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VIDEOTAPED
DOW WORKER OUTREACH MEETING

August 22, 2006

Collinsville Holiday Inn
1000 Eastport Plaza Drive
Collinsville, Illinois 62234

Court Reporter

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P A R T I C I P A N T S

APPEARING TELEPHONICALLY:

NIOSH Panel Members

Mr. Stuart L. Hinnefeld, CHP, Technical Program Manager, Office of Compensation Analysis and Support

Mr. David E. Allen, CHP, Dose Reconstruction Team Leader, Office of Compensation Analysis and Support

Ms. Laurie Ishak, SEC Petition Counselor

Mr. Mark Lewis, Senior Outreach Specialist, Advanced Technologies and Laboratories International, Incorporated

Dow/Phelps-Dodge/Conalco/Spectrulite Employees

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2 IT IS STIPULATED AND AGREED by and between
3 SimmonsCooper, LLC and Pohlman Reporting Company that
4 the August 22, 2006 Dow Worker Outreach Meeting
5 Testimony will be transcribed to the best of their
6 ability by a Court Reporter.
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10 MR. HINNEFELD: Good afternoon, everybody.
11 Good afternoon, everybody. Thank you for joining us
12 today. My name is Stu Hinnefeld. I work for the
13 National Institution for Occupational Safety and
14 Health, the Office of Compensation Analysis and
15 Support. Our office within NIOSH was created in order
16 to fulfill the responsibilities that NIOSH has under
17 this -- this law, the Energy Employees Occupational
18 Illness Compensation Program. And we're here today to
19 try to obtain as much information as we can from you
20 the workers. I think we're focusing on the Dow
21 facility this afternoon, workers who there who can
22 help describe to you the work that you did, the
23 conditions that you worked under, and particularly
24 with respect to radioactive materials that were
25 brought there we know from the Mallinckrodt site and
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1 whatever else may have been brought there so that we
2 can understand the nature of the work and help us to
3 -- in our -- in our -- fulfill our responsibility of
4 attempting to reconstruct radiation doses received
5 there.
6 I want to introduce my colleagues very

quickly. Dave Allen to my immediate right is a -- is the dose reconstruction team leader in our office of Compensation Analysis and Support. Dave and I have the same occupational background. We're both health physicists, which means we work in radiation protection and radiation dosimetry and things like that.

Laurie Ishak on other side of Dave is a special exposure cohort petition counselor. Her job is to assist people who want to submit a petition for special exposure cohort status and to make sure that they can prepare petition available and it has the best chance of success that it can have.

And on my left is Mark Lewis who works for ATL International. He is a contractor who works for us. You know, we've hired this company. And Mark is -- has been very instrumental around the country in setting up worker outreach meetings like this. He's here today to try to increase his network of -- of

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friends and associates and contacts around the -- around the system so that -- in order to stay plugged into this as we try to make sure we obtain as much information we can from worker groups like yourselves around the country.

And I want to say again thank you all for coming and joining us today. We're interested in hearing what you can tell us about the work at Dow. And I know that I think has some introductory remarks he'd like to make as well.

So thank you very much, Stuart, and we again appreciate you all being willing to hear our story today. The first presentation for this Dow meeting is I'm very pleased that

from the has -- is joining us by telephone. He was unable to make the meeting today, but his special relationship to this -- to this group is that -- that has examined some of the workers at Dow who have some sort of lung disease, chronic lung disease who are nonsmokers and -- with the possibility of their exposure to thorium and/or beryllium at the plant.

I've asked him to please call in and tell us his thoughts about what his examinations have shown so far, lab tests and so forth and his general

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comments about the possible effects of beryllium and thorium and the dangers they expose to workers. So I think he's on the phone. I'm going to see if the speaker phone -- let's see how we do -- can you hear me?

Yes. Perfectly. Can you hear me?

Yes. It's perfect. I'm going to turn off my microphone. You're -- the phone is right near the speaker. So you could just talk, and I think we'll be able to hear you and record you very well. And thank you for coming.

Thank you guys very much. I'm sorry I couldn't be there and I -- I don't have much to offer. I've been really at the sidelines of this -- this issue with trying to assist workers and their families as regards evaluating the possibility for occupational lung diseases at the -- at these two facilities in Illinois.

I've been working recently with a group of workers in Ames, Iowa who had been also processing thorium in the 1940s and '50s and had seen a pattern of some of these workers of pneumoconiosis that did not look typical of beryllium lung disease which certainly appears to be occurring in that Ames work

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force at an increased rate that I thought might be attributable to thorium and/or in fact thoron based on -- on some of the medical literature.

Working with one of the union representatives from the Dow site we were able to identify ten living workers with symptomatic lung disease and two survivors of men who recently died with the diagnosis of idiopathic pulmonary fibrosis from the site. I have to tell you I have not completely evaluated the medical histories of -- of each of these workers as yet. I'm in the process of doing this. But what I can tell you is that -- that we have seen three nonsmokers with pulmonary fibrosis from Dow that does not look typical of beryllium lung disease.

And taking the histories of these workers one of the things that -- that strikes me is the -- the mass of thorium to which they were exposed and the

potential exposures. They described on a regular basis handling hundred pound barrels of thorium which they would smelt, alloy, and be exposed to in what appear to be massive concentrations during periods of episodic fire so that it was described to us that that -- the combination -- possibly the combination of magnesium and thorium. I'm not sure. But the

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combination of these metals at some times generated extremely dusty smokey environments and that there were 11, four-foot fans mounted in the -- in the facility to try to improve ventilation. But they stated that that smoke was so thick that often you couldn't see from one side of the plant to other.

So that -- that strikes me as a potential for a very high exposure to fumes of thorium and very possibly -- and I -- I don't have the health physics data to -- to back this up -- but very possibly from what we've seen at Ames fairly high concentration of thoron gas.

And I have nothing further to say in terms of, you know, how the -- the x-ray equipment which we know was -- was another potential source, how that may have affected radiation exposures nor the quantities of uranium. So all I can try to suggest at this time is that there does appear to be a pattern of another source, thorium and thoron for which there may be some -- some clinical suspicion or epidemiologic suspicion based on nonsmokers with fibrotic lung disease. And that it does not look like asbestos or beryllium in this group.

I -- I hope that that's just adds to the -- you know, the sense of something going on in this

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facility. Certainly the worker history suggests a fairly -- a fairly dirty workplace, one in which fires occurred, smoke was -- was a significant issue and respiratory hazards were certainly present. And were these respiratory hazards to ionizing radiation sources as I believe they were, that that may be a consideration for you in your -- your reviews.

thank you very much for joining us. I think that testimony and input from yourself as an occupational physician will be extremely valuable. And I will present soon some

information to our visitors that amplifies what you said, that there was a June, 2005 survey of the residual thorium materials, not just dust, but materials throughout the Dow plant. I'm going to show that data in just a minute. So thank you very much for joining us, and I'll see you soon down the road.

Thank you guys very much.

All right. Bye-bye. Thank you. All right. Okay. So welcome to all our visitors. We have a spectacular turnout this afternoon, and I'm sure we're going to hear some very good input about the Dow site. The first thing I just wanted to point out to our visitors again -- you saw this slide yesterday, but I've drawn an arrow to where

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the Dow Chemical Company is located in relation to the three other steel companies that were right in that same region. And you can see the Dow plant is basically right across -- the railroad tracks is all that separates it from General Steel right below it. Then at this bottom is the American Steel plant and off to the left is the Granite City Steel plant.

There has been a -- two studies in 2005, one in March, one in June by the Pangea Group located in St. Louis. The one in March had to do with a radiological survey of the entire Dow plant. And a decommissioning plan study was published in June of 2005. And this is their site facility map which is actually extremely useful because it shows the layout of the plant buildings and also the main areas that you will hear testimony about this afternoon which are extrusion in Building 6. I -- I apologize. I still don't have a pointer today. It's not that I'm cheap, I'm just not very well organized.

But you can see the extrusion plant is in the middle to the left up there, Building 6. The castings area, Building 7 is up at the top sort of in the center. You can see that. I will note that outside of the Building Number 7 there was a 40-acre site which we believe may actually still be owned by

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Dow Chemical rather than the -- the successor agencies where very large amounts of magnesium thorium sludge were stored both underground and on top of the ground. And so -- so that's sometimes called the castings area

near Building 7.

And then the other very important part of the plant was the rolling mill which you can see down at the bottom in Building Number 5. Also noted in the Pangea reports were the nondestructive testing room which was kind of interesting because we've gotten some sort of conflicting testimony about what sort of industrial radiography was done at Dow. We know there was I think a sonics units and possibly a small Betatron unit. Maybe [redacted] can tell us about what he knows about that. We're -- we're not sure about all of the equipment that was in the nondestructive testing room, but Pangea noted it was there and whatever was in there there was some contamination -- radioactive contamination above the Illinois permitted limits.

And then there was a dross room inside where some of the sludge was stored in addition to that that was just stored outside. And that -- that dross room was fairly heavily contaminated.

I just wanted to mention the main sources

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of exposure at -- at this site. And at the top there -- there have been a succession of owners of this site. We -- we know that it was owned by Standard Spring Steel in -- during World War II. At the end of the war that property which was mainly geared up to produce magnesium reverted to the government. And in 1951 the government gave a quit -- quit claim deed, and the property then was acquired by Dow Chemical who operated it until 1973 when Consolidated Aluminum Company or Conalco did a lease purchase agreement and finally bought the property from Dow. And then in 1986 the Spectrulite Consortium, Inc., or SCI bought the plant and has owned it since then. And that's the succession.

So the main sources that we know over this long period of time from 1951 to the present include uranium 238 from Mallinckrodt under an AEC contract. And officially -- and you'll have to compare this to what you hear from the workers -- Dow did experimental, you know, kind of research and development work in the extrusion presses. They had a number of extrusion presses, a very large operation there. But several of those presses were used to

extrude aluminum. And then they also sent some bars that needed to be heated and straightened. And the

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period of time that's officially covered is 1957 to '60. You'll hear some testimony from the workers today that indicates that possibly the uranium was processed later, as -- as late as 1963, better data for '61, and some for '62.

We also know that thorium was licensed with a succession of licenses from the NRC and the Illinois Environmental Management Agency from 1956 to the present time. I'll -- I'll show you a little bit more data about that. And we also know that this was a site with large amounts of beryllium processed from the 1950s to the present used in multiple alloys. And we believe that this was very extensive and cannot understand why the Department of Energy missed this as a beryllium vendor site. And we are -- are making efforts to have that oversight addressed.

Now, at this site as at the General Steel site there was -- we believe there were even less high percentage of workers who wore film badges at all. There were a few only up until 1986. And it sounds like the -- the badges were worn very intermittently during that period and not as a regular thing. After the -- and anyway, we -- we think that after 1986 a higher percentage of workers actually carried the badges. But there is -- according to NIOSH, Landauer,

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and the Department of Energy at the Health and Safety Lab there is no available personal monitoring data for anybody at this site any time.

The workers here will tell you -- and I hope they will amplify this -- that they have severe doubts that the badges they wore were actually read and analyzed. I don't believe anybody has come forward has told us that they have received any sort of individual dosimetry reports from the Atomic Energy Commission or anybody. And some of the workers will tell you that they saw badges put into buckets that were discarded.

Dow was a major Defense Department contractor and had the AEC contract with Mallinckrodt and perhaps also with Rocky Flats. So this slide simply goes through those associations of this site.

We know that from the quit claim -- claim deed document, which we got by a detailed title search, that from 1951 to 1959 this site was on the National Industrial Reserve under the National Security Clause.

And we're not sure exactly what the ramifications of that are except that what it meant was that the government had a 90-day hold or a reserve, if you would, that -- that on 90 days notice they could come in, basically take over the use of

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certain equipment to do certain government related work. The Dow work for private companies was supposed to cease during that time. And then when that job was through the government would release it back to Dow. And that's basically what we know about that relationship right now. We're interested in knowing more.

We know that as early as 1962 Dow developed LocAlloy and used that alloy which was a beryllium aluminum alloy to make the SR-71 spy plane. We know that the Air Force and NASA were major contractors, and the Air Force in particular owned a lot of the equipment at the -- at the plant. And -- and that was in the 1970s. We also know and as you all probably know Dow Chemical was the prime contractor at the Rocky Flats AEC Federal Center from 1962 when it was found up until -- up through 1975 when Rockwell International took over.

And you will hear a lot of information today that the Dow Madison plant and Rocky Flats had a very intimate relationship during the '60s and '70s where -- where numerous batches of thorium were sent from Rocky Flats to be -- undergo metallurgic operations and then were returned to Rocky Flats and often went through several iterative cycles until

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things were gotten right.

We also know that personnel came from Rocky Flats to Dow and vice versa; that people at Dow worked at Rocky Flats and actually considered themselves part of the same company. And these may have been people who worked for Dow who were contractors at Rocky Flats. We don't know about all those relationships, but it certainly sounds like there was an intimate relationship at that level

between some of the thorium and the AEC and AEC nuclear weapons facilities. So -- so we're highly interested in those contracts.

You will also hear about some special runs that Dow did of Martin-Marietta thorium in the 1990s.

And we have a document that we will forward to you that is quite interesting actually where McDonnell-Douglas had thorium plates that they stored at a facility called the Tyson Valley Storage Center which was an ammunition depot during World War II and they built a number of concrete bunkers. And we know that in one of those bunkers, Number 35 to be specific that McDonnell-Douglas encouraged or -- or negotiated a deal where Washington University where I taught for 31 years actually agreed to store thorium plates in the Tyson Valley bunker Number 35.

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After they had done that for about 25 years the Nuclear Regulatory Commission was interested in reviewing lots of their old licenses to see that -- that the license terms were being complied with. And they found that whereas Washington University was doing a great job on most their licenses, the thorium license was actually sort of expired and -- and really didn't cover -- or their present licenses didn't cover the thorium storage.

So they wrote a letter which we have to the Chancellor at Washington University, Chancellor who was the brother of a former senator from Missouri -- who is the brother of the former senator from Missouri and told the Chancellor that he needed to remove the thorium and do something with it. McDonnell-Douglas then took it back. And what fascinates me is what they did with it, which was they gave it to the Spectrulite Corporation in 1993.

As you will see as this story unfolds today the current owner at Spectrulite claims that there was no processing of thorium done during the '90s or in the -- and in the ensuing decade that we're in right now. So you know, but we certainly know that Spectrulite accepted that -- I mean, that thorium at that period.

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We do know a pretty detailed history of the thorium licenses, and you can see that on the

board. All the companies that owned the place have had a -- had continuous licenses that have been renewed. And Dow Chemical had their first license, C2782 in 1958. And that was for thorium compounds without any limitations. Dow Chemical then got another site wide license that applied to all of their plants in Michigan, Texas, and Illinois. That was AEC STB 527, and that took -- took in effect in 1962. Then the successor to Dow at the Madison site, Conalco had Nuclear Regulatory Commission license STB 1097 which was issued August, 1982.

Spectrulite got its first license, STB 1488 in October of 1986. And finally that license was then again renewed by Spectrulite, this time now under the Illinois Division of Nuclear Safety or Department of Nuclear Safety in those days, in the first days which Illinois is an agreement state with the NRC so they could issue such licenses. And that number Illinois-01750-01 was issued 9/9/93.

We also know that in 2002 Spectrulite filed its intention to terminate that thorium license. That's still ongoing. Spectrulite has been through a bankruptcy set of proceedings. And we know that today

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in 2006 there is currently at the plant a -- a cleanup operation that in -- involves pouring concrete in the pot room where a lot of the thorium contamination is located.

I called this environmental -- you know, the Dow remediation history. We're talking about environmental remediation now. And we know that a company named Environmental Restoration Group based in Albuquerque, New Mexico removed a thousand railroad cars of magnesium thorium sludge to an off-site location from this 40-acre site near Building 7 which I've shown you near the castings department in 1993. At the same time they removed I think another 30 railroad cars full of PCB laden soil and debris.

We also will hear from the workers about I call them private subcontractor cleanups by Spectrulite which apparently were not part of the state regulatory framework that's reported by workers in 1998, 2000, 2003, 2006. And these are important because they were done under practices and conditions that at least in my experience are not standard best

practices and certainly exposed the workers to high levels of radioactivity from the thorium they were working with. They were forced to -- to shovel this sludge onto open bed trucks not protected in any way.

And throughout all of these cleanups even today you will hear a lot of evidence that the workers were not properly informed at all about the risk that they were being exposed to.

We also know that there was an official cleanup by the Army Corps of Engineers in 2000 under the FUSRAP Program but that was restricted to uranium dust in Building Number 6. Thorium was found at that time and documented, some of it co-located with the uranium. And the claim by the Army Corps of Engineers at that time was that the thorium had nothing to do with AEC activities and therefore it was not remediated.

