Connected.

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67

1 —: Okay.

2 —: It connected the casting

3 department, the pot room, and the aluminum unit in

4 that one building.

5 —: And the beryllium that was in

6 the buckets, was -- that was a powder, or what was the

7 form?

8 —: The beryllium was five pound

9 bars in like a barrel.

10 —: But didn't you say there was

11 some also in buckets? Maybe I didn't hear. Just

12 bars?

13 —: Just bars, that's all we ever
14 used.
15 —: Okay. All right. Good.
16 —: And they would cut this a lot
17 of times with a saw.
18 —: Okay.
19 —: Make half pieces out of them.
20 —: Okay. Now, were the bars --
21 so the bars were melted in the pot room as well,
22 right? So --
23 —: Yes.
24 —: So presume -- and this is
25 important so maybe this is a good time to do that.

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68

1 But in the pot room when that stuff was all being
2 added, I mean, I've heard that for thorium as well --
3 well, beryllium too. Would it -- is that metal --
4 does it catch fire, beryllium?
5 —: No. It just --
6 —: But thorium -- thorium would;

7 is that right?

8 —: It's just really hard to melt

9 in.

10 —: Okay.

11 —: And it didn't spark or

12 anything once it would hit metal.

13 —: It didn't. Okay.

14 —: It just melted. It was hard

15 to melt.

16 —: Okay. But once it got in

17 there it didn't do anything in particular about --

18 okay.

19 —: No.

20 —: Would the pot room in general

21 -- this is a good time to talk about this. What was

22 it like in there? Were there fumes, smoke?

23 —: It was so smokey in there you

24 couldn't see the end of this table.

25 —: Well, paint me a picture for

1 it. How -- how bad?

2 —: Okay. When you walked in you

3 think my -- my goodness, I want out of here the smoke

4 would be so bad. And when they alloy a pot --

5 —: Uh-huh.

6 —: -- that's putting the

7 materials into the pot --

8 —: Right.

9 —: -- it would just be smokey and

10 it stayed in there because the exhaust fans couldn't

11 take it out --

12 —: Okay.

13 —: -- quick enough.

14 —: Now, were you all wearing any

15 kind of a mask, respirator, anything?

16 —: No.

17 —: Okay. And -- and typically

18 let's say you were in the pot room on a shift, how

19 long would you be working in there with that sort of

20 smokey conditions?

21 —: Eight hours.

22 —: The whole time?

23 —: Eight hours or either 16

24 hours.

25 —: Eight to 16 hours?

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70

1 —: Yes.

2 —: All right.

3 —: If you worked overtime, it was

4 16.

5 —: —.

6 —: —. The -- the process

7 for melting the zirconium -- or the thorium in the

8 metal you had to heat up a basket in the metal first.

9 —: Uh-huh.

10 —: And there was a stirrer that

11 stirred the metal. Then you had to have this thorium

12 ready to dump in that hot basket. And you had to get

13 it under the metal as fast as you could. If you

14 didn't, it would ignite and fuse into one lump and it

15 was absolutely useless. It had to dissolve into the

16 metal. It didn't melt, it just dissolved.

17 —: Okay.
18 —: So you were over the top of
19 that pot.
20 —: So you were looking at it to
21 see --
22 —: You were looking down this hot
23 basket and dumping the thorium in it --
24 —: Right.
25 —: -- at the time. And then you

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71

1 had to get it under as fast as you could.
2 —: Right.
3 —: —.
4 —: Yes, —.
5 —: —. That's
6 much the same process as the zirconium.
7 —: Right. Right.
8 —: I want to throw -- throw
9 something at those three guys in particular and see if
10 it's -- if it sparks a memory or something. I seem to

11 remember KB Alloys, Incorporated, capital K, capital

12 B. Does that mean anything to you guys? Was that

13 where the beryllium came from? Does that?

14 —: I happen to remember is that

15 said it came from overseas because if we ran out, it

16 would take a month to two months to get it.

17 —: I may be having a pipe

18 dream. But I think if we can look up, —, if

19 there's anything like KB Alloys, Incorporated.

20 —: Definitely we will.

21 —: That might be one of the

22 sources of this.

23 —: Sure. We'll look that up.

24 We certainly will look that up. Okay. Any last

25 thoughts about -- I think we've been through the

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72

1 thorium --

2 —: —

3 —: -- the physical forms of it.

4 —.

5 —: —. He was talking
6 about the smoke in the pot room. At times like high
7 humidity the smoke would be so bad it'd go all the way
8 over into the rolling mill. That's on the other side
9 of the plant. And they'd actually have to go over
10 there and shut them down so they could see what they
11 were doing in the rolling mill. Because when they
12 were rolling -- loading the Two Age oven they couldn't
13 see. The crane men putting the coils on, he couldn't
14 see where he was putting them. That's how bad that
15 smoke got at times. It was shut down many a times
16 down there.
17 —: —,
18 —, is a physician who helped the people at
19 The University of Iowa at the Army Ammunition plant
20 and at the Ames Laboratory. And he's heard your
21 description, and he was extremely impressed. He has a
22 feeling that there were -- there are workers at Dow
23 who have interstitial lung disease based on the
24 thorium exposure. And it's particularly the thorium
25 -- thorium gives off a gas very much like radon called

1 thoron. And that gas is -- is very toxic to the
2 lungs. So -- and -- and it's that kind of condition
3 of course that would promote that sort of thing. So
4 — is working with six of the people from Dow
5 right now to try to investigate that and learn more
6 about that process. So he'll be very interested in
7 that information. Okay. This is just for the record.
8 What years was thorium worked on at Dow? What would
9 be the earliest date that you all can remember and
10 sort of the -- the end date if -- if -- when -- when
11 that work stopped?
12 —: —. What I could
13 figure it started in '51, and it ended in about '98 is
14 when they had the last slabs over in the mill to be
15 processed.
16 —: That actually coincides
17 perfectly there. We do have some information from Dow
18 Midland that their thorium license was being
19 decommissioned in 1998. So now I don't know.
20 Spectrulite and — also got a thorium license
21 in 1986. And I'm not sure which license that that was

22 -- that work was continued on. But -- so 1951 to
23 1998. Anybody got a different idea about that or does
24 that sound about right?
25 —: That may have been when they

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74

1 stopped making it, but the slabs that they had ran sat
2 back in the warehouse for a long time until they cut
3 it up and ran it through. My name is —.
4 And they ran it through with different types of metal
5 just to get rid of it.
6 —: You mean after 1998?
7 —: Yes.
8 —: Okay. And -- and take us as
9 far forward as we can that'd go.
10 —: Well, I retired in '99, so I
11 don't know.
12 —: '99. Okay.
13 —: But I think we went through
14 most of it after -- afterwards.
15 —: Okay. All right.

16 —: —.

17 —: Yeah. So '99.

18 —: —.

19 —: Yeah.

20 —: Somewhere in the middle

21 '90s, '96, '97, '98, along in that era we -- we did a
22 cleanup of the thorium scrap and sludge that was left
23 over in the rolling mill. There were probably 120 to
24 150, 55-gallon barrels of scrap, thorium scrap. In
25 the Sunbeam oven there were probably eight to ten

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75

1 slabs of thorium metal.

2 And down on the -- on the dock in the
3 casting warehouse east of the track well there was a
4 room that was full of thorium sludge. There were
5 barrels full of thorium sludge. That room was under
6 lock and key, and you didn't visit that room. I
7 didn't know why you didn't visit it. I didn't know
8 what was really in there except that they gave me a
9 key that had thorium room written on the tag.

10 In 1996 to 1998 we brought the sludge out,
11 and we -- we took the metal -- the scrap metal that
12 was in the rolling mill and melted it into the melting
13 pots in the -- in the -- in the mag floor and cast it
14 out in the form of ingot and took the barrels and each
15 barrel was checked for radiation with a Geiger
16 counter. And that's when we were instructed to wear
17 the -- the film badges.

18 We took the sludge and -- and joined it up
19 with the other sludge that we took out of the -- out
20 of the room and shipped it off somewhere. I don't
21 think it went to California. We'll talk about that a
22 little bit later on. I think there's an affidavit in
23 here --

24 —: Okay.

25 —: -- regarding that. But

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1 the sludge and the ingots were shipped. But the slabs
2 remained in the Sunbeam oven until some time later.
3 —: That's very -- that's very

4 useful. Good. —.

5 —: In on the other side of 2 Mill

6 there was about 20, 25 slabs of thorium sitting back

7 there by that blockhouse. And after they did the

8 cleanup in 2000 they disappeared. I don't know where

9 they went to.

10 —: Okay. Okay.

11 —: —. Sometimes

12 during -- before I retired, several months or a year

13 before they brought barrels in with the stripe, all

14 thorium, 55-gallon drums in the back there where scrap

15 was stored, and they were putting that stuff in those

16 barrels and shipping it out some place. Is that what

17 you were talking about? Well, this was -- this was

18 back in there where all the scrap was stored.

19 —: I think they -- I think

20 they -- — again. I think they took all

21 those barrels and shipped them over to the rolling

22 mill. They were on these --

23 —: No. These were -- these went

24 out. These went out the plant.

25 —: I don't know. The scrap

□

77

1 that I was referring to were in the 55-gallon drums
2 that was stored over on the extreme west side of the
3 rolling mill down on the -- on the -- on the north end
4 of it. You know where I'm talking about, —?

5 —: —.

6 —: Okay.

7 —: The barrels -- the barrels

8 he's talking about was stored behind 2 Mill in the
9 rolling mill.

10 —: Okay. Good.

11 —: I'd like to go back to you --

12 —. I'd like to get back to you said that

13 Spectrulite got a license.

14 —: Right.

15 —: They -- I'm not positive, but

16 I think when they started the leaching area they were
17 going to get all the metal out of the sludge.

18 —: Okay.

19 —: And I believe that's when they

20 got the license to do that.

21 —: Okay.

22 —: And that was all stored out

23 there behind the pot room area.

24 COURT REPORTER: The what, pot room area?

25 The pot room area?

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78

1 —: Yes. North.

2 —: Okay. Very good. All right.

3 Kind of a different topic about thorium. It relates

4 to who were the Department of Defense thorium

5 contractors at Dow. And various people have mentioned

6 Martin-Marietta, Boeing, Air Force, I've heard NASA.

7 But I -- I really want to open up the floor. I -- I

8 want to get on the record who did Dow do business with

9 that was in the military, the Department of Defense.

10 —.

11 —: When I was in shipping I was a

12 crate builder. And we shipped a lot of metal to

13 Hughes Aircraft, and Rocky Flats got a whole lot of

14 it. And I had an experience with Martin-Marietta down
15 there in '76 so I know they got a lot of the metal
16 from our plant. And they had a place in Kansas. I
17 can't -- Wichita, Kansas got a lot of thorium shipped
18 to them. —, you ought to -- you might know some
19 more.

20 —: Well, we shipped to
21 McDonnell. —. And well, we shipped to
22 McDonnell also. And well, Rocky Flats, Lockheed,
23 Martin-Marietta, McDonnell, and Hughes Aircraft.

24 —: Okay. That's terrific. All
25 right.

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79

1 —: I got one too. —.
2 The Titan missile -- the nose cone of the Titan
3 Missile, a lot of people knew about it because thorium
4 happened to be real good for it didn't lose its
5 strength at -- at high heat. And that must have been
6 in the late '60s.
7 And in the rolling mill, — might

8 know the name of it, but we put in a huge -- a
9 cyclotron or something like that, some kind of an
10 electrical device and it increased the speed of Number
11 1 Mill from 500 feet a minute to a thousand feet a
12 minute. And that was very important for thorium
13 alloys because once you got them below -- below an
14 inch they lost their heat real quick and they would
15 crack and break up. It enabled us to run at a
16 thousand feet a minute instead of 500. It -- it
17 really helped thorium. And one of the big things was
18 whoever made the Titan missile it was used in the nose
19 cone of it. That's all I know. —.
20 —: That's great. Any more
21 defense contractors that used thorium from Dow? Okay.
22 That's wonderful. Now, let's go back and get any
23 other information we have. This is about the
24 relationship between Dow and the Rocky Flats
25 Department of Energy nuclear weapons facility. And in

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1 particular if we can give that some kind of a time

2 frame. And I think we've already said that -- we've
3 implied that there must have been a contract. But if
4 anybody knows any more about that. And I guess I'm
5 interested in besides thorium at Rocky Flats was there
6 any passing back and forth of uranium. I don't have
7 any reason to think that. I just want to be complete.

8 So we're particularly interested in the
9 relationship between Dow and -- and Rocky Flats. And
10 I -- just to recap so far I think we've heard that
11 there probably -- there must have been some kind of a
12 contract because there's a general feeling that Rocky
13 Flats -- there was a Dow representation at Rocky
14 Flats.

15 I guess I'm interested are you all aware
16 of anybody from Rocky Flats who identified themselves
17 as Department of Energy, Atomic Energy Commission, you
18 know people who raise their hand and said we -- we are
19 -- you know, we're doing nuclear weapons work on
20 anything like that.

21 And I -- I guess I need to mention why
22 this is so important for you all. The -- the Army
23 Corps of Engineers decided not to clean up thorium
24 because they said that it had nothing to do with

25 Atomic Energy Commission activities. Now, I find that

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81

1 very hard to believe and particularly find it
2 impossible to believe that if you all were exchanging
3 thorium with Rocky Flats whose only purpose as far as
4 I'm aware was nuclear weapons production, that that
5 didn't have anything to do with the Department of
6 Energy or the Atomic Energy Commission. It had to.

7 So -- so that's why I'm stressing this
8 point that if we can pin down the Rocky Flats, Atomic
9 Energy Commission, Department of Energy link to Dow,
10 then we can get this classified as a DOE site. And
11 that does a number of things for you guys that's -- I
12 just can't stress how important it is.

13 One thing it does is it makes you eligible
14 for compensation under Part B of this EEOICPA law.
15 And Title E, what's important about it -- I notice
16 that — just walked in -- but people who
17 have illnesses other than the 22 covered cancers can
18 get compensation. And also, it makes you all

19 available for free beryllium lung scanning testing
20 under a Department of Energy program. Whereas the way
21 it stands now you're not eligible for that. And I --
22 I really think everybody who worked at Dow should be
23 screened for beryllium sensitivity and chronic
24 beryllium lung disease. So that could be done free
25 and paid for by the government if we could establish

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82

1 this link. So that's why I'm spending a few extra
2 minutes on the Dow Rocky Flats connection.
3 You all know what we've said already.
4 Does anybody have anything else they want to add to
5 that situation? Yes, —.
6 —: —. Some of this
7 metal that we was cutting down there they had people
8 with dress clothes on standing there watching us, and
9 they stayed with that metal all the way through. They
10 never -- they wasn't allowed to talk to us. So they
11 didn't tell us nothing.
12 —: Okay. —, why don't you

13 identify yourself for the record. And what we're
14 asking everybody to do is to give your name, spell
15 your last name, tell what jobs you had --

16 —: Okay.

17 —: -- and what years you were

18 there, when you began and ended.

19 —: My name's——. I

20 was hired in — '89 at Spectrulite. And I was
21 there for approximately 14 years. And 11 of the years
22 I worked there was in extrusion on the light presses,
23 strictly the light presses.

24 Getting back to Number 5 where you said
25 about different contractors for thorium, the

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83

1 contractors at Dow, Martin-Marietta, we did some
2 contract work for them. In fact, we was done on a --
3 how would you call it -- it was a leased program.
4 They leased a whole press for a week. And basically
5 we was doing a work cycle basis for them, and no other
6 metal could be ran until their special metal was

7 processed.

8 And we asked them repeatedly -- I did
9 anyway, because you know, I was curious -- what alloy
10 it was, and they would never tell me. They would say
11 oh, it's something special we put together. But it
12 was very hard, very dense, and it tore up the
13 equipment as you processed it which I thought was
14 pretty unique because they would never allow us to do
15 that.

16 —: Right.

17 —: But they were leasing the
18 press so basically it was their equipment for the week
19 and we was doing the work for them. So by proxy we
20 was working for Martin-Marietta. And I absolutely
21 know for a fact it was Martin-Marietta because they
22 repeatedly said so.

23 —: Uh-huh.

24 —: And — himself

25 was also an operator on that press.

1 —: That's good. Okay. Any --

2 I'm going to move on. But any other last comment

3 about the Rocky Flats connection?

4 All right. Let's go on to 7. Now, I know

5 this is a difficult one, but I'm trying -- I'm talking

6 about what was the volume of thorium as tons, cubic

7 yards, number of 55-gallon drums processed at Dow over

8 the years. So I'm just -- any comment that would give

9 an idea about the extent of thorium that was processed

10 through that plant or stored there. I want to get an

11 idea of the -- get across the idea that it was not a

12 minute amount, that it was a large amount. And I

13 don't know how to fill in large, but I want you guys

14 to try to do that for me. So amount of thorium,

15 anybody? —.

16 —: —. When I was a

17 crate builder down there I'd say probably every two

18 months we'd ship out like four truckloads of metal to

19 like Rocky Flats and that. And trucks then was about

20 36,000 pounds per truck because that's -- that's all

21 we could get on it because, you know, the mag was so

22 light. And you know, it'd be three -- three -- like

23 three skids all the way up to the top of the trailer.

24 So that's where -- that's the only measurements I

25 could give you on that.

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85

1 —: I think you just said

2 something important that I kind of missed. The

3 thorium that was sent to Rocky Flats, was it a

4 magnesium alloy? Is that what you're saying?

5 —: Yes.

6 —: Most of it was --

7 —: Most of it was.

8 —: -- pure thorium metal?

9 —: Yeah.

10 —: Okay. All right. And

11 another naive question by an amateur, but magnesium --

12 I mean, I can imagine what thorium metal might have

13 been used for. But what -- what was the special

14 utility of magnesium thorium alloys?

15 —: Special use?

16 —: Yeah. I mean, why -- why

17 alloy it with magnesium? You know, so you make the

18 pure metal and then you make it into an alloy. What

19 was the property of that that might have been

20 important at Rocky Flats for instance?

21 —: You'll have to talk to— or

22 them over there. I don't --

23 —: All right. —.

24 —: —. Magnesium was

25 light --

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86

1 —: Okay. All right.

2 —: -- and stronger than aluminum.

3 —: Uh-huh.

4 —: And that -- I guess that was

5 the main reason that they used it.

6 —: So I mean, thorium is a very

7 strong, dense metal, right?

8 —: Yes.

9 —: So I mean, just give me an

10 idea of magnesium thorium alloys. Would it be -- most

11 of it be rolled into sheets? I'm trying to get at was

12 it used in fighter planes or what do you all think it

13 was used for anyway?

14 —: I have no idea what it was

15 used in.

16 —: Okay. All right.

17 —: —s. We rolled

18 mainly in the magnesium, it was AZ 31.

