

GSI AFFIDAVIT TESTIMONY

August 11, 2006

SimmonsCooper, LLC
707 Berkshire Boulevard
East Alton Illinois 62024

, Court Reporter

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2 PARTICIPANTS

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General Steel Industries Employees:
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13 Dow Employees Present:

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1 IT IS STIPULATED AND AGREED by and between
2 SimmonsCooper, LLC and Pohlman Reporting Company that
3 the August 11, 2006 GSI Affidavit Testimony will be
4 transcribed to the best of their ability by a Court
5 Reporter.

6

7 O-O-O

8

9 And if I may then let's move
10 on to the -- wake up here thing. And so -- so let --
11 let's turn to GSI. Now, we've got some really kind of
12 special people here today. You know, t has
13 joined us. has been here before. is
14 here, and we're -- we are very thankful that -- that
15 they're here. And -- and so I know that they have
16 some really special things to talk about.

17 But I -- I do want to run through quickly

18 just particularly for and to let them know
19 what we've talked about so far quickly and then move
20 onto the -- the new areas. So on this first slide up
21 there we have I think sufficient testimony on those
22 affidavits that you can see on the screen, 5, 11, 12,
23 17, 18, 19, 21, 23, 26, 27, 28, 29. And then the
24 Affidavits 34 and 45 are location photos which are --
25 stand for themselves.

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1 And just very quickly we have testimony,
2 and I'm just going to run through for their
3 edification what we think we have enough testimony
4 about. But I'm doing it because if they have other
5 comments we certainly would welcome that. We can
6 testify that's there no cooldown period between
7 Betatron x-ray sessions. We've talked some about
8 incidents and accidents at GSI. That was in Affidavit
9 11. Affidavit 12 we talked about Betatron shortcuts
10 such as flipping or rotating the -- the head of the
11 Betatron.

12 Affidavit 17, we learned that there were
13 with no bioassay samples such as urine or feces at
14 GSI. There was no regular breath zone or area air
15 sampling for radioactivity in Number 18. We know that
16 the workers wore regular street clothes and that there
17 was no really specific radiation protective gear in
18 Affidavit 19.

19 We -- in 21 we have evidence that the
20 Betatron control panel was set to maximum. We are not
21 aware of any daily Betatron calibration. We have some
22 anecdotal information about Betatron inspections, but
23 we can't yet pin down whether they were by the Atomic
24 Energy Commission or who and how often.

25 Affidavit 23, we have some powerful

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1 testimony about hours to days long x-ray exposures of
2 some of the huge castings. Sometimes one casting
3 would take a week to finish x-raying. We know that
4 St. Louis Testing Corporation did nondestructive
5 testing at GSI, and we have some input on -- on that

6 -- on that process. We know that sometimes things
7 were so busy at GSI that they had to use the
8 accelerator at American Steel Corporation. And I
9 showed this morning that American Steel was not very
10 far away from GSI. And so there was equipment sharing
11 of that type.

12 But not linear accelerator.

13 That's wrong. It was -- what
14 kind machine was it do we think?

15 : I think they had a million
16 volt x-ray machine. And --

17 . Okay.

18 And said they used --
19 after my time there -- you know, it's a long period of
20 period of time, and I was there for some of it.

21 Uh-huh.

22 But they used -- what was
23 the isotope you used at American Steel?

24 : As far as I know iridium was
25 all that I used there.

1 Iridium.

2 Okay. Well, that's a --

3 COURT REPORTER: You said a Mansfield?

4 What's that?

5 COURT REPORTER: You said a Mansfield

6 x-ray or something?

7 Million volt. Almost like

8 Mansfield. I'm sorry. I -- my tongue twisted.

9 : Okay. So -- so to sum up

10 then for Affidavit Number 27 at American Steel rather

11 than being a linear accelerator which can also be set

12 up I should say to produce x-rays. But we think it

13 was a million electron volt x-ray source of some kind,

14 and then there was a iridium 192 gamma source. Okay.

15 That's good.

16 We've talked about the procedures for

17 x-raying metal castings and what was done to -- to

18 correct flaws and -- and so forth. So that -- that

19 general process. And we've talked some about where

20 those castings were transported in the plant. And we

21 want to talk about that more today, and -- and I'll go

22 into that later. But that general process we've

23 talked about and the personnel that were involved in
24 that.

25 And we've talked some about the fact that

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1 there were people who were not Betatron operators like
2 the inspectors for instance or electricians or other
3 custodial folks who -- who were in the Betatron
4 building and could have been exposed by that
5 knowledge.

6 I wanted to ask you -- I
7 think you mentioned when we talked that -- that you
8 knew about a Mallinckrodt representative that was --
9 either frequently visited GSI or was on site. Is that
10 -- do I have that correct?

11 : Well, the (phonetic)
12 brothers went to Rolla,
13 went to work for the people down at Weldon Springs,
14 and we interacted with him as he was trying to get
15 solid ingots. But as far as him traveling back and
16 forth regularly, no. But (phonetic) was

17 a on-site inspector for ordnance because we made the
18 tanks there. And he came over and looked at the
19 x-rays, the 14-by-17s regularly.

20 Okay. So -- so he was there
21 on site?

22 : Yes.

23 : And the other fellow from
24 Weldon Spring --

25 No.

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1 : -- the Department of Energy,
2 you just -- that was your contact there that you would
3 talk to from time to time --

4 Yeah. All of us did.

5 : -- and coordinate your
6 efforts. Okay. All right. Okay. Now, then that
7 brings us to the set of -- of affidavits that we do
8 not have sufficient information about. And so what I
9 want to do is go through those a little more. Well, I
10 want to give you all an opportunity to have input.

11 And then I have three new affidavits that I think
12 focus on your particular areas of knowledge that --
13 that -- that we have not had really any testimony
14 about.

15 So if you all will bear with me, I'll try
16 to go through these rather quickly. If you want to
17 say something about it, fine, or else I'll just move
18 on. We talked about the -- the Department of Energy
19 admits that GSI x-rayed Mallinckrodt uranium ingots
20 from 1953 to 1966 and that that included not only
21 ingots but Betatron slices and maybe other forms of --
22 of uranium as well. The issue that we need more
23 information from you all about I think in particular
24 is where in the plant.

25 And : we were hoping maybe you

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1 could shed some light on this, where that uranium,
2 those ingots were stored in the plant. In other
3 words, once they went out of the Betatron building we
4 don't know how they got returned to -- to

5 Mallinckrodt. Were they put on trucks and sent? Were
6 they put on railroad cars, or did they stay around in
7 the -- in the plant and if so, where?

8 : I'm sorry that I can't help
9 you much on that question. I wasn't involved with the
10 ingots and that myself.

11 : Okay.

12 : But mostly most of the
13 castings and everything that I was involved with would
14 go on a flatcar and be shipped out by rail.

15 Okay. So it's possible
16 that's one way they came in. Okay.

17

18 Yes, sir.

19 I seem to remember that
20 these ingots were put on the -- on a railcar in the
21 old Betatron, and that railcar was brought forward
22 outside of 9 and 10 Building and then loaded on a --
23 on a truck. I remember a State truck, a Statebed
24 truck that they shipped them back to Mallinckrodt by a
25 truck from that area --

1 .: Okay.

2 ?: -- right there.

3 does that make sense to you?

4 : Yes. It does. We in the
5 beginning -- in my beginning we x-rayed first a slab
6 that the metallurgical people called me down to see.
7 I wasn't working there, but being a metallurgist we
8 were interested in similar things. And the slabs were
9 taken off a truck earlier. And then when I was in
10 charge of the Betatron, the same way, it came in on a
11 truck. And the truck waited, and they went back on
12 the same truck. We didn't take them out on the rail
13 early. But what you're saying makes sense.

14 .: Now, this is the slices that
15 you're talking about?

16 : No. These are --

17 : These are ingots?

18 : These are -- they were in a
19 slab form, but I think they were ingots maybe four
20 inches thick and -- and maybe 30 inches square. And

21 they were trying to find out the best foundry practice
22 to make them solid. And they came up with some very
23 good things.

24 : Do you think -- you know, I'm
25 really an amateur at this, but I'm confused. You --

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1 you all the seem to use the word ingot for a lot of
2 different shapes and sizes. And for instance. has
3 a picture of what is labeled as ingots that weighed
4 3,000 pounds and they're -- they're big. They're, I
5 don't know, what, 15, 12 inches?
6 . Eighteen inches in diameter
7 and 30 inches tall.
8 -- : Three or four feet. Thirty
9 inches tall. And then so -- so that's one thing. But
10 then you all seem to call other things -- so I guess
11 that's what we're trying to get at is -- and it sounds
12 like maybe Mallinckrodt uranium metal came in various
13 forms and shapes. Is that fair --
14 I think that's true.

15 : -- at different times.
16 : I don't have any personal
17 knowledge --
18 : Uh-huh.
19 -- of the round ingots.
20 : Okay.
21 : Mine -- the ingots that I'm
22 talking about were like in slab form.
23 : Okay.
24 : As I've already given you
25 the dimensions.

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1 Sure.
2 : And that's all I know about
3 them.
4 : That's fine. That -- that's
5 -- that's what we're after. And your -- your
6 understanding would be the ones that you're familiar
7 with came from Weldon Spring?
8 Well, they come from

9 Mallinckrodt. I don't know.

10 : Okay.

11 : I don't know where.

12 : Fair. Okay.

13 , I have --

14 .: Yes.

15 : I have a question that

16 keeps flitting through my mind and I'm -- I'd like to

17 ask , this question. Were you aware that

18 the material was uranium?

19 : Yes.

20 : Okay. Because some

21 confusion of other people I've talked to and it seemed

22 to me like we just referred to them as Mallinckrodt

23 ingots and we didn't call them uranium or titanium or

24 anything like that. We just called them a

25 Mallinckrodt ingot.

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1 Yeah. That's exactly why

2 and -- and called me out of the

3 foundry and told me they had these uranium -- I call
4 them slab ingots. And I think that was their first
5 efforts on -- on -- on -- of making them. And they
6 wanted me to come down to see because we didn't
7 normally see uranium. And being a metallurgist they
8 thought I'd be interested in them. Then later on I
9 was down there. But, yeah, we knew they -- we knew
10 they were uranium.

11 ∴ And -- and just to clarify
12 again for the record something that I still do not
13 understand. I can understand why if you have a -- a
14 tank hull casting or a ballistic missile launch tube
15 on a nuclear submarine why you would want to have --
16 be sure that the wall of that casting was absolutely
17 intact, fracture free, and so forth. I do not
18 understand why you'd need to find out whether a
19 uranium ingot which as you say is now being cast in
20 various forms, you know, round, cylinders, slabs --
21 why did Mallinckrodt care so much whether they were
22 structurally intact or not? In other words, why --
23 why did they do x-ray work for 13 years on each and
24 every one of these ingots just from you all's point of
25 view? Just as a metallurgist --

14

1 . Well, my --

2 .: -- what's the point?

3 : My -- my guess would be

4 whether there is any point or not that the AEC

5 required it. Whether it was necessary, I can't answer

6 that question.

7 : Did you ever --

8 As a matter of fact, the --

9 the round ingots you couldn't get through them. All

10 you could get was a slice on -- they took four shots

11 of that I'm -- I understand. I never saw that. But

12 they took just the corners, four corners even though

13 it was round. You can think of getting the corners

14 because you couldn't go through it. Uranium is very

15 dense. My memory was we had -- if an exposure was --

16 was an hour with steel, it would be like four hours

17 with uranium because of the density of it. And if --

18 if you had it 20 inches thick, we couldn't get it

19 through it all, just the -- just the sides. That

20 answer your question?

21 : I appreciate it. Well, it --

22 it answers the question from your prospective. It

23 doesn't answer the scientific question which is it

24 wouldn't take 13 years to find that out. And the

25 Atomic Energy --

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1 : To find what out?

2 : Well, if you really can't get

3 a picture through the ingot. I mean, I'm assuming

4 that the Atomic Energy Commission and Mallinckrodt had

5 kind of coequal goals which was to define a product

6 that would do something in particular and had

7 properties that they thought were important. So I --

8 I guess all I have is a question that why would the

9 Atomic Energy Commission want that work done for 13

10 years is kind of difficult for me to understand.

11 : Well, my guess would be if

12 you can't get 100 percent, you take what you can.

13 : Uh-huh.

14 : And that was the -- the
15 edges, four edges.
16 : Okay.
17 : And I have
18 another question for and --
19 : Can I ask just one final.
20 But , did -- did you have any interaction with the
21 Atomic Energy Commission?
22 : That was in my department,
23 but not with me specifically. We had before the
24 Betatron a small cobalt 60 pill, and -- and that came
25 under the AEC hundred percent. And they had rules and

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1 regulations, one of which was you had to teach a -- a
2 very simple radiation physics course to everybody who
3 was on the license. And there were -- their
4 requirements we fulfilled --
5 : Uh-huh.
6 : -- and then got a license.
7 And my memory is we had to do that yearly because

8 you'd get new people in, other people go out. And --

9 and we fulfilled their requirements.

10 : But this would be then --

11 just the only people who would take that course would

12 be the people who used cobalt and iridium?

13 : Well, we never knew who was

14 going to -- we didn't have iridium. Any one of our

15 people on the chemical department and metallurgical

16 department's seniority list -- any of those could do

17 that.

18 : Okay.

19 : So we -- we had to get all

20 of them qualified.

21 : Well, here's what I'm trying

22 to figure out. I -- : has a picture in

23 his workbook which I think shows : and I

24 think it shows . as kind of one of the

25 graduating -- maybe the first graduating classes of

2 mandated course. And that -- that sounds fine. I
3 understand that. But I also know that there are an
4 awful lot of people at the Betatron building who
5 operated the machine who apparently never took that
6 course or at least aren't aware that they did. And
7 they certainly didn't take it every year.

8 So I'm trying to figure out what -- and I
9 can certainly understand why -- I mean, even at
10 Washington U when you're using tracer amounts of
11 radioactivity every single individual who uses that
12 material has to pass a test. And if you don't, you
13 can't use it. And they have to wear a badge. So I
14 understand a lot of those things.

15 But what I don't understand is -- I
16 understand that you took the course. I understand
17 that a few other people took -- and

18 But I haven't heard -- I think you are the
19 three people that I know took that course. And so I
20 guess I'm trying to figure that out is --

21 : Well --

22 .: There were a hundred

23 operators in the Betatron building. Were they --

24 : No. No. No.