Now, I've told you in the previous slide of the very intimate relationship of the thorium -- some of the thorium at Dow to the Rocky Flats nuclear weapons site. So we -- we believe that that statement that the thorium at -- at Dow had nothing to do with AEC operations needs to be clarified.

I will also comment that there is a current ongoing cleanup. We've contacted Spectrulite. We've contacted -- we've contacted the Illinois Environmental Management Association, and basically they -- they have not been forthcoming with any information other than that cleanup is taking place.

And that's -- that's an active area of ongoing investigation.

In March of 2005, as I've said, the Pangea Group issued a comprehensive radiological survey report on the Spectrulite site. There had been a previous 2003 radiologic scoping report, and both of those were necessitated by the fact that they -- that Spectrulite was trying to terminate their thorium license, and -- and decommissioning was part of that process where the site has to be cleaned up to unrestricted use conditions in order to terminate the license.

The radiologic survey found elevated thorium 230 and 232 activity above background and

above Illinois state guidelines for decommissioning radioactivity material license. And the contamination was found throughout the plant buildings on floors, in drains, on walls and on rafters, and in soil outside the buildings. And this study will confirm testimony from numerous Dow workers that the plant was heavily contaminated with thorium. The beryllium was not mentioned in the March, 2005 report.

And then that study was followed by a decommissioning plan for the Spectrulite Consortium Madison, Illinois facility that was published June 20th, 2005 as you can see prepared by the Pangea Group in St. Louis for Spectrulite.

I found this the most interesting part of that report, Table 4.1 has a source material inventory. So this is basically a contemporary listing of all the thorium materials in the various buildings throughout Spectrulite. And you can see that there are large numbers of them involving Buildings 1, 4, 5, 6. The Building 6 machine shop you can see listings of bar stock and various types of round stock and so forth, many kinds of physical thorium metal products. Table is continued, and this table is on Pages 14 and 15 of that 39-page report. There was a lot of thorium in Building 7, 8, the 9 machine shop, and in Building 10. So you'll hear from the workers today about why the thorium was there. We have history of -- of thorium being left around just in corners and in buildings for years.

Dow workers were harmed. I think we -- you will hear and I hope you'll particularly be impressed not only with input, which is a direct evidence of -- of harm from the thorium, that there were many other evidences that the workers were harmed at this site.

There was basically an absent radiation safety program. Geiger counters were used however in the plant but primarily to segregate radioactive from other sludge and in an attempt to reclaim the metals from that sludge. Also, another use for the Geiger counter was certain special projects where the contractor that was interested in the product was also interested in cleaning up the sludge and taking it

back to their home base with them. And the Geiger counter was used in those situations too; for instance, to separate the radioactive material that came off the extrusion presses.

As far as I'm aware no workers were adequately informed of the uranium or the thorium risk or the beryllium risk. They -- they simply weren't told about them.

We have no evidence that the beryllium has ever been cleaned up from the -- any of those sites at any time in its history. And so we therefore assume that there's probably heavy beryllium contamination throughout the Spectrulite site.

I've termed the badges that were worn up until 1986, the film badges as cosmetic. And I've said that possibly there were ceremonial badges after that. And I don't mean that facetiously, but there are stories where when inspectors would come into the

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plant badges would be issued a few days before and discontinued wearing soon there after the inspectors left. And again, there's no dosimetry data for this site.

There's a rich history of accidents, injuries, deaths not necessarily related to radiation but just by the machinery in the factory. There were impromptu -- by impromptu I mean week and two-week episodes where contractors such a Martin-Marietta would bring in special thorium, take over the use of the extrusion press, take all the product and the waste away with them, and return to their home base.

As said you will hear a -- a rich history today and tomorrow -- or today and this evening about massive fumes, smoke, a lot of it emanating from the pot room and castings and so severe in the other buildings that often the -- the pot room would have to be shut down for a period it was so bad.

And then you will hear other testimony that records and we -- we think important records at the plant were shredded, missing, classified, or I underline withheld because we do think there are records in Midland, Michigan at Dow headquarters and also at Spectrulite that we are attempting to get access to but so far have been denied access to.

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I'm sorry. And I think that may be -- yeah. I apologize. Yeah. I think that's it. So if you will -- would you do the honors and just -- I think now we'll open it up to the workers and let people talk and --

You want to have everyone say who they are or --

Yes. It's very important for the court reporter if you all would say your name, and the first time you introduce yourself please spell it so she can get it down. And -- but please identify yourself each time you come to the microphone. And you're welcome to speak many times. So that's all right.

Well, I'll start it off. I worked down there from 1961 to in -- mainly in the rolling mill and in maintenance.

At our previous affidavit meetings we introduced ourselves and -- first and then said what we had to say. Today we're going to have a little bit different format. I'm not going to be asking the questions today. and I will be passing the microphone around. So what we want you

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all to do is to take the mike and just tell your story, the things that you think are most important for Stuart and Dave and Laurie and Mark to hear from you directly about what you know from your own experience at the plant or things that you've heard. As long as you identify that they were things that you had overheard from others, that would be perfect.

So do you want to start us off and just make your first comments. And like I say, you can come back later on if you -- if you miss something you wanted to say.

Well, I started in casting for a couple weeks, but then I went to the rolling mill. And I worked almost all the jobs except for the rollers in the rolling mill. And then most of the time I was in the shipping part of the mill. When I got bumped out of there I'd go on the shear crew which would cut up the mag and that. And all the slabs that went in the mill would -- would run through 1 Mill in

what we called plate. It was heavy metal, you know, like one inch and above. That would get cut up. And then they would a Roto Clone there that would -- we'd run it through there and they'd brush it to get the dirt and that off of it.

And then on the sheet part of it is thin

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metal I'd say from a quarter inch on down, thinner. And then they had a -- on the Roto Clone they had a coil section where they ran the coils through there and get the dirt off of it. And then they did that until the explosion of it. Then they would take and cut the sheets up to -- most of it was like 48-by-144 or whatever size they needed. And when it came off of 2 Mill they would send it -- from there they'd send it either from 4 Mill or 7 Mill which was the hand sheets like. And they'd -- they'd make somewhere around maybe 80 to 125 passes. And about every time they'd take three or four passes they'd have to send it to hand salvage to either sand out the gouges that was in there or sand out what dirt got in from the coolant and that. And the dust would be, you know, a quarter inch all the way around the hand salvage area. And they'd sand -- sand it down, then they'd send it back and repeat the process over and over. And they had --

Tell about -- now, this description would apply to thorium; is that correct --

It --

-- and -- and other metals?

Mag part. All mag metals. Not -- not all mag metals, just thorium metal because AZ 31 and PE wouldn't go through the hand salvage as

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much. It was just the thorium HK and HM. And then they'd repeat that process all over again.

And then when they got it down to gauge some of it would go all the way down to eight-thousandths. And when they got finished there they'd send it to the stencil line which would put the lot numbers on it, the alloy, the government specs and that. And then they'd oil it, ship it -- you know, pack it for shipping, and ship it out.

And I guess I was in crate builder which I'd block the trucks and that for about nine years. And I'd see a lot of it go out through different

places. I've got a -- some write-up here I'd like to hand out to yous and let you -- you know, you can look at it later on so you'll know what -- my writing isn't too good, so bear with me there.

MR. HINNEFELD: Okay.

Start here and pass it around.

That'd be good. Why don't we do that. That'd be good. And -- and I'll ask anybody -- NIOSH would be particularly interested in your interaction with the uranium extrusion work and the rod straightening as well as the thorium and the beryllium.

My name is

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That's spelled You people thought you got rid of me this morning, didn't you? Like a bad penny, I keep showing up. I want to talk a little bit about 1992 or '3 Martin-Marietta came into our plant and awarded us with a prime contractor award, prime supplier award for the work we were doing with an aluminum alloy, aluminum thorium alloy that were -- that was being made into the skeletal structure of the outboard fuel tank on the space shuttle. Their group included a female astronaut who was slated to go into space in the spring -- the next spring. She did. I have her autograph and a picture at home and I failed to bring it along with me. I should have. But this was a special alloy that we -- that we made. And -- and I'm sure it contained thorium -- aluminum and thorium. I just wanted to put that into the record right now and I'll pass the mike.

Before we -- there is --

there is a worker who's not feeling well. And John is going to pass the microphone to him so we can hear and then let him go home.

My name is It's

I worked at the plant from '93 to

Two months ago I was diagnosed with multiple myeloma, and basically the only thing I really wanted to say

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was I didn't even realize that the place was contaminated. I knew that they worked on these projects earlier, but my understanding was that all of that was cleaned up at that time, the time period that I was working there anyway. So that's pretty much all

I have to say about it. I worked in the pot room. I was a -- I was a mag melter when I was hired. I worked in extrusion for a short time as a light press -- or a helper. And in the end of -- end of my time there I was a casting foreman in the aluminum unit of the mag floor. And during that time I was involved in -- in the middle of two explosions. I think that's been pointed out about the dust being knocked off the rafters and anything. And I -- that's pretty I much all I -- all I know. Thank you.

Thank you. Appreciate your comments. Go from the front back.

My name -- my name is I worked down at the plant from '53 -- February of '53 until January, I worked in the casting department about 99 percent of my time. And I worked in the pot room, worked on the aluminum unit and drove a lift truck. And -- and we -- we worked with thorium in the pot room melting it in on different alloys. And on some of them days when

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it's kind of rainy and cloudy and damp outside that smoke would get so bad it really covered up the whole place when they were charging the metal there, covered up the pot room and covered up -- it came out into the warehouse where the people was working.

Also, one of my jobs was to load this dross and sludge into boxcars. And we -- I don't know how many boxcars we loaded, but we did that for quite some time. And then for a while there when they was loading trucks outside on the aluminum unit and -- with the dross and that.

I also got -- have prostate surgery and removed my prostate, has carcinoid tumors. He took three foot of my small intestines out and part of my colon out. That's some of my sickness. Thank you.

I started in 1954 and -- and retired in And I spent all and a half years in the casting department in the pot room as a metal caster, crew leader, and -- and melter. And I was -- I was there when they first ran the thorium. And I can remember thorium coming in, it was made in England. And it -- opened the barrel and fumes came out of the barrel. And I asked the foreman -- I said won't this

hurt us, it's marked radiation, danger. And he said
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no, you've got to use this for a thousand years, it won't bother you. So then I worked with it every time they ran it.

And while he's speaking about the dust, you just -- you couldn't hardly see. And surprising I'm 78 years old and I lived through that whole time in that casting department in the pot room. And I can verify that it was so dusty you couldn't touch the man next to you.

So after I retired in what they did after that I have no idea. But I know that it was very hazardous. And we -- our clothing -- I have a picture of me casting on the slab unit. And I -- evidently we had a -- a hard hat and -- and shield. But up until the time Dow Chemical was there all we had was a sailor cap with a shield on it cut from the back. And evidently when the hard hat and the shield came in it must have come in under -- under Consolidated Aluminum because I don't remember them at that plant.

I can also remember that we never had any badges. Our clothes were flame treated. They would just -- it wouldn't flame -- flame up, but they'll -- they'd get burned through. Because all of us got burned several times in that amount of time we were in
0034
there. So up until the time Spectrulite came in I can't never remember wearing badges. And when they came in we started to wear -- well, up in -- I'm a little ahead of myself.

Before that we used to carry our clothes out and take them in the locker room where the warehouse people that wasn't exposed to it and throw all of our clothes in the same hamper that they used. And then later on when Spectrulite came in they started to give us a separate box in the pot room where we could throw our clothes in there, and they kept them separate from the warehouse. Up in that time they didn't keep our clothes separated. And we are wore badges and never told us. At the end of the day we'd turn our badges in. That was the end of it, we never heard anything thereafter.

My name's

I worked from 1960 to mainly in the casting department for and a half years. And them and a half years it was mostly in the pot room and the aluminum unit. And we did handle thorium. Beryllium almost every day. And the beryllium would be spread all -- all through the department. And then the power sweeper would come around and sweep the floor, and the dust would just fly. And like in the

0035

pot room it would be so dusty in there. And then that power sweeper would pick up the dust from the thorium and beryllium and just more or less spread it around.

I was burnt in 1965 or '66 with thorium metal. And in one week it went from a blister to almost a quarter of an inch to a half inch it ate into my foot. So I had surgery and that done on it. And then I also had cancer of the colon.

But the other comment I have is a dump that they had outside where they dumped the thorium. Every year through the '60s and '70s they would send people out there to try to recoup the metal. And we'd dig in it, throw it around. And that stuff would be wet and you'd have that stuff all over your clothes. And it was thorium because they had radiation signs posted around it. And that's about all I got to say.

My name's -- my name's I worked in the cast house for years in the casting department on the pot room melt floor and the aluminum unit. A lot of -- a lot of things been talked about, but worse thing I can remember is alloying that thorium. We'd lower a stirrer down into the molten metal, stir it around, around. And then we had a basket we'd lower it in, it had holes in it. And this is when the metal got to

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the right temperature. I think it was after 1,300 degrees. When that basket got full of metal we had them small barrels of thorium that we had weighed up, and we had to stand over that basket, pick up that small basket and dump right in. It had to be put in that way, otherwise it would have all burned up. So they made us throw it in that way. And when you threw it in it just flashed up, smoke, fire, and everything come out of it. That's about the worst thing I remember. Everything else is being talked about.

I lost part of my lung, my right lung. That was before I retired. And I got shortness of breath I'm living with now. That's about all I got to say. Everybody else is talking about everything. Thank you.

I'm I don't have anything to say really to add to what I -- the meeting in Alton. I worked over in -- in maintenance, and we had the -- these radiation, uranium badges, whatever they called. When we went into the pot room we had to put one on. And then when we came out we threw them in a -- in a big basket. So every time we came in we just picked one up, and when we go out we threw them away, threw them in the basket. And at the end of the day as far as I know they were thrown away because

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there was always another new basket there the next day. I don't know what year it was. I don't have any idea. That's about all I have.

I'm

last name. I worked in the pot room about and a half years. We melted thorium chips in oil on the weekends so nobody knew we was melting it. Then we'd put in barrels, and they stored it. But I remember handling thorium with my bare hands and breathing the smoke. Now I'm being treated with skin cancer. But they -- they told us at a time when we wore these badges there was nothing to worry about, don't worry about the badges, they don't register, they're okay. Just when you get through throw them in the can when you get -- when your clothes changed. Put your clothes in a hammer in a plastic bag, put your badge in a bucket, it's okay, you don't have to worry it, there's nothing to worry about. So we -- we was under the assumption nothing to worry about for all those years. That's about all I've got to say now.

I'm .

I went to work at Dow plant in 1961. I retired in I worked in the rolling mill up until the '70s. I had various jobs. I -- as some mentioned that hand salvage. Yes. I done hand

0038

salvage. We'd take that metal and we'd sand it. We had no kind of protection whatsoever until the last year or so I before I retired they said yeah, we got

to give you the mask. They give us a paper mask. Well, you couldn't wear the paper mask because of your safety glasses. You sweated when you couldn't see what you doing anyhow. So that didn't pan out too good.

But I went to the maintenance in 1970, and I worked all over the plant. I mean, I done various jobs down there. But especially the extrusion department, I done a lot of welding over there. And so the area they claimed they cleaned up over the 7 Press was -- we found out was very highly contaminated with radiation. We spent hours down there welding on a press, never told that it would hurt us. That's all I have to say.

I'd -- I'd like to comment on what brought up about the melting of the thorium into the basket. I have a picture of the basket and the condition of the pot room that we worked in. And what said, when you put that into that basket you'd breathe all of those hot fumes. We didn't have respirators or anything. So that's -- that's my comment.

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My name is I started at -- at Dow in 1954 as a melter cast -- as a melter. And when we first started doing that we -- they never told us anything about how to alloy, they just told us what to do. When the thorium metal came in they still told us nothing. They never gave us badges. They never told us it would be harmful or anything. And then when we'd sludge the pots into barrels or boxes a lot of time it'd splash out on the floor. A lot of times it'd splash out on the floor and -- and the fumes would come up in your face and everything. You could hardly breathe. And -- and as far as the beryllium and stuff we had that all through the casting department. I was there for years. And that's about all I have to say.

I worked at Dow from 1953 to I started out in the central shops where we gathered up trash and such throughout the plant. We would pick up the chips from the alloy department and take it out to this back 40 you talked about and burn it. I don't know how many

years that went on. Finally I went into the extrusion department. Worked in the shipping department, finishing department, pickler, crane operator, scuffer operator, billet cutter. About every -- about once a month, why, I was bumped. But -- so that's why I'm no -- I was no longer an employee of -- of Dow Chemical.

Pretty much everything that these people have said is pretty common. We -- when they would bring in the materials from the outside sources from -- we were told that it was Mallinckrodt they would rope off the Number 7 extrusion press. And of course, this was all top secret. We didn't know what -- whether it was beryllium or what they were extruding. They would bring in their own operators. They'd bring in their -- their own handlers. And they would -- our people would be there, but they would out -- they would run these extrusions and pretty much clean up their mess after they were finished.

