GENERAL STEEL INDUSTRIES
WORKER OUTREACH MEETING

August 22, 2006

Collinsville Holiday Inn
1000 Eastport Plaza Drive
Collinsville, Illinois 62234

Court Reporter

PARTICIPANTS

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NIOSH Panel Members
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MR. HINNEFELD: Good morning, everybody and thank you for coming. For a lot of you, thanks for coming again. My name is Stu Hinnefeld. I work for the National Institute for Occupational Safety and Health, the Office of Compensation Analysis and Support. That office of NIOSH was created in order to fulfill NIOSH's responsibilities under the law passed a few years ago, the Energy Employees Occupational Illness Compensation Program Act.

Part of, you know, our -- our assignment under that, our responsibility is to reconstruct radiation doses that were received by people who have filed claims under this law with the Department of Labor. And so we go on these outreach meetings to try
I want to introduce my colleagues who are here with me today. Dave Allen is a team leader for a dose reconstruction team leader for our OCAS office. Laurie Ishak is the special exposure cohort petition counselor. She's responsible for helping people who want to petition for special exposure cohort status to prepare the -- the best petition possible and have the best chance of success possible. And so she works with petitioners in order to provide that service.

On my left is Mark Lewis who works for a contractor company that we have hired, ORAU's hired. He actually works for a company that the company we hired hired. So -- but Mark is -- has been very helpful in -- in setting up and arranging and organizing worker outreach meetings around -- around the country at a variety of -- of sites. And so he's here today to kind of continue to expand his network of people who are, you know, workers from the program, people who are represented by labor unions or not and who are participants in the program and so to expand his network and knowledge about the people who are adding this information to us.

I want to also acknowledge a special visitor with us today. Deb Detmers from Representative Shimkus' office is with us today. I'd like her to -- give her the opportunity to say a few words if she would like to.

MS. DETMERS: I was going to sing a song, but now that I can't move my hands I guess I won't. So you're probably all saved from that. I -- I don't think I'm a stranger to a lot of you. I've been involved in this for a couple years. We've met with workers on and off for the last two years. I'm the one that kind of got Senator Obama's office involved.
And we're the ones that now have pulled Senator Durbin's office in.

I just want to say a couple things. One is you're here to tell your story. Don't be afraid of that. Don't be afraid of this. Just tell your story just like you've told it to me sitting across the table from me. You've told it to you've told it to you, you've.

Your story the best that you can.

The second thing is that one of the reasons I -- I wasn't sure I wanted to talk today. One of the reasons is I have a tendency to say exactly what I think which is not good in politics as you know. So I will tell you guys just so you know we're very frustrated here, and I think you know that. And I -- I'm not blaming any of you at the table. But we have a level of frustration that is growing here.

Once a week somebody brings me in another obituary of a colleague that died, and it is wearing on us. And just because there aren't as -- quite as many of us as at some of the sites doesn't mean that his cancer and his father-in-law's death and everything else we have in here doesn't matter just as much. So we -- we -- I do want to express our frustration at that.

And the bureaucracy that is involved in this has been somewhat overwhelming. I -- I work for a congressman and still felt like I was a ship in a sea kind of floating around not knowing which direction to go. And without the help of and who spend full-time plus doing this kind of stuff and ; who knows more about this than anybody I've ever met -- and you're never going to hear this from another republican, thank God for SimmonsCooper. But seriously, thank God for SimmonsCooper, or we wouldn't -- we wouldn't be as far as we are today.

So I want to thank -- they're the real heroes here and I want to thank them. And I -- so just -- you guys tell your stories, make sure they understand it, and we'll go from there. Thank you.

Thank you very much, Debbie.

And -- and I want to say for the workers, all of us we owe a special debt to Debbie and to Congressman
Shimkus because they really have been here from the
beginning. And actually we probably would not be here
today if they hadn't kept the -- the ball up in the
air and everything juggling. And so we're here today
in large measure because of their long-term efforts.
I just had a -- if we can get our friend
here to cut on. I just had some concluding remarks.
This is the second GSI session for the outreach
meeting. And I just had one extra slide of things
that I thought of last night actually that were not
said yes. So I would like to put them on the record.
And I'd just like to comment, this is not
pumping up and I. But you know,
have really worked at this research intensely for over
a year. And got me involved. And so I think by
now we really do know an awful lot of material about
these sites that will not be able to be found
anywhere. And it's been sort of like the history
detective program on TV. You know, we've had to go
out and dig this stuff up.
And -- and -- and our focus to you guys is
-- is really to share all of this information with you
to help you in -- in your primary role of dose
reconstruction. But -- but sort of in the same vein
that Deb Detmers just expressed I've got to say that
one aspect of the program really concerns me a lot.
And that is that our particular two sites at General
Steel, Granite City Steel misnamed and at Dow site are
now in the hands of Battelle under Task Order 16.
And you know, we're -- I'm very happy
actually that Dave Allen is here who's the NIOSH OCAS
task manager at that end. But I've got to say that I
believe that in this whole process -- I mean, we're
not here this morning just to, you know, be friends.
We're -- we're here because we're trying to convince
NIOSH that we should be awarded a Section 8314 SEC
right now based on the available that's -- that
information.
And since Battelle is actually going to
make the initial decision -- not the decision to award
the SEC but to evaluate our site, we're not happy that
we do not have direct access to the people at -- at
Battelle. And -- and Dave and Larry Elliott have
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certainly explained to us why that needs to be true. But I must tell you we're not convinced that any of those arguments are valid. So I just want to put on the record that we think that this lack of direct access to Battelle to input our data is inhibiting not only communications but actually our ability to support our contention that we should be awarded an 8314 SEC.

The other comment I need to make is that there is one other source term at GSI that I need you all to consider in dose reconstructions. And that is that when the Department of Energy came in and cleaned up the uranium dust in the old Betatron building in 1994 as part of that study they also discovered that there were above cleanup limits amounts of radium 226 in the soil outside of the old Betatron building. And at that point they -- I think officially they attributed that to a high level known to be present in this area. But there is a worker who unfortunately could not be here for these meetings, who works for a nuclear remediation company. And he said his company has measured, you know, a lot -- lot of radium, both 226, 228 and that in his experience the levels of radium in the soil at -- at GSI are not those that you would normally find as background in Southern Illinois. So we'll elaborate on that point. And we're not trying to make the exact technical point this morning. We just want to alert you that there may be another source of that material. We're -- we're not sure how it got there, but it -- it is present and it is -- that is documented.

The other thing I need to point out that's a little different about this outreach meeting than many other outreach meetings is that often workers are giving information to NIOSH after a site profile has been created. Well, neither of our sites have a site profile. So that's not the situation here. One possibility is that Battelle might create a site profile for us.

The other thing to mention is that although there are over 800 claims pending from our two sites and over 600 from GSI alone that so far only four dose reconstructions have ever been accomplished.
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at -- at GSI. And those we -- we obtained copies of
those through the Freedom of Information Act. And in
all of those, you know, the -- an earlier version of
TIB 4 were used. We're now up to TIB Version 3 -- TIB
0011
1 4, Version 3.
2 And although that does cover or add the
3 Betatron as a source at GSI, the document itself
4 Version 3 does not really cover Betatron radiation at
5 all. But it -- it does have a short section -- I
6 think it's a paragraph -- on industrial radiography.
7 And I just wanted to put on the record what Larry
8 Elliott actually confirmed to us in a letter that --
9 that NIOSH now does not believe that the earlier
10 version of TIB 4 that was used in those dose
11 reconstructions is adequate to cover our site. So the
12 implication of that is that there does not exist a TIB
13 that -- that covers our site comprehensively enough
14 and accurately enough. So somebody's got to fill in
15 those gaps.
16 The other final thing is -- and then I'll
17 turn it over to -- that I wanted to say is that
18 one of the requests we have directly is that we want a
19 status report on our two sites of the work that's
20 going on at Battelle. They are now ten months into
21 this one-year contract. And as one who dealt with NIH
22 grants and had to justify our means of support and so
23 forth for many years I know and everybody knows that
24 ten months into a 12-month contract the bulk of the --
25 of the hard work has been done.
0012
1 So something has been done to our two
2 sites. And -- and -- and we feel that it's so late in
3 the game, that's why we're actually going to elaborate
4 means to get this information into your hands and into
5 Battelle's hands at this point rather than waiting for
6 the more leisurely pace of an 8313 SEC to -- to
7 provide that information.
8 So I think with that I'm going to turn the
9 microphone over to and let him make a few more
10 remarks.
11 : Thank you. And thank
12 everybody for coming again today. Some new faces and
13 some that were here yesterday. We appreciate it. One
14 of the points that was made very clearly yesterday and
I'm really glad it did and it's actually helped us
decide that we didn't quite do everything we were
going to do. We're going to really need to assist a
little bit more in familiarizing everybody with -- and
we have some information for you with the Betatron.
And we have that -- had the abstract read
yesterday about the two articles. And what it really
made clear to me is that this is an older device and
information. I can really understand it's kind of
hard to get. And these devices have been modified and
there's a lot safer ones.