: No, not true. Okay.

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1 : There were probably a

2 hundred in nondestructive testing --

3 -- : Okay.

4 : -- at one time at least, but

5 they didn't all work in the Betatron.

6 : Okay.

7 : Some were Magnaflux

8 operators. Well, I -- I think I can --

9 : But I guess let me --

10 : I think I can answer your

11 question. Go ahead.

12 : Well, let me just -- I mean,

13 I -- I guess what I'd like to also understand is the

14 Atomic Energy license for isotopes, I understand that.

15 But that probably didn't even apply to the Betatron

16 itself, right?

17 : No. Not specifically.

18 : Okay.
19 : If I might interrupt.
20 : Go ahead. Sure. I'll be
21 quiet.
22 : I have a copy here of a
23 photograph picture that I have put myself dated 1963
24 on there. I'm pretty sure that's a fact. And there
25 --

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1 : Yes, sir. This is the
2 picture I've seen.
3 : There are ten people here --
4 : Right.
5 : -- that have -- we took this
6 class and qualified for radiography.
7 : Correct. Now, did you do
8 that every year?
9 : No, sir.
10 : If -- if -- okay. I think --
11 yeah. This -- yeah. This is the same one. Well, I

12 don't know. Here, listen to this sentence. In order
13 to remain qualified they must successfully complete an
14 examination given annually. The instructors for the
15 course were plant metallurgist and
16 assistance plant metallurgist. So --
17 so that's why I ask the question about -- it sounds
18 from that company magazine excerpt that it was
19 supposed to be an annual certification. So I --
20 anyway, I'm sorry, I -- that's the background.
21 ;: That's okay.
22 - : That's the preamble to the
23 question.
24 : Well, management changed
25 down there very drastically when we closed the

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1 Eddystone, Pennsylvania foundry. And there were
2 things done under someone else's tenure. For example,
3 turning the Betatron upside down and shooting out of
4 10 Building, we would never have done that, but it was
5 done later I understand. And the same way with these

6 licenses. I -- I don't know that the guy that took
7 over -- I won't mention his name, but I don't know
8 whether he paid much attention to that. And I think
9 that's all it was. The people who came in the
10 beginning like this class and there was others because
11 we -- we had so many people come in because the -- the
12 amount of x-ray work we had was a very heavy load. We
13 -- it was calculated that we were like 800 percent
14 overloaded. We had castings involved with Lima --
15 Hamilton's plant in Lima, Ohio and up at West Allis at
16 Allis Chalmers where they had Betatrons. We did
17 everything we could do to increase our capacity. But
18 you know, after 1966 which is about the time I think I
19 left I really don't know what went on. But some of it
20 sounds -- sounds like things we wouldn't have done
21 earlier.

22 : Okay. All right.

23 : But there was another class
24 after that picture of ten because I taught the class,
25 and they updated -- they updated the -- the AEC book

1 to include things in the Betatron.

2 : Uh-huh. Okay. So the AEC
3 supplied the course material basically; is that right?

4 : Well, they told you what to
5 cover, yes.

6 : Yeah. Okay. All right.

7 : And the big thing you
8 covered was how distance affected the radiation dose.

9 It -- it went up or down with the square of the
10 distance. And there were some little mathematical
11 problems. You may remember that,

12 : Uh-huh.

13 : Yeah. That's correct.

14 That's good. Okay.

15 : Well, does that -- does that
16 answer your question?

17 : A lot. Yes, it does. It
18 certainly does and I appreciate it. Okay. I think
19 we've gone through. Now, this is a question that
20 probably you folks here and maybe ; can
21 uniquely answer or not answer. And so here's our big
22 problem. Our big problem is understanding the fact

23 that we have pictures and we know that a lot of people
24 at GSI particularly in the Betatron operations wore
25 film badges.

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1 We do know that you and are the
2 only two individuals from GSI who have produced their
3 own individual Atomic Energy Commission dosimetry
4 reports which we really appreciate seeing because at
5 least that shows that two people got those reports.
6 However, there were a lot more people that wore film
7 badges. And we have now made rather exhaustive
8 efforts to find out where that data, the badge data
9 resides.

10 And there are not very many sources you
11 have to go to fortunately. Landauer is a big company
12 still in existence who has kept a record of every
13 single film badge that they have ever recorded in
14 history, which is remarkable. We've contacted them.
15 They say they have no radiation data for either Dow or
16 GSI. Then the other big place was the Atomic Energy

17 Commission operated the New York operations office in
18 a lab they called the Health and Safety Lab that
19 ran. And they collected a lot of
20 data, I think almost all the film badge data from the
21 Department of Energy AEC sites.
22 So we have who has that
23 data set. He's looked through there. He can't find
24 any -- any data from Dow or GSI. I have recently
25 contacted (phonetic) at Landauer and

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1 the director of the lab that has the HASL data. I
2 cannot get that fellow to answer me back, but
3 has.
4 So the bottom line is we can't find any
5 data from these film badges, and we think we've gone
6 to the two possible sources. And so what we're trying
7 to find out about is where -- once the badges were
8 worn and collected where did they go and who sent them
9 off. Now, I think : mentioned previously
10 that he had seen some reports which had low numbers in

11 the safe range. So we have that additional

12 information.

13 So: , I guess I'd like to ask

14 you if you would comment on that situation please

15 about what your understanding is of where the badges

16 went and did they go to . . And you know, any

17 indication of where they were sent away from GSI to be

18 read.

19 : I absolutely have no idea

20 who took them or where they went to. I really don't

21 know.

22 : Okay. what would you

23 say about that now? Did any --

24 : Well, the time's a big

25 problem. You see, I'm looking back to when I left.

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1 That's 40 years ago.

2 .: Right.

3 .: And then there was ten or 15

4 years that I worked there.

5 : Yeah.

6 : Part of the time I was in
7 Korea. I got those reports back. And as you said the
8 readings were always low, and I never had any reason
9 to keep them. Quite honestly I thought I was working
10 in an extremely safe environment until you guys came
11 along with activation and other things. I -- I have
12 thought I -- when we first started talking about this,
13 : and I, maybe you were there too, I don't
14 remember -- the company . Range. You remember
15

16 : Yes.

17 : He worked for Picker X-ray.

18 : Yes.

19 : And -- and we -- we were a
20 really big customer. Can you imagine taking all these
21 x-rays 21 shifts in a row and then another 21. It was
22 in constant operation. Wouldn't you have liked to
23 have had that x-ray film account? Well, you know,
24 was -- we were -- we were -- he was always over
25 there. And he worked for like I say Picker X-ray.

1 And my first thought was they might have gone to
2 Picker X-ray. And you all use Google and maybe the
3 MSN search engine. I could never find . there or
4 anyplace else, phonebook or -- couldn't find him. And
5 I couldn't find Picker X-ray. So maybe they're out of
6 business.

7 I don't know how many years you'd have to
8 keep a film badge. My guess would be like 25, and
9 we're talking 40 years ago. And I think that's part
10 of the problem. I don't know that Landauer had to
11 keep them forever. It's nice that they did, but I
12 think --

13 : They probably were not
14 compelled to. They just said they happened to have
15 done that.

16 I : Well, that's what I think.

17 And then --

18 : Right.

19 : And then, you know, I
20 recently talked to -- oh, what's his name, the

21 safety man in his latter years? Can't grab --

22 : Oh, (...)

23 (phonetic).

24 Yeah. I talked to

25 And -- and they burned all the records that

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1 the dispensary and -- and the safety department had

2 after the time had passed. So maybe the -- maybe that

3 information has been destroyed is why you can't find

4 it. I mean, we're talking a long time ago.

5 : Yeah. But okay. Well, let

6 me just say this. All of that hangs together just

7 fine except that the two reports we have we actually

8 have are not from Picker, not from Landauer but

9 they're from the Atomic Energy Commission. So I guess

10 -- I mean, I think it's one of those mysteries we may

11 not ever solve it. But and -- and hopefully

12 , for instance if you would give us

13 permission to do so -- you know, if we -- if we have

14 permission to use a Social Security number in your

15 name, then we can write this -- it's called the
16 Environmental Measurements Laboratory now, and it's --
17 it's actually run by the Department of Homeland
18 Security. We can write them and say look, we have
19 such a report from [redacted] and we have one from
20 [redacted] -- several sheets actually from [redacted] can
21 you look this up and verify this information. And
22 HASL records are --
23 [redacted]: That's a good idea.
24 [redacted]: -- are present forever.
25 [redacted]: Uh-huh.

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1 [redacted]: Those records are there.
2 [redacted]: Excuse me. But according to
3 like this record that I have here it comes from the US
4 Atomic Energy Commission. They don't have no -- no
5 facts on this at all?
6 [redacted]: They -- that's what I'm
7 trying to tell you.
8 [redacted]: That's who you're going to

9 send --

10 : The laboratory for AEC is

11 called the Health and Safety Lab --

12 : Oh, I see.

13 : -- which has now merged and

14 is now called the Environmental Measurements Lab. And

15 they do have all that data set. So we -- we should be

16 able to ask them directly to look up your record and

17 all the -- all the information about you. In fact, if

18 we had a -- if we had a list of all the people with

19 badges and they would give us permission to do so, we

20 could ask them about every single individual.

21 : Well, when I worked there

22 anybody that worked at -- with the Betatron, that went

23 inside the Betatron, you had to have your badge on.

24 : I have no doubt about it.

25 has many pictures of people with badges.

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1 : I've got a lot of pictures.

2 . Then I'd say anybody that

3 worked in the Betatron had a Betatron badge. They --

4 they -- name -- you'd have your name on it and that.

5 : Right. It's just that the

6 data doesn't seem to be there --

7 : Yeah.

8 : -- except those sheets you --

9 you two people kept.

10 , I had a

11 conversation with my neighbor who happened to be an

12 auditor at -- at American Steel in Granite City, and

13 we were discussing the film badge thing. And he said

14 American Steel also used film badges and they sent

15 them off regularly, routinely to be analyzed. They

16 got a report back on each one of them. And I said we

17 did too, we know that there's a report on them. And I

18 said did you -- did you give that to the employee.

19 No. No. He said we -- we weren't allowed to do that.

20 They were turned over to the plant auditor who audited

21 these reports. If there was a discrepancy on one,

22 then they would call that employee in and talk to them

23 about it. But they were -- they were filed and kept

24 on file in the main office at American Steel. And the

25 employee never saw it unless there was a problem with

1 it. And I'm assuming that we had some -- somewhat of
2 the same procedure at -- at General Steel.

3 : Very possible. Yeah.

4 : Just -- just to add a
5 little more information to that.

6 : But I -- the only problem
7 with that and I keep on coming back is if not a single
8 individual had their reports, I would say fine. But I
9 -- I am intrigued by the fact that you and
10 are the only two people at GSI who have their reports.

11 : Pertaining to what Ed was
12 saying what they did at General Steel and -- and other
13 places I worked over very few evenings -- it was usual
14 on the evening shift because -- and it was over at
15 American Steel. They used their machines and that and
16 whatever during the day time so the second shift we --
17 when we was on the second shift we would go over
18 there. But we -- what I was getting at was the
19 badges. We wore the badges that we had at General

20 Steel over to American Steel --

21 : I see.

22 : -- then came with our badges

23 on. Then when we went home for the evening we'd put

24 the badges in a rack.

25 : I see. Okay.

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1

2 : Yes, sir.

3 : Actually looking at Jim

4 Powers AEC Commission exposure history --

5 : Uh-huh.

6 : -- and the theory of the

7 auditor at -- at the other steel company I know what

8 he's -- or I understand what he said, but I don't know

9 that he had it correct. Item 12 on the federal

10 document says certification, I certify that the

11 exposure history listed in Columns 5, 6 and 7 is

12 correct and complete to the best of my knowledge and

13 belief. And then it calls for an employee's

14 signature.

15 : Right.

16 : And it's actually the

17 employee's signature rather than an auditor's

18 signature. So I'm wondering if it didn't require

19 maybe just the opposite where the employee would have

20 an opportunity to look at this, review it and sign it

21 and say I agree with it, put it in my file. So if

22 they didn't show it to the employee, maybe we ought to

23 ask the Atomic Energy Commission if that's an

24 operational procedure that they bless and see if maybe

25 that wasn't a violation.

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1 : Well, the other thing is

2 -- the copy that he --

3 , can I ask you --

4 : -- gave to us is -- is not

5 signed by

6 : Not at all.

7 : Mine either.

8 : And the other thing is I can
9 just tell you this, that there are hundreds of
10 thousands of workers who had film badges that were
11 processed by this Health and Safety Lab and -- and
12 there's voluminous data on that. And my understanding
13 is -- so this is not the first time we've come across
14 those kind of reports. My -- my understanding is
15 those reports were given by the AEC and they were
16 intended for the individual worker. And clearly it
17 says that's their individual, you know, lifetime
18 cumulative radiation dose.
19 So I would say this, that if that was the
20 policy that it came back to the company who never
21 showed to the employees, I'm pretty certain that was a
22 -- a gross violation of what they were supposed to be
23 doing. And we may never get beyond that point because
24 maybe those records are completely gone. But I -- I
25 think -- you know, I think that's a -- that's terrific

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1 that you all have made clear what -- what we know

2 about. And --

3 : Just to add some --

4 : And do you have -- do

5 you have any other insight into why you got your

6 report?

7 : Well, no. But since I've --

8 : Did you ask for it for

9 example?

10 : -- been involved with this

11 for the last few weeks I've been reading some of the

12 stuff that I accumulated throughout the years working

13 there.

14 : Uh-huh.

15 : And what you was saying kind

16 of makes sense in a form of like when you leave the

17 plant.

18 : Uh-huh.

19 : Now, I worked there --

20 started there in 1960 and I quit in 1969.

21 : Yeah.

22 : Now, I never had one of

23 these before, never did. Don't ever recall ever

24 getting one these. But the date is here is 1969.

25 : That's right.

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1 : So I take it for granted

2 that they -- this was all the accumulation I had when

3 I left, they're showing me that I'm in good shape.

4 : Maybe so.

5 : So -- but I do not --

6 : That's interesting.

7 : -- know if all people that

8 worked there got that.

9 : Uh-huh. That's very

10 interesting. That is a -- that's a great idea --

11 : But that's --

12 : -- that it was a --

13 : And -- and this was dated

14 1969.

