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DAY TWO

ABRWH BOARD MEETING

The verbatim transcript of the Meeting of the Advisory Board on Radiation and Worker Health held at the Millennium Hotel, St. Louis, Missouri, on June 25, 2008.

STEVEN RAY GREEN AND ASSOCIATES
NATIONALLY CERTIFIED COURT REPORTERS
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C O N T E N T S

June 25, 2008

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P R O C E E D I N G S

(8:30 a.m.)

WELCOME AND OPENING COMMENTS
DR. PAUL ZIEMER, CHAIR
DR. CHRISTINE BRANCHE, DFO

DR. ZIEMER: Good morning, everyone. I'd like to call the meeting to order. We'll resume on our second day of deliberations of the Advisory Board on Radiation and Worker Health here in St. Louis.

I'd like to remind everyone again to please register your attendance with us, if you've not already done so, on the registration form that's in the entryway. Also, members of the public who wish to address the assembly at our public comment session this evening at 7:30, there is a sign-up sheet for you there as well. Copies of the agenda are on the table in the back, as well as support documents relating to various topics that will be under discussion.

I'd like to call attention to the fact that on today's agenda the item called "Special Science Journal Publication", which was on the agenda for 9:45, that item has been covered -- was covered in yesterday's session so that will not

be on our agenda this morning. The Department of Labor update for this afternoon was covered yesterday afternoon. That was originally scheduled at 2:30 today so that will not be on today's agenda. The Board interactions with Congress, which was scheduled at 3:00 today, was also covered yesterday so will not be on today's agenda.

There may be a couple of items that do get moved forward, depending on how our time goes today, but otherwise we will follow the agenda as you have it.

We have some comments from our Designated Federal Official, Dr. Christine Branche, including some phone etiquette instructions.

DR. BRANCHE: Good morning. For those participating today in the room, I want to let you know that the hotel has notified us that there's supposed to be some fire alarm testing.

DR. ZIEMER: At what time?

DR. BRANCHE: I'm told between 11:00 a.m. and noon, central time. I've also been told we are not to leave the room. That's only a test. We can only hope that it'll be brief and quiet.

For those participants by phone, we do ask that

you mute your lines. It is critical that you mute your phones so that everyone participating by phone can hear every part of the discussion here at the conference hotel, as well as comments that are being made by your colleagues who are also on the line.

If you do not have a mute button, then please use star-6 to mute your lines. It's important that a person even now mutes their phones. If -- when you're ready to speak, please un-mute your phones, including using star-6 to un-mute your line when you're ready to speak. And Dr. Ziemer will give an indication when it's time for phone participants to weigh in.

Also for phone participants, if you would please -- if you do need to leave the line, please do not use the hold button. That provides an interruption by whatever music or sound your hold system provides and it disturbs the line.

So again, if all phone participants could mute your lines, we would very much appreciate it. Thank you so much. Dr. Ziemer?

(Pause for telephone noise)

DR. ZIEMER: We still have someone on the line

that has -- because of the noise, has failed to hear the announcement to please mute your phone, so please mute your phone if you're on the line at this time. If you have no mute button, use star-6. If none of those work, you may have to hang up. Thank you.

I don't know if we have to isolate that line if that noise continues --

DR. BRANCHE: We might have to.

DOW CHEMICAL COMPANY (MADISON, IL) SEC PETITION

DR. ZIEMER: -- but thank you. Our first item this morning is a petition from Dow Chemical. We have an -- the Dow Chemical petition has undergone some changes over a period of time, and we have previously had an earlier evaluation report from NIOSH. We have now a revised evaluation report so we're going to hear from NIOSH. LaVon Rutherford will present the evaluation report, and then following that we will hear from the petitioners. Dr. McKeel is here and Dr. McKeel, I don't know if you have others -- I think there's at least one gentleman from NIOSH who has -- or from Dow that has some additional information that he wanted to present as well.

So we'll begin with Mr. Rutherford and the -- Board members, his slide presentation, as well as the evaluation report, is in your packet on your flash drive. Thank you. LaVon?

MR. RUTHERFORD: Yeah, can everyone hear me?

DR. ZIEMER: Pull the mike toward you a little bit.

MR. RUTHERFORD: Okay. Can everyone hear me? As Dr. Ziemer indicated, my name's LaVon Rutherford. I am the Special Exposure Cohort health physics team leader for OCAS. The attach-- or the addendum that I'm about to speak to is available on the back table and -- if you want to get that to refer to it. This is an addendum to an evaluation report, as Dr. Ziemer had indicated, that we had completed previously.

I want to give you a little background information, kind of get you up to speed with why we completed this addendum. At the May 2007 Advisory Board meeting we presented our evaluation report, and in that evaluation report we concluded that dose reconstruction was not feasible for a class of workers from 1957 to 1960. That is the entire operational

period, and the Board concurred with that recommendation.

However, at that time the petitioner -- and Dr. McKeel, who'll be speaking in a moment -- voiced a concern that DOE's definition of the covered activities at the site were not clear and that they should include thorium activities. Dr. McKeel said that there -- evidence existed that thorium activities at Dow Chemical should be considered a covered activity. In our evaluation report we did not address thorium activities or thorium exposures during the residual period.

Based on this issue identified by the petitioner, the Board sent a letter to the Secretary of HHS. In that letter the Board recommended that the Secretary evaluate whether thorium activities should be included as a covered activity during the covered period at Dow Chemical. The Secretary then responded to the Board and sent a letter back indicating that the Department of Energy is responsible for identifying covered facilities and that the Department of Labor is responsible for identifying covered period. However, the

Secretary did offer up assistance from NIOSH to support any review that would be conducted by the Department of Energy or the Department of Labor.

The Department of Energy did a review looking at -- through a number of data sources, and they concluded in January 2008 that the Dow Chemical Company was probably producing thorium alloy for use in weapons production, and therefore the activity should be a covered activity under the EEOICPA.

Because thorium work was considered an -- a cov-- is now considered a covered activity, we had to evaluate, one, whether it -- its impact to the SEC class that we had already recommended and the Board had concurred with and the Secretary had recommended as well. And we also had to evaluate whether dose reconstruction during the residual period for thorium exposures -- whether we could actually do that.

Okay. In February 2008 we corresponded with the Department of Labor asking them whether the covered period would be affected by the inclusion of this thorium work. We received a

letter back from the Department of Labor stating that, based on the Department of Energy's report, there's no reason to change the dates of the covered period. Therefore, based on that -- since we had already concluded in our previous report that thorium exposures during the operational period could not be reconstructed, we -- we determined that the existing class that we had already recommended was not affected by this.

However, we still had the responsibility to go back -- based on thorium activities being now a covered activity, we had the responsibilities to go back and evaluate whether -- evaluate whether dose reconstruction was -- for these thorium exposures was feasible for the residual period.

In March of 2008 we contacted the Dow Chemical Company -- we had -- during the previous evaluation we had contacted Dow and, over time, had received documents that they had during the operational period. However, at that time we did not ask Dow for any thorium exposure information during the residual contamination period -- at that time, which was identified as

1961 to 1998. So we determined we needed to go back to Dow and see if they had additional documentation that would support dose reconstruction -- personal monitoring data, area monitoring data, source term information. We also went to the State of Illinois and requested similar documents. We did receive documents from the State of Illinois. If you have the addendum, attachment one to that addendum outlines all of the sources we contacted for information, and you'll see that we received nine documents from the State of Illinois.

We also -- as I'd mentioned, we have contacted Dow Chemical Company. They are still working on retrieving information for us at this time, so we do not have additional information from Dow.

A little background on the work that was conducted. During the operational period of 1957 to 1960 Dow extruded uranium -- 1957 to '58 -- for the AEC under contr-- under a subcontract with Mallinckrodt, and they also straightened uranium rods for the AEC under a subcontract with Mallinckrodt in '59 to '60.

Routinely they handled thorium, incorporating it into metal alloys -- products. They primarily did this under commercial work. But as I'd indicated earlier, there are indications they may have been used in weapons production as well.

Our first evaluation report was issued in April of 2007. And as I'd indicated earlier, that report concluded that thorium exposures during the operational period could not be reconstructed. That report also concluded that uranium exposures during the operational period and the residual contamination period could be reconstructed. We did issue a -- an addendum one. That addendum one was actually issued because, right before we presented our May 2007 -- presented at the May 2007 Advisory Board meeting, we did receive documents from Dow Chemical. We committed to the Board at that time to evaluate whether that -- those documents from Dow affected our pre-- previous feasibility determination. We issued addendum one and addendum one concluded that those documents did not change our feasibility determination from that April 2007 report.

All right, I want to talk about the addendum. We issued the addendum on June 3rd, 2008. The addendum addresses -- the only thing that we -- we did not previously address in our initial evaluation, and that is whether it's feasible to reconstruct thorium and thorium progeny exposures during the residual contamination period.

Personal monitoring during the residual contamination period -- we have no individual external monitoring data, film badge data or TLD information. We have no bioassay results for either uranium or thorium during the residual contamination period.

Area monitoring data -- we do have air sampling from the final cleanup of the site in 2006. I do want to point out that the reference we used for the final 2006 was -- and as Dr. McKeel's pointed out to us -- an e-mail from the radiological safety officer who was in charge of that cleanup, and it included excerpts from the 2006 final status report. We just received that final status report on Friday. I have made that final status report available to the Board. It is on -- under Dow Chemical under

the O drive, and you can review that. We are looking at that final status report to see if we can refine some of these calculations, and I'll get back to that later.

We have access to air sampling data from 1957 to '59, which includes general area and breathing zone samples. And we also have thorium monitoring -- thoron monitoring data from 1959 that was conducted with the metal alloy with the highest thorium content. Additionally, we have dose rate surveys from the operational period. We also have dose rate information from monitoring that occurred in 1981. And in a brief review of that final status report this weekend, we do have dose rate information from that final status report as well.

Our feasibility conclusion for this is: based on available information, NIOSH concludes that it is feasible to bound estimates for thorium and thorium progeny exposures during the residual contamination period with sufficient accuracy. We -- we made a decision, we knew that we had a Board meeting in -- scheduled in St. Louis. We also knew that, looking at the

data that we had, we felt that we could develop the model based on existing data and that any additional data that we may get from Dow Chemical will only support to refine our calculations, so we mo-- went ahead with completing the addendum and completing the report so we could present that today.

Our technical approach for reconstructing thorium dose -- our internal exposures, we have -- we -- again, I mentioned in 1959 we have general area sampling, as well as breathing zone and process sampling. We chose to use the highest general area air sample. That actual sample is actually below detection limits. We actually took the detection limit, which is actually slightly above the MPC value at that time. We used that as our starting point for the 1961 -- the first year of residual contamination. So we took a general area sample that was -- that was taken with operations in place, and we took that and we used that as our starting point for the high end of our -- our intake values. We chose the general area value because it was not focused on production, it was focused on -- it did

include some of the -- input from production, but it also included resuspension. We felt the process samples and the breathing zone samples were truly indicative of operations, which are not included in the residual period, so we still feel this is an overestimate.

We used the air monitoring data from the final cleanup survey and -- to support the end of the residual contamination period. We actually took this air data was -- was taken at perimeter boundaries of a radiological area that was established for cleanup of the rafters, and came out at 9.94 percent DAC, so this was actually taken during cleanup and would have included higher concentrations that on an -- what you would typically see over a chronic period.

We took the -- it's 1961 data, and we took the 2006 air sample data and we derived a decay constant from that using an exponential function. And using that decay constant we were able to determine the activity concentrations for each sub-- each year between 1961 to the end of the residual contamination period.

You will note that we are using 2006 -- October of 2006 as a final period. The residual contamination period right now currently is documented as 1998. We are working to change that date to the -- based on the evidence that we have, we feel that the -- at a minimum, the October 2006 cleanup final report is -- or the actual date identified as the final closeout is October 2006, so at a minimum we should be there. There are a couple of activities that we noticed this weekend when reviewing the final status report that occurred in 2007 that we need to determine whether those actually extend the contam-- residual contamination period into 2007. But based on those, it does not affect our feasibility to do dose reconstruction.

Again, as I mentioned, intake values are derived for each year. We've -- taking those intake values, we can estimate the ingestion values as well. Thoron intakes are estimated using the thoron monitoring data oper-- from operations in 1959.

External exposures -- we have external -- as mentioned, dose rate data from the Silverstein

report. We also have dose rate data from 1982. The 1982 data, we have indicated that -- range from -- you know, as -- as you'll note, exposure rates range from .01 to .05 MR per hour. However, one foot from the thorium storage bin we have a .7 MR per hour. We chose that number as our bounding number for the dose rate. We assume that number, and no scaling factor based on time. When I say no scaling factor based on time, we did not drop that value over time. At -- when -- at the completion of this report we did not have that final status report. The final status report does have dose rate information in it that we may actually use to refine our external exposure numbers, but the external exposure rate was assumed at 40 hours per week. And we did -- if you look at the sample dose reconstructions in the O drive, you will notice that we assume a 50 percent occupancy based on the Battelle 6000 report.

So our feasibility determination or conclusion is we feel that reconstructing the thorium exposures during the residual period, we can do that, NIOSH has sufficient information. And

based on the previous evaluation report analysis concerning uranium exposures during the residual contamination period, and this analysis, we find that dose reconstructions are feasible during the residual contamination period.

And in summary, the period 1961 through October 31st, 2006, NIOSH finds that dose estimates can be reconstructed. Feasibility is "yes"; health endangerment -- we do not -- if we determine feasibility is "yes", we do not have to answer the question of health endangerment.

And that's it. Questions?

DR. ZIEMER: Thank you very much, LaVon. Could you clarify the matter of the -- the samples that you recently found that you said --

MR. RUTHERFORD: Yes.

DR. ZIEMER: -- might extend the residual period into 2007?

MR. RUTHERFORD: Yes.

DR. ZIEMER: Would that then change the recommendation for the class -- or the definition of the class?

MR. RUTHERFORD: What it will do, it will de-- if -- one -- we had enough information to

determine that we definitely wanted to extend the -- or to October of 2006, beyond the original 1998 date for the residual contamination period. There are two activities defined in that final status report. There was some sub-surface under a concrete slab, slightly above recommendations -- activity concentrations that were removed, and there was also some existent contamination that was created during the cleanup that had to be removed in one of the buildings. Based on my initial review of that, we may extend the contamina-- or residual contamination period out to November of 2007, which was the final date when that was closed out.

But again, it will not change our feasibility determination.

DR. ZIEMER: Yes, I was trying to get a feel for how one would -- would approach, in terms of actions, whether one would want to have a single action to cover everything or do this incrementally. But at the moment the recommendation only goes through October, but I think you're saying it's a high likelihood there would -- if one were to approve this, for

example, right away --

MR. RUTHERFORD: Yes, that November of 2007, based on that final status report.

DR. ZIEMER: Okay, thank you. Board members, are there additional questions for Mr. Rutherford?

MR. GRIFFON: Yeah, looking at --

DR. ZIEMER: Yeah, Mark?

MR. GRIFFON: Just looking at some of the data, LaVon, can you -- can you just describe a little more -- I'm looking at this -- I mean you -- you've been through this a lot more on the calculation, but the approach for the residual period, you have a sample at the end --

MR. RUTHERFORD: Yes.

MR. GRIFFON: -- and -- and what --

MR. RUTHERFORD: We actually take --

MR. GRIFFON: You said the last -- in the -- in the cleanup period, you said that was 10 percent DAC, and what was the value on the front -- on the -- the last --

MR. RUTHERFORD: On the front end, the fron--

MR. GRIFFON: -- process sample.

MR. RUTHERFORD: Yeah, on the front end it was

actually 8.44 picocuries per cubic meter, which was actually slightly above the MAC at that time. When you convert it back to -- they were using 77 micrograms per cubic meter, and when you actually convert the numbers it was slightly above that.

MR. GRIFFON: Okay. And -- and that was a -- I think you said it was a general area --

MR. RUTHERFORD: Yes, that was a general area sample.

MR. GRIFFON: -- sample, not a process sample.

MR. RUTHERFORD: And we -- we used that, as I explained, because, one, during that residual period, we sh-- we are only addressing residual contamination that would have been there from AEC-covered activities. So the only -- we would not be addressing any of the process -- process work that continued after that 1960 period.

MR. GRIFFON: Okay. And then -- and then the model, did you -- is this -- is this a linear extrapolation between the two points or is this a decay --

MR. RUTHERFORD: It's an exponential model --

MR. GRIFFON: Exponential, right.

MR. RUTHERFORD: -- it -- yeah, and it's defined in our TIB-70.

MR. GRIFFON: In TIB-70, okay.

MR. RUTHERFORD: Uh-huh.

MR. GRIFFON: And then on the -- on the thoron, how many results did -- you say you have results for thoron.

MR. RUTHERFORD: Yeah, if I remember correctly, there were 13, but I -- it may have been more. Let me look around here. I know --

MR. GRIFFON: And I -- and I -- I do -- I -- I corroborate that 13, but I also see there were like 40 overall and you excluded a bunch. Can you explain why those were excluded?

MR. RUTHERFORD: Well, we used the -- that -- that -- 13 were straight from the HK-- or the -- the thorium alloy metal that had the highest thoron -- highest thorium activity during production, which would have creat-- you know, assuming would create the highest thoron exposures.

MR. GRIFFON: But these -- there -- it's mixed, but there is -- definitely some of the highest values are on the samples that were excluded -- at least if I'm looking at the spreadsheet

correctly, so I might -- if you can take a look at that, maybe --

MR. RUTHERFORD: Yeah, I can take a look at that.

MR. GRIFFON: -- not asking for an answer now.

MR. RUTHERFORD: Yeah, that could be -- I mean that may be an adjustment we -- you know, if -- if I -- if I determined I was wrong on that, we would just adjust that thoron monitoring based on the real -- that data.

MR. GRIFFON: I guess I'm more focused also on the number of samples and the adequacy -- you know, whether it adequately covers.

MR. RUTHERFORD: Well, recognize that is operational thoron monitoring data.

MR. GRIFFON: Okay.

MR. RUTHERFORD: So if that is based on when -- again, residual period, the only thing we are addressing is residual contamination, not operational. So that is operational data so it certainly is an overestimate.

MR. GRIFFON: Okay. Thank you.

DR. ZIEMER: Dr. Lockey?

DR. LOCKEY: LaVon, in 1981 it was NIOSH monitoring data. Is that correct? Was that --

or was that area sampling, personal sampling, what was that?

MR. RUTHERFORD: That was actually -- and I don't know that that was NIOSH monitoring data. I thought it was Oak Ridge. I'd have to go back and look at it again 'cause we actually had two different sources at that time -- at that time. The '81 data actually looked at -- it had contamination measurements and dose rate data.

DR. LOCKEY: And the contamination measurements were -- how extensive were they?

MR. RUTHERFORD: Oh, they were actually looking at uranium and the thorium concentrations, and the uranium activity was actually higher than the thorium.

DR. LOCKEY: Okay, thank you.

DR. ZIEMER: Okay, any other questions, Board members?

(No responses)

If not, thank you again, LaVon, and we'll hear now from the petitioners and we'll begin with Dr. McKeel -- oh, Mr. Stephan, you have a comment here?

MR. STEPHAN: Thank you, Dr. Ziemer. Just how

-- how our side would like to proceed, if you don't have an objection, is that Dr. McKeel will go first and then Dr. DeGarmo, who has been assisting the effort and -- and some of her students are with her, will go second, if that's okay.

DR. ZIEMER: Sure, yeah.

MR. STEPHAN: Dan's presentation is -- is going to be, you know, relatively substantive and I think you'll have a lot of questions from that.

DR. ZIEMER: Right.

MR. STEPHAN: And then we have a lot of workers who are here, and Deb Detmers from Congressman Shimkus's office is here, so when Dr. DeGarmo finishes, then I'd like some -- some time and I know that --

DR. ZIEMER: Yes, and I have --

MR. STEPHAN: -- Deb would like some time.

DR. ZIEMER: -- Deb on my list as well, and I think Bill Hoppe also had some comments he wanted to make, so we'd be pleased to hear from -- from all of the folks.

So Dr. McKeel, if you want to kick it off, welcome.

DR. MCKEEL: Thank you very much. Good morning

to the Board members and everybody here from the agencies and the public.

Okay, so once again, this is the -- I am Dan McKeel, a co-petitioner from the Southern Illinois Nuclear Workers, and this is the Dow SEC 00079 petition that we're addressing this morning. At the heart of this issue is -- let me see if I can make this -- let me see -- can I get some help on -- is this the -- on the pointer? You just... I'm sorry.

(Pause)

Just so everybody will know, the object on the left is a sample -- this is a photo from ORAU -- of HK31A, which is the specific thorium/zirconium/magnesium alloy that was at issue as being used in nuclear weapons. The FBI examined the purchase orders from Mallinckrodt that mentioned this and concluded -- rather nicely, by image analysis of those documents -- that the documents did -- the purchase orders did refer to HK31A and HM21A, which is another thorium/magnesium alloy. And that was part of the basis why DOE concluded that Dow Madison made thorium alloys that were used in nuclear weapons in '57 and '58.

So I wanted to go through our version of exactly what happened. I was notified of this 83.14 SEC in September of '06. I made a presentation to the Board during the Dow SEC update in February of '07, and then presented the petitioners' view of the SEC on May 4th of '07. At that time the Board recommended an SEC -- SEC for Dow, unanimously, from January 1st, 1957 through 12/31/1960. At that time I asked that the class be extended to cover the 1961-'98 residual period, which was operative at that time, based on the belief that some Dow thorium was AEC-related. And this was primarily based on worker testimony.

So I believe that actually -- slightly differently from what LaVon presented to you -- that there were two tasks that were assigned by the Board May 4th, and LaVon covered those but I believe NIOSH was given the responsibility not only to reconstruct uranium and thorium internal and external doses during the residual radiation contamination period, but also -- and I'll address this as part two -- NIOSH has the responsibility of setting the residual contamination time period, the start and end

dates.
In May of '07 NIOSH admitted to the Board it could not reconstruct internal thorium doses during the AEC uranium contract period. And on that basis, the SEC was recommended. Now today NIOSH claims that they can now do what they could not do May 4th, '07.
I've already said we had strong evidence at that time in May that some of the thorium activity at Dow Madison was AEC-related. We didn't know exactly, we -- and I'll -- I'll cover the -- we thought there were large numbers of shipments to Rocky Flats, an AEC-related one, and we later learned that there were purchase orders from Mallinckrodt.
At that time also the Board tasked Sanford Cohen & Associates, their contractor, to review the original NIOSH ER. SCA -- SC&A held a Dow outreach meeting on 6/20/07 in Illinois and they issued a report on the NIOSH original SEC evaluation on 8/24/07. NIOSH issues their first addendum to the original evaluation report August 6th, '07.
The SC&A Task V Dow report, on page 32, mentions the following: With the understanding

of the Advisory Board, SC&A did not attempt to obtain information from sources other than NIOSH or that distributed to both NIOSH and SC&A by the SEC petitioners and their representatives. As recognized by the Advisory Board, SC&A did not independently request or obtain information from any other source.

I have a lot of comments about that report, but the two I wanted to bring to your attention was that that report has an error in the diagram that shows the pot room at Dow Madison as having six rather than ten, which were -- there -- all the workers said that there were ten melting pots at Dow Madison. And I bring that up because it's not just a trivial type -- typo. I believe that that was based on the Silverstein '57 data, and that that data was not really gathered at the Dow Madison plant, but at another Dow plant in Michigan.

The other thing I want to mention about the SC&A report is that's the best overview of the testimony that the Dow workers gave, and they went into that in some detail and -- and mentioned operations that actually occurred during the -- during the residual period. And

as LaVon alluded to, there were extensive thorium alloy production operations still ongoing through the -- the '60s, the '70s, into the '80s and some in the '90s as well.

The Department of Energy Health Safety and Security did archives research and sent Mallinckrodt purchase orders to the FBI for two studies that led Mr. Podonsky to issue his January the 8th, '08 letter to Peter Turcic, indicating that the AEC used thorium alloy in nuclear weapons from 1956 to 1969. That letter did not give really any details on exactly where those nuclear weapons were produced and exactly what weapons were -- used the thorium alloys, and I presume that was because the documents that led to this conclusion had been de-- had been classified and declassified -- or were still classified; I'm not sure about that point.

In any -- in any case, the letter concluded that Dow thorium alloy plate was supplied to the AEC via Mallinckrodt Chemical Works uranium division purchase orders in 1957 and 1958.

And I think it's important to know that not the Department of Energy but Dow headquarters, a

private company, produced those purchase orders. It's probably also worthwhile to remember that at that time period, 1951 to '75, Dow Chemical was the prime contractor at Rocky Flats.

In any case, following that January '08 letter from DOE, both NIOSH and DOL accepted the fact that Dow thorium alloys were used in nuclear weapons. That was very important.

Well, I'm going to have to stop just for a minute because I -- I don't know why that is, but I -- I need to show you this, so I'm going to switch over, maybe with -- Laurie, can I get your help? I'm going to switch over to the PowerPoint PDF presentation, which will have this slide on it. So I -- I want to quit this and boot up the -- the PowerPoint and we'll go right to that. This is identical to the -- that presentation. Okay, and then -- here we go. Okay.

This is an excerpt from the DOE HHS (sic) January letter. I apologize for the quality of the text, but I'll read it for you. I think it's very important. This is a verbatim quote from that letter.

(Reading) During its operations Mallinckrodt Chemical Works uranium division conducted a variety of activities that supported research, development and production programs for the nuclear weapons complex. In addition, the Office of Health and Safety within the Office of Health Safety and Security has confirmed that magnesium/thorium alloys were used directly in atomic weapons from 1956 to 1969, which is consistent with the 1957 and '58 dates of the purchase orders.

And later in the letter it says (reading) conclude for the years 1957/'58 the Dow Chemical Company in Madison, Illinois probably produced the material for use by the United States, that the material emitted radiation and could have been used in the production of atomic weapons. Therefore, we conclude that Dow Chemical Company in Madison, Illinois meets the definition of an AWE, as defined by 42 US Code 73.84.4, based on their work with magnesium/thorium plates and sheets.

I had several comments about that letter, that was quite welcome at the time. Again, it's important that subsequently NIOSH and DOL

accepted those conclusions. It's important I believe that DOE found, based on evidence contained in documents that they referred to as Livermore documents and NS -- NNSA documents, of the use of this type of thorium in nuclear weapons work. However, NIOSH focused on only the two 1957/'58 Mallinckrodt thorium purchase orders, ignoring the fact that other such purchase orders may well exist, and that would be the most claimant-favorable assumption. The fact that Dow headquarters, and not DOE, produced the key Mallinckrodt thorium alloy purchase orders buttresses this possibility. And the possibility is -- and I wondered at the time, why didn't the Department of Energy have these purchase orders, and could they still -- could they -- could they have them, but they could be classified, for example.

On the 3rd of this month NIOSH released its second SEC addendum, which is the main point of this discussion this morning. I wanted to point out that that was a sole-author document by an employee at ORAU, Mr. James Mahathy, and of course there was NIOSH peer review. What's important I believe in assessing that report,

and all the -- the first addendum, as well as the initial evaluation report -- to my knowledge, Mr. Mahathy has never visited the Madison plant in Illinois, nor has he interviewed any Dow workers or petitioners. And almost all of the Dow -- and I put that in quotes -- monitoring data cited, we believe, was from other plants than the Dow Madison SEC sites. And we're talking particularly about the Silverstein '57 and the Schrader* '59 data that NIOSH relies heavily on in assigning thorium doses for intakes. We question the use of that data because it's not really from Dow Madison at all. I'll go into that a little bit further why we believe that.

In our opinion, addendum two does not state clearly how thorium internal doses can be bounded. There is some reference to NUREG 1717 and NUREG 1400. And although I understand they were not the primary documents relied on, these -- these guidances were not sufficient to bound the internal thorium in the original ER or now back in May of last year.

The air and other monitoring data, as I said, is largely we believe not from Dow Madison.

And it is very important to point out that NIOSH has no Dow film badge or bioassay data. There's no site profile for this site. There's no site-specific appendix to TBD-6000. So there is very sparse data from Dow Madison. And in fact, in the early days of this SEC petition I wrote to OCAS several times and was told that OCAS and NIOSH, quote, had no monitoring data for this site. So all of that data has come in since May of '07.

And as the Board ponders this, I would also point out that other Dow facility operations mentioned in Silverstein '57 are not yet proven to be similar to Dow Madison thorium operations, even though the thorium alloys produced were similar, because they were major products throughout the Dow complex. Again I mention that the Dow pot room description, sometimes in these reports referred to as the meld room -- a term that I've never heard the Dow workers themselves use -- as mentioned in the second addendum and in the SC&A report says there were six rather than ten pots that the workers say were there.

So that leads to a -- a central question in our

minds, and that is is the Dow Madison data authentic, and it's the Madison part that I question.

Silverstein '57 certainly merits questions and comments. And the first is that the Madison site workers -- and we've talked to dozens; we've had four outreach meetings recorded in verbatim transcripts -- nobody ever mentioned knowing Mr. Silverstein, and he was supposed to be the Dow Madison radiation safety chief. And he was, on paper. But the question is, we -- we don't -- we're not aware of any data that he actually was ever at Dow Madison and -- and the men just simply don't even know who he was. So the question is, and I believe there is -- there is evidence which I -- really it's too detailed to go into this morning -- I don't think that air data was actually measured in Madison, Illinois. So it should be thought of as data from another possibly but unproven -- unprovenly comparable site.

The same comments could be made for the Schrader 1959 thoron air data and was -- was any of that data -- this slide says was all the data from the Dow Madison, Illinois site. I

think the answer to that question is no. I'm not sure that any of it was from Dow Madison. The other point I would make is those data apply to the operations period during the uranium contract in the current SEC class, but I don't see how data collected before 1959 can be extrapolated to be truly representative of operations over the Dow residual time span, which is what's under consideration this morning.

The other point I'd like to make is that NIOSH makes the important claim now that they can reconstruct all uranium and thorium doses during the residual period, which starts in '61 up to sometime at least as late as October 2006 -- and maybe later, and I'll go into that in a minute. However, in all this time NIOSH has performed to date only three total dose reconstructions of 149 cases assigned to it.

I don't believe that the addendum two addresses high intakes from numerous thorium fires and explosions with smoke and fumes that caused plant shutdowns as described in the worker testimony and affidavits. NIOSH addendum two did not give concrete examples how Illinois Dow

thorium doses could be bounded in the various departments -- extrusions, castings, rolling mill -- with different exposures and operations at other sites. And I know that LaVon just said that they purposely avoided calculations based on thorium operations after 1961, but I don't think that's appropriate and I'll tell you why in a minute.