19 —: Okay.

20 —: Then the next one was PE, and

21 then the third was probably HK with HM. Those are the

22 two thorium alloys coming in third place.

23 —: Okay.

24 —: Like I said before, one use

25 was the Titan missile, the nose cone. HK 31 was good

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87

1 for high heat. It was like -- it didn't lose its

2 strength at around 650 degrees. I -- I got this from

3 scuttlebutt. I -- I'm not a metallurgist or anything

4 like that.

5 —: Uh-huh.

6 —: But — said it was

7 good, it held its strength as high as 650 degrees

8 which is good for space use or space vehicles.

9 —: Good. Okay.

10 —: And it's very strong mainly

11 at high temperatures.

12 —: But now H --

13 —: —.

14 —: Yeah. Let me so that -- but

15 the HK now, that was -- was that magnesium?

16 —: The HK that we rolled is a

17 magnesium. Yes.

18 —: Okay. Good. Okay. All

19 right. Okay.

20 —: And the HM -- and I -- I

21 think HM is thorium also.

22 —: Right.

23 —: And we rolled a -- a fair

24 amount of HM that nobody seems to mention.

25 —: But the HM was manganese,

1 right, rather than magnesium?

2 —: Yes.

3 —: No. No?

4 —: Thorium -- manganese was the

5 last, the M I think.

6 —: Okay. We may have a little

7 disagreement. —, HM, we're trying to get

8 at what kind of alloy that was.

9 —: —. It -- it

10 was -- it was all magnesium.

11 —: It was magnesium. Okay.

12 —: Everything was magnesium.

13 —: Okay.

14 —: The HK designation, what

15 was that, —, HK what?

16 —: 31.

17 —: 31, yeah.

18 —: Three percent thorium and one

19 percent zirconium.

20 —: Right. And then the HM

21 was 21?

22 —: 21.

23 —: 21.

24 —: Two percent thorium and

25 one percent manganese. But it was all magnesium

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89

1 metal.

2 —: And then the 97 -- 97 percent

3 magnesium.

4 —: Okay.

5 —: —. Like — said,

6 it was all magnesium because we -- what we did we

7 started with a full unit of magnesium. We brought the

8 mag in from Texas, 50 pound bars, stacks of them. We

9 charged them in and brought it up to close to 6,000

10 pounds because we had to go to the alloy when it --

11 the pot.

12 —: Okay.

13 —: Alloy was for hardeners and

14 that. So --

15 —: Okay. So I think -- I think

16 --

17 —: But I think there's a

18 misunderstanding between some of us. I thought H --

19 HM 21 was all billets and HK 31 was slabs. I didn't

20 think they rolled any HM 21.

21 —: We rolled a lot of it, a lot

22 of HM.

23 —: You rolled a lot of it. See

24 that --

25 —: Not as much as HK, but we

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90

1 rolled a lot.

2 —: — again. I

3 don't know what that -- the designation was, —.

4 But the metal that we melted in from the barrels from

5 the rolling mill were extrusion shapes. And then the

6 slabs were in the Sunbeam oven. So I know we made

7 billets and slabs.

8 —: What was that again?

9 —: Made billets and slabs

10 because the scrap metal that we melted in from the

11 rolling mill in the barrels was in extrusion shapes.

12 —: Okay. So I just want to

13 recap. I think I've got it straight finally. So if

14 you have HM 21, you've got roughly 97 percent

15 magnesium, you've got 2 percent thorium and one

16 percent manganese. Do I got it right?

17 —: That's right.

18 —: Oh, good. Okay.

19 —: —, we've got another

20 comment. — over there.

21 —: There's a lot of others.

22 There's a lot of other --

23 —: —. Let's not get

24 into the --

25 —: —.

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91

1 —: I just got one of them

2 straight. That's a big deal for me. Okay,

3 —.

4 —: —. This HK 31 I
5 cut metal on the band saw was caps for cannon shells
6 is what they were used for. There was about a six or
7 eight inch piece and we had to pack them. And -- and
8 I don't know where they went to, but they was for
9 cannon shells.

10 —: Okay.

11 —: What was that material,

12 —?

13 —: HK 31.

14 —: Yeah.

15 —: All right. Well, that's a --

16 that's an answer to a question I wondered about for a
17 long time is what really was the thorium used for. So
18 that's a -- that's --

19 —: —, could I make a

20 comment?

21 —: Certainly.

22 —: The purpose of magnesium,

23 magnesium was one-fourth the weight of steel and one
24 third the weight of -- aluminum was one-third the
25 weight. And what they -- or Dow originally wanted

□

92

1 this, they went into suitcases. And PE was photo

2 engraving plate.

3 —: Right. I've heard that.

4 —: And then the plate they

5 used for lightweight in trailers and in railroad cars

6 and stuff like that. But that was the purpose of Dow

7 going into magnesium.

8 —: Let me -- let me just follow

9 up on that because I have heard from several people

10 that some of the special metals that you all ran, sort

11 of experimental projects where sometimes you weren't

12 told what the metals were that they were coded as PE

13 projects even though they probably were not. Is that

14 -- did you ever hear that?

15 —: No. I never heard that.

16 —: Okay.

17 —: No. No.

18 —: Not true?

19 —: Not true.

20 —: Okay.
21 —: Not to my knowledge.
22 —: Not to my knowledge.
23 —: Okay. So PE was really photo
24 engraving?
25 —: Yeah.

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93

1 —: All right. All right, —.
2 —: —. When I got over
3 in the -- apprenticed in the extrusion they were
4 running HK on the heavy press. They would run it, and
5 they ran it for over two months. It -- they were on
6 tempcon (phonetic), that was round-the-clock. And
7 — was the one that had come out and said that
8 was a special alloy, a PE alloy. And I told him its
9 -- you know HK is thorium. And — was the
10 operator. But they ran on the heavy press for over
11 two months HK, and all that went for missiles. I'm
12 not for sure, but like the Tomahawk missile or one of
13 them missiles that they ran on there.

14 I'd like to ask — another thing. He

15 brought up something. Was that -- for them shells,

16 was that about four-inch diameter, about six to seven

17 inches long?

18 —: Yes.

19 —: —, they sent all that up to

20 O'Fallon. Can you check on that or find out something

21 on that?

22 —: Those were the Sabot --

23 the Sabot shells casings I think that he's referring

24 to. And those were AZ 61 alloy I believe. And do you

25 guys remember that?

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94

1 —: AZ 61 for what?

2 —: The Sabot shells that

3 were sent over to -- actually to Holshouser Machine

4 and extruded.

5 —: —, —

6 was the superintendent at the time they were running

7 the hollow billet on the intermittent unit. And he

8 took me in his office and said I'm going to show you

9 something and I said what is it. He said see this,

10 it's a Tomahawk missile.

11 —: Oh, okay.

12 —: Because we were running AZ 61

13 on the hollow billet. But — was the

14 superintendent of the department at that time.

15 —: I thought the Tomahawk

16 missile was made out of aluminum.

17 —: I know that. But -- but no.

18 —: No. Mag.

19 —: Mag. It was AZ 61 because I

20 was on it when the damn thing blew up on me. So --

21 —: Yeah. It blew up.

22 —: I didn't remember that.

23 —: Okay.

24 COURT REPORTER: Sable or something you

25 said?

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□

1 —: Sabot.

2 —: S-A-B-O-T.

3 —: S-A-B-O-T.

4 —: I have another comment. It's

5 a little out of line because we -- there was a special

6 alloy we ran one time, it was called lithium. And we

7 ran a lot of -- lot of beryllium in that because I --

8 the guy that was working with me had a basket in the

9 -- in the molten metal and dropped a beryllium bar in

10 there. And he had a shield on, and it came back out

11 of that basket and knocked his shield off. If he'd

12 been a little farther, it'd have blowed his head. So

13 that was -- that was -- that was lithium. And they

14 only run so much.

15 You had to turn all the water off of all

16 the units as far up to the slab unit because you

17 couldn't have any water on it. And they had one guy

18 -- I think it was he was working as a -- it got --

19 anyway, it blew -- blew on him and just the moisture

20 on his skin caused it to explode. He had a hell of a

21 burn on him, see, because the moisture made it molten

22 metal.

23 —: Okay. So let me just put --

24 —: I just wanted to make a

25 comment to have that on record.

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96

1 —: Can I ask a question

2 about that lithium? —. —, was that

3 in the little tin cans? Did you alloy those from the

4 tin cans? Was that the lithium?

5 —: No. Lithium come in -- the

6 magnesium first and then lithium was cast out, we made

7 the lithium. But I don't remember other than the

8 beryllium putting it in there, I don't remember what

9 went in it.

10 —: Okay. There was

11 something stored in the copper room. I was just

12 wondering if that was the lithium.

13 —: That might have been. It

14 could have -- yeah. I think you asked me about that

15 something heavy was in the pot room. —, didn't

16 you ask me something about something?

17 —: We didn't inventory it.

18 —: Huh?

19 —: We did not inventory that
20 particular metal that was in the copper room.
21 —: It could have been the
22 lithium.
23 —: Okay.
24 —: —. I inventoried that
25 a couple times and they told me it was lead, lead in

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□

97

1 those barrels. And they was there for years and
2 years.
3 —: Lead.
4 —: Lead.
5 —: Question, this is —
6 — and for —. You said there was
7 something in cans. What was the size of the cans, the
8 material? Like a beer can?
9 —: —. Yeah.
10 About the size of a Pet Milk can. Do you remember the
11 Pet Milk can?
12 —: Sure.

13 —: Smaller than a beer can.

14 And some of it was stored on a shelf under the coffee

15 maker in the foreman's office believe it or not.

16 —: It was a heavy material?

17 —: Very heavy.

18 —: Were there labels?

19 —: That could have been the

20 lithium.

21 —: I think it was lithium.

22 —: It could have been the

23 lithium.

24 —: I think it was but --

25 —: He asked about it, and I had

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98

1 forgot about that one.

2 —: My mind is kind of shot

3 too.

4 —: One at a time.

5 —: Sorry.

6 —: All right. Let's change to a

7 -- a slightly different topic. The -- the official
8 line is that most of the thorium -- we've learned
9 today this is not really quite true. But a lot of the
10 thorium was run on the extrusion presses. And I guess
11 I just want to find out how often. I mean, you all
12 have pretty much given a good picture of that thorium
13 was run off and on throughout the whole time from '51
14 to at least 1998. But I want to get some idea, you
15 know, the extrusion press -- actually the cleanup.
16 We'll get up to this in a minute.

17 But the cleanup documents is -- I believe
18 they all refer to the extrusion press. And of course,
19 I know now that there were multiple different
20 extrusion presses. But if you take all the presses
21 I'm trying to get some feeling on how often the
22 thorium was run at different parts in -- in the plant.
23 So let's just take extrusion first. Any of the
24 extrusion guys want to make a comment about thorium
25 runs?

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1 —: Okay. This is —
2 —, and I worked in extrusion on the 7 Press and
3 8 Press when it was there. I ran -- back in 1969 I
4 ran titanium on 8 Press for 16 hours. And I don't
5 know what alloy or what it was. All I knew it was
6 titanium. And in 1992 to 1993 we ran experimental
7 metal for Martin-Marietta. And it was a bar-shaped
8 extruded from a die. And it was brought in in wooden
9 boxes. And we used carbon block for -- on the back
10 end of the metal to push the metal out. And then it
11 was extruded, and it was sent -- then it was sent to
12 finishing.

13 COURT REPORTER: Sent to?

14 —: Finishing.

15 —: Finishing. Is that where you

16 -- is that what you said?

17 —: Yes. It went to the

18 finishing after we had extruded it.

19 —: It went to the finishing

20 plant after extrusion is what he said.

21 —: And we -- we had no safety

22 equipment. Some people used coveralls, wear

23 coveralls. Some people used -- used their street

24 clothes. And we just used cotton gloves. And the

25 people who was there, it was on like on two days and

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100

1 they leased the press out. And it was a bar job and

2 it ran real fast. We had to heat the billet up. And

3 the helpers had to load the -- the billet in like

4 manual. And then we extruded, and then they had to

5 clean up all the metal and the carbon after the

6 extrusion was done.

7 —: Okay. Very good.

8 —: —.

9 —: —.

10 —: My name's —. I

11 was there for 12 years extensively on the presses, 9

12 Press and 7 Press especially. And for the 12 years

13 that I worked there straight I never once was told or

14 heard that there was any metal we ran that was

15 radioactive, that was dangerous of any shape or form.

16 We was never told this. And we was given monthly

17 safety meetings where every employee was grouped
18 together and they was told of hazards and where there
19 was slips and trips or oils or whatever. But we was
20 never ever told of this.

21 Now, when this Martin-Marietta came in
22 like we was speaking earlier they came in and leased
23 it out in a work cycle process. Now, looking back in
24 what they did with the uranium back in the late '50s
25 and early '60s they also leased it on a work cycle

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101

1 basis basically the same way Martin-Marietta did. And
2 I also noticed other similarities where they also used
3 carbon follower blocks to push the die through the
4 press for the uranium back in the '50s and '60s which
5 we did the exact same way from Martin-Marietta with
6 this suspect special metal that we was running, this
7 alloy, special alloy.

8 Now like you said earlier, through the
9 Freedom of Information Act we found out that uranium
10 was not the only metal that was found above the press.

11 There was also thorium 232 which could lead suspect to
12 what the secret alloy was that Martin-Marietta was
13 running. Because we was never told no matter how many
14 times we asked. Now, this was -- a work cycle was
15 twice. It was done for a week one month. And then it
16 was done for approximately three or four days the
17 second cycle. So it was about a month apart, these
18 work cycles.

19 And we -- I remember specifically because
20 we couldn't just work our eight-hour shift. We had to
21 work until the customer said we was done because we
22 was basically working for them. So -- and when we was
23 done they took every scrap piece of metal with them
24 which seemed a little strange at the time, but you
25 know, we weren't responsible for it, they were. So I

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□

102

1 didn't worry about it. But they made sure every
2 single saw chip was picked up when they cut off a
3 sample. It was a very hard, dense, dark metal. It
4 was -- it was heavy as lead but hard. And that's the

5 reason for the carbon follower blocks.

6 Now, we was never told that this was

7 anything hazardous. We was never given any safety

8 precautions, never badges or anything of that nature.

9 But you know, now looking back at what -- the way they

10 processed the uranium and the way they processed this

11 metal there was a lot of similarities that just seem

12 to give suspicion to why that alloy 232 is in the

13 press.

14 And noted it was found by the bathroom

15 doors and outside the side door as well as above the

16 press. Well, when we was running that metal for

17 Martin-Marietta it was a hot day, we had fans blowing,

18 and the composite follower block we used was made out

19 of graphite. So if -- after it was ran through 4,000

20 pounds of pressure it came out dust. So we had to

21 scoop that out after every push and process.

22 And being dusty and hot and fans blowing I

23 would always step out the side door. And we was

24 drinking a lot of water that day so we was walking to

25 the bathroom a lot. And I believe it may have been

1 tracked to the bathroom and outside the door by one of
2 us employees if this is the same alloy, the same
3 metal.

4 Now, the suspect part of it is that they
5 took every piece of scrap with them. And what I mean
6 by every piece is when you would run an alloy and
7 before you changed over to a new alloy you would have
8 to put a purge block in there. In other words, you
9 have to get the old alloy out so if there was a soft
10 metal it wouldn't mix with a hard metal. And because
11 of this it was a common practice to purge the die out,
12 the container.

13 Well, they -- normally two billets would
14 do it. But they had to have six billets to actually
15 clean the inside of the container out. Now, we would
16 use scrap billets, you know, nothing that was
17 important, that was very expensive to purge these out
18 with because they were just scrap afterwards. Well,
19 they actually took these scrap billets with them also
20 because the outside edges contained the alloy. So I
21 thought that was highly strange, you know, very

22 strange.

23 Not only that but the billets that were

24 brought in as he mentioned were shipped in in special

25 individual containers which I have never seen before

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104

1 and I thought was -- quite frankly was overreacting

2 because most billets that were shipped to us, if

3 any -- which were very few were shipped in a bunch, in

4 a pallet, you know, in a pyramid shape. But these

5 were specially individually boxed with the wood

6 pallets. And when the customer left he actually took

7 the wood pallets and boxing with them which I thought

8 was strange too. Because I was wanting them for a

9 doghouse, and I was told I couldn't have them.

10 —: —. —.

11 —: Yeah.

12 —: I don't know how often we ran

13 the thorium in the -- in the casting department. But

14 when we ran it sometimes if we were on a tempcon shift

15 it was a seven day schedule, we'd run it around the

16 clock for seven days, and one shift would relieve the
17 other continuously running it. It was a continuous
18 cast. Once you got everything alloyed it was
19 continuous. And my one question is --

20 —: The work cycle.

21 —: I'd like to ask one question

22 if you had an answer. Beings we -- we handled the raw
23 thorium, do we -- were we exposed to radiation more
24 than after it become a solid form? Is there any way
25 of determining that?

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105

1 —: Well, I --

2 —: Because we were breathing the

3 fumes and everything and handling the raw thorium to
4 put it into the pots.

5 —: Oh, absolutely. I mean, I

6 think, you know, thorium metal, uranium metal, once
7 they're the solid ingot are relatively -- they're --
8 they're radioactive.

9 —: But did the radioactive

10 increase once it was in the solid form?

11 —: No. No. But -- but the

12 problem is when you -- in the pot room when you're

13 casting it --

14 —: Right.

15 —: -- those fumes.

16 —: Right.

17 —: The -- the real damage that

18 thorium does and uranium are the alpha particles that

19 you ingest, that you get down in your lungs. And so

20 that environment that everybody describes in the pot

21 room with smoke and fumes, but it would be the same in

22 the extrusion press. Any -- any time that you were

23 volatilizing that metal as fumes, dust, particulates,

24 little pieces of metal particularly the finer -- the

25 finer they are the more hazard it is in your lungs

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1 because they get down deeper. And once they get down

2 in there they stay.

3 And -- and thoron gas, just like radon

4 gas, you know, the -- the -- the danger to a miner
5 that works in a uranium mine is the radon gas more
6 than the -- the ore that they're mining. So the
7 answer is yes, the environment in the pot room is much
8 more dangerous than somebody who is simply, say,
9 wheeling a -- a thorium metal ingot around on a dolly
10 for example. Okay. Let's take a little break.

11 That's great.

12 (Whereupon, a short recess was taken.)

13 —: Okay. This is the Dow

14 Affidavit Meeting. We're resuming after a little
15 break. It's July the 21st, 2006 at SimmonsCooper.
16 And we've just had a new person join the group,—
17 —.

18 So —, can I get you to --

19 —: Yeah.

20 —: Can I get you to just say for
21 our lady down here that's doing the court reporting
22 your name and how to spell your last name.

23 —: Okay. —, —.