15 : That was sort of your

16 discharge papers.

17 : So what happened from '60 to

18 '68 I never did get one.

19 : Okay.

20 : But I got this when I left.

21 So I don't --

22 : But my guess is, , that

23 you signed one and that's your personal copy as

24 opposed to that one wasn't signed.

25 : No. I -- I --

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1 : I think one was signed

2 and --

3 : I don't recall ever signing

4 one. I might have, but I don't recall.

5 : I understand.

6 : Well, I -- I --- you know, I

7 think that's extremely helpful, and I think that's

8 probably about as far as we're going to be able to

9 take that in particular. But it's so important

10 because you got to understand the special exposure

11 cohort depends on them not having any radiation

12 monitoring data. And we are assured over and over by
13 NIOSH that they do not have that data. So -- so
14 actually as far as our special exposure cohort goes
15 we're -- we're in good shape.

16 At Mallinckrodt when I went through this
17 procedure NIOSH in the middle of the process suddenly
18 came forward with all this new monitoring data, and
19 that's what I want to avoid because it almost cost
20 them their SEC.

21 And so what I wanted to do -- and I'm not
22 -- I -- honest to God, I'm not picking on you
23 guys. I want to understand the situation because I
24 want to be able to get up and tell NIOSH we have
25 looked as far as we can, we've explored it. And that

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1 if they then come forward and say they have data,
2 which I really don't they're going to be able to do,
3 then we're going to really question where they came by
4 that.

5 So I want to go to their sources first,

6 and I think we've done that. And I think, you know, I
7 don't think we know unless we can get into the company
8 records and maybe somebody saved those, the company
9 copy. But we're -- we're just -- we really haven't
10 made a lot of progress on that. We're trying. All
11 right.

12 : I'd like to emphasize
13 something for you.

14 : Yes, sir.

15 : The Commonwealth plant of
16 General Steel castings was somewhat of a family group
17 of employees. In my own family my grandfather worked
18 there. My -- my dad was my boss for a while, and I
19 worked there. And others were -- were like that. And
20 when they closed the Eddystone plant you can't imagine
21 the huge change in everything which led to the closing
22 of it at a later date. It's a very big thing and it
23 happened during this same time period you're talking
24 --

25 : Yes.

1 : -- talking about. And it's

2 important. At least it's important to me.

3 .: Uh-huh. One of the things we

4 -- we still could do and we have not done is, you

5 know, it -- it could very well be that there's more

6 information that pertains to the Eddystone plant

7 itself.

8 : Oh, I'm sure there is.

9 .: And we -- we need to -- we've

10 not really looked into that because we didn't know any

11 particular people who worked at Eddystone yet. But --

12 but anyway, that's possible.

13 : We found one.

14 .: Okay. Let's see. The other

15 thing we've talk about -- and I think we've talked

16 about it unless if you all have more to add -- that we

17 think we know that there were -- there were at least

18 two cobalt 60 x-ray sources, one was in Plant 6. And

19 we know that the other one was used in the Betatron

20 buildings and elsewhere. I -- I think we still would

21 love to know exactly how many curies each one of those

22 sources were. We've heard 60 and 80. I think we've

23 had a very nice description of the Building 6

24 building. I don't know.

25 I guess, since we've not -- I've not

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1 talked to you before do you have any more information

2 about the cobalt 60 sources or --

3 : In -- in the 6 Building?

4 : Uh-huh. About the size of it

5 or --

6 : Me and was talking

7 before, and as far as I know when I worked with it and

8 I only worked with it for like a year or so and then I

9 went and was doing other work --

10 : Uh-huh.

11 : -- layout work and that.

12 But it seemed to me like it was a fraction of a curie.

13 I -- I never -- when somebody started telling me about

14 60 and 80 curies of the cobalt I said where's that at.

15 They said General Steel. I said I never heard of it.

16 : Okay.

17 : So that unless they got it
18 after I left, you know, they was still open five years
19 after I left. They could have got a lot of things.
20 But I never heard of that big of curie, that many
21 curies at General Steel.
22 .: Okay.
23 , I'm -- I want
24 it refer to a gentleman by the name of who
25 worked for --

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1 . Uh-huh.
2 : -- St. Louis Testing who
3 I later ran into at SCI. He was doing the x-ray work
4 for our zirconium slices.
5 .: Uh-huh.
6 : He had a trailer that he
7 had set up outside of our building, and he had a half
8 curie source of cobalt that he tested the one-inch
9 slice with.
10 .: Uh-huh.

11 : And he told me a story
12 about (phonetic) calling him one evening
13 and told him that the pill had gotten out of the cage,
14 it had fallen out and was on the floor in the cobalt
15 cage. And was sort of an excitable
16 individual, my God, what am I going to do. said
17 I'll take care of it for you, He said that he
18 went over to the plant, took the pill and flipped it
19 back up in the cage. And I said my God, you did that?
20 And he said well, it was a -- it was a real small
21 pill. He said I didn't think it was any danger. So
22 when they said 80 curie and 60 curie I'm thinking to
23 myself, you know, that -- that's just -- just a
24 tremendous pill, you know. And it was a small pill.
25 And I -- I was thinking maybe one to two curies, but I

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1 don't know even if it was that big.
2 : Well, here's what I would
3 say. I -- yes, I -- you know, what we've heard also
4 is that this particular -- the sources were made maybe

5 by the Budd Company. And so I've looked at a lot of
6 information about cobalt 60 sources. My -- you know,
7 and they come up to 5,000 curies for example. And
8 there are 5,000 curie sources that are being used to
9 treat cancer at medical centers for instance. I'm --
10 I'm convinced though that you can't -- you know, that
11 those huge castings, 15, 20 inches of steel you -- you
12 can't -- you can't get a gamma ray to -- that will
13 penetrate those kind of castings unless it's in at
14 least the 60 to 80 curie range.

15 : I don't think we ever
16 used those -- those -- the cobalt sources on those big
17 castings though.

18 : Not that I know of.

19 : Put -- put trucks in down
20 there, didn't you, in the 6 Building?

21 : Well, that --

22 : That was the 6 Building?

23 You're talking about 6 Building?

24 : Yeah.

25 : I'm talking about the other

1 -- the big one.

2 : Yeah.

3 : The big source in the
4 Betatron buildings where they put it inside of a
5 turret. And at least from other descriptions we've
6 had they definitely used it to --

7 : They never done it when I
8 worked --

9 : -- to go through big castings,
10 right,

11 : Yeah. Some --

12 Some of the conversations I've had with the
13 workers were the larger curie cobalt sources were used
14 in conjunction with the Betatron for portions of the
15 steam chests, channel heads. They also said they used
16 them on the Blair submarine missile tubes. So
17 wouldn't it take a little bigger curie to go through
18 something that thick?

19 : Well, also we heard that they
20 were placed inside a casting, you know, in a -- in a

21 dome-shaped casting where the Betatron head couldn't
22 possibly get in there and it would hard to put x-ray
23 film in but that the cobalt source could be put
24 inside, opened up and the x-ray film put on the
25 outside the casting.

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1 And -- and so anyway, again -- well, maybe
2 I need to understand this. I still don't quite
3 understand. I understand that the company was
4 licensed for isotopes by the Atomic Energy Commission.
5 I think that's fine. I understand that. But I also
6 know that like at Washington University there was an
7 individual, (phonetic) when I was there who
8 was the radiation safety officer who accepted
9 responsibility for that license for the entire
10 Washington University. And I just believe that from
11 what I know of those kind of licenses that somebody at
12 GSI, some named individual was the holder of record
13 for that license. I know it was awarded to the -- the
14 company. But who would that person be at GSI? That

15 -- that's one person I would -- was it

16 : Almost hundred percent

17

18 .: Okay.

19 : Metallurgist.

20 .: All right. And is

21 dead, right?

22 : Yeah.

23 : Yeah. Okay. So we probably

24 aren't going to get to the bottom of that. And is

25 there anybody else alive who would know the size of

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1 those sources, that -- that actually --

2 : Well, what -- what -- what

3 said is absolutely correct. In the 6 Building

4 area it was a small amount of cobalt 60. Now, you

5 must remember cobalt has two beams, one is one point

6 something million volts, and one is 1.33. Essentially

7 it's a million volt x-ray machine.

8 : Uh-huh.

9 : Now, a million volt x-ray
10 machine doesn't punch through thick sections, it just
11 doesn't. I don't care if it's one curie or 80 curie,
12 it doesn't punch through heavy sections because it's
13 -- it -- the MEV is not big enough to do that. Now, I
14 can -- I can see if you want to take an x-ray of a
15 circular thing, you can place it in the middle and --
16 and go around. But you know, while I was there we
17 didn't have anything bigger than around one or a
18 little less than one in 6 Building. I know nothing
19 about this 60 to 80 million --

20 : Yeah.

21 : As a matter of fact, I -- I
22 question where they even had it.

23 : As we were -- you was
24 speaking a while ago about they put this 60 or 80
25 inside the channel head. This is a picture of myself

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1 and my cohort working on a channel head there.

2 : Uh-huh. Yes.

3 : And we -- we never wasn't
4 x-raying that. It was ultrasonic testing we done on
5 there.
6 : Uh-huh.
7 : And that's how we done the
8 curvature and that because -- but they did do it with
9 film. But you had to put smaller film. Your 14-by-17
10 was -- it was just too big a curvature then. We done
11 many a things like that like we did there with
12 ultrasonic.
13 : But -- but when you said they
14 did it with film what -- what source did they use to
15 expose the film?
16 : That's not film there.
17 : No. No. I say -- but I
18 thought you said you could do it this way but they
19 also used film.
20 : They used the Betatron.
21 : Yeah. But not with that
22 one. They done it on the Betatron.
23 : No. Not with this particular
24 casting.
25 : No. That -- that's all done

1 with the ultrasonic.

2 : Well, let's just put it this

3 way. I'm -- I know that we've gotten a lot of

4 testimony that the big source, what people call the

5 big cobalt source used in the Betatron buildings

6 definitely was used --

7 : I know nothing of it.

8 : -- to x-ray the big castings.

9 : And a lot of the gentlemen

10 discussing the large source were there towards the

11 later years too.

12 : Yeah.

13 : And so is it possible

14 bringing in the larger source --

15 : Me and was gone by then.

16 : -- with some of the larger

17 product?

18 : Right.

19 : Because they --

20 : Oh, yeah.
21 : -- specifically said they
22 used it on channel heads which we know can be 20
23 inches thick. And one gentlemen, r talked
24 about it actually being used outdoors and the pill
25 sitting in there for two days outdoors on a trash dump

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1 site with no markings or anything. And it took two
2 days to do the job I guess on the channel head. And
3 he said that was an 80 curie.
4 : Okay. Well, I think -- you
5 know, I think we've probably gone through that about
6 as much as we can, and that -- that's useful. So
7 probably the Building 6 source was smaller than we've
8 heard in the past.

9 Yeah. That word plant would
10 confuse most people.

11 : Right.

12 : Building 6. Yeah.

13 : Building 6, right. Right.

14 Okay. So , you -- you said -- now, we have also
15 heard that there was an iridium 192 source. You're
16 doubting that; is that right?

17 : Yes. That was
18 came over from St. Louis Testing and brought the
19 iridium source with him.

20 .: Okay.

21 .: And -- and then took the
22 exposures, whatever we needed.

23 .: Okay.

24 : One of the things that was
25 kind of -- looking back is kind of funny. Steam pipes

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1 on the big turbine castings were always done in the
2 Betatron. Now, I don't know how to say this so you'll
3 understand. But different sources are more critical
4 of different sections. If you use a Betatron on an
5 end section they're going to come out pretty good
6 because it doesn't -- it blows right past the defects.
7 Now, if you use iridium, you're going to see a lot

8 more.

9 : Uh-huh. I've heard that.

10 : And I remember plant

11 management, the guys that came from Eddystone being

12 very upset that we used iridium because all at once

13 the steam pipes had a lot of defects in them. Before

14 that they never showed up. I don't know if that make

15 sense, but --

16 : It does. Oh, I'm --

17 : An iridium source and a --

18 and a cobalt source and a -- and a Betatron or the 250

19 KVP machine, they all had their -- their zone of -- of

20 doing a good job, and it wasn't always the same.

21 : Right. I actually do

22 understand that. And I think that I -- I've read

23 about the iridium 192 sources. Some people have said

24 they -- they used them to inspect welds in particular

25 and that they do have very sharp resolution and

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1 delineation. So I do understand that. Okay. I guess

2 I would like your gentlemen's comments about the --

3 : Yeah. Let me comment on

4 that.

5 : -- the smaller x-ray source.

6 : We had a 250 KVP machine.

7 : Uh-huh.

8 : and

9 and I picked it out. It kind of looked like a vacuum

10 cleaner, the tank type vacuum cleaner.

11 : Uh-huh.

12 : And we used it to see would

13 it work. And to my knowledge after that it was never

14 ever used. It -- it -- it just didn't meet -- it

15 didn't meet what we needed.

16 : Uh-huh. So --

17 : And I think it was stored in

18 the Betatron. But it wasn't used to my knowledge only

19 when we wanted to -- to make sure it would do a good

20 job. I don't -- I don't even know if we did the --

21 you know, the plates that come with it to -- to make

22 sure that the machine is okay. I don't even know if

23 we did that. But we do it for our own purpose to make

24 sure it did a good job in thin sections. But I don't

25 think it was ever used after that.

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1 : But in other words, it wasn't

2 used routinely to --

3 : No.

4 : -- inspect thin sections in

5 quality control or --

6 : No, sir.

7 : Okay. All right.

8 : But it was 250.

9 : Okay. That's good. That's

10 great.

11 : if I could add

12 something. That KVP machine is the x-ray devise that

13 told me he was exposed to in the

14 Betatron. So they must have started using it a little

15 bit more.

16 : Later they might have.

17 : It was -- it was in the

18 old Betatron.

19 : For thinner items I guess.

20 : We used it for the weld

21 prep on the channel heads around the thin, maybe

22 five-eighths of an inch section around the top where

23 they -- they -- some of them were already machined.

24 : Uh-huh.

25 : That's where the pipes

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1 were welded to it I think. Probably another

2 extension.

3 : Never used it when I worked

4 in there.

5 : But

6 : No. We -- we'd -- we're on

7 the same page.

8 : I : was the -- one

9 of the main operators and . And I'm sure

10 could verify that it was used frequently.