I'd like to mention also that as far as using data from other facilities for Dow Madison that the Dow Illinois extrusion presses were not hooded. There were no vacuums to take away the dust. And some presses were unique, particularly the large press number seven, one of the largest in the world.

Again, three of 149 cases sent to NIOSH by Department of Labor, according to the Department of Labor web site, have had dose reconstructions. Jeff Kotsch yesterday confirmed three dose reconstructions. NIOSH states that the 140 number should be 111, but I'll show you why I believe what I believe.

I asked three times before this meeting to confirm for me please at NIOSH whether any of the partial dose reconstructions associated

with Dow SEC 79 had actually been accomplished, and I was unable to verify that any had been done. But of course we do know that some people in the SEC class didn't have one of the 22 specified cancers and therefore should have had a partial dose reconstruction now all these many months later. What's the reason for this low number of dose reconstructions?

I wrote Mr. Elliott a letter and he kindly responded, and he said that the remaining non-SEC claims at Dow are pending -- that's a quote -- due to -- and this is a quote -- updating of methods, end quote, and that the dose reconstructions will be done soon, quote. My question is why is such updating necessary if the addendum two issued earlier this month says NIOSH can reconstruct all those doses?

This is the Department of Labor Dow EEOICPA statistics from 6/22/08, Part B, NIOSH actions, and you can see cases referred to -- I'm sorry, you really can't see that -- cases referred to NIOSH, 149; with dose reconstruction, three.

So that's where I got my data.

I have to mention -- I wish I didn't have to go into this, but throughout this process, and

1 particularly since May '07, that the
2 transparency -- to me, as a petitioner -- has
3 been exceedingly low, and secrecy has been way
4 too high, and I wanted to give you a couple of
5 concrete examples. As of this date, the CDC
6 FOIA office has still not supplied one item of
7 a request I submitted to them in April of last
8 year about the original Dow evaluation report.
9 Another example, NIOSH refused to provide
10 myself or Senator Obama's staff with names of
11 the State of Illinois entities addressed in a -
12 - in a February 4th inquiry letter from this
13 year. And you saw that same nomenclature,
14 State of Illinois, in LaVon's report that he
15 just presented. I was actually asking for the
16 letter, in the FOIA request, that NIOSH sent to
17 the State of Illinois, and it took 66 days for
18 me to get that single letter. OCAS and/or CDC
19 FOIA withheld another letter that was written
20 on 4/10/08, and that letter was written to
21 IEMA, as -- which is the Illinois Emergency
22 Management Agency -- as was the first letter
23 from February. The FOIA office declined to
24 provide me with any of the 62 Dow headquarters
25 documents put in the site research database on

January the 9th, 2008. And you can find that that was done in the attachment to the addendum two report. I think it's on page 15 or 16. Anyway, my request -- my FOIA request of May 16th should have produced those documents. You heard LaVon refer to a 2006 closeout report, but actually the -- the real closeout report that was issued by Pangea for IEMA is dated February 2008. And that's a closeout report for decommissioning and terminating Spectrulite's -- the current owner -- Illinois thorium license. And for some reason that I didn't understand when I prepared these slides, that was not cited in the 6/3/08 addendum two by NIOSH. What NIOSH did cite in that document was a -- a e-mail from the radiologic safety officer at Pangea, who is the contractor to IEMA for the decommissioning work. But surely that closeout report would have been a better source. And we know that OCAS sent at least two letters to IEMA requesting documents about the cleanup, so it's really unfathomable to me why they didn't have this February 2008 closeout report when LaVon said that they just got that report on Saturday and gave it to the

Board. So we also know -- I can tell you this -- that we know that there is a letter from Chris Barnes, the president and CEO of Spectrulite, who transmitted that closeout report to IEMA on March the 7th of this year. So IEMA should have certainly responded to OCAS's April '08 letter and sent that report to them, and why they didn't, I really don't know. Anyway, my FOIA appeal to the 86 -- the 08-00862 FOIA appeal that I filed on the 20th of June of this year, I point out that many of the appendix two responsive documents were withheld from me, and that made my job -- and makes my job this morning -- much more difficult to try to rebut NIOSH's claim that they can reconstruct doses for the residual period. Now this is a contentious issue. I'm not sure I'm right, but I want to offer it up for your consideration. LaVon Rutherford just stated that NIOSH did not consider thorium operations, only the static residual contamination that was at the plant in -- in the residual period. In the 6/3/08 addendum two on page 25 the author states internal exposures to thorium during the residual period resulted from corrosion of

stored material, resuspension of dust, scrap handling, scrap cutting, and loss of containment of disposed materials. But that description ignores the fact that Dow AEC and their commercial thorium streams were mixed and inseparable, and I've underlined and bolded that because that's a very important concept that's part and the heart of a provision of EEOICPA. And that is that if you have a mixed waste stream of AEC and non-AEC uranium, thorium, plutonium, whatever, that you have to consider all of that radionuclide, in this case thorium, as AEC-related. And so since we know that thorium alloy HK31 and HM21 were produced at least through the '70s and well into the '80s, and maybe even the '90s, according to testimony, that we believe that all thorium operations must be bounded during the residual period, including the production activities of that mixed -- that led to that mixed waste stream.

That means that NIOSH must also bound thorium-232, thorium-230 and thoron exposures through most of the residual period when thorium HM alloy production continued at the same pace as

it had in 1957 to '60 for AEC activities at Dow, plus the post-1961 periods when Penalco owned the plant up to 1986, and after 1986 when Spectrulite Consortium bought the plant. I believe that internal and ingestion path thorium should be calculated for all casting, extrusion and rolling operations throughout the residual time period.

This -- I -- I don't want to go over old material, but I just wanted to remind you that addendum two and the DOE letter of 1/8/08 of this year have ignored basically worker testimony that Dow Madison shipped large amounts of HK31 and HM21 to Rocky Flats AEC facility, and those shipments continued in 1950s and 1960s and maybe even later.

My summary and conclusions on dose reconstruction -- NIOSH could not dose reconstruct thorium internal doses in May 2007, and erred in stating they can now accurately bound internal thorium doses at Dow Madison in Illinois in the 6/3/08 second addendum report to the SEC 79 evaluation. The pot room description is flawed, and thorium fires and explosions with high intakes are not

considered.
I also point out that SC&A has not formally reviewed or concurred with the first or second addenda to the Dow Madison evaluation reports. This should be done, in fairness to the workers.
Second part I think that needs to be addressed is the definition of the residual period, when it ends. And there seems to be some confusion still -- LaVon mentioned that they were sending information to have DOL, the Department of Labor, determine the end of the residual period, and I wanted to read you this excerpt from an April 15th of this year letter from Peter Turcic of Department of Labor to our group, DOE and to NIOSH, and here's what Peter says. (Reading) As for the period of residual contamination, Department of Labor accepts that thorium was in fact part of the AEC work and thus should be covered as part of the residual contamination at the facility. As for the period of time that residual, be it thorium or any other contamination, that is totally in the preview of NIOSH -- and I believe that's a typo and it's meant to be purview of NIOSH. So

Peter Turcic is saying DOL has no part in determining that the period of time of the residual period.

Now what that leaves us with is several proposed residual periods. One was the original one, 1961 to 1998, based on the uranium that was at the Dow Madison plant and used for AEC operations. In the NIOSH December 6th report to Congress, that same time period is observed. SEC 79 evaluation report addendum two, issued 6/3/08, extended the residual period to be 1961 through October the 31st, 2006. And that was based solely on a March 3rd, '08 Pangea e-mail.

Subsequently I followed up on that e-mail and talked to the radiological safety officer at Pangea and have more information about that. One thing I found out was that the IEMA closeout report by Pangea was dated February 2008, not 2006. I also found out, as LaVon just mentioned, that IEMA required added decommissioning work in 2007, and that ended officially, according to the Pangea person, on November the 9th of 2007. Further what I learned, and I think this is extremely

important, the site was not released for unrestricted use until June the 8th, 2008, so a few weeks ago. The project closure report of February '08 has this to say in the executive summary, and I quote, Pangea Group was contracted to provide for the remediation and removal of the remaining source and contaminated material from the Madison facility, and verification that all licensed material was removed from the site.

On page 17 the report says all residual source material, as well as all waste generated during initial decommissioning effort, was disposed of at the U.S. Ecology facility in Robestown, Texas. 705 tons were shipped off-site.

Page 20 of the closure report, section 5.2.2, says, I quote, To quantify the amount of contamination under the Building 7 casting area concrete slab, six 48-inch macro cores were taken in August of 2007 through the slab in an attempt to bound the contamination.

This is not in the addendum two report.

Page 20, section 5.2.1, secondary remediation of the dross storage area of Building 7, respiratory protection was mandatory for all

workers engaged in grinding work to remove the contamination. The dross room remediation activities were completed in May of 2007. IEMA therefore, by its actions, believed the 2007 contamination was significant and ordered it to be removed off site by Pangea during the secondary decommissioning phase, and the project closure report of February '08 says that 219 tons were removed during the secondary 2007 decommissioning phase. That's on page 21. And then also on page 21 it mentions that the date of the final cleanup of the soil in phase two was in November of 2007. The Pangea radiologic safety officer told me on 6/21 that November the 9th was the last date, and actually documents that Senator Obama's office got from IEMA just recently -- I think it's part of actually the appendix, one of the appendices to the closure report -- shows that the last shipment of thorium was sent to Texas November the 7th, 2007. That's also mentioned on page 21 of the closure report.

When I talked to Pangea they said that the reason that they recommended October 2006 as the end of the residual period was because this

was the end of the primary decommissioning, and that that had resulted in a 99 percent cleanup. And then in another part of our conversation said 99-plus percent cleanup, and I'll come back to that a minute -- in a minute. When confronted with this accomplishment, however, IEMA ordered Pangea to perform two added tasks for the soil and dross room that were not completed until November the 9th, 2007. We believe that IEMA considered significant contamination had to be removed in 2007. And significant is a very important term because that's the -- the standard used in the report that NIOSH makes to Congress on residual contamination, and that's contained and specified as 10 Code -- Code of Federal Regulations Part 835, Appendix D. IEMA was unwilling to certify 100 percent completion and release the site for unrestricted use, the goal of license termination, until June 8th, this month.

Now how about that statement that Pangea used that 99 percent of the contamination was removed by October 31st, 2006? The primary phase ended and, as I just showed you, produced

705 tons of material. The secondary phase in 2007 produced 219 tons. And so if you calculate those fractions, what you come up with is that during the primary phase in 2006, 76.3 percent was removed; and during the secondary decommissioning phase in 2007, 23.7 percent was removed. So phase one equals 99 percent removal is just a serious misstatement of the facts, and all of those numbers come from the Pangea IEMA February the 8th closure report.

Here's that standard I mentioned. Between the red lines is the actual wording from the document, and I've just retyped it below.

NIOSH believes that contamination levels at designated facilities in excess of those indicated in 10 CFR Part 835, Appendix D, the occupational radiation protection surface contamination values indicate that there is, quote, significant contamination, end quote, remaining in those facilities. And that's on page 4 of 9 of the main file, the December 2006 NIOSH PDF document, Report on Residual Radioactivity and Beryllium Contamination at Atomic Weapons Employer Facilities and

Beryllium Facilities. John Howard, Director, was the author of that report.

The petitioners therefore believe that the date November the 9th, 2008 (sic), when the secondary decommissioning tasks were 100 percent completed, or June the 8th, 2008, the site unrestricted use release date, are more appropriate dates to end the Dow residual contamination period for the mixed AEC and commercial and military waste stream at Dow, Penalco and Spectrulite Consortium.

Finally, I need to say that there were surprises to me in the handout that LaVon Rutherford spoke from today and the slides you just saw. And those points need to be strongly challenged, and I put this slide together this morning 'cause I really had just seen the information. I apologize that it's hard to read, but I'll try to read it for you. All the Board members have a copy of this and Dr. Ziemer has a -- a copy of each slide on a full eight and a half by eleven piece of paper, so it -- it has -- has gotten into the record, hopefully.

The co-petitioner strongly challenges NIOSH's

report today. It wrongly portrays the 1/8/08 DOE letter by not mentioning that there were two 1957/'58 Mallinckrodt AEC thorium purchase orders, and I think may have been used -- probably should -- should be -- were used, although Mr. Podonsky's letter does use the word "probably," so there is an element of uncertainty in there.

I think the addendum two and that document you all said to date should have underscored the fact that the thorium alloys were used in nuclear weapons between 1956/1969, not necessarily at Dow Madison but throughout the atomic weapons complex.

LaVon mentioned that NIOSH and Department of Labor had exchanged letters about the covered period. Those were withheld from me; still have never seen them.

The NIOSH March '08 letters to and from Dow requesting documents were withheld from me; I've never seen those letters. I've sent FOIAs that should have produced them.

NIOSH got 62 documents in the site research database on the 9th of January of this year, as mentioned in the second addendum, but was not

mentioned today. What LaVon mentioned is that NIOSH is still waiting for even more documents from the Department of Energy, so I don't understand that at all.

He did mention that the addendum one had been issued, but LaVon's report today did not mention that SC&A had reviewed the NIOSH original evaluation report, but not addendum one and SC&A has not identified -- has not reviewed addendum two.

The slides you all saw today does not explain NIOSH's rationale for setting the end of the thorium residual period at October 31st, 2006, and it does not describe interactions which I've detailed for you with Pangea and IEMA.

Again, the 1957/'58 air sampling and breathing zone data we believe are not from Dow Madison site.

1959 thoron monitoring data is not collected from the Dow Madison site, we believe.

The dose rate monitoring from operational period was not from Dow Madison and was not included in SC&A's August 2007 report. And I'm talking particularly about the document referred to as Schrader 1959 in the addendum

two.

I therefore question the authenticity of all of that data that's being used to say NIOSH can reconstruct thorium doses as being authentic Dow Madison air sampling, dose rate data, et cetera.

Another extremely important point is that addendum two omits mention of the fact that worker affidavits -- and you can see the SC&A report of August '07 for this -- that the usual work week was not 40 hours, but that at that plant, as at many other plants, overtime was common and that there was a far longer work week. So 40 hours is an underestimate of the work week and is definitely not claimant favorable.

DR. BRANCHE: Excuse me, Dr. McKeel. As concerns this one document, you said that it's -- you're entering it into the record, but nobody here has that piece of paper so we're going to need a copy of that one -- of this one slide, please, after you finish. We don't have this.

DR. MCKEEL: You have -- you have a copy of all --

DR. BRANCHE: No, we don't --

DR. MCKEEL: Oh --

DR. BRANCHE: -- of this one slide.

DR. ZIEMER: Actually this -- this last slide is not in the packet, and for some reason there are several missing in the -- in the --

DR. MCKEEL: Well, the reason they're missing is that I had to do them today and I was at Kinko's at --

DR. ZIEMER: We --

DR. MCKEEL: -- 12:30 last night --

DR. ZIEMER: -- we'll get together and coordinate those.

DR. MCKEEL: -- but -- yes, actually what I -- Dr. Branche and Dr. Ziemer, what I would like to do is my presentation in electronic form is on your laptop, and you are welcome -- I wish you would keep that and use that as an official --

DR. ZIEMER: Can use that --

DR. BRANCHE: Thank you.

DR. MCKEEL: Will that suffice as a --

DR. BRANCHE: That will suffice.

DR. MCKEEL: -- submission for the record and...

DR. BRANCHE: Yes, it will. Thank you.

DR. MCKEEL: So both a PDF and the PowerPoint identical presentations --

DR. ZIEMER: That will -- that will work.

DR. MCKEEL: -- with all the slides --

DR. BRANCHE: Given that I've interrupted you, Dr. McKeel, there's some participants by phone, if you could please mute your line, and also please do not put us on hold. If you have to leave the line, it is better for you to hang up the phone and dial back in rather than put us on hold. Thank you.

Sorry, Dr. McKeel.

DR. MCKEEL: No, that's fine. So finally and lastly, we come to what I think is the overarching issue for today and that's -- we're asking the Board to please consider extending the class coverage for SEC 00079, and there are several options as to when the class should be extended to. I tried to find out how many people would be -- additional people would be covered if the dates were extended, and I -- I don't have the answer from NIOSH about that. But anyway, here are the periods that are -- could be considered. The original 1961 through

1998 period when the current SEC was approved by the Board last May. 1961 through October 31st, 2006 was the new date for the residual period in the NIOSH appendix two. But as I say, that date was only the date when 76 percent of the residual contamination had been cleaned up. Our proposal, number one, to consider is extending it from 1961 through November 9th, 2007 when 100 percent of the license decommissioning activities were completed. Or if you want to be truly conservative and truly claimant favorable, the period would be 1961 through June the 8th, 2008 when IEMA released the Madison site for non-restricted use, and that was according to the Pangea phone call that I had on 6/21 of this month.

Finally, I have a slide with my new contact information in Van Buren, Missouri, and I would just point out and invite any of you all to come and visit. Last two slides -- this is of the Current River, a national historic river in southern Missouri. Here's my friend [Identifying information redacted] on the front porch of the new house and the Current River is

running by and we can watch that each day. And this is my one medical slide for this presentation. These beautiful flowers are foxglove, from which digitalis is manufactured. And for some reason this year, as opposed to last year, the foxglove produced abundant flowers. So thank you very much.

DR. ZIEMER: Thank you, Dan. Could I ask one other clarification point, and this was one of the slides that is not in my packet here, but it was the slide -- slide having to do with -- I think you said 76 percent and then 100 percent of the residual contamination.

DR. MCKEEL: Yes.

DR. ZIEMER: Were -- were those numbers based on the mass of the activity removed; and if so, do you have any evidence that the -- that the concentrations were unchanged from the first to the second? You know what I'm asking whe--

DR. MCKEEL: Good point. Well --

DR. ZIEMER: Certainly it's --

DR. MCKEEL: -- the -- the slide is up on the Board. The 705 tons and the 219 tons were the amounts of radioactive waste shipped to Texas from the Dow Madison plant. Now -- you know,

and there are shipping manifests that show that. It doesn't really show any measurements that were made of that bulk material as far as radioactivity levels, but apparently that's all -- you know, 924 tons of residual contamination were removed and shipped off site.

DR. ZIEMER: Well, I know --

DR. MCKEEL: And that's all I (unintelligible).

DR. ZIEMER: -- often in decontamination operations the first time through, as it were, you pick up a large bulk of the contamination. But I was just wondering if we had evidence this time -- I'm -- I'm talking about the concentration --

DR. MCKEEL: Oh, I'm sor--

DR. ZIEMER: -- values and --

DR. MCKEEL: I'm sorry, I --

DR. ZIEMER: -- we don't know at this point, I guess.

DR. MCKEEL: Right. What -- what I do know is that the -- the 219 tons were from areas that -- interestingly, the Pangea representative described as very small areas of contamination between Buildings 6 and 7 for the soil and the dross room is a relatively small room where

they stored thorium sludge indoors, for reasons that I don't really understand because they had a 40-acre plot outside that they stored large amounts of magnesium/thorium sludge. That was cleaned up in 1992, at least partially, by this ERG group. But -- but the exact -- you know, I don't know if those facilities do any measurements on the bulk material they receive, and I didn't see any numbers of concentrations of radionuclides in that material shipped out. It may exist, I just -- I don't know.

DR. ZIEMER: Thank you. Actually perhaps later, as we have discussion period, we can focus on some additional issues that were raised, but I think we want to go ahead and hear from the other petitioners. And Dr. DeGarmo -- is it DeGarmo or DeGiarmo?

UNIDENTIFIED: (Off microphone) (Unintelligible)

DR. ZIEMER: Thank you. Welcome.

DR. BRANCHE: For the record, when you do come to the mike could you please spell your last name for us? Thank you.

DR. DEGARMO: D-e-g-a-r-m-o. And I have a lot of documents I want to refer to so I may be

shuffling them back and force -- forth. First let me thank you for the privilege of addressing the Board. My name is Denise DeGarmo and I'm an associate professor of international relations at Southern --

DR. BRANCHE: Oh, I see, if you --

DR. DEGARMO: And if you want them, I will make them available to you.

DR. BRANCHE: Okay.

DR. DEGARMO: I'm an associate professor of international relations at Southern Illinois University in Edwardsville, which is just across the river from here. I received my Ph.D. from the University of Michigan, department of political science, in Ann Arbor where I focused on security studies with a specialization in U.S. nuclear policy. I've since expanded my interests to include international environmental security, and certainly the events that have occurred in the metro east fit into both of those purviews. About two years ago I was approached by Deb Detmers and asked whether I would be willing to assist her office and Senator Obama's office on the Dow petition. During this time I have

conducted research, with the help of two students who I'd like to recognize, [Identifying information redacted]* and [Identifying information redacted]. We've worked tirelessly on this -- this issue to advance the cause of the Dow workers. The workers have not only become our friends, but they have become our heroes. We have an ultimate respect for the men and women who have worked through the atomic weapons facility. The -- as is the case with thousands of atomic weapon workers across this country, the best nuclear arsenal in the world was built upon their backs. These extraordinarily -- extraordinary people willingly answered the call of their government during a time of significant crisis. They swore their allegiance and took their oath of secrecy as they assumed their positions in the front line of defense. Unknowingly these individuals worked with dangerous materials in dangerous facilities, not always receiving the protection that they deserved. And as a result of this, individuals are suffering from afflictions associated with chronic radiological exposure.

The government is responsible for their illnesses and is responsible for helping them in their time of need, given their extraordinary service to this country. Had it not been for the thousands of workers across the country, as well as those at Dow, from a scholarly point of view, we do not know how or if the nuclear arsenal of the United States would have been developed to the superior capacity that it is today.

While we deeply appreciate NIOSH's recommendation for dose reconstruction, I do not believe that they have gone far enough and would like to ask you to reconsider -- or to consider, if you will -- the Special Exposure Cohort request.

Let me tell you something about the workers. Some of the workers, including [Identifying information redacted], [Identifying information redacted], [Identifying information redacted], [Identifying information redacted] and [Identifying information redacted]*, have been collecting health data on the workers at Dow, trying to create some type of record which recognizes this kind of afflictions that these

workers have encountered. 139 out of 2,000 have heart disease, breathing ailments, or a combination of the two. And a disproportionate number of those individuals rely on the administration of oxygen for their subsistence. 162 out of 2,000 have prostate cancer, where the national average is 120 per 100,000 people, so we see an increased rate there. While several individuals have been recently contacted by NIOSH for dose reconstructions for this type of cancer, we would like to see NIOSH give greater consideration to what we believe is a pertinent link between prostate cancer and radiation exposure.

We noted that NIOSH is measuring exposures for prostate cancer at Blockson, and we would like to see some consistency for all facilities that are under review. From 2001 through the present 103 people have died.

And although the Department of Energy does not recognize the presence of beryllium at the Dow Madison facility, we do have several workers whose only job was at Dow and have been diagnosed with berylliosis.

What else do we know? Let me set these down --

thank you. I wholeheartedly agree with Dr. McKeel in his evaluation of the Silverstein report. I'm not sure it makes any logical sense to use that report for the purposes of dose reconstruction. Issues with all the Silverstein papers that I have read, including his professional articles -- I'm not sure that it accurately represents the thorium work that was taking place in the plant at that time, or into the residual period because I do have evidence that atomic weapons work was continued into the residual period, which should be taken into consideration. If it was not used for the previous SEC, why now has it been chosen to be used for a period that it's not reflective of? I also have an interesting letter here that was written by -- in 1959 by the technical department, [Identifying information redacted]* at Madison to [Identifying information redacted]* of Dow's environmental research lab, stating that it was a good time to evaluate thorium and daughter products evolved during sludge centrifuging. Apparently this process had been going on for some time, but had never been taken into consideration. And I wonder

then, if something as important as the centrifuging process had not been evaluated for exposure, how can we be sure that that 1957 report is actually accurate?

So here's that (unintelligible) -- okay.

The evidence that I referred to that suggests atomic nuclear weapons were -- involves thorium, uranium and beryllium. Before I speak to these materials I would like to remind the Board that one of the interesting things that Dow did during the atomic weapons work was that it set up its source material license and special nuclear material licenses not only for Midland, but included other operations, including Madison and Bay City. Whatever material was licensed to Midland was also available and licensed to these other two operations. This allowed Dow to move not only beryllium, plutonium, uranium metal, thorium alloys to other plants, it also allowed them less oversight where they were able to operate more freely outside of the AEC. They didn't have to create new licenses to track the movement of materials.

We know that during the residual period that

thorium was alloyed with magnesium for missiles. And during that process they created one alloy, known as lockalloy, that was used for missiles that carried nuclear weapons. We also know that during the late '60s and early '70s Boeing and the University of Michigan undertook a project for a nuclear missile called the Bomarc. The Bomarc missile was an intercontinental ballistic missile and Dow was asked to create an alloy that could actually be used for the delivery -- or the mechanisms, excuse me, for the actual nuclear device. So we do have evidence to suggest that work was going on with thr-- with thorium throughout this particular period. We also know that alloys were transferred back to Midland from Madison for use in their test reactors, test reactors that were producing plutonium for the nuclear weapons program.

I also have some documentation that discusses the reintroduction -- or maybe the continuation, if you will -- of uranium into the Madison facility. The letter that I'm referring to is a letter that was written in 1971 regarding source material license STB-527

dated March 20th, 1968, and this source material license was amended to include uranium. And I wonder if NIOSH has given any consideration to the effects that this additional exposure to uranium radiation might have had on the workers.

Additionally, in a letter dated 1972 to the U.S. Atomic Energy Commission, it is stated that Dow was using uranium metal for research. And we know that the only reason you would use uranium metal -- or one of the major reasons you would use uranium metal would be for nuclear weapons itself.

In the case of beryllium I have an e-mail from Caroline Anders that states -- to Roger Anders at Paducah on October 7th, 2003, that they have no information to suggest any beryllium was ever used at the Dow facility. And yet, quoting Dow officials, the Granite City Press ran a story in 1963 which reported that Dow Madison would help produce beryllium/aluminum alloys for the purpose of enhancing their missile project. And in a letter from Madison division dated May 21st, 1959, [Identifying information redacted] comments on an increased

use of beryllium in several of the alloyed -- alloys that were being used. And obviously this is -- beryllium might be included in kind of the residual period, since it fell into the first SEC.

The last piece of evidence that I would like to -- to suggest NIOSH take a look at is that in 1993 when the Nuclear Regulatory Commission was going over the materials that were stored at the Tyson Valley facility, which is west of St. Louis, they found a number of magnesium/thorium sheets, four percent thorium, stored at the facility in bunker number 35. They were brought by McDonald Douglas to the facility sometime in 1968. Even though Washington University did not have an AEC source license to store them, this material was stored -- delivered, excuse me, to Dow Chemical on September 27th, 1993 for disposal. There were about 100 to 150 sheets of thorium-232. So those materials were at the Dow facility.

What does all of this mean? Well, the health dangers are real at Dow Madison for all workers, for those already covered and for those who have not yet received coverage. The

workers are dying at an alarming rate and are suffering from diseases associated with the fruit of their labor. Evidence of additional radiologic materials are being ignored. The impact of beryllium and the presence of uranium beyond the initial SEC should also be taken into consideration. I'm not sure how a dose reconstruction can be done when so much information has been overlooked, not available, or is -- has so many inconsistencies as I see in the Silverstein report. With so much information still classified, unavailable or even destroyed can we ever get a true picture of what is going on at this facility.

Due to these men's exposure they will ultimately die for their country, yet they will not be buried at Arlington, nor will an American flag drape their coffins. The least we can do is support them now as they suffer the ailments from the work they did, work they accepted without question to the government that asked for their efforts. Would it not be better to err on the side of the claimant and adopt an SEC for those employed between 1960 and 2006 rather than force them to go through

another hoop to jump? Thank you.

DR. ZIEMER: Okay. Thank you very much. Robert -- are we going to have Deb go next?

MR. STEPHAN: Mr. Hoppe, do you want to go next?

DR. ZIEMER: What I want to ask is --

MR. STEPHAN: You want to take a break?

DR. ZIEMER: We need to get a break here and --

MR. STEPHAN: Why don't we do that now.

DR. ZIEMER: -- would this be a logical point to break and --

MR. STEPHAN: Let's do that.

DR. ZIEMER: -- then we'll return. Fifteen-minute break and then we'll return. Thank you.

(Whereupon, a recess was taken from 10:15 a.m. to 10:30 a.m.)

DR. BRANCHE: Hi. Participants by pho-- oh, dear me. Again, if people -- are -- is -- are we back up? Okay.

Ladies and gentlemen, we are starting the -- continuing the discussion of the Dow Chemical Company, the Madison, Illinois site SEC petition. Phone participants, I encourage you ag-- no, I require of you that you please mute your phones. And a new development has

occurred in telephone land and this whole issue of putting us on hold. Please understand that if you -- if you put your line on hold, then everyone, including those participating in the meeting room itself, are interrupted by your -- whatever sound your hold button makes, so we ask that you not put us on hold but rather, if you must leave the line temporarily, that you just hang up the phone and dial back in. If you hold the line we'll have to interact with the operator to cut you off. Thank you so much for your cooperation.

DR. ZIEMER: Thank you very much. We're going to continue now with our discussion of the Dow Madison petition. One of the individuals we'll hear from now is Bill Hoppe. I don't believe Bill is actually a petitioner, but one of the workers at the Dow site and has some information for the Board. I think we have passed out copies of your sheet, Mr. Hoppe, so you may proceed.

MR. HOPPE: Okay, I thank you. The Madison plant is kind of -- direction was north and south was the buildings, more or less, and the rolling mill, which is on the west side, is on

the west side of the arch, so it's a little bit of a location area. And where you see the dark spot on the upper right, that's where we called the Dow dump. It's 40 acres. That's where Mallinckrodt and Dow dumped all their radiation material in there. And we dumped I know a lot of barrels of sludge and that in there.

And then next to it is their casting area, and they were talking about six pots in that Silverstein's deal. On the billet unit there was 12 -- or ten pots, and on the slab unit there's ten pots. And on the intermittent unit there's eight pots, so that's where that's at.

And then the building over to it was the extrusion department and that's where all the presses were located, in there. And the only place they took readings was right around seven press. That's at the south end of the extrusion department. They never took them anywhere else in the plant.

And on the far west side is the rolling mill. That's where all the mills were. That's where they rolled the flat metal from anywhere -- I guess from ought four to ought -- or up to 12, 14 inches thick metal down there.

And every building down there had radiation in it. They either sanded and all that in it. One building where the main office was, that's all -- where they did all the samples of -- for the alloying and that, and that dust went all throughout that building. At times they'd have to shut down the plant because of the pot room. When it was high humidity and that and it'd get the pots burning, all that smoke and that would go all the way over -- all the way across to the rolling mill and they'd have to shut down because the crane-man couldn't see what he was doing to -- for the coils over there to operate the crane, so at times that was all, you know, done like that.