But when I got home last night I reread
this, and it's almost like it was written for General
Steel Industries. But it was written in 1974, and the
Kuttemperor individual that wrote the paper -- and
it's K-U-T-T-E-M-P-E-R-O-R -- it's like he was at
General Steel. The article -- and I have copies for
you -- specifically talks about an Allis Chalmers
Betatron, 25 million volts. We found a picture of the
gentleman -- or actually of the Betatron. So we'll be
able to compare that to this, and it's a twin.

It specifically says activation takes
place. It specifically says it takes place in
industrial castings. It specifically says if you
grind, you got a big problem not only from external
exposure but internal exposure. That's huge because
regular -- or regular x-rays really don't address from
what I've read in TIBs any internal exposure. So
we're really going to ask for your expertise.

And another thing that it said -- this is
on the front page, doesn't -- I mean, you don't have
to read very far. It says the size of the material
that's x-rayed is important. They got real brave in
the lab and they did a one pound link from a chain for
the test. Some of the castings at General Steel
weighed over 70,000 pounds. They talk about taking
one shot. Some of the castings at General Steel
required two, three, 400 shots.

524 was the biggest one.
524 shots, that was on the
outside. What happened when they found the problem,
fixed it? Did they check that casting again?
Absolutely. It came back
in for a reshoot.

So I think we're getting
the idea where -- and they talk about the same thing,
8,000 roentgen.

Some were ten.
That's the article. That's exactly what it says. If the size of the casting and
grinding and burning and activation and attenuation,
which is where the radiation goes into the material --
sometimes they say you can't even read it because it's inside.

Well, these guys once it went inside
that's how they fixed it, they went inside. And the
unique thing about it the casting didn't stay in the
Betatron. It went everywhere in the plant for
everybody to work on them, to grind, burn, chip, weld.

So I think you'll find this article
really, really helpful. And I'm glad we had that

conversation yesterday because it really told me. And
I did a little kind of -- you guys got one book, 400
page. You're going to get another one that's 325
pages of Betatron information out of about probably
2,000 pages I have. This is a difficult device to
understand because it's so old.

I hope it really helps. I think we need
to get to the bottom of it, find out did it really do
what all these people are saying. And there's more.

That's just one guy. There's more and more documents.
There was an article referred to in Los Alamos lab.
We're going to copy that too. Ten thousand seems to
be the magic number for activation. But then we have
other reports that go down to three and four.

So we're really going to ask for some help
on this one. And we'd really like to ask you guys to
help us to fully understand it. Because it's not just
GSI. We know where there's a lot of these Betatrons.
This a nationwide issue, not one site. There's a lot
of other General Steels out there that had these. And
in reading the last 25 years worth of annual reports
from Allis Chalmers that I have I got an idea where
they went, who they went to, how they were used.

And we're going to share everything we
have with you and probably with about 25, 30 other
organizations and people because we really need to
know what happened to this thing. And we'll get to
the bottom of it one way or the other. And we're
going to make sure we're not making a mistake.
Because if we don't let people know it, there's
probably still some out there being used. And I don't
think I could let that happen in good conscience.
So if we could ask for your commitment to
help us look at it like you said yesterday, we really
would appreciate it. And hopefully that kind of helps
get the record straight a little bit. Anything we
have we'll share with you. And like I say, you'll get
another 300 pages of Betatron information, and we're
going to do that pretty quickly.
So thank you very much for your time.
MR. HINNEFELD: Thanks, We
certainly appreciate the -- getting the journal
articles.
: Why don't you let
talk first.
: Oh, okay. Yeah. This --
this is really a -- now we're going to get into the
workers.
MR. HINNEFELD: Right.
: And I can elaborate
a little bit about this situation.
Can I -- can I -- I just want
to preface what is going to talk to us about
this morning. Because one of the issues to me that
I've learned about and certainly wasn't aware is that
a steel plant -- seemed to me, I've seen the pictures
of the ovens and the furnaces and it certainly looks
hot and like a bad environment that way. But what I
didn't realize was how much material is ground and
sanded and -- and left on the floor of these plants.
And -- and I want - - was telling me about some
of that situation. And I hope he can kind of convey
that to you, that this was an extremely dusty
environment with high amounts of airborne
particulates. And you know, it was throughout the
plant.
: My name is , and I
would like to put this up here where you can really
look at it to -- to explain really what we're talking
about. You're familiar with the Betatron. Okay.
This is a -- this is a Westinghouse turbine right
here.
This is a Magnaflux machine that you use a
magnetic field to find the cracks, surface cracks.
It's a 240 volt machine. That's the machine. This is

the powder box. You spray -- you spray metal
particles into the magnetic field. These Xs and the
squares are -- each one is a test site for the
Magnaflux machine. The -- okay. On -- on -- on a
casting like this you've got anywhere from two, three,
or four of these machines around the casting, four --
two men to each machine. And when this machine --
when this casting is completed with your Magnaflux
process it is literally covered with metal dust.
Okay. All the defects are marked up either with
yellow chalk or these squeeze tubes of liquid paint.

Before it goes to the next process this
casting went -- you would take an air hose and blow it
off. When you got enough dust on there and you wipe
your hand across it like that you've got a hand full
of dust. The floor around this casting -- let me get
a -- give me that one picture of this here.

You've got 8, 9 and 10 Building. 8
Building was a machine shop, layout, ultrasonics. 9
Building was the repair floor for Westinghouse
turbines and your nuclear submarine parts and your
nuclear power plant points -- or parts. 10 Building
was the armor building, your tank hulls, tank turrets,
and railroad.

8 Building, the floor was so dirty they

used an electromagnet to sweep the floor. You hooked
it into your overhead crane. The overhead crane drug
this electromagnet across the floor and it would pick
up like bushels of trash, take it over to a dump site
and dump it into a bin where they hauled it off to be
recycled or -- or whatever.

Around this casting here when -- when
Magnaflux were done and all over the -- all over 9
Building if I dropped a cigarette on the floor, I
didn't even bother to bend over and pick it up it was
that filthy dirty. And think of how much dust there
was put into the air. When -- when we finished with
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13 Magnaflux and blew that casting off with an air hose
14 so they could move on to the next work site how much
15 dust and dirt -- metal dust and dirt you blew into the
16 air. I -- I worked --
17 I would mention --
18 mention to Stuart and -- and Dave and Laurie about the
19 amount of dust that was just covering the floor, the
20 thickness of it.
21 Okay.
22 : Yeah.
23 : In 9 Building which was the
24 main repair floor the dust would be from anywhere from
25 three inches to six inches deep, metal chippings,

0020
1 grindings, you name it. The janitors couldn't even
2 sweep the floor. That's why they used an
3 electromagnet to -- to pick up the big stuff so they
4 could even get down to the floor. You know, it -- it
5 -- it's unbelievable.
6 Same token, I worked the hot floor a lot
7 in Magnaflux. I worked behind the burners. Think of
8 all that burning chips and stuff when they'd start
9 that torch up and blow that stuff out across the
10 floor. And the -- you know, it's -- it's almost
11 unbelievable to think that conditions like that
12 occurred.
13 In fact, this machine here, this Magnaflux
14 machine you're supposed to -- you got a handle on
15 front end. You're supposed to be able to pull that
16 around. We had to move them with a crane because you
17 couldn't move them by hand.
18 MR. HINNEFELD: Uh-huh.
19 So the -- you know, it -- and
20 okay. This casting here, all that dark spots on there
21 is scale, grease, and dirt collected from the grease
22 and the oil and so on. That's a gear box for -- for
23 the largest crane in the world. So there's -- there's
24 -- okay. Now, that's -- that's in -- that's in the
25 shooting room right there.

0021
1 MR. HINNEFELD: Right.
2 : That casting is so big they
3 had to move it into the -- into the shooting room on a
4 truck because the crane in the Betatron wasn't big
5 enough to pick it up. You can see the dust -- the
tracks -- the truck tracks in the dirt and the dust in
the Betatron right there.
So there's -- and you get over here to
these chippers and so on, the girls they had -- they
had quite a few lady grinders. This one big, tall
colored lady she'd come in to work every day clean,
clean clothes, a white turban on her hair, around her
hair, over her face. They would get alfalfa seed
sacks -- feed seed sacks and then wrap themselves in
-- in these sacks in clean -- so they'd keep their
clothes clean. She would come in with like gym shoes
on snow white every day, snow white turban over her
head trying to keep clean. Some of them even used the
-- the asbestos blanket to wrap themselves in when
they worked on these castings because they was so
filthy dirty.
And the -- most of the people in this --
in 8, 9 and 10 Building here thought they was doing a
hell of a good job, and we were. It was some of the
best paying jobs in -- in the plant. In fact, the
Betatron people were highly envied because we were the
elite.
And the -- you know, it's -- it's -- in
the same token street -- we wore the street -- our
street clothes in. This is myself right here. And
the -- no protective gear, whatever. You'd use
whatever you could cover yourself up with.
And the -- but when you have to use an
electromagnet to clean the floor so the janitors even
could sweep up the dust is unbelievable. So the -- I
don't know if you've got a copy of this of the plant.
MR. HINNEFELD: We've got it in --
MR. ALLEN: Got a few different versions.
MR. HINNEFELD: Yeah.
The -- back there you guys
looked at my display before.
MR. HINNEFELD: Right.
So you know, when -- when --
when the casting moved from the work floor to the
repair floor to the welding floor back to the Betatron
for reshots, inspection of the repairs they weren't
always the cleanest.
MR. HINNEFELD: Right.
So you know, I guess what went
MR. HINNEFELD: Uh-huh. Right.