11 : But I think one of the main

12 reasons they were afraid of it, it didn't have any
13 safety devises on it like the Betatron with the bells
14 and whistles and locks and interlocks. And he told me
15 on the phone that's how he got hit. He went in there
16 and didn't realize it was on, was in a hurry, and it
17 got him.

18 .: Okay. Well, let -- let's go
19 on to Number 13. Now, this one I -- I think you all
20 really can help. We'll get -- get away from
21 controversial things. But I want you to understand
22 why we're asking this question. We -- we now know
23 with an absolute certainty that the 25 million volt
24 Betatron caused activation of everything it came in
25 contact with. And that would be, you know, air, the

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1 Magnaflux powder, the castings, uranium, everything.
2 We know that that beam is powerful enough and not only
3 powerful enough but does cause photofission of
4 uranium. It splits it into two atoms, two different
5 atoms.

6 We know that the -- that the activation
7 has a huge range spectrum of activation products, you
8 know, all radioactive lasting anywhere from a few
9 milliseconds up to several products that it lasts for
10 some days. So the importance of that is that every
11 casting that was put through the Betatron once it was
12 radiated had some induced radiation that it carried
13 with it.

14 And so that brings us to really one of the
15 -- probably the most important thing about your SEC
16 application besides the dosimetry data and that is
17 what is the class of people who should be included in
18 the special exposure cohort. And as far as class what
19 -- what we want to know is who -- basically the -- the
20 big question is who was exposed to radiation at GSI.
21 Well, you might say okay, it was only the people who
22 used the isotope sources -- so let's say the cobalt 60
23 in Building 6 -- and the people who operated the
24 Betatron.

25 So that would be a hand full of people out

1 of the 3,000 people that worked there. And if -- if
2 that's the situation, then you know, the class would
3 be 50 people, period. Well, I don't think that's the
4 situation. From what -- from everything that we've
5 heard, you know, it was clear that castings came in
6 from all over the plant, got examined in the Betatron
7 and left the Betatron building, and then went back
8 into the plant.

9 So what we do not have today is a good
10 feeling -- have some feeling, I shouldn't say that.
11 But what we need is a -- we need a list basically of
12 the buildings that were in -- at GSI and what was done
13 in each of those buildings. And I'm talking about
14 done not as a metallurgic process, but what kind of
15 projects were taking place in there. Where did they
16 build the tanks? Where did they build the railroad
17 cars, et cetera? And then within those buildings at
18 those activities who did what jobs? And I know that's
19 a big, tall order.

20 But basically that's what we have to do
21 for NIOSH to -- and -- and the goal is to include as
22 many people legitimately as we can that were exposed

23 to radiation of any kind, even a millirem per year.
24 So that's why we're asking all these questions about
25 the different sources. But basically whatever

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1 castings went in to the Betatron building and came
2 back out we need to track where they went in the
3 building.
4 So , I think I'm going to let you take
5 over this. I -- I -- I don't know the best way to do
6 it. But you know, some of the -- some of the
7 breakdowns of the plant worksheet which you all have,
8 you know, what happened in the blacksmith room, in the
9 storeroom, and all that. I'm not worried about that.
10 But when we start talking about, you know, the foundry
11 and the -- the various numbered buildings that
12 probably is important. So I think I'm going to
13 let you take that on.
14 : Okay.
15 : We -- what we need to wind up
16 with honestly is this plant worksheet. And in each

17 building we need to know the activities, what was
18 built there. And then we need to know what classes --
19 what jobs were represented at those activities. And
20 we really need to send that in to -- and -- and we're
21 going to assume that every casting that went out of
22 the Betatron building was radioactive.

23 And you know, we're going to have to
24 actually leave it up to NIOSH because I think it's
25 going to be impossible for them to calculate those

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1 doses. But that's basically what we're going to give
2 them as a charge. We're going to tell them they were
3 all radioactive, you calculate the doses. But what we
4 need from you guys is what went on in those things.

5 So I'm going to let you try to collect that data
6 because I'm --

7 : One thing I'd like to --

8 .: I'm not sure how to approach
9 it exactly.

10 : Okay. Well, there's

11 probably about three phases to this. I tried to
12 understand it and I've had some help from site
13 experts, people that worked there. And one of the
14 first things -- corrected me today on one thing.
15 At the peak of operations there I had read somewhere
16 around -- or heard somewhere around 3,000 people. And
17 what was it you told me today? And
18 background is the steelworker union president. So he
19 would know exactly who and how many people and what
20 classifications were at that site. How many would you
21 estimate were there in its heyday?
22 Q: Well, first of all there's
23 four different unions involved in the plant. And I
24 represented one of the largest unions which was Local
25 1023 of the Steelworkers. If I recall right when I

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1 was a business representative there there was -- in
2 the late '60s there was approximately 2,300 people in
3 the steelworkers union alone. Then you have the
4 patternmakers union, you have the machinist union, and

5 --

6 : Boilermakers.

7 : -- boilermakers. And the

8 boilermakers union is -- has all the welders and

9 burners. So it had to be approximately 1,000 of them

10 people I would guess throughout the whole plant.

11 : How many patternmakers did

12 you say?

13 : Forty.

14 : I don't -- I'm not sure

15 about the patternmakers. -- or . would know more

16 about that than me.

17 : Okay.

18 : We always had 40. And we

19 had to have all of them working or we couldn't send

20 anything out. That was the agreement we had with the

21 union. And --

22 : What was the fourth one?

23 : Boilermakers.

24 : Machinists.

25 : Machinists.

1 : Yeah. And I -- I don't --
2 : Steel -- steelworkers,
3 patternmakers, boilermakers, and machinists?
4 : That's it.
5 : Okay.
6 : So if you had to guess --
7 : And how about machinists, how
8 many people were there would you guess?
9 : I would probably know more
10 than me. I don't really know.
11 : Well, I would -- I could
12 guess that we probably had about 30 to 40 machinists
13 on a regular basis.
14 : Okay. But you know, that's
15 not really way far off. That's 3,380 people. So
16 that's --
17 : That sound about right?
18 : So that's roughly 3,000.
19 : Do you guys agree with that
20 number, the 3,300 or so?

21 : It might be a skosh high.
22 : So three -- let's stay with
23 three, 3,500 ballpark. Just trying to get an idea
24 here of the work force.
25 : Yeah. We had about 2,300 in

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1 ours.
2 : Well, if you're going to go
3 through all these buildings and who worked in them you
4 can add that up and see what it comes up to to check
5 it.
6 : Well, let me -- let me switch
7 quickly to Affidavit 32 which is -- while we're
8 talking about the big picture we need to have if
9 possible a breakdown by Caucasian, black, Hispanic,
10 and the percentage of people there that were women,
11 just estimates from you guys' point of view. So -- so
12 let's talk about how about the percentage of people
13 that worked there that were black.
14 : When I was there I would

15 probably guess five percent. Am I in the ballpark you

16 think,

17 : You mean black?

18 : Five percent at the time

19 I -- because chainmen and them was about the only ones

20 we had at that period.

21 : Oh, no. You had chippers

22 and grinders.

23 : Oh, yeah.

24 : It would be higher, but I

25 don't know. What about it, . ? What do you think?

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1 : I -- I'm -- I'm

2 suggesting 40 percent --

3 : Yeah.

4 : -- of the total work

5 force.

6 : Yeah.

7 : Forty percent?

8 : Forty percent of the total

9 work force?

10 : Yeah. In some of those

11 buildings they were all black except the foremen.

12 : There were a lot of black

13 individuals down there at the time.

14 : See, we only had one in the

15 Betatron. ; the only one I ever remember.

16 : How about --

17 : There were some after

18 the --

19 : No. There was --

20 : Like and --

21 : That's after my time.

22 : Yeah. All right.

23 .: There was -- there was a

24 few more.

25 : Yeah. ; was the only

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1 one when I was down there.

2 : And then what about women?

3 : Well, --
4 : How about Hispanics? Were --
5 : -- there'd be -- let me --
6 let me give you the breakdown. I'm fairly familiar
7 with it. In the core room we -- we had a tremendous
8 amount of people from Southern Europe, Macedonians,
9 almost all of Southern Europe. Sometimes they didn't
10 even talk to each other. They split earnings and
11 didn't talk to each other. I've mentioned that to you
12 previously. There were women in that department that
13 put core wash on the cores before they went in the
14 oven, just one or two. Primarily it was a -- it was a
15 white male organization, but a lot of the males came
16 as immigrants from Southern Europe. General Steel in
17 its early days built a building to Americanize some of
18 those fellows.
19 Now, when you go in the pattern shop you
20 have the pattern storage group. In the pattern shop
21 itself there were no women. But in pattern storage
22 and -- and bringing the patterns back out when we
23 needed them there were three women who did the
24 paperwork.
25 See, these core boxes in the olden days

1 when we'd use form jobs like your -- your wife's

2 father worked on they would use core boxes from three

3 or four different jobs to make the new job --

4 : Uh-huh.

5 : -- because the shapes were

6 -- were repetitive. There were three women in that

7 office that did a lot of that work. And the -- the

8 pattern storage gang was primarily two black guys and

9 one white guy that went and got the boxes, went and

10 got the patterns, delivered them where they was

11 supposed to go. In the welding group there were three

12 women.

13 : I remember

14 : You remember . Well,

15 everybody remembers she was beautiful. She

16 really was a beautiful girl, and she was a good

17 welder. Because all of those women worked in the

18 metal form department --

19 : They were good.

20 : -- where I worked part of --
21 part of my life there. And I always wondered -- I --
22 I've talked to several people -- why did they migrate
23 to us. And the thought was that out in the plant they
24 would be picked on because of their sex more than they
25 wanted where if they came down in the corner of the

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1 plant and -- and welded on flasks they were fairly --
2 I don't know, maybe safe's not the right word, but
3 comfortable.
4 Now, in the inspection department casting
5 inspection of C and F there was one woman in that
6 group. And it was a small group, maybe ten fellows,
7 no blacks. Hourly inspector's what I'm talking about.
8 : Uh-huh.
9 : There were -- what I'm
10 getting at the -- the percentage of women compared to
11 total was very small. Of course, in the -- in the
12 offices -- there were a lot of females that worked in
13 the offices. And that -- and that's about all I can

14 tell you because it -- primarily out in the plant

15 office --

16 : Let's just talk plant.

17 .: Give a ballpark.

18 : Yeah.

19 .: One percent?

20 : Not much more than that. If

21 you're -- if you're talking 2,000 workers, one percent

22 would be, what, 20?

23 .: Uh-huh.

24 : I doubt if there was any

25 more than that especially if you don't count

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1 secretaries.

2 : Okay. All right.

3 .: Okay. Good.

4 : But let me -- let me go a

5 step --

6 .: And -- and how -- can I get

7 somebody to give an estimate of Hispanics because I've

8 heard there were quite a few there just as a

9 percentage would you say?

10 : I don't think very many, but

11 we had a Mexican molder. And we also -- I didn't

12 mention, but we had some ladies that ran the cranes.

13 It's not going to change the percentage much, but

14 these -- World War II changed for employment for women

15 in -- in factories like General Steel.

16 : Uh-huh.

17 : We didn't have enough men

18 here so they taught women to run the cranes. They had

19 a few women burners. But still the percentage of the

20 total plant was small. But once they got on the

21 seniority list they were there forever or until they

22 wanted to leave. And they did good work.

23 : Uh-huh.

24 : Okay.

25 : Now, did I answer it or --

1 : No. I think you got it

2 pretty close.

3 : I -- I don't really

4 recall any Hispanics in -- in our small realm. Do

5 you,

6 : You mean the Betatron area?

7 : In the Betatron 10 -- 8,

8 9, and 10 Building -- or yeah, 8, 9, and 10 Buildings,

9 the Magnaflux and so forth.

10 ;, where did that come

11 from?

12 -- -- I don't remember any

13 Hispanics in there at all.

14 : Because I've -- I've

15 actually met some people in the foundry,

16 (phonetic). There was And

17 looking through the magazines I thought I understood

18 that was a fairly high -- not -- not a high population

19 but a part of the population at General Steel with

20 Lincoln Place being right there, that community. But

21 not at General Steel. So maybe they were employed

22 more at Granite City Steel or American Steel. So if

23 we're breaking down percentages, if we agree with

24 these percentages maybe, you know, one percent of it.

25 .: Right. We're -- I mean, I

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1 think we've got --

2 : Whatever. I think we -- we

3 really have a very low percentage of --

4 : The only one I ever knew was

5 --

6 : -- women and Hispanics.

7 : It's probably less than one,

8 certainly less than --

9 : Yeah.

10 .: -- one percent Hispanics.

11 : Yeah.

12 .: Maybe at tops one percent

13 women.

14 : Women.

15 : Maybe 40 percent black and

16 the rest Caucasian.

17 : Curious. I was just

18 curious what the breakdown was.

19 : Yeah.

20 : you had something said

21 something to me one time, a lot of that followed the

22 classification of jobs.

23 : Yeah. It -- the union

24 contract determined a lot of where black people

25 worked. Like the patternmakers were all white. I

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1 I think the people that did grinding and chipping, the

2 majority were black. As far as Mexicans I only knew

3 of one, and I -- I hesitate to say about him. His

4 name was Mexican he was a molder. And your --

5 your wife's father knew him quite well as mine did.

6 And my dad asked me if I ever tried ; coffee. And

7 I said no, I never did. He said try it some time. I

8 -- I noticed that was always in a very happy mood

9 after lunch and I tried his coffee.

10 : And you were happy.

11 : And you felt a lot better.

12 MR. BURGESS: It was 50/50, you know. But

13 he was the only one I knew, and he was a -- he was a

14 good man.

15 : So job categories

16 definitely did play into --

17 : Oh, yeah, all the way.

18 Chainmen, all the chainmen were -- were black --

19 : Okay.

20 : -- except one. The

21 chainmen, extruders, the metal form historically had

22 been a white guy. So --

23 : Just curious --

24 : Yeah.

25 : -- of the work force.

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1 : And most of the crane

2 operators were male white, although there were as I

3 mentioned earlier a few women. Welders, I -- I don't

4 know if I ever saw a black welder. Did you?

5 : Okay.