In general there was very little safety throughout the entire plant. Regardless of whatever you used, whatever materials you used there was hardly any protection whatsoever. Pretty much what I have to say. Thank you.

This is again. I forgot to mention that I have prostate cancer and I have a chronic sinus problem.

Well, to join you in that I think we all have -- have the problems. I'm being treated for prostate problems also.

This is again. I haven't heard anybody mention near the back of the pot room on very far end there was a storage facility back there for years. It was thorium chips in barrels and thorium metal that had been pumped out of the bottom of the pots after a run. And it was stored back there for years. We used to have to go back in there twice a year and inventory that. They had to pull it all out and inventory. The pellets were broke. Metal was coming out on the floor. And there must have been dust and dirt on the floor a foot deep. I don't know when they moved it out, but I think sooner or later they moved it out. But I know it was back there over 20 years. Thank you.

I'm
Hired in in 1960, retired in A lot of what I got to say is going to mimic perhaps what these fellows have said. It be easier for me to tell you where I didn't work than where I did work. Worked everywhere, production and maintenance.

I remember cutting grass out in this area where they -- they called the dump that was radioactive, getting the tractor stuck back in there, fighting to get it out and everything. In the pot room I was a sawyer, also an inspector. And we did nondestructive testing of billets including the HK, HM billets. I did it with direct contact sonic inspection. I worked in extrusion. My biggest contact with the radioactive material was in the hand salvage area in extrusion. Everything had to be straight within 12 and a half thousandths per foot, very little twists allowed. And the surface always needed salvage. A lot of sanding, a lot of scraping.

In the rolling mill I worked on the mills as roller, assistant roller, helper. And the big one as far as thorium is concerned was 7 Mill -- 4 Mill where it was a -- just a matter of repetition. You'd throw it over the mill, throw it into the mill and they'd throw it back to us and we'd put it back through again each sheet probably taking 30 or 40 passes each to being perhaps 50-thousandths reduction.

I guess that's about it for me. My health seems to be pretty good.

I -- I'd like you to comment for me. I've heard the story that I didn't understand before. I thought that in a rolling mill you just roll the metal through and then you'd roll it again. But my understanding is there was some sort of sanding devices that went on as you were rolling it and that that itself created dust. Can you elaborate on that for us a little bit.

Would this be on the mill itself you're talking about?

Yeah. From -- from the metal itself.

I don't remember any sanding other than the wire brush on 1 Mill.

Well, yeah, tell us about that.

As far as I know the only sanding that was ever done -- I can be corrected on this by a lot of fellows. But all I remember is the wire brush on I Mill. And I think its main purpose was to keep the rolls clean. I don't think it actually came in contact with the strip itself.

Okay.

And if there was any dust, it would be just smothered by the coolant. So I don't think there was ever any airborne dust from that particular operation.

Okay.

I'm and I started at Dow in 1954 and retired in My primary contact with thorium alloy was in the rolling

0044

mill in '58 through 1960 where we involved in high end rolling on the plate -- plate and sheet mill -- sheet mills. And after we'd make a pass and the metal was in the oven we would sand it. After every pass we would sand this stuff, hand salvage.

And I pretty much worked all over the plant and pretty much a carbon copy of what Mr. said. And at the present time I don't have any health problems to speak of. But that's about all I had to say. So thank you.

I'm

And I worked in maintenance from 1961 to ' when I retired. And I was in through the whole plant all the time. I worked in all the nonskills and maintenance, and we had to go through the whole plant. And in 1991 I had a cardiac arrest, and I don't know if that probably could have been caused from some of that stuff too. So I was probably exposed to all of it because I had to go through the whole plant all the time.

I'm

and I went to work at Dow in 1973 to when I retired. And I worked all over the rolling mill. I worked in the casting, extrusion, and on the -- on the presses. And I even cut some special metal

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that they run in 7 -- on 7 Press. It was for a

government work. They had the government people standing there watching me while I was cutting it. And they had to clean the machine, take a air hose and clean --

We can't hear.

-- take a air hose and clean the machine with a air hose every time you cut a piece of it. And that metal was so hard -- I cut it on a band saw -- that you used three of four blades before we ever figured out how to really slow it down to cut it because it was so hard. And when we got through cutting it they -- we had to sweep it all up and put it in boxes. And they stood right there with us while all of its kept together.

And then another special metal was on the Lindbergh oven on the heavy press there that -- they had rented the oven for a certain length of time for us to run this metal through through the oven. We had to run it through the quench and take it and then put it in an ice cream freezer truck. They wanted to freeze it as quick as they could because -- then they'd take it back and stretch it again.

And I worked all over the rolling mill and all over the plant really. And with General Steel in

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there I had 44 years in there. And I've got scars all over my lungs. I don't have any air. I ain't had for the last 20 years where I can hardly breathe from working in that stuff. That's all.

My name's

I went to work for Dow Chemical in '68. I retired from the plant in I worked all aspects of production work. I cut it, I sanded it, I worked around the mills. I went into the apprenticeship program in '89. Sorry. And I became an MT. I've worked on all these machines from the basement to the roof in the entire plant. And the only thing we were ever told down there was this stuff won't hurt you it's so low grade and that. And we raised all kinds of cane with them, and that's the only answer we ever got, the thorium wouldn't hurt you, you could sit on it and it wouldn't bother you. And that's all I have to say.

My name is

I worked from 1953 to

And my recollection of working in the pot room handling thorium metal when we first started that we didn't -- we didn't use masks. It was just all -- had a shield on. Then later on we started using masks. But during that time as it's already been stated that

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we were handing that thorium that the metal has to be up to 1,350 or to 1,400 degree before you could even melt it. Then when it melted that -- the fumes would come off of it. We was told that it wouldn't hurt you. And I'm certainly in agreement with what every -- everyone else has said. Now, everyone is talking about that. I never heard nobody say a thing about the SO2 that we used to breathe in the pot room. And that was very, very powerful. That's all I really have to say about it. I think it was bad. It was really bad. Thank you.

My name's I hired in in 1953. I retired With the exception of about two months when I first hired in all my time was spent in the extrusion department. Incidentally, the first two months it was pretty tough. We had to stack the ingots these boys made. And we had to unload boxcar loads of World War II bomb bodies. And these guys may remember it because they had some little round dudes in there that could really blow them pots. We were supposed to get them all out. Well, they didn't get them out when they sent them to us and we sure didn't get them all out. But anyway, I thought I'd bring that up.

0048

MR. DENNY: Yes.

I -- I want you to explain your phrase blew the pots.

Beg your pardon?

I want you to explain what -- what you meant by that.

They were caps in the --

No. No. I want you to explain what that means to everybody and particularly the folks at NIOSH. Blowing the pots, what -- what do you mean by that?

Well, I'm telling -- the boys

from -- from casting can explain that better than I can. You'd -- you'd -- you'd see guys running out of there scared to death. And some of them would actually have some flame on their clothes. Of course, I had fire retardant clothing I believe then.

So you're talking about an explosion with fire?

It -- it's an explosion when you put cold or wet material in that hot pot. It would cause it to explode or blow.

This foreign matter (inaudible).

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The extrusion department didn't -- didn't open for about a couple months after I started there. And a few weeks before they opened it they put up the bids. Of course, all of us guys were trying it get the best job, you know. Well, I didn't have enough seniority to get anything but a helper job. So I started out as a press helper. After a few years I got to be an operator. And after about ten years I got to be a crew leader. And that's what I was doing all the rest of those years.

As -- as a crew leader we had -- we had five smaller presses and we had one large press. Okay. Two of these smaller presses was 1,800 ton capacity. Two of the presses was 3,000 tons capacity. And we had one press of 5,500 ton capacity. And of course, we had what we called a heavy press that was brought over from Germany after the war. When it was brought in it was eleven-five, and they increased it to 13,500 ton.

And it was my job to see that they had the right metals on each press, had metals waiting for the next job, relieve anybody that needed to be relieved and especially lunch relief.

Well, getting back to this radiation thing, the first time I ever realized that there might

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be radiation in that plant we had some guys that came out and said we're going to run a special job today, and that was it. So a little later we were -- I'm standing around there waiting for them to get their stuff done and I heard the word Weldon Spring. Well dang, you know, that really brings up some memories

from World War II. And I thought man, what do I got myself into. But anyway, that -- that was the beginning of the knowledge that I had that we might be running radiation -- radiated products.

I just wanted to clarify what Mr. said about Weldon Spring, that -- and the reference to World War II. As you all probably know the first government facility at Weldon Spring was actually the Weldon Spring Army Ordnance Works. And that -- that was built and operated during World War II then closed. And subsequent to that the -- the Army deeded some of that land over to the Atomic Energy Commission which built the Weldon Spring uranium feed materials plant in 1955. It started operation in 1957, closed in 1966. So -- so that was the reference to Weldon Spring and World War II. Okay.

Thank you. Well, the first real dealings I had -- but I didn't know at the time

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that that was radioactive -- but that was running pellets. I'm sure a lot of guys in here that were press helpers remembers pellets. Anyway, I didn't realize that they were radioactive. And when they brought them up there to put them in the container I asked one of the fellows -- I didn't know either one of them. I said well, why -- why these little pellets, you know. And he says well, this is -- we're experimenting. I said well, what kind of alloy is this. Well, he says it really don't have a number. So you know, we went through things like that all down through the years. And so it's something that as you get older even after you leave the place you get to thinking, my goodness, how could they have done that to us.

I never seen a badge. I've -- I've seen several instances of where -- I remember one instance real well. They run a -- the Number 8 press was 1,800 ton and they decided to run a -- one billet. They didn't tell us what it was. But it came down the conveyer out of the heater and it looked like it was going to fall apart. It hit the loader still holding together. So they told the operator go ahead and push it. Well, they had put a box on the exit end. It was either -- okay. It was either lined with lead or

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graphite and I don't know which but it was one or the other, I couldn't tell. And when the guys throwed the lever forward to push it, three seconds it was gone through there in that box, just kerplunk. And the smoke boiled out of that thing, went up in those overhead beams.

And I thought right then if -- if they don't clean this, we're going to be in trouble. And I never did see them clean it. I heard that they did clean it, but I never did. In all the years I never seen them clean it. Well, I've talked enough. I'll pass this on.

Thank you.

I just wanted to drop back to this bomb bodies that they were talking about a while ago. The -- those were incendiary bomb bodies, and they were split I guess through the government agency or somewhere. And when we charged them evidently all the -- the fuses or the powder wasn't out of them. And as they melted under you always kept one eye on that pot of bomb bodies and the other out on the door because you didn't know when you were going to have to run until they were completely melted in. That's that.

I'm sorry we couldn't get them

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all.

This is Stanton again. At one time they run some plutonium through the plant too through the homogenating ovens. Nobody could get around it, just the guards.

Let me -- Mr. that's of immense importance. That's a whole new element not supposed to officially have been at Dow at all ever. So any elaboration that you could supply us with about plutonium at Dow with guards would be much appreciated.

All I can tell you is I seen them -- the guards with it and they put them on the oven cars.

Well, why don't you describe what you saw in a little more detail. That would be good.

It came in a billet form.

It wasn't very big, maybe 250 pounds approximate. And when they put it on the oven car we were told not to get around it.

We can't hear you.

We were told not to get around it. You know, I don't know why, too expensive I guess. But the guard stayed there all -- all the

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time that it was in the oven. That's about all I can tell you.

And how long was it in the oven?

I really couldn't tell you because, you know, different shifts, you know. And probably a full day anyway.

Any time frame? Any year? Give us a time frame.

That I couldn't tell you.

I'd just like -- I'm again. I'd just -- just like to mention one more thing that hasn't been brought up, that we used to run lithium metal. I don't know what it is or what it consists of. But I know that when it got your skin you could not put it out with water. It would burn -- it would burn worser when you put water on it. And that was one of the things that I -- I deal with, I worked with and it was powerful.

I -- I worked on that -- that metal when we first ran it. And they -- you had to turn water off on two other units besides that because that lithium couldn't have any water around it at all. And I had a -- a melter working for me had a basket in a pot. And one of the

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pots -- 6,000 pound pots, he dropped a -- a beryllium -- a beryllium bar in it and it come down in the pot and come back up and knocked his shield off. If his head had been a little farther over it, it would have blew his head off.

And another fellow was working -- one of my casters there. He -- a piece of metal hit on his arm, and the moisture in his arm caused that to -- to blow. And it had a nasty burn on his arm. That was on the lithium.

My name is

I started in '53 -- of '53, retired in And I worked all over the plant. And I'm the one that drove that sweeper in alloy. And sometimes that when I would cough wasn't nothing but black phlegm come out of your throat.

And some time I would come through there with the sweeper and if they had put something wet in that metal, the flames come up and I'd be caught on the sweeper on fire. And so I have problem skin -- skin disease and prostate, breathing problems. And I just wanted to say that it was a hard place to work.

My name is

I started to work at -- in 1961 and retired in -- in . Mostly everything has

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been stated that -- I worked in the pot room and on the aluminum unit. And you've heard about as much as I could tell you from these guys that have spoke before me. Thank you.

My name's I got my mug shot. There you go. Okay. I was employed by Spectrulite in of '89, and I worked there until And at the very beginning of this meeting mentioned how Spectrulite denied ever processing or running thorium. Well, that's a lie. Well, not the company. That was a -- that has to be a lie.

Thank you,

Okay. I'm sorry, . Oh, I'm sorry. When I first started there I started out in that -- in casting like a lot of people did. And I didn't spend much time there. A lot of these people have more knowledge. Then I was transferred the second year over to rolling mill. This was another place where they cut and sanded sheets of thorium which I had no knowledge of back then. So I'm two for two for safety. Then I spent the last 12 years directly on 7 Press which was in extrusion.

Now, this is really important because this is where I have the most knowledge of everything I've

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found in the last couple years of this investigation. And everything I'd found started from 2003 backwards. So I'm going to go the other direction from the 1960s on up.

Now, the thorium that we found in the extrusion department was thorium 232. Now, this is very important to remember now because the only alloys they ever alloyed in casting and the rolling mill was thorium 230. So how did thorium 232 get into an extrusion department, a department that never extruded thorium? So this was really a mystery for me that I wanted to solve because I worked like I said directly underneath that red spot for 12 years in a row. Got that? And because of this I had to find out where this thorium was processed or how.

Now, I was reading through the records I got through the Freedom of Information Act on how they processed and ran uranium back in the '60s. Now, after watching -- or reading the process of how they did this on a work cycle basis with carbon follower blocks and reading all this information it just came to me out of the blue like well, we did that for one customer in this factory at one time, the exact same process they did for the uranium. And that was the red flag that went off right there.

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So I started doing backtracking. And I'm going to start from when I -- you know, from when this first started. So they got their license for thorium, Spectrulite did in October of 1986. Then Mr. here who testified a few months ago that in '87 he ran a special alloy which they didn't tell him what it was for a special company for one day. I believe this was about six or seven billets. And this is very important to remember because they just got their thorium license six months before this and then a special company with a special alloy came in and ran this metal for a day.

Now, through these documents I have obtained through Emergency Management from the Department of Energy they did a walkover survey in 1989. And in this memo it states that in 1989 they already found the uranium 238 and thorium 232 as contaminants detected and exceeding guidelines. So we know how the uranium got there in the '50s and '60s from Mallinckrodt.

But how did the thorium 232 get there? Well, like I said, they got their license in '86, and six months later Mr. was the operator of the

press that ran this secret metal in 1987. So it's a good chance that they picked up the contaminants in the 1989 radiological survey.

Now, his two helpers he had on that job that day was (phonetic) and (phonetic). They were the actual people on other side of the press that handled this material, loaded it, caught it coming out and unloaded it. Now, they -- and coincidentally they died about four years later about six months apart of relatively the same illness, a brain tumor. And this was very concerning to me, so I had to dug deep -- dig deeper into it to find out more information.

Well, also Martin-Marietta came in in 1992, and they also ran a work cycle basis just like it was described by Mallinckrodt and they also used a carbon follower block because I loaded it on there. So again, not for one day but for a whole week we ran this special alloy which I asked repeatedly what it was and was just told it was special.

It was a hard, heavy, dense metal nothing like anything we ever ran before. It was at a heating temperature of 1,150 degrees. Now why do I remember that number? Because nothing was ever heated over a thousand degrees in those heaters because aluminum would melt and magnesium would burn. And when this reached over a thousand degrees I was really alert. I was waiting to turn that heater off. I was expecting a fire, and it didn't happen. This billet came out glowing orange, and I've never seen any metal glowing orange before. So when they loaded it up they would run them -- and they would run about six to seven a day. They would lease this whole press -- this press for a week so it was basically their equipment.

Now, they came back I'd say about a month and a half later and did it again, another work cycle. But this was a much shorter work cycle, about a three-day process.