And on this other -- I don't know if you just got this long -- bigger page or not, but --

DR. ZIEMER: We have it in two pieces.

DR. BRANCHE: Yeah, exactly.

MR. HOPPE: It's -- on the right -- like on the right-hand side it shows right where the parking lot is down there, and right across the street from the parking lot was the school. And all that smoke and all that was -- contaminate the whole area. It's -- it's a lot

of contaminant all the way around, and a lot of the -- they stored a lot of the warehouse stuff, the slab -- slug -- sludge, pardon me, the sludge and that would be stored in casting at the north end of the building and that. They had the lee-- what they called the leech area. That was where they tried to recover the thorium, the radioactive material out of it, and it's -- it was all over the place. They'd dump all the -- all their acid and that out on the ground and -- but that's pretty well where it's at and on some of it it shows where the lunch areas were where we ate. It was right out there in the middle of it and all that, so if you've got any other questions, if I could help you -- I don't know if I answered enough on it or not, but...

DR. ZIEMER: Bill, if you could help me orient the -- the individual sheet with the larger one, is -- is it the same set of buildings?

MR. HOPPE: It's the same thing but it's just in a different deal. It doesn't -- you see on the upper left corner it's got the Dow dump --

DR. ZIEMER: Yes.

MR. HOPPE: -- on the colored one.

DR. BRANCHE: Okay. So because we had to make it in two -- we had to make your one very large sheet in two copies, you're saying that the -- the part that says Dow dump should be on the left side --

DR. ZIEMER: Yeah, I see --

MR. HOPPE: Yes, that's the large one.

DR. ZIEMER: -- I see it --

DR. BRANCHE: -- and the Granite City --

MR. HOPPE: Okay --

DR. BRANCHE: -- should be on the right.

MR. HOPPE: Yeah.

DR. ZIEMER: I've got it.

MR. HOPPE: That would be -- this would be the Dow dump in this area.

DR. ZIEMER: Yeah.

MR. HOPPE: Okay. The dark part, or the red one, would be right in here. It's the same direction but it's just different. This here one I roughly put in the equipment and that down there. In the other one it's a little bit more of it, you know, finer deal.

DR. ZIEMER: Okay, thank you very much. Next we'll hear from Deb Detmers, who's from Representative Shimkus's office. Deb, welcome.

MS. DETMERS: First of all, welcome to the St. Louis area. We -- you -- you picked the wrong time; the Cardinals are not in town, but we welcome you here anyway, so...

As you know, I've spoken before you before. I've been in Cleveland where you were. I was in Denver with you. I've traveled around, so thank you for being a little bit closer to home this time.

Robert Stephan from Senator Obama's office and I have worked on this together now for a number of years since Rob-- actually since Senator Obama was elected. We are from different parties and from different spectrums, but we have bec-- this has become a bipartisan effort on our part, and we have involved a lot of people. This has taken a village to get us this far. We have a law firm, we have Dr. DeGarmo and her students from SIUE, we ob-- we've had Dr. McKeel's guidance with which -- out we wouldn't have been this far without Dr. McKeel's guidance this far. And literally we have involved people whenever we've had to involve people.

I just want to state -- Robert's going to

summarize a little bit, but I want to state from the record's standpoint, I started on this six years ago when these two gentlemen, [Identifying information redacted] and [Identifying information redacted], came to see me about their cases. [Identifying information redacted], four years ago when we had a town meeting, showed his papers to somebody and said -- they said oh, you've got a really low number. You should be getting your dose reconstruction -- you -- dose reconstruction any day now. That was four years ago. [Identifying information redacted] still not had his dose reconstruction. [Identifying information redacted] filed for his case in 2001. So I just want to state this: This has been going on a very long time. Every time we get to a point that we think that we're pretty close, like in Denver where we thought we were very close to getting this SEC approved for the entire time, another hoop is put up. And every time you put a hoop up, I just want to point out to the Board that we jump through that hoop, and we have provided documents, and we have found the documents -- in many cases, a

lot of the documents you have in front of you is what we have found, is what we as a group have found together. And we have jumped through hoops and we will continue to jump through hoops. We're not stopping. But the only people that can say "wait a minute" -- at some point we're going to say we're going to listen to the workers, and that -- and that's what I'm begging you to do is listen to the workers. We have workers' testimony. We've had it multiple times. We've had a number of workers and that worker testimony has remained consistent on what went on in that plant. And now it appears to us that in this -- what we are looking at today in this addendum is we're taking suspect at best information -- and I'm saying that kindly, suspect at best -- and we're putting that over what we have been told by the workers. And I'm saying that I'm not sure that that is the right direction to go and Congressman Shimkus doesn't think that's the right direction to go. I'm fairly certain that Robert's going to say he doesn't think that's the right direction and Senator Obama doesn't think that's the right direction to go. These

guys have given everything. They continue to work, they continue to fight the battle, and they have consistently told you what has happened in that plant. And I think it's a time that we stop and we listen to what they're saying and say that is what happened there, and you're the only ones that can make that happen, and I ask you to do that. Thanks.

DR. ZIEMER: Okay, thank you very much. And Robert, we'd be pleased to hear from you now.

MR. STEPHAN: Thank you, Dr. Ziemer and the Board. We certainly appreciate your patience this morning. We've given this Dow petition due consideration, going back -- well, for a long time now. But I remind you of where we were in May -- I believe it was May -- of 2007 in Denver. In May of 2007, after nearly two hours -- I believe Deb was there, I was there, Dr. McKeel presented -- we were almost to the point of approving the residual period -- we were almost to that point, and we stopped because we wanted to get some clarification on some legal issues, I believe, with HHS legal counsel. And so -- so since then, many things have happened. Many things have happened.

I -- I just want to reiterate what Deb just said, and I feel for all those workers who do not have the resources that we fortunately do. To put this in context, we have a law firm who -- who has assisted us pro bono. They have won the Illinois State Bar Association pro bono award for the entire State of Illinois, which almost never happens for a law firm outside of Chicago. You have to understand the dynamics of how the Illinois -- the State of Illinois works. There is Chicago and there is down-state, and Chicago is important. Okay? Down-state usually is not. Okay? They've won that pro bono award almost prim-- almost solely because of their work on this case. This is a 400-member law firm. Okay? Who assists us daily.

We have obviously the resources of a Congressman's office. We have the resources of a Senator's office. We have numerous workers who -- who are communicating weekly, spending hours on this stuff -- hours. We have obviously Dr. McKeel, without whom we would essentially not be where we are at. Thankfully Dr. McKeel is retired, because if he were

working we probably would not have the full benefit of his diligence. We have Dr. DeGarmo, as Deb said. I can't stress enough how much time we spend on all of this.

And the point I'm trying to make is as we have been involved -- and quite frankly, in working with NIOSH, in working with DOL, in working with DOE -- things have improved from where we started. I think that is safe to say. We have a much clearer picture of what has gone on at Dow, and we have a much better chance of being accurate with potentially the dose reconstructions if we go that way, although I still question that we can be accurate. And I think we're much more to the point now where -- where we certainly believe, Senator Obama believes, all of our group believes that the Board should be unanimously voting to approve the extension of this SEC. I'm praying for a couple of you to come to the yes side -- I'm praying for that -- but I really do believe that this should be a unanimous vote. Okay? And I ask you to consider a couple of -- of items. These have been talked about just a little bit. Obviously the waste stream, I -- I

just hope that there would be some discussion amongst the Board, and you can articulate back to us what your view is of mixed waste streams on this thorium. We know that Dow had magnesium/thorium operations that were commercially used -- for -- for commercial purposes. We know that. We also know that it was used for the AEC. So once it's brought in, how do we differentiate it from then on, so I would like you to address that point just amongst yourselves.

The second point is, through our work we have shown that the thorium was used in nuclear weapons. This is not something that any agency discovered and brought to you, to the public domain or to us. Okay? So let's go back to our contention. Dr. McKeel has been contending for a long time that thorium was used and it was related to the AEC at Dow. When we went to Peter Turcic, Peter Turcic rightfully said, based upon the regulations, that we knew -- he knew, DOL knew -- that mag/thor was used there, but it was just commercially. It had to be used in conjunction with the AEC and it had to go into a nuclear weapon.

So, what happened next? We got the documentation, a lot of it from the Bureau of Mines and Minerals yearbooks, a lot of it patent information related to Dow and their patents on mag/thor from the early '50s. We supplied that to the DOE. The DOE talked to Landauer, I believe, and it was admitted that mag/thor was used in nuclear weapons.

So what happened next? DOL said we'll stipulate that, that it was used in nuclear weapons. But how do we know that the Dow thorium was used in nuclear weapons? Okay?

So we've done all this work. Every time there is a hoop -- these hoops are -- are endless, and I understand DOL's position. They -- they have their regulations and -- and they're implementing them. I totally understand that. There is no documentation, supposedly, that mag/thor was used by Dow in nuclear weapons. We think that -- that there is a very credible case that it was. Mag/thor was -- Dow was one of the very early -- certainly one of the early producers and held many of the patents. We've tried to get those patents from the U.S. Patent Office and we've been unable to. They just

simply don't have them. But nonetheless, if you are trying to come up with a document that shows definitively -- a purchase order, what have you -- that mag/thor was used by Dow, we don't have that document. And DOL doesn't have that document, nobody has that document. But I would ask you to consider this: We asked in 2006 -- Congressman Shimkus and Senator Obama, in a letter to DOE, they were very responsive, Libby White, Gina, their whole group -- we asked for all of their Dow documents, and they sent us a lot of information, reams and reams of information, which I think everyone has. But they did not send us the purchase orders from Dow and Mallinckrodt. That didn't come from DOE. That came from Dow, the 649 pages that Dow sent. Okay?

There are no purchase orders -- there are -- there are not contracts, excuse me, between Mallinckrodt and the AEC. They don't exist. Obviously they -- the work was done, but this whole effort by DOL and NIOSH and DOE that worker testimony -- we have all this worker testimony, not only that thorium was shipped to

Rocky Flats, which has roughly been ignored, that subject, but that it went to Mallinckrodt. We understand that the agencies have a regulatory job that they have to carry out that they need documentation to support the worker testimony. We -- we don't agree with it, but we understand it, and we understand why they're doing it.

But you don't have that burden. You simply do not have that burden. I would -- I would -- I would remind, for the record, that it was never intended in the law, nor is it in -- anywhere in the -- in the original legislation that worker testimony had to be substantiated with documentation. Okay? You do not have the burden that these agencies have, and that is why the SEC needs to be approved.

Now we go into a couple of more issues here related to the dose reconstruction process. We certainly respect NIOSH's efforts recently -- and obviously we disagree with their decision, but we respect their work -- that they can redo these dose reconstructions. They have no monitoring data from the workers themselves. They have no bioassay data from the earlier

testimony. There's a large reliance on the Silverstein report. Okay? The Silverstein report is from August 7th, 1957. Okay? None of the workers can remember Silverstein. Nobody knows this man. Why not? Because he worked in Michigan. He worked in Michigan. Matter of fact, I can read it to you here if you want me to, it's right here in the document, where he worked.

Dr. DeGarmo just had the document from Silverstein's staff, who in '59 was suggesting a different method of measuring thorium. That was in '59. Silverstein's report is from '57. Okay?

These are -- these are very important points that we need to work out. What was Silverstein's ability to accurately measure what went on at Dow Madison when he was at Dow Midland -- or one of the other sites in Michigan? Okay? I mean do we need to support that he didn't come there with travel documents? I mean how far are we going to carry this out? Okay? He wasn't there. So why are we taking his word when his word -- in the -- in his report we can -- I encourage you

highly to read his report. It's right here. Read his report and compare it to what the workers have said. And much of it is in disagreement. This is from a man who's never been there.

So the point here is -- well, let -- let -- let me -- let me go to one more point here. This is from the compliance report of the AEC, 1960. The Dow Chemical Company magnesium foundry at Madison has a plant manager has responsibility of running the plant. The Dow Metal Products Company and the plant survey -- safety director have the responsibility of administering a radiological safety program as laid out by radiation hazards committee -- the Radiation Hazards Committee and the radiological safety officer, both being located at the main headquarters in Midland, Michigan. The radiological safety officer is Mr. Silverstein. The largest supply of thorium comes from Canada in the form of pellets as of July 1, 1960 a total of 80 tons of thorium have been used at the magnesium foundry at Madison. Go-- going -- reading on, Dow Chemical is further licensed to transport -- transfer and deliver possession

of title to refined source material -- this is all related to thorium -- to any person licensed by the AEC.

Now why don't we have any more documentation beyond that? Because they didn't need it. It's in the -- it's in the compliance report right here. Yet we're being asked to provide it now. It doesn't exist. We've provided just about everything we can provide, but guys, we -- as Deb said, you know, regardless of how the vote goes today, largely through the efforts of the workers, Dr. McKeel, Dr. Garmo -- DeGarmo, you know, we have brought this much farther than it was.

And we are certainly prepared to take it much farther than it has gone today. Our -- our efforts have not been futile. We are producing documents which are highly relevant as we go on. Case in point, Peter Turcic's comment that magnesium/thorium was only used commercially at Dow, and that it was not used in nuclear weapons production. We've shown that to be false.

So where we are today is we need to vote. We need to vote to continue the residual period.

Now we have some dispute about the residual period which I think we can work out, based upon the documentation we have from IEMA. Some of it we just received on Friday, quite frankly. I drove to Springfield and picked it up. But we -- we could work some of those dates out. If we get to the point where it's only a dose reconstruction issue and the SEC is denied, God forbid, then I think we have many more conversations that need to be had about the dose reconstruction model that is being used. That's an unfortunate circumstance, which means that if the -- if the SEC is denied today, we would highly object to NIOSH proceeding tomorrow in recomputing these doses. There's only been three done so far because they've been waiting on all this to be resolved. We don't think at all that we're at the point where if the SEC is denied we can start doing dose reconstructions. So how much longer is that going to take? It's going to take much longer. As I say, we -- we were this close to approving this. That was in May of '07. And I don't want to be here in May of '09 arguing about dose reconstruction methods.

So from Senator Obama's point of view and in support of all these workers and everyone who's worked on this effort, we are asking for a unanimous vote to extend the SEC for Dow from at least '61 through 1998. Thank you.

DR. ZIEMER: Thank you very much, Robert. Board members, we can open this now for discussion. We actually have a recommendation from NIOSH. You -- you have several options before you. I would point out -- and the Chair's aware that there is a fair amount of new information that the Board has received today that you may not have fully digested. We -- we have some new information from the petitioners -- that is, it's new to the Board members. We actually have some -- well, the -- the evaluation review from NIOSH is fairly recent. So you may wish to also consider whether or not you want to postpone a vote till later in the meeting or till a later period. I think you need to evaluate what you want to do with the information that you've received today.

So it would be appropriate to have a motion, one way or the other, relative to the

recommendation from NIOSH, noting that there still is a fuzziness on the period, that NIOSH has indicated that it could indeed be extended. So there's really two parts to it. One is the period itself, and the other part is the reconstructing of the doses.

So let's open the floor for discussion. We can have -- we can have questions of the petitioners, of the agencies, so -- and Larry, it looked like you had a comment for us so let me recognize you first.

MR. ELLIOTT: Well, I -- yes, I do have a comment, and it goes to several things. I think there's a lot of confusion that has been presented here today that we need to -- I need to ask LaVon to come up and speak to that may help, I hope, for a better understanding.

I don't think we have an issue about the end date here. What will happen is we have to provide to the Department of Labor the research that has been compiled on when this residual period would be ended by the cleanup of the remaining activity or the AEC operations. And once we transmit that to Department of Labor, they will make the designation of the time

frame for the residual period, so I don't think we've got any issue at that -- but I would like LaVon --

DR. ZIEMER: Well, let me ask, would that require additional action or is that sort of understood if -- were the Board to approve that in terms of the dates, or to make a recommendation along that line, would that require further action by this Board if -- if --

MR. ELLIOTT: I think that would depend upon what the action is and which way it would go.

DR. ZIEMER: Well, if the class is defined as given here, and you find that later it's a different date.

MR. ELLIOTT: Well, it -- if -- if the scenario is that the Board recommends to the Secretary that a class --

DR. ZIEMER: Yeah, that's what I'm asking, right.

MR. ELLIOTT: -- be added, then -- well, you could couch the recommendation in -- in the context of whatever the residual period determination is by Department of Labor. If the scenario is that the Board makes a

recommendation to the Secretary that NIOSH can reconstruct dose during the residual period, then I think it's moot.

But I think -- you know, there's been a lot of presentation discussion about the Silverstein report, and I'm concerned that that has led to confusion. I think that needs to be spoken to. There's a lot of confusion that's been piled upon confusion about beryllium exposure. That is not something that we can -- we can address in this program. It's not a NIOSH responsibility. So I just want to put that on the record. We don't quibble about that. We truly believe that this site was a very, very dirty operation, that there was magnesium/thorium alloy produced even in the residual period. We need to speak to why we feel that we can bound the dose or reconstruct the dose, and what we're anchoring that dose to, and I'd ask LaVon to speak to that again for everybody's understanding, or at least to get it on the record as to where we're at with that. So that's -- that's an important point as well.

And I may have had a couple more points but I -

- I think -- I think it would pay dividends, for the audience and the Board, to hear us out on that.

DR. ZIEMER: LaVon?

MR. STEPHAN: Sir, I'm just going to cut you off and just say we -- we totally understand about the beryllium issue and that's not a point of contention for us.

MR. RUTHERFORD: A couple of things. One, the -- I just want to clarify a couple of things. I may have said that -- 'cause Dr. McKeel had mentioned that the Febru-- if I said a February 2006 final status report, I meant February 2008 final status report. I think Dr. McKeel said I said 2006. I was just correcting that. It is a February 2008 final status report and is available.

The other thing is we are not waiting for any information from the Department of Energy at all. We are -- we have requested, as I mentioned in my presentation, additional documentation if it's available from Dow, but we are waiting for -- we aren't waiting for anything from the Department of Energy.

As for the dose reconstruction methodology,

there's been a lot of discussion to the Silverstein report, the 1957 report. If you look at the data we used for our dose reconstruction methodology, we did not use the Silverstein report at all. We used the Silverstein report only in looking at studies that were done early on, 1957, the data that was used and that -- that came out of that 1957 study. The actual data that we used was the 1959 survey data that -- from -- if you look at the air sample data and -- and that air sample data is available to you on your O drive. And also if you look at that survey data, it's very clear up in the upper right corner on the survey information, it has "site" and it says Madison. So we used that data in our -- in our dose reconstruction methodology.

We did look at the Silverstein report. We looked at the Silverstein report during our original evaluation to determine if it supported dose reconstruction methodologies then, and we also re-looked at it as -- just to look at the values that were in that. But we did not use those numbers in that Silverstein report for our calculations.

And again, I think the -- the way we differentiated between the -- oh, another question Dr. McKeel brought up, it -- it -- and Larry tried to allu-- alluded to it a little bit. There is a question as to, you know, whose responsibility it is to determine the end of the residual contamination period. What we have done in the past, we issue a residual contamination report. That residual contamination report identifies when we believe the end of the residual contamination period is. Department of Labor uses that report to define that end date. We will provide updates or some -- something in that manner, whichever Larry determines appropriate and -- to the Department of Labor for them to adjust that end date of the residual contamination period. The other thing is the differentiation between -- again, what we took was 1959 data -- operational data, operational air data, and we assumed operations stopped at that point, and then we used that as our high value. And then we used the end value of the 2006 survey data that was taken, and that survey data, again, was taken from air samples conducted during the

rafter decontamination efforts, so those again were high samples. And then we used an exponential model for our -- our -- to determine that.

In our opinion there was no other operations that would need to be considered for that because we were only looking at the residual activity from the AEC operations.

DR. ZIEMER: Thank you for clarifying that. Okay, Michael?

MR. GIBSON: How were you able to distinguish between the AEW (sic) operations and the other operations?

MR. RUTHERFORD: That's a good question. What we did -- we did not distinguish between AWE op-- between the AEC operations and the commercial operations from the thorium, so -- so what we did was we took air sample data that could have been commercial, could have been -- I mean it was -- could have been either/or at that time, and then we used that data and then we used the end data, again, that could have been from AEC-related contamination or commercial contamination. So again, it's -- it's an overestimate.

DR. ZIEMER: So even though it might have been air contamination produced by production --

MR. RUTHERFORD: Right.

DR. ZIEMER: -- you're -- you would be assigning it to residual -- the residual cleanup --

MR. RUTHERFORD: Exactly, and --

DR. ZIEMER: -- operation, regardless of where it came from.

MR. RUTHERFORD: Exactly.

DR. ZIEMER: Okay. Other -- Gen Roessler?

DR. ROESSLER: Before you explained what you used from the Silverstein report, I had a question -- and I'll still ask it, but -- is he still alive? Is he a person you could contact?

MR. RUTHERFORD: You know, I -- I don't know if we -- you know, in our data capture efforts, in our communications efforts early on, if we've determined whether Silverstein's alive or not. I'd have to go back and check. I'm -- I'm not sure about that.

DR. ZIEMER: Robert, did you have a comment? And then Larry.

MR. ELLIOTT: I think the point we need to make here is that, you know, we don't quibble with

the workers' testimony that they -- that this guy never showed up at the plant. That's -- that's not -- you know, we're not using the Silverstein report to anchor our dose reconstruction methodology. The Silverstein report was a reference placed in our addendum to show that we had looked at similar operations in Dow, and could we get any information that was relevant to Madison from that. Well, obviously we didn't take it. We -- we referenced it, but we didn't use that information. So I don't see a need to go see if Mr. Silverstein is still alive. I think -- yeah, he's a radiation safety officer and, as I understand the organizational structure and radiation safety officers, they're at corporate headquarters and they've got some poor guy down at Madison here who he reports to -- Silverstein -- on what activities are going on. So you know, I -- I don't know that if you're asking us to go find Silverstein --

DR. ROESSLER: No, I just wanted to --

MR. ELLIOTT: -- I'd like to know what the -- what the benefit would be.

DR. ROESSLER: I think -- I think the point

needed to be clarified as to what use was made of his report because there was an objection to that. And I think -- I think we've got it out on the table now.

MR. ELLIOTT: Okay, thank you. Thank you.

DR. ZIEMER: Robert?

MR. ELLIOTT: One other thing I would comment on -- I'm sorry, Robert -- with all due respect, and I appreciate your summary, Doctor, but on prostate cancer, we would expect a high rate of prostate cancer in this population as men get older and new -- new diagnostic tools come available. But unless those are age-adjusted statistics, we can't rely on that to say that there's an excess here, and we are -- we have a consistent approach for reconstructing doses for prostate cancers. We have a model for that, so just wanted to assure you on that point. Thank you.

MR. STEPHAN: With -- with respect to IEMA's report, quoting here, soils located north of Building 4 and west of Building 5 are significantly above the State of Illinois decontamination guidelines for total thorium. Reading further from that same report,

approximately 39 percent of the rafters were inaccessible due to workers using aerial lifts. Did -- they couldn't simply get that high. I mean if -- you know, if you're familiar with the building, it's very high ceilings and, as the construction of the building goes, it's very -- well, it's impossible, really, to get all the way up there. So I think it just calls into question a little bit of their findings when 39 percent of the ra-- 40 percent of the rafters, if you will, were inaccessible when they were doing their testing, the Pangea Group was doing their testing.

DR. ZIEMER: Larry?

MR. ELLIOTT: Another point I would like to speak to -- this is in reaction to Dr. McKeel's presentation -- with regard to the number of claims that we do have, and I -- I'm very much concerned about this, not because of what he presented, I don't think it was inaccurate, but I want -- I don't want to leave you with the impression that we have 149 claims. We only have 111, 100 -- 49 have been pulled from us for SEC determination by the Department of Labor. We have 103 that are still in our hands

awaiting the resolution of how we're going to deal with this residual period, and we have pended those because -- and I'm not -- [Identifying information redacted] is in that group. I really want to get his dose reconstruction done or you guys make a decision to recommend an SEC class, but you know, we've been pending these claims for a number of months, awaiting the resolution of how to go about this. We think we have a solid approach that is a good overestimate and is claimant favorable and -- and would give an answer to these claimants. So yes, we do have a large number of claims in our hands at NIOSH pended, 103. The three that we've sent back, two were done under TIB-4 -- which you know is an overestimating approach and DOL found them to be compensable based upon that and we won't ret-- they -- we won't ask for them to be returned. These were inaccurate dose reconstructions done in that regard 'cause that TIB-4 approach is an overestimating approach to show that the cancer was not caused, but those went ahead and got over to DOL and have been compensated. One is a partial dose

reconstruction based upon exposure at another site, the GSI site, and so that's how that partial got done. We -- it was compensable and we did not have to do any further work on that claim to get that person a compensation -- compensation decision. Yet we still have 103 claims that I would like to see moved toward a decision. Thank you.

DR. ZIEMER: Robert?

MR. STEPHAN: Larry or LaVon, can you help us understand in laymen -- laymen's terms the impact of thorium on IREP -- you know, dealing with the '57 and '58 issue or up to '69. And then also as a follow-up to that, in laymen's terms for the benefit of the workers, related to prostate cancer.

MR. ELLIOTT: Well, I'm going to ask Jim to speak to the technical part of this on thorium and different cancer models and what that would mean as far as dose estimates. But while he's coming up here and getting his thoughts collected I will say this, that yes, we admitted during the AEC period that we could not reconstruct the thorium commercial dose. Okay? Now, you have to break out the next

period of time, which is the residual activity period, and that's what our second addendum here talks to and how we go about reconstructing not only uranium dose -- which we said we could do during the AEC period -- but also how we're going to reconstruct the thorium dose and the thoron dose during the residual period.

So now let Jim answer your question about risk models.

DR. NETON: Well, I -- I think your question is related -- and correct me if I'm wrong -- related to how a thorium intake would affect the probability of causation for different organs. If that -- if that's the situation, then what -- what you have is a dose from thorium per unit intake, primarily in-- inhalation would be the pathway of exposure here, principally; would affect the lung, the liver and the skeleton. Those are the three primary organs that would be affected, and the probability of causation for those three organs would go up appreciably lar-- higher than any of the other organs that would be exposed, such as prostate or the -- the bladder or the

stomach or something of that nature. That's typical of any of these -- what -- what's called the actinides, where they're alpha emitters and their radiochemistry is such in the biology -- in the body is such that they only accumulate in certain organs.

MR. STEPHAN: Thank you.

DR. NETON: That's about as good as I can tell you right now.

MR. STEPHAN: Thank you.

MR. RUTHERFORD: I would like to add something. If you actually look at the example dose reconstruction we -- you know, the -- the model that we have provided, there will be people that will be compensated under this model so, as Larry had indicated, that we would prefer to move forward with some of the dose reconstructions to at least get some of these answers out.

DR. ZIEMER: Let's see, I think we have Jim Lockey and then Phil.

DR. LOCKEY: LaVon, this is for you. In your presentation -- I was just looking at one of your slides is on -- I can't tell you which number it was, but a survey -- summary of

available monitoring data for residual contamination period -- okay? -- continued, and it says NIOSH has do-- dose rate surveys from the operational period.

MR. RUTHERFORD: Yes.

DR. LOCKEY: Is that '57's -- what period are you talking about?

MR. RUTHERFORD: We have the actual '57 and some '59 data.

DR. LOCKEY: All right. Do you have any data from Dow Madison after 1960 forward?

MR. RUTHERFORD: We do have 1981, I believe, survey information -- huh? '81 or '84, and we also have the 2006 information as well.

DR. LOCKEY: So Dow Madison didn't do any monitoring from 1960 to 19--

MR. RUTHERFORD: We -- at least we have not recovered any. Now recognize we may get that data from Dow and -- but I also want to point out that more than likely that data is going to allow us to refine those calculations, and more than likely is going to allow us to lower the calculations that -- for the external -- if you look at what we did, the external monitoring data we used was operational data, and it

actually -- if you look at the act-- or the dose rates that we used -- 'cause at the time, they were still in operations. We used a dose rate that was next to the storage bin, one foot away from the storage bin of thorium. We used that dose rate. And if you -- okay, taking into account the Silverstein report, we didn't use any of that data, but the Silverstein report also indicated, if -- if you look at it, that operational -- the maximum an individual they would expect would be 30 millirem per week. We've actually defined 28 millirem per week for residual period.

DR. LOCKEY: So -- so Dow would have been under a mandate to do radiation monitoring. Correct?

MR. RUTHERFORD: Yes, if -- if they had a license they were under, they were mandated to do some sur-- some surveying at some level. If -- if they determined through calculations, through air monitoring data or through external monitoring data that they did not meet thresholds to require film badges or personal dosimetry, they would not have employed that.

DR. LOCKEY: And all that data's been requested of Dow.

MR. RUTHERFORD: Yeah, we have requested it now for the thorium, so the '61 on thorium data.

DR. LOCKEY: And when -- and when was that --

MR. RUTHERFORD: But we would have -- we would have gotten the film badge monitoring data when we requested the -- any monitoring data from the '61 period on for uranium. They would have provi-- if they had film badge monitoring data, they would have provided it then. But -- so we don't expect to get film badge, but we could get dose rate survey information.

DR. LOCKEY: And when was that asked of Dow?

MR. RUTHERFORD: We asked it in February/March time frame of this -- just recently. Once we had the word from the Department of Energy and Department of Labor that changed the covered activities to include thorium in the residual period, we went back to Dow and requested that information. And they are working through that request now.

DR. LOCKEY: Thank you.

DR. ZIEMER: Phil?

MR. SCHOFIELD: During the residual period do you have any fecal analysis or urinalysis --

MR. RUTHERFORD: No.

MR. SCHOFIELD: -- samples?

MR. RUTHERFORD: No.

DR. ZIEMER: Robert?

MR. STEPHAN: I just want to go to -- to this issue of the Silverstein report again. I mean I -- I appreciate your point about how you relied on it and how you didn't. But for example, the number you just gave me in the Silverstein report says, quote, workers occupied the area once every five or ten minutes for less than one minute each time, and the workers highly dispute that. Again, this is a guy that's in Michigan. He -- he doesn't know. It's the same guy who -- who has several numbers wrong in the report, so I just want to point that out, that, you know -- I mean there -- there is some ways you use the Silverstein report and there's some ways you don't, and some of those ways that it's being used we certainly do have question with and certainly does not jive with the worker testimony.

DR. ZIEMER: Dr. McKeel?