6 : I don't recall.
7 : So the --
8 : Curious.
9 : The -- the job
10 classification -- but it was mainly the union that
11 controlled who came into those various
12 classifications. And then before I left there was a
13 -- a certain amount of breakdown. It was amazing who
14 -- we had molders that had done a certain job for
15 years and years and -- but we had chainmen who had
16 years of seniority. And all at once your seniority
17 was what picked where you went in that department.
18 And -- and those -- those black guys had watched those
19 molders for years and they could do just as good as --
20 well, nobody thought they could. But they did just as
21 good a job.
22 : Yeah.
23 : So they began to -- to --
24 you know, to cross the lines that were set up over the
25 years. Oh, in about 1960 things began to change.

1 : Just curious because that
2 plant did a lot of government contracts, and I was
3 curious if that could have affected it.

4 : Let me -- let me share with
5 you gentlemen why -- why this is important. It -- it
6 actually turns out that an issue of race and
7 minorities won the SEC award for Mallinckrodt, that
8 was the decisive factor. And what the decisive factor
9 was was that the Department of Energy for many years
10 has done epidemiologic health studies on nuclear
11 weapons populations. Okay. And somebody in their
12 un wisdom in that department decided that the only
13 people that they were going to analyze in their
14 epidemiologic studies were white males. So they
15 eliminated all women and all minorities.

16 And apparently the only person that the
17 advisory board on radiation and worker health that was
18 aware of that fact was me. And so one of the things I
19 pointed out to them when we were talking about -- they
20 -- they had four meetings and they never could decide
21 about Mallinckrodt. And they kept on claiming that
22 their radiation dose information was very complete.

23 And I kept on asking well, how complete is complete.

24 You know, do you have it on ten percent of the people

25 or 90 percent, and I couldn't get an answer. So

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1 finally on the last day I said well, here's what I

2 think, the database you're working from is not

3 representative of the workers at Mallinckrodt. And I

4 said because systematically and forever you've

5 eliminated women and minorities from your database.

6 And there was a -- a board member,

7 who was black and a terrific guy, and he

8 listened to that. And I think he really paid

9 attention. He said well -- and -- and what they were

10 trying to do with these epidemiologic populations and

11 what they will do to you -- this is why it's important

12 -- they don't have any radiation data on you all.

13 They do not have any. So they will have to

14 manufacturer radiation data from other worker

15 populations. And they will say well, there are other

16 steel plants, Bethlehem Steel for instance. You all

17 will be lumped in with Bethlehem Steel. But what they
18 will not tell you is -- and so what data they'll have
19 for Bethlehem Steel will be on white male workers.
20 Well, if you're a white male worker, you say well,
21 that's great. But here's what you all have said.
22 You've said 40 percent of the people were black male
23 workers, and they have zero data on black male
24 workers.
25 So that's another argument that we're

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1 going to make, that you know, their data on coworkers
2 is not representative. And so that's why it's
3 important to get on the record what the proportion of
4 -- of women and -- and minorities of various kinds is.
5 What -- what I'd like to do -- we -- we've
6 really got just two things to cover, and one of them
7 is the building population which I'd like to spend the
8 last part on.
9 But -- but since you came today and
10 we're -- we're delighted there's one thing that you

11 can tell us that nobody else can. And that is about
12 the situation between the unions and management at
13 GSI. And what we're particularly interested in is,
14 you know, so -- so you were sort of the guy in the
15 middle I understand. You heard it from the workers
16 and then you had to interface with management. And
17 I'm very interested in the issue of radiation.

18 And just preface it by saying that in all
19 the contract books that I've looked at they lay out
20 everything about the jobs and the job classifications
21 and the rules and the regulations. But the one thing
22 they don't say a word about in any of those is
23 radiation as being a named danger or risk at GSI. And
24 the same is true at Dow, not a word. So I'm -- I'm
25 interested in over the years did -- was this a subject

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1 that was even talked about between management and the
2 -- the unions and so forth? Was that a concern?
3 : No. It wasn't at that
4 particular time. Because of the -- of the nine years

5 that I worked there I never knew of anybody that got

6 any radiation at that time that we knew of.

7 : Okay.

8 : Now, I'm not saying they

9 didn't, they might have and we didn't know it. But

10 there was never no problems. The men never complained

11 to me or I sure the heck would have been confronting

12 the company. But I know they -- know none of the

13 people complained. And the company never did say

14 anything about radiation. And it was -- well, we were

15 all younger guys working there, and you're doing a job

16 and you don't think about it.

17 : Uh-huh.

18 : And -- and like I said, if

19 somebody would have got contaminated or something,

20 then that would have probably become an issue. But

21 no, sir, there never was anything discussed with the

22 union and management about radiation of the people.

23 : Uh-huh.

24 : , excuse me.

25 You were there during the

1 incident though, were you not?

2 : No. Not when he -- you say

3 he got injured, no, I wasn't there.

4 : No. I wasn't either.

5 : He was -- when did John F.

6 Kennedy get shot, 1963?

7 : '63, right.

8 : He was radiated the day

9 before John F. Kennedy.

10 : I -- I was there, and I'm

11 sure you were there.

12 : Well, I was there then, but

13 I sure didn't know it. Never knew a thing about it

14 until they -- he contacted me about a month ago. I

15 never knew he would have got radiation.

16 : Yeah. They -- he told me

17 they took him to a hospital and took him home and that

18 seemed to be the end of it. So it seemed like it was

19 pretty quieted up.

20 : I never knew nothing about

21 it. I was on a different shift I guess. I wasn't --

22 : Uh-huh. *Could -- could*

23 have been.

24 : I wasn't --

25 : Sure.

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1 : I wasn't the union president

2 at that time, and I sure didn't know nothing about it.

3 : Well, if I understand

4 radiographers used the small machine on the weld prep

5 on channel heads. And I would be shocked if my memory

6 was so bad that in 1963 we were doing that because I

7 was in the Betatron at that time.

8 : Well, they -- I think they

9 were using it for something -- he didn't necessarily

10 say just for that, you know.

11 : Okay.

12 : As a matter of fact, I

13 don't --

14 : You see, the --

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15 : I don't know exactly what

16 they were using it on, but he entered the room and it

17 was serious enough they took him to the hospital.

18 : And I think

19 can probably clarify the whole situation because I

20 think he was on the shift with at the time.

21 : Yeah. He was. He said

22 that.

23 : And I was in -- I was in

24 the house at the time. I remember them bringing him

25 over to the new Betatron. He had an escort of I think

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1 a guard and a couple of our guys. And he hung his

2 badge up, got his lunch box, and he went out. And

3 they took him to the hospital. His face was white as

4 a ghost because I think he thought that he was

5 probably going to die.

6 : Yeah. But the new Betatron

7 wasn't built before 1963. It was built much after

8 that.

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9 : It was built in '63.
10 : It was built in '63.
11 : So it might have been right
12 at the time he got hit.
13 : It doesn't -- those figures
14 don't add up with me, not that it's important.
15 : Well, here's the other
16 thing that I -- I wrote down. Maybe then let's just
17 -- I guess you could give us a feeling for how the
18 company regarded from your point of view worker safety
19 in general. I mean, steel plants are dangerous places
20 to work in lots of different ways that had nothing to
21 do with radiation. And so I mean, a picture that I
22 have is I believe there was a big time radiation
23 danger to the workers particularly in the Betatron
24 area, no question about that. It's pretty clear that
25 that wasn't really addressed in any serious way. But

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1 that doesn't mean that that applied to worker safety
2 issues in general. So what was your perception of

3 that? I mean --

4 : I think --

5 ∴ -- people are bound to get

6 injured and so forth and so on.

7 ∵ I think as a -- as a whole

8 it was a pretty good place to work at as far as your

9 safety and that. I mean, in them -- in the '60s it

10 was not like in the 2000s. You know, they have laws

11 now that they never had then. But they -- they had

12 earplugs but it wasn't mandatory that you -- they left

13 that up to your own discretion which maybe that's not

14 right nowadays. But that's the way it used to be.

15 And they had earplugs if you wanted them

16 which I -- I'm not too smart, I should have because I

17 can't hear at all out of my right ear now, see. But

18 anyhow, that was that. And -- and for as far as the

19 masks like your -- what most of your chippers and your

20 grinders, they wore the masks. And the rest of us

21 dumb fellows out there we didn't, what's the

22 difference, there's just dirt flying all around, it

23 ain't going to bother us. But as a whole it was there

24 if you wanted it, but the company never pushed it.

25 The union never pushed it. Their own people never

20 there I think with the Illinois EPA which didn't
21 exactly make sense to me, but that's what I heard and
22 that they were repelled because the levels of
23 radiation were so high out there that they had to back
24 away.

25 We have a report from one individual that

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1 one of the Betatrons which we're trying to find out
2 what happened to the Betatrons, were they sold, were
3 they turned back to the government. We know they were
4 both there in 1988 sitting in the old Betatron
5 building. We know they were both gone by 1994 when
6 National Steel owned the place. But there is one
7 report that one of the Betatrons is and was buried out
8 by the -- somewhere near the old Betatron building in
9 1994 and they -- '93 or '94?

10 : It would have been '93
11 according to the individual.

12 : '93, right. They were
13 running a fiberoptic line and they found it buried out

14 there. So my question to you is as a union

15 were any of these concerns ever brought it your

16 attention?

17 : No, sir. But then again, I

18 left in '69 and this all happened after they shut down

19 I guess in '74 this was going on.

20 : No. I mean, this was sort of

21 a general story that things were buried out in the --

22 that -- that was just not something that --

23 : Well, first of all, yeah, my

24 recollection of working in the area with the radiation

25 what could they bury out there?

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1 : That's what I -- no. No, I

2 --

3 : I don't have a clue.

4 : Exactly. That's what I'm

5 saying. I don't even know. These stories are so

6 vague and so nebulous that nobody can put a name on

7 even what material was out there.

8 : I -- I --
9 : Well, did the company -- let
10 me ask you this. I'm -- I'm just trying to get things
11 on the record --
12 : Yeah.
13 : -- that have been brought up.
14 Are you aware that the company buried anything out
15 there in those --
16 : No, sir. I am not.
17 --: Okay.
18): Me neither.
19 : Okay.
20
21 : Yes, sir.
22 . This is -- I'm assuming
23 this is State Street; is that correct?
24 , is the geographic expert
25 here.

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1 Here's -- here's the old

2 Betatron?

3 : That's correct.

4 : The extreme left?

5 : And then the railroad

6 tracks at the very low quarter there. And then you

7 see a piece of Dow's property.

8 : This -- this area -- and

9 it looks like there's a small -- a pond --

10 : A pond.

11 : -- there or something

12 like that. This area here --

13 : Yes.

14 : -- looks like it's --

15 some excavating had been done there. It looks like

16 there was a dig there or something like that.

17 : Uh-huh.

18 : Could this be the --

19 could this be the area that was owned by the

20 government?

21 : Yes. That's what -- well --

22 : That's what we're -- that's

23 one of the things we're investigating.

24 : Right.

25 : Would the burying that

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1 went on in here maybe not be from GSI but from SCI --

2 : We don't know.

3 : Well, we also know that

4 the --

5 : -- coming north from the

6 other plant?

7 : At quote, the Granite City

8 depot -- and the more I read about Granite City Army

9 depot was one huge area that might have encompassed

10 all sorts of things. Fifty-five agencies used it. So

11 yeah, we're -- we're trying to find out about that

12 piece of ground. And that's right, it could have been

13 from other people, other agencies that had nothing to

14 do with GSI.

15 : That could have been the

16 famous dump site from -- from Dow --

17 . That --

18 : -- or part of one.
19 : Well, this -- now, this
20 property is different from that.
21 : Yeah.
22 : The castings property beside
23 Building 7.
24 : Dow has their own little --
25 : They had their private

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1 dumping --
2 : Yeah. I -- I know where
3 --
4 : Yeah. They're -- they're
5 on the other side of the tracks.
6 : I know where --
7 : But this could be a satellite
8 dumping --
9 : I know where that one
10 was, and there was another one back here.
11 : No. But that's useful. From

12 the point of view officially at GSI --

13 : Interesting point.

14 : -- that really didn't come

15 into play as far as you all?

16 : Now, that's an interesting

17 point.

18 : But that's important. All

19 right. Well then, I think I'm going to just say,

20 you know, I think you've covered the union situation

21 well. And I -- I just think if -- if you can

22 suggest an approach on how we might get this building

23 and class, you know, defined, it would really help me

24 because that's something we must do. And I don't know

25 how to do it exactly to be honest with you.

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1 : You know, one way in a

2 summary and in maybe more of a in-depth analysis I've

3 heard what buildings considering the possibility of

4 any kind of contamination, whether it be activation or

5 perhaps uranium moving in and out of buildings on cars

6 that were at one time holding uranium. If we
7 identified some of the main primary buildings that you
8 know about activation and dust and dirt and the kind
9 of work that went on, the chippers, the grinders, the
10 welders, all the things you're not supposed to do if
11 you could help us identify them by some of the prime
12 buildings that you think that could have happened in
13 and some of the buildings where the train tracks went
14 in for one thing. Because we know the cars were used
15 in the Betatron building with ingots on it one day,
16 and the next day it could be carrying a casting back
17 in to the plant.

18 So if we could identify maybe the primary
19 buildings that would be suspect in your opinion of
20 possible radiological issues and just a real brief if
21 there were burners, chippers, grinders on that. If we
22 could just start with the buildings maybe going --

23 : Let's start with 1.

24 : Sure. That's --

25 : We can go right through

1 them.

2 : That's a good way to go.

3 : That'd be great.

4 : Then I -- I want you to

5 -- you to overrule me any time you think I'm wrong

6 because, you know, remembering 50 years of ago --

7 : Absolutely.

8 : -- when you're 77 is

9 difficult.

10 : My mind don't operate like

11 it used to.

12 : I'm 67. I can't remember

13 last week. So --

14 : Well, I got a -- I loved

15 this place.

16 : All right.

17 : I thought I'd worked there

18 until I died but it didn't work out that way.

19 : So we're going to start

20 with Building 1.

21 : Building 1.

22 : And there is -- obviously

23 you guys know the difference in Building 1 versus Item

24 1.

25 : Now, when we go to the

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1 numbered buildings starting with 1 --

2 : Okay.

3 : -- we're in the -- in what

4 we called the cleaning, finishing, and product machine

5 shop half of the plant. Does not include the foundry

6 or -- or the core room or the pattern shop. Building

7 Number 1 is where we brought in castings from the

8 north end of the foundry where we made small castings.

9 They were transferred by a little car. And they were

10 taken off and -- and shook out with an overhead crane.