Thank you.

we appreciate that

because the point you make I think is really

important, that was metal particles that were

activated. It's not like everything -- anything that

came off the chipping and grinding would have been

metal. And it sounds to me if I understood you

correctly a lot of this went into the Betatron, had it

done, then went out.

So it sounds to me like everything we're
talking about, dirt, dust, chippings, grindings were

after a Betatron test, is that correct? So if there

was any activation and if I've read what I thought I

read correctly -- and this is where we'll need you

help -- the smaller the particle. And I think they
talked about that too that when you activate something

if it's a small particle, sometimes the activation
could possibly be more the finer the particle. I

thought I read that.

It gets pretty interesting when you -- you

think about it. And brought that up to us

today about all this dust and metal. It was all

metal, and metal's what takes on the activation issue.

So that was a great point. Thank you.

racial content.

Oh, you know, that was

another just for the record too that we tried to find

out the mix and population in the plant. It was

really diverse. And I know that was kind of important

at some of the Mallinckrodt hearings. If we

understand correctly -- and these folks here can

correct me if I'm wrong -- it was about one or two

percent women, 40 percent Afro, and the balance white

and European. Does that sound about right?

Because it seemed to be a pretty

interesting factor at Mallinckrodt because a lot of

the testing for the radioactivity, I guess the badges

and a lot of the bioassay information was strictly for

white males. And that'd be interesting to know at

d this plant too.
MR. HINNEFELD: The Mallinkrodt epidemiology work, so the collections of badges that was mainly white males. The -- not -- not who got badged. But those studies that were done after the fact to try to determine health effects in the population, that -- those epidemiology studies were generally done on white males because they were the largest number of people so the studies could have more power.

And -- and when you include -- and if you have a -- a homogeneous study population, you were more likely to see effects. And so that's why they -- the epidemiology studies. It doesn't mean that other groups weren't badged. It just means that their results were not included in those epidemiology studies.

Well, I -- I think the point that's relevant to particularly the GSI site at Dow -- I think you'll hear this afternoon perhaps that there were a much smaller fraction of Afro-American workers there for whatever reason. But I think what's important is since -- since neither of these sites have any radiation exposure data, the only way you can possibly do a dose reconstruction is by using coworker data or data from another site that's comparable. So I guess the point I'm trying to make is if you use that other data, to make it truly comparable it ought to be on a similar population where you have, you know, a mixture of Caucasians and -- and Afro-Americans.

And I do understand that there is not a -- actually because of the way those epidemiologic studies have been done there may not be as much good data on cancers in Afro-American people. But to -- to make that a -- you know, to make another site a comparable control group to apply and extrapolate to this group you would have to have a similar high ethnic diversity. So just a point. All right. Why don't you let some other people talk.

Sure.

In -- in this -- in this conversation here you might also need to think about the number of women welders, women
grinders, crane operators who were left over from World War II that were still working in the plant. The diversity, this wasn't a bunch of young people in this plant. There was probably more older people in the plant in the general working conditions of the plant than there were young people. The only really young people were in the Betatron area because of the new technology. But in the rest of the plant there was a high, high percentage of older people, a lot of women and a lot of older men. So this would be -- also need to be figured into the equation.

: Thank you, Any other comments from the crowd? Sir.

: You had a copy of this layout before of General Steel. I worked there from '63 to '7. My name's , and I was in management, a supervisor there. In the reclaim system, when you say the buck stops, it stops there. I don't care if it's the north end to the south end, we sent material north and south. I had people -- like my first -- myself worked in these places. I worked there too. So I supervised them from down from the north end to the south end. I'd say from Building all the way down to 8 and 9, 10.

We had shakers there. You shook everything off these castings once they been poured. And it started south and come north, then come back where he was talking about they was testing. At our supervisors' meeting in the '60s -- we had the front office over there and I was like assistant superintendent -- we noticed that the tanks were being blowed up, holes in them. So we had to look at our all process for the reclaim system throughout the entire plant to correct this problem which they did.

Another thing, this dusty material -- you talk about dust, the material all came back to the reclaim system. We had magnets that we had to draw out of the storage tank. When they come by there they would take the metal out of the sand, out of the dust. We had to push that aside there. So those type of things all came back to the reclaim system that we
worked at. And most of them peoples there were mostly
about 75 percent black. A few whites was in there
too. But basically we -- that's what we did.
The main foundry, you're look at 15. Then
down in the Betatron building I had people, the
shakers down by 8, 9, and 10 Building. We had done
some cleanup work in that area too in that particular
spot. If you go back down to these other, 4, 5, and 6
Buildings that's where the -- a lot of grinding and
chipping was done in. These castings sitting in that
dirt and dust. We had a guy on a tractor that would
go in there and had to move this stuff and push it to
the conveyer to bring it back to the reclaim system.
So everything dust and dirt and sand
concerned, whatever it went through came back there.
We had to do the process of putting new sand and
maintain it. So all the core room, the cores was
broken up, everything, blocks were all shipped back to
the cell -- sent to the -- to the sand system, reclaim
system which is Building Number 23 on this outline.
8, 9, 10 we had a shaker there. That'd be the south
end you want to go to that direction.

You come on down this end we had another
shaker that shook everything out and a metal conveyor
that conveyed it all back. We had conveyor belts
underground and above ground that were -- headed
directly to the feed and return. So we were return,
and we collected a lot of metals, I mean a lot of
metals and shimmies, small pieces of metal from this
process.
So that's my -- my point I wanted to say.
But like I say, I was in management there, and I was
over that department. And we had meetings in the
front office with the president and even bigger guys
and we had to go in there and look at our process. We
looked at sands, at the microscope, and all those type
of things to make that process start here until the
core had been made. You pour it and the frame come
out then bring it down to these other buildings.
And these buildings -- that 7 Building was
dirty, full of dirt. There were signs on those
castings wanting a sample of that. They never took a
plan. The foremens poured it out of the pots from the
open hearth any these big turbines, Westinghouse
turbines. That was from this building, this floor,
and you go another step out at this height of this
building on there that's how big they were. You had
people that'd sit in there and they burnt risers in
here off these castings. They had to cut them off
first, eight hours. Then you get into the chipping
and grinding.
So that's what I -- I bring this up to you
all that you understand it. In the reclaim system
they -- where it does come from everything came back
there. Thank you.
MR. HINNEFELD: Thank you.
That paints a pretty
interesting picture of what happened after they were
tested. And I might add the cleanup report from
FUSRAP which you guys supplied us with and we had seen
it and looked at it, it really tells you in the report
the only building that was checked on that site was
the Betatron building, the old Betatron building,
briefly at the new Betatron building. Nobody looked
at 10, 8, 9, the reclaim system.
That plant's being populated again now.
There are people working there. And in the report I
found it kind of unusual -- and I don't have the exact
wording. But the company that owned the plant at the
time, National Steel asked for assurance and it got it
that nothing else would be looked at. I found that
really interesting.

Or -- or reported publicly.
Or reported publicly. If
you specifically asked for it -- back then in '93 the
mayor of Granite City didn't know they even cleaned up
the plant when I visited with him when I started my
research or the fire chief who is now the mayor. They
were -- you know, you could have knocked them over
with a feather. That was done very secretively. In
talking with some of the workers I understand there
were guards that were there on site to make sure
nobody went around.
But having heard this last comment it
sounds like the contamination went from one end to the
other. To look in two buildings, I think somebody
made a mistake. I might be wrong.
want to follow up on what -- the implication of what we believe. What we believe is -- is that the uranium ingots from Mallinckrodt -- the assumption in the DOE cleanup report is that they entered the Betatron buildings and left on the railcars or on a truck from the Betatron buildings and that was it. It was also clear from the record that the plant management was discouraging to the Department of Energy and actually tried to put constraints on -- on which parts of the plant could be examined. And I'm -- I'm inferring this because we don't have access to internal memoranda and things like that. But the inference was there was a reason that the plant management didn't want Buildings 4 through 10 as I have just talked about examined.

And yesterday we put on the record that there was a lot of indication that the uranium ingots did not just go into the Betatron building but certainly were back in the storeroom, were back in the Building 6 area way at the other end of the plant and that -- that it's highly likely that some of the oxides that were found up on the rafters in the old Betatron building, from the uranium ingots I'm talking about now, got recycled to other parts of the plant through the reclaim process and -- and maybe just because the ingots were taken to other areas of the plant. So I think that's an extremely important point.