24 COURT REPORTER: E or A?

25 —: E. —, —.

□

107

1 —: And then tell us when you

2 worked down at Dow.

3 —: From 1954 to —.

4 —: Okay. And what did you do

5 there? What was your job?

6 —: Just about a little bit of

7 everything. Worked on the mills, worked on the --

8 the --

9 —: Slab.

10 —: -- machines that we had in

11 there, hand salvage, oven. Done just about

12 everything.

13 —: You did a lot of different

14 jobs?

15 —: Yeah.

16 —: All right. Well, thank you

17 for coming very much. I understand that it was sort

18 of a heroic effort on your part and we really

19 appreciate it.

20 —: Yeah. Because I got up

21 sicker than a dog.

22 —: I know.

23 —: I almost didn't show up. I

24 feel a little better.

25 —: Everybody's here under kind

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□

108

1 of difficult situations.

2 —: Yeah. I know. I

3 understand.

4 —: So thank you for coming. All

5 right. So we're -- we're now going to talk a little

6 bit more about the source of the thorium at Dow. And

7 we've heard that it was probably from England, some of

8 it. Some of it was from the Midland, Texas plant.

9 And we know that there were two plants -- two Michigan

10 plants that Dow had, one in Bay City. So there are

11 other possibilities. So anybody -- any other thoughts

12 on the source of the thorium?

13 And in particular I'm interested of course

14 is making a link, was any of that thorium owned by the
15 Atomic Energy Commission. And that takes us back to
16 Rocky Flats which we've talked about. But just
17 anybody else who has any other insights on where the
18 thorium came from that you all used at the Madison
19 plant. Okay. Well, maybe we've -- maybe we've
20 exhausted that topic then for what we know here.
21 Okay.

22 Now, I have a little bit of extra
23 information here on this. This has got to do -- this
24 has got to do with the item on the thorium license
25 numbers. And -- and for this I've really got to thank

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□

109

1 — who has done a huge amount of research
2 and finally developed for us these various license
3 numbers for Dow and its -- and its thorium operations.
4 And I just want to read these into the record.

5 So the question is what were the Dow, the
6 Conalco, the Phelps-Dodge, and the Spectrulite thorium
7 license numbers. And we know that there was a Dow

8 Chemical license which was AEC, capital C-2782 granted

9 in January the 1st, 1958. And that was for, quote,

10 thorium compounds without limitations, end quote.

11 Then there was a second Dow Chemical license which I

12 believe was a shared license with Phelps-Dodge. That

13 was AEC number STB-527. And that was issued in 1962.

14 And it's not on the slide, but I believe that was

15 decommissioned in about 1998. Then there is a third

16 license which was issued to Conalco or the

17 Consolidated Aluminum Corporation. And that was

18 license number NRC -- that's for the Nuclear

19 Regulatory Commission -- STB-1097. And that was

20 issued in August of 1982. There was a license then

21 issued to the Spectrulite Consortium, Incorporated or

22 SCI. And that was NRC license STB-1488, and that was

23 October of 1986.

24 And then — turned up another

25 possible license. I want to put that two license

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1 numbers which we're not sure about but we're still

2 investigating. One was a Dow subcontract license
3 number ACO5-84OR21400, and that was with
4 Martin-Marietta Energy Systems, Incorporated. And we
5 don't know the year of that. Then there is another
6 license granted in 1957, number 25034-M. And we
7 believe that was a Dow license as a subcontractor for
8 Mallinckrodt. And I think it's likely that that
9 possibly was a license for uranium rather than
10 thorium, but we're not sure about that.

11 We do know that the license for extruding
12 uranium from -- now we're talking about uranium
13 licensing. We don't believe that Dow ever had a
14 uranium license per se. But we think that it operated
15 under the Mallinckrodt license number W-14-108-ENG-8.
16 And that was the license that ran from 1957 to 1960.

17 So anyway, that's what we know about the
18 licensing operations at Dow. And then we of course
19 have to do a lot more work to find out exactly what
20 those licenses entailed. But the -- the main license
21 in 1958 was for unlimited use of thorium compounds.
22 All right.

23 Affidavit Number 11 addresses this issue
24 that we have had heard about this morning that some of

25 the thorium dross or slag was buried near the castings

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111

1 department. And I will just throw in that we believe
2 this was the area that was held onto by Dow after --
3 after it started -- after it became Phelps-Dodge and
4 Conalco and so forth. And the information I have from
5 the cleanup in 1992 was that this was -- a lot of it
6 was an aluminum thorium type of compound.

7 So any more comments about that buried
8 thorium would be useful at this point.

9 —: —. I hired in in
10 1960 and that pile was huge then. So it had to go
11 back into the early '50s.

12 —: Wow.

13 —: That pile was big.

14 —: Okay. And I'm sorry,

15 —, I don't remember. When you -- when you
16 left was it later than '92?

17 —: I left in —.

18 —: Right. So had it been

19 removed by then?

20 —: It was cleaned up then.

21 —: Okay. And does that 1992

22 sound -- time frame sound about right to you?

23 —: Yes.

24 —: Okay.

25 —: But that pile had to be

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□

112

1 started back in the '50s because it was well, five to

2 ten times bigger than this room.

3 —: Uh-huh. So maybe I need to

4 -- maybe I need to hear about it. You're describing a

5 pile above the ground, right?

6 —: Yes. Yes.

7 —: Okay. But there also --

8 we're trying to track down, there's a cleanup document

9 that mentions a license -- not a license, a permit for

10 burying thorium. But this was an above ground pile;

11 is that right?

12 —: This was all above, and it was

13 all magnesium and all thorium sludge.

14 —: Magnesium, not aluminum?

15 —: Not aluminum, no.

16 —: And -- and this was the pile.

17 So when you went in each year to look for the -- for

18 the thorium metal or -- well, just the alloy, you were

19 looking for pieces in an above ground pile, right?

20 —: Yes.

21 —: All right. And -- and then

22 so when they came in and cleaned it up in 1992 -- I

23 mean, a thousand railroad cars, that's a lot of

24 material. Does that square with what you remember

25 about the size of those piles?

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113

1 —: I know that pile was probably

2 as high as -- maybe five, maybe six feet high.

3 —: Six feet high.

4 —: At least.

5 —: And what -- what size would

6 you say compared to a football field?

7 —: No. Not -- not that big.

8 —: Not that big? Half as big?

9 —: Yeah. About half, maybe a
10 little more than a football field.

11 —: A little bit more than half
12 as long as a football field as wide and --

13 —: Yeah. It was probably a good
14 -- it was probably a good 60, 70 yards.

15 —: Okay. And ten feet high.

16 —: Yeah.

17 —: Something like that?

18 —: About six feet high, five
19 feet.

20 —: Six feet high. Okay. All
21 right.

22 —: But there was a lot of metal
23 out there because it had never got separated, and
24 every year they turned it up. Now, I only did that
25 for two years and then they had different people do it

1 all the time.

2 —: Now, so if it were there in

3 1960, I mean, did they add to it every year or was it

4 just there and left over from the '60s would you say?

5 —: That was mostly left over.

6 —: Okay. Didn't add to it?

7 —: No.

8 —: Okay. All right.

9 —: By then in the later years it

10 went out in barrels, the -- the sludge.

11 —: All right.

12 —: And where it went we don't

13 know. — might know.

14 —: Okay, —.

15 —: —. I don't remember

16 the guy's name, but there was a guy that was dumping

17 sludge out there when it exploded and he was killed.

18 —: Right.

19 —: That was in '54.

20 —: It was '54. So it was '54

21 they were dumping it out there then.

22 —: Wow. A person was killed?

23 —: Yes.

24 —: He burnt up.

25 —: From -- from fire? Is that

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115

1 --

2 —: No. That's from the what we

3 called the Dow -- Dow section. It's just east of the

4 casting.

5 —: No. But I mean, how -- what

6 happened to kill the man?

7 —: It was raining from what I

8 gathered and what they said. And he was dumping

9 sludge out there. And I guess some of the mag got in

10 with the wet ground or something and exploded. I'm --

11 I'm not for sure, but --

12 —: All right.

13 —: —. I think that

14 was chips that exploded. Wasn't it wet chips?

15 —: It was magnesium chips I

16 think.

17 —: Magnesium chips and ground

18 covering.

19 —: Was that that same event,

20 '54?

21 —: That could have been from one

22 of your chips.

23 —: That could have been.

24 —: Because they cut them.

25 —: Yeah.

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116

1 —: Okay, —.

2 —: Yeah. —. We

3 have a gentleman that was next door at General Steel

4 Industries when that happened. That actually blew out

5 the windows on their locomotive. And —

6 would be glad to share that information with us.

7 —: Wow. Okay. All right. That

8 -- that clarifies things a lot. So -- so really the

9 burial part is probably a misnomer and that probably

10 didn't happen. Okay. Okay.

11 So this has got to do with who knows about
12 the thorium cleanups. I mentioned that I had had some
13 documentation that — kindly provided of this
14 Environmental Restoration Group cleaning up thorium in
15 1992. We know there was a cleanup of uranium in 2000.
16 It -- oh, I know one thing I wanted to ask you about
17 that's kind of specific.

18 In the cleanup documents it mentions that
19 under the Mallinckrodt contract for uranium now that
20 it was extruded from 1957 to 1960 at the end of which
21 time, quote, Mallinckrodt came in and removed the
22 uranium and cleaned up the area. Now, that's what the
23 cleanup document says. But I've never heard you all
24 mention that. So I -- I want some feedback. Is
25 anybody aware of Mallinckrodt coming in that plant in

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117

1 1960 and cleaning things up, anybody at all?

2 Okay. I -- I think I could just say for
3 the record there -- so there are 14 workers from Dow,
4 none of whom remember that event having taken place.

5 That doesn't mean it did not. But I have also not
6 ever heard anybody who confirmed that part of the
7 cleanup report.

8 Let's see. So —, could you
9 tell us about just -- again, there was a -- there was
10 a cleanup. The one you're talking about occurred
11 after the Army Corps of Engineers came in and cleaned
12 up the uranium in 2000, right? This is thorium now
13 that you're talking about being cleaned up after that
14 period of time?

15 —: —. I think
16 the thorium cleanup that we were involved in over on
17 the mag floor happened prior to --

18 —: Prior to.

19 —: -- the Corps of Engineers
20 coming in.

21 —: Okay.

22 —: I think it happened in
23 maybe 1998 possibly.

24 —: Okay.

25 —: It was after -- it was

1 after '96. And I think it was before the Corps of
2 Engineers came in. When we cleaned that up --
3 routinely all the sludge that was generated on the mag
4 floor was stored in the warehouse for a time until we
5 got enough to load a railcar. And then it was loaded
6 and sent out to California.

7 The man put it in the big pens out in the
8 ocean and let the tide wash the sludge and the
9 impurities out of it back into the ocean. And then
10 they went in and picked up what metal was left in
11 there and remelted it, and we bought it back from them
12 for a couple dollars a pound. He also put aluminum
13 with it. It was called 90/10, and it was 90 percent
14 magnesium and ten percent aluminum.

15 I don't know if the thorium sludge that we
16 generated and that we got out of that thorium sludge
17 room -- it was shipped out. I -- I can't put it in my
18 memory whether it was shipped out in a railcar or
19 whether it was trucked out of there. But I -- and I
20 don't know if it went to California or not. It may
21 have and it may not have. I'm just not -- I just

22 don't know.

23 —: So it was your impression

24 that the thorium -- now, I understand about the

25 magnesium and aluminum, that was -- that was

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119

1 reclaiming the metal.

2 —: That's correct.

3 —: So that was a recycling

4 operation. But how about the thorium? Was it your

5 impression that that sludge was being sent away for

6 storage or to -- you know, just to be gotten rid of,

7 or was that a recycling operation as well?

8 —: No. I -- my impression

9 was that it was sent somewhere -- somewhere other than

10 California. It wasn't to be reclaimed. It was sent

11 somewhere --

12 —: Right.

13 —: -- to be either

14 incinerated or stored or --

15 —: Somewhere like Envirocare for

16 instance --

17 —: Right.

18 —: -- or Cotter Corporation or

19 one of those places where they can store low level

20 radioactive waste.

21 —: Correct.

22 —: Okay.

23 —: I don't remember when that

24 was.

25 —: Any more comments about

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120

1 thorium cleanups? —.

2 —: I'm not for sure exactly when

3 they started that leaching area down there north of

4 the pot room. But that was -- they started that to

5 get rid of all the thorium so they didn't have to pay

6 that high price for it, getting rid of it.

7 —: So tell me -- tell us a

8 little more about the leaching operation. What did

9 they actually do?

4 of my hands. And the guy agreed to take them at the
5 rate of five carloads a week. So we -- we loaded it
6 one car every day until the warehouse was cleaned out
7 again.

8 The residue from the leaching operation
9 went outside between the casting and the extrusion
10 departments. And a pile of it was built up out there.
11 And his intention was to turn it into a fertilizer and
12 market it. It supposedly was very good for growing
13 plants. That was removed.

14 —: Let me just make sure I
15 understand. That was a different pile than the pile
16 we were talking about --

17 —: That's correct.

18 —: -- the aluminum magnesium
19 sludge pile that was there in the '50s?

20 —: This was -- this was
21 sludge residue after the metal was reclaimed in a
22 leaching process.

23 —: Right. I understand. But
24 that -- a completely different location from that?

25 —: Right.

122

1 —: Okay. All right. That's

2 terrific. All right. Let's move.

3 —: —.

4 —: Yeah. I'm sorry. Excuse me.

5 —.

6 —: On that sludge pile that

7 you're talking about, now this is what we heard when

8 they did it. They hauled that away they took it out

9 in trucks. It was all trucked out, and they told us

10 it went to Colorado.

11 —: Well, there is a -- there is

12 a company in Colorado called the Cotter Corporation.

13 And the Cotter Corporation for example was the company

14 that bought the Mallinckrodt uranium residues and

15 reclaimed radium out of that and left it all over St.

16 Louis at Latty Avenue and so forth. So more than

17 likely that place in Colorado was the Cotter

18 Corporation. They're still in operation and they

19 still accept waste now and so forth and so on. So

20 that -- that makes sense. That's good. Okay. All

21 right.

22 —: I'm sorry. What was

23 that, the sludge -- the thorium sludge you were

24 talking about?

25 —: Yes. That was outside.

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□

123

1 —: Oh, it was outside.

2 —: The big pile.

3 —: Okay.

4 —: Okay. Well, this -- I think

5 we've -- this is Affidavit Number 13. I'm sorry.

6 Which agencies granted the Dow thorium licenses?

7 We've gone through the numbers of the licenses in

8 Affidavit Number 10. But I just wanted to read in for

9 the record that we believe and I think we know that

10 the Atomic Energy Commission granted licenses for

11 thorium in '58 and 1962 and that the Nuclear

12 Regulatory Commission granted licenses for sure in

13 1982 and 1986.

14 Now, there are two Illinois agencies that
15 might have had a role in those license granting
16 procedures, and we're not certain about them. But I
17 would just want to mention that for the record. One
18 is this IDNS which is the Illinois Department of
19 Nuclear Safety. And then some years ago -- I don't
20 know, in about 2000 or so, 2001 that department was
21 merged into the new Illinois Environmental Management
22 Agency called IEMA. And -- and under IEMA the old
23 Department of Nuclear Safety became the Division of
24 Nuclear Safety.

25 So I just wanted to read it into the

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124

1 record because we recently as I mentioned visited the
2 Illinois EPA. And our next visit to Springfield will
3 be to that IEMA agency to find out -- to -- to get
4 copies of any licenses they may have had a part in.
5 And hopefully they can give us copies of the old
6 licenses from maybe the Nuclear Regulatory Commission
7 or the AEC. So that -- that's what we're going to do

8 there.

9 Affidavit Number 14 -- oh, I'm sorry.

10 —.

11 —: —. On Affidavit

12 Number 12 you skipped over post 2000 uranium cleanup.

13 —: Yes.

14 —: Yes. I actually -- when they

15 -- they laid the whole factory off on a vacation that

16 week while they cleaned that up. I volunteered as a

17 janitor that week and observed the whole cleanup from

18 beginning to end. And actually there was another one

19 in 2003 I just recently found out about. But --

20 —: Now, wait a minute. Don't go

21 too fast now. The --

22 —: I know. Let me back up.

23 —: Well, I want you to talk

24 about that one separately because I don't know about

25 that one.

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125

1 —: Right. This -- I just found

2 out a few nights ago about the other one.

3 —: But now -- now, the one in

4 2000 we're talking about. So the Army Corps of

5 Engineers comes in, they spent 16 days, they've

6 cleaned it up. That's the one you're talking about?

7 —: Yes, sir.

8 —: Okay. Good. Okay.

9 —: And from the very beginning I

10 watched the cleanup take effect. They shut all the

11 electrical off, they draped thick plastic four stories

12 down completely encasing the -- my work area. In

13 fact, where me and — worked

14 literally for dozens of years. And they didn't clean

15 up the whole factory, not the whole building, just

16 basically around 7 Press.

17 —: Right.

18 —: And they had a

19 decontamination trailer with plastic decontamination

20 tunnels they could run through and spray off. Through

21 the Freedom of Information Act I finally found out

22 they removed over 60,000 pounds of radioactive dust

23 and materials which is close to 30 tons --

24 —: Right.

25 —: -- if I am not mistaken. And

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126

1 watching the whole process I kept asking them
2 questions over and over since it -- basically it did
3 affect me, they was working right over my desk. And
4 nobody would really give me a honest or straight
5 answer or they would all say I didn't know or you
6 would have to ask someone else. That was the whole
7 routine that everyone gave me that was cleaning this
8 up --

9 —: Tell me -- give me --

10 —: -- including the factory and
11 the company that I worked for. See --

12 —: Well, give me an example of
13 some of the questions you asked that couldn't be
14 answered.

15 —: I go well, how dangerous is
16 this, or how much is this and, you know, what spots
17 are the most dangerous. And they would never really
18 ask us. And one of the employees accidentally rode in

19 there on a bicycle and they flagged him down and
20 practically jumped him. And they took the bicycle
21 out, checked his bicycle, checked his boots, and then
22 let him go on his way. But the whole time they kept
23 telling me it's not that dangerous, you'd have to
24 practically go up there to eat it to hurt you.

25 —: Did -- did you ask them

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127

1 anything about the thorium, about cleaning that up?

2 —: I had no idea there was

3 thorium at the time.

4 —: Okay.

5 —: In fact, the company never

6 even told us there was radiation there until they come

7 in to clean it up.

8 —: Okay. Okay.

9 —: And then they still did not

10 tell us. It was all passed down through the grapevine

11 from one person to another. And the company never

12 addressed it in any of the safety meetings which we

13 held once a month, every employee.

14 —: And then when we were

15 finished with that cleanup they just undraped

16 everything --

17 —: They undraped. They rolled

18 everything up.