11 Went to the shake out and -- and got them fairly

12 clean. Then they went into a sandblast.

13 : Well, which is Building 1

14 on here,

15 .: Fifteen. Number 1

16 Foundry, is that what you're talking about?

17 : No. No. It's not Number 1
18 Foundry.
19 : Okay.
20 : Building Number --
21 : It's Number 16.
22 : Oh, it was 16.
23 : -- 16.
24 : Yeah.
25 : Okay. I see it. All

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1 right.
2 : It runs perpendicular to the
3 main foundry.
4 : So --
5 : Now, my memory of that is
6 there was no --
7 : Got it.
8 : -- railroad entrance to
9 that, but that could be wrong.
10 : Yeah. We have another map

11 that might help us with that.

12 : I don't recall. I don't

13 recall of one either,

14 : No. After they got the

15 castings ready to work they were worked, that is

16 chipping and grinding and welding in the -- I guess

17 it'd be the east end of that building.

18 : So chipping, grinding,

19 burning --

20 : Welding.

21 : -- welding in that

22 building?

23 : Yeah.

24 : Okay.

25 : Now, once they were -- they

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1 were ready to go so to speak they went usually to

2 Building 17 on your map which is 3 Building, sometimes

3 2 Building for machining. But we're -- we're talking

4 very light machining, you know, just the inside of a

5 -- of a hub. It was light machining.

6 : Okay. Well, any kind of

7 machining is one of the items that's recognized as a

8 possible hazard considering contamination with the Los

9 Alamos guide on this stuff. So --

10 : Now, Building 2 is Number 18

11 on -- on your map. And that was --

12 : Uh-huh.

13 : In my day it was changed to

14 work with manganese castings. There was a lot of

15 grinding going on because austenitic manganese steel

16 work hardens. And if you tried to -- to use a tool on

17 it, it will -- it will break the tool. It gets hard

18 very quickly. And so all the machining was done by

19 grinding. Like we -- we kept experimenting hoping to

20 find a way to do it faster. But high speed grinding

21 was the best way. Now, that takes care of 1, 2, and

22 3.

23 : Buildings 1, 2 and 3, a lot

24 of--

25 : That sound reasonable?

1 : -- chipping, burning,
2 grinding; is that right?
3 : Right.
4 : Okay.
5 And the machine grinding,
6 it's --
7 : That -- yeah.
8 : That's a little different,
9 but it's --
10 : I understand what you mean.
11 : -- a lot more powerful.
12 : Sure.
13 : Now Building Number 4 I
14 think is your 19. Yeah. And we used that building --
15 that was a manganese building. We had the electric
16 furnace in that building and we -- we transferred the
17 steel, molten steel back and forth. Now, there was --
18 arc air was used there to remove risers because we
19 couldn't burn it.
20 : What about items that were

21 subjected to the Betatron? Would they have been

22 worked on?

23 : Very few. Very few. These

24 were heavy industrial castings used to grind taconite

25 up it in -- in -- in --

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1 : Okay.

2 COURT REPORTER: Taconite?

3 : And they were all grinding

4 parts.

5 : Taconite, yeah.

6 : You know taconite?

7 COURT REPORTER: No. Taconite?

8 : Yeah. T-A-C-O-N-I-T-E.

9 It's --

10 : It's an iron ore.

11 : It's a very hard iron ore.

12 And -- and -- and we built a pretty large business

13 with that. But it was always a transfer of metal into

14 the foundry and then we transferred the -- the poured

15 castings back.

16 : Okay.

17 : And we made some very large

18 castings by diluting a whole ladle full of -- of

19 carbon steel with -- with a high amount of manganese

20 so that we could -- we could pour the big castings.

21 : So not a lot of grinding,

22 burning, and chipping in there and very little --

23 : It was not a huge --

24 : -- Betatron.

25 : It was not a huge operation.

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1 : Okay.

2 : They did a lot of things,

3 but not much volume.

4 : Okay.

5 : That make sense?

6 : Uh-huh.

7 : Okay. Now we're in 5

8 Building.

9

: Yeah.

10

: The 5 Building is a -- we

11 did layout for machining and machining. We had face

12 plates where the castings were put on and leveled and

13 -- and they decided could they machine or did they

14 need to weld on them because there wasn't -- wasn't

15 enough metal there. But it was called layout --

16

: Would anything --

17

: -- and pressing.

18

: Would anything have gone in

19 there after Betatron testing?

20

∴ No.

21

: Okay.

22

: But it could -- all these

23 cars now from -- from 4 Building on all those cars had

24 railroad track in it at the east end, all of them.

25

: So --

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1

∴ Maybe two -- maybe two rails

2 coming in.

3 : So if there were tracks
4 going in there --
5 : Yeah.
6 : -- it's definitely
7 something we have to consider.
8 : But from here on until --
9 until we get done.
10 : Okay.
11 : But 5 Building was -- was
12 primarily like the New York City Transit Authority
13 trucks. They were laid out and pressed if they needed
14 to be pressed.
15 : Okay.
16 : In other words, there was a
17 dimensional check and then they were machined. Now
18 we're in 6 Building?
19 : Uh-huh.
20 : In the 6 Building of course
21 is the infamous cobalt area.
22 : Uh-huh.
23 : And by and large that --
24 that was a floor where slightly bigger castings than
25 there were in 1 Building. Like the -- the Transit

1 Authority trucks were worked there. And -- and you
2 got to remember these -- these floors moved if we had
3 a heavy volume of underframes --

4 : I'm just --

5 : No. I'm listening to this.

6 : I'm sorry. I was saying

7 hello to a guy behind you,

8 : Hi,

9 : I didn't mean to

10 interrupt you.

11 VIDEOGRAPHER: Pardon me, guys. Can we
12 just stop?

13 : Yes.

14 VIDEOGRAPHER: We're going to change tapes
15 real quick. It will just take a minute.

16 (Whereupon, a short recess was taken.)

17 : We're working in 6 Building.

18 But although there were an awful lot of -- of
19 passenger car trucks and rapid transit motor trucks

20 worked in that building, as the foundry schedule
21 changed then the finishing department had to change
22 where they were going to work those castings. So
23 almost any of these floors could change fairly
24 quickly. But that building was used primarily on
25 trucks. And we used grinders and welders and

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1 chippers.

2 : Were there railroad tracks?

3 : Yeah.

4 : Right.

5 : And then 6 Building is

6 where the small cobalt source was used?

7 : Yeah.

8 : Right. At the --

9 : It was in the west end of 6

10 Building.

11 : The west end.

12 : The northwest corner

13 actually, wasn't it? I mean, it didn't take up the

14 whole end.

15 : No.

16 : And would that --

17 : I thought it was a small --

18 : It was just the northwest

19 corner.

20 : Yeah.

21 : And in the northwest corner

22 would that have been right next to Number 1 Foundry?

23 : Yes.

24 : Was that open or closed to

25 Number 1 Foundry?

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1 : It was -- the -- the blocks

2 made it closed then there was a gangway.

3 : There was an opening into

4 the foundry though?

5 : Yeah. But you had to, you

6 know, go across a gangway.

7 : Okay.

8 .: It wasn't adjacent
9 totally --
10 .: Okay.
11 .: -- you know.
12 .: But no thick walls or
13 anything there?
14 .: Just the block walls.
15 .: Concrete block.
16 .: Concrete block walls?
17 .: Concrete block walls.
18 .: Okay.
19 .: Now, 7 Building --
20 .: Wait a minute. Now, at the
21 end of 6 Building now -- at the other of 6 Building
22 there was Magnaflux work going on too. We had to
23 Magnaflux these --
24 .: Well, yeah. And --
25 .: We Magnafluxed in there.

1 .: Any buildings where there

2 were subway car trucks and -- and other castings that
3 needed Magnaflux it was there. You guys moved them
4 around sometimes.

5 : But we got 6 Building --

6 : So we got the chippers,
7 grinders, welders, and Magnafluxers all in 6?

8 : Right.

9 : Yeah.

10 : How many employees would
11 have been in Building 6 just a rough nobody would you
12 guess?

13 : A hundred.

14 : Yeah. A hundred to maybe
15 more because you had overhead crane operators and
16 chainmen and --

17 : Hundred and 50 safe?

18 : Yeah.

19 : Yeah. No more than that.

20 : Okay.

21 : Now we want to go to 7?

22 : Sure.

23 : Number 7 Building was

24 identical to Number 1 in the way it handled castings

25 except it was the big castings. You know, we had a

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1 few hundred pound castings in the north end. Here

2 they all came through. Every casting ever made went

3 through 7 Building.

4 : Every casting --

5 .: Everything.

6 : The railroad tracks big

7 time, huh?

8 : The depressed center. No.

9 No. They came from the foundry at one end. The other

10 end had railroad tracks.

11 : Okay.

12 : Now, they -- they did a lot

13 of different things there. At one time they -- they

14 just burned this -- the risers and anything extra.

15 : Uh-huh.

16 .: And then they trimmed it

17 down. And they had a name for it, 4152 or something

18 like that burn. And then they combined the two of
19 them and called it trim burn. That was during your
20 time there. The idea was why -- why do you -- why do
21 you cut it off and then -- and then do it up close to
22 the casting, why not do it all at one time.

23 : Did any material go back in
24 there after Betatroning or nondestructive testing?

25 .: These were all green

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1 castings, weren't they, , coming from the --

2 : Well, they come in as green

3 castings. Yes.

4 : No.

5 : I don't think anything --

6 : Whatever was done there --

7 whatever type of work was performed there --

8 : Was done then went --

9 : -- when it left as far as I

10 know it never did come back after that.

11 : Well, that's pretty true.

12 But the -- the subway trucks had to be heat treated.

13 : Yeah.

14 : So they went to 10. And I

15 -- I would have thought they would have finished them

16 in the 6 Building before they shipped them. I don't

17 know, but --

18 : But what about the heat

19 treat in that 10 Building?

20 : Yeah. They had to be heat

21 treated.

22 : Right.

23 : Yeah. They were normalized.

24 : Well, but I thought you was

25 referring to coming out of Betatron.

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1 : Yeah. What I'm looking for

2 or interested in is some of the building that would be

3 receiving something after it had been to Betatron --

4 : No.

5 : -- testing.

6 : No. We didn't get any.
7 : Directory from the Betatron?
8 : No. He's right.
9 : Yeah, directly.
10 : I don't believe that would
11 be --
12 : These are essentially on
13 their way out.
14 : I -- I don't believe it
15 would be.
16 : Okay.
17 : Now, one -- one group of --
18 of people that we didn't mention in these early
19 buildings --
20 : Okay.
21 : -- that'd work all the way
22 through the plant are drillmen. They -- they used the
23 portable air drills. And in some cases they -- they
24 used the regular machine drills. But -- but drill
25 people worked all over that plant --

MeetingGSI081106non.txt

1 : So all buildings drilled.
2 : -- like Magnaflux people
3 did.
4 : Yeah.
5 : That's important because if
6 they're drilling after they've been tested with the
7 Betatron, that's another issue of concern. Okay.
8 : Now, are we -- we're kind of
9 agreeing up to 7 Building?
10 : Okay.
11 : There was -- there are some
12 -- some incidental buildings that are the foundry
13 buildings.
14 : Uh-huh.
15 : But we're just talking C and
16 F buildings. And we go then to 8 Building. 8
17 Building was a beautiful machine shop for locomotive
18 castings that are no longer used in this country.
19 They had all kinds of milling machines. I mean, these
20 are -- these are huge. They set a whole locomotive
21 underframe on a -- on a bed -- on a -- yeah, on the
22 bed --

23 : Uh-huh.
24 : -- going in to be machined
25 and being on there for a couple of weeks. It's a

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1 major operation. And that's what mainly 8 Building
2 was. But the tanks were over there to -- to weld the
3 bottom plates in. Later on we put a huge 25-foot
4 boring mill in for the rings. The Manitowoc and
5 others used rings on big drums. I don't if they're
6 for concrete or what they were for, but they were
7 huge. You remember those down in that -- that hole?
8 : That -- that was down on
9 the -- on the east end of the --
10 : Yeah. On the east end.
11 : So if we're in 8
12 Building --
13 : 8 Building.
14 : -- is 8 connected directly
15 to 9 to 10?
16 : Yes. Transfer car.

MeetingGSI081106non.txt

17 : So that's open.
18 : Transfer car.
19 : Right.
20 : Would items go into 8 that
21 had been tested with the Betatron?
22 : Yes.
23 : Yeah. Tanks were in there.
24 : Okay. Would railroad cars
25 go into 8?

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1 : East end.
2 : Okay. So that's a --
3 : The transfer track, if
4 you'd come out of 36 on the map.
5 : Yeah.
6 : The transfer track, it
7 ran all the way in to 8 Building, maybe midway through
8 8 Building.
9 : That transfer track ran
10 halfway through the 8 Building.

11 : So it went all the way, 8,
12 9 and --
13 : And it went --
14 : -- 10.
15 : And it went in to the
16 Betatron building.
17 : Okay.
18 : And you had use two cars.
19 There were two cars that intersected each other in 9
20 Building. You could only one the run car in to 9
21 Building. And then you -- if you were going to 8,
22 you'd have to get a lift and put it on the other car
23 and go that way.
24 : So 8, 9, 10 is a very high
25 activity area for Betatron material after it's been

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1 tested?
2 : Yes.
3 : Yes.
4 : What other things would

5 have taken place? Example, would there have been

6 Magnafluxing done?

7 : Right. Yes.

8 : In 10 Building and 9

9 Building and --

10 : 8 Building.

11 : All of them.

12 : All of them.

13 : All of them.

14 : Any machining, the grinding

15 taking --

16 : 8 Building was bigger.

17 : 8 Building --

18 COURT REPORTER: Woe, woe, woe, guys. One

19 at a time please. Thank you. One at a time.

20 : Yeah. That's right.

21 COURT REPORTER: I have a hard time

22 hearing you when you're all four talking.

23 Oh, poor baby.

24 : I'll zip my lip.

25 : That's right.

1 : Just be nice.

2 : I understand.

3 : If --

4 : There was -- there was

5 welding, burning, chipping, grinding, Magnaflux

6 operation in 9 and 10 Building.

7 : So all the above?

8 : In the end -- in the east

9 end of 10 Building there were underframes down there.

10 : Okay.

11 : They did the painting or

12 the undercoating in those -- of those rail frames.