It's difficult to prove that the uranium was there because nothing was surveyed. And you know, those building still exist. So at the end of this process one of the things I'm -- I'm very much in favor of is getting the Department of Energy and -- who now at least is only the titular head of the FUSRAP program. But the Army Corps of Engineers still does remediation. I think there's more work to be done in that plant. So that's the reason we're putting this on the record and also to put on the record that workers who worked inside those other buildings were potentially exposed to uranium. I want to be explicit about that, that we do not accept the
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9 -- the implication from the DOE report which we think
10 was done -- was incomplete, let's put it that way.
11 That we do not believe they were the only workers at
12 GSI in the Betatron buildings that were exposed to the
13 uranium from Mallinckrodt.
14 . Too just a
15 comment in fairness to the people that did the
16 cleanup, it was after a plant had been closed. And
17 one comment that's in the cleanup report was there's
18 no one around that will know anything about the plant.
19 They didn't look as hard as I did. I got 600
20 claimants that were most likely at the plant or had
21 loved ones there. And I don't think they chatted with
22 anybody. So maybe we could help them a little bit
23 with that information the next time as to what went on
24 almost like a factual, here's the plant, maybe you
25 ought to go look.
0034
1 , there's another
2 comment back here.
3 : Sure.
4 I was in the
5 maintenance department. I started there in 1955. I
6 was 17 years old. I lied about my age to get a job
7 because I needed it. And speaking in behalf of the
8 maintenance people, you know, I worked with these
9 guys. They -- when I hired in there, like I say, I
10 was a kid and a lot of them were young men just like
11 myself. The electricians, average age about 34 or 35
12 years old.
13 (phonetic) which used to
14 change the cones in the machines down there, when he
15 would go down there he'd let us know. We'd follow him
16 down there and do some -- change the oil, grease
17 cranes, and clean things up. But you -- also your
18 millwright helpers, machinist helpers they called
19 them. I'm sorry. They were all young -- young guys
20 like myself because they'd get in there and do the job
21 for the older guys, you know, they'd -- they hand them
22 the tools, they were the grunts.
23 And the maintenance workers spent a lot of
24 time in and out of that Betatron and in them tunnels.
25 And we would go down in them tunnels as oilers. And
0035
1 each conveyer -- some of them run maybe three or 400
feet long. And then they'd dump onto another one and
3 go. We'd spend all day down there greasing those
4 rollers and breathing that dust. We didn't have no
5 protection respirators. When we went into the
6 Betatron we didn't have no protection whatsoever
7 because we were young kids that didn't even know what
8 was going on down there.
9 In behalf of the maintenance workers, you
10 know, we -- we -- we was exposed quite a bit, you
11 know. And it -- I think if you checked around some of
12 your programs a lot of your maintenance personnel
13 ended up with cancer. And there's a lot of young men
14 still left that -- I know there was 14 of us oilers.
15 And -- and I pipe fitted for a while there too. And
16 we -- we spent a lot of time in -- on those roofs
17 while they were x-raying greasing fans.
18 And the heat treat department which is
19 right next door, we'd spend all day over there on
20 Saturday, you know, and greasing the Quint/Staint
21 (phonetic) cranes and -- and -- but the -- there was a
22 lot of young -- young people there too.
23 : Can I ask a question just
24 for the record. You dealt with grease, oil, hydraulic
25 fluids if I understood you correctly.

0036

: Right.
1 : In the Betatron building?
2 : Right. We -- we serviced all
4 the machinery in the Betatron building every time we
5 got a chance to -- to go down there. If they was
6 broke down for some reason and sent electricians in or
7 -- or maybe they had to change a crane wheel or change
8 the cables because had them -- they had inspectors go
9 in and check the cables on them cranes because they
10 was picking up such heavy loads with them, you know.
11 And we used to have to go in there. And -- and at the
12 same time they didn't.
13 Sometimes they -- we would go in there and
14 have the whole Saturday to maintain the old Betatron
15 building. Then the following -- maybe a month or so
16 later we'd go in and spend a whole Saturday doing the
17 new one. It was on a -- we had a schedule that we run
18 by, and we'd fill out a report on that there that we
19 turned into our supervisor which was -- let me think
20 (phonetic) and
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(phonetic), (phonetic), (phonetic).
And which was an electrician, I've been
donw in there a lot of times with him while he was
changing a cone, servicing the -- the x-ray machine
itself. We'd be all over that thing just climbing

R: My name is
I spent a lot of time at GSI. I started
there in '50. I quit when they closed. I left and
went to the Army from there. I came back from Korea.
But --
He was a young man too.
I was a young man when I
started just like the maintenance operators. But he's
right that I was a Betatron operator. I worked with
My name is the two
We did a lot of work together in the
Betatron, both old and the new Betatrons. And I can
verify what said is correct. There was dust
everywhere. If the dust was residual; that is that it
contained radioactive material that could collect in
the dust, it was there, it was present. Not only on
the floor and the rafters, everywhere you looked you
seen dust.
The maintenance -- the maintenance people

that came in they came into the Betatron and we would
stop production if there was something special they
had to do like repair something, they did it and left
and he said with no protection whatsoever.
The Betatron operators, we did have our
film badges that were supposed to go to the Atomic
Energy Commission to be checked at a certain --
because we had our pencils, our dose pencils that we
used that would collect radiation if that meant
anything.

But so far what said about the
activity that went on throughout the mill and the
castings that came out from the Betatron after being
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14 exposed to X number of roentgens of -- of exposure to
15 be worked on by the chippers, grinders, or just
16 whoever would -- had another part to do on that
17 particular casting. I'm sure that they were exposed
18 to any radiation that would be present at the time.
19 But it wasn't an ideal situation.
20 And like I say, I -- I spent practically
21 all my life there. I started there in the '50s and
22 left there when they closed in the '70s. So it was a
23 -- not a unique situation. I'm sure it happened all
24 over the country because they had Betatrons in most of
25 the foundries and things that did castings. But they
0039
1 produced some of the biggest castings at -- at GSI in
2 the world. It was supposed to be like geographically
3 located where the pouring of steel would settle. And
4 some of the largest castings that were produced was
5 produced right there at GSI.
6 : Thank you very much.
7 '. Betatron and
8 Magnaflux. The gentleman's name that was mentioned,
9 happens to be a neighbor of mine. He was
10 the fellow that changed donut tubes. I saw him there.
11 He did a lot of work on the -- excuse me. I'm sorry.
12 He did a lot of work on the Betatrons. He's a bad
13 cancer patient and wears a bag, people.
14 I wanted to mention one fact. Back in
15 those days as , mentioned we did also wear
16 dosimeters along with regularly worn film badges. I
17 remember one incident I was working over in the old
18 Betatron. I had been wearing a dosimeter all week.
19 Before the start of the shift I would charge it, zero
20 it, put it in my pocket along with the film badge.
21 At the end of a 16-hour shift I read the
22 dosimeter and what appeared on the dosimeter was a ten
23 roentgen exposure. I logged this exposure, notified
24 the foreman of it. We had a logbook, a dosimeter
25 logbook. Good Lord, who knows what happened to them,
0040
1 but they were there. A couple days later the foreman
2 informed me that I did not know how to properly
3 evidently zero a dosimeter. The -- I never heard any
4 reports. Along with the film badge that I wore if
5 there was any conveying information involved, it was
6 simply dismissed in such a manner.
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Now, what I'm trying to convey, gentlemen,
is there came a point in time that the operators
unfortunately became wary of the reliability and
accuracy of film badges that we wore. And as I
reported with the dosimeter, the standard joke of --
of the operators were simply well, my film badge came
unclipped from my pocket, landed close to the shot,
and after two or three shots I realized what happened.
A week later nothing was ever said about
this incident, nothing was ever reported. I ask you
gentlemen here that were operators how many times have
we heard stories of this? We said it ourselves. Hold
up your hands, the operators that are still there
today.

:: We have a very young
operator.
:: And what I'm trying to simply
state in this manner is well, our -- our -- our very
well-being depended on these film badges and
dosimeters. If we could not rely on reliable
information -- and sir, we never saw any reports. I
never saw in the three years I worked there any blood
-- a copy of a blood report, an x-ray, any film badge
or dosimeter reports, and no records of such. We
became wary. Thank you.

:: My name's I
worked in the Betatron. You talked about, we
were all young guys. And as you guys know certain
workers we didn't care for or we had problems with we
would purposely take their -- their badges, set them
up on a casting, and load them up thinking we would
get them shit-canned, get them away from us. Nothing
ever was said. No readings ever came back. We were
always good. It's truth. Ask any one of these guys.
:: I think I want to stay on
your good side.

:: My name is I
was a -- a burner at General Steel Industries, and I
worked on the castings. And by -- what I mean by
burner is the big castings, when they knocked the
risers off I had to burn that smooth with the rest of
the casting. And I worked generally where there was
railroad cars that you had to burn a -- a quarter of
an inch bevel around the outside edges. And you had
to get the cheers -- shears out of the corners where 
they made the corners.
And so what I ended up doing -- I had 
heard of older men being there dying from black lung.
And so I'm very health conscious, but as of now I have 
had prostate cancer. Now I got lung cancer. So 
that's another reason why I'm here because of the fact 
I was very protected of myself for getting black lung.
So at that time they had no respirators.
But the respirators that they did issue out was made 
of cotton. And I would take the respirators going 
next to my face or mouth and I'd wet those 
respirators. And if I would breath through that and 
could see any brown, I'd add additional respirators.
And those respirators, as it was put out in front of 
each other, now it got so thick you couldn't fold the 
aluminum over. So I'd double it back and put them on.
So I'd have maybe five, six, seven respirators. And 
if I could see in the inside brown from that smoke or 
from that torch, I'd add more.
Now, if you had to get over in the bin to 
get the shears out or you couldn't get it from the 
other way, the other burner next to you was burning 
your back, well, I had a big old asbestos apron that I 
used to put around.