19 —: -- and you guys went back to

20 work pretty much?

21 —: Yeah. They had duct tape

22 wrapped around all the tires of all the JLGs and

23 equipment. They had them all draped in plastic. That

24 way they didn't have to throw away the tires. They

25 just threw away the tape and the plastic. And my

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□

128

1 press in particular, everything -- everything was

2 draped in plastic. The floor was completely covered

3 in plastic. And for something not being very

4 dangerous I kept asking well, why is -- why you going

5 through such an extent of cleanup then if it isn't

6 that bad.

7 —: Right.

8 —: And one of the excuses was

9 this is just government over expenditure and some way

10 -- another way the government's wasting money was

11 another answer I got too. But I never got an answer

12 from the company how bad it was, they never would tell

13 me.

14 —: Well, that -- that cleanup

15 cost \$980,000. So it was almost a million dollar

16 cleanup over 16 days.

17 —: Uh-huh.

18 —: —. We was --

19 —: —, let me give you a

20 microphone.

21 —: I was a supervisor down there

22 when this was taking place, and they met with all the

23 supervisors in the extrusion foreman office. And we

24 asked the question how dangerous this was to our

25 health, and they said it wasn't any worse than getting

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1 a chest x-ray.

2 —: Well, that -- that was

3 certainly not an accurate statement of the risk. But

4 thank you very much for letting us know that.

5 —: —. I asked

6 some of the same questions, what are they finding over

7 there. And the answer that I got was oh, they're

8 finding a little bit of contaminated dust up on the

9 rafters, it's nothing, they're going to clean it up

10 and get it out of here, but it's -- it's not anything

11 at all.

12 —: Okay. So let -- let me pin

13 down a fact that I don't understand about that cleanup

14 period. So in all -- as I said in the -- all of the

15 cleanup documents it mentions the extrusion press,

16 singular, one press. I know, we were just talking

17 about it, that over time, you know, there were at

18 least six and some documents say seven presses. And

19 we know that one of the presses was called Number 9.

20 So at the time of the cleanup in 2000 I just want to

21 gets clear was there a single press there, two

22 presses, four presses? How many extrusion presses

23 were there?

24 —: Three presses. There was

25 four actually, but one was never -- I'm sorry. There

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130

1 was four presses, but one was never operable. It was

2 just basically for parts.

3 —: Why don't you name what they

4 were.

5 —: There was 7 Press which is

6 the one that we ran for the Martin-Marietta and where

7 the cleanup took place.

8 —: All right.

9 —: Then there was a smaller

10 press which was 9 Press which was the edge of the

11 cleanup actually. It was still over my seat where I

12 sat where the cleanup went.

13 —: Okay.

14 —: It went right to the press.

15 And then the largeset press was the heavy press which

16 was on the far end of the factory which I believe they

17 sold to a company in Atlanta, Georgia. This is after

18 --

19 —: That's the one called the big

20 press?

21 —: Right, the big press.

22 —: The one from Germany, World

23 War II. It's a --

24 —: 14,000 ton press.

25 —: Okay. Well, let me -- here's

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□

131

1 what I don't understand. Why -- why would they not

2 sample or work with the other presses during the

3 cleanup? In other words, what information did they

4 have that led them to only deal with that one press?

5 —: I -- I believe it was because

6 it had just enough pressure to get the job done where

7 the other press was too small. And the large -- the

8 heavy press which we talked about was actually too

9 big. The billets and the extrusions --

10 —: But from -- from their point

11 of view -- from the Army Corps of Engineers' point of
12 view it may be or could it have been that they knew
13 that the extrusion work for the Mallinckrodt uranium
14 had taken place on Press 7?

15 —: I have no knowledge as that,
16 but they could have. Yes. They could all know it's
17 already been ran once with radioactive material.

18 —: Do you know about -- you
19 know, what I'm getting at now is there were three
20 presses there. Why did they only look at and --
21 because they did take some samples of the press
22 itself, you know, wipe samples to see if there was
23 radioactive --

24 —: They didn't give us very much
25 information at all.

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132

1 —: Okay.

2 —: I couldn't answer that.

3 —: Okay. But -- but the other

4 thing is -- —, that I don't understand is did --

5 did you actually see them take wipe samples from the

6 press? It sounded like the press was covered up.

7 —: No. No. But an employee of

8 ours named — which I spoke to a few nights

9 ago -- he gave me permission to use his name and --

10 —: Yeah.

11 —: -- you know, and quote him.

12 —: How do spell that?

13 —: Saying that he walked over

14 with them when they did these wipes.

15 —: How do you spell that name?

16 —: —, —.

17 —: Okay. All right.

18 —: And he said he'll come in and

19 give his statement if necessary.

20 —: Okay. Good.

21 —: He said that he was with them

22 during the first walkover before the 2000 cleanup.

23 —: All right.

24 —: And since he was a

25 maintenance man, he had to operate the cranes and he

1 had to walk down from beam to beam. And he was
2 following them all the way up and down listening to
3 everything they had to say. And a lot of times he
4 would overhear them say oh, this is real hot, oh, this
5 is a bad spot, this is a bad spot. And when he would
6 mention to them, you know, well, how bad is it. They
7 goes -- both turned and gave him the same answer that
8 I got year -- you know, a little later was you'd have
9 to come up here and eat it to hurt you.

10 —: Yeah.

11 —: But they never really said
12 what if it falls in our food underneath us. They
13 never came to that question.

14 —: Right. Right. Okay.

15 —: But --

16 —: All right.

17 —: -- that was -- in 2003 though
18 there was another cleanup too.

19 —: Yeah. Please tell us about
20 that.

21 —: Okay. Another supervisor

22 that worked with —, his name was —

23 —, he gave me his permission to use his name

24 and to quote him. And he said that he'll come in and

25 give a --

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□

134

1 —: Tell us — again,

2 how --

3 —: —,

4 —. Is that right?

5 —: I think so. I'm not quite

6 sure.

7 —: And right after the strike in

8 2002/2003 he was still an employee there. And he was

9 told is what -- this I'm paraphrasing -- to clean up

10 all scrap metal that's in the factory so they can sell

11 it and get rid of every piece that's in the factory.

12 —: Okay.

13 —: And as he was going through

14 it all they had a team come in, — hired a

15 team to come in with a -- with Geiger counters and

16 they found everything that was radioactive, every
17 little piece of scrap they could find. And — said
18 he'd piled it all up in front a saw shop where we'd
19 sharpen our saw blades. And he said there was some
20 round, nine-inch billets even that were dark gray.
21 But it was all radioactive material, some sheets of
22 thorium. He even mentioned some rectangle slabs which
23 sound a lot familiar to that Martin-Marietta that we
24 ran --

25 —: Uh-huh.

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□

135

1 —: -- which I can almost -- can't
2 believe that would be there because they was
3 accounting for every little saw chip.
4 —: Uh-huh.
5 —: And for them to leave little
6 slabs like that would be -- you know, it'd have to be
7 strictly for the customer -- for the owner of the
8 factory's use.
9 —: I understand. It wasn't

10 scrap?

11 —: It wasn't scrap. Yeah. It

12 was either left there for them or some other reason.

13 But he described it particularly.

14 —: Okay.

15 —: Now, after he cleaned this up

16 he noticed weeks -- you know, he was scrapping all

17 magnesium and all the loose aluminum in that entire

18 factory. And when he got around to looking that

19 radioactive material he gathered up was gone. Then

20 about a month later another group come through with

21 Geiger counters doing radiological surveys which

22 cleaned the factory, and that's when MEL bought it.

23 They had to be a clean bill of health before MEL

24 bought it.

25 —: Magnesium Elektron, is that

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1 --

2 —: Right.

3 —: -- what we are talking about?

4 —: Right.

5 —: That name is important,

6 Magnesium and then Electron is E-L-E-K-T-R-O-N. And

7 they --

8 —: So the first one was done by

9 — because he hired a team he said. Then

10 after he piled it up it disappeared. And then another

11 team came in to give it a clean bill of health is what

12 he said which was paid probably by MEL or whoever was

13 buying it.

14 —: Interesting. Okay. Very

15 good.

16 —: Uh-huh. And this was what he

17 told me just a few nights ago. So --

18 —: Okay. That's great.

19 —: But he doesn't know what

20 happened to the metal that he piled up.

21 —: No. That's very important.

22 That's two cleanups that I --

23 —: After 2000.

24 —: -- had not heard about.

25 —: Yeah. Me neither.

□

137

1 —: Right. All right. Very
2 good. Terrific. All right. Let's see. I'm a little
3 behind myself here. Oh, in 1951 the General Services
4 Administration of the government deeded the Dow
5 Chemical plant to Dow by a quit claim deed. And in
6 the title search that SimmonsCooper performed -- or
7 First American performed for SimmonsCooper we were
8 trying to establish whether there was any connection
9 between Dow and the Atomic Energy Commission in
10 particular.

11 So we were interested to see that in 1951
12 to 1959 time frame the Dow plant was under what's
13 called the National Industrial Reserve. And
14 apparently the National Industrial Reserve was a
15 program where the government would contract with
16 commercial industrial sites to basically reserve plant
17 operations in case the government needed them for
18 national defense.

19 And my understanding of the arrangement

20 with Dow was that Dow was on like a 90-day standby.

21 And I think it was primarily in the documents I saw to

22 manufacture magnesium alloys. So -- and there was --

23 I think there was a mention in there of thorium as

24 well. So -- so that's -- that's one issue.

25 But also the title search mentions they

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□

138

1 were under the National Security Clause. And I really

2 honestly at this point don't know exactly what that

3 is. But I just wonder if in the 1950s time frame

4 we're talking about were you all aware of any

5 particular arrangement with the government where the

6 -- I gather actually if the government gave notice to

7 Dow, they could come in and take over certain of the

8 operations. I'm not sure whether -- maybe it was

9 everything, extrusions, castings, rolling to use for

10 their own purpose. So does anybody have any insight

11 into how that worked? —.

12 —: Would you run that by me one

13 more time?

14 —: Okay. So -- so the -- the
15 arrangement was called the National Industrial
16 Reserve. And I think that plants all over the United
17 States of various kind, the government had this kind
18 of arrangement. So I'm trying to figure out in the
19 1950s how that operated with respect to Dow. In other
20 words, did the government ever come in and take over
21 the plant to use for manufacturing purposes?

22 —: Well, the -- the press -- the
23 heavy press was owned by the Air Force.

24 —: Okay.

25 —: And the scalper in casting --

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□

139

1 the slab scalper, that had Air Force on it and the big
2 cutter down there that cut the big billets --

3 —: That was a thorium machine.

4 —: That was -- that had Air Force

5 marked all over it. So the Air Force had owned that.

6 —: Two ovens.

7 —: Two what?

8 —: Two ovens, Air Force

9 ovens.

10 —: So — adds two

11 ovens were owned by the Air Force. And so did the Air

12 Force ever come in and actually say well, we need to

13 use that -- those facilities?

14 —: This is hearsay -- —

15 — -- hearsay, but we was told one time in the

16 casting department pot room if the government needed a

17 certain type of magnesium they could come in and take

18 that -- that unit and use it for that week or how long

19 it took. They had that right to do it.

20 —: I think that's --

21 —: But this is hearsay.

22 —: No. But I think that's what

23 the National Industrial Reserve was set up to do.

24 —: Yeah.

25 —: And it kinds of makes sense.

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1 So I -- —, do you have a --

2 —: —. When we
3 worked back there they took and they ran everything on
4 the heavy press that the Air Force wanted. If they
5 had landing met two years in advance they'd run it,
6 and they didn't take orders for anything except for
7 what they could take and fill the government first.
8 Then they didn't look for no more business until the
9 government was --
10 —: So the government had first
11 priority?
12 —: They had priority.
13 —: And commercial customers
14 had --
15 —: That Lindbergh oven belonged
16 to the Air Force.
17 —: Okay. That's great.
18 —.
19 —: When I started there in 1952
20 -- — -- they showed us a movie. And there
21 was one man from Dow Chemical. He was -- he worked
22 for the government for one dollar per year, and that's
23 why they got this plant. And he's the one -- that was
24 the beginning of Rocky Flats before I don't think it

25 was even existed until then.

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141

1 —: Uh-huh.

2 —: And I worked on Number 4 Mill

3 when I got there. Alloy hadn't started yet, neither
4 had the extrusion. And everything was owned by the
5 Air Force. I know they owned the forktruck, the one
6 with the -- that would carry the sheets. And that was
7 Air Force property for many years from '52 to maybe
8 1960 or beyond.

9 —: Okay.

10 —: It was the Air Force that
11 actually owned it, and Dow Chemical did not own it.
12 And 4 Mill, whether the Air Force owned it or not I
13 don't know.

14 —: Uh-huh.

15 —: But I know that we got the
16 metal from Pittsburgh, Pennsylvania, and it came in in
17 sheets all lopsided, they didn't do a good job up
18 there. But anyhow, that was Air Force stuff, and it

19 was called FS1 or F1 or -- it was magnesium, but it

20 was not called AZ 31 or anything like that --

21 —: Okay.

22 —: -- in those days.

23 —: That's very interesting.

24 Now, tell me again. I hate to -- it's so important I

25 need to get it straight. So the Air Force is the Air

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142

1 Force, but Rocky Flats was Atomic Energy Commission

2 from the beginning. I mean, I'm not saying that Rocky

3 Flats didn't have some interaction with the Air Force,

4 but basically it was the Atomic Energy Commission.

5 —: Well --

6 —: Why do you lump those in

7 together?

8 —: Because --

9 —: I'm putting you on the spot,

10 but I -- I'm friendly about it. I just want to

11 understand.

12 —: Okay. —.

13 As far as I'm concerned Rocky Flats is Dow Chemical.

14 —: All right.

15 —: I've always believed that --

16 —: That's fine.

17 —: -- and I still do. Everybody

18 -- the employees out there came from Midland and

19 Madison, Illinois.

20 —: Oh.

21 —: And I only knew one,

22 — I think is his name. But Dow Chemical

23 and Rocky Flats were synonymous. They were not too --

24 —: Well, it's -- you know, there

25 are many -- like Martin-Marietta for instance managed

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□

143

1 the Oak Ridge National Laboratory for the Department

2 of Energy. So there were those kind of relationships

3 all over the place. It was really kind of incredible.

4 —: Yeah.

5 —: And so it may very well be

6 that what you're saying is literally true.

7 —: Yes. But I have to say that

8 I don't really know anything. All I know there was

9 scuttlebutt on the floor --

10 —: Right.

11 —: -- about Rocky Flats --

12 —: Well, we're all trying to

13 learn.

14 —: -- and about this guy. But I

15 did see the movie about this man. And I also saw the

16 movie about Herbert Dow when he started those

17 magnesium out of -- up in Midland, Michigan out of the

18 salt wells, the brine wells.

19 —: Brine, sea salt. Uh-huh.

20 —: And he was very, very

21 interested in magnesium way back in the '30s --

22 —: Uh-huh.

23 —: -- long before they even

24 thought of Madison plant.

25 —: Yeah. That's great.

1 —: And this one guy I do know, I
2 saw the movie of him and he worked for the government
3 for one dollar a year, but he was also very high up in
4 Dow Chemical. And because he was a dollar a year man
5 he got -- he had a lot of influence with the
6 government in getting things for the Madison plant and
7 the one down in Texas where they got the metal out of
8 the Gulf of Mexico.

9 —: Well, we've got to do some
10 more history reading then. Good.

11 —: But they had real -- Dow put
12 out real good movies of those two people.

13 —: Fantastic. Well, maybe they
14 still exist. They probably do.

15 —: I'm -- I'm sure they do.

16 —: We're trying -- one of the
17 things we're trying to do with — and
18 SimmonsCooper's help is to get access to the Dow
19 Midland, Michigan records. That's what we really
20 need. I'm sure -- I'm sure there's some local records
21 here at Spectrulite. But in all the cleanups for
22 instance all of the communications were between the

23 Illinois EPA and Dow in Midland, Michigan, not -- not
24 locally. So the State of Illinois was negotiating
25 with the Dow headquarters, and that's where we need to

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145

1 go. So that's very helpful. I'm sorry, —.

2 —: —. Almost all the

3 mills, all the presses, all the blockhouses was all

4 under the Air Force, belonged to the US Air Force.

5 And it was like that until Conalco was supposed to

6 have bought it from the Air Force when they came in.

7 That was in the, what, middle '70s? So before that it

8 was all US Air Force, the forktrucks, cranes, all

9 that. And then another thing under Dow was everything

10 they ran for the government was all cost plus. It was

11 -- they got whatever it cost them plus extra to run

12 it.

13 —: Uh-huh.

14 —: So that I do know.

15 —: Okay.

16 —: They talked about that.

17 —: That's great.

18 —: —. This may not be

19 on the same subject, but something come to my mind.

20 If I don't mention it, it will escape me because of my

21 --

22 —: By all means.

23 —: There was a head metallurgist

24 from Dow Chemical that worked in the plant, he's

25 deceased now, it was —. He was our head

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□

146

1 metallurgist. A guy that I know in Collinsville

2 worked for him. His name was —, —

3 —, —, —. And he says he has

4 some analysis and records of different things. One in

5 specific he had was what I -- I called him about was

6 about that -- I can't -- lithium alloy. But he said

7 some time when I got more time call me and I'll go

8 through. Well, I never did call him. So it might be

9 worthwhile to look into that.

10 —: That would be very useful.

11 If we had a list of the alloys, that would be very

12 helpful.

13 —: Yeah. He has -- I don't know

14 if he has every one of them of that, but he -- he was

15 his -- he works the lab under —. And —

16 — was the head metallurgist for Dow Chemical.

17 —: Is -- is that the --

18 —: That was where they worked.

19 —: Is that the man that people

20 nicknamed —?

21 —: Huh?

22 —: No.

23 —: No. That's somebody else.

24 —: Yeah.

25 —: Okay. All right.

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147

1 —: No. Not —.

2 —: Okay. All right.

3 —: You picked the wrong name.

4 —: No. No. No. But wait. No.

5 But this is not kidding. —, did you not tell me

6 that the — was the head of casting, the head of

7 castings for Dow?

8 —: Production superintendent.

9 —: Production superintendent.

10 COURT REPORTER: — was the head of

11 what?

12 —: The casting department.

13 —: He was a production

14 superintendent for Dow Chemical in the whole United

15 States to my knowledge, the castings. And he -- and

16 actually — (phonetic) I think worked with him

17 too, that one that's -- that you're talking about

18 lived in Collinsville too.

19 —: Okay.

20 —: Right.

21 —: So are we saying we think

22 they're the same people or different people?

23 —: No. They're two different

24 people.

25 —: Different people. Okay. Got

1 you. All right. All right.

2 —: —, you have a

3 comment?