DR. MCKEEL: I have a comment to make about Mr. Silverstein and about radiation and monitoring badges at a site like Dow Madison, and I -- I

really think we're overlooking something big time. I think it's quite right what Larry Elliott said, that Mr. Silverstein was the radiation safety officer for Dow Madison, even though he was housed in Michigan. And as such, he had overall responsibility for the program. Now when I was looking for -- I've searched quite hard for film badge data for Dow, and I dovetailed that with a search for film badge data from GSI. And over a year ago one of the places I contacted, on my own, was Landauer. And the reason why was some of the men had indica-- at GSI had indicated that maybe their data was sent to Landauer, so I called them up. And -- and so one of my -- and it was a formal request. We sent them the names, Social Security numbers and signed Privacy Act and medical releases from -- I think it was like 45 Dow workers and 45 GSI workers, just as test cases, and said could you please run these against your databases and see if you had any film badge data for either one of those groups. And I learned that Landauer had this remarkable corporate sense of responsibility that they have kept, in some form, every single film

badge reading they've ever -- that they've ever contracted for to measure.

So anyway, long story shorter, there was no film badge data at all for Dow. Now there were other people -- Picker*, for instance. I'm sure you all and the health physicists know other places where there might have been film badge data. So you know, I personally couldn't call all those people. I'm not sure I even knew who all there were. But I did try to take care of it by asking NIOSH did they have any film badge data, and they had none at all.

And to me, there's something really wrong with the emphasis that it's our job, the workers' job, to find their film badge data. Number one, the work was being done by the Atomic Energy Commission. Number two, worker safety is responsibility of the company, and that company was Dow Chemicals in Midland, Michigan, and Dr. or Mr. Silverstein was the person responsible for the safety of those workers.

And there is a term in the law which I like, and that is the thing speaks for itself. What speaks for itself is no film badge data. And if you listen to the workers, they were not

regularly badged.
So the other footnote I want to put on the same thing is [Identifying information redacted] yesterday said that she had filed an SEC petition for the Hematite former nuclear fuels plant. And what's interesting about that plant is it's been through six owners; the first three did AEC work, the last three did commercial work. And it was pretty much a -- a sharp dividing line between that. So I -- I've spent a lot of time at the Hematite plant and I talked to the current manager, who's a young guy, very helpful, and I asked him in particular what was his experience about film badge data at a place like Hematite. Now remember, the last three owners, including the current one, Westinghouse -- private companies, not -- not federal, AEC, DOE facilities -- and here's what he said. He said that they have all of the film badge data that's ever been collected from the earliest AEC days at a -- at that site. And I said well, is -- is it stored at DOE, for instance? He said no, we've had it on-site, and he said AEC licensees such as themselves are required to keep that data

forever on-site.
Now, was he telling the truth? I don't know. That's a pretty big company, actually, Westinghouse, and he swore to me that all of the film badge data was there. He said he could not give it out to anybody. He said but they were required, to keep their license, to do that.
So this thing speaks for itself. Dow -- Dow Chemical Company was sloppy. They did not keep those records. The Department of Energy has none of those records for the site. And so, you know, the credibility of Dr. Silverstein as a radiation safety officer is very low, as far as I'm concerned, just on that basis, judging on the record.
So the other comment I wanted to make is we're not just questioning the Silverstein data as being authentic. And I know LaVon said on his 1959 data there was some notations of Madison site. But you know, I'd just ask that there be careful scrutiny on that point. I'm still not convinced, without further proof, that that data that's being used was from the Madison site, so I'd ask people to look at that.

The other thing I'd comment on is this idea that there's two sets of data, 1981/2006, from Dow Madison. Now in 2006, that truly represents the residual contamination period. There was no -- there was no production activity going on. However, the 1981 data presumably is different because thorium was still being processed in 1981. And so actually you should have been able to measure the impact. But -- but again, to really get a good feeling for the amount of radioactivity in that plant, you would have to have extensive air sampling data in all the different areas -- you know, castings, extrusions, rolling mill -- and it -- and it had to be at more than just one period of time. We're talking about 1961 to perhaps 2008 or let's just say 2006 to be conservative. That's a long span of time. You need to have many measurements during that time.

So it again comes to something that seems to me has come up before this Board many, many times. What amount of sampling is enough? Is one datapoint enough? Is four enough? I don't think so. I think if you're trying to

characterize radiation over a period, you can't just calculate a factor from 1961 and apply it robotically to each successive year. That doesn't make any sense. I mean you -- you don't know what the values were in all those other years, any real data. And it's -- it's not possible to model that accurately except using very simplistic assumptions. And my take on it is if assumptions are so simplistic that they really deviate too far from -- from reality, and to say that that's a bounding dose, I -- I'm sorry, when you don't have enough real measurements to know what the upper bound might be, so my take on it is whatever the source of that data, there's too little of it to do what NIOSH really needs to be able to do. And I -- I think you all should reject those measurements on those type of considerations, among others that you may turn up.

DR. ZIEMER: I wonder if we could get some clarification on the point that was raised. I think, Dr. McKeel, you're ask-- you're questioning whether the air sampling data actually came from this plant or -- could you

clarify that?

DR. MCKEEL: I -- yes, I'm -- I'm asking that, and I'm also questioning over what period of time --

DR. ZIEMER: Yeah, I understand the second point, but LaVon, can you confirm to us the location of those samples?

MR. RUTHERFORD: Yeah, if you take a look at the -- if you look at the report, that report will have a SRDB number tied to that report. And if you go into your O drive and look into the references, you can pull that actual survey up and look at it. And when you pull that survey up, in the upper right-hand corner of that you'll see it says Madison site. So that's -- and -- and I know what Dr. McKeel is saying about not having oper-- or data over the period of time, but I explained our methodology that we used. We actually took operational data as a high point and starting point, which -- for the first year of the residual period, and then we used actual -- end point data was not the end point -- it was end point data that, again, was overestimated based on the fact that the decontamination efforts that were

occurring in 2006. So I think we are -- are -- have provided a conservative model from that.

DR. ZIEMER: Thank you. Robert?

MR. STEPHAN: Final point on this issue, which I think backs up what -- not that it needed backing up, but adds to what Dr. McKeel was just articulating. I will submit this for the record, but for now I'm going to paraphrase. This is a sworn affidavit from some of the Dow workers.

In late 1995 or early 1996 [Identifying information redacted] and [Identifying information redacted], who are electronic technicians, were working in the pot room. We came out and were talking to [Identifying information redacted], who was the melter; [Identifying information redacted], who was the stockman; and [Identifying information redacted] -- [Identifying information redacted], I apologize if I'm butchering his name, who was the general utility man. When [Identifying information redacted] came up -- then [Identifying information redacted] came up and told [Identifying information redacted] to get rid of all the badges that we wore, which

were radiation dosimetry badges. [Identifying information redacted] put them in a 5-gallon bucket. He threw them in the dumpster. [Identifying information redacted] was the head of melting for the plant. [Identifying information redacted], [Identifying information redacted] and [Identifying information redacted] are the only ones that are living today.

Now, legitimate question is in 1995 or 1996, who was the owner? Was it Dow Chemical, was it AEC-related? Well, of course not, because it was an entirely different operation at that point in time. But still we go back to this issue of the commingling of all the waste streams back from the '50s. So what would the-- what would these radiation -- the dosimetry badges, what would they have said in 1995 or 6? We don't know, and so I -- I don't really have a quibble with the fact that NIOSH, with the available data that they have, can do a dose reconstruction. The question is -- and -- and that it is -- it's bounding, it's highly claimant-favorable. But do we know that that data is enough? We don't know the answer to

that question. We certainly don't know the answer to that question. We simply don't know. So Dr. Branche, I'd be happy to submit this for the record and give you a copy.

DR. BRANCHE: Thank you.

MR. STEPHAN: Thank you.

DR. ZIEMER: Wanda Munn?

MS. MUNN: A question of clarification with respect to badges. Is a material license that is issued by AEC or its successors and related to the requirement for badging --

MR. RUTHERFORD: Only when --

MS. MUNN: -- incorporated --

MR. RUTHERFORD: I'm sorry, go ahead.

MS. MUNN: -- with a level of anticipated dose, so that one might have a materials operating license but if the quantity of radioactive material that was being handled was so low that the dose would not be detrimental to the handler, badging would not be required? Is that the case?

MR. RUTHERFORD: That -- that is correct, and we do have a -- one of the reports that indicates that may have been the situation, so...

DR. MCKEEL: I'd like to comment on that. There are -- there are rules that the AEC has -- NRC -- that, you know, if you're handling material that has a thorium content less than two and a half percent that that can be exempt. But that's not the case at -- at Dow Madison. You know, we don't have any film badge data for the production period when men were taking solid lumps of thorium and pouring them into those pots under heavy fumes and so forth. So I think the data from the Ames Laboratory, for instance, that [Identifying information redacted] has discussed with you all extensively, the -- the thoron doses to those workers in fact are so high during the residual period that he's asking that they be considered for compensation having worked at the Ames Plant for less than 250 days. And so I think rather than talking about are these doses so low that badges weren't required -- well, I'll just make this as a categorical statement: Those men should have been badged. And the fact that -- periodically you'll see in there testimony they were badged, but it was cosmetic badging. Their impression was, to a man,

there's nobody who stepped up -- before 1986 when Spectrulite took over -- who has said yes, I wore a badge every day and -- there's nobody who I've talked to who has ever seen a report of a personal dosimetry reading, nobody. And so I don't believe it happened. I believe it should have happened and -- wow, I -- I just -- I -- I think they should have been badged. I think that something happened to the badges.

DR. ZIEMER: Robert?

MR. STEPHAN: Again, following up here on Dr. McKeel's point, I appreciate the point that you're trying to -- trying to make, Wanda, but you -- if you refer to the IEMA reports, they cite throughout the report that in the mid-'90s and into -- well into 2000 that the levels were much higher than the guidelines. So if you're going to the question of you had a small amount of thorium and it didn't require badging, regardless, and we -- and we I think have lots of disagreements about what the amount of thorium that was used there was, IEMA's own reports when they're trying to do the decommissioning from Pangea cite numerous instances where the levels were much higher

than their guideline, sig-- quote -- to quote the report, significantly higher in many cases, which is in the most recent IEMA report.

MS. MUNN: Yeah, thank you.

DR. ZIEMER: Mark?

MR. GRIFFON: I have a -- a couple of questions I've been sitting -- sitting waiting my turn so I've several questions. I -- I wanted to start with the previous period that we looked at as far as internal dose. I'm talking mainly to the thorium and thoron dose reconstruction, and previously, during the operational period '57 through '60 I think -- if I got the right area of the previous report -- NIOSH -- this is from the ER report, says NIOSH does not have enough documentation to ensure that all conditions that could have affected exposure levels were similar to those represented by the available air monitoring data. So -- but then we're go-- in the current model they're going on to use some of that air monitoring data as operational, extrapolating to the cleanup data and using that for the residual period. So you know, it wasn't good enough for the -- for the operational period, but I guess the -- the

reasoning is that well, it was some data and it is operational and we're in a residual period. I'm -- I have some concerns about that. I guess I would say yeah, it's -- it's a little higher, so therefore is -- does that mean it's okay to use, is it bounding? I don't know. That's -- that's one question. I'll call LaVon up in a second --

DR. ZIEMER: Do you want to respond, LaVon, on that issue or...

MR. RUTHERFORD: Recognize that a lot of things we were looking at during that operational period, again, was what other activities were occurring that -- we -- we had to reconstruct all doses during the operational period, so we had to look at all activities that were occurring at that time. Okay? So we -- we were concerned that we had operational data, but we were not sure that we -- because of the operations, the '57 air data, that little bit of air data that we had come in, we weren't sure that all operations were covered by that data.

What I'm saying now is is that we're taking operational data from 1959 -- again, that

includes the resuspension factor from residual contamination as well as operations -- and we feel that is a bounding number, and recognizing that it is above an MPC that -- the data that we're using.

MR. GRIFFON: Okay. Then -- then I wanted to get into the -- the actual model if -- looking at the -- and this is a similar question that I asked about the thoron and of course -- the O drive booted me out, hold on. It -- it's -- it's -- the general question is that -- I looked at the thorium data -- here it is -- and in the ER report it says the thoron -- and I should say that the question I asked earlier, LaVon explained to me that the -- there were more datapoints, but the data they selected for the model was the December '59, the one last year, and that was consistent with what I saw in the Excel spreadsheet. This thorium data, now that I'm looking at this, you have a similar situation. You have much more data available and they take a lot of the December '59 data, but there's also datapoints from '58 and '57. And in the ER report it says it took the highest available operational data, I think

were the words --

MR. RUTHERFORD: Yeah.

MR. GRIFFON: -- and -- and there's a couple points in December '59 here, and I would say well, you know, there's some that -- that might be -- might -- it was a good explanation, in my head anyway, why they might have not been considered. Some are breathing zone related to hand sanding. It might have been a particular -- okay, I can see rationale for dropping those, but this one says -- two of these say near control panel and in pot room, and other samples identified like that were included, yet these happen to be quite a bit higher than your 95th percentile in your distribution. So again, I have some -- some specifics here on the model and I've just looked at it today really, so -- but I don't know if you can address that or --

MR. RUTHERFORD: I can -- I can address that our intent was to look at the general area air samples. We focused -- we stayed away from the strict process samples or breathing zone samples because those were associated with true -- with operations and -- and would have been

le-- have leaned towards operations, more towards operations and not towards a resuspension residual period model that we were looking at. That's why we focused on general area.

Now if there's a couple of samples that we excluded that look like they could be a general area sample, I'm -- I'm not sure why. I would have to look at that. But that was our intent was to use the general area data that would include both an operational -- it would have an operational component from any general area activity that the operations were -- were supplying, as well as resuspension.

MR. GRIFFON: And the-- these have -- in the spreadsheet I'm looking at, there is a -- a tag back to the original survey documents. I haven't -- I haven't cross-walked these, so there might be a good explanation on why a couple of these were left off, but just looking at the description, in the pot room, it was included when it was 1.33 -- I think this is picocuries per meter cubed -- and the one that wasn't included was 9.33. The upper 95th right now is -- is, you know, around three, so it

raises a question in my mind of how -- how was the data selected.

And then LaVon, I don't know -- did you mention why -- why are there a couple of points from '57 and 8 included in this -- in the thorium stuff and not in the thoron? Or... There's some air sampling data from '57/'58 here. I thought you were only looking at the tail end of the -- sticking with the 1959 data for thorium.

MR. RUTHERFORD: Again, I'm not sure on that. I'd have to look -- go back and look at the data again on that myself.

MR. GRIFFON: Again, there's a lot of values excluded from '57/'58. I don't -- I don't really see why these two were picked. They're not necessarily low-- they're kind of in the middle values, so they're not necessarily lower or higher, but --

MR. RUTHERFORD: Well, if they were process samples or breathing zone samples, we clearly --

MR. GRIFFON: Oh --

MR. RUTHERFORD: -- separated those out.

MR. GRIFFON: All right. And then -- and then

the data for the cleanup -- I'm probably missing this 'cause I've been going through a lot of documents, like everyone here has, obviously, but wh-- where is that da-- is that in -- in a spreadsheet format as well or --

MR. RUTHERFORD: No, it's actually -- we have -- like I said, we just got that last Friday and that report itself is -- it should be in with the references. It's called the Spectrulite final closure report, I believe -- I can't remember. It's not referenced in -- in our addendum because we did not have that at that time, but we did put it in the O drive and make it available for the Board so it is there.

MR. GRIFFON: And you mentioned ten percent DAC value, but was it multiple samples or was it one sample --

MR. RUTHERFORD: No, actually it was sampled over a month period of time.

MR. GRIFFON: So a one-month sample.

MR. RUTHERFORD: A one-month period of time and they took the highest actu-- we took the highest value of the -- based on that perimeter boundary.

MR. GRIFFON: Okay. And last question is the

extrapolation model, is that -- it's -- it's described I think in the attachment of the addendum --

MR. RUTHERFORD: Yeah, in detail.

MR. GRIFFON: -- but is there -- is it in a spreadsheet somewhere? Is it --

MR. RUTHERFORD: That should be --

MR. GRIFFON: I have to look to that more --

MR. RUTHERFORD: Yeah, it should be --

MR. GRIFFON: -- closely, too, but...

MR. RUTHERFORD: Yes, it should be in with the sample dose reconstructions. If not, it may also be in with the references itself in there and -- and that, again, is a model we've taken right out of TIB-70, so --

MR. GRIFFON: TIB.

MR. RUTHERFORD: Right.

MR. GRIFFON: Thank you.

DR. MCKEEL: I have one more comment to make about what LaVon just mentioned. It just struck me in my debilitated state, but we've been talking about a steady state over the residual period, and I think it's really important to recall that the reason the original residual period ended in 1998 was

because the U.S. Army Engin-- Corps of Engineers, under the FUSRAP program, came in and remediated fully, they said, the uranium that was in the rafters in Building 6. Now in that report they clearly described commingled uranium and thorium in those rafters. And they also pointed out that, because Army Corps of Engineers believed at that time that all of the thorium there was commercial-related, they had no mandate to clean it up. So they made no specific attempt to clean up the thorium. But my reading of that report was an awful lot of it was commingled with the uranium, so -- now they restricted that cleanup just to the extrusion building, so they wouldn't have touched 5 or 7. But at least some of the residual thorium was undoubtedly removed with the uranium in 1998 and so there was sort of a little step effect in there where the overall thorium -- some of it left the site in 1998. That's a point. And 2006 measurements would be a little bit lower than they were say in 1997, probably, just -- yes -- yes, Diane.

MR. RUTHERFORD: I was going to respond somewhat to Dr. McKeel. I also wanted to make

a note that the license -- the 1962 AEC license did note or did make a note at the bottom of exemptions to 10 CFR 20 with less than four percent -- four percent or less thorium/magnesium alloy productions. Not -- I did not go back and look at the specific citation to verify what all the exemptions were. I'm just making that note, so I want to clarify that. Okay.

The 2006 data that we actually took, the reason we took that 2006 data, one, we felt we could have taken the surface contamination data from 1998 and actually did a two-step model that would have ultimately -- especially now that we had the 2006 data, would have actually lowered the concentrations from '98 to 2006. But from a claimant-favorable and from an ease of the calculations, we just moved the 2006 data and took that air sample data from 2006, which again is from D&D activities, it was generated by D&D activities as our high point, and we felt like that would -- would be a -- a simple approach and would cover the whole period.

DR. ZIEMER: Mark, you have additional --

MR. GRIFFON: No.

DR. ZIEMER: Okay. Dr. Lockey?

DR. LOCKEY: LaVon, one -- one question about what you just said, the AEC license and four percent.

MR. RUTHERFORD: Yes.

DR. LOCKEY: Can you -- explain that to me, will you, in a little bit more detail?

MR. RUTHERFORD: Okay. The AEC had determined -- make -- makes a determination -- as Wanda had mentioned earlier, part of your licensing -- part of your radiological safety requirements will depend on how much material you handle, how much operat-- or what type of operations you're doing that you could possibly generate exposures to employees. Based on the studies they may do, the amount of material that's involved, they make a determination that a site may be exempt from monitoring practices -- personnel monitoring, typically, practices depending on how much radioactive material you -- you are working with. And in this case, in the license it indicates at the bottom -- now again, I want to qualify this that I have -- I just, you know, was only -- I haven't reviewed the actual citation under 10 CFR 20 to verify

this, but -- but the AEC inspection says that there -- they are exempt from 10 CFR 20 when dealing with four percent or less thorium materials in 1962. Okay.

DR. LOCKEY: Let me follow up. Prior to 1960 what was the percentage in the thorium, do you know?

MR. RUTHERFORD: You know, I -- I know they worked with four percent, and actually they worked with higher during a -- where's Dr. McKeel -- they actually worked with some higher period during that time. Now we -- again, it's during the operational period. I think they -- I can't remember the actual percentage, but it was much higher than four percent, some special material, thorium alloy material in -- that they used in 1959.

DR. LOCKEY: And after 1960?

MR. RUTHERFORD: After 1960, based on the AEC license, they were dealing with four percent or less.

DR. LOCKEY: Okay.

MR. STEPHAN: This is from Dow, February 22nd, 1971. It's from Dow to the AEC. I was very surprised to get three invoices related to AEC

source material license fees -- it goes on to discuss why he was surprised, why some of these licenses should be combined or canceled, and he says in here 859 pounds of thorium nitrate used during 1970 on license number STB1055 which contained about 40 percent thorium.

DR. LOCKEY: Was that from Dow Madison?

MR. STEPHAN: Yeah.

DR. LOCKEY: Okay, 40 percent.

MR. STEPHAN: Yeah, so -- I mean I could go through this whole document and find all kinds of other instances post-1960 that have much higher levels of thorium beyond four percent.

DR. LOCKEY: Okay.

MR. STEPHAN: I mean this is just one example I found right now, but th-- this is 1971, talking -- talking about the period of 1970.

DR. ZIEMER: Thank you. Dr. McKeel?

DR. MCKEEL: Well, they were licensed for several different kinds of thorium source material, including pure thorium -- thorium pellets, so it wasn't -- they weren't licensed just for the alloy. Some of the alloys had lower amounts, two and a half percent I think was HM21A for the thorium content of that. But

you know, they had to -- they had to buy thorium to make the four percent or two and a half percent alloy, and then they had to dump that solid thorium into the magnesium and add a little bit of zirconium or whatever else was in the alloy mix. But they were dealing with ver-- very enriched thorium, so -- I mean that's -- that's quite right, they -- I mean they were exempt -- once it got to be an alloy and a piece -- a hunk of metal with a small amount of thorium in it, then you can get exempt. But they -- they weren't exempt from having to have a license, and I feel badges, for their much higher compounds of thorium way above that limit.

DR. ZIEMER: Thank you very much. The Chair is going to make an executive decision here, and that is that we're going to take a lunch break. We will return to Dow, but not immediately after lunch. The Board has a session called Department of Energy update, and I just want to tell you that for the Board this will look more like a training session. It's dealing with certain procedures on the DOE documen-- documents that are retrieved. We will not be

enacting any Board business during that hour. Those in the audience who wish to take a more leisurely lunch, we will -- we will recess from 12:00 to 1:00 and then from 1:00 to 2:00 we'll have our DOE session. And so my intent is that at 2:00 o'clock we would return to the Dow issues, so don't feel obligated to come back for -- I'm -- I'm not implying that the DOE will give a boring session. Far be it from them to do so. But we will not enact business during that sort of training session, so we'll see you after lunch.

(Whereupon, a recess was taken from 11:55 a.m. to 1:05 p.m.)

DR. BRANCHE: I'd just -- before Dr. Ziemer introduces the next segment, I'd just ask that phone participants -- is the line open completely?

DR. ZIEMER: Yes.

DR. BRANCHE: I'd ask that phone participants mute their lines. If you don't have a mute button, please use star-6.

I also ask that participants by phone not put this line on hold. If you must leave the line, it would be much better for you to hang up and

call back in. Putting us on hold interrupts the entire line.

Thank you so much for your cooperation. Dr. Ziemer?

DEPARTMENT OF ENERGY UPDATE

DR. ZIEMER: Thank you. We're -- official come back to order for the afternoon session. We're going to begin our afternoon agenda with the Department of Energy update. Reg-- Regina Cano is going to make the presentation. She's with the health and safety group at DOE, and supporting her today are Guy McDowell who's with the security division, and I believe by phone Ken Stein, who's also security division. Ken, are you on the line as well?

MR. STEIN: Yes, I am. I am with the office of classification.

DR. ZIEMER: Okay, very good. Thank you. Regina, welcome. The podium is yours.

MS. CANO: Thank you. Again, thank you for allowing DOE to address the Board. I also want to let you know Dr. Worthington normally provides the presentation of the program update for DOE, but she has been on travel and so I guess it's appropriate to say, being in St.

Louis, I'm pinch-hitting for her.
So -- but again, we have a number of individuals from DOE present -- Greg Lewis, Guy McDowell, and as you mentioned, Ken Stein is on the phone.
And again, you know, just -- I -- I realize that this may be repetitive. However, for -- I don't know if there are any claimants here or anybody from the public, I just want to make sure we go through DOE's responsibilities for their benefit.
As previously mentioned, DOE has three major responsibilities under EEOICPA. We respond to DOL and NIOSH requests for information related to individual claims, which include employment verifications and data relevant to exposures.
We also provide support and assistance to the Department of Labor and NIOSH and the Advisory Board for research-related activities. The other -- third element is that we research issues related to EEOICPA-covered facilities, which includes time frame designations.
As mentioned, I would say at least probably 90 percent of our work is dedicated to responding to individual claims. The majority of our

budget does go towards res-- you know, providing the records to support adjudication of the claims. Basically for employment verification we respond to approximately 8,000 a year; dose reconstruction, approximately 5,000; and DARs, the Document Acquisition Requests, approximately 9,000. This is used to support Part E claims.

Again, just to give you an idea of -- of the number of requests we've responded to in the past years, in 2006 we responded to approximately 17,000 requests; in '07, 21,000 -- almost 22,000 requests, which -- you know, basically the increase went from -- approximately 32 percent from '06 to '07.

The next couple of slides will just be -- provide you with an overview of the trends that we're seeing. For '07 it kind of gives you an idea of the active months. For '08, so far -- and this is as of April '0-- April, we have received approximately 10,000 requests, so we're anticipating to probably accommodate approximately 18,000 requests for '08. And so that also just shows you that, you know, in '07 we were -- we responded to approximately 21,000

and in '06 it was 17,000 and in '08 it's going to be about 18,000. That's what we're anticipating.

Another area that we support, as I mentioned, is facilitating record requests between DOE and NIOSH. Currently -- to support SE-- SEC activities. Currently we have six ongoing SECs that we are supporting. As you can see -- you know, Fernald, Hanford, Mound, Nevada Test Site, Savannah River and Pantex. Our role at headquarters, again, is to facilitate record requests between the Department of Energy out in the field and NIOSH and the Department of Labor. Greg Lewis is our primary point of contact, and I know that a lot of individuals from NIOSH have dealt with -- with Greg.

Just to give you kind of an update as to what has taken place with some of the SEC record retrieval activities, for Hanford -- I realize that several months ago we had some budget concerns, but I believe that that has been rectified, so we have made significant amount of progress in providing the documents relevant to Hanford and a number of the other SECs. But as of June '08 Hanford staff hosted NIOSH

contractors and basically that enabled them to understand the needs for NIOSH, and that also allowed NIOSH to understand the limitations that Hanford may have in responding to some of the requests.

To date Hanford has -- NIOSH has reviewed approximately 100 boxes of responsive documents, approximately 20,000 pages were identified for production, keyword searches resulted in about -- almost 300,000 potentially responsive documents, and we're also anticipating a July visit. This will provide NIOSH the ability to meet with subject matter experts.

In regards to Savannah River, same thing. We -- we have found that having preliminary planning meetings with our sites has proved to be very valuable. It enables our sites to understand NIOSH's expectations and their needs, and also for NIOSH and SC&A to understand Savannah River or the site's availability to provide certain documentation. We hosted a visit with NIOSH representatives June 10th through the 13th, and this is where we were able to provide technical reports for

their review. During that review NIOSH also identified approximately 5,000 pages from 519 documents from which they need electronic copies. These are undergoing proc-- are being processed by Savannah River at this time.

We've also been able to retrieve and conduct security reviews, and provided over -- almost close to 3,000 pages of documents -- or pages from the SRS special hazards investigation reports.

In regards to Mound, during an initial keyword search 2,000 boxes were identified as having potentially responsive documents. Subsequently NIOSH and SC&A have submitted a comprehensive data capture plan. The DOE Office of Legacy Management -- they have also hosted a visit in March of '08 which again provided NIOSH and Mound to have a face-to-face discussion in regards to understanding the needs.

NIOSH reviewed approximately 74 boxes of records and selected responsive documents for reproduction. DOE staff facilitated interviews also with former Mound workers. Both NIOSH and SC&A have assembled a comprehensive research plan and within I believe the next few weeks we

will be working with both groups to identify a plan of action and time frame for completing our SEC research.

And I just want to say on that point, I think we found that developing a comprehensive research plan enables NIOSH and SC&A not only to share information, but it also provides our sites an opportunity to plan accordingly. It helps for budget purposes, you know, for them to plan in regards to how much -- how many -- number of staff that they have to hire, and also in regards to how much time it will take to respond to NIOSH's requests. So we've found that this comprehensive data-capturing strategy has been very valuable.

As mentioned, DOE also -- we fund and coordinate large-scale records retrieval activities, you know, in addition to assisting Labor -- or NIOSH, we also assist Labor with their site exposure matrices databases. We've completed over 20 -- and I would say that number has actually gone up dramatically. I would think close to what, over 30, Greg, total? We also assist the Advisory Board, as you know, and -- with their site profile

documents, the techni-- I should say the technical reviews, and then also for the Special Exposure Cohorts.

While we have large-scale research activities going on at the site, we also want to make it clear -- or make a point that we also accommodate small research activities and we -- we're constantly -- there's constant activities going on at the site, particularly pertaining to gathering information to update and improve site profiles, and that may be requested by NIOSH or -- or SC&A.

DOE also has responsibility to research and maintain the covered facilities database. There are over 343 covered facilities, and I can tell you probably at least on a monthly basis we're updating that database. And that's often as a result of information that NIOSH will provide to us and ask for us to clarify or po-- or potentially Labor.

As I mentioned, we are -- we -- we research activities related to the covered facilities list. Right now we have several ongoing research activities taking place, and this may be, again, initiated by NIOSH, Department of

Labor, Congress, or potentially a poten-- petitioner or a claimant. To assist us in this effort we have been working with the Office of Legacy Management. As you know, they have responsibility for the closure sites and an immense expertise in records management. So we believe that Legacy Management has been valuable in assisting us in the research activities.

In regards to initiatives, within the past couple of years we've -- we're constantly looking for ways to improve the program and become more efficient in responding to the claimants and to NIOSH and Department of Labor. We have named a POC within our office to coordinate all records. And again, that's Greg Lewis. We hold, if not monthly, bi-week-- I guess every what, maybe every week, would say? Some type of a conference call with NIOSH, ORAU, SC&A or Department of Labor so we can make sure that we're being responsive to their needs.

DOE headquarters has recently made an arrangement -- again, like I mentioned -- to work with the Office of Legacy Management to

assist us in research.
Something else we asked our sites to do was that -- was that they review and update their records research procedures. We found this to be very helpful. As a result, a number of the sites took steps to improve their data-gathering methods and sources. They were able to find additional collection of records that could be potentially helpful to EEOICPA, so we found this to be very helpful.
And most recently, we -- I guess late last year and early la-- this year, our DOE field staff trained the DOL District Offices, basically giving an overview of operational history and site records management procedures as it relates to EEOICPA. We thought this was important because we do have the subject matter experts available to Department of Labor. Not only do their know their sites and can explain it to Department of Labor, but they can also explain to the Department of Labor the records that they're providing to them and how they should interpret that information as -- and apply it to the claims process.
We also made the commitment to provide site

experts to participate and contribute to the working group conference calls. We hope that you would, you know, take advantage of that. If at any time you need assistance, just let us know. We'll make sure we have the appropriate person on the call. I think that's helpful when you're discussing activities at a particular site and you need -- need clarification. We'd be happy to have them on the call.