Now, this was the only time in that whole 12 years I was there that we ever ran an alloy or a metal without knowing what it was. I mean, we -- there was -- everything was written down, everything was detailed. Whenever we did a job it was all laid

out in front of us. This was the only time we ran this process and never told what the metal was.

Now, this isn't the end of it. In the 2000 cleanup they laid the whole factory off because they told us, you know, there was radioactive uranium dust over our heads. Now, remember this is the very first time me and any of my other coworkers on this press ever heard of the word radiation of any type, specifically radioactive dust. And they didn't clean

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up the whole factory. They didn't even clean up the whole building. It was just cleaned over our heads.

So that week of the shutdown, the plant shutdown I volunteered as a janitor just so I could stay there and watch what they was doing because this was of great concern to me and my coworkers. And it was a very elaborate cleanup, dozens of Geiger counters on a table, plastic wrapped everywhere. It was done professionally. And whenever I would ask officials who was there with white hats on or hard hats exactly how dangerous it was they would always give me the comment oh, it ain't that bad, it's okay, it's not so bad. And only one response I got once was you'd have to climb up there and eat it for it to hurt you. And my reaction was well, I work underneath it, what if it falls in my food. They quit talking to me and wouldn't answer my questions from that time on. That was it. Okay.

So I started getting sick around July -- January, 2000. And about six months later the company decided to put everybody out of work by giving us a contract that nobody would sign. They wanted to get rid of me, everybody in the department, everybody in the factory, out of sight, out of mind. I mean, it was a contract that nobody in their right mind would

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sign. It was definitely to get rid of us. Still no flags, no warnings went up.

After my health deteriorated and it took me a year to get healthy again -- I had to actually learn to walk again, which is difficult to explain but it was -- I started digging in deeper to find out this information. And one of the things I found absolutely was amazing was that this press that was used for years to run this uranium, this hot uranium in the

'50s and '60s, the same press that was used to run this thorium in secret back in '80s and the '90s, this radioactive equipment we'd think would be very safe, put away, the public would be safe from it and that workers would be safe from it, no. I found it abandoned in Brooklyn exactly 50 feet past the county line which made it St. Clair County's problem.

Now, this press before we went on strike was completely overhauled. I mean, thousands and thousands of dollars were spent to rebuild it and refurbish it. They sold the heavy press for a millions dollars and it was leaking like a sieve. This press was worth a quarter million dollars easily. The owner once told me during a meeting this press makes between two to seven million dollars a year depending on a good year or a bad year. Well, that

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makes perfect sense not to keep us from operating it because he was making millions off of this press. There was no reason for them to put a yellow flag around it and tell us to stay away, it was a hazard. This was being poisoned for profit.

We was never told once that this metal we was running for Martin-Marietta was thorium. We was never warned. And this press that was found out in Brooklyn was literally the back half of the press. Now, if you run the metal through the press like this and extrude it out the back end, well, the very back half of the press is going to be farthest away from the process so it's going to be the least radioactive. Where is the front half of this press? Whose back yard has this been dumped in? Where is it at? This has some of the questions that need to be asked.

Now, the people here today may not be able to be helped, we may be beyond that. But the people who are still living around this factory, working in this factory are still being abused by these toxins and these hazardous waste. Unless these people are accounted for their actions and this equipment and this tooling it's still going to be a hazard for years to come. And if this place isn't either condemned or cleaned up which is impossible to believe that it will

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ever be cleaned up because it's been abused by hazardous waste for 60 years, 75 acres, over a million

and a half feet of square feet of floor space. It seems impossible that this will be cleaned up. So condemning it is almost the only option there could be. Because if you don't, you'll be back here again in ten or 15 years listening to a whole new group of people who are actually the employees working there today, and we got to stop this.

There's a elementary school and school ground 20 feet from the property. When they'd melt thorium it just doesn't melt like an ice cube. It makes smoke. It goes straight up and comes right back down on these children, the school ground, and in houses around them, has been doing it for years and years and years. This has to be stopped because there is too many people sick, too many people dying. And it's been the status quo all -- ever since these companies been there. Well, the company before me did it, so I can. The company before them did it, so I can. Stop it so nobody else has to show up in these meetings ten, 15, 20 years from now and describe the same thing over again. It's just going to be another nightmare. Thank you.

Yes. My name is

0065

I worked in the pot room and all over like everybody else did. What -- what they didn't bring up that I think, you know, when they ate lunch -- we used to eat lunch inside the pot room up -- and they didn't have no shelves or nothing like that at first. And see, and all that was exposed and -- and stuff, you know, because we worked with the thurman (phonetic) --

Thorium.

. -- thoron -- excuse me -- and all that different stuff. You know, everybody did. And -- and they always said that it wasn't dangerous, you know. And I -- I road the sweeper. I swept up a lot of that dust and stuff too. And we dumped it in the piles and on boxes, then they'd take it in a truck sometimes and dump it out on the waste field they called it.

And we had -- well, it was just nobody never told us nothing. We wore badges on -- on sometimes, you know, in the pot room and they would take our clothes and put them in a plastic bag. And

then we'll take the badges and put them in a box. And they never gave us the results or nothing from that because we asked them a couple times, and they oh, everything's okay. But they never did tell us
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nothing. And basically everything that's been said has been true.
And about cancerous around here, I got a lot of the people that's in the neighborhood that done had cancer just in that area around that plant, a whole bunch. I -- I had a daughter that had cancer and died from it, you know. So it got to be -- and I stayed in that neighborhood all my life, you know, and wasn't too far from the plant. And so it got to be something going on around there because there's numerous peoples that stays right around that area that do have cancer. And I've been trying to get names and stuff, you know, get people together to file a petition or something for somebody, but I'm working on that. Thank you.
again. I understand what Mr. talking about because a lot of us -- almost all of us have been working a midnight shift have come out the next morning and noticed a fine film of dust on our car. Now, this dust we are talking about isn't just from trucks driving up and down the road. This is stuff that was emitted from the smoke stacks while they was melting this thorium and beryllium alloys.
And none of this was ever addressed when
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they did the cleanup, it was strictly the uranium. And in this cleanup I have these documents here that mention over and over from the Department of Energy, from the EPA, from the Environmental Cleanup that they was only going to clean up the uranium, not the thorium in extrusion. That was that thorium 232. Now, this doesn't make any sense. Why would they spend all this time, money, and effort to clean up radiation but only address the uranium and leave something that's just as hazardous if not worse, 232 thorium? That's because Martin-Marietta brought this in and left the mess. And these people were not going to clean up another company's mess.
And all this was speculation at

Martin-Marietta because we never knew what this alloy was until a few weeks ago when a gentleman named -- he was the head of the laboratory department out there at the factory. His job was to record everything, soil samples, dirt samples, air samples, even radiation samples. His job in the military prior to this was monitoring nuclear weapons and nuclear reactors. And he measured everything from cesium to cobalt. So he knew what he was doing.

But when they handed him the Geiger counter to check this -- check this alloy to check the

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departments he kept them repeatedly this is the wrong Geiger counter, this is a Geiger counter for beta gamma rays like for x-rays or a nuclear bomb or uranium. They never would give him a thorium particle detector which was exactly what he needed to get the correct readings because thorium particles are different than beta rays and gamma rays. And I've been learning a lot about this unfortunately. And it was his testimony because he had to record this that he knew for a fact that that was billets of thorium that Martin-Marietta brought in that we actually ran on a press. This was the first positive link of what the alloy was over us and how it got there.

Remember this whole time all these years they only alloyed thorium 230 in the casting. They only rolled thorium 230 in the rolling mill. They found thorium 232 in concentrations exceeding guidelines above our head. This is a separate alloy, a separate process, a separate poison. And with his testimony and with his knowledge we now know for a fact that Martin-Marietta brought this metal in. We ran it without any knowledge whatsoever of any hazard, any protection of any type and then went and sent us on home to talk to our families, infect them, and spread it throughout the family, transfer it to others

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and never even gave us a warning.

Yeah. I want to -- I want clarify a couple of things that has talked about. One is that the information that I know about natural thorium metal is thorium 232. And I really don't know -- I -- obviously I don't know what the metal that Martin-Marietta brought in, that type of

thorium that did talk about at one of our previous meetings on the 11th of August. And you all will get that video so you can check that out for yourself. But I think most of the thorium was 232. The other thing is -- that Larry brought up there's this very important thing and that is that there were emissions from the plant of the airborne particulate some of which had to be thorium.

And in July I visited -- as part of our investigation to just getting information about the plant at Dow Madison we visited the Illinois EPA offices in Springfield and looked at the records they had for the land division and the air division. And the box from the air division happened to be what I looked through first and was interested to find there a series of inspection reports every other year for the air pollution permit held by Dow. And in each and every one of those reports it mentioned that the work

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that went on at Dow -- and of course, you got to realize this was -- most of the time now this was Conalco and then later on Spectrulite that they were inspecting -- that the work done there was as a secondary smelter and refiner of aluminum and magnesium. And that's a -- that's a verbatim quote.

There was not a word mentioned in any of those air permits from 1973 to 2004 of either beryllium or thorium. But we also saw that day an application form for the air permit for the state, and there was a question in there which required the person filling out the application to identify all of the particulates that might be released into the air from that plant. So I would think that the onus to provide that information were -- was on the companies that operated the plant; that is Conalco and Spectrulite.

So you know, I do think that the information I've received over the years shows that there has been a lack of aggressive monitoring by state agencies and certainly the -- the massive amount of thorium that you've heard about that was used at that plant should have been monitored in the -- in the air -- in the air permits.

And I think the Dow site is really a

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little bit different even from General Steel although it was close by. But -- but the houses and the schools and the residences that were clustered -- that are clustered right around that plant really make it a different site. And so stack emissions really were a significant source of environmental contamination around that plant. And that really hasn't been addressed adequately at all. Let's see. Where -- where -- there we go. All right.

My name is and I started at the Dow facility in early '65. And I worked in the extrusion department and some time in the rolling mill until '72. And then from 1972 until worked in the cast house. Most of the time my job was as a magnesium melter, then the other time was spent basically as a service crew leader. I can certainly attest to the fact that these guys are -- what they're saying when they speak about the alloy and using thorium and beryllium. And I've done both. I've also had to break beryllium into smaller pieces to be alloyed into specific alloys.

Then there was an area in our department that was in the annex where radioactive material was kept for years and was kind of fenced off in a little area. It then disappeared from there. And I do

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believe that it was moved down across the track well on the dock area. Now, from there I don't know where it went. But I knew for years we worked around that. Through inventory, as indicated, we had to inventory that -- that area every year to make sure that the poundage was still there.

Wearing of the badges, yes, I've done that. Did we get any specific reading? We got no readings according to the report from management. So that's where I am to this point. And this makes my job easy because I'm following such a expert from the advice of the guys ahead of me. So thank you very much.

I -- I do want to make one comment about that because Mr. just made a very cogent observation, and I didn't want it to just pass. And that was that he -- he -- in noting that there was thorium stored on site and that he had to make an inventory every year. That's extremely important

because any licensee of the Nuclear Regulatory Commission or of the Illinois Department or Division of Nuclear Safety is required under that license term to conduct a yearly inventory. And I showed you for example a inventory of thorium at this same site that we're talking about that was done in June of 2005 by

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Pangea Corporation. And you could see that it was very extensive, there's still a lot of thorium there.

What's interesting to me is we also -- both and ourselves through Congressman Shimkus' office sent a FOIA request to Illinois Environmental Management Agency asking for all of the information pertinent to licensing and cleanup of radioactive materials at that site. We've recently been assured by the director of that agency that they supplied us with all the information they had. And I looked through and inventoried all the information they sent. And I can promise you that the only yearly inventory that we found was that in the Pangea Corporation.

Now, every single year actually since NR -- well, the predecessor agency of NRC was the AEC. So there should be many annual inventories submitted to those agencies, and we did not see any. So once again there's a disconnect between what was apparently done at the plant and not only what is -- what -- what records have survived. Maybe they still reside at Spectrulite. Maybe they reside at -- at Midland, Michigan. But where they don't apparently reside is at the agency which is supposed to be the agency for which these yearly inventories are -- are performed.

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And so I'm -- I just need to note that for the record that I -- I think here's one more evidence that this situation that we're hearing about today at this plant has really gone unchecked by even the state agencies now for -- for decades basically. So --

Yeah.

Most of the inventories even when Consolidated had it they always had a Dow Chemical man come there when we had the inventories whatever that means.

Yeah. Well, so the -- so the

records may be up in Midland, Michigan. Right. But --

We had to do that twice a year.

But -- but again, in spite of that being the truth then -- then what that would have to mean is if the company gave them to the regulatory agencies for which they really are supposed to be submitted, we can't get them.

I wanted to verify some of the members that Dow Chemical did come in.

That's fine.

(Inaudible.)

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Yeah. So we're -- we're now giving you all testimony that at least the company did those inventories and collected that data.

On response to on where that -- some of that metal went it was thorium, and they would cut it up in small pieces. And we would use it throughout other metals because it would never show up in the spec lab on samples and that. It'd be like a thousand pounds in the 60,000 pounds it was lost in there. And that's the way they got rid of a lot of that metal.

In about 1996, '7, '8, somewhere along in -- in that line we resurrected about fifty, 55-gallon drums of thorium sludge out of the room across the track well down on the shipping dock that was kept under lock and key. At the same time over in the rolling mill we had probably another 70 or 80 barrels of thorium scrap. And across the aisle from that was a Sunbeam oven that had 10 to 12 slabs, 6,500 pound slabs. We had to inventory that every year. So I think there are probably inventory records up to '96 or '97.

At that time they sent the crews from the lab down to monitor what was going to go on. They gave us all badges, and that's the first time that I

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saw a badge from 1988. We melted the scrap. We used the same barrels that the scrap came out of to put the sludge in it. And we gathered the sludge out of the room down on the dock and we shipped it all out. And I don't know where we shipped it out to. We could

have shipped it to Oxnard, California where we shipped all of our other sludge.

And that was another process. We'd pick up the sludge from the mag melting pots and put it in railcars and ship it out to California. A man out in California had a unique way of recovering the metal from that sludge. He had pens built out into the ocean, and he dumped all the sludge out in the ocean. The tide would come in and out and wash the -- wash the fluxes and the dirts and that out of the sludge. And what was remaining was the heavier metal that sunk to the bottom of his pens. He'd pick that up, melted it, poured in into ingot, alloyed it with aluminum tin cans, and it came back to us in the form of 90/10 magnesium or 90 percent magnesium, ten percent aluminum. We used that to alloy with also.

I don't know if the thorium sludge went to California to that same outfit or not. I -- I'm just unaware of where it went to. But I know that there were thorium scrap and slabs in the rolling mill as

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late as 1996 or '7.

Now, I just can't let that description go without commenting on my own experience at Washington University where we dealt with a thousand laboratories that used tracer amounts of radioactivity. I heard once that the total radioactivity process at Wash U labs, those thousand labs was about two curies per year, so very teeny, tiny quantities.

But I can promise you at that institution -- and I think this is representative of what every single NRC licensee is supposed to do in the United States -- is they had to keep not only extremely detailed inventories of all -- of all inputs, all outtakes, microcurie by microcurie with a person's name. They had to account for every bit of that. And if they couldn't and if they didn't, the agency would come in and basically suspend their license, that was it. There were no ifs, and, buts, appeals, it just happened that way.

So you know, I think there are many ways -- I have no doubt after this testimony that things were inventoried. But again, the only conclusion that I would have to reach at this point is either the

25 company did not report these reports to the agencies
0078
1 that granted them their license. And as you've seen
2 that was the AEC and the NRC and then the Illinois
3 Environmental Management Agency, those three agencies.
4 Or they in fact did report all of those inventories
5 and those agencies when asked now under Freedom of
6 Information Act requests and direct requests to the
7 director of the Illinois agency are refusing to
8 provide those inventories. However, they've assured
9 us that they have given us everything they possess.
10 So the only reason I tell you this about
11 dose reconstructions are that even basic facts which
12 I'm sure Stuart and -- and the dose reconstructors and
13 Dave Allen will be extremely interested in at NIOSH is
14 how much material was actually on site. So far I
15 think the only thing -- document we can produce is
16 that Pangea June, 2005 report. And maybe with -- if
17 we all try, you know, even more vigorously to get that
18 data from the company.
19 I can tell you we've initiated contact
20 with Dow Midland. We've asked to see all of their
21 reports. And we've done the same thing with the
22 Madison site with the current owner of Spectrulite.
23 So we need to get to the bottom of this. And I don't
24 mean to hold it up any longer, that's the last I'll
25 say about it. But it's a -- it's an important thing
0079
1 to know about this site. Yeah.
2 MR. HINNEFELD: We should -- yeah. We
3 need to break real quickly for the videographer.
4 We're going to switch tapes
5 now.
6 (Whereupon, a short recess was taken.)
7 My name is
8 It's Anyway, I was an employee
9 of Dow Chemical from 1953 to .
10 and I was in the rolling mill most of my time. And
11 while I rolled thorium on 1 Mill for -- for seven
12 years from 1961 to 1968. But my main comment is I was
13 a finishing mill roller on the mill in 1955 and '56.
14 And they brought in five technicians from Dow Rocky
15 Flats. And they -- well, they -- they went and they
16 covered the whole area with paper. And they gave us
17 -- which at that time we had to furnish -- we had our

own street clothes. But they did furnish hair nets and -- for our shoes and coveralls.