4 —: —. I don't know

5 if you'd be interested in this, but back in the '50s

6 when I went to work at General Steel and Industries

7 some of the old-timers said something about Dow

8 Chemical would take that mustard gas they had left

9 over from the war and burn it in them ovens down there

10 when they was making magnesium. Did you ever hear

11 anything about that?

12 —: In the ovens at Madison?

13 —: Yeah. That the government --

14 —: Well, Dow -- I know about Dow

15 making that product and it's certainly possible.

16 That's the first time I've ever heard that. But it's

17 very likely possible.

18 —: That was just a rumor some of

19 the old-timers told me.

20 —: Okay. Yeah. Well, I'm sure

21 they weren't -- you know, they -- they needed to get

22 rid of it and that's -- that's possible.

23 —: That's how they got rid of

24 it.

25 —: Yeah. Incineration is one

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149

1 way to do it. It's kind of dangerous. But anyway,

2 okay. Does anybody -- Dow 15 Affidavit is about

3 firsthand knowledge of beryllium. I think we've

4 covered that quite a bit.

5 One thing I wanted to bring up was one man

6 who's helped us a lot is this — who is

7 with the Government Accountability Project. And I

8 asked him one time if beryllium could have been

9 licensed by the government. And -- and the reason I

10 said that is —mentioned that in the early days,

11 in the '50s we're talking about and in the World War

12 II era, that beryllium was -- you know, it was sort of

13 a monopoly who controlled it. And he said he had --

14 he never had heard of a licensing program, but he said

15 that might be possible.

16 So I just wanted for completeness -- I
17 think we've been through beryllium pretty well. But
18 if anybody knows anything about beryllium licenses or
19 any government, you know, particular relationship with
20 beryllium, now would be the time to say it. If we've
21 said what we need to say, I think that's -- that may
22 be it for beryllium. Any other comments about
23 beryllium? Okay.

24 Now, — and different people
25 from time to time have mentioned special metal

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150

1 projects. And I think at our meeting in Collinsville
2 there was also a mention about one of those special
3 metal projects was that -- maybe it was —. I
4 can't remember, but somebody had observed even an
5 ingot of plutonium at the Dow Madison site being
6 guarded and so forth. So I -- I want to find -- and
7 we've heard this morning a little bit more about the
8 Martin-Marietta project from—

9 But are -- are there any other

10 recollections that you all have of special metal
11 projects that you were -- that were different from the
12 normal ones that sort of seemed to have some special
13 importance to the government? Any more comments about
14 that sort of thing? —.

15 —: —, in about this
16 time frame we made a special aluminum alloy, the name
17 of it escapes me right now. I don't know. I can't
18 remember. It was made specifically for
19 Martin-Marietta, and it was used in an extruded form.
20 We extruded it. It was used for the frame -- the
21 inner frame of the main fuel tank for the space
22 shuttle program. So those -- those big orange center
23 fuel tanks that you see is supported with the aluminum
24 that came from the Dow Madison plant. I can't
25 remember what the alloy was. — may know.

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151

1 —: I remember what you're talking
2 about. I remember what you was talking about. But
3 the type of metal, I can't recall it. But we did make

4 stuff for the space shuttle, and they should have --

5 I'm trying to think.

6 —: But -- but that's useful. So

7 there could have been special metals that were a

8 secret because of the -- like aluminum, the metal

9 wasn't so special but the use for -- that it was going

10 to be put to was secret.

11 —: Yeah. But it -- a lot of

12 times if they had a special alloy to make, they'd come

13 out with the alloy and give it to us and we would make

14 it. And that'd be the last time we ever make it.

15 —: Oh, I see.

16 —: Because the regular alloys

17 that we make we -- we kept on records.

18 —: I understand.

19 —: But if it was a special type,

20 they told us what to take and that was it.

21 —: Okay. I understand. Who

22 else? Oh, yeah. I'm sorry. Go ahead.

23 —: —. We did extrude

24 metal for Martin-Marietta, and they sent their reps

25 in. And I was over the heavy press when this

1 operation was going on.

2 —: Okay.

3 —: And we had to follow their

4 instructions. And I don't know what -- exactly what

5 year it was, but it was right before Thanksgiving.

6 And we couldn't get our container temperature up to

7 the specs they wanted. And they had a plane to catch

8 out. And they left me -- the guy in charge -- I

9 forget if he was from North Carolina or South Carolina

10 -- excuse me -- he left his phone number. And he had

11 to catch a plane to get back for Thanksgiving. And we

12 was instructed to stay with it until we got our

13 container temperature up and work over if we had to

14 extrude that metal. And they stored this metal in the

15 Number 2 Building out -- outside. And I don't know

16 what kind of metal it was. It was just a special

17 project for them.

18 —: But this was run on the heavy

19 press?

20 —: This was run on that heavy
21 press, this metal was.
22 —: That's interesting. Now,
23 —, your -- your project with the -- that was
24 on -- not on the heavy press, right?
25 —: No. That was on the 7 Press

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153

1 --
2 —: Right.
3 —: -- that we did that
4 Martin-Marietta extrusion for.
5 —: So that's two different
6 projects?
7 —: Well, there was another time
8 that I actually did work for Martin-Marietta too. And
9 that was back on the Lindbergh oven.
10 —: Okay.
11 —: They -- this was around '96 I
12 believe, 1996. I remember being for a week at a time
13 during machine changeovers and breakdowns and such

14 that we'd be reassigned for a week at a time here and
15 there. And I happened to be down on the Lindbergh
16 oven which is a long oven which is about a football
17 field in length, almost half a football field in
18 length.

19 —: Uh-huh.

20 —: And it would heat up metal
21 and then quench it on the back end. Well,
22 Martin-Marietta leased this out I believe. And they
23 had sheet metal, real thin squares of sheet metal
24 about half the size of this table. And what they
25 would do is they'd run it through the ovens and heat

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□

154

1 it up to certain temperatures. Then they would quench
2 it and get it cold. Then it would have to -- we'd
3 have to carry it and put it back in a refrigerated
4 boxcar, have to be a refrigerated car. It was -- had
5 to be so many degrees below zero. And when it came
6 out of the oven it was like a limp rag. And we had to
7 use two-by-fours to lift it up over the rollers. And

8 as soon as that water hit it and quenched it it was

9 harder than steel.

10 And like I said, it was about half the

11 size of this table. And one corner was bent over when

12 it cooled. And there was four of us with a

13 four-by-four trying to pry this back, and we couldn't

14 even budge it. And yet it was only, you know, a

15 eighth-inch thick.

16 And we did this for I think it was like a

17 three-day process. And on the third day a friend of

18 ours that was working with us on the job mentioned

19 this stuff came from Roswell, I bet this came from

20 outer space. Well, when he told them that in joking

21 they quit talking to us, wouldn't answer any more

22 questions or answer or talk to us and joke with us.

23 They wouldn't do anything. And they loaded up

24 everything and left.

25 —: Okay.

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155

1 —: And he goes I hope I didn't

2 make them mad. But honestly it was some -- it was
3 Martin-Marietta I believe that brought it in. He may
4 know the customer if he remembers it. Because they
5 had to bring in a special truck with ice and load it
6 in there after it was heated which we thought was a
7 strange process. We never done that before.

8 —: All right.

9 —: —. I think

10 the process that you're -- that you're describing
11 would be a hardening process, a case hardening process
12 or a surface hardening. Is that -- am I correct, the
13 rapid heating and -- or heating and then rapid cooling
14 will -- will harden -- harden the surface of the
15 metal?

16 —: It's aging -- aging metal.

17 —: Yeah. They was called

18 case hardening or surface hardening I believe.

19 —: Okay.

20 —: —. When you were

21 running that metal I had to -- I was one of them on
22 the Lindbergh that made sure the temperature was at a
23 certain temperature all the way through. We had
24 thermocouples in the side of the oven getting that

25 temperature, but it was something else.

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156

1 —: Okay. That -- that's very

2 nice. Thank you. All right.

3 —: —, one more.

4 —: Yes.

5 —: The food's ready.

6 —: Oh well, why don't we -- it's

7 one o'clock --

8 —: One more.

9 —: You had a comment perhaps.

10 —: Yeah.

11 —: The -- the metal we was

12 extruding on the heavy press for Martin-Marietta I do

13 know for a fact it was for the space shuttle program.

14 —: Okay. Very good. Well,

15 that's a great place to stop. Let's break for lunch,

16 and then we'll resume after that.

17 (Whereupon, a short lunch recess was

18 taken.)

19 —: Okay. This is —
20 again, and we're beginning the afternoon session of
21 the Dow Affidavit Meeting at SimmonsCooper. It's July
22 the 21st, 2006. And before we continue on with the
23 numbered affidavits — has joined us which
24 we appreciate. And he -- I'm going to just let him
25 make some comments that he wants to about happenings

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□

157

1 at Dow and without having it address any particular
2 affidavit. So —, would you like to --

3 —: Okay.

4 —: Let me -- let me give you
5 this. Okay. You can just talk. That's fine.

6 —: Right. Yeah. I worked down
7 there at the rolling mill the whole time I worked
8 there. And we started on that thorium back in the
9 early '50s.

10 —: You said a word -- you said
11 -- start that again because we missed a word.

12 —: That because I ain't got my

13 teeth. That's why you missed it.

14 —: That's okay. That's all

15 right. Just say it again and she'll pick up that

16 word.

17 —: Because I ain't a very good

18 speaker and I speak too fast.

19 —: You're okay. We'll get it.

20 —: I worked the rolling mill

21 for the whole time I worked there except maybe except

22 a month. You get that?

23 COURT REPORTER: Uh-huh.

24 —: And we started on that

25 thorium back in the early '50s. Then we used to have

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158

1 to load it in the oven to get -- to try and get that

2 flattening. And then they would roll it down to the

3 next -- send it to inspection. And inspection would

4 inspect it for dirt. If they found any dirt, they

5 would send it to hand salvage.

6 COURT REPORTER: Send it to?

7 —: Hand salvage.

8 —: Hand salvage.

9 —: Hand salvage. You had a

10 sander and you sanded that metal down. And then you

11 had to sand that dirt out. And they didn't give us no

12 equipment, just a pair of gloves and a dust mask, that

13 was it. And so --

14 —: Did they -- did they tell you

15 that the thorium dust was dangerous at all?

16 —: No. Never mentioned

17 anything about it.

18 —: Okay.

19 —: The only thing they told us

20 that if we got -- we was running scraps through there,

21 and if you got metal there that didn't have markings

22 --

23 —: Uh-huh.

24 —: -- whether it was thorium or

25 AZ or what -- whatever, you had to go get that Geiger

1 counter out of the office.

2 —: Okay.

3 —: And they'd run that over it.

4 —: And that was in the early

5 '50s?

6 —: Yeah.

7 —: Okay.

8 —: And then eventually they

9 stopped that.

10 —: Okay.

11 —: But the only time they ever

12 really done it again was if they had an odd scrap they

13 was wanting to get rid of.

14 —: Why do you believe they

15 stopped using the Geiger counter?

16 —: I think they just figured

17 that they didn't need to.

18 —: Okay.

19 —: That's what I figured.

20 —: You mean for safety or they

21 didn't need to --

22 —: Yeah.

23 —: -- they didn't need to

24 reclaim the metal?

25 —: No. And --

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160

1 —: Okay. Okay. Go ahead. I

2 didn't mean to interrupt you.

3 —: But we would just take it

4 down there to next inspection. Inspection would ship

5 it to hand salvage. Well, they wouldn't ship it.

6 They just -- we would --

7 —: Say that again. They'd ship

8 it to who?

9 —: Hand salvage.

10 —: Okay.

11 —: They were not called

12 shipping, but they'd just move it with a forktruck.

13 —: Okay.

14 —: And so then we'd to hand

15 salvage that. I did that 16 hours a day. Of course,

16 — worked down there many a nights with me. And so

17 did —, he worked down there. And we had quite a
18 few guys work -- worked on that hand salvage. —
19 even done it.
20 —: I worked there a lot.
21 —: Yeah. All overtime. If
22 they had overtime, he was there. But then we'd keep
23 on going. And as they roll that down where you keep
24 getting lower and lower and lower on your gauge. Then
25 when you got down to a certain gauge that the metal

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161

1 called for, well then you would stop. And then they
2 would send it through a pickle line.
3 COURT REPORTER: A what?
4 —: A pickle line, pickle.
5 —: A pickle line, AMP. Then
6 you'd have to -- they clean the metal with acid. Then
7 they marked it. Then you went in there to hand
8 salvaged it. Then kept on doing that all the time.
9 Then we would clean up and you'd throw a little dust
10 cloth on them on the floor, that's where we swept up.

11 —: Okay. All right.

12 —: —, I don't know, but I

13 think he worked down there a few times too. Yeah.

14 All these guys I worked under, most of them. But it

15 was real -- it was hard work and you had your -- your

16 head down about six inches from the metal.

17 —: Yeah.

18 —: And you were breathing all

19 that dust from that thorium.

20 —: So tell me in the -- now,

21 this is in the rolling mill. Why -- just offhand why

22 would there be dust in a rolling mill?

23 —: Because it's all flat

24 sheets.

25 —: Okay. And the rolls

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□

162

1 themselves, where does the dust -- so you'd have a

2 hard metal and you're rolling it. Where is the dust

3 coming from?

4 —: The dust is coming from the

5 hand salvage. See, that's where the dust was coming

6 from.

7 —: Okay.

8 —: And then the -- of course,

9 you got your rolls, just a certain amount of coolant

10 on it.

11 —: Okay.

12 —: See, in order to keep them

13 clean.

14 —: Okay.

15 —: But the dust is off of the

16 PG wheels and the dust sander.

17 —: What was the word -- you said

18 dust sander, but what was the other? What kind of

19 wheel.

20 —: PG wheel.

21 —: PG.

22 —: Yeah. That's a round

23 thing --

24 —: How do you spell that? I

25 don't know what a PG wheel is.

1 —: -- about this big around.

2 —: Capital P, capital G.

3 —: Oh, a PG wheel.

4 —: PG wheel.

5 —: I got it. You got that, PG?

6 All right.

7 —: Yeah. And then bolt it to

8 the sander. And that's what you sanded the

9 (inaudible).

10 —: Okay. I got you. So you

11 were sanding and you -- you were just making dust?

12 —: Yeah.

13 —: All right. All right. Thank

14 you for explaining that.

15 —: And then we -- we also done

16 what they call -- throw that -- get real hot

17 temperature then throw it on the -- on the floor to --

18 I can't think of the name of it now, the -- you got to

19 get that metal hard, a hardener.

20 —: Okay.

21 —: And then we would scoop it

22 up with forks in the little forktruck. And then
23 they'd take it down and it would go to that process.

24 COURT REPORTER: I missed the whole last.

25 —: Okay. So you were saying --

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164

1 —: I ain't got no teeth that's

2 why I can't talk.

3 COURT REPORTER: No. You're fine.

4 —: Okay. So you were saying --

5 so -- so after you said something about so they did

6 that whole process, but just before that. So you're

7 talking about this last little part. So why don't you

8 say that again so she can get it.

9 —: Let me know what part you're

10 talking about.

11 —: I think you were talking

12 about sort of finishing up.

13 —: Oh, finishing up, yeah.

14 —: When you were finishing up

15 the roll.

16 —: Yeah. Rolling, you're

17 talking about— and his buddies.

18 —: Okay.

19 —: And they usually roll it by

20 hand because it had to be all hand jobs. Reach up and

21 throw it over the top, then grab it and shoved it back

22 through. And -- but that was the easiest part. You

23 didn't get much -- much dust or dirt from there

24 because it was all heat.

25 —: Now, tell me --

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□

165

1 —: That metal was hot.

2 —: -- was your job -- so would

3 you use that PG wheel? In other words, I'm trying to

4 figure your particular exposure.

5 —: Yeah.

6 —: Did you use that wheel all

7 the time?

8 —: Oh, yeah.

9 —: So your environment was very

10 dusty?

11 —: Yeah.

12 —: Okay.

13 —: Yeah. I used that every

14 day.

15 —: You said something else that

16 we haven't talked about but we need to get on the

17 record. You mentioned the word overtime. Was there a

18 lot of overtime at --

19 —: Oh, yeah.

20 —: -- Dow if you wanted to do

21 it?

22 —: Yeah. There was all the

23 overtime you wanted on that thorium.

24 —: Okay. Is that a -- well,

25 will some of you all -- I'm sorry. I said to

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□

166

1 — that -- he brought up the topic of

2 overtime. And one of the things that NIOSH does when

3 they calculate your radiation dose is they routinely

4 assume that you all worked an eight-hour day. But at
5 least at GS -- I see a lot of negative nodding. At
6 GSI when we did that set of affidavits, you know,
7 people said that they -- in the Betatron building for
8 instance there was as much overtime as you wanted to.

9 And I think one person even worked a 36-hour shift.

10 So I think we just need a few comments about what
11 would be a normal workday. Was there a lot of
12 overtime, et cetera? So --

13 —: Well, a normal workday would
14 be at least three days a week --

15 —: Okay.

16 —: -- 16 hours a day.

17 —: Three days a week, 16 hours a
18 day.

19 —: Yeah.

20 —: Okay.

21 —: Then some of them was
22 actually --

23 —: So that's a 48-hour week,
24 right?

25 —: Yeah. And some of them

□

167

1 worked probably -- even worked longer.

2 —: Right.

3 —: I have worked five of them.

4 —: Okay. Five, 16-hour days?

5 —: Yeah. And so --

6 —: Yeah. That's a -- that's a

7 lot.

8 —: Yeah.

9 —: Okay. Any other --

10 —, do you have some comment?

11 —: —. The

12 overtime during the '80s and '90s at the Madison plant

13 ran between 45 and 52 percent. That means that

14 everybody worked a half again as many times -- hours

15 of overtime which would be a 20 -- 20 to 22 hours a

16 week overtime.

17 —: Okay.

18 —: We got those reports

19 monthly so we knew exactly how much overtime we

20 worked.

21 —: Okay. —.

22 —: —. Yes. When we

23 did that cycle work basis for Martin-Marietta we

24 didn't do an eight-hour shift and go home. We stayed

25 until they said they was satisfied and they were done

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168

1 which was usually an extra -- what, eight to nine to

2 ten o'clock sometimes. We'd almost work a double

3 shift until the customer said they was ready to go or

4 satisfied with the day's works. So it wasn't up to

5 us, it was up to the customers.

6 —: Okay. So it was really

7 fitted to the job kind of?

8 —: Yes. It was. It was work

9 cycle, and it was their press.

10 —: Okay. That's great. —

11 —, do you have more to -- to add or -- that's a

12 pretty good description of what you did in the rolling

13 mill though.