Again, as I mentioned, we have requested that NIOSH and SC&A work together to draft a project plan for each records research project. This has been very valuable and helps us plan appropriately. And as well we've initiated pre-planning meetings. I think the face-to-face really helps. That way it helps establish better communication amongst NIOSH and the field when they know who they're talking to. They can put a face with a name. I think that's -- that's been very helpful.

Something else we continue to work on -- as you know, you know, we have the -- the NIOSH MOU. We currently are reviewing the DOE/NIOSH procedures to identify roles and our

responsibilities. We believe that DOE needs to make sure that we can comply with expectations outlined in the MOU. We realize it's taking some time to complete, but a number of areas that we continue to work through include system of records, security clearances, and safeguards and securities. Again, we want to make sure that everybody can comply with what's outlined in the MOU.

Security clearance, for example -- you know, I just want to make sure I understand the DOE process for granting security clearances, and we want to make sure that nobody is inadvertently terminated, their clearance.

It's been challenging for us because, for example, if an individual was provided a Q clearance from a site, we have no way of tracking whether or not that clearance has been terminated or any kind of action's been taken on that particular clearance unless we have some way of connecting it to our organization, which in the -- we're -- we're doing right now. We're trying to reconcile the clearance issue.

Again, safeguards and security is another area that we take very seriously. The MOU is

something that did outline security requirements. We've looked at those security requirements and we're working with NIOSH and the Board and the contractors to make sure that everybody can comply. We need to make sure that we can protect the information that we provide to -- to the Board and to NIOSH. And I realize security has come up recently, there've been questions, so I just want to see if we can address some of the issues or questions that have come up relevant to security. Again, I just want to make clear that DOE -- we have never restricted access to any type of information that you feel that's relevant for EEOICPA. We will always make that information available, whether it's classified or unclassified, provided that the individuals accessing classified information have proper clearances. But at the same time we also need to make sure that the documents we are providing -- we do in a responsible manner. Ultimately we want to prevent the inadvertent release or dissemination of classified information, and controlled unclassified information, to unauthorized individuals.

I -- I don't -- you know, DOE, from the very beginning -- I mean we always review our information that goes out, so I think there may be some concern or some -- as to whether or not we are instituting a no protocol, and that's not the case. I think from the very beginning, any type of document that's been provided to NIOSH will undergo some sort of review. However, in updating the MOU it's been -- we have been trying to understand NIOSH's internal procedures as to, you know, what kind of documents they do drafts so that when we do provide the appropriate guidance it does meet your needs. And we also want to make sure that we are complying with the security protocols that are in place.

Again, I also want to mention that DOE has been working collaboratively with NIOSH to divide the guidance. We've had several meetings in Washington, D.C., as well as conference calls, to kind of flesh out some of the issues that we're concerned with. Again, you know, it's -- we want to make sure that -- that NIOSH, as well as the Board members, understand where we're coming from when we -- when we are

referencing certain regulations or procedures that require the outline -- safeguarding and protecting information.

Does anybody have any questions?

DR. ZIEMER: Thank you, Regina. Let me begin the questioning with this question -- or ask for an elaboration. You talked about the covered facilities database. Could you expand a little bit on the content or what types of information you have in --

MS. CANO: Sure.

DR. ZIEMER: -- that database?

MS. CANO: Basically it's just a brief description of the facility, including the time period that it's covered, AOAS's -- or I shouldn't say AOAS's -- subsequent owners or potentially known as, but it's always been intended just to be a brief description. You know, we see that NIOSH often -- or Department of Labor -- has additional information that will outline operational history for that particular site. But again, it just gives basically the claims examiner an understanding of what's covered and the time period, and whether or not it's an AWE facility, beryllium

vendor obviously or a -- or a DOE facility.

DR. ZIEMER: Perhaps I should ask if any of your colleagues have comments also, either Guy or Ken or -- or Glenn (sic).

UNIDENTIFIED: (Off microphone) If you have any particular questions, then we're here to (unintelligible) those for you.

DR. BRANCHE: I have a couple.

DR. ZIEMER: Couple of comments? No, go ahead.

DR. BRANCHE: I appreciate Gina's having -- Regina having mentioned that there have been on-site face-to-face meetings as well as conference calls to help us reconcile their adherence to their policies and their need to protect the data, and NIOSH's need to access the data, not only for their own work but also for -- and providing information to the Board. One of the suggestions that arose over the last few weeks has been the idea that in order to facilitate things that one of the Board members who is already cleared be an initial point of contact for the Board for DOE, and the suggestion had been that it be Mr. Presley. And I think that's something that I -- I talked to Dr. Ziemer about, but I think it's

appropriate that if there are any objections that that raise -- that -- I mean he will be representing you and -- and be this point of contact, because in some cases the need for speed has been one that has made the idea of having someone readily recognized as representing your body would help.

MS. BEACH: Christine, could you explain that role in its entirety --

MR. GRIFFON: Yeah.

MS. BEACH: -- what that would consist of?

DR. BRANCHE: I think I'd ask Mr. Presley if he could explain that role -- or --

DR. ZIEMER: Or maybe DOE can. Let me make a couple comments. It was indicated to me that the Board may need to be represented from time to time on some of the security issues. We have a limited number of people -- in fact, very limited at the moment -- of people who have Q clearance, maybe only one or two. But in any event, I'm certainly prepared to make that appointment if -- that's my prerogative. I'm not quite sure what it entails or what the expectation of DOE is, how they see the person in that role. Maybe we could hear from Regina

on that, and then Bob, if you have comments as well.

MS. CANO: I mean first of all I think, you know, we have already -- Bob and I -- or Mr. Presley and I have already worked quite a bit together, and I think it is an -- it is an appropriate -- that if there are questions relating to security that they do -- you know, we can coordinate those questions through Mr. Presley. However, when it comes to actually reviewing documents, having an ADC review, we prefer that those reviews take place at the site because they do have the expertise available to -- to review that information. However, we still can coordinate with Mr. Presley, which I think is important. It helps if we could have one point of contact and, you know, so we can address the concerns, if necessary.

Ken, do you have anything else to add?

MR. STEIN: No, that -- that (unintelligible). The classification review should take place at the DOE facility by DOE personnel.

MS. CANO: But otherwise I think it is appropriate, if possible, to have somebody

appointed by the Board to -- to act as the main point of contact on security matters.

DR. ZIEMER: Josie?

MS. BEACH: I wonder if it would be appropriate to appoint the one person and then an alternate, in case that person isn't available.

MR. GRIFFON: Well, I -- I'd still like to go back to Josie's question, which is what is the role. I mean I hear coordinate. I don't know what -- do -- do -- is Bob going to speak -- is Bob going to speak for the Board, you know, weigh in on -- on this development of this policy? I'm not sure exactly what coordinate means.

DR. ZIEMER: I myself don't know the answer to that, I just --

MR. GRIFFON: And I've lost my clearance for the meantime, so you know, I'm not a viable candidate.

MS. CANO: I mean I think there are a couple of issues. One, as we try to work through the appropriate security guidance, I think that's -- that's one area that we need somebody to coordinate with the other areas if security matters exist. For example, if question's

raised by a Board member that -- well, is this considered classified, then you know, I think it would be appropriate to go to Bob -- or Mr. Presley, and then we can work with him directly. But again, that would be my suggestion.

DR. ZIEMER: Would it be helpful to have an alternate as well?

MS. CANO: Yes, I think so.

MR. GRIFFON: But -- but I don't understand -- again, if it's -- if it's looking at policies related to this, why -- number one, why does it have to be a person with clearance, 'cause the policy's not going to be classified.

MS. CANO: It doesn't have to be.

MR. GRIFFON: Right, it just needs to be -- I mean I'm not sure we don't need a workgroup on this, but I don't know, I just -- I'm a little confused. And then is Bob's role going to be to monitor -- if any questions come up that are potentially getting into secure areas, is that Bob's role to monitor the Board for those potentials? I -- I don't -- please define...

DR. ZIEMER: Again, I don't have the answer to that. I'm not --

MS. CANO: Ken, do you have any...

MR. STEIN: The only thing is -- I've already spoke about the issue of classification reviews, and of course I will keep that at the site.

DR. BRANCHE: I didn't catch that.

MS. CANO: I think that's a --

UNIDENTIFIED: Hello?

DR. ZIEMER: I think Larry has a comment here.

MR. ELLIOTT: Well, I hope I can help here a little bit. From a NIOSH perspective, we think it's important --

DR. BRANCHE: One second, Larry, 'cause we can't hear you.

MR. ELLIOTT: Now you can hear me probably. From a NIOSH perspective, we think it's important that if we encounter a situation where -- this goes beyond coordination, I believe, with whatever DOE's needs are. This is more in line with what NIOSH wants to see happen, and that is if in a situation we encounter a question about whether information or data is of a secure restricted inf-- data classification issue, we want to be able to have a Board member or members with the right

classification clearances to be able to put their eyes on that information, as we have done in a couple of instances in the past. We want to be able to have SC&A have the right cleared folks engaged, along with ours, so that it's not just NIOSH cleared staff coming back to the Board and -- and parsing out what can be said about a given set of information. So that's one perspective that I think a Board representative or representatives that have clearances could aid in. In other words, giving a balanced understanding and review of what has -- has been observed. So that -- I just want to put that on the table.

I don't think that necessarily goes so much to DOE and Gina or Pat Worthington's interests to be -- for coordination, but from our perspective we think it is important that we bring forward a balanced review that includes perspectives of the Board, of SC&A and of NIOSH staff, rather than NIOSH staff coming in and saying here's what we found and here's what we can say about it and we can't talk about anything else. Okay? So I don't know if that helps, but I see this beneficial to -- to the

collective effort that we have afoot. And I know there are several Board members who have had clearances and want clearances, and we're working hard with Gina's office to get on top of who will have clearances, who is being put in for clearances and where those situations stand, and how we -- how -- they sponsor it, but how we establish the need for those clearances in this program.

DR. BRANCHE: Another point of clarification. One of the things it's very important that you understand, you are not required to have a clearance to be a member of the Board, and I don't want anyone to think that we're trying to push towards that area. But there are pieces of information, for some of you who like to get -- and dig down way into the data, that would not be available to you if you didn't have the clearance.

The other thing I want to clarify as far as the policy is concerned, and Mark was right, you do not need to have clearance to be able to weigh in on the policy that's been developed. I think from the initial discussions earlier this year about the policy, I think we've

matriculated to a point now where deliberations are now ongoing between NIOSH staff, me as your Designated Federal Official, and the Department of Energy so that the policy is as generic as possible to cover NIOSH, the contractor working for the Board and the contractors working for NIOSH on the -- with the dose reconstructions. We want the language to be that generic because renewals -- I guess new applications are about -- are underway now for the contractor serving NIOSH directly in the dose reconstructions, and for the one for the Board. So we don't want to have language that specifically names any one contractor. And frankly, the policy would need to govern all of the entities that I just named, including the Board. But again, all of those come under the aegis of NIOSH and its relationship and its access to data with DOE. So I wanted to -- I don't know if I've said too many words to make it a little -- to make it cloudy, but my attempt has been to clarify this issue of the policy and distinguish it from this -- a little bit more, as Larry has already explained, from this -- this, I think, essential point of contact issue.

MS. CANO: And I also want to add there's basically two types of information that we're concerned with. Obviously classified, and then unclassified yet controlled information, and it's the latter. Obviously if you have a Q clearance that you -- and you're on site, you're subject to your requirements outlined in your -- when you receive your Q clearance, so you know, you know, what you can and cannot say when you're dealing with classified information. However, we still have documents that were released to NIOSH and the contractors whereby it's unclassified but controlled, and this is OUO, which is Official Use Only, and UCNI, which is Unclassified Controlled Nuclear Information, and then ECI, Expert Controlled Information. So we have -- we still have those three categories of records that we do provide to you. We want to make sure that you have procedures in place that will safeguard that type of information we provide to you. Again, you know, I just want to mention, I don't know if you are aware, but with UCNI if you disclose information, you're -- it's potential a $110,000 fine and criminal

prosecution. So I just want people to be aware that when we release this information to NIOSH and the contractors, that you are -- you understand DOE requirements protecting that data. We just want to keep everybody out of trouble. We don't want to inadvertently release information to unauthorized users, so...

MR. ELLIOTT: I think it also --

MS. CANO: And I also want to say real quick, we don't release classified information. NIOSH does not protect or accept classified information. We declassify that. But again, you still have -- certain people still have access to that information.

MR. ELLIOTT: That's the point I was going to make. HHS has a policy that we do not hold, accept or retain -- we do not have the ability to safeguard and manage secure restricted data that is classified. The policy that Christine is mentioning is a -- is a -- it'll take the guise of a security plan that overarches all of the NIOSH responsibilities under this program to protect and show DOE that we have procedures in place to protect unclassified yet controlled

information, like UCNI, OUO or ECI, Expert Controlled Information. And I think, you know, the Board members who have clearances will be helpful in making sure that this kind of uncon-- unclassified yet controlled information and the procedures to protect it are in place, in accordance with the security plan that we'll put on the table.

DR. ZIEMER: Wanda Munn?

MS. MUNN: Just a comment, although I also am still not really clear on what the end result of -- of this will be. From personal knowledge, I'm aware that dealing with levels of secured documents is a real sticky wicket, and unless an individual has much past experience in handling those documents, then it can be very time-consuming and very difficult for all concerned. I don't know the document-handling backgrounds of all of my colleagues, but I do know that Mr. Presley has had extensive background with respect to handling classified and unclassified material. And if I'm not mistaken, has even been a classifier and a declassifier and from -- simply from the point of view of expedience in terms of our

access to material and how it's handled, he would seem to be a logical point of contact from my perspective.

DR. ZIEMER: Other -- other comments -- and Board members, not just on this issue of a contact, but general questions on DOE documents and related matters. There were a number of questions I think that Board members had the opportunity to submit in advance. I don't know who all did and what -- if they've all been answered, but now's the opportunity if there's something out there that -- relating to document retrieval and protection of documents or related matters.

Yes, Josie?

MS. BEACH: I'm just going to go back to these -- this appointment. If -- if we could get something in writing that would explain the role, I think it would be helpful for all of us to understand -- I'm not opposed to having Mr. Presley do that. I'd just like to understand the role a little bit more.

DR. ZIEMER: Perhaps we can actually try to deal with this at -- during our working session tomorrow as well. I think the idea has been

floated here, but it needs a little more specificity before we take action on it. Yes, Mike.

MR. GIBSON: I'm also not opposed to Bob taking part of this. I am concerned, though, that this is an awesome responsibility for one person on the Board to take on. You know, I think it could in some ways limit our duties because we're relying on one person, and I just -- I think it would almost be better to have, as Mark said, maybe a -- a workgroup, or even a subcommittee, of cleared Board members that could deal with classified issues for whatever site it comes up in.

DR. ZIEMER: Actually I think the idea of either a workgroup or a subcommittee may indeed be one -- it might be a group of all of our classified members who would constitute that. Are we allowed to ask who's cla-- who has clearances? Is that --

MS CANO: Uh-huh, you are -- I believe. Are you not?

DR. BRANCHE: I don't think so.

MS. CANO: Okay.

DR. ZIEMER: No.

MR. ELLIOTT: No, it --

DR. ZIEMER: That's why I asked the question because I -- I wasn't --

MS. CANO: I -- I mean --

MR. ELLIOTT: No, it --

MS. CANO: Maybe it's a CDC -- I --

MR. ELLIOTT: It's a -- well, you --

MS. CANO: No, I --

MR. ELLIOTT: It's a privilege to be carrying a classification, and if you have one, you're advised not to talk about the fact that you have one. And so yes, we keep lists of those who are interested or who are in a process. But no, we don't speak about who has an active classification. Mr. Presley has divulged that himself by stating in workgroup meetings that he has accepted this role for the time being until we have others who get a classification. But I encourage you not to speak about the -- the Board members who have these. We don't talk about cla-- NIOSH staff who have classification --

DR. BRANCHE: Right.

MR. ELLIOTT: -- and I don't think it's appropriate for Board members to do, either.

DR. ZIEMER: Well, in -- if -- if we follow that through, then, if we did have such a working group, we would have to assure that -- that we didn't define the working group by -- by that.

DR. BRANCHE: As I stumble over myself here, Dr. Ziemer, it would be inappropriate for there to be a workgroup, and certainly not a subcommittee. Our procedures are that all of our workgroups have meetings that are open to the public, and there are transcriptions. And if the point is -- well, that would not be an easy thing if the idea is to be able to talk about information that is classified.

MR. GRIFFON: Well, we can't -- we can't do that an-- I mean we couldn't -- even people with clearances couldn't do that unless they go to a classified room or area.

DR. BRANCHE: Right, rather than use the word -- excuse me, Mark, I'm sorry. I interrupted you.

MR. GRIFFON: You know, I don't know, this -- this coordination thing's confusing me 'cause if they're making phone calls or e-mails to coordinate with the Board, it can't be anything

classified, you know. It's a discussion of policy or procedures or -- and -- and I would agree, you know, Bob probably on this Board has the most experience in that area, but others that have dealt with research in the areas probably have some experience as well, so...

DR. BRANCHE: Right. Actually as it concerns information that has to be reviewed in a -- in a secured place, there are no e-mails. Those have only been handled by phone calls. As it concerns policy, we have -- again, with NIOSH having the principal responsibility in working with DOE for drafting the policy, and taking into account the Board once the draft policy is ready, we'll be able to distribute that for the Board to see the policy that's being put in place 'cause this is something that has to happen at higher levels than we are as far as the policy being adopted within the two -- and adopted by -- approved by the two Departments. What probably is in order is for the -- if the idea of having a group of people who clearances are in place be available to DOE as points of contact, then that coordination would happen working with me -- as opposed to calling it a

working group.

MR. CLAWSON: Correct, agreed.

DR. ZIEMER: Well, it -- it appears to me that where this is going is that at some point, including now, I guess, we will have a cadre of individuals which may range from one to 12, but will probably be somewhere in between, that will have the appropriate clearance and who could be called upon from time to time to address issues as they arose. It would be logical for the Designated Federal Official to, in a sense, coordinate that effort if -- if the agency needs to contact somebody. But let's -- let's keep this before us as a -- as an issue to discuss. We need to make sure that -- as far as DOE's concerned, that they have ready access to individuals who are both available and knowledgeable for handling particular documents and issues, and likewise working with NIOSH and with our contractor, all of whom will have groups of individuals who are so qualified, so --

MR. GRIFFON: But I -- I would agree with Josie that the first thing it'd be nice to see is just the role of this group or individual or --

or however we're going to set it up. You know, what -- what -- what are they going to be, a...

DR. ZIEMER: Yeah, and I think -- I think we may need to do a little brainstorming --

MR. GRIFFON: Yeah.

DR. ZIEMER: -- to --

MR. GRIFFON: I have a little better sense from Larry's comments and from Gina's --

DR. ZIEMER: Yeah.

MR. GRIFFON: -- comments, but I'm still a little fuzzy on what -- what the role is.

DR. BRANCHE: In all hon-- thank you. I think, in all honesty, the way some of this has evolved from having one person, into a cadre of people, and then some of my e-mails to the Board members -- is that a -- and I think -- and I know Regina alluded to this, and -- and Larry underscored it, a clean list of everyone's security status was not available in any one repository. And so as we've worked over the last several -- several weeks for the last couple of months with DOE to rectify that situation and to know who has clearance, who needs to have their clearances renewed, Dr. Worthington and her staff, principally Regina,

have worked really tirelessly -- and I don't think I'm overstating that -- to make certain that people whose clearances were expiring could -- and wish to be reinstated could have that done. And so we're at a point -- again, as we've evolved -- that's much better than we were a few weeks ago, certainly a few weeks ago when the idea of one point of contact came up. Others of you have indicated a wish to -- you've made your preferences known about your own desire to have a clearance or not, and that will allow us, over the next several -- well, I don't know how long it takes; it takes some time to get the clearance. But as some of this gets rectified for each individual, the cadre of people can then be available. But I think the idea, as -- as, Mark, you've stated several times now, and Josie as well, to determine what this role is, I'll try to work with Gina at the break to get some of the responsibilities that you have in mind and --

MS. CANO: Okay.

DR. BRANCHE: -- and bring that and vocalize it during the Board working time tomorrow.

DR. ZIEMER: Okay, thank you. Brad?

MR. CLAWSON: One other thing I'd be able -- want to make sure and -- with this is, you know, I understand Bob's role, I -- I respect all that, but also, too, it is very important for him to have an alternate or whatever, also just as a sounding board to be able to how are we going to present this and how are we going to be able to put this information, so forth, to the Board members that we need. It's -- it's a difficult situation.

MS. CANO: If I could --

DR. ZIEMER: And actually I -- I think, in many practical cases, that person or persons would be working with NIOSH and SC&A to sort of answer that question collectively because it's -- it's the same question, I think -- how do you present -- how do you make public the -- the key information without compromising the secure information.

DR. BRANCHE: Gina wanted to say something.

DR. ZIEMER: Yes.

MS. CANO: You know, I think right now in regards to the policy, we're more -- we're concerned about establishing a policy for protecting unclassified yet controlled

information. Those that have Q clearances understand the requirements that go along with a Q clearance. And when you're accessing data at a site, it's always been our priority to make sure we release information to NIOSH and its contractors in an unclassified manner 'cause we want to make sure that you can use that to the best of your ability and not have to have -- to keep coming back to a classified document. So we will try in our -- you know, to make tha-- make sure that that document is unclassified.

In addition, we work with NIOSH and the Board to establish locations where they can work with classified information necessary. Our classification officers are usually hand as well, so if they have questions -- okay, I need this information; how can I write this in an unclassified manner -- they will provide them with the appropriate guidance.

So again, we do what we can to provide the information to you in an unclassified...

DR. ZIEMER: Very good. Yes, Larry -- thank you.

MR. ELLIOTT: I hate to keep coming to the mike

and -- and -- but I think it is important for the Board members and the audience to understand that, since we have Board members here who either currently work at a site for DOE or have in the past, that if they have a clearance or they had a clearance at a DOE site, that is not what we want to see supported here. We want to see a clearance supported for the needs of this Board's efforts under this program. And part of what Christine was talking about, about the list being not fully completed and well-established, goes just to that, that -- that for various reasons, certain members or certain people have had clearances but they were in place for other reasons -- their work reasons, their consulting reasons or whatever -- and what we need to have is the purpose established for that clearance to be the NIOSH responsibilities under EEOICPA. And DOE's very receptive to that and working with us, but I think that's important for the public and the Board to understand. So you know, the -- if it's a Board member that comes forward and says I -- I'm ready, I want to have a clearance, I'm -- I'm willing to go through

that arduous process of a background check, then you know, we need to sponsor that through HS-5, 15, whatever your --

MS. CANO: Our organization's basically --

MR. ELLIOTT: Yeah, DOE, but with our established purpose.

DR. BRANCHE: And if you wish to have that information, then you need to get in touch with me. If you'd like to have your clearance, I'm the -- I'm the per-- if you're a Board member, I'm the person you'd contact.

DR. ZIEMER: Okay. Yes, Dr. Lockey?

DR. LOCKEY: If -- if somebody say has a clearance already, do they have to then go back and establish that it's also a clearance for this specific activity?

MR. ELLIOTT: We need to provide the justification for that clearance to be recognized for the purposes of this Board's efforts.

DR. LOCKEY: And is that effort as -- as hard as going back in time and getting the original clearance or --

MR. ELLIOTT: No, it's just a matter of -- of restating, within the DOE security structure,

that the person's clearance is also applicable for this purpose.

DR. LOCKEY: Okay. Thank you.

DR. BRANCHE: Good.

MR. ELLIOTT: If you've had a clearance and it's expired, and you're asking it to be renewed, then you can't renew it based upon the previous justification of working for a site. You need to renew it based upon this purpose, for this Board.

DR. ZIEMER: Thank you. Good. And we'll return to this during our -- our work session. Regina, thank you, and members of the DOE staff. We appreciate your continued work with the Board and with the agencies, not only on this part of the effort, but the total program itself.

DR. BRANCHE: Thank you.

DOW MADISON (CONTINUED)

DR. ZIEMER: We're now going to return to the Dow Madison petition, and let me remind you, I think, where we were. We had had quite a bit of discussion. We had had the presentation by NIOSH, presentations by various ones of the petitioners, a fair amount of discussion. I

wanted to see, Board members, if you have additional questions, either of NIOSH or of the petitioners, or other comments you wish to make.

(No responses)

'Cause if you have no additional questions or comments, then let me advise you of possible actions you may wish to consider. Number one, it would be in order to have a motion to accept the NIOSH recommendation and so report to the Secretary. Number two, it would also be in order not to accept that recommendation and rather to -- to recommend an SEC, as requested by the petitioners. You have an additional option and that is to postpone action if you have additional questions or issues that you think need to be resolved in some manner or the other. So I'd like to hear from anyone who wishes to suggest an action.

(Pause)

Inaction itself constitutes an action, and it is not necessarily helpful. So what is your pleasure?

MR. CLAWSON: What --

DR. ZIEMER: Brad Clawson.

MR. CLAWSON: I've got one question -- excuse me. I've got one question right now, because I am a little bit confused in what NIOSH portrayed to us today. I am not fully clear exactly what they're saying because I thought previously we had already voted on a certain part of it and I'm really not clear -- and this is just a personal thing, probably -- of what exactly they're bringing forth to us and I'm --

DR. ZIEMER: Okay, I'll -- I'll ask LaVon or Larry to clarify that. It's the Chair's understanding that we are dealing with the -- the remediation period and the issue is whether or not NIOSH can reconstruct doses for that period. NIOSH has said that they can, and therefore is recommending that -- okay, Larry.

MR. ELLIOTT: You want me to sit down? You just said it. No --

DR. ZIEMER: Okay --

MR. ELLIOTT: -- I'll try to --

DR. ZIEMER: -- you can say it even better, so --

MR. ELLIOTT: Well, I don't know about that.

DR. ZIEMER: Brad still has a puzzled look on his face.

MR. ELLIOTT: NIOSH has provided the Board an evaluation report that recommended that a class be added for the covered period during the AEC operations because we could not reconstruct the commercial thorium dose.

DR. ZIEMER: That's what we did before.

MR. ELLIOTT: That's what you've done before. That class has been added. There've been about 43 claims that have been pulled from us for determination of eligibility in that class by the Department of Labor.

The addendum that you have before you to that evaluation report today is a recommendation indicating that during the residual period -- we did not treat the residual period under the original class definition; we indicated that we had to go back and re-evaluate our ability to reconstruct the thorium dose or thoron dose -- and/or thoron dose during the residual contamination period. And this addendum two presents to you a recommendation that says we feel we have the ability to reconstruct all dose during that residual period.

MR. CLAWSON: Okay. Time period, though, I --

MR. ELLIOTT: Time period?

MR. CLAWSON: Yeah.

MR. ELLIOTT: The time period will end -- I probably need LaVon's help on this 'cause -- but it --

MR. RUTHERFORD: All right, the start of the time period is the very beginning of the residual contamination period -- I believe January 1, 1961 -- and it will end -- we -- we presented in our addendum October of 2006. However, as I'd mentioned, we received that final status report that indicated there were two more decontamina-- decommissioning efforts that occurred up to November of 2007, and those -- those efforts are outlined in that report. That may drive the end of the residual contamination period to October of 2007. So...

MR. ELLIOTT: It will.

MR. RUTHERFORD: It will -- yeah, it more than likely will. The reason why I don't want to say it will, because we just got the report, as I -- the full report and I didn't want to come out and say that, but it more than likely will.

DR. ZIEMER: Robert, a comment?

MR. STEPHAN: Two -- two things that I'd like to remind the Board of goes to Mr. Clawson's

point. Number one, we believe that the AEC period goes at least until 1969. So I'd highlight for you Labor's position, which is that they -- and DOE's position, that they do not know for certain that the mag/thorium was used -- mag/thorium, excuse me, mag/thorium from Dow Chemical in Madison was used in the production of a nuclear weapon. They have stipulated it was used in the production of a nuclear weapon -- nuclear weapons until '69, they just say they're not sure that it was from Dow.

My question for the Board would be this: Find out where it's from, which I don't think that you'll be able to do. Secondarily -- so that's num-- that's point number one.

Point number two is -- seems like a relatively minor point, but the report didn't come until February of '08 -- the closeout report -- and subsequent to that, the final closeout for this site did not occur until June -- I believe June 8th of this month is when the final decommissioning letter arrived to IEMA. So we're -- we are -- we're quibbling really over just a matter of a few months, but I would hate

to miss somebody over this point of, you know, when did it actually end, was it October of 2007, was it June 8th of 2008, and I would, you know, beg your indulgence that we consider that we just make that time period closure be when the final decommissioning letter arrived, which I believe was June 8th of 2008. So to us, that's the time period. Wha-- and on that point we'd be arguing over a few months, but...

MR. RUTHERFORD: I would like to -- and we can definitely take that into consideration after we look at the report in full, but I would like to remind the Board as well that if documentation becomes available to the Department of Energy or the Department of Labor that would support that the covered class for operations should be extended, we can go back and do an 83.14 and extend the existing class period to add those years, assuming that no new data came up from that point, so -- do you understand what I'm saying?

DR. ZIEMER: Yes, and I would -- I would point out that changing the date of the original covered period is not an option that is before this Board --

MR. RUTHERFORD: No.

DR. ZIEMER: -- today.

MR. CLAWSON: Right.

DR. ZIEMER: The original action that we took covered the period from January '57 through December of '60, and if -- if evidence -- I think LaVon is suggesting is if evidence is substantiated that -- that that covered period should be different, then that could come back for action, but we don't have that option today. That is not before us, I don't believe. Larry?

MR. ELLIOTT: Yeah, that -- but that goes to both ends. That goes to the AEC covered period, which Robert just spoke about and Dr. McKeel has -- has opined upon that should be, in their opinion, extended to 1969. But it also would address this issue of the few months at the end of the residual period. And what we need to do there is we -- as LaVon has said, we've got to evaluate the report that came in on Friday in its entirety. The -- the -- and if I'm correct in this LaVon, and if I'm not, stand up and correct me, but the 2000 -- the letter that was in February I believe or just

recently, that's a delicensure letter based upon the report that came out. So you know, I don't know that we can -- we can promise that that February is the right date. That's just when it -- the delicensure was issued, so they took the license away.

DR. ZIEMER: Robert?