Now, I was extraordinary glad to get the 
job at GSI. That was -- during that time a lot of you 
guys are not old enough to know about it, but that was 
one of the better jobs in the area and you had good 
benefits. But I never -- I'm hearing now about these 
badges and -- and the -- and the Betatron and all 
that. All I did -- if the foreman said go to -- 
(phonic), go down -- that's my nickname -- go 
down to building such and such, burn off the risers, 
that's what I did.
So what they did they transferred me up to 
where they was working on tank turrets. And those 
would be so hot, maybe 800 to 1,200 degrees, you could 
only the work in them for maybe just to burn out the 
rods so they can get the black casting sand and stuff 
out. And so what ended up happening was you put a 
piece of wood in there and you would have to wear like 
the shoes with the wood on them. And when you'd walk
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19 on that it's so hot that you could only burn for 15
20 minutes because the wood would literally catch on fire
21 and it would burn your eyes. It wasn't so much that I
22 couldn't stand the heat because I can really stand a
23 lot of heat, but you couldn't see to burn because your
24 eyes was running from -- from that.
25 So now, I was sent to all these buildings
26
27 because I was a burner and somebody didn't show up.
28 The foreman would say go down to this building, go
29 down to this building. And you'd go down there and
30 report to the foreman down there, and then you'd do
31 whatever he tell you to do. So I was never aware. I
32 just always thought that the American government was
33 taking care of its people. And so now we see from
34 what these gentlemen are saying that they were not
35 taking care of their people.
36
37 And so when I was in the military I heard
38 about roentgens and things like that. But I
39 understood that to be in situations where they was
40 trying to kill the enemy. And so now you hear about
41 these things, and it seemed as though GSI was maybe
42 directly or indirectly doing the same thing. And so
43 here we can see how -- why this meeting that we're
44 having here today is so important. It is imperative.
45 Because now, I never smoked. And when -- when they
46 asked me about that and I said well, how is it that I
47 got cancer. And I was an electrician before I
48 retired. And so I said well, what did I -- or where
49 did I get this cancer. I don't know if I got it at
50 GSI. I really don't. All I know is they tell me I
51 got a mass in my chest, and I've been taking chemo
52 treatments and radiation treatments for almost two
53
54 years. So I'm a living witness of this fact that
55 either from GSI or some other source, but I -- I do
56 have cancer.
57
58 And so I'm very thankful to
59 -- the doctor here for having
60 these meetings because little people don't have any
61 representation without someone in the know-how like
62 Brother -- (phonetic). And so I'm truly
63 appreciative for everyone that's participating today.
64 Thank you very much.
65
66 Because the burning process at the plant, you know, we
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12 all know that's with a cutting torch; is that correct?
13 : Yes. Sometimes it took --
14 sometimes the cutting torch had to be so long you had
15 to adjust the valves on this end and walk down the
16 other end and light it, and then come back and adjust
17 it so you had the proper flame. So really and truly
18 sometimes I would to use a four-foot burning torch or
19 a eight-foot burning torch.
20 And so that -- that's blowing the dust
21 like these gentlemen are saying all over the plant.
22 And when the -- sometimes when the crane would pick up
23 your casting to turn it over, when he locked the
24 brakes up you'd -- you'd run outside because the dust
25 would fall down down your neck. And when you're
26 sweating that -- that's very -- real irritating.
27 : I'm very much.
28 I was an operator at General Steel. And after I got cancer
29 well, of course the doctors would like to have a
30 record, your lifetime record of what you accumulated
31 which was supposed to be available with the AEC and
32 other. So having known people in industry, in
33 technology, in politics I -- my family started
34 searching. And then after 90 days time some of the
35 big leaders in this country says what records and they
36 cannot be found or do they exist today. If there was,
37 I'd get them. I'd get them, but they're unavailable.
38 Thank you.
39 I would like to
40 add onto what said about wrapping
41 themselves in asbestos blanket. This was done all
42 over the plant due to help to keep yourself halfway
43 clean from all the dust and dirt and you name it. And
44 today asbestos is one of the dirty words when it comes
45 to cancer and a few other things. So I would like to
46 add that to statement because it is much
47 under emphasized.
48 : Okay. Thank you. And I
49 think if I understood correctly too that asbestos was
50 worn at that plant to keep you from getting hit with
51 hot chips coming off of the chipping; is that correct?
52 : Yes.
53 : We used it quite a bit in the
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-- in the sand system because you had to reclaim
system. All them -- the risers -- the riser would
come back that directions. So that -- personally
myself I stood there on that belt and picked them off
with asbestos gloves and we had asbestos material like
aprons around us. Myself I was tested positive for
the asbestos from working that hot -- that stuff was
hot. You had to use asbestos to keep from getting
your hands burning. You couldn't use regular gloves.
And that was a dusty -- like you say, you go in there
and work, you come home and you shower. There'd be
sand in your ears, your nose, everywhere.
And some of the old-timers had a habit of
using tobacco. So they spit tobacco. They thought
that would help the dust back there back in the '50s.
I tried it, I -- I passed out. I couldn't chew no
tobacco. It made you just dizzy, see. But those guys
they -- that's what they did at that time period. So
it was a -- really not a very good condition.

"Thank you very much."

I think you --

I'm I have two
comments that are kind of important, one to me and one
to what you guys are here for. Our -- our foundry was
a huge place that started out with the little bitty
Commonwealth Steel Company. But it was very diverse
not like we're talking about female, black, white. It
was diverse from Southern Europe. We had people that
came from every Southern European country. And in
Granite City even today there are a lot Orthodox
churches that were started by those people.
They came and sometimes wouldn't even
speak to each other even though they -- they worked a
piecework program. One was on one side of the core
plate, one was on the other. They split their
earnings, but you know, Serbs didn't talk to whatever,
you know. And our company built a building basically
to Americanize these Southern European workers, who
these were excellent people I might add. Some -- some
of the people here know those older guys. Some are
younger and don't.

But let's take one family. The
family in our core room became very important later
because the son, like a lot of their sons, became very
important. was of the Granite City team that won a state championship. He learned his basketball in this same building where his father and others learned English. But he went to the Illinois are still a little famous even though, you know, that's back in '41. But -- but captained that team, later became a captain in the and played professional ball with the So it wasn't just diversity like we normally think of it. It -- that -- that whole foundry was diverse without anybody else but the Southern Europeans.

The other thing is that hasn't been mentioned that I think's very important is these big casting were blasted, and there was all kinds of medium for that. You can use steel shot. You can use a grit and various sizes. And it was almost impossible to blow that off. Sometimes the castings went right to layout or the Betatron from blasting. This was not a -- a set in stone process. You could deviate with the various things that had to be done. But that grit that came from the shot blast along with the -- later the magnetic particle medium was on the casting.

And I'm talking 350 exposures on some of the castings first time around. I don't remember the 560, but that's a big number too. But -- but what happened to that under this 25 million volt x-ray I don't know. I can't multiply in my head 330 times 25 million because that's exactly how many times it was bombarded. And those -- those particles were -- they weren't just one thing, they were several things that would -- would receive that radiation.

You know, I might add if I may background too was a metallurgist. So the alloy's pretty important. To just say that plant used 5,000 tons of carbon steel a month which is what they say in their publication is really just the tip of the iceberg. And the Betatron hitting carbon is another one of the items that's mentioned in the Los Alamos training book which, you know, we're going to provide
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... could help us with the Mallinckrodt information.

Everybody heard about ingots there. And I'm sure
there's a breakdown of what was in an ingot. We have
some publication from Mallinckrodt that actually broke
it down that we found by some miracle that we'll share
with you too. Because it wasn't just uranium. It's
really a breakdown of -- by percentage of what's in an
ingot. So that might be kind of interesting too.

And to follow on to that I

interacted at the Weldon Springs site which was the
second Mallinckrodt site out in St. Charles County.
And so I recently wrote the current project manager in
the DOE Office of Legacy Management, a man named Tom
Pauling and I asked him to please help us with
information about the Weldon Spring uranium ingots
that came to General Steel and also came to Dow which

you will hear about this afternoon. So -- so we're
trying on many fronts. We've written a letter to
Roger Anders at the Department of Energy in the health
division. I gave a copy of that to so that
maybe he can help us follow up.

So we're trying on many levels to get the
information we need from the Department of Energy.
And if your good agency could help us in that regard,
that's -- that's an area where as you know it's really
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-- for us at least it's tough to get that information.
So we would appreciate any help.

: My name is
I worked at the Betatron from '63 to '66. As I
mentioned yesterday about the uranium ingot that came
from Mallinckrodt, I don't believe that we were
shooting those for structural defect because you
couldn't -- you couldn't get a readable film if you
shot it head on because it was too dense. And you had
to shoot the -- the ingot obliquely from the corner
which distorted the image on the film somewhat. I
don't think we interpreted the film. I believe the
film was packaged up and shipped back to Mallinckrodt
with the ingot for their interpretation.
But I heard of a story, and I'm going to
ask -- to -- to tell us about that story which
adds a little fuel to this fire I believe.