And well then we were instructed to go ahead and make reductions on this metal. And while I inquired what is this metal and they -- they wouldn't -- he said well, it's just an experiment, don't you know. And I said no. And well, they had a Geiger counter with them, but they never gave us any badges

0080

or anything. And I said well, isn't this dangerous. And they said no, it's probably no worse than getting a chest x-ray.

So anyway, during this process we -- I was instruct -- I did what I was instructed to do. And on one of these reductions the metal, it popped and broke and it injured one of our employees, a (phonetic). And they took him to the hospital that day. And then I went to visit him at night, and he was in quarantine and the only way you could see him was through a window.

So well, when they finished this experiment they went and they rolled up all the paper. They had us wash the whole mill down. And then they kept going over the billie (phonetic) roll which the metal kept rolling over. And we just had to continually wash it until it was finally clear. So when they got done they took all the clothes, they took our hair nets and everything. They rolled it up, they rolled up all the paper and that was it. So -- but I never did know what the metal was. It was in 1955 or 1956. Thank you.

I'm the widow of He worked next door at Fox Brothers Industries. My husband dug down in the

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building next door to Dow Chemical. He ran in -- it was a leak in there, a water leak. He dug down through about six or eight inches of concrete with a backhoe. He got down there with a shovel and shoveled some of it out so he can find the leak.

All at once water or stuff came in there. He got up out of there with a ladder. It was knee deep water. When he come home that afternoon he was red all over. This was on Thanksgiving Day. I asked him what happened. He says I -- I don't know, maybe I

got sun burnt, inside a building. Well, about -- he kept getting sicker, he'd feel like he had the flu. So finally he said well, I got to go to the doctor.

So he went to the doctor, they took blood work. His blood work was really bad. So he went to an oncologist. He had myoprivitis (phonetic) disease. That's when the bone marrow starts shutting down. About a year or year and a half later he came down with AML, acute myelogenal (phonetic) leukemia. He lived for two years battling leukemia.

The doctor'd keep asking him was you exposed to radiation. He says no, not as I know of, either did I. And when he came down with leukemia again they'd keep asking are you sure you didn't get close to radiation or exposed to it. He says not as I

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know of.

So out there next door to Dow Chemical out in that field it's there. He -- that's where he got it at. So that stuff what they had buried has seeped down in that water and he got down in that hole. And that's how he -- he's not living today. So that whole area is bad.

Let's just -- we have a map that we think we can show you.

We're going to take a quick look here.

Yeah. Let's get the map up and we'll try to show you where that Fox Brothers is. It's very close to the Dow plant.

Okay. You guys might have help me a little bit, but is that Fox Brothers over -- right over in here?

Yeah. That's Fox Brothers. Yeah.

So the Dow property if I understand correctly comes down and over. This is the dump area, and that's probably the building that we're talking about. And so that might be a real interesting question with the water tables. That would I would think really be of interest.

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Yeah. What -- what we know -- so the real question at issue is has that massive amount of thorium sludge that's been sitting out in

the 40-acre plot next to castings leached down into the ground water. What -- what we know further about that incident -- and I think if we could get some clarification, but I think the date was Thanksgiving in about 1994. So there is -- there is apparently a water line that goes between Dow and Fox Brothers, that's one thing I've heard. I don't know that. But you know, it seems certainly likely that in those 30 or 40 years that thorium waste could well have matriculated down into the ground water and -- but I have -- I really haven't been able to find a good report about that. And so -- but that's -- that's the issue.

She said the date's about '92.

1992 was what we heard was the date for that incident. So Thanksgiving Day. I don't know what to say about that particular incident. Like I say, we -- we've tried actually to get a report that -- but -- but the Army Corps of Engineers didn't address ground water in their report. And so we're going to have to get that some other way if -- I'm not

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even sure ground water has ever been tested in that area. It should be, but I'm not sure it has been. Okay.

And you might note too that there are a lot of residences over there right across the street from that site. You can see those very clearly too. Is that the area you were talking about earlier?

Yes.

And they definitely say that's it. So --

Oh, yeah. There's -- there's railroad tracks running from Fox Brothers Industrial over there from -- into Dow Chemical at the back. And evidently there has been connection between Dow Chemical and Fox -- well, I don't think Fox Brother owned that at that time. But that building was -- I guess you call it a warehouse for them because the train tracks run over there -- over there back. So this is a lot bigger than we getting into really. It's a lot. It's big. Thank you. Here.

My name is
I worked at Dow from '53 and retired in The first I heard of badges was at your last meeting. And they -- when I started there every piece of equipment in that plant had an Air Force number on it. And I worked there during a shutdown between '69 when it wasn't Conalco, it was Phelps-Dodge took over. And I worked there during that shutdown, and we took all kinds of stuff out to burn and to dump. And they had a company man go with us and make sure we set it on fire. That's about all.

My name's
I was employed there from 1961 to I held various jobs through the plant out in the extrusion, worked in the rolling mill on up in fitting and maintenance. And in the summertime they had me going out and cutting the grass. And the area she was talking about, to get back there to cut the grass alongside the fence they make a area so that, you know, make it clear they had to go get the guard. They had a gate there, it was under lock and key. And they had to let -- go get a guard to open the gate so I could go back there and cut the grass. And as soon as I got done I had to go get the guard and lock the gate back up.

So -- and then my experiences as of right now I've come down with Parkinson's. So I don't know if anything -- that has anything to do with it or not, but right now I'm down with Parkinson's. Thank you.

I'm
I don't have a lot to add to these guys. I was in supervision, both extrusion and the rolling mill for 30 years. The only thing I'll add is we processed the thorium in extrusion -- light press extrusion. And during this process it was heat treated or hot stretched we called it so -- because magnesium was very tough to stretch. A lot of it had to be heated before you could stretch it. And then it was sawed.

Now, when you saw anything you're going to get a lot of dust, you're going to get a lot of chips. These chips flew, and you could look in the sunlight and you'll see all kinds of sparkles. The way these chips were cleaned up was mostly with an air hose,

blowing with an air hose and then put in a pile and thrown in there. And there's no way in the world you could have separated all the chips of thorium from -- from the -- from the regular magnesium.

I also worked down at shipping for a number of years, and we shipped thorium. And believe it or not we put radiation tags on each of the boxes we shipped out. But again, we were all told the same thing as you have heard a hundred times before, you know, you could sleep on the box, you're -- you'd be

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under more danger getting an x-ray. We all heard the same story over and over and over. So you know, it's just like Hitler said, you say it often enough, people will believe it.

Yeah.

Can you tell us where you shipped the thorium?

Really no. I don't remember. I remember a lot of this stuff went into military applications. The -- and it was -- went for further processing, you know. So we just -- we shipped it and then it was machined and -- and done whatever they needed.

Do you remember any interactions with people from Rocky Flats?

No. I don't remember anything, but you know, that -- just because I don't remember doesn't mean a thing.

That's fine. Thank you.

My name is My claim for cancer was filed on 2001. It was small cell lyphomia (phonetic). I don't smoke, and I never smoked. And I started at '61 until My

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brother worked in the casting department. He died of cancer at 46. was the head of all the Dow casting departments in the United States, and he offered help to the Department of Labor if they needed anything for this here. He was in charge when they run the straight uranium on 7 Press years ago when they made it from scratch. And he said on a rainy day

you could look out in casting, you could tell the difference from the ground from the smoke coming out of the ground.

And he helped me fill out the forms, and he offered to help any way he could to the Department of Labor, but they turned him down as far as any help. At least they never asked him for anything. And he went and had a heart attack and died.

And -- and 7 Press was the one the uranium was gone. And everything surrounding it was where people worked. And all these presses that ran these dies, these dies had to be cleaned. So they were cleaned in caustic acid, and all that acid had to run some place. And like where she's talking about between the buildings and that it ran out through there and had to go in the ground some place. And the waste from the dies that had uranium on them, that had

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to be washed off there too. It couldn't just go away.

And the guys working in the crane they had to breathe all that stuff. And the fans and exhaust was a very poor system. So they got to breathe all the caustic and everything up there. And just about all the time the fans were broke, they didn't work good. Caustic would drift from one end of the department to the other. And everybody can -- knows what it smells like. And that's all I got to say about it there.

I would like to make -- I just -- Stuart, I just want to note for you all

I think there are maybe a few people who had earlier claims submitted from the Dow site. But along the same lines what I mentioned at GSI, that there are only two claims so far that have been paid from the Dow site. I think there've only been a couple dose reconstructions.

And not, oh, this month I reviewed

denial under Part E of the EEOICPA Act. And I understand that that denial came from DOL, not yourselves. But it's kind of interesting that he submitted his -- he submitted a Part D and a Part B claim in August of 2001. And they are now getting around to saying that he's denied under Part E because

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of course our site, number one, is not a DOE site. So

-- so the -- you know, the -- his claim was sent automatically from Part D to Part E when the agency changed from the Department of Energy to the Department of Labor. But I do think it's an interesting -- and, oh -- and in that same letter it noted that his Part B claim was still open.

And you know I think this -- this is an example of somebody now -- August, 2001 to August, 2006 is a full five years, and nothing has been done about his dose and -- oh, I shouldn't say that. It hasn't been reconstructed.

And so I guess I would say this is a pretty glaring example. I don't believe anybody on earth could possibly defend the fact that that's acting in any kind of timely manner. And you know, I would say on the basis of -- of alone given the facts that we are hopefully establishing today, I mean if one were looking for a person to give a self identified Section 8314 SEC to on the basis of his record, if you haven't been able to reconstruct his dose in five years, what possible way is there going to be for it to be done this year by Battelle or in the next few years. So anyway, I think -- I think we must put him on the record that way. Okay. Yeah.

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In 2003 we went over and talked to and she called someone up in -- I think it was Cleveland. And was supposed to be number one to be paid with our group. I was supposed to be number nine to be paid. was supposed to be number 19. Then they changed all the rules and all that over. So that's where we're at. So it's been all changed and everything else on us.

Let's see. Where are we in the thing? you want to say something?

No. No. (Inaudible.)

Okay. My name is and I hired in in 1965, extrusion. And I worked on most all the presses. On 6 Press and 8 Press we ran thorium helicopter parts. And on 8 Press one time I ran 16 hours of titanium. And on 7 Press in -- in the '90s we ran two weeks of a special metal, and they didn't tell us what the metal was composed of or if it was hazardous or anything.

It was a special job, and they brought their own billets in and took all the scrap and all the metal back out with them.

I'm

I hired in in 1965 and retired in

0092

I worked in all the departments but mainly in the rolling mill and the extrusion. I sanded the plates in the rolling mill, and I ran 7 Press in -- in the extrusion department. And I don't think there's anything else I can add to it.

My name's I worked from 1988 until And I just want to talk about when we melted radioactive chips in the pot room. And it's kind of ironic how the company thought that these meltings could proceed. One half of our crew would work on one unit, and one crew would work on the other half. And the only thing that divided us between the units of the chips being melted and the unit being ran was they ran a flag line down between the units.

And when they melted the chips all the smoke and -- just mainly the smoke and fumes would go in the air. And these -- this smoke and fumes they -- it didn't know not to cross that flag line. So I thought that was kind of pretty bad on the company thinking that a -- a flag line was going to stop chips and fumes from coming over and get the other workers. That's about all I have to say.

My name is and I started out with Dow in 1966. And I

0093

worked there until when I retired. I worked in all departments. First of all, I started out in the rolling mill, and I served as everything except a roller on one of the mills over in the rolling mill from one time to another. I also worked in extrusion as a -- a finisher helper. And I also worked in casting in the pot room. In later years I got into an apprenticeship program. When I became a millwright, we called them MTs. And at that time I worked all over the plant.

And one of the things that bothered me was when they decided to do the cleanup they said that the dust wasn't harmful. But when I looked at saw what

they were doing I worked from the top of the crane almost -- well, I worked from the top of the building all the way down to the lowest part of the cellar, and we did maintenance. We did crane maintenance. And there they were up there in white suits and masks collecting dust. And somebody mentioned the fact that all you had to do was eat it. You eat a lot of dust inspecting cranes and doing maintenance on those cranes up there. And believe me, it was dusty.

As far as where the thorium and this -- these products were stored, we were in and out of those areas all the time. As far as the presses in

0094

extrusions was concerned we were from the top of those presses to the bottom because any time any maintenance had to be done we had to tear it down and do it. And a lot of times we worked in the cellars like I was saying.

And someone mentioned that the press was rebuilt. Well, I don't think there's any press in there that we didn't rebuild starting from the big press down to the smallest one. We'd tear it apart, rebuild it, put it back together, and get it back on line. So whatever's there -- I thank God that I don't feel bad. But if there's anything to be caught, I was there to catch it.

And I have a lot of -- a lot of friends of mine that were in maintenance that are suffering some type of repercussions. But you know, the bad thing about it is you're not sure of where this thing came from. Like the lady over there said her husband went down in to the -- to fix a leak. Well, we were down under the ground fixing leaks all the time. And fortunately enough that I didn't fall in the same stream that he fell in. I hope I didn't. We have what they called artesian wells there on that property. And of course, ground water feeds into those wells. And I'm sure that there should have been

0095

some contamination there somewhere.

I -- I can lay in my -- in my bedroom and I can look out my bedroom window and see SCI. For something this dangerous to be so close to where I live it kind of tears me up. To know that no one has said this is dangerous. My kids played in the dust

that you talk about that was on your cars. But your cars left town, but my kids was still there. And this bothers me. This bothers me. And I hope to God that I live long enough to see something done about this situation. I may not get nothing, but God knows I hope that whoever lives there gets something. Thank you.

again. What Mr. was talking about about the dust overhead on the beams and the crane I have documentation obtained through the Freedom of Information Act from the Department of Nuclear Safety, Illinois IDS that state that that maximum limit amount for safety for these employees before the cleanup in 2000 was between two to four hours a year. That was the most time they could spend up in these cranes, up in these beams according to the documents that I've obtained. I'll be more than glad to give you a copy of them later.

Hi. My name is

0096

I started in 1952 and retired in I worked in the laboratory for the technical department in all the years, of the lab under Dow. I was for Consolidated and for SCI.

The main reason being here I have some information I gave to and to would see if I could clarify some of the other things that came up. A couple items is there on beryllium usage when we talked about beryllium. The only alloy that I can ever remember with beryllium being in was the A -- was a die casting alloy. I think it was AZ 92 which was very, very small amounts of beryllium, like a tenth of a percent. Other than that there was no other mag alloys that used beryllium.

The thorium alloys HM and HKs we used in the laboratory. We sawed them, we machined them , milled them, heated them, bent them, did everything to them because we tested every product that went out the door. Did a lot of it. Took inventories. The inventories were -- would always be listed as a alloy not as -- not as thorium, but it'd be HM 21, HK 31, et cetera. We never inventoried as a thorium or anything.

In 1996 I was called back there to do a

0097

special project. And at that time I surveyed all the lab files which were still complete. Dow records were still all there, Conalco records were there, SCI records were there. And there was -- in that time thorium was not being produced anywhere in the United States or no alloys -- no magnesium alloys were being produced from thorium. And that's about it.

Hey, when was -- when was the last time you recall mag being --

What?

Do you recall the last time thorium being processed?

let's do that on the record.

Hey, This is a question for . He was out in the lab. And when was the last -- about the last year that you recall thorium being processed there? You got any idea?

I don't remember.

Okay. I -- I'm just curious because I know we -- we ran it while I was there.

Oh, a lot of it. Yeah. Beau coup of it.

I have a question

0098

for you. I have a newspaper article that . gave me from one of the local newspapers that heralds the beginning use of LocAlloy alloy at Dow and they were quite proud of that and that was a beryllium aluminum alloy. Do you remember processing that?

LocAlloy -- my understanding LocAlloy was a alloy developed by Lockheed Aircraft. It was beryllium and mag or beryllium and aluminum, don't know which.

All right. Beryllium and aluminum.

We never did it at Madison, never was there. I was consulted one time about what would happen if we had to do it there, and it had to have a complete white suited and everything else you touched it even. And I don't think it was ever produced there at Madison.

Well, that article --

And this would have been about in I'd say in 1967 or so.

Okay. And I guess the other thing is about the inventories. Are you aware of whether those inventories were submitted to the licensing agencies?

Oh, no idea. This was just internal for the amount of metal in the place.

Internal?

Yeah.