MR. STEPHAN: Well, I think Dr. McKeel maybe can elaborate a little bit on this, but I -- I think you just -- you -- I mean if you're going to pick a date, you should pick the date that the site was decommissioned. You know, otherwise we could pick the date of -- of when the 700-some-odd tons was removed in 2006, yet there was 219 more tons released in 2007 whe-- you -- you're -- you're picking a date about when a -- when the last truck actually left the site, which no one knows. So if you have to pick a date, you would -- to us, you would pick the day that it was finally decommissioned, and that date would be June 8th of 2008. Otherwise we're just -- we're picking one date wi-- amongst several different papers going back and forth. Yeah.

DR. ZIEMER: Larry?

MR. ELLIOTT: I'm not going to quibble or argue with you on that, Robert. I -- in essence, I agree with you. But it -- it's not this Board's determination, it's not NIOSH's determination to make. We will present our research findings on this point to Department of Labor and they will establish the covered period for the residual period. And so if they choose to look at the -- the delicensure letter as that, I guess that's when it'll be. I -- I don't know what that -- that throws a monkey wrench, perhaps, into your considerations here, but --

DR. ZIEMER: No, our -- our understanding, I think, as the report has come to us -- even though you have a specified date in there, our understanding based on the earlier discussion is that the ultimate ending date would be based on whatever determination Labor ultimately makes. If they wish to extend that, they could. I don't think this Board, if we approved it either way, would be saying that date is it, regardless of what the -- the date is shown.

Yes, Dr. McKeel?

DR. MCKEEL: Dr. Ziemer, I just have to interject, I included a slide in my presentation this morning which was the verbatim letter that Peter Turcic sent on that point, and his -- I don't think I'm -- I think this is the exact quote -- he said determining the residual period is the sole purview of NIOSH.

MR. ELLIOTT: No, that is not true.

DR. ZIEMER: Well --

DR. MCKEEL: That's what the letter says.

DR. ZIEMER: -- I know -- I know that was the quote from Pete --

MR. MCKEEL: You want to get the slide back up there and look at it?

DR. BRANCHE: The slide --

DR. ZIEMER: That was the quote from Pete's letter, but -- but the -- the regulation is -- overrides that --

DR. BRANCHE: Exactly.

DR. ZIEMER: -- quote of Pete's.

MR. ELLIOTT: If I can speak --

DR. MCKEEL: So Peter Turcic's --

MR. ELLIOTT: No, I think you --

DR. MCKEEL: -- misspoke? That -- that's the

inter-- that's what you're saying, that's his letter --

MR. ELLIOTT: In all due respect, Dr. McKeel, I think that you're taking his words out of context. Yes, NIOSH makes a research determination, and we provide that in a report, as we have done in 2006, 2004, and now we have a series of sites that we're going to have to addend in that report with some type of an errata or addendum. And DOL will then take that and they will make the designation for the covered period. So I do not argue that Peter Turcic said what he said, but to take it out of context and say that it is NIOSH's determination is inaccurate.

DR. MCKEEL: Well, the -- the -- I'm just going to let this stay on the record. The -- the words he used are sole purview, and I think if you look in any dictionary, sole means one.

DR. ZIEMER: Well, I --

DR. MCKEEL: That's an unequivocal word.

DR. ZIEMER: I think we understand, however --

DR. MCKEEL: Okay.

DR. ZIEMER: -- that Labor -- Labor relies on NIOSH to provide them with the information on

which their ultimate determination is made, so yes, it -- it will -- NIOSH will determine that and Labor will have to take the steps legally, formally, to make the -- the ultimate -- so they're -- they're both involved and I -- I'm comfortable that, either way, that we'll get the right date there. The two groups will be working together and do that part correctly, so -- Robert.

MR. STEPHAN: I think we're -- I mean I appreciate Dan's point because you know I'm the one who initiated all of those e-mails that was trying to pin everyone down in each agency as to what their responsibility was, so as long as we can get, in some form or fashion from you, whenever you convey your opinion from NIOSH about the date -- you can get that to us and we would encourage that date to be June 8th of 2008.

I do not want to lose sight of this point. I hate to restate this, but I think this is absolutely critical and it cannot be glossed over. And you know, I'm not sure if maybe Jeff would want to speak to this or not from the --

from Labor's perspective, but -- Jeff Kotsch -- but the determination from DOE and DOL was that the mag/thorium was used in a nuclear weapon, at least until '69. We think that our documents show very clearly, which supported DOE's original decision, that Dow played a significant role in that. I -- I do not disagree with Labor or DOE's characterization that they do not know for sure that Dow Chemical in Madison, Illinois supplied the mag/thor that went into the nuclear weapons, but they do not know -- we do not know, I don't think any of you know who did. So it's a very important point that needs -- well, there is no resolution to it because I don't think you're going to fi-- you're going to figure that out. So in absence of that, I -- I think you have all the information you need right now to at least take it, at a bare minimum, until '69. At a bare minimum, I think that's quite clear. So you know, I guess I would just ask, you know, maybe for some discussion amongst the Board as to how you view that at least until '69, you know, issue. Obviously we're arguing for, you know, the whole entire residual

period.

DR. ZIEMER: However, that -- that actually is not an option before us. Currently the periods are defined and we have to deal with -- with what's before us. If we get into that debate, we'll miss -- miss what we have to do, and that is to act on the petition that is before us here.

Board members -- okay, we've -- oh, Phil, you have a comment or a motion of some sort?

MR. SCHOFIELD: Actually this is more of a question for LaVon. Is there any documentation that you know of that shows them making shipments to Rocky Flats as late as '69?

MR. RUTHERFORD: Absolutely not, no.

MR. SCHOFIELD: Okay.

DR. ZIEMER: Dr. Lockey?

DR. LOCKEY: LaVon, this is a question for you also. The -- from -- from 1970 to 19-- to I guess 2006 or 2007, when you did the decay curve, did we have SC&A look at that?

MR. RUTHERFORD: No, SC&A -- although I will say SC&A -- and you know, John'll correct me if he feels I'm wrong -- the SC&A original report -- they did look and -- they looked at uranium

exposures during the operational period and concurred with us that we could reconstruct those. They also concurred with reconstruction of uranium exposures during the residual period in their report. And I did go back and look at that and review that and, like I said, John'll correct me if I'm wrong, but they did not look at reconstructing thorium exposures during the residual period.

Now if you're asking towards the model that we used, I do not believe that the workgroup has looked at TIB-70 -- the procedures workgroup has looked at TIB-70, I don't believe, so I'm not sure that that has been looked at as well. Which is -- that -- that pro-- that procedure outlines the model that we used, the exponential model.

DR. LOCKEY: Has SC&A looked at that model?

MR. RUTHERFORD: That's what I'm -- I don't -- I don't believe that they have reviewed that model. And you know -- I mean I don't -- I don't have a problem with saying, that model -- the models that are outlined in there are the residual contamination models that we will be using for a number of sites, and so in my

opinion it makes sense to, you know, make sure we're all okay with it, so...

DR. ZIEMER: In that connection, the procedures workgroup is going to be proposing something soon relative to the -- well, I'm not sure that OTIB is covered. I think that -- not -- not 70, so that -- that's still your bailiwick. Other comments or questions?

(No responses)

Are there any motions?

(No responses)

I'm going to interpret the lack of -- if there are no motions, I'm going to interpret that lack of a motion as a -- at least a one-day postponement because I'm not going to let you off the hook and we'll be back to this tomorrow, if we --

MR. GRIFFON: I -- I --

DR. ZIEMER: You may wish to digest some of this information overnight or -- what, but -- go ahead.

MR. GRIFFON: I -- I was going to make a motion to postpone (electrical interference) today, given the fact -- mainly based on the -- the need for more time to assess this model of the

thorium and thoron and -- and TIB-70 as they -- you know, as they overlap.

DR. ZIEMER: Are you making a motion --

MR. GRIFFON: And used --

DR. ZIEMER: -- to postpone for a particular time period or just for a day or what?

MR. GRIFFON: Well, I don't think we're going to look at TIB-70 and this model in a day, so this is a motion to postpone and possibly to form a workgroup -- you know, I'm not sure -- I wasn't -- you know, I don't know that -- if we need contractor support or how we want to do that, but I -- I just don't think we're -- at this meeting we're going to be ready to -- I'm not going to be ready to vote on the thorium and thoron issues when I have, you know, several remaining questions about the model and the data used therein, so...

DR. ZIEMER: Okay, so you -- there's a motion to postpone. Is there a second?

MR. CLAWSON: Second.

MS. BEACH: Second.

DR. ZIEMER: At the moment, this motion to postpone is indefinite and -- and that is acceptable. If you don't want to specify a

date, you are not required to on a motion to postpone. It has -- it has the effect of tabling the action temporarily, although it doesn't require the same vote as a tabling vote. It is simply a motion to postpone. Yes, did you wish to spe-- make a comment?

MR. STEPHAN: Can I encourage a date versus indefinitely?

DR. ZIEMER: Well --

MR. STEPHAN: Next Board meeting or -- or something of the sort? You don't --

DR. ZIEMER: Well, the Chair would certainly interpret it as being -- we -- we all want it to occur as quickly as possible, but Mark, do you -- does -- do you, as the mover, wish to ex-- specify a date -- an action date?

MR. GRIFFON: I'm a little -- I mean I -- I understand the concern and the need to put a date on the table, I just -- I imagine this might require a workgroup. And if it does, you know, how -- well, are we going to be ready for the next Board meeting? I'm not sure. You know, I'd like to say we would be ready for the next Board meeting --

DR. ZIEMER: Perhaps the Chair can specify that

it's the sense of the motion that we would move ahead as rapidly as we can gather the information, evaluate it and get back to the Board. And it --

MR. GRIFFON: Including --

DR. ZIEMER: -- we may --

MR. GRIFFON: -- including the --

DR. ZIEMER: -- wish to appoint a workgroup and do some tasking tomorrow as well.

Larry?

MR. ELLIOTT: Well, I would echo Robert's plea for setting some type of expectation on the table. Maybe it's not time, but I -- I would encourage the Board to talk about steps to be taken; what is the path forward. And I would encourage you to engage me, engage us in what we're going to do if -- while that's going on. And I would say to you that my plan, my thoughts are that we would proceed with pro-- now doing dose reconstructions for these claimants because we know that there will be some compensable claims come out of that effort, and I think it's time that we moved forward on that. And you know, that's one thing that I would put on the table before you

that -- that -- for your consideration. We're doing that in other places. GSI, we -- we picked up those, and Blockson, and so you know, I -- I -- this goes back to the comment I made before about 103 claims being pended awaiting some type of resolution on this point, and we think we have a good model. It's claimant favorable and it is going to compensate some people in a residual period -- which, quite frankly, has not been seen to date in many residual periods that we've been doing. Okay?

MR. GRIFFON: Understood.

DR. ZIEMER: Thank you.

MR. GRIFFON: I guess I would -- just to -- to maybe define better -- I mean my conc-- I would want to establish a workgroup and task them -- I mean my -- I think I have two main concerns. Maybe others on the Board have different concerns, but it's the residual mod-- I mean the internal model for thorium/thoron -- thorium and thoron, and the -- the '69 question on whether it was still operational. I think we have to, the best we can, deal with that. I'm not sure we're going to have new information or whatever, but I think -- tho--

those are the two primary things I think a workgroup should move on. I don't -- maybe we can, my limiting their tasks, make it more efficient -- you know, instead of just having a wide open review, you know.

DR. ZIEMER: Jim Lockey -- are you speaking for or against the motion?

DR. LOCKEY: Well, I'm -- I'm -- I have some comments. Mark, I wasn't sure what you meant by -- by -- after the '69 group. I don't think we're going to get any additional information --

MR. GRIFFON: Well, I -- I --

DR. LOCKEY: -- on that. We -- I understand the TIB -- the TIB document, I think that's important --

MR. GRIFFON: Yeah.

DR. LOCKEY: -- but -- but if you're a-- if you're also saying that we need to get information about whether it was a AEC site after that point in time, I don't know where that data's going to come from.

MR. GRIFFON: No, I'm not sure we're going to get any new information, but we certainly have a difference of opinion between the petitioner

and NIOSH on -- on that, and maybe we can look at the evidence available and -- it might be a weight of the evidence question.

MR. ELLIOTT: Well, the --

DR. ZIEMER: Larry?

MR. ELLIOTT: NIOSH has not weighed in on this. Okay?

MR. GRIFFON: Right, I'm sorry, yeah --

MR. ELLIOTT: I did what you asked me to do at the last meeting. I approached DOE and I said DOE, tell us, tell the Board what search strategies you used, what information resources you examined to evaluate whether or not there was magnesium/thorium alloy that was employed in weapons beyond the time frame. And you have a letter before you. I don't know what more I can do in that regard.

The only other thing that I want to commit to as far as the expectations of what's going to happen here is that we will push out our research determination so that DOL can examine that and make a determination on the end point for the residual period. That's two things I -- I've got to commit to you today as far as expectations. We'll start dose reconstructions

using the -- the approach we've outlined, and we'll push out the research determination to DOL for a determination on the residual period conclusion.

DR. ZIEMER: Thank you. Robert.

MR. STEPHAN: Larry characterized it much better than I. I'm not so much concerned about a date, but the expectations would be good, and maybe that's not a form of a working group, but for example -- and I don't know if you want to work this into the motion, but for example, on Blockson, you know, Wanda Munn has been the -- the chairperson on that and we've known from the beginning exactly what issues we were trying to work through, so I'm just maybe encouraging -- I think Larry would agree, and I would want to make sure that we, you know, got, you know, concurrence with Dr. McKeel -- that we all know what we're going to try to work through. And then on the '69 issue, I would just say -- I mean I realize that is not the Board's purview, but we're talking about voting for a time period that encompasses the 1969, so it's just a matter of what information you're considering. And to Mr. Lockey's point -- Dr.

Lockey's point, I -- I don't think you're going to find any information, but knowing that you have an absence of that information for all suppliers I think would be very useful to you. So that is -- you know, you may not find anything, but not finding anything would be useful, if that makes sense.

MR. GRIFFON: So I guess I would retract my second task there -- I mean the main issue --

DR. ZIEMER: Well, we're -- we're not actually tasking at this point.

MR. GRIFFON: Right, right.

DR. ZIEMER: The motion -- the motion before us is a motion to postpone, and we will -- any -- any tasking of our contractor, as well as defining the path forward, will occur during our work session tomorrow.

MR. GRIFFON: Right, okay.

DR. ZIEMER: Yes -- yes, Dr. McKeel?

DR. MCKEEL: If I may make one final comment, the part of this that I'm not happy about is the answer to the question of is there anything more that NIOSH could do to facilitate getting this moving along -- and -- and the Board. I mean we've just listened, preceding this, an

hour of discussion between the Board and DOE and NIOSH, how they could cooperate in -- in DOE supplying documentation. And LaVon Rutherford just made the statement that there were no documents showing that Dow Madison supplied thorium for AEC activities as late as 1969 and his answer was absolutely not, there are no documents. And I would submit to you that there are documents, and the documents are in the form of worker affidavits, which can be considered and given appropriate weight. But I think what needs to be done is I -- I do not think the evidence put forth by DOE is at all complete. Now what -- what they do accept, and this is a slight -- it's not just a nuance, it's kind of different from what Robert said. There seems to be no dissension, and I think the Podonsky letter was very clear that DOE accepts that the 1957 and 1958 purchase orders to Mallinckrodt for thorium alloy plates -- that they accept that as evidence that some Dow Madison thorium was used for AEC activities, and they further state that, since those two years fall within the 1956-1969 time frame that DOE says throughout the complex thorium was

used in nuclear weapons, that -- that that is established. Now '57/'58 are in the current covered period so they recommend not changing the covered period, but at least that's a fact that's discovered. What we don't know in any detail at all is DOE says they base this decision on documents that they refer to -- I think quite vaguely -- as Livermore documents, and that somehow NNSA played a role in obtaining those documents. Well -- and the issue seems to be the reason why there's not full disclosure of why this determination was made, which of course I'm happy to hear because it confirms what the men have said for two years. But I think that there must be specific documents, and I was asked during the lunch break by someone -- well, what are those documents that prove the 1956 to 1969 time period? And I said I don't know. If you'll look at the transcript of May 4th, 19-- I mean 2007, you -- I -- I asked that question then. I wanted to know what -- what is in those documents. I got a few documents sent to me by Dr. Worthington, which I appreciated, but it didn't answer that question. So I was asked

what document can you find that written in, and you know, I -- I don't know the answer to that. But I don't see why we can't get that. Now if the answer is we can't get it because it's classified, then either a Q-cleared member of NIOSH or a Q-cleared member of DOL or the Board could go and look at the documents. And -- and the easiest way to do that -- I am sure that Dr. Worthington and Gina Cano know what those documents are in great detail, and somebody could have a meeting with them under proper conditions for looking at classified or restricted documents and see them so the Board would know directly. And I -- I urgently request that that be done quickly, because all of that research has been done now. DOE wrote us a letter and said our research is completed. Fine. But we don't know what the results of that were except that one sentence in that letter, so I think that -- I think that should be done.

The other thing I'm just going to point out is the timeliness issue that we've talked about in many SECs. Now we're talking about appointing a new workgroup, and I think if you'll look

back at the May 4th, 2007 Board meeting transcript you will also see there that there were, you know, two motions approved, both of them were by Dr. Melius, who's not here today, but I was under the distinct impression that a workgroup that he chaired said that they would look out and monitor what was happening about the Dow SEC. Now to -- to my knowledge, and I certainly haven't listened to every single workgroup meeting, but I don't think that's happened. So we already have a workgroup that's taken responsibility for that and I would -- I -- I think Dr. Melius is engaged on this issue and I -- I wish that could become more active and we could just move this along to a resolution because I -- you know, and I -- I've got to say about assessing the model, I -- I know it takes a while to do this, but NIOSH's report came out June the 3rd, and we've been working on this now for two years, so I don't see, for example, why NIOSH is in the stages of constructing their model. Since SC&A was engaged and the Board was engaged and Dr. Melius's working group was engaged, why couldn't they call up each other and have a

technical workgroup meeting on this? So I frankly think there are a lot of things that can be done, but I don't -- I don't think that saying that NIOSH got the workgroup -- I mean got the Pangea IEMA closure report Saturday -- I have a letter from Larry Elliott, his second letter to IEMA dated April the 10th where he asks for all the subsequent documents. He asked for the documents February the 4th. And somehow IEMA didn't give them to him till Saturday, so it seems to me that -- by golly, if our group of private citizens, with a lot of help from Congress, I'll admit, can get those documents in our hand -- I called up and got the closure report myself on the 21st of June by simply calling Pangea and -- and the person that your e-mail ref-- that the NIOSH e-mail referred to, and he gave me access to their FTP site and I got the closure report and read it, long before NIOSH did. Now something's wrong when I can get something like that and NIOSH can't. And so I think we need to move ahead and I -- I think there are a lot of things that could be done proactively, and I guess I'll let it --

DR. ZIEMER: Okay.

DR. MCKEEL: -- stop there.

DR. ZIEMER: Thank you very much. Board members, we have a motion before us, motion to postpone. Anyone wish to speak for or against the motion?

(No responses)

If not, are you ready to vote?

Okay, all in favor, say aye?

(Affirmative responses)

Opposed, no?

(No responses)

Abstaining?

(No responses)

Motion carries, and this will -- we will return to this tomorrow during the work-- working session to specify the path forward to delineate what exactly is going to happen.

MR. STEPHAN: I -- I just want to -- I just want --

DR. ZIEMER: Robert, additional comment?

MR. STEPHAN: Thank you. I just want to clarify with Larry for the benefit of the workers, for folks like [Identifying information redacted] and -- and some of the

others, so we are going to proceed with dose recons-- these pended dose reconstructions for any of those probably at the higher end who -- who could get compensated quickly, just as we've been doing with Blockson. Okay? So there's only been three dose reconstructions done to date. They're going to start doing them now anyway, even -- even though the Board has decided to postpone this, so I just want to make sure we're clear on that, Larry.

MR. ELLIOTT: Yes, I -- Yes, we will start -- we'll unpend these claims and we'll start dose reconstructions that includes the residual period as quickly as we can. That requires us to make sure that we have an approved -- this appendium (sic) talks about our approach, but we have to have a guidance document that goes to our health physicists, so it won't happen like next week, [Identifying Information Redacted], but it's going to happen very soon. And what that means then is any that are non-compensable would be revisited based upon the outcome, the resolution, of the issues that are going to continue to be discussed.

And before I sit down, I would just like to

respond to worker testimony. Yes, we -- we have shared the -- the affidavits and the testimony with the working group -- with the Board and the different working groups that have been employed here, with my staff, and I just want the folks that have worked there to understand -- that gave this testimony in these affidavits -- it's not that we -- we don't find them valuable and we disagree with them, we just have no corroborating evidence. What needs to be said in that -- in that light is that Dow did a lot of work for the Department of Defense, you all know that and we know that. And in that context, it's very possible in our minds -- it's that instead of Rocky Flats, it could have been Rocky Mountain Arsenal that was -- shipments were made to. We have no corroborating evidence, we -- you know, on the face of it, yes, we -- it's not that we do not believe you, but we have -- we need to have some corroborating evidence that shows us that -- that AEC work was done in that way and sent to other sites besides Mallinckrodt, and right now there is none.

DR. ZIEMER: Thank you. Yes?

MR. LEWIS: And this is Greg Lewis from DOE. I just want to clarify a point that Dr. McKeel made based on our Livermore letter. And essentially he was looking for the -- the source of these materials that were used in nuclear weapons and, based on this letter, it mentions that they looked for that link -- they did look in classified information and provided an unclassified letter. We certainly with -- people with Q clearances could come look on that source information, but they were looking for information specific to Dow or any supplier, and were not able to find any. They linked it to two production facilities, the Y-12 and the Bendix plant, which is in Kansas City, and we went to those two sources to look for suppliers and were also unable to find evidence of a particular supplier. So the -- the purchase orders (unintelligible) the source that we have related to this Livermore document, but we certainly would be willing to -- to provide the source documents.

DR. ZIEMER: Okay, thank you.

DR. LOCKEY: Question --

DR. ZIEMER: A question here from Dr. Lockey.

DR. LOCKEY: Question, how many potential suppliers could it -- could there have been in that time frame?

MS. CANO: To our knowledge there are -- there were several that DOE or the AEC had contracts with at the time. We had Alcoa whe-- Alcoa --

DR. LOCKEY: Okay.

MS. CANO: -- Reynolds Aluminum, Nalco Materials -- Nalco Metals Division, and Westinghouse. We do know that they were actively involved with -- with alloys at that time, so -- but again, when we conducted our research, we limited our research to Dow Madison and Dow. I mean we did ask, you know, specific questions relevant to thorium and magnesium when they conducted the searches, but we also know at the time that these suppliers also existed.

DR. ZIEMER: Robert?

MR. STEPHAN: Can I just get on the -- I apologize, I just want to get on the record for the workers' benefit that DOE's decision -- correct me if I'm wrong, Greg or Gina -- did include review of the worker testimony, it did in-- it did include all of those affidavits,

and it did include, for example, documents like those mines and minerals yearbook documents, so there -- there was other documentation and they did review the worker testimony. Thank you.

DR. ZIEMER: Okay. Dan?

DR. MCKEEL: I had just one thing I needed to clarify for the record and that is apropos to Mr. Elliott's comment about Rocky Mountain Arsenal. As soon as that suggestion was made that the Dow workers at Madison had confused -- got confused in their testimony, I asked them specifically; and what they testified to, what they believe, what they saw with their eyes was Rocky Flats, and there is no Rocky Flats Arsenal. They saw the words Rocky Flats. Nobody saw the words Rocky Mountain Arsenal so I think that is a straw man. It is not what they saw. It is against their testimony. And they say -- at least 11 affidavits -- that they sent thorium alloy, the same kind used in nuclear weapons, to Rocky Flats in large (unintelligible).

DR. ZIEMER: Okay, thank you very much. Thanks to all of the folks -- petitioners, staff members -- for your input on this. We

certainly -- the intent of the Board to move ahead as rapidly as we can and try to come to closure on -- on these issues.

Also it's been -- I think this is a case particularly where the petitioners have -- and their -- those working with them have had a great deal of input in terms of making -- finding and uncovering documents, and it's been very helpful. I think it's been helpful to the agencies and certainly been helpful to the Board, and we thank you for that.

SPENCER CHEMICAL COMPANY (PITTSBURG, KS) SEC PETITION

Now we're going to address the Spencer Chemical Company petition. Stuart Hinnefeld is going to present the NIOSH evaluation report on that petition and -- do we have petitioners on the line for this? No --

DR. BRANCHE: It's not clear -- there -- there were some petitioners whose names we're aware of, but it's not clear that they're going to participate, and you can't say their names. But I would ask that whoever's participating by phone, please mute your line. Every person needs to mute their line. Thank you.

MS. KIMPAN: Dr. Branche, this is Kate from

ORAU.

DR. BRANCHE: Yes?

MS. KIMPAN: There was (break in transmission) Chemical on earlier that dropped off.

DR. ZIEMER: Oh, there was someone from Spencer on earlier?

MS. KIMPAN: Yeah, when you were all at lunch the Spencer person came on and was asking if this was the call for Spencer, so (unintelligible).

DR. BRANCHE: Okay, we'll have our point of contact contact the person from Spencer Chemical. Thank you very much, Kate.

MS. KIMPAN: Yeah, (break in transmission).

DR. ZIEMER: Go ahead, Stuart.

MR. HINNEFELD: You want me to go ahead?

DR. ZIEMER: Yeah.

MR. HINNEFELD: Good afternoon. I guess a little -- minute man should be added to our job titles now. I was scheduled to go at 10:30 and found out when Dr. Ziemer announced that I was next up.

I'm here to present the results of our petition evaluation report for the Spence-- Spencer Chemical Company/Jayhawk Works. That plant is

located in Pittsburg, Kansas, in the southeast corner.

This petition was submitted to us on -- in May of 2007 and we qualified it for evaluation in January of 2008. It indicates that we had a -- quite a lot of communication with the claimant -- or with the petitioner in order to establish a -- an evaluation basis. In other words, a bas-- a qualifying basis so that we could have a petition that met the requirements of the rule and therefore we could go ahead and evaluate it.

In our evaluation -- and this is an 83.13, so we did not initiate this class. This was a petitioner-initiated class. In our evaluation we've determined that we're unable to complete a dose reconstruction with sufficient accuracy for a class of workers there.

This site was originally classified by DOE and DOL as an Atomic Weapons Employer facility from 1958 to 1963. It conducted chemical processing to produce uranium and thorium oxides, uranium carbides and other forms, including UF-6. I think actually probably used UF-6 as a feed, but it handled a variety of chemical forms of

the uranium. The physical forms were fused ceramic pellets and finely divided powders. Of course, oxide is a -- can be a pretty finely divided powder. And these are the uranium forms. We know essentially nothing about the thorium forms.

The radioactive activities and storage occurred at several locations around the site, but the major processing building occurred -- or was in Building 702. We have no information about how materials moved around the site or how people moved around the site.

After operations were completed, processing buildings were decontaminated and Building 702, the main production building, was dismantled directly. Research on this petition identified that the -- we'd identified information while we were researching this petition that caused us to question the starting date. We thought it started earlier than 1958. We said we think this work started in 1956. We provided that information to the Department of Labor, and they concurred that the starting date should be 1956.

They felt like the end date should be 1961.

The end date is a li-- there's -- like I said, there's conflicting information on -- in the end of activities. The reason for this is that this site did commercial work in addition to AEC work, and there are a series of license terminations, there are -- there's a statement about a license termination. There's a statement -- a later statement about working with uranium and thorium and some of the airborne levels that they were experiencing -- not quantitatively but qualitatively.

And so there's a certain amount of uncertainty with respect to that end date. The Department of Labor has opined that 1961 should be the end date. And that could very well be correct because, like I said, it was not real clear to us when the AEC work stopped.

The project site research database, which includes documents -- you know, okay, this is our data capture efforts. We did our normal data capture -- our view of what's in the site research database and we've done quite a lot of data capture to populate that database. We've used -- we looked at what existing project technical documents we should be prepared to

present. We spoke to people who worked at the -- you know, site experts who worked at the site.

We did a number of database searches. These are our -- this is our typical data search effort for these sites when we try to find out as much as we can. We looked in -- a couple of searches from the Office of Scientific and Technical Information, and we inquired to companies -- at least one company -- that apparently provided personnel monitoring service. This is one of the more confusing things we encountered, but it's -- I don't think it's really critical to our conclusion. That company was Landauer that we inquired to.

Radiological operations at Spencer Chemical/Jayhawk's were -- were like I said. They processed several types of uranium for use in the nuclear fuel cycle. They were mainly making oxides and carbides for fuel purposes and for research purposes. They researched chemical processes, et cetera. They had thorium on site. They had a license to do thorium work for research purposes, but we don't know what they did with the thorium. We

don't even know what chemical forms of the thorium they had.

The uranium enrichment was five percent or less in most cases, although it appears that there was one small area of their main processing building where they did use uranium, at least for some period of time, that you would con-- consider fully enriched, up to 93 percent U-235. And like I said, we have noth-- we don't know any information about the thorium operation.

Internal monitoring per-- data, there are documents from the period -- for instance, the license inspection reports and things like that -- that describe workers being on a bioassay program, but we have not been able to find any bioassay records. We have some summary information and a few individual air samples as well. Summary information would be that same kind of qualitative descriptive information.

And external monitoring data, even though documents from the period indicated that workers were -- wore dosimeters, and a report includes results for one person. We have a report that has -- I think it was kind of an

investigation report of a dose result because he had one cycle where his dose reading was very high compared to his previous dose cycle, so this report shows those two reports -- those two cycle reports for this one person. But we have not been able to find any dosimetry reports.

The -- this -- well, the troubling thing to me about that -- but it's only minor -- you know, it's only a minor -- min-- you know, slightly troubling because it's not really terribly -- it's not really relevant to our decision -- is that we approached Landauer about this site. Landauer ostensibly was the company that provided the film badge service for this company. Landauer retains almost all of the records of -- that they've ever generated -- the results they've ever generated. They don't have -- they could not find anything for this site based on the name we gave them and the various synonyms -- in other words, other names, other owners that we asked about. They -- they couldn't find it. We don't have an account number that this site would have used, a Landauer account number, which would have

facilitated the search, so we -- they did not find anything for this site when we asked them. Let's see, did I cover this? So although documents from the period -- I mean the period of operation -- describe air monitoring, radiation surveys and contamination surveys, we have not been able to find results of those surveys except in some qualitative descriptions.