14 —: Uh-huh. But no, not really.
15 Just the -- the same routine.
16 —: Okay.
17 —: We usually -- usually ran
18 that thorium about anywhere from three to four days a
19 week.
20 —: Well, let -- let me get this
21 last question then on the record for you in
22 particular. At any time that you worked for Dow did
23 anybody explain to you about the dangers associated
24 with thorium being radioactive or any -- any kind of
25 problem you might have from inhaling all that dust?

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□

169

1 —: No.
2 —: Okay. All right. Well,
3 thank you very much for that. —.
4 —: —, just for the
5 record and for you edification a PG wheel is a -- is a
6 wheel about maybe three inches wide, and it has a
7 series of abrasive flaps on it. And these flaps

8 rotate on a -- on an air handle and -- and scratch the

9 surface or sand the surface of it.

10 —: Sand it.

11 —: Great. Okay. So that would

12 really kick up a lot of fine -- very fine --

13 —: Absolutely.

14 —: It's air powered.

15 —: It depends on what -- what

16 grid it was. You go in there with a 40 grid, then

17 you're really kicking up dust.

18 —: Exactly so.

19 —: That's great. All right.

20 The other thing is before we continue with Affidavit

21 17 I wanted -- there's apparently some additional

22 information about burying thorium sludges. I want to

23 just take us on that for a little bit. I'm not sure

24 this is a definite sighting, but you have some more

25 information about that, —?

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□

170

1 —: Yeah. They had some thorium

2 that got wet and was on the floor at one time.

3 —: Okay.

4 —: And nobody wanted to pick it

5 up, and they just shoved it out the door. And the

6 thing was a day or two later they was going to do some

7 concrete work out there. And it got buried out there

8 underneath that concrete right outside the door.

9 —: That very --very hard job to

10 do?

11 —: And did you -- did you tell

12 me that that was near the pot room?

13 —: Yes. It was out -- it was in

14 the pot room outside the door.

15 —: It was -- it was on the floor

16 of the pot room then they moved it out?

17 —: Out -- outside the door.

18 —: Buried it and cover it over

19 with concrete?

20 —: Yeah.

21 —: Okay.

22 —: And one more question what he

23 was talking about. What'd they do with the solvent

24 after they rolled it? —, that would have been --

25 —: The coolant.

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171

1 —: The coolant when they rolled

2 this stuff --

3 —: Good point.

4 —: -- what'd they do with the

5 solvent?

6 —: So --

7 —: Because that goes in a

8 container.

9 —: So —, you all used

10 a solvent while you were doing rolling?

11 —: Yeah. We cleaned it up

12 after -- after we're done it would have to be cleaned,

13 the whole sheet.

14 —: So the question was that

15 there must have been large volumes of that solvent.

16 —: Yeah.

17 —: What -- what would they do

18 with it once -- once the job was over?

19 —: Poured -- take a squeegee --
20 —: Okay.
21 —: -- and squeegee it out.
22 Ain't that right, —?
23 —: We had a -- in back of 1 Mill
24 -- —. In back of 1 Mill we had a --
25 a large tank, and it had a roller that would go back

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□

172

1 and forth. And it would skim -- it was a skimming
2 tank. And they would skim all the sludge off. And
3 they had scrap boxes. The same ones we used for
4 scrap, we would dump it in that. And then I don't
5 know where it went. They -- a forktruck would pick up
6 these scrap boxes loaded with that sludge and take it
7 some place, to a dump I guess. But that's how they
8 got rid of the sludge. The -- the morg oil from 1
9 Mill and the hydraulic oil -- there was a lot of leaks
10 -- went down the sewers. Then we would take a fire
11 hose and flush it down to the sewers just to get rid
12 of it.

13 COURT REPORTER: Morg oil you said?

14 —: Pardon?

15 COURT REPORTER: You said morg oil?

16 —: Hon, that was the name of it,

17 —. And it was a sort of a reddish brown

18 in color. It's -- it was specially made for

19 hydraulics. But we had two kinds of hydraulic oil.

20 Morg oil was the red one, and the -- and the dark

21 black-blue one was just plain hydraulic oil. And the

22 morg oil leaked a lot. And that would go into the

23 Mississippi River I guess.

24 —: Okay.

25 —: But we would take a fire hose

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□

173

1 and wash it down to get it -- just to get rid of it.

2 And I would elaborate on -- —, on this area where

3 we sanded the -- this HK we had about three or four

4 different kinds of sanders. And we used files to

5 gouge out the metal. And sometimes there'd be 12

6 guys, eight guys, two guys working in an area. But if

7 you had 12 guys working, there was a lot of dust
8 because -- well, you got eight, 12 sanders going at
9 one time. And it would make a lot of mag dust in the
10 air.

11 —: I have a note here that I
12 should ask about RotoClones in the rolling mill. So
13 since I don't know what that is, I'm just going to
14 throw that question out and get you to talk about it.

15 —: Well, it's a piece of
16 equipment that was supposed to have had water in it.
17 And it was right there across from the north shear.
18 And I don't know if it was -- what caused it -- the
19 mag would set it, would get to the size of this --
20 this machine. And it was kind of dangerous is the
21 reason they took it off. One guy -- three guys I
22 guess was blown up in there. Two guys?

23 —: It was two.

24 —: There was two or three guys
25 that was blown up. And I know —

1 (phonetic) was the one that -- that picked him up,
2 picked the guy from Benld up. And it blew out his
3 insides. Because -- told me when he
4 grabbed the guy's leg to pull him out there was --
5 there was nothing -- there was nothing between the
6 skin, it was like a sack or a tube. And he tried to
7 grab the guy out and all he had was skin, he didn't
8 have no bones.

9 —: So what --

10 —: But that was because the

11 explosion was so -- so powerful.

12 —: What -- what did the machine

13 do besides that to people?

14 —: There was a brush line, and

15 they would run the sheets of magnesium through these

16 -- these wire brushes.

17 —: Okay.

18 —: And the dust was -- was

19 transported through pipes up to the RotoClone.

20 —: Okay.

21 —: And there it was mixed with

22 water.

23 —: Okay.

24 —: And periodically it had to be

25 cleaned. And that's when those three guys or two,

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175

1 whatever.--

2 —: Why was it mixed with water?

3 I don't understand. What was the --

4 —: The water was to keep --

5 —: To keep the dust down?

6 —: -- it localized.

7 —: Yeah. Okay. All right.

8 —: Yeah. To keep it from

9 spreading all over the mill.

10 —: And like it's -- it was like

11 a wet vacuum or something like that?

12 —: But it turned out to be kind

13 of dangerous.

14 —: All right.

15 —: And the rumor is this -- he

16 knows his name.

17 —: —

18 —: —, yeah.

19 — was supposed to have lit a cigarette in

20 there.

21 —: How do you spell—

22 (phonetic)?

23 —: —

24 —: Okay. —. Okay.

25 Sorry.

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□

176

1 —: And he's the one —

2 — pulled out of that thing. And -- and he didn't

3 have no -- the bones were gone or something.

4 —: Gee whiz.

5 —: But anyhow, when he grabbed

6 him he told me -- and it was kind of horrible. He

7 said he grabbed him and all he had was -- he just --

8 the skin of his leg just collapsed. And I don't know

9 where the bones went to. But I know they went all the

10 way down to the drinking fountain down on -- by I

11 Mill, by the pulpit because we found pieces -- had

12 pieces of his -- of —down that far away.

13 —: I got something to say on

14 -- on that RotoClone machine.

15 —: Yes.

16 —: —. They sent

17 you in there to clean up the dry dust that was on the

18 inside of the clones and you had use a special tool.

19 I think it was made out of brass or -- or copper. You

20 couldn't use anything else. If you did, it threw a

21 spark and that would cause an explosion. So I done it

22 many times when I was in there.

23 —: And -- and did you -- was

24 there an explosion?

25 —: No.

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□

177

1 —: No. You used the right --

2 —: Right.

3 —: You used the correct

4 instrument.

5 —: I used the correct tool,
6 and I didn't smoke. So --
7 —: Okay.
8 —: I know how dangerous it
9 was.
10 —: Wow. So -- so I've heard
11 about -- let me -- I guess I need to ask. So this was
12 a -- I mean, I've heard about magnesium dust
13 exploding. Is that what we're talking about now?
14 —: Uh-huh.
15 —: So magnesium dust with water
16 and a spark of some kind will just ignite?
17 —: Right.
18 —: Is it a -- is it like a flash
19 or is it really an explosion? I mean, does it -- it's
20 a blast.
21 —: It's hydrogen gas. Mag, dust,
22 and water turns into hydrogen gas.
23 —: Okay.
24 —: And you've got to have it --
25 some way of evaporating or getting rid of that gas.

1 And what there was in there, every night they'd clean
2 it out because one side of it they used to put coils
3 through it. Then on the other side they used the
4 slabs through it.

5 —: Okay.

6 —: And it was all going in this
7 one unit. Well, then with that water and that mag in
8 there causes the gas, which in turn any kind of a
9 spark or anything would ignite it.

10 —: Okay.

11 —: And they had like -- they had
12 like a six inch -- or a six foot square pipe going out
13 the top. And when they -- when it exploded it was
14 perfectly circle, you couldn't even see where the
15 creases were for the corners before. That how -- it's
16 dangerous.

17 —: Let me -- while I still think
18 of it I need to ask you this. When you all are
19 talking about mag, you know, what's really important
20 for this law is radioactive exposure. So when you say
21 mag, are you talking about pure magnesium, or could

22 you be talking about magnesium alloys? And in
23 particular could you be talking about magnesium
24 thorium alloys?

25 —: Any of the above.

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179

1 —: On that --

2 —: Any of the above. Well,

3 that's what I'm -- that's what I'm getting at.

4 —: All the -- all the alloys, all

5 the mag that we got over in -- in the mill would be a

6 certain type, you know, already alloyed. You know,

7 like AZ or --

8 —: Okay.

9 —: -- PE or something like that.

10 But on -- but this RotoClone, most of it was like AZ

11 or thorium or HK or HM --

12 —: Okay. That's great.

13 —: -- used on it.

14 —: All right. So -- so in other

15 words, when there's an explosion it's not just

16 magnesium metal. It could also be the thorium that's

17 alloyed with it, right?

18 —: Yeah. It'd be dust.

19 —: Okay. So I mean, it could be

20 thorium dust and thoron gas coming from that. All of

21 the -- all of the above.

22 —: Fifteen or more percent.

23 —: Okay. All right.

24 —: Actually -- —

25 -- what happens here when -- when mag mixes with

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□

180

1 water, water only has two elements in it, hydrogen and

2 oxygen. Hot magnesium of any -- of any temperature

3 will burn the oxygen out of the water leaving nothing

4 but hydrogen.

5 —: Uh-huh.

6 —: And when that happens

7 it's very volatile, and it will blow the roof off the

8 buildings. We've -- many times cans of soda came in

9 with the scrap undetected, it was put into a pot of

10 magnesium. As soon as it went subsurface the
11 magnesium went up and that pot blew. You could watch
12 it climb like a Christmas tree. It would blow, boom,
13 boom, boom, boom until it reached its height and then
14 it would spread out. It'd give you time to run -- get
15 the hell out of the way sometimes. Sometimes it
16 didn't. Sometimes fatalities occurred when a pot
17 would blow.

18 —: One -- one fire they had over
19 there started with a banana peel the rumor was. There
20 was enough moisture in a banana peel, a discarded
21 banana peel that some people got hurt. It blew up and
22 -- and — was in that truck. And the only
23 thing that saved him was staying in the truck because
24 they had a layer of molten magnesium on the floor.
25 And then when 3 Mill -- well, first of all, HK and HM

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□

181

1 was 100 degrees hotter than -- than regular AZ or --
2 or PE or anything of those. You had to have the --
3 before we processed the HM and the HK they set up the

4 ovens 100 degrees hotter. I think it was 810 or

5 something like that degrees.

6 And when they burned down 3 Mill I wasn't

7 working then. But I came in -- oh, I came in the next

8 day at eight o'clock, and the fire was so hot there

9 was no skeleton of the mill left. It -- it vaporized

10 the steel. The steel girders were gone. There was

11 just nothing there.

12 —: Wow.

13 —: It -- it actually made the

14 steel catch on fire. And that's got to be hot to melt

15 -- to vaporize steel. And I said well, where the heck

16 is it, I thought they took it apart. They said that's

17 it, it's just gone in the air. It's almost

18 unbelievable.

19 —: I'll say. Okay. All right.

20 So let's -- let's move on. That's -- —, yes.

21 —: Yes. —. The

22 special alloy that we ran for Martin-Marietta was also

23 the same nature. The most aluminum and magnesium

24 temperatures would melt at 1,100 degrees and -- or --

25 and catch on fire if it was magnesium, where the

□

182

1 alloy -- the special alloy that we did run for
2 Martin-Marietta I know for a fact was set at a higher
3 temperature because I was the one setting the
4 equipment. And it was at 1,150 degrees. And the
5 entire billet came out glowing orange which is
6 something we never seen before because whenever it got
7 to that point it would always melt or burn. So right
8 then and there, you know, now speaking about it, you
9 know, I could tell that if it was a magnesium, it
10 would have burned. If it was aluminum, it would have
11 melted. So it was a composite with something we don't
12 know.

13 —: Okay. Very good. Okay.

14 Affidavit 17 has to do with who knows about management
15 ordering records to be shredded at Dow, who ordered
16 this to be done and when. And you know, —
17 mentioned some. When we started this morning he
18 mentioned a little bit about that. Does anybody else
19 have any information? And I think what we're talking

20 about now is records. We're not talking about routine
21 records which every company gets rid of on a regular
22 basis. But we're talking about any instance where
23 anybody might have seen destruction of records of the
24 company that they felt the company really wanted to
25 hide. In other words, this wasn't just routine

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183

1 getting rid of old paycheck stubs or something like
2 that. Anybody see anything like that? And I would
3 say this is for the duration of the operations over
4 there, '51 to whenever, 2005, whatever, 2006.

5 —: — has something.

6 —: Mr. -- —, did you

7 -- do you have any more about that?

8 —: About the records?

9 —: Uh-huh.

10 —: Well, my name's —

11 —. — was in the maintenance. That

12 was his job so take and he hauled off a whole bunch of

13 stuff and dumped it there but not knowing what it was.

14 And then — (phonetic) was the oldest guy in the
15 extrusion department. And he -- he -- he did the same
16 thing, he hauled off stuff and office paperwork and
17 stuff and dumped it like that. And but it didn't
18 necessarily mean it was confidential or anything.
19 —: Okay. It could just be
20 routine.
21 —: Could have been anything.
22 But they cleaned out the offices there.
23 —: Okay. That's fine. Dow
24 Affidavit 18 has to do -- it says who knows about
25 x-ray machines at Dow. And I apologize if I'm calling

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184

1 this the wrong name, but some people have mentioned a
2 Kelley-Koett -- I'm not sure how you spell that --
3 Betatron. And some people have mentioned 195 kilovolt
4 portable x-ray unit.
5 So -- so what we're really getting at is
6 most steel companies we think used some kind of
7 industrial x-ray. We -- we heard about a portable

8 Cobalt 60 source brought up in a van beside one of the
9 buildings. I mean, you all had to look at castings
10 and welds and things like that to make sure they were
11 intact. So it seems like there must have been some of
12 that kind of equipment at Dow. I think—
13 told me that he -- he believes that there was a
14 Betatron type machine and you know, that stayed there
15 for a long time. And I certainly have heard several
16 people talk about portable x-ray units. So anybody
17 who has any information about that sort of equipment
18 at Dow would be very useful right now.

19 —: —.

20 —: Okay.

21 —: As a warehouse stockman I was
22 -- I delivered a lot of x-ray slices -- test slices to
23 the x-ray room in the casting department. I don't
24 know if it's one of these machines that you're talking
25 about.

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□

185

1 —: Okay.

2 —: But it was stationary. It

3 wasn't --

4 —: So tell me a little bit more.

5 When you say x-ray -- you say slices, you mean metal?

6 —: Right. When they cast the

7 billet --

8 —: Right.

9 —: -- they cut a test slice every

10 so many billets.

11 —: Right. Uh-huh.

12 —: And those are taken --

13 especially I think it was ZK 60 --

14 —: Okay.

15 —: -- that went into a lot of, I

16 gathered, helicopter parts and everything else.

17 —: Okay.

18 —: And that was taken there to

19 x-ray to see how many specks of I guess dirt or

20 whatever, impurities.

21 —: Right.

22 —: And if it was too much, they

23 rejected it.

24 —: Now, I'm just trying to pin

25 you down. So -- so -- so did you take it to an x-ray

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186

1 unit that you saw?

2 —: Yes.

3 —: Okay. And -- and -- and what

4 -- and how did they describe -- how would you describe

5 the source?

6 —: Well, it was the kind where

7 they had to be behind something to take the x-ray.

8 —: Okay.

9 —: They went behind somewhere.

10 —: Okay. But was definitely an

11 x-ray --

12 —: Oh, yes.

13 —: -- machine. It wasn't a --

14 you know, like a cobalt source is often in a lead

15 casing.

16 —: No. No. No.

17 —: This was an x-ray machine.

18 —: It was an x-ray machine.

19 —: So that would be more like
20 the 195, a regular industrial small source?
21 —: On -- on what they're running
22 specks on that was to see if the metal was clean or
23 not an 01 was acceptable, an 03 wasn't. That was how
24 the lab referred to it. Remember that?
25 —: So let's see. —, I guess

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187

1 I need you to put on the record about the Betatron
2 like machine that you thought was there.
3 —: The Kelley -- Kelley-Koett, I
4 got that from — (phonetic), the name of
5 it. There's no information on it that they can find
6 except they got 110, 220 on there. And if that was
7 the power, they didn't have that until later on in
8 there. Because —(phonetic) and myself was
9 the one that put it in there. And -- but it was
10 sitting in there just north of the Air Force ovens.
11 And years ago it used to be down there by the 4
12 Building in casting, and then they moved it down.

13 The portable units, almost every
14 department had a few portable x-ray units. And then
15 they also had these like the Magniflux units.

16 —: Right.

17 —: And I'm not for sure what they
18 called the ones where they used the oil on the -- the
19 inspectors used with the oil on the --

20 —: Ultrasound.

21 —: -- ultrasound.

22 —: Yeah.

23 —: They had quite a few of them.

24 —: Yeah.

25 —: Pardon me. And in -- in

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188

1 extrusion and in the rolling mill they had them we
2 called them sonic tanks that -- it was in water, they
3 put the metal in water.

4 —: Was that to clean the metal?

5 —: No. That was to x-ray.

6 —: That was for diagnostics?

7 —: Diagnostic or x-ray them or

8 whatever, you know. I don't know --

9 —: Okay. All right.

10 —: -- what that part of it was.

11 But they had quite a few. I'd say at least three

12 units for each department of x-ray units. And then

13 the -- the Magflux (phonetic) units they had probably

14 one in each department for that.