: Okay. All right. Thank you very much. Let's see if we got someone else.

The name is

I started at Dow in 1953 and retired in

I spent a year in the alloy department as a metal caster and we called them then pot men. I think it's a melter now. Then I bid on a job as rolling mill inspection, and I spent the rest of my time in that job inspecting metal in process and in the final inspection meeting the specs and the gauges, and so on, tolerances.

And I was diagnosed with prostate cancer in 1999 and had surgery. And that's about it.

I started in 1962. I started in the rolling mill, worked there for about 12 years I think, then went onto being an electrician. Worked all over the plant after that. But while I was in the mill I can remember working on hand salvage. We used an air sander to sand HM and HK that would have dings and scratches in it. We had to sand all that stuff out. And other than that I'll go along with whatever these rest of these guys said. It's all basically the same.

On the beryllium process that we had in the casting and the aluminum unit mostly, but on the magnesium there's at least three or four different alloys, AZ 61, PE, AZ 21, and --

31.

-- 31 probably had beryllium in it too. But on the aluminum unit -- I retired in 1999. We was using beryllium in almost everything on the aluminum unit in all alloys, at least five to ten

to 15 pounds in it on every cast. And we'd cast 80, 90,000 pounds a day. So we did use beryllium in mainly the pot room and the aluminum unit.

And to clarify something else on your water. When they cast in the pot room and the aluminum on thorium metal and that it was cooled by water. That water ran outside into a -- a water tower. And there was always a mist coming off of that. And that would be the same water that was hitting the magnesium that had this thorium in that. Now, whether it would stay in the water or something, but they had a -- like a sump out there. It's the size of a swimming pool. And that water stayed there, and it would be kind of like a mist all the time over

0101

the top of it.

Yeah. I'm sorry. Is that the last person?

Yeah. That's all of us.

Okay.

. got something I'd like to say about that.

. yes.

Dow aluminum unit, when we processed the holder to tap out for casting they pulled the last sample after they dross it and chlorinated. After they pulled that last sample the last thing that was done 15 pounds of beryllium was spread out over the top of the furnace. Then we went around and casted it. And all the smoke and stuff come right out of it when we did that. And on the mag floor it was always washed in in a long ladle underneath the pump pipe going into the holding pot. And then it was melted. That's the way it was melted in in the pot room. And we used it all the time.

That's right. I agree with that.

UNKNOWN SPEAKER: It never happened.

Whoever said he agreed, why don't you --

0102

UNKNOWN SPEAKER:

. Here you go, sir.

I agree with everything he said.

Who -- who was that that was talking?

Yeah. That -- that was and you said you agreed with everything that was just said?

Yes.

Okay.

For some degree.

Thank you. Okay. Anybody else who feels a burning issue to be discussed?

(Inaudible) beryllium was produced in all of the metals there. It's put out by Dow Chemical.

You need to --

This is This book here's put out by Dow, and it shows beryllium is used in all the castings there, a certain percent. It tells how much they use on every one there. And it's got put out -- the book and everything their self.

read from the front of

0103

the book what you're reading from.

Dow, the Metallurgency (phonetic) of Magnesium.

And when -- when was that published?

1945.

So -- so --

So it -- it -- it shows that a percent is used in everything and it has been used in everything. So --

Let's see. Homer, I don't -- I don't see beryllium. Why don't you show me what you're talking about. I see the table. I'm sorry. What -- show me where you're talking. Where do you see it?

Right there.

Where? Just to clarify, there's a table that has American Society for Testing Materials. Table 1, Magnesium Alloys in Common Use, and it shows a number of them, all Dow metal products with aluminum and zinc in many -- aluminum in all -- all but one, zinc, magnesium. And then over under alloys on the next page, 7 it's talking about

magnesium like most other metals does not possess sufficient strength in its pure state for many

0104

structural uses. In order to produce the strong engineering alloys with which the world is familiar, magnesium must be combined with other metals. Alloying -- alloying ingredients are added to gain improvement in strength, workability, hardness, toughness, and other properties. It says aluminum, zinc, and manganese are the most common alloying ingredients used with magnesium. Other components such as beryllium, cerium, zirconium, silicon, and tin are sometimes added for the purpose of producing alloys with special properties. And then Table 1 lists the magnesium alloys in common use in the US.

So well -- and by the way, the Story of Magnesium is by the American Society for Metals and its produced by WH Gross. So I guess I'd say in summary that, you know, there's some conflicting information about beryllium. But the preponderance is that it was used frequently for a long time and in reasonably large amounts in aggregate.

Yes. again. And it wasn't always a situation where they just needed someone to go down and to do this process of getting this beryllium ready for the guys to use on the mag floor. And by me being a they said well, how about having one of your

0105

laborers go down there and get some beryllium ready for the guys who are alloying on the mag floor. And that seems like to me it was on a much regular basis because it was always, you know, get who you could get to do it. So I know it was being done because even I did it myself.

I -- I can't remember whether it was you, but I know that in the past meeting somebody has given us testimony about beryllium being in some kind of recognizable containers. I mean, it -- you know, it's not just hearsay that it was beryllium. And I don't -- is anybody in the room that can talk about that? Yeah.

We handled that beryllium. It came in -- some time in 25-gallon barrels and 50-gallon barrels. And then towards the

late '90s they just started shipping it kind of like in plastic and cardboard on pallets. But 99 percent of the time it came in barrels that was sealed, and they had danger on the tag. But we used a lot of it because like on the aluminum unit they would have a 50-gallon barrel sitting up there all the time, and it would only last maybe two or three weeks.

Okay. Thank you very much. Anybody else who wants to speak tonight? Yes.

has some material to tell you all about the alloys as well and -- and the contractors that Dow had.

Some of these I'm going to -- I'm just going to skip because I can't say it. But they -- the one that gave us these alloys that -- he was the head of casting for Dow. One was cobalt and the other one, the symbol of it is SR/Y. Then it's thallium, T -- the symbol is Tl; lead, PB; thorium, TH; uranium U, curium, CM; beryllium. And that was used in all forms, solid, liquid, and gas. It come in in solid form. They'd melt it down and then the fumes would come out as -- in the gas forms of it. Can you say them?

Yes. So under cobalt are Strontium and yttrium, then thallium, lead, thorium. They got four alloys of thorium, HK 31, HK 61, HM 21, and HM 31. And very fascinating are uranium, two types, natural and enriched. So maybe you ought to tell us again who -- who Mr. was. I mean, enriched uranium is not something that's in the FUSRAP, US Army Corps of Engineers reports. And so what -- what would his credentials be?

was the head of the casting department. And he was also head of casting for all of Dow at one time. So --

For the -- for the whole company?

For the whole company.

Yeah.

And I don't -- I can't tell you exactly where all of that has been used or anything. But that's -- that's some of the stuff that he issued to us before he passed away.

Wow. Well, let's see. The other -- the other elements that are mentioned by then or curium and beryllium. And has here that when the company was asked about radioactive materials to bring out a radiation detector and say they didn't see any reading but they knew it was the wrong detector. It mentions that and head of production control for the plant are the ones who told us about the detectors, but (phonetic) -- also told that the detector was the wrong type. told to keep his mouth shut. From the '50s on the company knew what they were doing.

So you know, I think there's been conflicting testimony. But again, the preponderance

0108

is there was regular use of beryllium, lots of it, 25, 50-gallon drums, 50 gallons would last two or three weeks in one department. So I'm -- I think it's pretty clear from -- from all of this that that was a -- a regular part of the scene at Dow Chemical and all its successors.

When I was in the rolling mill some of the customers was Boeing, Lockheed. We shipped to LocAlloyed (phonetic), FMC, Rocky Flats, Martin-Marietta, Hughes Aircraft, and Rockwell International. And as said most of that we used to have to put on warnings, you know, it was radioactive. So that lasted for quite a while.

Okay. So Stuart, we could keep on talking here and just take a break.

MR. HINNEFELD: All right.

How do you feel is the best way to go?

MR. HINNEFELD: I think that it seems like if everybody's had a chance to have their say, there's another meeting scheduled at 4:30 which is about 20 minutes from now.

Okay.

MR. HINNEFELD: So I think it may serve well to break now. And again, at 4:30 it will the

0109

same format. So it's not like there's new information at 4:30. It will be the same format. Anybody's

welcome to stay and continue this conversation. But I suspect there will be some additional people who couldn't make it at one --

Right.

MR. HINNEFELD: -- who will be coming at 4:30. So everybody's on their own in terms of whether they want to stay or not. But it will -- it's just going to be the same format at 4:30.

All right. That would be terrific. Thank you very much for listening to us.

(Whereupon, the afternoon session of the Dow worker outreach meeting concluded.)

0110

EVENING SESSION OF THE DOW OUTREACH MEETING

Okay. This is This is the continuation of the afternoon -- late -- the evening session of the Dow outreach meeting for NIOSH on August the 22nd. We've got a few more people that have arrived, and I'm just going to start and turn the microscope (sic). where -- oh, yeah. is here. Why don't we let him start and then we'll take it on down. And maybe you can --

Hello.

why don't you give your name and spell it for them and tell them when you worked there and what you -- what you did when you were there.

Okay. Let's see. I worked there from 1989 to My name's as in I hired in in the leaching process. Approximately worked in there

around a month. I signed a bid in casting, and I worked in casting, oh, five or six years. I went to the aluminum unit and worked there a few years. Then I went into the maintenance and worked there the rest

0111

until I got -- we went on strike.

Leaching process, I remember that. There was a bunch of old barrels back there. We busted them up and took whatever was in it and put it in tanks and processed it, took the good from the bad. We didn't know exactly what we was doing. We was just trying to get the good metal out of it. Pretty nasty place back there.

In casting department we did a radiation cleanup. We wore badges. We wore badges, suits, like an asbestos type suit, and a dust mask. It was on the slab unit. All we did -- we melted on the unit only. We didn't cast during the cleanup. I -- I believe the billet unit was casting while we was doing it. Matter of fact, I know they was.

Can you tell us what year that was roughly?

Well, I remember I got laid off right after that. And for some reason I went down and bought a brand new car. I was laid off and people don't normally do that. But that's what I did. It was 1992.

So what year was it?

So that's true. 1992. Yes.

Okay. So can you tell us --

0112

you mentioned the radiation cleanup. I'm not -- I'm not aware of a radiation cleanup in 1992.

It's the first time I ever done it in my life. You know, I don't --

Well, tell me -- tell us about -- so this is what you all did at the plant?

Right.

Well, just tell us what you did exactly.

We took chips and we melted them on the unit with a stirrer and fork truck rollover. I believe we dumped them in tubs or probably actually dumped them in tubs and actually dumped the barrels into the pots. We melted it.

Supposedly all the radiation or -- and I know the dirt goes to the bottom of a magnesium pot. It's called sludge. We would sludge out the dirt, the bad stuff and we would put it in barrels. Then the welder would take and weld it up.

Yeah.

I can't remember the amount of barrels, but it seems like seven or 12. I'm not for sure. And one incident I had in there --

Tell me what they did with the barrels. You know?

0113

Yeah. I knew of the barrels. Well, there was -- we worked around the clock doing this, and I actually don't know how long it was. It didn't seem too long. It seemed like a couple weeks or a week or something like that. I'm -- I'm not for sure on that. But I know the barrels went to the outside of casting department in a out type building, but you could enter it from the inside. Because I was told by my supervision to take these people that was going to take the barrels out later on. Now, this was probably a few -- quite a few years later. I was to take a ladder and put it up on the outside window so they could look in there and see what they was dealing with. That's exactly what I did.

Okay. Go ahead.

One thing that was kind of odd about the whole deal was the spec lab lady was in there -- and we was kind of curious about this. Like we don't know nothing about that, we was young guys. And I was -- we was talking about radiation quite often. And some people would -- wasn't worried about it and some people was, you know. But I asked the spec lab lady -- I go is this stuff going to hurt us, simple as that. I don't know. And she goes there's more radiation -- I remember it plane as day --

0114

there's more radiation that comes out of a microwave than what you guys are messing with. So I said all right, let's try it. So we took a Geiger counter to the -- the microwave, and the needle moved. Then right after that we walked right straight to the sludge barrels. We took it to there, and it pegged out, simple as that.

Then a little while after that I got laid off work. That's the only time I've been -- ever been laid off there in my whole -- well, years. And I was off for exactly weeks. And I came back to work and I came back on a midnight shift. And I asked in the safety meeting how'd the badges turn out because I was curious, you know. And they said everybody was all right. A couple of the guys made fun of me for asking, say you ain't going to glow in the dark or something like that, you know. And I just left it at that, you know.

Then I asked again later on about them at another safety meeting. I was told they was posted, everybody's fine, but I never did see nothing or hear nothing about it.

Is this the episode you told us before one of the ladies maybe who showed you through with the Geiger counter didn't return to work?

I've never seen her since then.

All right.

I never seen her again. Yeah.

Okay. Thank you very much.

Okay.

Hello. My name is [redacted] and I worked for Spectrulite. I started at Spectrulite. When I started there I started under Phillips Dodge (phonetic), then it was Conalco, and I think it was Consolidated, then it went to Spectrulite. But through the years I -- I did general stockman, aluminum melter, and mag melter, and laborer. And I worked in all the departments, extrusion and the rolling mill.

But getting back to the pot room for the radiation we wore special clothes and we wore a name tag with a badge, you know, with our name on it. And after each shift they would collect all these clothes and put them in a plastic bag after each shift. And where they went I don't know after that, you know. And when we was melting -- melting the chips -- you know, we melted a lot of chips and everything, a lot of five pound chips, serious chips and everything, you

know. And you know, they would just burn, you know, and it'd be, you know, pretty rough, you know. But they never would say anything about the radiation or anything like that there, you know.

But then when I was out on the floor as a general stockman or either fork truck driver I used to drive and used to load up the -- what you called it -- the sludge, you know, like was talking about. I did the same procedure he did too. You know, when we sludge we sludge out the sludge and put them in barrels and let them cool off. And they set them on the side the wall, you know.

Then later on when they cool off when it's time to load them up the fork truck driver go in there and take them back down on the dock. And then we would load them on the freight trains, you know, to carry out, you know. But like I say, you know, as far as this radiation thing, you know, we never was told anything about, you know, training or anything or preparation or anything like that there. You know, I wasn't, you know.

Did anybody mention the word thorium to you? Did you know that there was thorium in the pot room?

Yes, sir.

0117

Okay. Okay.

Uh-huh.

All right.

And we knew thorium, you know, and the beryllium too, you know.

Okay. Okay. So -- so just one more question about -- you're kind of unique because you worked for all the companies, right? Did you actually work for Dow itself?

No, sir.

Okay. So you started at Phelps-Dodge?

Phelps-Dodge.

So you're from there.

1972 to

Right. Well, that's pretty interesting. So all of the companies that bought the place after -- after Dow?

Yes.

Yeah. So -- and then you described about wearing the special clothes and the badge. And other people have said that particularly the badges started to be worn pretty commonly after Spectrulite bought it. Is that accurate as far as what you know?

That's correct.

Okay. But not so common in Phelps-Dodge and Conalco era; is that correct?

That's right.

Okay. Uh-huh. Okay. Good. All right. That's pretty good.

that's what I was concerned about, when you started wearing the badge and clothing. What kind of clothing was that you said? My name's

They were regular -- regular clothes that I remember.

The -- the regular clothes that we wore in the pot room?

That was our regular uniform.

That -- that consisted of a -- a bib overall with a blue denim shirt.

(Inaudible.)

And I think I stated before that they were fire -- flame treated. They weren't fire -- they wouldn't burn, they'd just flare up. But I don't -- I'd retired in

The procedure used up to the time that Milam retired was we sent the clothing down to a handicapped workshop on the other side of town, and they washed that clothing in baking soda which treated the clothing so that a flame would not -- if you got a -- a hot chunk of metal on you, it wouldn't flame. It would -- it would smolder and burn through. I've got a scar here on my chest to prove it.

And then we went to a new and improved clothing material, and I think it was Mylar. Does that make sense to you, Mylar? I think that was the clothing M-I-L-A-R (sic), Mylar. And it was supposed to be an improved cloth. And we tested it all the time when we sent them out to be washed and they came

back we -- we tried to burn them up. We'd -- we'd take a piece and actually put a flame to it to make sure that it wouldn't -- that it wouldn't flame. And it did do a pretty good job that way except if you got hit with a large amount of magnesium, there's no way. I mean, it wouldn't -- it wouldn't protect you. It -- it would just burn right -- right through to your skin.

All right. Let's see. Anybody else who's come that wants to comment tonight?

I didn't comment when made the statement on running the odd looking thing on the Lindbergh. That was -- I followed him on

0120

that shift and -- my name's And it was for the stealth bomber and it was for Allied Metals. That's the one that went in the refrigerator car there. And they banded it on skids and ran it through and in and out and they put it in the refrigerator car. That was about in the 1900s (sic). That's all I got to say about it.