We have not obtained any bioassay results for any of the claims from the site. This is under the feasibility of internal dose reconstructions. We do not have any information about the nature of the thorium operation. Documents from the period describe workplace and personnel monitoring programs, so the site profiles for AWEs that either refined or worked with uranium or thorium may be able to use to reconstruct the doses for uranium. Those -- those site profiles really only address uranium, and we do kind of know the thorium op-- the uranium operations. We know some of the -- you know, the chemical conversions they did, some of the process they have, so we may be able to use those -- TBD-

6000 and 6001 to do a -- a uranium par--
partial dose reconstruction. But the lack of
information regarding the thorium operations
and, to a large extent, the source term would
prevent us from reconstructing doses from the
thorium.
So the lack of the external monitoring records
prevents us from reconstructing the total
external dose, although TBD-6000 -- medical X-
rays can be reconstructed using our existing
technical documents, and the external dose from
uranium can likely be reconstructed using --
can likely be reconstructed, it should say
likely, by means of those TBD-6000 and 6001.
The way I -- the reason I say likely is that
most of the data we have that went into 6000
and 6001 does not really include enrichments up
to 93 percent, so up to five percent, I don't
know, maybe there's, you know, and extrap--
extrapolation that can be made there from the
data collected up to -- you know, that was --
there's -- that generally not reflected on
enriched uranium. There may be some enriched
uranium data that went into 6000 and 6001. But
when you're talking about going up to 93

percent uranium, I don't know that there's a way to get to that, so it's not entirely clear to me that we'll be able to do a complete one, but it seems like there would be something that we could do in terms of uranium internal dose based on 6000 and 6001.

Our feasibility of internal dose reconstruction table is shown here, and this -- like I said, this shows clearly in uranium that we can reconstruct -- that it's feasible to reconstruct uranium internal doses. I'm not real sure that we'll -- we'll actually be able to do that, but I think there'll be something we can do. We can only -- and we may be able to reconstruct the external dose from the gamma, neutron -- or gamma, beta external dose from uranium, based on the uranium -- the TBD-6000 and 6001, but that would only be a component of the external dose. We can't really complete the entire external dose, but we do believe we can reconstruct the medical X-rays.

The reason I -- that the Landauer -- or the fact that Landauer couldn't -- didn't -- couldn't provide any results for this site is

not very troubling to me is that the -- we would still be adding this class anyway because the cl-- the -- the fundamental thing, the real difficulty, is the internal thorium dose is really the -- what's going to -- you know, drives, you know, in large part the ad-- the addition of the class. Landauer results wouldn't have anything to do with that. And so, you know, that -- that's not that troubling. If we in fact had individual dosimetry data or dosimetry data make a coworker model, I doubt that those doses from that experience would be any higher than those prescribed by 6000 and 6001, so I don't -- I don't -- it doesn't -- you know, it doesn't concern me all that much we didn't get the Landauer data.

And -- and finally, based on the query we -- we ran of the 30 some-odd cases -- there were 30 cases affected by this -- based on the query, strangely enough, there are almost no cases that have non-SEC cancers. I think the query came back that 29 out of the 30 cases have SEC-listed cancers. That -- that's really unusual. Oh, I might also mention that the -- the

uncertainty in the end date, the December 1961 end date, also does not affect any claimants. You know, by moving the end date from '63, which was the original end of the covered period, moving that end date back to '61, no claimants drop out. No one is -- no one is dropped out because of that.

Okay, in terms of the health endangerment question, there is no evidence of a discrete incident that would have resulted in extremely high doses such as a criticality incident. But there is evidence that workers would have accumulated or could have accumulated chronic radiation exposures through intakes of radioactive materials and direct exposure. And we conclude, based on that, that the health may have been endangered for those workers covered by this evaluation who are employed at the -- at the number -- at the number of work days aggregating 250.

Our proposed class for this site is all Atomic Weapons Employer employees who worked in any area of the Spencer Chemical Company/Jayhawk Works near Pittsburg, Kansas from January 1st, 1956 through December 31st, 1961 for a number

of work days aggregating at least 250 work days, occurring either solely under this employment or in combination with work days within the parameters established for one or more other classes of employees in the SEC. Now we defined that class because that's the end date of the covered period. The period 1961 to '64 could be -- you know, as -- as we think about this, what -- what happens to that period '61 to '64, even though it's not relevant to the current crop of -- of claimants. You know, there may be other claimants later on that it would be relevant to. The -- the demolition or the -- the decontamination and disposal of the buildings -- I mean one of the buildings was dismantled right away -- that all kind of seems to be 1964 time, and at -- '63 or '64, something like that. So at the time the residual contamination report was prepared, that was the end of the covered period, so there is no residual period defined in the last residual contamination report that we wrote. So as part of the addenda that we provide -- you know, the update to the residual contamination report,

which had extensive discussion in the previous site -- we would also suggest probably that a residual period be started from '60 -- after '61 through '64, and then we could evaluate that period. Like I said, there are no claimants in that period now, but if the -- the claim came up, then the evaluation of whether in fact it's feasible to do the thorium during that time, without any data, that would be a question that you would face later on.

So our recommendation is for the period January 1st, 1956 through December 31st, 1961 NIOSH finds that radiation dose estimates cannot be reconstructed for compensation purposes, so we have a feasibility finding that no, it's not feasible to reconstruct the doses; and we have a positive health endangerment finding, which are the two-pronged test we have to follow.

I think this came up earlier in one of the other sites, what do we do about this maybe indeterminate end date. I think maybe language in the recommendation letter that would say "or whatever date is ultimately selected as the end date" may be appropriate to include in -- in your recommendation.

DR. ZIEMER: Thank you, Stu. Josie, you have a question or comment?

MS. BEACH: Well, I think you've partially answered it. I was going to ask you about the samples that were taking (sic) in the ER report, 1964 in Building 709. It does talk about some smears after the building was washed down, so I'm concerned about that in the residual period, and not quite clear how you're going to address that.

MR. HINNEFELD: Well, those -- those smear results in 1964 were after the decontamination of the building, and the results are within the free release standards that are used today for free releasing properties. So that would essentially evidence that this contamination -- the residual contamination period would end at that time.

DR. ZIEMER: Let me ask if the petitioner is on the line. Petitioner from --

UNIDENTIFIED: Yes, I am.

DR. ZIEMER: Oh, please identify yourself and then -- if you wish, and then you may make comments.

MS. SHUPACK: Yes, sir. My name is Sally

Shupack, and I'm the original petitioner for the SEC, Spencer Chemical Company. And I just want to say that we have spent a lot of time, about seven years, trying to get to the truth. And I found, like NIOSH did, that every agency that I wrote to did not have the epidemiological surveys to produce, including Landauer.

I also in my research found that they did reference the badges and inspection reports, and they referenced urinalysis reports. Neither of the two companies that were supposed to monitor have that data.

Also it was in the documents that I produced for NIOSH, which was about two boxes full of legal documents, it was said that over 50 percent of the badges that were sent to Landauer were contaminated. One thing that I think is important to know, too, in the documents is that the hooding operations were not filtered, so the radiation dust from the operations was sent out into the effluent air. So because of that, I think that any person that worked at Spencer could have potentially -- their health could have been endangered

because you -- I -- you don't know what the circumstances were for each person and what the proximity was to the operation.

There's a lot of things that I could cite. The inspection reports were categorized almost as shoddy. I don't think that there was much consideration for the employees as far as protection. The respirators were dusty. One of their solutions for getting the contamination rate down on the badges was to put them in plastic bags so that they wouldn't pick up the air -- the radiation dust, which to me is just counterproductive if you're trying to assess radiation exposure. And even at doing that, there was only -- over 50 percent of the -- the badges were contaminated.

The problem is, we just don't know which -- which people were exposed at that level because of lack of documentation. I feel like that there is nothing more that can be done. I certainly have -- have done an extensive research into it, and NIOSH has done an extensive research into the matter, and I think we're at the end of the road, to the place where the Board has to look at the evidence and

determine whether we are approved for SEC status.

One other thing I might tell the Board is that I had -- because I am not a expert in nuclear energy, by any means, my family and I hired a -- a lady and her husband -- her name's [Identifying information redacted]* and she is -- she has a Ph.D. in nuclear energy -- to review all the documents that were obtainable. And I would submit that if there is any question in the Board's mind, after the testimony of NIOSH and myself, as to whether we should be approved for SEC -- Special Energy (sic) Cohort -- that you would read [Identifying information redacted] report, who certainly has the educational and professional background to address the two issues about dose reconstruction and whether there was health endangerment. And I think she concurs with NIOSH and with myself that that in fact is true. But I would submit to you that she -- that you read her report if you have any reason or any doubts about either the lack of information or the results of the operations, the -- the safety issues, the protection

issues, and the chronic daily -- daily accumulation of radiation.

My father was 51 years old when he died of pancreatic cancer, and he was a healthy man. He worked for Spencer for over 30 years, and I believe that his death is a direct result of not only the radiation he was exposed to, but probably the chemicals he was exposed to.

So I respectfully submit, though, that you consider all the data and that you rule in our favor. Thank you for hearing me.

DR. ZIEMER: Thank you very much for your comments.

Board members, do you have any questions for the petitioner?

(No responses)

If not, any general questions or comments relative to the petition?

Yes, Mr. Griffon.

MR. GRIFFON: I just had a question for -- for Stu, probably just to follow up on the thorium. You say you can't reconstruct -- and mainly it's because you don't know much --

MR. HINNEFELD: We don't know what they did.

MR. GRIFFON: -- operational history -- right?

-- or...

MR. HINNEFELD: We don't know what they did with the thorium. We've got no --

MR. GRIFFON: And no --

MR. HINNEFELD: -- data at all.

MR. GRIFFON: -- no potential source term amounts per year, nothing -- none of that --

MR. HINNEFELD: (Unintelligible) licensed quantity --

MR. GRIFFON: -- information.

MR. HINNEFELD: There is a licensed quantity. It's ten -- ten kilograms, 100 kilograms? I think it's ten kilograms, at least ten kilograms.

MR. GRIFFON: So really you -- you just don't know process information.

MR. HINNEFELD: No.

DR. ZIEMER: Licensed quantity doesn't --

MR. GRIFFON: Right.

DR. ZIEMER: -- help you very much.

MR. GRIFFON: Right.

DR. ZIEMER: LaVon, do you have a comment?

MR. RUTHERFORD: I only wanted to add -- and I think Stu may have already said it, but I -- I do know from the documentation this was a

unique process. It wasn't a process -- it was a unique process in producing the thorium that they were -- they were looking at -- at using, and there is some detail in the report on the -- on that, but there's no data and no detail-- detailed process description. It's just that it was a unique process.

MR. GRIFFON: A unique process, that's all...

MR. RUTHERFORD: Well, yeah. I mean a unique process at that time when they were trying -- there was a number of sites that -- or companies that DOE was looking at for producing thorium metal and doing --

DR. ZIEMER: Trying different --

MR. RUTHERFORD: -- thorium work.

DR. ZIEMER: -- methodologies.

MR. RUTHERFORD: Exactly.

MR. HINNEFELD: It was for research and development --

MR. RUTHERFORD: Right.

MR. HINNEFELD: -- kind of stuff.

DR. ZIEMER: Board members, are you ready to make a motion on this petition?

MS. MUNN: I am.

DR. ZIEMER: Okay, I -- Ms. Munn --

MR. SCHOFIELD: I second.

DR. ZIEMER: You haven't heard the motion yet. You're going to second whatever she -- now's your opportunity, Wanda.

MS. MUNN: This could take a while. In the absence of adequate information to allow radiation dose estimates and dose reconstructions, I move that we accept the recommendation of NIOSH and forward the recommendation to the Secretary that the SEC for Spencer be accepted as written.

UNIDENTIFIED: Yay.

DR. BRANCHE: Well, we have -- we have --

DR. ZIEMER: Is there -- is there a second?

MR. SCHOFIELD: Second --

MR. CLAWSON: Okay, Phil.

MR. SCHOFIELD: Okay, I can second it.

DR. ZIEMER: Phil -- Phil has seconded the motion. Is there discussion on the motion?

(No responses)

We'll take a roll call and also the Designated Federal Official and the Chair will seek the vote of Dr. Melius separately. Okay?

DR. BRANCHE: Unless Dr. Melius is on the line.

(No responses)

Okay.

DR. ZIEMER: A roll-call vote.

DR. BRANCHE: Ms. Beach?

MS. BEACH: Yes.

DR. BRANCHE: Mr. Clawson?

MR. CLAWSON: Yes.

DR. BRANCHE: Mr. Gibson?

MR. GIBSON: Yes.

DR. BRANCHE: Mr. Griffon?

MR. GRIFFON: Yes.

DR. BRANCHE: Dr. Lockey?

DR. LOCKEY: Yes.

DR. BRANCHE: Ms. Munn?

MS. MUNN: Aye.

DR. BRANCHE: Mr. Presley?

MR. PRESLEY: Yes.

DR. BRANCHE: Dr. Poston?

DR. POSTON: Yes.

DR. BRANCHE: Dr. Roessler?

DR. ROESSLER: Yes.

DR. BRANCHE: Mr. Schofield?

MR. SCHOFIELD: Yes.

DR. BRANCHE: Dr. Ziemer?

DR. ZIEMER: Yes. The motion carries, regardless of Dr. Melius's vote, but in any

event we will proceed to prepare the formal wording for the submission to the Secretary and the Board members will have a chance to see that later in the meeting. Thank you very much.

Our next item, and I want to ask Ms. Munn, do you wish to proceed or do you want us to take a break first -- your prerogative.

MS. MUNN: I would appreciate a break, and then immediately thereafter I would like to address our procedures workgroup report.

DR. ZIEMER: Okay, let's keep it to 15 minutes and return promptly.

(Whereupon, a recess was taken from 3:05 p.m. to 3:20 p.m.)

DR. ZIEMER: (Unintelligible) phone --

DR. BRANCHE: Please open the lines. Could someone participating by phone please let me know that you can hear me?

UNIDENTIFIED: I can hear you.

DR. ZIEMER: Thank you.

DR. BRANCHE: Thank you very much. And now -- thank you very much, and -- and now if everyone participating by phone could please mute your phones. If you do not have a mute button, then

please use star-6, and then when you are ready to speak then you would use that same star-6 to unmute the line. And again, I ask that all phone participants do indeed please do mute your phones and please, if you must leave the line, do not put us on hold. Thank you very much.

SPENCER CHEMICAL (CONTINUED)

DR. ZIEMER: Just before the break Mark Griffon asked NIOSH what the license limit of thorium was at -- at the Spencer Chemical Company site, and I think during the break that -- the NIOSH people double-checked in the evaluation reports.

MR. HINNEFELD: Yeah.

DR. ZIEMER: Stu, do you have that number for us?

MR. HINNEFELD: Yeah, I -- I didn't remember the entire bullet. It's in the evaluation report. The ten kilogram limit was for the first license for thorium and -- and uranium oxide production, but there were other later ones with much higher quantities. But at that same time there was a 1,000 kilogram limit on the thorium for research and development --

DR. ZIEMER: Okay.

MR. HINNEFELD: -- so it's quite a lot more than I said.

DR. ZIEMER: Right. And so that's a considerably greater quantity and even there the processes were not know, so -- well, thank you for clarifying that.

PROCEDURES WORK GROUP SUMMARY

We'll now move to the procedures workgroup summary and -- chaired by Ms. Munn. And Ms. Munn, we'll turn it over to you, and I think you're going to have a few comments and then one of your colleagues is going to make a presentation.

MS. MUNN: Thank you, Dr. Ziemer. This is I think a fairly straightforward report to you on the activities of the procedure workgroup, your workgroup that never sleeps. We meet fairly regularly, either by telephone or more often face-to-face, virtually every month because we have so many activities ongoing. We'll speak a little more about the extent of those later as we get into some of our activities.

I have several items I want to bring before the Board for action today, and before we start

those I want to bring you up to date on something that has occupied an enormous amount of our time for the last several months. You may recall at our last meeting you had a presentation at some length by Kathy Behling, who had been working with her colleagues and with NIOSH over several months to completely revise our database of activities to make it possible for us to not only have a first-rate and complete archive of the reviews that had been completed, but also of each and every action item that had been taken with respect to those. As you are probably aware, we have now tasked our contractor with a total of more than 100 different procedures to review. And even though each one of them does not always have a large number of findings, even a small number of findings for that large number of procedures turns out to be an enormous number of individual items to track over a period of time. Closure comes in a form of -- of many different ways, and we want to be very thorough in making sure that we do those properly. What I've asked Steve Marschke, who is going to be taking the primary responsibility for upkeep

of -- of SC&A's portion of this database in future, to do today is to bring you a very quick update on where we are. As you can imagine, with a change of this magnitude to the way we do business, there's a great deal of tweaking that needs to go on in the early stages. We thought we'd give you an opportunity to take just a very brief look at what some of the tweaks now look like, in case you have not had occasion yourself to be using this database particularly.

I've passed out to you two items, one titled "ABRWH Procedures Issues Tracking" and the other entitled "ABRWH Procedures Issues Tracking System". I'll turn it over to Steve and let him explain to you what those are and how we have brought them to this stage from what you saw the last meeting. We had one or two items that we anticipate will change them a little bit the next time you see them. Steve?

MR. MARSCHKE: Thank you, Ms. Munn. The first -- let's I guess go directly to the slide and -- I don't have an electronic copy, but the Board all has the handouts that Ms. Munn handed out. The first slide is a screen capture of

what we call the -- the main screen on the database. It's also called -- sometimes called the summary screen. And the change is the circled area, the change from what -- what Kathy presented a couple months ago. Previously we had two buttons in there, one button for -- to print the details, another button to print the summary results. I'll get more -- and then we've replaced those two buttons with a single button, and I'll get more into what that single button does a little bit later. If we just go -- and that's really all I have to say about the first slide.

The second slide -- again, you can start -- it still has the same button circled because, again, those two buttons have been collapsed into one. We've also made a couple additional -- of additions to this detail -- what we call the detail sheet. One is on the -- about in the middle on the right-hand side. We've added a status date, and this is -- this is a field which gets changed anytime the status of the issue gets changed. As Ms. Munn indicated, we have issues which are closed. We obviously have issues which are open, and we have issues

which are in between called in progress, in abeyance, transferred -- we have about a half-dozen statuses that we've settled upon. And any time we transition from one status to another, the status date field will now get updated. And when the issue stat-- changes to closed, then we'll have -- this status date will be the same as the issued closed date. The other thing we've indicated we've added to the detail screen here is a field to indicate the source of the issue. Currently most of the issues come from three reports that SC&A prepared for the Board where we reviewed over 100 procedures and -- or -- or other documents. But on occasion -- and we are anticipating that we would receive issues from other sources, as well; perhaps maybe another working group would transfer another issue in to the procedures working group, and we would use this field here to track where the particular issue came from. If we look at the third slide, this is the slide -- when you press the print/view reports button, either from the summary screen or from the detail screen, this third slide is what appears on your screen. And basically you'll

see here the first two buttons on here are the -- print the issues summary and print the details, which were on the old database which Kathy had explained to -- to you. We've added two additional print capabilities here. One is to print the issues sorted by meeting date, and that -- we felt that would be very helpful because, as Wanda said, we've been having a lot of meetings. We get a lot of action items that come out of these meetings, and this is a way that we can sort on those meeting dates and find out what it is we have -- we were supposed to do and what it is we've done, and kind of where we are fulfilling our issues or action items.

And if you look at the -- fourth slide is an example of what you -- what is produced when you select that button. And I think it's pretty self, you know, explanatory.

The -- if we go back to the -- the slide with the tracking report slide, the fourth button on that slide, the second new button, is called the status summary button. And when you press that button you -- it -- the database manager produces the last slide, which was -- which is

titled the Issues Tracking System, and this is -- and the sub-- and the subheading is Summary Status of Procedures. This is the -- basically this gives us a one-page snapshot of where we are. And you'll see it lists -- everything is now listed by finding date. One of the enhancements that Wanda talked about is we want to identify and -- or put an identifier next to each one of these finding dates.

For example, the first finding date, 1/17/2005, that is the first set -- or that is SC&A's report on the -- on the first set of procedures that we reviewed. I believe it was 33 procedures that were reviewed in there. And if you just look across you can see in that 3-- with those 33 procedures we had 182 findings; currently 29 of them are open; 49 -- 48 of them are in abeyance. And what we mean by in abeyance is we have agreed upon a resolution to the issue, and quite often that resolution involves revising the document, and in abeyance means we -- that document has not been revised as of yet. We are -- fully anticipate when that document is revised that that issue will then be closed. And we -- and again, you can

see we have just transferred and -- one is transferred and 104 are closed.

You'll notice on the handout that I gave you there are some handwritten markings on the bottom of it. They obviously were not produced by the database. We have a -- Nancy Adams has also been tracking these issues, and we have a little bit of disagreement between her statistics and the statistics that are being produced by the database, and the hand markups was Nancy's attempt to reconcile these differences. And when I get back to my office tomorrow I hope to do the same and figure out why we are getting different things for what is supposed to be the same numbers.

But that's the update that I wanted to present, and I give it back to Ms. Munn.

MS. MUNN: Thank you very much, Steve. Josie?

MS. BEACH: Is this available for us on line?

MS. MUNN: Yes, it is.

MS. BEACH: Where's it at?

MS. MUNN: Yes, it's on the O drive. Uh-huh, yeah.

MR. MARSCHKE: You have the O drive there?

MS. BEACH: I do.

MS. MUNN: Yeah, Steve'll find it for you.

DR. ZIEMER: As you guide Josie there -- for the record, indicate where -- where on the O drive the Board members will find it.

MR. MARSCHKE: (Off microphone) Go onto the -- (unintelligible) on your O drive -- my computer (unintelligible) --

MR. GRIFFON: It's right on your main screen.

DR. ZIEMER: Yeah. Well, the name of the file.

MR. GRIFFON: Shortcut to Advisory Board --

MS. MUNN: Shortcuts, uh-huh --

MR. GRIFFON: -- SC&A.

MS. MUNN: Shortcuts'll get you there.

MR. MARSCHKE: Go -- like NIOSH data, that one.

MR. GRIFFON: You got that?

MR. MARSCHKE: And then go --

MR. GRIFFON: Then procedures review --

MR. MARSCHKE: -- (unintelligible) Advisory Board, and then on Advisory Board you see it says Advisory Board/SC&A, like -- like the second one?

MS. BEACH: Oh.

MR. MARSCHKE: Then you see procedures review tracking system?

MS. BEACH: Got it.

MR. MARSCHKE: And then you go over here -- if you can slide that so that you can see the title more --

MS. BEACH: I'm not sure how to do that.

MR. GRIFFON: It's -- actually there's a shortcut key -- it's only two keystrokes to get there.

DR. ZIEMER: Okay. But the -- the brief answer is -- is it's on the O drive.

(Whereupon, Mr. Marschke, Mr. Griffon and other Board members spoke simultaneously.)

MR. MARSCHKE: You can see it's a -- one without a -- it's the name, doesn't have data or anything at the end of it.

DR. ZIEMER: And I remind you that there are designated individuals who have the capability or the permission to make changes in the database. Most of you will simply be able to inquire or read it, but --

MS. MUNN: Yes, you can query it, you can read it, but only --

DR. ZIEMER: Our contractor has --

MS. MUNN: -- NIOSH and the contractor (unintelligible).

DR. ZIEMER: -- and NIOSH has -- have

individuals who can make changes on the behalf of their groups.

MR. MARSCHKE: That's correct. Yes, that's correct.

MS. MUNN: Uh-huh, that's only a -- thank you very much, Steve. I appreciate it.

MR. MARSCHKE: You're very welcome.

MS. MUNN: I want you to be aware of the fact that what you're looking at here -- the sheet -- the single sheet with the compilation of the summary status of procedures is something that we have discussed at great length and, with the additional tweaking that Steve mentioned so that we can be a little more adept at finding what belongs to the first set, what belongs to the second set, and what miscellaneous things have come in as a result of additional requests from usually this body, we will maintain a little better feel for exactly what we're dealing with as we look at that finding date item. It is our hope that at every meeting of the full Board from now on Nancy Adams will be bringing you a copy of this so that you will have an opportunity to review for yourself where we are with respect to the charge that

we've given to our contractor and to this -- to -- to the procedures working group regarding our -- our items that we have to address.

At the base of that summary status of procedures, in case you missed it, there is a description of what each of the items -- the headings means. That may change a little bit in time, too, as we work with this database a little more so that -- we want to be as clear as possible to the -- to the casual member who drops in to see where we are -- exactly what you're looking at.

Do you have any additional questions on this? Just want you to be accustomed to seeing what it looks like because Nancy's going to bring it to you on a regular basis. Right, Nancy? Hopefully so.

Now we have one or two other things we need to address. You may recall that a couple of months ago our contractor produced a status report of considerable weight, we felt, in an attempt to get information to the Secretary on progress that we are making relative to our procedures reviews. We've never done a status report, so we had more than one iteration of

the report itself that was done more than a few weeks ago. We issued a draft of our transmittal letter. And is often the case, we let some time get away from us before we actually did what we needed to do.

We now have available for your perusal copies of what we hope to be the transmittal letter for that draft for the Chairman of this group to send out. I'll read it for the record.

This report is a first account from the Advisory Board on Radiation and Worker Health relative to the overview process for procedures developed and utilized for the National Institute of (sic) Occupational Safety and Health in fulfilling the responsibilities derivative from the Energy Employees Occupational Illness Compensation Program Act. Section 3642 (b) (42 USC 43840 (b)(2) of the Act directs that the Board shall advise the President on the scientific validity and quality of efforts being performed for purposes of the compensation program.

In order to assure the completeness and scientific validity of procedures being used by NIOSH to receive, process and complete claims,

the Board has selected groups of procedures and supplementary documents for in-depth review. The professional review is a major function of the Board's technical contractor, Sanford Cohen and Associates, and is administered by the Board's working group on procedures established in October, 2006. The working group consists of five Board members: Wanda Munn, Chair; Michael H. Gibson; Mark Griffon; Dr. Paul Ziemer; and Robert Presley, Alternate. Following the selection of a document for review, the technical contractor undertakes thorough research of the procedure and provides the workgroup with a detailed report including, when applicable, a list of findings and/or observations. These findings or observations have been presented to the working group in a matrix format to allow individual concerns to be addressed as necessary. The workgroup then meets with the technical professionals from NIOSH and the contractor to prioritize, facilitate, and assist in coming to closure on each of the items identified.

After the Board's selection of a third set of procedures, it was observed that the tracking

system used -- being used could result in some loss of descriptive detail following closure of an individual item. Since each factor considered in achieving resolution can be of significance after the fact, the need for better narrative in the final archive was recognized. The contractor undertook and has now completed a significant revision to the format to be used. The new format can be accessed electronically and queried to display whatever set of information is desired relative to either an individual item or the entire set. Completion of this notable improvement presents an appropriate moment to summarize the status of the first set of procedures and assess the progress of this substantial effort. Since the working group first convened, meetings have been held on a regular basis approximately every six weeks, both in group session and by teleconference. The first set of 33 procedures referred to SC&A resulted in 153 individual findings of varying weight. Of those items, 99 have been resolved and are now closed. Fifty-four are open and under discussion or otherwise in process.

Approximately two-thirds of the findings relate to the clarity, completeness and consistency of the procedures for use in dose reconstruction. The other third deal with technical issues such as accuracy, claimant favorability and scientific quality. It should be noted that approximately 50 percent of the technical findings have been closed. Likewise, some 50 percent of the non-technical findings have been closed.

At the conclusion of the procedures review process and the resolution of the issues that were identified, the expected impact will be, one, modifying a procedure to correct an error, provide further clarifications of its scope/guidance and/or improve its logical sequence format -- that's a typo, I believe; two, develop new guidance documents and/or eliminate redundant procedures; three, revisiting some adjudicated cases through their Program Evaluation Program and perhaps change the dose construction methodology for performing future claims.

Accordingly, the Board's review process should help to assure that the procedures being used

by NIOSH and its contractors not only are scientifically solid, but also are clear and efficient.

We are attaching as an appendix the contractor's more extensive report of the endeavors associated with the first set of procedures. We trust you will find this information comprehensive and of interest. We will, of course, be pleased to provide additional detail if you desire.

I would place this document before the Board and request that you approve it for our Chair's signature and transmittal to the Secretary, with the attachment as described.

Yes, Josie, you have a question?

MS. BEACH: Sorry.

DR. BRANCHE: Wait a minute, you made a motion. Right?

DR. ZIEMER: Basically that constitutes a motion. It's a recommendation from a subcommittee, doesn't -- or from a workgroup, does not require a second, so we'll consider this before us as a motion. The motion would be to transmit this letter, with the attached report, to the Secretary.

MS. MUNN: Thank you very much. The next item we have I think is a --

DR. ZIEMER: Whoa, you want action on the motion?

MS. MUNN: I guess that would be nice to have action on that.

DR. ZIEMER: A possible friendly amendment in the first sentence of the second paragraph, "procedures used by NIOSH", would it be correct to say "used by NIOSH and its contractor" or is this adequate? I think we cover it for ORAU procedures, as well.

MR. GRIFFON: Yeah, yeah, we did.

DR. ZIEMER: Is that correct?

MS. MUNN: Yes, it is correct.

DR. ZIEMER: I hadn't noticed that before, but if that's agreeable --

MS. MUNN: No.

DR. ZIEMER: -- we could add that as a friendly amendment.

MS. MUNN: I believe it should be added, yes.

DR. ZIEMER: You had also asked, Wanda, if there was a wording problem amongst those three items near the end.

MS. MUNN: Yes, as I was reading it.

DR. ZIEMER: That was intended to be quoted directly from the SC&A report --

MS. MUNN: Yes. Yes.

DR. ZIEMER: -- and I am trying to pull up my copy --

MR. GRIFFON: Or improve its logical sequence, I think --

MS. MUNN: Its logical sequence, there's a T --

MR. GRIFFON: -- instead of is logical, yeah.

MS. MUNN: -- left out of --

DR. ZIEMER: Oh, okay.

MS. MUNN: -- its logical sequence.

DR. ZIEMER: Which one is that?

MS. MUNN: The second --

DR. ZIEMER: Oh, I gotcha --

MS. MUNN: -- line of the first item.

DR. ZIEMER: -- okay.

MR. GRIFFON: Right.

DR. ZIEMER: Got it, okay.

MR. GRIFFON: Paul, maybe on the -- the next sentence, too -- this is just a wording thing, but "are scientifically solid" -- I mean I wonder if we want to say scientifically defensible or -- or something. I don't know that we've ever used "scientifically solid."

MS. MUNN: Sound?

MR. GRIFFON: Sound.

DR. ZIEMER: Sound.

MR. GRIFFON: Sound is better than solid.

DR. ZIEMER: I agree, that's --

MR. GRIFFON: Yeah, yeah.