15 —: So I think in the contract

16 books that you all have given me from Dow that there

17 are listed people who are radiographers. So I mean,

18 there were people who that was their main job --

19 —: That was the inspector.

20 —: -- to operate the x-ray --

21 the inspectors.

22 —: The inspectors did that.

23 —: Okay. All right. Okay. And

24 -- and I guess I do need -- just tell me a little bit

25 more about -- now I'm going to try to pin you down.

1 Why do you think this machine was a Betatron? Did
2 somebody tell you that or did it have it written on
3 it?

4 —: — and —

5 is the one that said that's what they --

6 —: Oh, they said it was?

7 —: Yeah.

8 —: Okay.

9 —: But we -- we know it as an

10 x-ray machine. We didn't know it --

11 —: Right.

12 —: -- as a Betatron. They were

13 the ones that came up with the Betatron.

14 —: Well, a Betatron of course

15 was a special higher voltage type of x-ray machine.

16 And so that's fine. But -- but at least two people

17 referred to it by that name?

18 —: Yes.

19 —: Okay.

20 —: And it had to be at least 440,

21 powered by 440.

22 —: 440 volts?

23 —: Volt, yes.

24 —: Yeah. Okay. All right.

25 —, did you have --

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190

1 —: Yes. —. This

2 is about the fourth time I've heard the term slices.

3 And I thought I heard earlier the slices were from

4 billets. Could you tell me exactly what those billets

5 were made of?

6 —: Every alloy that we cast.

7 —: Including thorium and --

8 —: Any -- any billet that was

9 cast.

10 —: And did I understand you

11 correctly they were about two inches thick, they were

12 slices. Who cut them?

13 —: The sawyer in the subbasement.

14 —: Who did?

15 —: There was a sawyer in the

16 subbasement that cut them off as they were cast.

17 —: Okay. So these are like
18 slices we've heard --
19 —: And it was an automatic
20 machine; is that right?
21 —: Well, the -- the sawyer had to
22 -- yes, half -- half right. The slab saw had an
23 automatic gauge on it.
24 —: Okay.
25 —: The saw -- the billet saws you

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191

1 had to eye -- eyeball those.
2 —: Oh, eyeball it and then cut
3 it off. Okay.
4 —: So this term slices is
5 similar to something referred to as Betatron slices at
6 another facility we've heard.
7 —: Right. But it was just part
8 of a billet; is that -- is that correct, the end of a
9 billet?
10 —: Part of a --

11 —: No. It was continually cast.

12 —: The part of a radioactive

13 possibly billet.

14 —: —, —

15 again. This is a continuous cast. Okay. It was cast

16 up on the casting floors. It went down through leads

17 that went down 220 inches I believe.

18 —: Okay.

19 —: When it reached a certain

20 length the horizontal saw came in and cut through that

21 billet and dropped it.

22 —: Called that a flying saw,

23 flying --

24 —: So that flying saw --

25 —: And the -- and then it

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1 continued. It continued all the time. It came in

2 clamped on it and it followed that billet all the way

3 down. You were casting at a speed of three to three

4 and a half inches a minute. It'd get -- it'd travel

5 right with it, cut it off, dropped it, went back and

6 returned to home, and grabbed the next one at the --

7 at the certain distance, cut if off. And when it was

8 time for a test slice it just went back up and

9 travelled up an inch, whacked the test slice off, and

10 dropped it. And it -- it's a continuous casting,

11 continual process.

12 —: So obviously those slices

13 had to be investigated somewhere or they wouldn't have

14 been made.

15 —: Correct.

16 —: That's the ones that went to

17 the x-rays and --

18 —: Okay.

19 —: That's terrific. All right.

20 —: Thank you.

21 —: Okay. We're getting there,

22 guys. So let's see.

23 —: One more.

24 —: —.

25 —: Sorry. — has a

1 comment about something.

2 —: This is —. Them

3 slices you're talking about, we cut slices off of

4 aluminum for Boeing Aircraft, their metal had slices

5 cut off too. And then we went to the sonic tank and

6 inspectors checked them for cracks and stuff. So it

7 wasn't only mag, it was aluminum too.

8 —: Okay.

9 —: I'd like to --

10 —: —.

11 —: —, yes. I'd like

12 to add that whenever those special metals came in

13 those were never test sliced by us or any -- no slab

14 samples were never sent out to the lab or anything.

15 It was strictly their metal, and we never examined it

16 or did any tests or anything whatsoever when we ran

17 their -- Martin-Marietta special metal. So we have

18 never -- no idea what type of metal or alloy it was.

19 Even the lab didn't know.

20 —: Maybe somebody would know

21 about -- does anybody remember the -- the Mallinckrodt

22 uranium in particular? Did they make any special
23 slices or any test samples of that material? Now
24 we're talking about the uranium -- the 1957 to '60
25 uranium from Mallinckrodt Chemical. Okay. All right.

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194

1 Now, here's a simple question because I've
2 asked and I'm not sure that anybody knows this. But
3 let's give it one more try for the record. We've all
4 agreed that film badges were very infrequently worn
5 before Spectrulite became the owner. There were more
6 of them that were worn after Spectrulite became the
7 owner. And the question now is did anybody ever say
8 whose badges they were, you know, where they were
9 analyzed?

10 And I'll just throw out the names that I
11 know of that did that sort of work back then would be
12 Landauer, the Atomic Energy Commission and in
13 particular they had a lab called the New York
14 Operations Office. And the particular laboratory was
15 called the Health and Safety Lab or HASL, H-A-S-L.

16 And there were some badges from Mallinckrodt that were
17 read at the University of Rochester. And somebody
18 said they thought maybe some badges were read by the
19 Picker Corporation which supplied x-ray film.

20 So that's all I know about the choices.

21 But does anybody have any -- I know that you all are
22 saying that you don't even necessarily think the film
23 badges went anywhere. But if they did, did anybody
24 hear any names associated with where they might have
25 been analyzed?

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195

1 Okay. I'm going to take it then that we
2 have -- all people here concur they never heard
3 anything like that which is important all by itself.
4 Let's see. I guess that actually covers -- yeah.
5 That covers both 18 and 19 before and after Dow was
6 the owner and Spectrulite was the owner. We don't
7 know at either time where the badges were read. And
8 -- and I guess I want to put this on the record at the
9 same time. And nobody -- or did anybody here in the

10 room ever see a film badge report that was made?

11 —: No.

12 —: No.

13 —: Okay. That's a unanimous no

14 to that as well. All right.

15 Now, there is a -- Affidavit Number 21

16 talks about an incident that occurs at Fox Brothers

17 which was a plant very close to Dow. And there was a

18 --

19 —: Back to Number 20 Affidavit.

20 —: Okay.

21 —: — here. When I

22 spoke earlier about — being with the -- the

23 team that was doing the survey he was also one of the

24 employees that was in the pot room at the time he told

25 me of the thorium melts.

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□

1 —: Okay.

2 —: And he said he was one of the

3 them that had badges at the time.

4 —: Okay.

5 —: And he kept requesting over

6 and over again the -- to know what his badge turned
7 out, his readings were.

8 —: Good.

9 —: And repeatedly every time he

10 asked questions in that safety meetings once a month
11 he kept asking them what were our readings, what were
12 our readings. And at one time a supervisor once told
13 him that well, they were already posted on the board a
14 long time, and there was nothing to report, there was
15 -- they were all low. But no one's ever heard or seen
16 any of those reports. And he never did get a response
17 back to his badges.

18 Now, the other supervisor, —

19 I spoke to also -- mentioned earlier he said that he
20 was standing next to the super -- or the owner of the
21 factory and -- when he told a gentleman named —
22 —to throw the badges away. They were in a bucket
23 at the time or a coffee can I believe is what it was.
24 And he was told -- he overheard him telling the -- the
25 owner telling — to toss them in a dumpster.

□

197

1 And he -- he suspects that he did. So he remembers
2 that part specifically. So he told me that just a few
3 nights ago.

4 —: So I guess we need to be
5 specific. The owner was —?

6 —: Yes.

7 —: That— or the -- or --

8 —: —.

9 —: His dad?

10 —: Yeah. Now --

11 —: No. —?

12 —: —, yes, sir.

13 —: Okay. All right.

14 —: Now, I always thought that

15 — would probably be in charge of the

16 safety since he was in charge of safety and health and

17 stuff in that factory, that he would be the one

18 probably ordering all this equipment. But from one

19 the lab technicians I spoke to, —, she told

20 me there was a company man who was in charge of the
21 lab named — (phonetic). And she believes
22 he was the one that was ordering these badges and
23 Geiger counters because he had -- even though he had
24 to keep track of everything in the -- that was in
25 production. That was all the metal alloys, all the

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□

198

1 materials. And if he had to keep track of all these,
2 then she believes he was the one that actually had to
3 order these and would have to turn them in if they
4 were turned in. Now, I'm trying to contact —
5 —. So I'm hoping I'll have some more
6 information later on on this.

7 —: And again, the -- the time
8 frame that you're talking about is probably in the
9 '90s some time?

10 —: Yes, sir. It was in the
11 '90s.

12 —: Okay. Okay. So that's
13 important too. Okay. Well, that's -- that's --

14 —: But it was her understanding
15 that he was the one that -- that was able to order
16 these. And I don't know who the gentleman is.
17 —: Well, that would be --
18 —: If I seen him, I'd probably
19 recognize him, but I don't know him by name.
20 —: Well, please do try to track
21 that down and we'll see if we can find a --
22 —: I have his phone number.
23 —: A name or anything, that will
24 help us a lot because we're -- we're going to try to
25 contract all those sources and we'll see what comes

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□

199

1 out.
2 —: — may know who
3 he is.
4 —: —. I -- —
5 — was not in charge of that operation. —
6 — was.
7 —: Was that — that was

8 in charge of it?

9 —: — was. —

10 — worked for —.

11 —: Okay. So --

12 —: Yeah.

13 —: Okay. Well, that's -- that's

14 good. That's a lot more than we knew before we walked

15 in this room. So just to go back to 21, Fox Brothers

16 close to Dow. There's a story, and — has

17 tried to put me in touch with this person and I need

18 to make contact. But I just want to know what the

19 general recollection of people is.

20 There was an incident where a man was

21 working at Fox Brothers down I gather around a pipe

22 that was supposed to convey water from the Dow plant

23 over to Fox Brothers. The pipe ruptured, the man

24 suffered some sort of a burn which as I heard it

25 described was a burn of the part of the body that came

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1 into contact while he was standing and immersed in the

2 water. So it sounded like, you know, a thermal burn
3 to me. However, it was interpreted as maybe a
4 radiation burn. And of course, my comment was well,
5 it would have to be an incredibly high dose of
6 radiation to cause a skin burn. But I don't know.

7 I'm not prejudging. I don't know. I just wonder what
8 anybody knows, have they heard that story, can you
9 fill in any more details about that? Anybody heard of
10 an incident like that at Fox Brothers?

11 —: —. I don't think
12 anyone ever heard anything until this lady got ahold
13 of —. She caught onto us about trying to do
14 something.

15 —: Okay.

16 —: And the Corps of Engineers got
17 involved in it, and they traced it back to the Dow,
18 what we called Dow ground there alongside of casting.

19 —: Uh-huh.

20 —: And that's where they said it
21 came from was over there. That's one of the court
22 records up in Edwardsville. And I got -- I gave you a
23 copy of this --

24 —: Yeah.

25 —: -- slip here. Well, then

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201

1 that's where she was volunteering to come to any of
2 our meetings or anything if we ever need her or want
3 her.

4 —: Right.

5 —: And so that's where we knew --
6 you know, knew about that.

7 —: Okay.

8 —: But before that I don't think
9 there was anyone ever heard anything about him, you
10 know, getting burned or anything else.

11 —: Well, that helps clarify it.

12 So a person came forward to tell the story of a place
13 that was a -- and the link was that the pipe that
14 supplied the water was -- was from -- from Dow. And
15 that was from the Army Corps of Engineers.

16 —: No. It wasn't from the -- the
17 pipe wasn't from Dow. It's a water line pipe over
18 there on Fox Brothers' ground. But it's --

19 —: What was the connection to
20 Dow? I -- I had heard that that pipe conveyed water
21 from Dow to Fox Brothers. Is that not true?
22 —: Not that I know of.
23 —: Okay. Good. All right.
24 —: He was just working on a water
25 line and --

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202

1 —: So it's just it -- okay.
2 —: It's the ground -- ground --
3 —: It's an incident really that
4 you can only attribute to Fox Brothers then?
5 —: Yes. Except the radioactive
6 material came from -- or the radiation came from our
7 plant.
8 —: Okay. All right.
9 —: I'm —.
10 —: —, yeah.
11 —: The lady said that that all
12 came from more or less just the chips and everything

13 in the ground and just in general just working through
14 the ground and just like seepage there, that that
15 wasn't no pipe, but it was -- it was around there.
16 And she sent that all the way from I guess Wyoming
17 there.

18 —: Right.

19 —: And she'd pursued that for
20 several years and tried to win it and nobody wouldn't
21 help her any. And they pretty well dropped up. And
22 she's got all the information from the Corps of
23 Engineers and that in Edwardsville and all the dockets
24 and that.

25 —: Right. So --

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203

1 —: And she's got more to go
2 along with it there.

3 —: Right.

4 —: She -- he had all the
5 symptoms of radiation except they didn't handle no
6 radiation.

7 —: Right. So anyway,—

8 has told me about that woman. One thing is I spent

9 three years in the service at the Army Burn Center.

10 So I know a lot about thermal burns. And all I can

11 say is a lot of the symptoms that I heard from this

12 gentleman sound very much to me like a severe third

13 degree thermal burn. So we'll -- we'll check into it.

14 —, do you know more about that?

15 —: Yes. —. An

16 employee when I first started working there, he was a

17 lifelong employee, he was there from when it first

18 opened up his name was —, and he was always

19 in casting department. And when I was first working

20 there, you know, I was listening and learning as much

21 as I could from all the old-timers. And he told me

22 about that lot next door didn't belong to SCI because

23 it was contaminated and they wouldn't purchase it when

24 they purchased the factory. And I asked him

25 contaminated with what, and he went on with a list of

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□

1 things, oh, you wouldn't believe all the radioactive
2 stuff I buried out there in the '50s, early '50s, late
3 '50s. And he went on and on about saw blades being
4 radioactive and barrels he buried.

5 And then when they had the cleanup in that
6 field back in '95 I was -- for some reason whatsoever
7 I was over there for a week, and I was watching them
8 out the back door clean that up in their moon suits.

9 And one of the employees standing next to me was also
10 an old-timer. He said well, they're not digging deep
11 enough. He goes that's at least eight, ten feet deep,
12 that stuff we buried. And they was only going about
13 four feet down is what he mentioned. And I always
14 remembered that part because --

15 —: So this might be --

16 —: -- he was the one there.

17 —: The leaching field for that
18 water line that they're talking about?

19 —: That may be the seepage that
20 went in the groundwater that may have affected this
21 gentleman.

22 —: Okay. Well, let me -- I'll

23 just say that we will follow up with this lady. And

24 it's an interesting story, and we need to track it

25 down.

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205

1 —: —.

2 —: Yeah.

3 —: On that stuff -- seepage

4 that's where that pile was. It connected to the Fox

5 Brothers out there --

6 —: Okay.

7 —: -- that we was talking about.

8 That's where all that was.

9 —: But you --

10 —: Yeah. It was right beside of

11 it.

12 —: Remember though, we had gone

13 into that and you said that that pile was above the

14 ground.

15 —: Yeah. But --

16 —: Okay. But I mean --

17 —: The pile was.

18 —: You know what I'm getting at?

19 Were there two types of events? One event was burying

20 the waste and the other was piling the slag and the

21 dross on top of it in a big pile.

22 —: Okay. The dross was just kept

23 being piled higher and higher and higher.

24 —: All right.

25 —: Now, as far as the burial it

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206

1 would been in the same area.

2 —: Oh, okay. All right. That's

3 good.

4 —: The same area.

5 —: All right.

6 —: But now if -- I don't know

7 anything about the digging part of it.

8 —: No. That's fine.

9 —: It was all out there at the

10 same place.

11 —: Yeah. No. I'm
12 understanding. So the same -- in the same plot of
13 land that we're trying to track down we're still not
14 -- I mean, it was cleaned up if that's correct by ERG
15 in 1992. We're still trying to find out -- it'd be
16 interesting to know what happened to that plot of
17 land. I mean, it's still there in some form. Has it
18 really been cleaned up and so forth.

19 —: —. Seemed to me
20 like there was a drainage ditch out there that ran
21 right through where that sludge was -- was stacked.

22 —: Uh-huh. Okay.

23 —: Because I was up there a
24 couple times. And it seemed like it was a drainage
25 ditch and especially it was covered with -- with

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207

1 sludge and dross.

2 —: Was it an open drainage
3 ditch?

4 —: I -- it seemed to me like it

5 was.

6 —: Okay. There wasn't a pipe or

7 --

8 —: No. I didn't see a pipe.

9 —: Okay. All right. That's

10 great. Good. Excellent.

11 —: I got a --

12 —: Okay. —.

13 —: —. We used to

14 -- I used to work around out there, and you'd see wild

15 dogs out there in that area. And they'd raise puppies

16 out there underneath them -- dig holes. And there

17 wasn't none of them had any hair on them. They was

18 just nothing but skin.

19 —: Wow. This is getting too

20 scary. We ought to go on to the next affidavit now.

21 Okay.

22 —: Bald dogs.

23 —: Yeah. It was.

24 —: Hairless wild dogs --

25 —: Hairless wild dogs.

1 —: -- playing in the thorium
2 piles. Oh, me. All right. Dow Affidavit Number 22,
3 who -- oh, yeah. Well, this is sort of -- this is to
4 clarify for me. Who knows about the Mallinckrodt
5 radioactive waste stored at the Granite City Army
6 Depot and/or Fox Brothers and the Illinois EPA cleanup
7 of this material? And just to say that when we were
8 at the Illinois EPA I did read about a -- a cleanup
9 that sounded like it was in the area of Fox Brothers,
10 but it was actually on the Granite City Army Depot.
11 And they mentioned there were like 3,400 55-gallon
12 drums from Mallinckrodt that were stored there for
13 some years and then moved off site.

14 So -- and this is -- it's not really
15 connected directly to Dow except it's kind of close to
16 it. So I just wondered if anybody heard about that,
17 knew about that, and maybe if that material also had
18 any relationship to this episode at Fox Brothers. So
19 do you all know about -- and specifically this report
20 said 3,400 barrels which was such a huge number it
21 sort of caught my attention.

22 —: What year was that?

23 —: Well, you know, I don't have

24 that file with me. I'm not --

25 —: After '49?

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209

1 —: It was after '49.

2 —: Because I was stationed at the

3 depot in the Army in --

4 —: Oh, you were?