1990s was that, or --

Yeah. 1990s.

Okay. All right. Okay. Anybody else who wants to make any comments?

Yeah.

I think -- I think the name of that company was Allied Signal that sent those billets over to run them on 7 Press or 12. Allied Signal was the name of the company. can you verify that?

Yes. I -- I was told that they shipped their billets in and ran it on 7 Press and then took everything out. And I was told that was Allied Signal.

Can I ask you to please say that so -- because -- so the court reporter can tell every --

0121

Okay. I'm I was a in extrusion at the time. And in the '90s there was stacks of billets sent in and stacked up across from the canteen there by 7 Press. And I was told -- and I think it was

who was my boss that told me -- that it was Allied Signal. It was hush hush, we weren't to talk about it. And I was told that the people who ran those billets ran it on a voluntary basis. But I don't know if that's true.

Well, I would say this. In the medical world if you volunteer to do something but you're not informed what you're doing, then that's really not okay, that's not informed consent. So they may well have been volunteers, but they -- it didn't -- from -- do you think the people who were actually doing the extruding -- do you have any reason to think that they were actually informed?

I do not think -- I do not think they knew what they were working with. And I was told it was thorium.

Okay. Good. That's great. Thank you. Anybody else? Yeah.

Hi. My name and I worked there from ears from 1974 to 19 -- I think it was And it's And I worked as -- the first year I just had came into the rolling mill I worked as a clerk in there. I was 18 at that time. Went and picked up paperwork all through the rolling mill area from one end to the other. And there was always billets and all the rolled aluminum were out there.

Then I went to extrusion. I worked there for a short time. There was always billets and everything out there also. We used to walk around all the time, went into maintenance. Into there and then went in to the storeroom area.

And then from there I went and worked the last of the time over in the lab. I worked in the spec lab, the chem lab, and also -- and the -- oh, what -- the other lab where they -- the testing lab. And most of the time I worked shift work, and I had a crew. I had was on with B crew testing all the samples, magnesium and aluminum. And we used to use lathes, shave them off, basically tell them what they needed to add and spark them. You know, tell them what -- what product they needed to add into their molten metal to bring out what other alloy, whatever alloy they needed.

And then basically we just wore lab coats.

And we were told to take them home and wash them. And I mean, that was pretty much it. I mean, there was not any rules about eating in the lab or anything like that. You know, you're there by yourself pretty much on the midnight and evening shift.

But we tested all those samples out there and just sent out the information to them. We would go out there into the pot room or aluminum unit and check and see what -- what was going on out there periodically. And -- but there was quite a few different alloys that we ran. And there was the thorium and beryllium. But I'll be real honest, I was young and naive and no one ever told me anything about it, if there was something to be informed about that would be any kind of a danger in any way to my health.

Also, we used to -- when I worked in the chem lab I used to go down and I used to take oil samples from the trucks that came in and then water samples all over the plant all the way from the outside area back behind the rolling mill, behind extrusion. Because I used to ride a little bicycle, bring them all back, and they'd test them there in the chem lab. And then we used to test, you know, a lot of the samples there too over in the testing lab.

tell -- tell us what you tested for in the water samples.

You know, I actually did not do those tests, the chemist did. So I could not tell you that. was one of them.

But why I think your story is really particularly interesting and relevant to what our job is all about here is for our special exposure cohort application we're going to have to classify people by jobs. And we've heard a lot of testimony tonight that most of the people who've spoken with some exceptions worked in many departments and many jobs. A few worked in the same area. You worked in lots of different areas. So when -- when you list for instance what you did at -- at the company, I mean, where would you class it? What job would you say you had? You know, you've told us many. Were you a lab tech or --

I was a lab tech.
Okay.
-- when I left. I spent the majority of the time in the lab.
Okay.
At the very first of the month I had to go into the rolling mill (inaudible).
Did you wear a badge?

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MR. HINNEFELD: You've got to speak up.
No. I did not.
I'm sorry.
What type of badge?
Let -- let me tell you what I want you to -- I've got two questions. Maybe we'll -- this -- so this is The first question is you mentioned that you tested for magnesium and aluminum. And what that interests me is, you know, magnesium we've heard from many people was not really -- not used in the pure form, it was usually alloyed with something. So would you actually -- and let's say you are doing spectroscopy. Would you detect thorium and beryllium, I mean, or is that just something that you heard was around? In other words, would you write reports that had aluminum such and such, magnesium such and such, beryllium such and such, thorium such and such?
First of all, they would send back through the -- the chute they'd send back a -- a sample. They would pull the magnesium with like glass tubes because when it came back in it was all the pieces of glass and -- and you'd have your little sample. And we would run the lathe and clean it off and then test it. It was in the -- they called it the

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old gray mare or something, the spectrometer.
But what we would test for is we would -- we would mark all that down for them on a sheet, what it showed and what they needed to add. They did have a formula there that we were supposed to look at to tell them, you know, what was there and -- and to help them, give them a guideline on what to add. And yes, it was set up where it showed thorium, beryllium, you know, magnesium, everything that was in that product that they were making for that alloy. It had all the

different alloys on it. And you know, I had -- I had a copy of that sheet actually, but my basement had flooded, and I -- I lost all my paperwork but a few pieces that I had left.

Second question. I will give you back the mike. We're interested in who at the plant, if anybody, actually wore radiation film exposure badges. Did you wear a badge like that?

No. I did not because I didn't even know there was radiation in anything I was working with.

And from -- from the prospective of a person who worked in the lab most of the time was there any radiation safety officer that ever came and talked to you?

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No. There wasn't at all. We were never told any safety precautions in any way. We just had safety glasses and a lab coat. And I mean, I don't know if it makes any difference, but with what I have found that happened with this is a lot of breathing problems. And I'm a nonsmoker. I have never smoked in my life, and I have all the kinds of breathing problems. And I'm on a lot of different breathers.

And as a follow up to that about breathing problems in the plant -- now, we've heard of some people who were injured and went to a local hospital. But was there any kind of medical person there in the hospital, nurse, any kind of industrial health person, anything like that? If let's say you had breathing problems -- let's just talk about in general was there anybody in the plant you could go to?

The time that I worked there there was not. What they did is they basically called the guard in and if there was some kind of a issue that you needed help and the guard would come in and check it out. But I mean, they're not -- I don't think they were -- had any kind of degree in any way for that.

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Thank you. And then -- then I had one more question for is it

Yes.

eah. So it -- I think you said -- and I wanted it expand a little bit. So you were a basically, right? And -- but what's important is -- but what was your contact with the other parts of the plant? In other words, did you go to different places or were you -- when Stuart and Dave Allen and the health physicists try to reconstruct doses sometimes they make the assumption, which is reasonable, that if you were a or a for instance you might not ever visit the rest of the plant. And -- and I think we need to put on the record whether that's a true perception or not in -- in your case. So why don't you elaborate on that just a little bit. And maybe you could talk not only about yourself because they're not -- we haven't had many here. But maybe you could talk about that in general whether folks like you visited the rest of the plant.

Well, we had offices in the plant. My office was in extrusion, and I had to walk all the way through maintenance, halfway through extrusion, and into the offices. And yes, I walked

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all the bulletin boards. And the last several years I was there I was the only in the plant. And so I had to go to casting and the rolling mill because I did all the manning schedules. And I was out and about all the time.

Well, let's just take a specific example. Like let's say people were extruding Mallinckrodt uranium on the extrusion presses. Did you ever come in close contact with the -- you know, the presses? In other words, were you walking around the machinery or in the castings? Like would you go to the casting room at all or -- in other words, I -- I know it was all in the plant. But would you have to pass through those areas? That's really what I'm getting at.

Yes. Yes. I did.

Okay. Okay.

I'd like to go back to what said earlier about what jobs, you know, did you do. Like in the rolling mill the first week of the month there was no overtime. You know, they shut all overtime down, they didn't work nothing

on overtime. Then the second week well, they worked a little bit of overtime to get caught up. The third and the fourth week -- well, the third week it was

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anyone that would work over they worked over. And then the fourth was they shipped everything out they could to get it -- you know, so they'd get their profit out I guess that month. So there was a -- a lot of overtime.

And to say, you know, were you just one job, we have like maybe 20 jobs in the department. And if one was a little bit slack, they'd send them over to work with the other ones. So each department -- the only time you got into a -- like one job was whenever you were like in maintenance, you were a electrician, you were a millwright, or a pipe fitter or something like that.

And they -- as I said earlier, you know, that no one went up in the steel over maybe 20 hours a year if it was that much. And in extrusion I was a -- I started out as a instrument man then they combined the instrument and the electricians together. But we still kind of kept our same, you know, instrument or electrician. And we used to have to go up in the steel just to clean the fire checks. There was three fire checks up there. We had to clean them once a week, and that took about two hours for each one to clean it. And then there's -- there was two on the 7 Press and two on the 6 Press that you had to

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clean.

And then you'd go up and you had to work on the -- they had push button controls for the windows. You had to work on the motors on the windows and that so you were up in the steel all the time. Then you had the revamping on it. And everyone over all the areas that was contaminated pretty well the people more or less ate their lunch right there. And we were up in the crane and you'd take a -- a beam that's about 12 inches and it's filled up with dust and that, it might have five or six inches of dust. And when you're walking across it your dumping that dust down on top of the people that's sitting down there below. And in the extrusion department our shop was right -- let see -- it'd be north of the 7 Press.

And that's where you worked and repaired stuff. And you ate your lunch right in there. And you were right in the midst of it all the time.

And go back to the -- like the hand salvage in the rolling mill they'd go through a hundred sheets of emery cloth per shift sanding out the metal and that. And you have a lot of dust. And like, I don't remember -- I think the one that said that you just take and blow the dust off to the side. You'd try to blow it up against the wall so you can pick it up. And you're -- you're in the dust and everything else.

And to say one job -- you just couldn't say, you know, you were on -- a crate builder, you know, loading trucks or if you were a roller. The rollers were -- more or less that was their job. But all the rest of them did everyone else's job. And you had the cranemen, they -- they were kind -- that was a qualified job. You had to be qualified to be a craneman. But other than that wherever you -- unless they needed you. If they needed you, you were qualified for any job. But you were all the over the place and all over the departments.

And as far as having radiation in any certain building, they had it from one building all the way through all the -- every building out there had radiation in it. And they had it stored in -- quite a bit of it in each department. So I don't know if that will help you or not, but that's where I'm at.

again. Just what said was that the Illinois Department of Nuclear Safety memo stated that the only -- the safe work condition was between two to four hours per year. When I read this document I thought that was very strange because if you could only spend two to four hours a year up in these beams where this dust was located, well, that tells me it had to be pretty strong dust, radioactive dust. And that memo also went on to state that they was hoping it was hard, pancake type dust. Now, farther along during this investigation, this scoping they realized that this wasn't this hard, pancake type dust but a loose fluffy type dust. And they mentioned the word suspension

several times and the possibility of resuspension.
Now, I can guarantee that working under this press for all those years coming back from a Monday after, say, it rained on a Saturday or a Sunday I would have to wipe dust off of every desk, all our equipment, the tooling to read the numbers and a situation like it. So dust was always falling from these beams. The windows would always be open in the summer and that wind would always blow it in. The crane driving back and forth continuously would always shake it off. The heavy press occasionally would break and shatter a giant ramp which would vibrate the whole building. And we nicknamed this red rain because the rust would fall off the beams and there would be splotches all over the place that we'd have to blow off with a air hose or wipe off with our hands. So this dust like he said was prevalent

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everywhere. And it wasn't the thick type pancake that he was expecting, but a loose fluffy dust.
And like I also have a respiratory problem that started when I was working there. I actually had to go to a pulmonologist while still employed. So I haven't been able to go since because my financial and medical condition.
But this dust was of the most concern when I seen it was between two to four hours per year, that's if you're up there in it. What if it falls? No one ever took gravity into account. You know, they always thought you had to go up there to be with it.
But like he said, we didn't have breaks, we was on production. Everybody went to break at two o'clock, then a lunch break, then another break at, you know, ten o'clock. We never got that. We worked straight through and only had one break a day, and that was lunch. We had to eat most of our meals, our snacks, everything on the press under this dust. So this made a large difference.
I wanted to ask a question because I think it's important and we haven't really talked about it. He and I share a common belief that the FUSRAP Army Corps of Engineer cleanup in Building 6 was not particularly exhaustive when

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that -- when that actually occurred. And my question

was -- he worked on the 7 Press, but we've also had testimony at our other meetings that some of the other presses were used. We're not sure. I think most of the uranium and the thorium work, the special jobs were done on the 7 Press.

Almost, yes.

But I think there is some evidence that maybe the 9 Press and some of the other presses were also used. What my question is is when the Army Corps came in to clean up I know the report describes drapes and plastic sheets and you -- you saw that. But I think there's a discrepancy about -- did -- did you see them doing swipe tests for instance on the presses themselves? In other words, to get -- get a reading on surface contamination on the presses, around the presses, on the floor, and so forth? Was that parts of the testing process?

Now, if this was done, it was done without me being able to see them or watch them because it was enclosed from four stories up all the way to the floor with plastic, the whole work area, my work area specifically. Now, I never did see any swiping, but I did see a large table about like you're sitting at now with at least a dozen Geiger counters

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on it. And like I said, whenever I would ask questions they would just turn their back to me or just say no, no big deal. They would just give me a flippid (phonetic) answer because I was not of any importance to them.

Yeah. Well, I guess that's the final thing I'd like to put on the record about that cleanup. It -- it sounds to me like there were not only not very good communication between the people doing the cleanup and the workers around the site. In fact, the plant had really shut down, right, and -- and people were laid off and -- and -- and so forth. So I just think this is a good example. And I think if you all will do a careful look at those cleanup reports, the thing that I thought there was really aposti (phonetic) of was data on the presses that were actually doing the work. And obviously that -- to me that would be one of the first places you'd start to look. So --

again. Not only on

cleanup. They only walked down through -- up to 9 Press. They never went any farther to see if there was any radiation any farther. They ran radiation material on 8 Press, 10 Press, and that's on down. And the heavy press also pushed I know thorium. In
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'79 they were on tempcon where they were running around the clock, and they pushed it for two months. They were for missiles material. So they never checked anywhere else. The little -- they never checked the rolling mill or the casting department neither. They just checked right around 7 Press, and that's where they got the readings from.

I guess I'm going to make my final comment and I promise I'll stop. But I need -- I need to say this. I think that when you all get to constructing doses for the workers at Dow one of the few documents that you will have besides the information that, you know, you turn up on your own and what -- what we provide is going to be those cleanup reports. And I think we want to go on record as saying that if you use those cleanup reports by the Army as the full extent of contamination at that site, that we feel that's very inadequate.

We -- we really feel that that whole cleanup operation was not done very completely. We -- we challenge the idea that the thorium was not related to AEC activities, and we believe that it was an absolute mistake from what we've heard that the extent of the scoping and the survey and of the buildings was so minimal.
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And I think the other evidence that we've presented to you today is that when finally a really good comprehensive radiologic survey was done of the building in 2003 and -- and -- but even later than that that was a qualitative survey in 2003. In 2005 in March the Pangea Group came in and finally after all these years, decades did a really comprehensive survey particularly for thorium.

Now, they did do some measurements while they did that for -- for uranium. But you got to understand that by 2005 when that was done and today the entire extrusion area is completely cleaned out. There are no presses there anymore. They've all been

cut up, sold. They're gone. So you know, as extensive as that survey was -- and I'm assuming also that as the presses were taken out probably there was some cleanup done as well. So I'm -- I'm not sure even that that -- even though it was comprehensive that it was a very good comprehensive test of what was there when these workers were there.

And so we -- we really would not like you to use that -- that cleanup data and say this is representative of the working conditions there at the time. So that -- that's what I want to say.

. Just a

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quick question. I heard the name Allied Signal. Was that correct?

I think that was the name of the company. I could be wrong, but I believe (inaudible).

If she's wrong, I'm wrong because I got that information from her.

Okay. The reason I'm asking Allied Signal --

We ran it on the 7 Press.

Are you familiar with Allied Signal? Are you guys familiar with Allied Signal?

MR. HINNEFELD: Not -- not very much.

Could you tell me who that is? I -- I know I heard the name. It's another classified site. So that might be a product coming from someone other than Mallinckrodt if I'm not mistaken. Who is Allied Signal?

MR. HINNEFELD: I think -- I think Allied Signal is a -- a aeronautics company, isn't it?

Now, is that Hematite?

MR. HINNEFELD: No. No. It's not Hematite.

Okay. I'd like to just do

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a little homework on Allied Signal because that is definitely another site that's been mentioned.

MR. ALLEN: I'm about with you. I've heard the name and I can't recall.