13 : Well, was 9 Building where

14 they built the cars? That's my memory, but it could

15 be -- it could have been 10.

16 : I don't know.

17 : I -- I was thinking it

18 was 10 Building. We had a fire down there one --

19 : Okay.

20 : Do you remember the fire

21 that -- when the --

22 : Well, I -- I don't argue

23 with that.

24 : So there -- there could be

25 castings from nondestructive testing of the Betatron

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1 going in to 8, 9, 10 --

2 : Absolutely.

3 : -- if I understand you

4 correctly being worked on by grinders, chippers,

5 welders, Magnafluxers, you name it, railroad tracks

6 going into -- or essentially all three buildings?

7 : Right.

8 : So those three buildings

9 are definitely three of the main --

10 : Right.

11 : -- buildings on that site

12 with almost every activity that we're --

13 : It was heavy.

14 : -- interested in.

15 : It was heavy.
16 : Okay. How about heat
17 treatment?
18 : Heat treatment was --
19 : 10 Building.
20 : It was primarily done in 10
21 Building. But I see they've -- they've added Number
22 30 at the end of the core room. And -- and I'm sure
23 what that was for. HY 80 castings were hydrogen
24 flakes and hydrogen prone. And this hydrogen
25 embrittlement that happened happened as you cooled

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1 down from almost 3,000 degrees to room temperature.
2 It happened at 723 degrees centigrade, 1,133 degrees
3 Fahrenheit. And when you went through that transition
4 zone to prevent hydrogen embrittlement you had to go
5 through it very slowly. So the foundry couldn't get
6 it to 10 Building heat treatment fast enough.
7 : Uh-huh.
8 : So this Number 30 which

9 probably was after my time was added so that you could
10 take them right out of the mold and put them in the
11 heat treat. And then after they were heat treated to
12 -- basically it's letting them cool slowly. Then they
13 could go in to the finishing department.

14 : So you're -- if I
15 understand your thoughts are Building 30 was added
16 after you left?

17 : Yeah. Yeah. I knew that we
18 were talking about it, but --

19 : Okay. Because that's --
20 that's going to be real interesting. Primary heat
21 treatment is in what building?

22 : 10.

23 : Because that's a building
24 where the federal government purchased five heat
25 treating ovens to -- to -- we've now found out. So --

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1 : I don't know. I would -- I
2 would think the government paid for this too.

MeetingGSI081106non.txt

3 : Well, this --

4 : It was only used for HY 80.

5 : Well, they wrote the check.

6 They may -- we'll have to check that out because they

7 wrote the check for this in 1951 for the heat

8 treatment in the two buildings. And so it looks like

9 they really invested a lot of money right in the dead

10 center of the plant.

11 : And maybe in some other

12 places.

13 : This is . Can I

14 just add because , just brought up some new

15 information that he deserves great credit for arriving

16 at. And that is he found that over at the historical

17 museum were all the board meeting minutes for GSI from

18 1941 forward. And so in 1951 there's this beautiful

19 set of minutes that has a listing for the Commonwealth

20 plant and for the Eddystone plant showing all of the

21 equipment that the government purchased for those two

22 plants.

23 : Oh, great.

24 : And they paid -- and in

25 particular we -- we almost fell out of our chairs when

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1 the list says one Betatron and one Betatron building
2 for \$299,200. And you might say wow, that's terrific.
3 But -- but in that same list were maybe 15 other
4 items, the large of which -- what came close to that
5 equipment that -- that the government had paid for.
6 But one was two buildings plus five heat furnaces,
7 \$1.6 million.

8 : All the transfer cars.

9 : Yeah.

10 : In 1951?

11 : Yeah, 1951. And then a ton
12 of stuff for Eddystone. And -- and each year actually
13 they -- there were many more why don't we say
14 government purchases for GSI. And the fascinating
15 thing about the Betatron buildings is there's another
16 set of notes the -- the next year saying that the --
17 that transaction had been delayed slightly because the
18 government wanted GSI to buy the building at a
19 discount, but the board had considered the

20 government's offer and refused.

21 So one of the things that will come up is

22 we know for sure now that the government owned the

23 Betatron and the Betatron building and GSI wouldn't

24 buy it. So that doesn't mean that it was -- we still

25 don't know whether it was -- the Army that was agency

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1 or AEC was the agency. But we definitely know that it

2 was owned. So I didn't mean to digress. So --

3 : No.

4 : -- that's interesting.

5 : Definitely. That's --

6 these heat treatment -- that's one of the -- part of

7 that \$3.4 million that they spent in '51 on one little

8 purchase.

9 : The magnitude of the amount

10 of equipment that the government bought is amazing.

11 : Both of them.

12 : Yeah.

13 : So it -- it shows a

14 substantial investment in the property --

15 : Absolutely.

16 : -- which is very important

17 to our quest here to find out who was involved and who

18 owned it.

19 : Right.

20 : There's no doubt about it

21 now.

22 : Right.

23 : So heat treatment. While

24 we're looking at treat treatment do things from the

25 Betatron go in to heat treatment? If you -- would you

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1 heat treat before you went to the Betatron, or would

2 you heat treat after you went to the Betatron?

3 : I think before.

4 : It could be both.

5 : I think both.

6 : For example, if you heat

7 treated the casting first which is the proper way and

8 then you welded on it --

9 : Absolutely.

10 : -- it should go right back

11 in and be stress relieved. So probably it was both in

12 -- in most cases.

13 : That's pretty important

14 because if you hit it with that Betatron and then you

15 send it back in there, you've now exposed the heat

16 treatment people to the same problem anybody else has.

17 : Yeah.

18 : And then I guess so that's

19 real important.

20 : While we're talking about

21 that area, John, may I ask.

22 : Yeah.

23 : We have heard that the new

24 Betatron building was converted into offices.

25 : That's correct.

1 : But are we just talking about

2 this building that's called 36? I mean, the heat
3 treatment building is still there presumably and
4 still --

5 : Oh, it's still there. It's
6 on the photographs, and it's still there in aerial
7 photographs.

8 : So -- but the office
9 buildings then would just be this 36?

10 : That is correct.

11 : That's called the -- just
12 Betatron?

13 : Yeah.

14 : Okay. All right.

15 : Yeah. It's --

16 : Okay. I didn't mean to
17 digress. I just wanted to make sure.

18 : And you -- well, that 36 is
19 Betatron, and then the 35 is -- I mean --

20 : That's the old Betatron.

21 : This is also a very old map

22 --

23 : Okay.

24 : -- from a GSI book. And

25 it's clearly mentioned on there as a government

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1 Betatron.

2 : Uh-huh. I understand. Okay.

3 All right.

4 : Before this law ever came

5 in effect.

6 : Right. I understand.

7 : Okay. your next

8 challenge would be like new Betatron, old Betatron.

9 So we know they all have --

10 : Well, let me ask this.

11 : -- Betatrons.

12 : How about -- how about the 12

13 Building that they mentioned? What went on there?

14 : Oh, that's interesting. Our

15 people in 8, 9, and 10 Building used to go to the

16 local watering hole, and the story was we were going

17 to 11 Building. So we have no 11 building on this

18 map, but we do have a 12 Building. We -- we skipped
19 it. I'm serious. That actually happened to keep --
20 to keep the communications proper. 12 Building was
21 primarily used to handle -- in the beginning now I'm
22 talking about -- to handle the large patterns for the
23 hull. See, we had two patterns and two sets of core
24 boxes for the M60 and I guess the M48 before it hull
25 and turret, and it took a lot of room.

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1 And so we --we -- our patternmakers used
2 that building to work on the patterns and to store the
3 patterns and all that. It isn't a very big building
4 compared to like 9 or 10 Building. It's just a small
5 building.

6 .: But these would just be the
7 patterns, these wouldn't actually be the castings that
8 went back and forth? They were the patterns.

9 .: No. No.

10 .: Okay.

11 .: No. It wasn't.

12 .: Okay.

13 : And then when -- when we

14 began making turbines that casting -- that building

15 was converted into a molding department. And we used

16 sand slingers there just like in Number 2 Foundry to

17 make the molds for the inners and outers and all the

18 industrial castings. It was a very busy building for

19 a small place.

20 : -- , Number 11 says

21 storeroom.

22 : Yeah. That -- that would be

23 the storeroom.

24 : Our location 11 on this

25 map.

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1 : Uh-huh.

2 : Is that the area that

3 was describing to us the other day in our

4 visit?

5 .: Yes. Yes.

6 : And I notice there's an
7 open space kind of in there.
8 : There was a railroad track.
9 : And he kind of mentioned
10 the railroad tracks coming in there.
11 : And they went in through the
12 main foundry.
13 : And was it like a storage
14 area?
15 : Well, when he was using it
16 it was a storage area. But -- but that was moved
17 daily. We brought in gondola type cars and dumped the
18 slag pots --
19 : Uh-huh.
20 : -- into it and then put the
21 slag pots back for the open hearths. And then when it
22 got full they moved it out and put another one in.
23 : So the railroad cars did
24 come into that area?
25 : Certainly.

1 : Even though there wasn't
2 any big machining done, the railroad cars came there?

3 : Yeah. They came in to
4 service the open hearth primarily.

5 : Now, he mentioned some
6 other storage area there that was a secured storage
7 area with some special merchandise in it.

8 : I think that's the -- either
9 the back side of -- of where the Number 11 is or
10 across the railroad track. I just don't know. But I
11 think it's across the railroad track.

12 .: Do you recall what that
13 merchandise was he was talking about that was stored
14 in there?

15 : Well, ,
16 (phonetic) who is a very fine man -- and he's a lot
17 older than me and he's still a good man. He thought
18 that they had uranium in a -- in a wooden box that
19 they stored in this special building. And the reason
20 it was special, when you had a special appropriation
21 to -- to build something it was stored there until
22 they needed it in the construction. And they had a

23 ton -- I shouldn't say a ton. But they had many
24 pallets of welding rods there because we didn't use
25 just one kind of welding rod. We had, you know,

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1 pretty much across the map of types of welding rods
2 for nickel castings and -- and 4140 chrome-moly armor
3 castings, manganese steel castings. And the
4 maintenance people used them, production. It was --
5 it was a place where they stored expensive welding
6 rods.
7 : So that's why it was
8 secured?
9 : That's -- well, and then
10 this -- this uranium issue might have been another
11 reason. Maybe that's why they put the uranium there,
12 because it was secure. But I haven't been able to
13 figure out, you know, where did it go from there, why
14 was it there. Must have been may be over a weekend or
15 something.
16 : Most definitely. It was

17 definitely an interesting conversation that warrants

18 --

19 : But right across from that

20 is the --

21 : -- consideration.

22 : -- is the blacksmith shop.

23 : Uh-huh.

24 : maybe you could look at

25 the other buildings and areas to see if any of those

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1 rooms or buildings would have castings that had been

2 irradiated and Betatroned. Isn't that what we're

3 after, ? I mean --

4 : Yeah. I'd like to find out

5 if there's anything that --

6 : Any potential.

7 : Anything after it left the

8 Betatron that went into that building.

9 : Right.

10 : You mean the foundry

11 building?

12 : Yeah. There's a mechanical
13 testing building. Would anything have gone from
14 Betatron to mechanical testing?

15 : Well, let me explain what
16 that is.

17 : Okay.

18 : The mechanical test lab was
19 a small building with a -- a press in it. And they
20 used SR4 strain gauges which I think the Budd Company
21 provided. And the subway cars had specifications
22 about how much stress could be in it under certain
23 conditions.

24 : Uh-huh.

25 : And they actually cut the

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1 end member in half to see what that did to the stress.
2 And it was all used to -- to do stress testing. And I
3 don't think there was anything else done. It's a very
4 small building. It doesn't have any huge overhead

5 crane. And American Steel had one, but it was more
6 elaborate. They had -- they had equipment that they
7 could take on the -- the passenger cars and see how
8 much vibration they got. We didn't have things like
9 that.

10 : Was there -- if they stress
11 tested it, would they stress test something after it
12 be it had been nondestructive tested?

13 ;: Well, that wasn't the --

14 : That wasn't the purpose?

15 : No. That -- it might have
16 been or it may -- either way. It could have gone
17 either way.

18 : Okay. Were there any
19 railroad tracks go to it?

20 : I think -- maybe you guys
21 can help me here. I think they brought it in on a
22 truck and then took it off by a crane kind of that was
23 outside the building and brought it in. That's my
24 memory. It was kind of like a cantilevered thing.

25 : I don't know.

1 : You don't remember?
2 : No. I don't.
3 : Okay. Okay. And then
4 we've got the new lab.
5 : That was beautiful. I bet
6 the government paid for that one.
7 : That's something we're
8 looking into because it has happened at other sites.
9 One of the questions I have has anyone ever heard of
10 -- and this is -- this was shared with us by
11 , and
12 who were Betatron employees that the cobalt
13 source -- and I know you were at that meeting.
14 Maybe you can help me with this. Didn't they say that
15 the cobalt source from time to time was stored in the
16 basement of the new lab? Did I hear that right?
17 : Yes.
18 : Okay. And that --
19 .: I can't verify that. But
20 that's what they said.

21 : That's what they said.
22 So --
23 : Jesus.
24 : Yeah. So that might be
25 another spot to really consider as a possible --

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1 : Well, when you --
2 , see -- I'm sorry. But
3 which -- which location are we talking about now for
4 the new lab?
5 : 37.
6 : 37.
7 : 37 on there.
8 : 37. I got you. Okay.
9 : Yeah.
10 : Uh-huh.
11 : And now, if somebody spent
12 a lot of the time in the lab, I wonder if they had
13 radiation badges up there. Anybody know that?
14 : In the lab?

15 : Did the -- are any of those

16 --

17 : Not when I worked there.

18 But I -- I never worked in the new -- that new lab.

19 But the old lab, no, we never had no radiation badges.

20 : You didn't work in the new

21 one?

22 : No.

23 : Because one of the guys that

24 did work in the new one was I think

25 that's where he told me he spent a lot of time; is

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1 that correct?

2 : Right.

3 : And he does have one of our

4 AEC badge reports. So we know he wore a badge.

5 : He also worked in the

6 Betatron.

7 : In the Betatron, and an

8 isotope guy so probably could have had a badge.