: Okay. I'm an operator there. I come in on a Sunday morning. It
wasn't unusual to work Sundays, seven days a week.
And I relieved -- a crew says they were shooting those
ballets, ingots, whatever you want to call them. And
they says -- I says well, what film did you use. You
know, you got to get relief, you got to find out what
went on the shift before. They says oh, no, we didn't
use film, we charged the billet, we charged the
ingots. And then they went on to the wash house.
Thank you.

: Are you -- you're saying
there was no film?

: They were -- they were
charging. They -- I don't know if they were telling
-- I don't know if they were telling the truth or not.
But they says oh, we were charging those ingots,
charging them with the Betatron. And later on of
course down the line when I -- information was
available to me I observed that you can charge them
with a Betatron and it will change their molecular
construction. And they can be made into nuclear rods
or whatever they used them for.

I need to -- I'm as
a follow onto that when first told me a
long time ago that there was some feeling among the
workers that maybe the uranium from Mallinckrodt
really wasn't just being examined for structural flaws
which is the official version now. And you've heard
some testimony from supervisory people and workers
that worked there. And this last testimony is really
very powerful that there was a crew who was shooting
the uranium ingots without any film. And if you
couple that then -- you know, so I can learn too and
change my opinion.

So if you think about the two articles
that I mentioned yesterday -- and I think has
copies of them for you that have to do with directly
irradiating uranium ingots with a 25 million volt
electron Betatron and -- and you accept the
information there that the Betatron is perfectly
capable of and did at those kind of intensities split
the uranium atom. And in fact, as I said on the slide
yesterday you can get, you know, a slight amount of
enrichment.

But the other part of that story is that
there is a wealth of literature from the Department of
Energy and specifically at Oak Ridge National
Laboratory that they've had a program I became aware
of that's been ongoing for 20 years that specifically
looks at the destructive secondary responses of
different metals that are irradiated at these high
intensities. So not only does -- I mean, and -- and
so in a way that's complimentary information the
Betatron can activate. And of course, the -- the
released energy that's captured within the metal
itself has to do something. And what it does is it --
it changes and breaks down the internal atomic
structure of the irradiated metals. And ORNL has been
very interested in that process. And in fact, so
interested in the process that the Department of
Energy has invested by now probably billions of
dollars in research that's aimed at fixing that
property.

So I was very interested it learn that the
Department of Energy now has a very active program
where they create metal -- metal alloys. They develop
them, they produce them, and they sell them to
commercial firms who want to -- and I suppose it must
be used in aircraft and spacecraft who -- who can not
tolerate any sort of weakness in the metal alloys that
they produce and use in their -- in their military
equipment and probably in regular commercial flights
as well.

So if you take all of that information and
combine it together, now it becomes more reasonable
scientifically to examine the postulate why was
Mallinckrodt sending those uranium ingots. And this
is another area where I think we haven't really talked
about in our meeting. But if there are any workers
here who can put anything into the record about
secrecy regarding the uranium ingots, I think it's
very important. Because in the Mallinckrodt
discussion, in the Iowa discussion, certainly in the
Nevada test site and Pacific proving ground that issue
of access in the SEC process to classified information
has arisen on a number of occasions.

I have a feeling from what I know that it
may very well be that the Department of Energy at Oak
Ridge or elsewhere has information about -- they may
even have the original records of why those uranium
ingots were being examined. And it could be that the
structural flaw theory is just a theory and may not be
the real and actual reason behind that.

So as -- as future petitioners we don't
have access to that material. We don't have any
people in this room who have Q clearances. And that
puts us on an unequal footing. Your agency, the
board, the Advisory Board on Radiation and Worker

Health, Sanford Cohen & Associates all do have experts
with Q clearances that can get into the vaults at Oak
Ridge and look for that information. And to put us on
a coequal plane we're asking to know about that. And
we have a serious question about that particular
issue. So I think this is excellent to bring this up.
And -- and maybe we have some more input on this.

: It's an interesting point

because one of the documents in that cleanup report
that you guys have access to specifically says
Betatron testing and then it appears the page is
whited out. There's another one in there that says
General Steel Castings and it's blacked out. That'd
be real interesting through the Freedom of Information
Act and of course you guys have the security clearances I'd like to know what Betatron testing really meant. It has the name on it. I'll be glad to provide that because it wasn't -- there's part of the FUSRAP report that wasn't sent to us that is on the Internet like the first one through four sections I think. And that's where some of the letters are that talk about going over to the site and getting permission. And we have the complete set. And that was kind of interesting. You know, you look forward to reading it, then wait a minute, that's whited out and that's blacked out. I'd like to know what the rest of that is. And there's a mention in one site, it says WAPD. Just a Google search, WAPD actually meant a nuclear power plant up in Washington. I believe that's what came up when I did a search on it just on Google. WAPD I think might bring up Hanford or Haniford (phonetic). And I'm just real curious because I didn't think Mallinckrodt was providing any enriched material to go anywhere. And I was really amazed when that WAPD showed up in the cleanup reports for General Steel Castings not with Mallinckrodt. So I intend to do a lot more searching on that one. So I just thought that might be kind of interesting too to find out. Because there's some reports in there that they give names of people and what have you on the thing, but then it looks like it's blanked out. So some help on that would be appreciated too because I think maybe we could all maybe find out something. And maybe there was a reason for it. Maybe there just wasn't anything on that page. But to put a name on a piece of paper and then have nothing else on it didn't, you know, just make a lot of sense.

Betatrons, Mag.

Two things I'd like to mention. One that mentioned about the secrecy. I had an uncle who was a supervisor in metal form. knew him well. When I went to work in this department the first thing my uncle told me was you're going to see things you're not going to be able to talk about, you keep your mouth shut, you don't ask any questions. And sir, I
heard that a lot more than one time throughout the
three years I was employed there.

Another thing I would like to mention was
the unusual. Every great once in a while, sir, we ran
into the unusual. One day I was operating in the new
Betatron, the 25 MEV. We had a three man crew, an
operator, an assistant, and a darkroom man. The
darkroom man was always in the darkroom developing,
and loading, unloading. We had just set up a long
shot, exactly how long I don't remember, it was 40
years ago. But it was hours of running. Probably
into -- an hour and a half into that running the
machine was starting to heat up. At the new Betatron
there was a switch on the console, it was a horizontal
sit-down console. I believe it was -- it was a
capacitor change switch, sir, that when you would
power the machine down while it was running you could
change a capacitor bank, increase the efficiency and
cooling of the -- and running of the machine, power
back up, continue the shot.

It was when I was making this capacitor
change to achieve efficiency with the machine that a
terrific explosion took place. And when I say
explosion it was not a 4th of July firecracker. Dust
flew off the ceiling everywhere. I think I lost about
ten years of my life. It was no laughing matter by
any means, and I'm serious when I say that. My first
impression was render the machine safe, that was our
-- our -- our priority orders, render the machine
safe, go upstairs into the Mag room and shut down the
Mags, call supervision. I don't remember any
radioactivity testing being done after that.
Electricians were called. Supervision was called.
Inspections was made of the machine. The machine was
later brought back on line after inspection. But
don't believe the unusual didn't happen, it did.
Thank you.

Appreciate your comments.
This is again. And
we must have had some type of clearances at General
Steel. I went to the next employer -- of course, I
worked two years for the government prior for that in
the Safety and Health Administration. And then when I
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got to the next employer we got our badges, and I had
a black dot on it. And one of the fellow -- oh, he
was a foreman. He says what are you doing with a
black dot, they -- it's a mistake.
And so I asked a department head that
hired me, and he says oh, no, we didn't bother to
change you from where you come from because that was a
-- a secret clearance and it would cost too much money
at that time to bump it back down to confidential or
whatever needed. So we did have some kind of
clearances, but we were never told about it.
 : Thank you,
 : You know, part of that too
 -- I mean, obviously these guys built the ballistic
Polaris submarine missile launch tube. That's
definitely documented. There's pictures of the
Polaris submarine in some of the company brochures.
And that is clearly recognized as a nuclear weapon. A
Polaris submarine doesn't do anything, it's a missile
launching system.
And I've done a lot of looking in the
good old Google. You start looking for military
weaponry and in particular looking for nuclear weapons
it comes up every time. And I've told the story to
the Federal Radiation Board that there's one guy that

1 definitely affirmed that it was a nuclear weapon. And
2 he was a Navy guy, and his name is John F. Kennedy.
3 And he said it was one of the single most important
4 weapons that were used to solve the Cuban Missile
5 Crisis.
6 And we know their sister plant in
7 Eddystone was involved in building the missile launch
tubes apparently for the Thresher submarine which did
sink which was the first submarine made from HY 80
steel which this plant was recognized as being the
first foundry in the United States of doing. And I
think they mentioned the other day that the place was
like flies with investigators after the Thresher sank.
That plant had nothing to do with it because of the
time line, but apparently the x-rays were at that
plant. And I think I heard they came in and got
those. So this nuclear weapon which is clearly
defined in the law as being pretty important. And
along with the law while we're talking about it, it
clearly says accelerators really makes this plant a
candidate for a lot of different things. So I think
we just -- that secret clearance kind of rings a bell
now. I think we know what they’re talking about.
: I know some people that worked
in the Betatron especially
And they
were told that if you -- if you see it turn red, run.
That’s all they were told, if you see that red, go.
: Red warning lights through the
door.