5 —: -- '48 and '49.

6 —: Okay.

7 —: And I don't recall that.

8 —: Well, Mallinckrodt operated

9 until about 1955. So it could --

10 —: Then that's --

11 —: -- it could well have been --

12 —: Could have been there.

13 —: Yes, sir. It should have

14 been there in '46.

15 —: They had a lot of outside

16 storage at that time at the Army depot.

17 —: Uh-huh.

18 —: And they had tons and tons of

19 aluminum and zinc and all that stuff. So --

20 —: Okay. So that's real

21 possible that --

22 —: Very possible.

23 —: They -- they mentioned in

24 this report -- I thought this was interesting -- that

25 55 federal agencies used the Granite City Army depot

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□

210

1 to store various things. I didn't know there were 55

2 agencies.

3 —: Besides that there was a --

4 two great big mountains of bauxite in there. And you

5 know, bauxite's what aluminum's made out of.

6 —: Okay. All right. Well, I

7 guess that all fits together then. All right. This

8 could be a fairly short or long one depending on what

9 you guys come up with. Dow Affidavit Number 23 asks

10 to describe the radiation safety program and --

11 —: It's short.

12 —: -- protective clothing

13 measures at -- at Dow or Conalco, Phelps-Dodge,

14 Spectrulite. So but -- but what I'm really getting at

15 is now a -- you know, a company run, organized

16 radiation safety program. I'm aware that you all had

17 monthly and so forth meetings to talk about general

18 safety items. But let's concentrate on the radiation

19 safety. And I -- and I've heard -- we're already

20 heard today that there certainly were -- were people

21 who used Geiger counters and monitored things. So can

22 we -- can we just enrich that a little bit more one

23 way or the other?

24 —: —. —

25 passed away here about a month, month and a half ago.

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1 And about a month before he passed away I was talking

2 to him. And he said that Dow had a Geiger counter,

3 but it was the wrong type, it would not read anything

4 that we had in the plant and they knew it. And every
5 time they'd come out they said look at, there's no
6 readings. So he said that's radioactive material is
7 so small it won't even read it on the Geiger counter.
8 And that -- that was every time you had a safety
9 meeting or anything like that -- would come
10 out and say well, I've had the Geiger counter out
11 there and it didn't show nothing, you know, what do
12 you's want, you know. Just that's the way it went.

13 And as far as protective clothing, they
14 gave us gloves I guess because they didn't want
15 fingerprints on the metal, and the safety glasses was
16 a big deal. And very seldom they ever gave you any
17 coveralls to -- like on the hand salvage or in the
18 mill you got dust all over you, but they didn't want
19 to give you coveralls because they didn't want to add
20 added expense. So that's about where it was at. It
21 was --

22 —: But now, you -- you all have
23 told me though that -- that you did use Geiger
24 counters to defect radioactive metal pieces and so
25 forth and -- and to actually separate out radioactive

1 from nonradioactive scrap. So I mean, the Geiger
2 counter must have done that or it wouldn't have been
3 -- I mean, it wouldn't have been -- you couldn't have
4 done it. So those kind of two statements are sort of
5 conflicting, right?

6 COURT REPORTER: Wait a minute. The name
7 you said, — somebody?

8 —: —.

9 —: —. —.

10 COURT REPORTER: Thank you. Go ahead.

11 —: —.

12 —: I think the incident

13 where he referred to sorting out the scrap— said

14 they did that in the late '90s or early 2000.

15 —: That cleaning all the scrap

16 out the factory?

17 —: Yeah.

18 —: That was right after we was

19 put out on strike that the -- there was a cleanup of

20 all the scrap metal in the factory and they found

21 radiation.

22 —: In 2002.

23 —: 2002/2003. Right.

24 —: Yeah. Because prior to

25 that I don't think they even used it. I didn't want

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213

1 to get those confused, but --

2 —: No. I understand that that

3 was a late event. But that -- that -- in that

4 instance a Geiger counter was used and it did work,

5 right?

6 —: Yes. In fact --

7 —: I mean, that's the way it was

8 --

9 —: Excuse me. In fact --

10 —: But is that -- is that also

11 true that earlier than that the Geiger counters were

12 not used. But I -- I can't remember all the

13 testimony. But I thought people did say they were

14 used earlier. No?

15 —: Yeah.

16 —: Well, when they were used they

17 -- they always showed nothing --

18 —: Okay.

19 —: -- years ago.

20 —: But they weren't used to --

21 to sort -- to reclaim thorium scrap for instance --

22 —: No.

23 —: -- earlier?

24 —: No. I don't know. Not -- not

25 in the rolling mill.

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□

214

1 —: Okay. That's fine. Okay.

2 —, do you have a comment?

3 —: Now, we was never told about

4 any safety measures or -- and any protective clothing,

5 nothing of that nature. Like I said, we was never

6 alerted to anything until after the fact. But one of

7 the things that come to mind now is that we was --

8 repainted the press, the 7 Press on an annual basis

9 with this heavy lead green paint, the machine paint.

10 —: Uh-huh. Right.

11 —: And the reason it was painted

12 over and over again is -- my guess is to hide any type

13 of low radiation that it was emitting --

14 —: Uh-huh.

15 —: -- and if there was any

16 present. But the excuse they kept giving us was they

17 want it to look good for customers when they come in.

18 But the only equipment they would paint would be ours,

19 nothing else.

20 —: Well, I would comment. I

21 mean, painting radioactively contaminated surfaces is

22 a common procedure. For instance, in the nuclear

23 fuels plant at -- at Hematite which is now being

24 decommissioned the interim stage for before they

25 demolish the buildings which they can't do for a year

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□

1 or so is to paint all the interior surfaces with a

2 similar --

3 —: Lead based paint?

4 —: -- kind of paint. Their

5 paint is actually blue. But -- but that's the idea.

6 It -- and -- and it's -- I think in commercial nuclear

7 power plants that's used all the time as a mechanism

8 to contain surface --

9 —: I believe that when think

10 found the press abandoned out in Brooklyn that when

11 they was taking -- when they put the Geiger counter on

12 it and was checking it for radiation I believe it was

13 the same effect what — was saying, they --

14 the Geiger counter may not have been set high enough

15 and the lead paint may have covered it.

16 —: The truth of the matter is

17 though it is an effective way --

18 —: Plus it was --

19 —: It is an effective was to

20 attenuate --

21 —: It was also the very back

22 half of the press which would have been the least

23 farthest away from any radioactive material that was

24 extruded through the front. So --

25 —: Okay. But anyway --

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216

1 —: No --

2 —: -- let -- let me see if I --

3 I -- if this is a fair statement to summarize things.

4 That even though the Geiger counters were used in the

5 late stages and even though they were used early on, I

6 mean, a modern radiation safety program would include

7 training sessions. It would include, you know,

8 regular badge monitoring. It would involve feedback

9 about what the radiation badges showed. You should

10 get a report of what the radiation badges showed and

11 so forth. I mean, it would be -- you would have

12 people inspecting the x-ray machines and -- and

13 calibrating them and so forth. So it sounds like that

14 kind of organized activity was not known about, the

15 people in this room at least.

16 —: Nope.

17 —: But anyway, I think I've

18 heard that. Okay. Let's see. So this Affidavit

19 Number 24 says describe the Atomic Energy Commission,
20 Nuclear Regulatory Commission, or Illinois Department
21 of Nuclear Safety inspections at the Dow Madison plant
22 1952 to the present time. And the reason I bring that
23 up is the only time that I am absolutely aware that
24 that occurred is in the 2000 cleanup; that the
25 Illinois Department of Nuclear Safety were present

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217

1 during that time. But that's the only time that I'm
2 aware that that actually happened. So actually I'm
3 asking -- I mean, and you all have mentioned several
4 times this morning that there were people observing
5 special metals projects and so forth. But was there
6 anybody who came in from any of those radiation
7 protective agencies or -- or the regulatory agencies
8 that actually inspected what was done? And I think it
9 would have been primarily in connection with the
10 thorium work rather than the uranium work. But did
11 anybody see that at all?

12 —: No.

13 —: And by the way, the Atomic
14 Energy Commission were not shy. They -- they -- I
15 mean, I know of several interventions that they did at
16 Mallinckrodt out at Latty Avenue for instance. And
17 somebody called them and reported -- a worker actually
18 called the AEC and said that he believed that the
19 material he was working with out there which was not
20 supposed to be radioactive was radioactive and he
21 thought it came from Mallinckrodt downtown. And the
22 next day they sent a team of people down from Chicago
23 and were swarming all over that and reported very high
24 levels. So in those days the AEC was not only visible
25 but they were very proactive about things. So I'm

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218

1 just guessing that if you didn't know they were there,
2 they probably weren't. That's a comment. Okay.
3 —: I don't even remember them
4 there when we had to wear the badges in the pot room.
5 That was just government people watching what we were
6 running.

7 —: Okay. I think this is the
8 last one for everybody, and I think we've really
9 covered it. I think — said he may be
10 able to give us -- the question is what types of
11 alloys were produced. And actually —,
12 — have given me some -- some of that
13 material. And I -- I guess I would say that that
14 would be a very useful thing to have of the various
15 alloys that were used. We've talked about HK 31 and
16 HM 21. And so we know what the thorium alloys were.
17 And anyway, I would just say that -- I would say also
18 a list of whatever alloys there were with beryllium in
19 it. So the thorium and beryllium alloys in particular
20 would be very useful to put in our special exposure
21 cohort.
22 So I would say that's about it as far as
23 what I have as organized things. I think this is the
24 opportunity if anybody has any other thing that they
25 want to insert in the record about Dow operations,

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1 this is the time to do it. ---

2 —: Yes.

3 —: -- wants to have a final word

4 here.

5 —: I'd like to have a final

6 word, yeah.

7 —: That's fine.

8 —: As you know, the heavy press,

9 the large one which was at the far end of the factory

10 had no operations that I know of with the uranium

11 which was sold for a million dollars, that was a large

12 sum of money. Now, I know the 7 Press that we

13 operated on for the special alloys and for the uranium

14 process in the '50s was -- was also repaired right

15 around the year 2000, 2001 at a cost of close to a

16 \$100,000. I mean, it was shutdown time, they had

17 disassemble it, they repolished it, put in new seals.

18 They spent a lot of time, money, and effort to rebuild

19 it and refurbish it. And then a year and a half, two

20 years later it gets cut up as scrap. I have no idea

21 what the reasoning behind this is. If a million

22 dollar machine is sold and another one similar to it

23 is repaired, why isn't that sold, why is it scrapped?

24 And we found it abandoned out in Brooklyn

25 as we said and had Hazmat out there. And they checked

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220

1 the back of it with a Geiger counter also. But I
2 believe if they would have scratched through some of
3 that green lead paint, they may have got a lighter
4 reading. And like I said, it was also the back half
5 of the press which was farthest away from all the hot
6 and radioactive machinery -- or radioactive material
7 which may have been ran through it. So we don't know
8 -- even know where the front half of it is.

9 —: Well, just to provide some
10 closure on that what I would say is, you know --

11 —: I do know it was an outside
12 source that scrapped it out.

13 —: Yeah. Right.

14 —: They had outside contractors
15 at a scrap yard come in and cut it up. And I haven't
16 yet been able to find out who they were. But they

17 were not employees that cut it up. They were an

18 outside scrap company.

19 —: As I understand it the -- the

20 extrusion department of Dow right now is empty. So

21 all the presses are gone. And it seems to me that the

22 only practical thing we're going to be able to uncover

23 is -- is two types of records. And that is the

24 remedial investigation for Dow for the 2000 cleanup is

25 supposed to have radioactive swipe sample results for

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□

221

1 one the presses which I assume was 7, right?

2 —: Yes, sir.

3 —: And so I need to look. I --

4 in the other cleanup documents I haven't found that --

5 that data, but I'm hoping that in the remedial

6 investigation it will. I don't know how we're going

7 to find out about any of those other presses because

8 basically they're gone and they're cut up and

9 scrapped. And you know, so that may be about the best

10 we can do is to look at what the actual measurements

11 were.

12 It certainly seems to me -- I -- I agree
13 with Larry that if those presses were used to extrude
14 thorium and uranium it's hard to imagine how they
15 could not be contaminated. But you know, the evidence
16 sort of disappears. And I'm afraid that we're not
17 going to be able to get that information back except
18 from that source. So I think that's the way we're
19 going to have to leave it. Well anyway, if that's --

20 —: I just wanted it on the
21 record.

22 —: -- if there are no further
23 statements, I -- I really thank everybody. —has a
24 final.

25 —: —, uranium was ran on 9

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222

1 Press.

2 —: Okay.

3 —: But 9 Press, the heavy press

4 was all shipped out and sold.

5 —: Right.

6 —: The only one they cut up they

7 said they couldn't sell it was 7 Press --

8 —: Right.

9 —: -- so they cut it up.

10 —: Right.

11 —: And from what I gather right

12 now they got black plastic from the ceiling all the

13 way to the floor and barricade everyone out of the

14 extrusion part completely.

15 —: Well, we --

16 —: But they never checked any

17 other departments except right around the 7 Press.

18 They never checked nothing in the -- the rolling mill

19 for any kind of radioactive material. They never

20 checked nothing in casting for any kind of radioactive

21 material. And if we ran it down there, casting had to

22 start it off. So --

23 —: Well -- well, let me just put

24 on the record that — from Iowa and the Ames

25 Lab said that the way that they proved beryllium was

1 used at the Ames Laboratory which is a -- a Department
2 of Energy facility at the University of Iowa was to go
3 into the plant, I mean recently, and take swipe
4 samples which you can do for both beryllium and
5 thorium. You can do it for uranium actually. And so
6 — lab up there in Iowa is willing to do
7 that for us for a cost of \$14 a sample which is cheap,
8 really cheap. And so -- and they have people who are
9 willing to do that. So we're going to try to actually
10 get into Dow. And I mean, you know, it's going to
11 take some doing, but we're going to try to get the
12 permission of — to come in and do that. And
13 we fully intend to go to the extrusion department and
14 to all the buildings and take swipe samples.

15 —: —, does that mean
16 that the heavy press didn't have no contamination?
17 And it's in Georgia now, you know.

18 —: Well, I -- I think --

19 —: Could it be tested down there?

20 —: It -- it was never tested.

21 —: Well, —, here's --

22 here's the thing --

23 —: Excuse me.

24 —: You know, I've -- I've asked

25 for anybody -- number one, we need to know more about

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224

1 where it is in Georgia. We need to know the name of

2 the company.

3 —: I give someone --

4 —: Okay. All right.

5 —: -- a copy of it about some guy

6 that was inspector for it --

7 —: Fantastic.

8 —: -- that big press over there.

9 The insurance company that's been -- give him a copy.

10 And I've give copies to several -- did you get one of

11 them?

12 —: I have not gotten that. I

13 would like to --

14 —: You got a copy of it, —.

15 —: I would like to get that.

16 Huh?

17 —: You have it.

18 —: You've got a copy of it.

19 —: It shows the press sitting up

20 down there and going in operation. I give it to all

21 -- I gave — one too.

22 —: I give him --

23 —: It show a picture of the heavy

24 press and how they was setting it up and everything

25 down there in Garden (phonetic), was it Georgia?

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225

1 —: Yeah.

2 —: A small town in Georgia. Did

3 you get one too?

4 —: Yeah. I got one.

5 —: Yeah. I handed -- I had

6 several copies made.

7 —: Well, you got a copy of it I

8 know.

9 —: Well, I need another copy.

10 —: Okay.

11 —: I mean, what I need -- what I

12 need actually is the -- is the address, phone number.

13 I need to know how to get in touch with that company

14 because we need to write them and just see. —.

15 —: Yes. I believe when —

16 — comes down and if he does swipes since most of

17 the equipment's already gone that he couldn't test, I

18 believe one of the places he could find some residual

19 radiation would be, believe it or not, the bottom of

20 our lockers where we used to throw our shoes and

21 boots. Because if we walked around, we'd track it

22 around everywhere and throw them in the bottom of the

23 lockers of every day. There's a very good chance in

24 certain individual lockers who worked on the presses

25 or around this material that if there was any

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□

226

1 residual, it would most likely be in the locker rooms

2 in the bottom of certain lockers of the employees who

3 worked there on the press.

4 —: Well, how about on just --

5 how about in the rolling mill --

6 —: That's also --

7 —: -- and all the other places

8 in the pot room and every place?

9 —: That's --

10 —: I mean, I think that's what

11 we've gotten is that for thorium and maybe beryllium

12 too --

13 —: But if you couldn't find it

14 *in extrusion, I believe you could probably find it in*

15 *extrusion employees' lockers if not tracked in there*

16 *by their boots. Because like they said, they found it*

17 *outside the door and by the bathroom.*

18 —: Yeah.

19 —: And I remember us tracking in

20 and out there. So there's a good --

21 —: Well, it's got to be in the

22 pot --

23 —: There's a good place to look.

24 —: It's got to be in the pot

25 room too.

227

1 —: Yeah. Yes.

2 —: For goodness sake,

3 everything's got to be there unless they've made some

4 extraordinarily --

5 —: It was just a suggestion.

6 —: Yeah. Oh, yeah. Well, I'm

7 not sure how that's going to materialize, but that's

8 the goal. So --

9 —: Thank you very much.

10 —: All right. Well, I thank

11 everybody very, very much. I think it was a great

12 productive day and I thank you all so much for coming.

13 —: Thank you.

14 —: All right. Oh, fantastic.

15 —: On that Number 18.

16 —: Yes, sir.

17 —: See if that doesn't fit a

18 little better. I think you've got a misspelling here.

19 —: Yes. That's fine. I -- I

20 apologize. When I wrote that I didn't have this. But

21 that's the name of the company. Right. Yeah.

22 Absolutely. Yeah. That's fantastic.

23 —: And there's more

24 information.

25 —: So -- so let me just -- may I

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228

1 read that into the record? The name of the Betatron

2 machine that I had was misspelled on the affidavit.

3 But it's K-E-L-L-E-Y, dash, K-O-E-T-T Manufacturing

4 Company, Incorporated. So that's the group we think

5 that probably made the Betatron at Dow. Okay. Any

6 last minute other things? Okay. Thanks very much.

7

8 (Whereupon, the affidavit testimony was

9 concluded.)

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229

1 CERTIFICATE PAGE

2

I, —, Court Reporter, do

3 hereby certify that this Dow Affidavit Testimony was
transcribed by me to the best of my ability.

4

I further certify that I am neither attorney
5 nor counsel for nor related nor employed by any of the
parties to the action in which this is taken; further,
6 that I am not a relative or employee of any attorney
or counsel employed by the parties hereto or
7 financially interested in this action.

8 IN WITNESS WHEREOF, I have hereunto set my
hand and seal this 7th day of August, 2006.

9

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—
[Court Reporter]

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