Yeah. It'd be worth taking a look because -- it'd be worth taking a look because

that may be product. You did say they were billets or something? That might be another product coming from another supplier other than Mallinckrodt. And it rang a bell for me because I definitely saw something I wasn't comfortable with with Allied Signal. So I guess I'd just like to do a little homework on that. I thought maybe you guys might be familiar with it.

Back in the '90s -- I'm not for sure, it's the first part of '90s they got about six million pounds of ingots in from Russia. And come to find out it all was radioactive. That's when they had that Shimogal (phonetic) --

MR. HINNEFELD: Chernobyl.

-- explosion and all this got contaminated. When they ran it it was all the way across the 4 Building and all the way in casting where they stacked all this metal. And they couldn't figure out why it was spiking the spec lab out there. Well,

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they finally found out that it was radioactive so they sent it back. Russia sent it back to -- or sold it to Mexico. Mexico sent it back in, and we got it right back, the same material. And we've had a couple of foremen that had to go out there and pull all the tags off of it. And so no one knew what it was.

And to go back -- you know, they were talking about the burning in chips and that. Well, whenever they'd burn and melt chips in I'd say seven-eighths of it would burn up. And from the casting over to the rolling mill is probably about -- oh, about 1,200 foot away. And them chips, the smoke and that would be all the way over. It'd go at least 1,200 foot, and it'd be bad over in the mill. So

Thank you, I'd like to add to that because what he said is exactly true what everybody heard out there at the time about these ingots from Russia. They were stacked on pallets, and they were stacked just one stack on top of the other just two high. And there was enough of them to fill this room. That's how much was sitting out there right next to 7 Press believe it or not for up to six months. Now, this was supposedly the second time it came back. And of course, it was a rumor at the time.

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So you know, a rumor is just a rumor, you just take it for what it is. But now with seeing everything that's happened and unfolding in front of us this gives it more credence. And what even gives it more significance is these ingots that he was talking about that were shipped over from Russia these was magnesium, right? Now, all the ingots that we usually acquired are Canadian, Texas, they're usually local or from the States. Now, not always, but mostly.

And these metals were always silver and -- like a coin, a new coin, not shiny like a mirror but very silver metal. Now, these metal ingots from Russia, these magnesium ingots, they were tarnished. They were a dull gray. Now, this would give a good credit to coming from overseas because salt water and salt air does this to magnesium. It does corrode it, it does taint it, it does discolor it. And if it was sent up across the ocean, it would make sense why they were not shiny at all, none of them. You know, it was -- they were wrapped in plastic, shrink wrapped, but still they were dull gray, not shiny like normal ingots.

And the supervisor who was told to go out there the second time after they came back -- now, remember he bought this metal twice. If it wasn't no

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good to run the first time, why was it shipped back to the owner. And then the second time it was returned he done bought the same metal twice. It was slowly alloyed with the rest of the metal. I've spoke to several other employees who worked in the pot room, and they would say they'd go throw one gray ingot in with ten shiny ingots. Now, they was slowly distributing this because it took six, seven months before this pile the size of this room finally diminished down to small enough size.

And like I said, the foreman that took these little red tags off in a foreign language off of each pallet also noticed Mexican writing on them with chalk. So that was where the suspicion that they was -- also came from Mexico. Now, after all these ingots were all gone and the floor as all empty of course there was dust everywhere. I had to clean it up with a sweeper, it was my job again.

Now, the other rumor which of course now seems to more make more sense is that there was a oven, sort of like a pizza oven over in the rolling mill. Now, there was four ingots about nine inches in diameter and about oh, I'd just say 20 inches long because that's how long the oven was. And these four ingots were also a dull dirty gray. They looked like

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they'd been in there, they had cobwebs, it looked like dust accumulated on them. Now, when I was in the rolling mill working I never noticed these. And it was out to the corner, maybe it was put off to the side for a reason.

But right before the 2000 cleanup around January, about four or six months I noticed this pizza oven with these four billets in it still -- you could see the butts of them sticking out -- was relocated. It was picked up and moved and parked in that paint shop that's -- that's over by the storage department. Well, the reason I noticed it then was because every day I would have to walk past it to go out the door, and on the way into work I'd have to walk past it. And anything new, you know, you'd notice. And I noticed this pizza oven with ingots in it. Well, that seemed very peculiar but it was none of my business so I didn't ask questions. And surprisingly they disappeared right after the 2000 cleanup in July. So maybe these were also contaminated thorium or uranium ingots -- or billets I should say. But that was also just another rumor that could be true.

One of the people who has been helping our effort in a really magnificent way here is . who's a discovery specialist at

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SimmonsCooper. And one of the many interesting bits of research that she supplied to and I for our attention was a -- a lawsuit brought by Aetna, the big insurance company versus Spectrulite Consortium in about 1993. We don't have that record with us, but I remember looking over it. And this was a case, and the issue was who was responsible for a thorium cleanup. And I think the amount of the lawsuit was around $17.4 million. The case was settled out of court. Aetna was the -- I -- I think they had brought the complaint.

We were quite interested in getting the exhibits to the case because we were looking again for -- this was prior now of course to the time when we got the nice Pangea report from last year. But we thought it would be quite interesting to see the extent of the thorium in the early '90s. Unfortunately the exhibits to that case are sealed. And we think that there's a possibility still that the judge in that case may be convinced to unseal those exhibits.

But it's just something to -- to enter for the record. And I think it adds to the general story that there was a problem with the way thorium was handled, accounted for over the years. And this is

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just one more example that at least somebody else beside ourselves thought that that was the situation. So I guess that's it for that particular item.

My name's I'm very concerned about most -- I was here this afternoon -- about the employees in the pot room and the casting department. And I know you're going to determine -- try to determine the dosage. And I handled that every time we ran it between 1954 and And I'm -- what I'm concerned about if we were exposed to more radiation than an individual at other plant after it became a solid product. And that is my concern for the fellows in the casting department. Because we took the raw thorium right out of the barrel which was about a five notch piece of it and they weighed about five or six pounds. And then we'd add so much of it -- whatever the lab called for how many addition we put in, we'd take that and put in the pots. And then later on we -- I think the thorium was in pellet forms. But my concern is if we had more dosage in what a -- what they would have gotten after it was a solid form.

And also, like I was here this afternoon. I was concerned about the sludge that we took to the dump over the years I was there. When

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it first was taken out to the dump there was no designated area for -- between thorium and AZ 31B or ZK 60 or whatever. It was all in one pile. Finally somewhere along the line after years somebody kept

complaining about how the thorium was stored out -- or the sludge was stored out in the dump.

Well, then they -- they came in. Dow Chemical built us a separate lab outside of the casting department, and they brought I don't know how many men in here. And they went out there with Geiger counters, and they worked for almost two years I think. I don't know what they did, but they -- they separated it all in a pile and I think they hauled it away in trucks, didn't they or railcars after that? They worked two years doing that like I say. And still in that time we were never informed this thorium would hurt us. I handled it many a times without gloves. We only had a cloth -- cloth gloves is all we used in there. And like we told before our -- our clothes were just a bib overalls and a denim shirt. So I'm -- still my concern is about the dosage that the men in there inhaled. So --

I'm going -- I'm going to try to pin you down to -- I know you said somewhere between '54 and 1990. But can you give us

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as close a date as you can for that?

You mean, when we started separating the sludge?

No. When they did the cleanup. You said they -- they cleaned -- they separated it and they cleaned it up for two years.

It'd have to been under Consolidated Aluminum I would imagine.

Okay. I'm sorry.

It had to be under Consolidated Aluminum I would imagine. I -- I retired under Spectrulite. But see, Spectrulite -- I remember when Spectrulite came in I had to also get all the scrap material and keep -- because as a and keep the men supplied with what to charge. And I was back in the area where all this scrap is stored and had it mixed in with the thorium alloy and other -- other alloys. And there was a man back in there digging around in there. And I said what are you looking for. He said I'm looking for that thorium. I said what's your name. He said , and I think that was And I said well, if you're going to find it, you'll have to root around

all in there because it's always mixed in with the rest of the scrap. The only thing that comes from the

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mill, they take a marking pen and mark on there HK 31 or HM 21. And I said -- well, that's the last thing I know what happened. And I -- that was right after Spectrulite took over.

And I'm sorry. I -- that was right after Spectrulite took over. Is that what you're saying?

Right.

All right. So just for the record then what is trying to -- is telling us is that the father, the man who actually was the chief operating officer, owner of Spectrulite, when he bought Spectrulite in -- which was in 1986. So somewhere around then, '86, '87.

It was was the son.

All right. So --

It was

Okay. was the son.

who's the current president, his father?

And he was

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looking through the piles. Now, this is the same pile that we were talking about outside of the castings department?

It's a separate storage area beyond the pot room --

Okay.

-- where they kept all the scrap metal.

All right. And he's interested in the thorium waste there. And then beginning about then you're saying there was some kind of a cleanup that took place for two years.

I don't know whether it was a cleanup or he was getting it ready to -- to be charged or what have you. I'm not quite sure.

But they were -- did they

move it or --
I don't know what he did with it. I have no idea.
Well, I don't -- but when --
Because it was still there when we took inventory, some of that.
Okay. You inventoried it. And then I guess I don't understand. What happened over those two years? Why -- why do you think it --

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that something occurred over the two years?
Two years after '86?
I'm -- I'm trying to get at how -- are you saying that they did this cleanup over a period of two years?
I don't know if it was a cleanup or he just looked through that alloy to see if he was going get rid of it. I don't know it was (inaudible).
Okay. So -- so you encountered him looking through that material; is that right?
Yes.
Okay. All right. Well, just also for the record the first cleanup that I know that's been recorded by anybody was by this Environment Restoration Group which could have been the resulting work. But that was not until, you know, 1992. And that's the one where a thousand railroad cars of -- of magnesium thorium sludge were hauled off site in railroad cars. Okay. All right.
This area you was just speaking of, this where the thousand boxcars removed this thorium sludge, this lot that was next door to SCI -- now, I've been wondering for a long time when

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SCI bought this factory they didn't buy that lot. They just bought the factory, but they did -- wasn't purchasing the lot. Now, when they bought this factory they bought this factory from Conalco. How come Dow owns this lot if Conalco owned it? And this was one of the big questions I never got an answer from or found in all my paperwork. If Dow still owns this lot, did Conalco also not buy it, or did they also purchase it and give it back? Because

Spectrulite, according to the records, does not own this property where all this sludge, the PCBs, and all this other contaminated waste was buried.

I think I can --

I think I can answer that. The area, the 40 acres across the street adjacent to the casting area was a known dump. And Conalco or Spectrulite or any of the other companies didn't want any part of that over there. It remained with Dow Chemical. That was Dow's headache so to speak, and the other companies that came in didn't want -- didn't want to deal with that. I mean, you really can't blame them.

I want to clarify that about that mag prime that came in that referred to and referred to the six million pounds. That did not belong to Spectrulite. We were warehousing that for

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another company. And we were supposed to use it and melt it in and make an alloy for this company. And that never came to fruition. We felt cheated because we thought they were using us for a warehousing facility and they weren't paying rent on it. We filled up the loading dock with it and we ran out of room. We moved over in the 4 Building adjacent to 7 Press and stored it there. We bought mag prime from Canada; Freeport, Texas. Dow Chemical shipped a lot of it in. And in the later years we were buying mag prime wherever we could buy it because we didn't have any money. And we bought a lot of it, brokered it through the port of New York from Russia, from Kazakhstan on the Red Sea. And I don't know where that's at in relation to Chernobyl, but I don't think any of that mag prime was radioactive. I really find that strange to believe that it would be.

. Okay. Well, we have gotten some certainly interesting and different testimony this afternoon. Anybody else who wants to say anything?

On the air -- air samples and that we used to have to have an instrument down there on the aluminum unit taking air samples 24 hours a day. And if it got a little bit high, they'd start

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shutting the unit down so it wouldn't go over it. And the pot room, I'm -- I'm not for sure what they -- how

they checked the air samples down there. But I know every once in a while they'd tell them hey, just shut the unit down for a while because the fumes are too bad going up through there. So -- but I do know on the aluminum unit they had a instrument taking readings 24 hours a day because we had to calibrate the instrument all the time.

I'm -- I apologize if I didn't hear it. I was talking to The samples that you're talking about, what were they sampling?

They were taking samples out of the exhaust flue. might know more on that, but --

. We had the -- we had chlorine tanks set up down on the aluminum unit and that's what we'd do gas furnaces with and -- and run chlorine in there all the time. And they were monitoring the -- the air quality for the chlorine. In the event that a chlorine leak existed, chlorine is heavy and it will sink. And the casting pit was six feet lower than the floor. Is that about right,

' And that's the first place the chlorine gas would head would be into the casting pit and capture

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the people that were working down there. So they were monitoring the chlorine. And that meter -- and if the chlorine got too high, the alarm would go off and that would -- that would alert the guys to shut down and evacuate and get the chlorine problem solved.

Okay. Well, I think I'd like to summarize then for the Dow part of the session, and then and I have a final comment. I think what you've heard this afternoon, preponderance of the testimony is that there -- we certainly can confirm the uranium work for Mallinckrodt. But in addition the -- then major radioactive contaminate at this site obviously was thorium for many years.

I believe that we ought to go back when we are ranking in importance all the things. We've heard this really massive testimony of how much thorium was used, for how long, in how many ways, and it was spread all throughout the building, stored throughout the building.

And also I -- I think it's really outstanding about this site that there was with many

different successive owners even though we've heard that badges were added to the program in 1986; that when you look at the whole picture there was very little what we would call modern radiation safety practices in that plant. There was a concerted effort by management to not tell the employees what was going on including people at the supervisory level who had to manage and advise these folks. I think there is a striking disparity between modern industrial hygiene and regulatory oversight of what was going on in the thorium licensing and in the Illinois EPA's oversight of the air emissions at this plant.

And I'd like to end by telling you and reminding you of the importance of what was saying today, that -- I think he's suggesting a path forward on analyzing the exposures that these workers got. And he -- he would recommend that -- certainly not exactly comparable but at least with respect to the thorium and thoron gas that maybe the Ames Laboratory not too far north might be a good place to start. And that if you extrapolate between Dow and its thorium operations in the pot room and the smoke and the fumes and you couple that with his pretty large experience with workers at the Ames Lab, that it's his assessment that just in a qualitative sense that these workers probably got tremendously high doses of thorium, in particular thoron gas and that that has to be factored into the equation.

And then I would just conclude that the beryllium use I think has been now pretty well documented, that it was regularly used. And really the beryllium was there. There's no evidence that anybody -- I mean, that the safety aspects of beryllium which is one of the most toxic metals known was ever mentioned at all. And there's certainly no evidence at all that there has been any attempt, any acknowledgement that I'm aware of at all by any regulatory agency that beryllium is a problem at the plant. And it certainly has not been remediated specifically itself.

So you know, I -- I think this -- this is a -- a really good example of sort of the ostrich complex being demonstrated, that everybody hid their

head in the sand and pretended that all of these exposures were not taking place for a long period of time.

I guess the final thing that said that maybe I ought to add to -- to the narrative for the two sessions is -- without belaboring the point that he and I also think that the Department of Energy cleanup in 1993 and '4 at the GSI plant or -- or what was then owned -- the property then was actually owned by National Steel. So Granite City Steel had sold it and National Steel owned it. But the comment is that

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we -- we also believe that that cleanup was very restrictive for the extent of the uranium and the finding that the uranium was only in building -- in the old Betatron building is really almost, after all that we've said, was -- was pretty unbelievable.

So we would ask you to cast a scientifically skeptical eye on that report and combine it with all the information that we've tried to provide with you yesterday and this morning at GSI to say that the extent of even the uranium contamination where you've certainly heard -- actually Mark Lewis mentioned something that I -- I think we ought to all think about and that is that besides what we told you at GSI about radioactive contamination and activation effect which we can all debate and discuss, there was actually just contamination by the uranium. The oxides were knocked off and there's abundant evidence now. You saw some wonderful pictures of dust all over the old Betatron floor with truck tracks in it. So that floor was extremely dusty. And when those trucks went back in the plant it just carried that dust in there. And I'm assuming that some of the dust was the oxides from the uranium pellets.

So there are many pathways forward. And I know the epidemiologists among us love to talk about

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pathways and acceptable exposure pathways. And -- and that's legitimate. Well, we're trying to provide those to you. The pathways were the dust that was circulating and spread all over the plant originating in the old Betatron thing.

So with that I think I would really like to thank you all for your attention and for giving us

so much time, for being here, for allowing us the opportunity to express our knowledge that we have of these two sites.

MR. HINNEFELD: Well, we'd like to thank you and who've done such a good job organizing out here and everyone who came and spent time with us and shared your information with us. It's -- it should be very helpful to us as we -- as we go forward. So thank you very much.

Thank you.

(Whereupon, the Dow worker outreach meeting was concluded.)

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CERTIFICATE PAGE

I, Court Reporter, do hereby certify that this Dow 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 18th day of September, 2006.

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[Court Reporter]