Speaking of the Navy material and the Navy missile
tubes and the Navy parts, the bulkhead plates,
everything that went for the Polaris submarine we made
there at General Steel. We had a section that we
called gaslight square. And gaslight square was just
a -- a confined section that the Navy parts were given
a final Magnaflux after they cleared Betatron. And it
would be so many Navy inspectors there doing the final
phases of Magnafluxing these missile tubes. And
missile tubes, you could -- there were so many missile
tubes that come through GSI and Navy parts until you
just couldn’t count them all.
But they did have a section called
gaslight square where everybody else was kep out of
that section except the Magnaflux operators in which I
was one that worked on the missile tubes and these
Navy parts out of HY 80 steel and that type of thing
that went toward the missile tubes and bulkhead plates
and whatever that went on the submarines. But he was
right about the -- the missile tubes and the secrecy
of it because this was a confined area and everybody
else was kep out of it. And you couldn’t even touch
one of those castings. Unless you were a certified
Magnaflux operator they wouldn’t let you in the area.
Then the amount of secrecy over it, well,
we didn’t talk too much about it. Even the defects
that we found we didn’t talk too much about it. But
that’s what went on with the missile tube operation
there at GSI.
: Thank you very much.
: again.
This is just going to be a little bit of information
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about the -- the ships we were building parts for.
The -- General Dynamics was a prime contractor.
Electric Boat Division of General Dynamics was
responsible for building the submarine fleet, the
nuclear fleet. And I think -- and might
help me -- we built 30 boats?
: I believe that's a correct
number.
: Or 36 boats maybe. And
we turned around and built 12 for Great Britain if you
remember. We -- we also built parts for the Great
Britain -- Great Britain's nuclear fleet. Each boat
had 20 missile tubes on it. Each missile launcher
0065

consisted of two parts, the lower and the upper part.
So you're talking about 40 pieces times 36 boats,
times 48 boats plus C yokes, valves, bulkhead plates.
: Rudder hubs and yokes.
: Rudder hubs, yokes, a lot
of different parts for those submarines. So that is
just for your information as to what we were doing
down there as far as building parts for these -- for
these boats.
The Thresher incident, when the Thresher
blew up I think it was down 200 feet, and a pinpoint
hole the size of a pencil lead sprung a leak in the C
valve. And the stream of water shot across the
control room into the main control panel, and it just
ripped the boat apart. They estimate about 12 seconds
before it completely imploded or exploded or whatever
it did.
The Bureau of Ships and Navy ships were --
the Nav ships and Bu ships were interested in seeing
the film from -- from that when that happened.
Luckily I think we didn't have any. But we were
inspected. After we cleared the film we were
inspected by General Dynamics or -- or Electric Boat
Division came in and read the film. And then they in
turn turned it over to Bu ships and the Bureau of --
0066

and the Navy ship would come in periodically to review
that film. It was quite an operation, quite
interesting.
: And I guess that metal was
interesting too, HY 80 and then we got a Freedom of
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Information Act did a request back that if we wanted
information on another metal that is mentioned now
with General Steel HY 100, we'd have to go to the
Pentagon in Washington DC. So that is another alloy
that would probably have to be evaluated. Any other
comments?

:: I'm sorry again. And this
is of a lighter thing that occurred there. When that
submarine went down, was it the Trident or --
:: The Thresher.
:: Okay. So anyway, all of a
sudden there was a rain, and they says the basement
became flooded. So they brought the film we already
processed. And we had a machine called a X-Omat, and
we would run it through the X-Omat again and not
develop it. We would run it through the fixer and
washer and try to salvage the film and dry it, you
know. And we done that for -- I think I worked over
three, eight-hours shifts, and we -- plus several of
my coworkers had to do the same thing. But we were
not successful in saving all the film. So there
again, they says well, we done what we could.
Then another incident, they went to
computers and many of -- a few of the people in the
foundry open hearth I guess went ahead and retired.
So they put in computers. All of a sudden I was on
the second shift. And who was the
works manager, president, or something around there --
and he called and I answered the phone in the
Betatron. He says -- he says :: I am trying
to get ahold of somebody at the plant. We want
another tank hull shipped to Aberdeen, Maryland. We
want that -- that new Dodge truck, put it on the
trailer. It was a trailer tractor, a new one and --
just before they shut down. And he says have them
rush it to Aberdeen, Maryland, drive day and night,
put a couple drivers on it. And I says well, I'll get
ahold of somebody. So I got ahold of somebody. They
contacted :: and a government ordnance
inspector by the name :: (phonetic).
And I thought nothing of it. You know, I
grew home that -- after that particular shift. You
know, you were always tired. So low and behold in a
day or two one of the tank hulls was brought back and
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too bad it had a shell going through the nose of it. And I

1 start asking questions, and the people from the
2 foundry says oh, they don't have enough nickel in it,
3 the computer made a misread or something. So that's a
4 little lighter. And we didn't know what to think so
5 we laughed about it.
6 : We'd ask you too just --
7 they put a lot of nickel I guess in those turrets?
8   Yeah.
9    : In the hulls?
10     : Sure.
11      : A lot of nickel?
12      : And the regular foundry
13 people -- I think    here, his dad was --
14 worked in the foundry or something. So anyway, they
15 had men when they were pouring the heat or just before
16 they had a shield with colored glasses -- with colored
17 glasses. And as a result they would say two
18 more nickel and they'd drop in two billets of nickel,
19 and it'd be perfect. But that computer couldn't tell
20 that.
21   : That's kind of informative
22 too because the Los Alamos report which we keep
23 referring to really looks at nickel when it's hit with
24 a Betatron, that's not a good result, I know that
25 isn't. So that would be something that would be worth

0069

1 taking a look at.
2 elaborate what was bad
3 about that.
4    : Yeah. What happens when
5 you -- they mentioned some metals in there. And I
6 have the specifics here so bear with me a little bit.
7 But if we understood correctly in working with a -- a
8 metallurgy expert they would drop in ingots, billets
9 like they would cubes of sugar in coffee to get the
10 right flavor for these 30 alloys.
11 And when a Betatron, according to Los
12 Alamos, hits that kind of metal it changes it. And I
13 might be wrong, but I almost thought nickel went to
14 BE 7 gas. But we can look that up today and see if
15 that's exactly what it does.
16 And it's funny that D -- DTIS website that
17 I mentioned, I guess the Defense Technical Information
System, there's a reference to a tank hull if you go
on there with a search, the advanced search it
actually mentions a specific tank turret by number
from General Steel Castings that apparently came there
or came I guess to Aberdeen -- I think they even
mention Aberdeen -- and flunked the test because of
graininess, what have you. So that might have been
that hole that they're talking about there.

There were actually a couple of those
incidents because another one of the reports said they
seemed to have missed heat treatment which was another
issue.

And while we're talking about nickel maybe
these burners and grinders can help me a little bit.
If you had a hole in a tank turret that you were
working on, what kind of welding rod did you use? Do
you know what the material was?

I was a burner, 

-- I just burned.

So we'll need to talk with
a welder I guess to find out because -- anybody else
know what it is?

Can we explain what BE 7
is.

The what?

BE 7.

Well, the BE 7 obviously is
a gas that's put off. And we were real interested in
whether it's beryllium related.

MR. HINNEFELD: BE 7 is an isotope of
beryllium. It's --

That's what I thought.

MR. HINNEFELD: It's the radioactive

isotope of beryllium.

All right.

It is a radioactive

isotope?

MR. HINNEFELD: Of beryllium, 7 is. But I
think it might be carbon that's the target.

Maybe it -- it -- that's
why I said I'd like to take a look for you. But the
materials they talked about in the Los Alamos thing
were manganese, carbon. And maybe that's why it
caught my eye because their literature says they did
5,000 tons of carbon a month or -- it's some huge
number of carbon.

I -- I

want to ask several questions to our resident
metallurgist if I might.

Oh, my goodness.

: Nickel alloy is a

hardener; is that correct or not correct?

: Yes. It strengthened. We
you have rode on. All of the Port Authority and the
New York City Transit Authority trucks, the motor
trucks, almost all of them were made in Granite City,
and they were a nickel alloy. And it was slightly

stronger than the A27 carbon steel.

And the heat treating
process, was that a homogenization process after?

: No. It was to set the

strength.

: Just to set the strength?

: Yeah.

: Okay. So it didn't

homogenize that nickel or make it --

: No. They normal -- maybe
the -- the terminology was normalized. You heated it
in a furnace to 1,650 then took it out and let it air
cool.

: Uh-huh.

: Pretty -- pretty standard

practice for normalizing.

: There was a lot of nickel
in all of your four way -- four-wheeled trucks that --

: Wait a minute. The court

reporter --

: Let me bring that back for

you.