9 : Now --
10 ?: Yeah. But you don't know
11 that he had it on in the lab.
12 ?: No.
13 .: But I would rather doubt
14 that he did because I seem to remember that he worked
15 in the Betatron mostly on weekends, did he not?
16 : Yeah. Overtime.
17 .: The seniority would get
18 the overtime.
19 : Went to the seniority,
20 right.
21 .: And his badge was in the
22 rack.
23 ?: Okay. So he got his badge
24 down there --
25 ?: I think he --

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1 ?: -- probably.
2 .: -- picked it up on the

3 way through.

4 : Okay. So if the cobalt was

5 stored in the basement according to the other

6 gentlemen --

7 : Yeah.

8 : -- maybe he should have had

9 a badge up there.

10 : Now, this area there you're

11 talking about --

12 : Yeah.

13 : -- the railroad tracks ran

14 completely around the plant.

15 : Okay.

16 : And -- and the cars were --

17 were used as available. You know, if you'd call a --

18 call the -- the office and ask for a flatcar or

19 whatever kind of car you wanted, your friend

20 would pick up the easiest one to get and take it.

21 : Now, these were --

22 : They went all around.

23 : These were company owned?

24 : Yeah. Company owned.

25 : Company owned cars.

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1 : There was a whole bunch of
2 them. I don't know, 40 or 50 probably.

3 : Yeah. There was -- there
4 was actually a document from the Granite City press
5 that when they closed they auctioned off 44 railroad
6 cars I believe from the plant that weren't owned by,
7 you know, any railroad. So --

8 : But what I'm getting at if a
9 car as contaminated --

10 : Yeah.

11 : -- it went over all. It --
12 it -- it even went into the foundry because we had
13 tracks that came in so that we could move patterns and
14 other things.

15 : So railroad cars did go
16 into the foundry?

17 : In one spot.

18 : Okay. Things were loaded
19 and off-loaded in that foundry?

20 : Yeah. In the -- in the
21 south end.
22 : Okay. Was that a busy
23 area?
24 : Well, it depended an awful
25 lot on -- on the product mixed.

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1 : Uh-huh.
2 : We made our -- our
3 industrial castings. Again, 's father was -- was
4 on those like a depressed center car or a -- a steam
5 locomotive underframe. If we were making a lot of
6 them, it was very busy.
7 : Okay.
8 : But you know, that business
9 sometimes was zero. So --
10 : Uh-huh.
11 : The flask and form people
12 used it to bring forms in and flasks in. And they
13 were so heavy we had -- we used a -- a steam

14 locomotive to pick them up and put them on a car.

15 : I don't think we knew

16 railroad cars went in there. So that's really --

17 : Oh, yeah.

18 : -- interesting.

19 : I think there was two

20 tracks.

21 : Okay. We're going to

22 locate a better track layout for that site too. I

23 think -- do you guys think we missed -- oh, I have one

24 question. I guess the -- there was a weigh scale. I

25 thought : told me that everything came in

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1 and out of that plant through a weigh scale; is that

2 correct? And that weigh scale is --

3 : It's one of these buildings.

4 : Is one of the little

5 unmarked one?

6 : Yeah. By 13.

7 : By 13.

8 : To the -- to your right of
9 13. To your right of the powerhouse. There's three
10 or four --
11 : Okay.
12 : -- buildings along in there,
13 and one of them was the track scale.
14 : Okay. Interesting.
15 : See, everything that went --
16 : There would have been a lot
17 of activity there for train cars.
18 : Oh, yeah. Because you had
19 weigh all the -- all the metal going into the open
20 hearth.
21 : Everything going in and
22 going out?
23 : Yeah.
24 : Okay.
25 , that's spectacular.

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I : Yeah.

24 it out of the Betatron and -- and then we'd mark it up

25 where the defects were. Then they'd burn it and weld

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1 it. Then they'd give it back to us or they'd x-ray it

2 again and then we'd check them out again. It was just

3 continuous more or less in them three buildings.

4 : You know, I'm always

5 looking at aerial photographs because they don't allow

6 you on the site. But a quick question not being on

7 the property. Is there any other way for a casting to

8 get in and out of that Betatron without going through

9 8, 9, and 10? Am I reading that correctly?

10 : And -- and the new

11 Betatron.

12 : In the new Betatron?

13 : The new Betatron.

14 : No other way in or out, it

15 has to go through 8, 9, or 10?

16 : Yeah. But the other you're

17 -- got the walls around it. There's no way to get in

18 there.

19 : Okay. I didn't think there

20 -- I couldn't see that real good, but I didn't think

21 there was.

22 : Now, the -- your old

23 Betatron outside is the building. Now, they --

24 : One way in and out of there

25 too it looked like.

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1 : Yeah. They could come in

2 about any way they wanted though.

3 : There's a couple of things

4 that weren't mentioned from where I could see.

5 : Uh-huh.

6 : We did have two men inside

7 the Betatron when the exposures were made. One was

8 who was over looking at a hull from the

9 core room. And as far as I know it never bothered

10 him.

11 : So he was exposed to the

12 Betatron?

13 : Oh, yeah. He was there all
14 during the exposure. And then there was a young man
15 that came in during lunchtime from the plant
16 engineering group. He was a draftsman, and he was in
17 there measuring. And when the guys got done with
18 their lunch they pushed the button. All the bells and
19 whistles went off. He heard them, but he -- he wasn't
20 concerned. And -- and I don't know to this day -- I
21 think his first name was Do you remember, .
22 But he was in the room when a -- when an exposure was
23 made. But once an accident like that happens, you
24 know, plant safety takes it and -- and you may not
25 ever hear from it.

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1 : So safety did know about
2 this?

3 : Oh, yeah. Sure. Certainly.

4 : What year would you think
5 this happened, just a guess?

6 3: '63 since everything else
7 has happened in '63.
8 2: And it would have been in
9 the old Betatron?
10 1: The old Betatron, yeah. I
11 didn't have anything to do with the new one.
12 2: Okay.
13 1: And the other thing that I
14 think is very important today because of shipping in
15 containers. The pill, the little cobalt pill that was
16 maybe under a curie was gone, and we went all over the
17 plant with Geiger counters. And we found out that one
18 of our special sands used for chilling was made from
19 Zirconate. It's a mineral that's zircon sulphate --
20 or zircon silicate, and it was slightly radioactive.
21 And one of the thoughts was that this pill got ground
22 up in the sand mill and it was scattered throughout
23 the plant. Well, that wasn't what happened. But we
24 -- when something's missing you look.
25 Well, we finally got in an airplane -- not

1 me but with a Geiger counter. And that
2 -- that was easily found down in Brooklyn/Lovejoy.
3 Some guy thought it was a fishing cork that cleaned it
4 up, a laborer in 6 Building and he took it home with
5 him. And I never heard how the health of that family,
6 the man, his wife, and maybe his children worked out.
7 But that actually happened. And I -- you know, I
8 don't know that this is pertinent to what you guys are
9 doing here today. But if you can go over a town 200
10 feet in the air and find a small pill under one curie
11 with a Geiger counter, why are you worried about the
12 ports. My goodness, if you got some dirty bomb stuff
13 in them, if it's got any kind of radiation in it at
14 all, an airplane and a Geiger counter can find it in a
15 minute.

16 : Well, you made a real good
17 point that really brings me back just for a second to
18 Number 6 Building. If a small curie can be picked up
19 out of an airplane, it must be powerful enough to
20 affect anybody in the 6 Building.

21 .: That's possible. It --

22 : Must be pretty powerful if

23 you can pick it up in a airplane because you can't fly

24 too low.

25 : No. It wasn't too low.

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1 : That's interesting.

2 : I'm thinking the

3 confusion between the size of that -- of that pill was

4 probably --

5 : Time frame?

6 : No. Point -- .8 curie,

7 and it was probably interpreted as 80 curie from what

8 --

9 Well, I'll tell you how you

10 --

11 : -- everybody's been

12 talking about here today.

13 : I would almost bet it wasn't

14 80 curies.

15 : I don't think.

16 : That was a -- because all

17 it had was concrete block walls if I understand
18 correctly. I've seen a number of --
19 : The answer to that is ask
20 the AEC for the licenses that General Steel had over
21 the years on the thorium. And they'll tell you if we
22 had an 80 cobalt -- 80 curie, you know.
23 : I believe
24 already visited that issue with them and they don't
25 seem to be home about AEC telling us about the

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1 licenses for GSI.
2 : Oh, yeah. We found -- no, we
3 haven't found out about the -- the --
4 : He knocked, but nobody was
5 home.
6 : No. No. No. No. That's a
7 great -- I mean, that's the next thing. We've have
8 got to -- we've got to get their -- I've sent a letter
9 to the historian of the Department of Energy and asked
10 for that all of that material. So hopefully --

11 is his name. So hopefully we will get
12 that, an answer from him soon. And it's about -- you
13 know, I asked him specifically who owned the Betatron,
14 was it the AEC. And really every AEC related issue
15 that I could think of at either Dow Madison or at GSI.
16 So --

17 : Is there anything else we
18 need with the building site? I think you guys gave us
19 --

20 : I -- I think you did a
21 wonderful job. I think that's a very complete
22 picture.

23 : Maybe plug in titles and
24 then confirm them, you know, job descriptions.
25 , were there sentry

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1 guards or anything? Sentry guards?

2 Yeah. There is a question
3 there --

4 : Guard personnel?

5 : -- too that some of the
6 workers that were guards were -- am I assuming
7 correctly that they were all over the plant, would
8 have been in all the buildings?

9 : Well, some of them were and
10 some of them stayed out in the front office. The --
11 like the older ones that had more seniority. The desk
12 sergeant and that, he never made the rounds and that.
13 You know, he --

14 : But the younger guys would
15 have made routes or --

16 : They had time clocks they
17 had to punch.

18 : Okay.

19 : They had a little devise
20 that you could plug your time clock into --

21 : Like a key or something?

22 : -- on the Betatron building.

23 They didn't go inside I don't believe. But they --
24 they made their rounds everywhere.

25 : Okay.

□

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1 : *And he's right, it was on a*
2 *time basis.*

3 : *This -- this was on the*
4 *entranceway to the new Betatron between 10 Building*
5 *and the new Betatron there.*

6 : *The chute.*

7 : *That chute between there,*
8 *right?*

9 : *What's that?*

10 : *Where they punched the*
11 *time clock.*

12 : *Well, no. They're -- they*
13 *have different locations throughout the whole plant.*

14 : *Yeah. But wasn't it --*
15 *wasn't it near the time clock where we --*

16 : *Yeah. Right.*

17 : *-- clocked in and out?*

18 : *Absolutely.*

19 : *That was on that -- that*
20 *alley way between 10 Building and the Betatron, right?*

21 : Right. Where -- where our
22 timecard was.
23 : Yeah.
24 : So that guard that did that
25 one would have been pretty close to that -- in that

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1 Betatron essentially?

2 : Well, and then -- and then
3 there was a guard that -- now, if it was the same one
4 -- I don't know how they worked their positions and
5 that. But that -- on the old Betatron, that building
6 by itself, if I'm not mistaken, there was a -- a key
7 on the corner of the building there where they punched
8 that.

9 : That's my memory too.

10 : So that could have been the
11 same one that points to -- next to the new Betatron
12 and old Betatron. Well, I call it new Betatron, but
13 --

14 : Okay. So those guys were

15 making their rounds into some interesting areas.

16 : And that -- that pretty well

17 covers all the guards.

18 : Yeah.

19 : There's a few that watched

20 the gate in the front, but --

21 : The majority of them --

22 : Yeah. I don't know how they

23 worked on the weekends and that sort of thing.

24 : What about personnel from

25 administration that would have circulated, the

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1 timekeepers?

2 : We got a question. How

3 many people from other job categories such as

4 timekeepers and maybe engineers from the main plant or

5 main office would have visited the plant? Were there

6 supervisory people in the plant at any given time?

7 : Visited the plant?

8 : Yeah. Like an engineer

9 would come out if there was a problem. Would an

10 engineer walk into that plant?

11 : Maybe ; can fill you in on

12 that.

13 : The product engineers worked

14 very closely with the pattern shop, and they went

15 through the plant to get to the pattern shop. So the

16 engineers -- I'm talking product now, not plant.

17 : Yeah.

18 : Product engineers --

19 : Uh-huh.

20 : -- came through the plant as

21 they needed.

22 : Okay. So that -- we're

23 trying to determine whether people that worked in the

24 main office could have possibly been exposed.

25 : The timekeepers came down

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1 to visit our time clock on a daily basis.

2 : Okay.

3 : They'd check to see who
4 was on the shift and checked the two preceding shifts
5 and made a notation as to how many hours they worked
6 and so forth so they could verify when the timecard
7 came in that they actually --

8 : Yeah. The other thing that
9 was asked at the other meeting, kind of interesting,
10 where did -- where'd you guys eat lunch?

11 : Cafeteria or in the Betatron
12 if you wanted to.

13 : How about you,

14 : We had our -- we had a
15 little locker in the back room of the Betatron.

16 : So you would have been in
17 the Betatron?

18 : And we would --

19 : Betatron or --

20 : No. I'd either go to
21 Madison or sometimes the plant cafeteria. I'd go
22 where I wanted to go.

23 : Okay.

24 I -- I kind of always ate
25 in the Betatron in the -- in the -- what we referred

1 to as the foreman's or the layout office back in the

2 back, the locker room.

3 : In that locker room.

4 : Because a lot of the

5 workers just --

6 : Just opposite of the

7 shooting room.

8 : -- mentioned that they ate

9 where they had 20 minutes or something and it was kind

10 of fast. So it was interesting.

11 : , I think we ought to

12 give --

13 : I think we've pretty much

14 --

15 : -- I a chance because

16 we're kind of --

17 : Yeah.

18 : We're at the four o'clock

19 point. So --

20 : Well, we appreciate

21 everybody's input.

22 : Absolutely.

23 : Thank you very much.

24 (Whereupon, the affidavit testimony was

25 concluded.)

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1

CERTIFICATE PAGE

2

3 I, _____, Court Reporter, do
4 hereby certify that this GSI Affidavit Testimony was
transcribed by me to the best of my ability.

5 I further certify that I am neither attorney
6 nor counsel for nor related nor employed by any of the
parties to the action in which this is taken; further,
7 that I am not a relative or employee of any attorney
or counsel employed by the parties hereto or
8 financially interested in this action.

8

9 IN WITNESS WHEREOF, I have hereunto set my
hand and seal this 2nd day of September, 2006.

10

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[Court Reporter]

MeetingGSI081106non.txt

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