: On the New York subways
and -- and most of your transit the trucks that they
ride on had to have a lot of nickel alloy placed in

those, and that's for the flexibility and things like
that. I Magnafuxed thousands of four-wheeled trucks
that were used on the New York subway -- subways. And
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so nickel is prevailing in those things. And I guess
that's what it's used for is the flexibility and the
-- then the bending and things like that, the stresses
that these trucks are under.
: I might add for the record
too in the railroad business a -- a truck is actually
the set of wheels that the railroad car sat on rather
than a vehicle truck. And this plant definitely made
railroad cars which are mentioned in here for the
military in order to carry that heavy -- you're going
to haul a tank, you can't haul it on a little 40-foot
tractor trailer. They did -- they actually built
heavy duty railroad cars for the Army. They had a
contract with the Army for that if I'm correct on
that.
Correct.
: And those trucks that
you're talking about if I understand correctly did
they not test those with a cobalt source in 6
Building?
: Cobalt 60. Yeah.
: And that was the little
building we talked about with no roof yesterday,
concrete blocks around it.
: He tells me he
could jump up and down and look over the roof. I
don't know if we can -- he was either a heck of a
basketball player. But what do you think the roof --
or the walls were,
? Were they eight feet, ten feet?
: About ten feet.
: About ten feet. So that's
where our issue with sky shine down on 6 Building
really comes into play too because -- did anybody work
close to that building or that little area there where
the cobalt was?
: I did a lot of work there.
: Okay. Did -- were there
workers around that building, you know, normal
workers?
: Absolutely. The only
thing they had that would separate the workers from
that was probably just a -- a makeshift wall or
whatever, sometimes a concrete wall.
Okay. So that adds I think to our looking at the Betatron by itself. One or two little buildings really doesn't do it justice at all.

The 6 Building with all the open walls and everything was really of interest. Any other comments? Yeah.

They -- while we're talking about other sources I think we covered them yesterday a little bit, but there was mention of a tin shield going around a cobalt source or iridium source in 10 Building. Was that correct, sir?

Well, it wasn't only -- almost all industrial radiographers learned to set up a perimeter with wire or string. And -- and in -- in the end of 10 Building St. Louis Testing came and used the iridium source because we didn't have one. And these -- these tin shields that you're talking about had nothing to do with -- it just showed where the perimeter was. And the perimeter usually -- from St. Louis Testing hung a radioactive sign on it. And they set it up where it should have been, based on the standards of those days, safe as long as you didn't go past the perimeter wire or string, whatever.

Does that answer your question?

Yes, sir. Any other comments? I just wonder if it'd be appropriate, do we need a five minute break right now? Does anybody need to use the facilities?

MR. HINNEFELD: Well, if there are no other comments, we could probably wrap up I suppose.

Any other comments from the group?

Yeah. I guess I do have some. So I guess I would summarize by saying I hope we have enriched your understanding of the operations of the plant, of the multiple radiation sources, of the dedication of these workers. And we hope very much that you will use this information to do a more accurate dose reconstruction from these people. And I guess we've tried to also heighten your awareness that we believe that it will exceedingly difficult if not impossible to accurately reconstruct the dose for these people in a timely fashion.

And I can attest to you that the entire
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16 group that's working on these SECs will be pushing
17 these two aspects, accuracy and timeliness. And you
18 know, we certainly appreciate you're coming hearing
19 this testimony. We certainly hope that in the next
20 few weeks we will get some kind of progress report
21 from the activities at Battelle. And I think with
22 that I'll close the GSI session and turn it back to
23 John who may have some other comments.
24 Just one quick note if I
25 could another Betatron operator has joined us, and --
0077
1 . And are there any -- I know these guys
2 -- some of these guys, they haven't seen one another
3 for 40 years. So if there were any comments,
4 , you wanted to make. We certainly
5 appreciate you folks joining us. I don't mean to
6 catch you off guard there. He just walked in.
7 . I really don't have --
8 don't have a comment so to speak. But I did work in
9 the Betatron and Magnaflux and worked with a lot of
10 guys I've seen their names. And made me
11 aware of this. And I apologize for being late, but I
12 had some business. I had no choice but to come in
13 when I did. But that's about it.
14 : We really appreciate that.
15 And we know you guys haven't seen one another for a
16 long time, and we're definitely going to try to pick
17 your brain on operations at the plant. So anything
18 you can share with us will really be appreciated, and
19 you know, we'll talk a little later.
20 You people have any
21 questions that we could maybe answer?
22
23 : Yes.
24 . Can you ask -- ask
25 if he wore a badge and if he can comment
0078
1 on radiation.
2 : Yeah. did you
3 wear a radiation badge when you worked in the
4 Betatron?
5 : Yes. I did.
6 : Did -- the answer was yes.
7 Can I ask did you ever get reports or what have you of
8 the results from those badges?
checking those badges at all. But we were given a badge. But I don't recall any quality control or anyone doing any readings on them.

: Thank you very much.

: You know a big question I --

I know a lot of guys that was at meetings that I attended earlier and they said you're wasted your time. You can see the age of everybody here. They said the government's waiting for us to all die off and then their problem disappears, they bury it just like they buried the Betatron. And I know a lot of guys out there that don't attend these meetings anymore because they think they're just wasting their time. And they kind of ask me -- they'll say well, what did you find out. The same old thing, you know, it's a stall, it's a -- you know, we -- we come up with more information and everything else but you never hear anything.

I call them up and give them my number on reconstruction, you're 758 out. I said well, when's this going to -- when am I going to get a result. Maybe within a year. Well, the next guy I talk to, maybe within two years. Well, I've done had cancer. I just had a heart valve replaced. I'm on that road going down the -- the other side of the hill, and a lot of these guys are older than me and in worse shape.

And so, you know, I just kind of wonder what are we waiting on, what -- what's the big deal? You know, what's taking so long? And it's been going on for quite a while. And are they waiting for us to die.

MR. HINNEFELD: Well, I can assure you the government doesn't -- is not waiting for the claimant population to die. There's no part of the -- of the program -- of this process that involves that. I understand that it is a very lengthy process and it has taken far too long and we understand that.

We ain't got that much longer.

MR. HINNEFELD: And -- and we don't -- and we feel bad about that. The only reason I can give for the length of the process is that there was just a
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2 huge amount of work created by this law. This law,
3 you know, in the way it's structured is -- it requires
4 a lot of work on -- by several federal agencies,
5 three -- three different departments. The Department
6 of Health and Human Services, that's the one we're
7 from, the Department of Labor and the Department of
8 Energy have to cooperate and all have quite a lot of
9 work to do to administer this program.
10 And so because of that large amount of
11 work that was generated when the law passed it has not
12 been possible to provide timely responses to that
13 large number of claimants who came in in the early
14 days. And it just hasn't been possible to do it.
15 : Well, when they generated these
16 laws they also generated some hope.
17 MR. HINNEFELD: Yes. I understand that.
18 I understand that and --
19 ... For all of us, you know, they
20 generated some hope that you might give something to
21 your kids or something.
22 MR. HINNEFELD: I understand that, and I
23 understand that the -- the length of time it's taken.
24 I can't defend the length of the time it's taken. I
25 can only explain that it has been so much work to
0081
1 accomplish in the amount of time, and that is why its
2 taken so long.
3 And I honestly believe at this point we're
4 making far better progress. I know we're making far
5 better progress in terms of completing dose
6 reconstructions and completing research than we were
7 two years ago. And so as we've -- as we've acquired,
8 you know, the contractors we needed and built the
9 systems we needed in order to accomplish this work
10 we're moving along at a better pace. And all I can do
11 is -- is say that it makes us all feel bad that its
12 taken this long. I'm sorry, but I don't know how we
13 could have done it. Given the way the law's
14 structured I don't know how we could have done it
15 quicker. I just don't know how.
16 you have a
17 comment?
18 ... Well, I appreciate those
19 sentiments, but I -- I guess I've got to say as the
20 final word I have here is that this far into the
process with the recent acknowledgement by Larry
Elliott that the four dose reconstructions that have
been done for GSI have to be reopened and reexamined
then, you know, the fact still stands today that we
have zero acknowledged completed dose reconstructions
0082
for General Steel Industry workers.
And I -- I think I have to sum up my
strongly growing feeling that there has been an
inordinate, unfair, unequal, unjust amount of
attention, effort, work to the larger DOE sites. And
although you may say well, our rationale was we did
that because there were more claimants and so forth.
For these individual people as far as I'm concerned if
I were a claimant, I would want to my claim to be
considered coequally with everybody in the pool as far
as possible. And I really do think that there has
been a planned and acknowledged and -- and amplified
in many comments by the Radiation Board consideration
first of the large DOE sites and much less attention
paid to the, quote, smaller AWE sites.
And so -- so based on that if not a single
dose reconstruction has been completed for this site,
that's why we're going to demand to be honest with you
to the extent that we can with workers, citizens,
advocates, and the Illinois congressional delegation
that we receive some kind of information about what's
going on at Battelle very, very quickly. And I'm
talking about within a matter of a week or two and not
later. So I guess that's my closing comment.
Okay. We thank everybody
0083
for coming and we certainly thank you for your time.
MR. HINNEFELD: Thank you all for coming.
(Whereupon, the worker outreach meeting
was concluded.)
CERTIFICATE PAGE

I, Court Reporter, do hereby certify that this GSI Worker Outreach Meeting was transcribed by me to the best of my ability.

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

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 11th day of September, 2006.

[Court Reporter]