DR. ZIEMER: Those certainly are all friendly amendments. Any other comments on the motion to approve this for forwarding to the Secretary -- basically it becomes a status report. We did want to, to some degree, indicate impact of -- of the review procedure, and Mark was very helpful in -- in developing the -- the comments toward the end of the letter about the technical findings and the percent of issues closed and so on.

MS. MUNN: For which thank you. You may note, if you began checking very carefully, that some of the numbers that are quoted are not in accordance with the numbers that you've just seen on the printout that we gave you. Please be aware that that's due to the fact -- as we know from other presentations -- that these numbers change on a daily basis as -- as things are moved in and out of databases. These

numbers are intended to reflect the same numbers that occur -- that appear in the SC&A report that's going to be transmitted so that there will not be a confusion --

MR. GRIFFON: Well, I think --

MS. MUNN: -- in that regard.

MR. GRIFFON: -- I think actually we might have that unique circumstance -- we -- we've discussed this, but for that first set, I think we did some double-counting in --

MS. MUNN: Yes.

MR. GRIFFON: -- in the database and we're going to correct that, I imagine.

MS. MUNN: Yes, we will correct that.

DR. ZIEMER: Well, that's why we used the words "approximately 50 percent"; it isn't exact, but it's close enough for -- for this particular case.

Are you ready to vote on Ms. Munn's motion?

All in favor, aye?

(Affirmative responses)

Opposed?

(No responses)

Abstentions?

(No responses)

I believe it's unanimous. Since this is a report to the Secretary, we will also obtain Dr. Melius's vote as well.

Thank you. Proceed.

MS. MUNN: The next items that I'd like to have you -- that we would like to have you give us your reassurance upon has to do with, we think, a very simplistic issue. As we are moving through our procedures, we frequently encounter a situation where we are asked to have a -- an existing procedure either changed or have the issue moved from the procedure that was originally reviewed to some other procedure.

It has been our philosophy that when this occurs our contractor, who originally identified the finding, would continue to follow that finding to its closure, whether or not it went into another document that was not on the current list as authorized for -- for review by the contractor.

This does not mean -- we had not interpreted that to mean that the contractor would review the entire other document, but that when an item moves from one spot to another, or is revised in the existing procedure, that portion

would be reviewed by the contractor for the specific purpose of assuring that the sense of the finding had in fact been closed by the change that occurs.

So the question before you is: Is it your interpretation, as it was ours, that it is the responsibility of the -- of SC&A to follow the finding through to its resolution, regardless of where it goes, because -- because we have not previously discussed whether this is in fact what will transpire, and it involves the possible inclusion of certain documents that would not have otherwise been addressed by the contractor. But this is not going to be an extensive review we're talking about. We're just talking about following the finding itself to its logical resolution.

Do you find that our interpretation is adequate and correct without further budgetary confirmation each time the contractor is expected to address these issues? Are we thinking correctly; that's essentially the question. Do we have any problem with the philosophy as expressed?

DR. LOCKEY: I'd like to have a comment from

the contractor about that.

DR. MAURO: That's what we've been doing all along. I -- I guess I've taken it upon myself to follow the -- wherever it went. The issue very often -- in fact, it happened very recently where a series of comments actually were resolved in a new set of procedures that we were not actually authorized to review. So I authorized my folks to review those portions of the new procedures that dealt with the old issue and bring it to closure. So I have been moving along on that basis, but I brought that to Wanda's attention at our initial meeting, just to confirm that proceeding in that capacity was in accordance with your desire.

DR. LOCKEY: And you had that in your budget already.

DR. MAURO: Yes, because it's part of the closeout of an issue that we budgeted for. See, the fact that the issue -- the issue was part of one procedure, the fa-- and we've re-- reviewed it, and also part of our budget is the closeout process. The fact that the closeout process takes us someplace else -- it's very important to point out, though, when tha-- when

a particular issue leaves one location and goes to let's say another location, we don't review the entire new document.

For example, if the issue becomes subsumed within this other new procedure, for example, or a revision to a procedure that contains substantial new information over and above the issue that's -- that we're concerned with, we don't review the entire document. So in effect we simply follow the finding to its closure. If it's subsumed within a new procedure that covers much more territory, we do not initiate a review of that entire procedure. We simply apprise the working group that we've followed it to its logical conclusion, alerting, though, the group that there is this new procedure that has only been now partly reviewed, only to the extent needed to achieve closure of initial issue.

MS. MUNN: Do I assume that the absence of further comment or question indicates the approval of the body? I'd like to hear that verbally for the record so that --

DR. LOCKEY: Yes.

MS. MUNN: Huh, yes?

DR. ZIEMER: Certainly the members of the workgroup were in favor of that. It's as John described and it makes sense to follow the issues to closure, and I think there were -- well, you've named the workgroup so that's about five of the Board members there, and then you've heard from some others.

MS. MUNN: Very good, we'll take that as a -- as a unanimous agreement.

The last item that I have to bring to you for your consideration is of significant importance to those of us who are on this particular working group. We'd like you to consider the possibility of viewing TBD-6000 and 6001 in a different light than the other procedures that we've had to deal with. These procedures, as I think all of you know, are base procedures from which a significant number of appendices, each appendix being a site-specific document, will derive.

We did not have a feel for how significant an impact this was going to be on our particular group until the General Steel Industries Appendix BB had been issued and we began to look at it. Because there was some urgency to

-- for the -- for the appendix to be reviewed thoroughly and discussed, the amount of time that has been consumed in our workgroup to address this particular item has pushed all of the other items -- you've just seen the information from the first set and you see how many outstanding items we still have -- have had -- it's had the effect of pushing them back a little. Not completely to the back burner, but away from what would be our preferred method of approach, which would -- we'd like to be first in/first out. We've not had an opportunity to do that, and we foresee that what may transpire with TBD-6000 and 6001 in the future could very easily result in the further complication of what we're trying to do.

We would like to request that the Advisory Board as a whole consider the possibility of viewing TBD-6000 and 6001 in a different light than other procedures, and that you consider some other approach, whether it's another working group or whether it is some other method for dealing with these particular procedures. Our suggestion would be another

working group, but if that is unreasonable and if anyone has a better concept, or if you have a strong objection to our considering that, please do let us know. We're open to any suggestion that you might have.

DR. ZIEMER: Wanda, I think the Chair can interpret that as a motion, in the sense that my recollection is that it actually is a recommendation from the committee that -- or from the workgroup that the actions dealing with TBD-6000 and 6001 and the appropriate appendices be addressed by a separate group. Whether it be a workgroup or a subcommittee could later be defined, but I believe that was the recommendation --

MS. MUNN: That is the recommendation of the working group, yes.

DR. ZIEMER: -- and -- and so I will interpret that as a motion. It does not require a second. It is open for discussion if anyone wishes to speak to or against such action.

MS. PENCHETTI: This is Kathy Penchetti and I was wondering if you could interpret, what is TBD-6000 and 6001 referring to? Is that a certain site or a certain SEC petition?

DR. ZIEMER: Yes, let me give you a brief description and perhaps Larry or one of the NIOSH people can -- can correct it, but those two deal with a variety of uranium AWE facilities, and each of -- in a -- in a general sense, the appendices that deal -- deal with specific facilities.

Larry, could you give us a better, more precise description than what I've given from the top of my head? The -- 6000 and 6001 are broad guidelines on how to deal with those kinds of facilities, and then the appendices deal with site-specific issues on various uranium facilities. And there's two types of uranium facilities described in those two TBDs, 6000 --

MR. ELLIOTT: Yes --

DR. ZIEMER: -- and 6001, so here -- here's the sort of official descriptions.

DR. BRANCHE: As Mr. Elliott prepares, could the person -- could you all please check to make certain that you've muted your phones? If you don't have a mute button, then star-6 will work. Thank you.

MR. ELLIOTT: Technical Basis Document 6000 deals with Atomic Weapons Employer facilities

that worked with uranium and thorium metals, and TBD-6001 deals with Atomic Weapon Employers that refined uranium and thorium. So one is a metal operation and the other one is a refinement operation, and there are a number of sites associated with each one of those particular categories, and there are appendices that are -- so -- so the Technical Basis Documents themselves deal primarily with how a dose reconstruction would be done for uranium or thorium as it was worked in one of those sites.

The appendices speak specifically to unique exposures that occurred at one of the specific sites mentioned under either TBD-6000 or 6001. And for example, Appendices BB, which there was much discussion about in the working group on procedures, covers a unique exposure of non-destructive testing of using a large X-ray device called a Betatron operation. So that presents a unique exposure in that regard and we needed to have an appendices that provided guidance on how to reconstruct doses for that unique exposure.

Does that help?

DR. ZIEMER: Yeah. Thank you very much, Larry, for clarifying that. And Board members, if you approve this action, then in our working period we can actually discuss how to implement it. But the -- the general idea here would be to have some subs-- subset of the Board focus specifically, either workgroup or a subcommittee, focus on these uranium facilities as they come before us.

DR. BRANCHE: As you consider that, Dr. Ziemer, a subcommittee does require a different kind of action. A workgroup is probably your easiest approach at this point.

DR. ZIEMER: Understood. Discussion, pro or con? Does anyone wish to speak against the motion?

(No responses)

If not, I'm going to call for a vote. All who favor it, say aye?

(Affirmative responses)

Any opposed, no?

(No responses)

Any abstentions?

(No responses)

The ayes have it and motion carries, and in our

work period tomorrow we will discuss how to implement that action. Thank you --

MS. MUNN: Absolutely.

DR. ZIEMER: -- very much. Ms. Munn, back to you.

MS. MUNN: Thank you so much. That concludes my report. Unless you have some question of me with respect to other activities of the workgroup, I'm done for this meeting.

SEC PETITION UPDATE

DR. ZIEMER: Okay, thank you very much. We have one more item that we want to take care of yet this afternoon, and that is the petition update -- SEC petition update, and LaVon Rutherford will give us a summary of where we stand on the various SEC petitions.

DR. BRANCHE: As Mr. Rutherford comes to the -- to the microphone, I do ask that everyone who's participating by phone please check your lines to make certain that you are muted. If you happen to be on a cell phone, there is a mute function. If you do not have a mute function on your cell phone, then I'm going to ask that you actually think about joining our call through a land line phone because the

interruption that the one individual is providing is really quite -- causing quite a bit of disruption to the line. Thank you so much for your cooperation.

MR. RUTHERFORD: All right. Thank you, Dr. Ziem-- (electronic interference) -- thank you, Dr. Ziemer. As Dr. Ziemer mentioned, I'm going to give an update of existing SEC petitions. Some of these petitions will be updated in detail again tomorrow as well.

The reason for this update is to provide the Advisory Board the current number of qualified petitions under evaluation, and sites being evaluated through our 83.14 process. The intention is to update the Board in hopes that this will help the board prepare for future workgroup meetings, as well as future Board meetings.

As of June 9th we had 114 petitions. As of -- I'm not sure of the date today, but we have 117 petitions. We picked up three petitions in the last few weeks, those petitions for the Hematite, as was mentioned pre-- previously, Argonne National Lab and Tyson Valley Powder, so we actually have 117 petitions. We have

eight petitions in the qualification process, which now are 11. We have 58 petitions that have qualified for evaluation, six evaluations are in progress and 52 have been completed. We have 48 petitions that did not qualify.

Now I want to talk about existing SEC petitions that are with the Advi-- or existing evaluation reports that are with the Advisory Board for recommendation, and kind of go through a summary of their status and where they stand.

The Chapman Valve evaluation report was approved and sent to the Advisory Board and the petitioners on August 31st, 2006. We presented that evaluation report at the September 2006 Advisory Board meeting. The Board established a workgroup to review that evaluation report at the September meeting, and the workgroup presented its findings at the May 2007 Advisory Board meeting. A decision was made at that time to postpone a recommendation till July 2007 until the Advisory Board -- or July 2007 Advisory Board meeting. This would allow the petitioners to review the SC&A report.

The Advisory Board voted six to six on a motion to deny adding a class to the SEC at the July

2007 meeting. In light of the vote, the Advisory Board determined they would like to receive a response from the Department of Labor and Department of Energy concerning potential covered work at the Dean Street facility.

We had a couple of updates that occurred in October and November of '07, and then DOE presented their findings at the January 2008 Advisory Board meeting that the Dean Street facility should be included as a covered facility, but there is no indication that any additional radiological activities occurred because of the addition.

At that January 2008 Advisory Board meeting NIOSH committed that we would revise the Chapman Valve evaluation report. But based on DOE's findings, we did not anticipate any change in our feasibility determination. We issued that revised evaluation report in February 2008 and at the February 2008 Advisory Board conference call the Board tasked SC&A to do a focused review of the new information provided by DOE and asked that the new information be available prior to the April Board meeting.

SC&A provided a report to the workgroup on March 12th of 2008. NIOSH presented the revision to the evaluation report, and that revision did not change our feasibility determination.

The Advisory Board decided to reconvene the workgroup to discuss a path forward. The workgroup met on May 1st. They asked NIOSH to send a letter to DOE inquiring about the extent of their evaluation. In addition, NIOSH agreed to continue looking for pedigree -- the pedigree of the enriched uranium analysis. Pending the outcome of these two actions, the workgroup intended to reconvene and presumably make a decision prior to the June 2008 Advisory Board meeting.

Status: The petition and evaluation report are with the Advisory Board for recommendation, and an update is scheduled for tomorrow.

Blockson Chemical, the evaluation report was initially approved and sent to the Advisory Board in September of '06. NIOSH presented the evaluation at the December 2006 Advisory Board meeting. At that time it was brought to our attention that we did not evaluate all covered

exposures, therefore we withdrew that evaluation report. At the December 2006 meeting the Advisory Board established a workgroup to review the evaluation report. NIOSH issued a revised evaluation report at the July -- on July 3rd, 2007. We presented that revised evaluation report for Blockson Chemical at the July 2007 Advisory Board meeting, and the workgroup met in Cincinnati on August 28th, 2007.

A public meeting was held on September 12th, 2007 to go through changes that were completed in the dose reconstruction technical approach, and the workgroup held a conference call on November 2nd, 2007.

At the January Advisory Board meeting Dr. Melius indicated he wanted to review the pedigree of the bioassay data and he wanted to discuss the radon model with Mark Griffon. There was no change in the status of the petition and report at the April Board meeting. The workgroup planned to meet to discuss a path forward.

The workgroup met on June 5th, 2008. A couple of the action items were given. The workgroup

intended to have a conference call on June 24th to discuss resolution of the radon issue and any outstanding action items. I believe that occurred.

MS. MUNN: It did.

MR. RUTHERFORD: The status: Petition and report are with the workgroup and an update will be provided in tomorrow's meeting.

Feed Material Production Center, the evaluation report was approved and sent to the Advisory Board and petitioners on November 3rd, 2006. NIOSH presented the evaluation report at the February 2007 Advisory Board meeting, and at that meeting the Advisory Board established a workgroup to review the evaluation report.

In May 2007 SC&A provided a draft review of the evaluation report to the workgroup, petitioners, Board and NIOSH. Workgroup met in Cincinnati on August 8th, November 13th and March 26th of 2008.

Current status is the workgroup review of the Feed Materials Production Center is ongoing.

Bethlehem Steel, the evaluation report was approved and sent to the Advisory Board and petitioners on February 27, 2007. NIOSH

presented that evaluation report at the May 2007 meeting. At that time the Advisory Board determined that it needed further information before making a recommendation on the SEC petition. The Advisory Board tabled the discussion of the Bethlehem Steel SEC evaluation report until the workgroup that is looking at the use of surrogate data reports back to the Board.

The status is the petition and evaluation report are still with that workgroup and the Advisory Board for recommendation.

Hanford Part 2 -- for those that don't know, Hanford Part 1 went through and a class was included. Hanford Part 2, the evaluation report was sent to the Advisory Board and petitioners on September 11, 2007. NIOSH presented the evaluation report at the October Board meeting. The Board sent the report to their contractor and the Hanford working group, which was already established and chaired by Dr. Melius.

The Advisory Board's contractor issued a white paper questioning whether additional buildings should be included in the proposed class

definition. In March 2008 NIOSH issued a revised evaluation report with a modified class definition which included -- which made it a more generic class definition with respect to the areas identified.

NIOSH presented that revised class definition at the April 2008 Advisory Board meeting and the Board concurred with NIOSH's recommendation to add a class.

Status -- the remaining years of the evaluation report are with that Advisory Board workgroup and SC&A for review.

Nevada Test Site, the evaluation report was approved and sent to the Advisory Board and the petitioners in September of 2007. NIOSH presented that evaluation report at the January 2008 Advisory Board meeting, and the Advisory Board sent the report to their contractor and to the NTS Board workgroup for review. Again, that -- that workgroup had already been established to review the site profile.

Our current status is the petition and evaluation report are with that Advisory Board workgroup and SC&A for review.

Mound Plant, 1949 -- the evaluation report was

approved and sent to the Advisory Board and the petitioners in December 2007. We presented the evaluation report at the January 2008 Advisory Board meeting and the Advisory Board concurred with NIOSH to add a class for the early years, but sent the report to their contractor for review and established a Mound workgroup, which is chaired by Josie Beach.

The Mound workgroup met on April 1st, 2008 and the petition and evaluation report are under review with that workgroup and SC&A.

Texas City Chemical, the evaluation report was approved and sent to the Advisory Board and the petitioners on January 18th, 2008. We presented the evaluation report at the April 2008 Advisory Board meeting, and the Advisory Board gave the petition and evaluation report to the surrogate data workgroup for review.

The petition and evaluation report are with the Advisory Board for recommendation, and an update is scheduled for tomorrow's meeting.

Area 4, Santa Susana Field Laboratory, the evaluation report was approved on February 15th and sent to the Advisory Board and the petitioners. NIOSH presented the evaluation

report at the April meeting. The Advisory Board indicated they would not take action on this petition. A -- at that time SC&A was reviewing the site profile, and until that SC&A review was complete they would not take action. Status: The petition and evaluation report are with the Advisory Board for recommendation, and an update will be provided at this meeting.

Y-12, 1943 to 1947, the evaluation report was approved and sent to the Board and petitioners on June 6th, 2008. We presented that evaluation report yesterday and the Board concurred with our recommendations.

Spencer Chemical, evaluation report was approved and sent to the Board and petitioners on June 9th. We presented that evaluation report today and the Board concurred with our recommendation.

Dow Chemical, Addendum 2 -- this is, again, the second addendum and -- to the previous evaluation. Addendum 2 of the report was approved and sent to the Board on June 3rd and we presented that addendum at this mee-- Advisory Board meeting, and the path forward will be discussed tomorrow with the Board.

Okay, SEC petitions currently in the evaluation process. Pantex, we have a Pantex petition that has been -- petition that has far exceeded the 180 days. There have been a number of reasons around that, not only due to issues with qualification, the Administrative Review Panel, but also issues with data capture. We plan to have that report -- that report is on schedule to be completed in August of '08 and we plan to present that report at the September meeting.

Westinghouse Atomic Power Development, during our evaluation process of the Westinghouse Atomic Power Development we brought up questions concerning the approved covered activities for that facility. We corresponded with the Department of Energy with concerns that the covered activities that were currently identified for that facility were actually activities that occurred at another site.

We recent-- recently received a response from the Department of Energy that they concluded, they were in agreement. The covered activities previously identified were activities covered at another site, but they also identified that

there were covered activities that did occur at that site, but at a different time period. They've submitted that information to the Department of Labor that ultimately will change the covered time period for that site and will affect existing claims we have for that site. Massachusetts Institute of Technology, this was the one that we had planned to present at last -- the previous Board meeting, and it became clear to us late in the game that the Massachusetts Institute of Technology and the Hood Building were two separate facilities, and we would require a separate evaluation report. We are still working to complete -- this will actually be identified as the Hood Building evaluation report. The Massachusetts Institute of Technology, which is a -- will be a shorter time frame. We have no claims that fit into that time period at this time. The Hood Building will be complete and presented at the September Advisory Board meeting.

Savannah River Site, construction workers, we had planned to have this report ready for the September 2008 meeting. However, due to data capture issues, it -- we do not expect that

will happen. We roughly lost about two months of our -- with difficulties in data capture. What we plan to do is we will send a -- a letter to the Board outlining what -- you know, the reason for this delay. We will also contact the petitioners and also correspond to them the reason for the delays, and then we will ask Jason to correspond to any Congressional contacts the reasons for our delays as well.

General Steel Industries, we plan to -- the -- we see no problem with completing this evaluation report and presenting it at the September meeting.

And the last one, which I didn't start out with the facility, but is the Los Alamos National Lab. We are on schedule to complete that evaluation report in October, and we would present at the following meeting.

We have six sites that are in various stages of the 83.14 SEC process at this time. We also have a number of sites that we've kind of changed our approach on. We had Battelle sites that we are moving down a path of doing our due diligence of data capture efforts, and what

will happen is our -- our contractor, ORAU, will determine feasibility on those sites. If dose reconstruction is feasible, that group will complete those dose reconstructions at that time. If not, they will immediately move them into the 83.14 process.

And that's it. Any questions?

DR. ZIEMER: Okay, thank you, LaVon, for a very concise summary. Questions, Board members, or comments?

(No responses)

It's good to see what's coming on the horizon for us, a lot coming down the pike.

MS. MUNN: Something to do.

DR. ZIEMER: We're going to recess here momentarily. I think one of our workgroups will be meeting -- Blockson workgroup is going to be meeting the rest of the afternoon.

I'll remind you we have a public comment period this evening at 7:30 right here -- is it 7:00 o'clock?

DR. BRANCHE: 7:30 Central Time.

DR. ZIEMER: 7:30 Central Time here in this room.

Any other housekeeping comments, madam?

DR. BRANCHE: No, just that we reconvene at 8:30 tomorrow.

DR. ZIEMER: And then we'll reconvene tomorrow morning at 8:30, so we're recessed until 7:30 this evening.

(Whereupon, a recess was taken from 4:20 p.m. to 7:30 p.m.)

PUBLIC COMMENT

DR. ZIEMER: Good evening. We're going to begin with the public comment session for this evening. We have a few instructions and the reading of the redaction policy by our Designated Federal Official, so let's do that first. Christine Branche.

DR. BRANCHE: Good evening. Please understand that if a -- every per-- every person who mentions -- who comes up to the microphone to give a comment, you're to give your own name and no attempt will be made to redact your name.

If an individual in making a statement reveals personal information -- for example, medical information -- about themselves, that information will not usually be redacted. But the NIOSH Freedom of Information Act

coordinator will review such revelations in accordance with the Freedom of Information Act, as well as the Federal Advisory Committee Act. And if deemed appropriate, will redact -- that means remove -- such information.

All disclosures of information concerning third parties will be redacted.

Is persons participating by phone would please mute their lines, either using the mute button or the star-6 feature, that will allow all of the phone participants to be able to hear all of the -- all of the information that's exchanged here at the meeting.

When you are ready to speak, at Dr. Ziemer's instruction, then please unmute your phone.

And if you've the star-6 feature to mute your line, then you would use that same star-6 to unmute your phone.

Also, if you must leave the line, do not put this call on hold. It would be better for you to hang up and dial back in, but do not put us on hold, please.

Thank you. Dr. Ziemer?

DR. ZIEMER: Thank you very much. We -- we do not have a large number of individuals who have

signed up to comment, but nonetheless, our regular time limit of ten minutes per person remains in effect for the public comment period.

Also as I look out I'm not certain that all the individuals who have signed up are actually here. Let me start, though. I'll take them in order.

[Identifying information redacted] --

DR. BRANCHE: Mr. Funke wanted to go first.

DR. ZIEMER: Huh?

DR. BRANCHE: Mr. Funke wanted to go first.

DR. ZIEMER: He is not going to go first.

DR. BRANCHE: Oh, okay.

DR. ZIEMER: We -- the courtesy is that those who sign up locally go first.

I don't see [Identifying information redacted] here, however. [Identifying information redacted] is -- her husb-- well, [Identifying information redacted] signed up and is -- is not -- apparently not here.

[Identifying information redacted], also Dow -- [Identifying information redacted] was Dow -- and the Dow people, many of them had commented last night and, since much of the Dow business

was completed, they may not have remained. [Identifying information redacted]? Is [Identifying information redacted] not here either? Also Dow.

Okay, then I will go to John Funke by phone. John, can you hear us?

MR. FUNKE: Yes, sir, I'm here.

DR. ZIEMER: Proceed, John.`

MR. FUNKE: Good evening, Dr. Zimmer (sic), Board members. Excuse me if I don't identify you all; just assume I did.

I got an important announcement here. I've come into possession of a letter -- I won't say who it's from to who it's to because under the third party stipulations that you just read off, but it pretty much says in a sense -- I'll read the paragraph.

(Reading) Based on the information provided to us by DOE, I am pleased to report that the Department of Labor has determined that the classified area satisfies the EEOICPA definition of a Department of Energy facility for the period January 1958 to December 31st, 1999.

This is referring to the Area 51 on Nevada Test

Site. I am -- most assuredly you'll all be hearing about this in the coming days, and I have a couple questions I would like to pose on this.

If 51 is accepted, how will this affect the existing site profile, or will they do a separate site profile for 51, apart from the existing profile? And will this also include Area 11 of the plutanium (sic) dispersement site just above 51? Now -- I'll let somebody answer that after I'm done. I want to move on to a couple of other things.

I understand the other day Dr. Zimmer (sic) asked Robert Presley if they had resolved all the issues in the -- in the site profile and Technical Base (sic) Document. And from what I could hear, I think he said he had a few, but I believe there's a lot more than a few. I've just reread what was written and there still seems to be a lot needs to be cleaned up in there.

And also there's new things coming forward every day. I'd like to point out a couple.

I found evidence of a unregistered, undocumented waste site in Area 3 at Nevada

Test Site. I did this on an in-person inspection. When I went out there my curiosity got up because they had fenced in what we used to call Step City, the storage area or the bone yard. And it was after -- I made a call to a former employee that I worked with out there. He related to me that after we had closed down Area 3 and moved out, DOE came back in there and dug up a 30 by 30 by 14-foot-deep hole and removed quite a bit of radioactive waste. And I'd like to point out that this -- this area was directly in the shop area of Area 3, and everybody worked there worked around this site and on top of it for over 25 years.

I'd like to move on to another thing. When Dr. Anspaugh, Ron Sharp, former (unintelligible) was set up and myself was out there, I noticed in the parking lots that had originally been rock-hard and paved with limestone, as all parking lots were, I was leaving two-inch footprints as I was walking across it. And on closer examination I realized that the whole entire area had been plowed. And then when -- in checking Area 2 and Area 12, I found the same thing. It appears that the whole entire

Yucca Flats has been plowed and winrowed (sic) under. And so I contacted Department of Energy and asked them if this had been done; they said that it had been done in some areas. They didn't say which. And I requested a cleanup report as to what was taken off of the site. And they were going to give it to me and then the next day they called me back and said they couldn't give it to me because all the cleanup report was still in the draft stage. So this cleanup report is very important.

And I also inquired about the animal biology reports which the environmental report goes into great detail about, but there no result to the animal biology report, so I'm trying to get that as well.

And there was another thing that's came up is I've been reviewing and studying on the NRDS area. I found out that the -- when the reactors were run that a great deal of water was generated as a result of these reactors running when -- when gaseous hydrogen hits the air superheated, it turns immediately to water. And I guess the water that was generated from these runs was so great, they had to actually

concrete the areas in and concrete the dry washes and even build a holding area they referred to as a canyon, lined with concrete. And I noticed in reading this site profile and the Technical Base (sic) Document, there is no reference at all to any water studies or any reports on water in the NRDS area.

And that's pretty much it for now, so I'll go ahead and let somebody answer them other questions if they can.

DR. ZIEMER: Okay, thank you, John. I don't know if anyone is prepared to answer your initial questions here tonight. I'm looking to NIOSH staff and they are not prepared to answer those questions tonight. They did hear your questions, so all -- all I can do is tell you that they have been heard. And I don't know that the workgroup would be prepared to address those, either, at this point. Thank you very much.

Are there any other individuals on the phone lines that wished to make public comment?

(No responses)

Okay, I hear none. Let me -- (electronic interference) -- yes?

UNIDENTIFIED: Doctor (electronic interference) comments?

DR. ZIEMER: Go ahead.

MR. DUTKO: Doctor, my name is John G. Dutko, I'll spell --

DR. ZIEMER: Spell --

MR. DUTKO: -- (unintelligible) --

DR. ZIEMER: -- spell your name -- spell your name, please?

MR. DUTKO: Sure. D as in dog, u-t-k-o, John G. Dutko.

DR. ZIEMER: Oh, John, yes. Thank you. Go ahead, John.

MR. DUTKO: Yes, sir. Sir, at -- at -- at GSI in 1993 the government cleaned out -- cleaned up the old Betatron. They found U-238 in the railroad tracks of the Betatron, the heating system, in the vacuum cleaner (unintelligible) handling systems, the air exhaust (unintelligible). Now if they found that in '93, surely that residue had to be there is the '60s (electronic interference) work, wouldn't you think?

My comment is this, sir: How could that uranium-238 not affect us if we walked through

there (electronic interference) as we did in that old Betatron. The new Betatrons, in '73 when General Steel was sold, was hosed out by a (unintelligible) to clean up the Betatron and remodel it. They hosed it out with a fire hose. That was never done to the old Betatron and in '93 the cleanup crews did find uranium-238, and we walked in it (electronic interference) here, sir. How can that possibly not affect...

DR. ZIEMER: Okay. Does -- does that complete your comments, John? I'm -- I'm -- I'm taking your question as -- at the moment as a rhetorical question because, in essence, the dose reconstruction process tries to answer the very -- that very question, whether or not an individual worker has been affected by --

MR. DUTKO: Well --

DR. ZIEMER: -- their dose.

MR. DUTKO: -- it's questionable whether they did, sir. I have another comment --

DR. ZIEMER: Okay, thank you.

MR. DUTKO: -- (unintelligible) the way of a question. As we -- as we X-rayed the Betatrons and a casting left the new Betatron to go out

in the 9 or 10 building, it took us about a half-hour to get that -- remove that casting and set it up in one of the buildings. I'm told that -- that casting would remain activated for as much as an hour. Now, if the last shot fired into a casting before it left Betatron was a 60 Roentgen shot, would it remain activated the same length of time as a 10,000 Roentgen shot, sir?

DR. ZIEMER: Okay.

MR. DUTKO: Do you under-- (electronic interference), Dr. (electronic interference)?

DR. ZIEMER: I -- I didn't follow that fully. Could you -- you may wish to repeat that. I'll see if --

MR. DUTKO: Okay.

DR. ZIEMER: -- I can --

MR. DUTKO: As we -- as we -- as I repeat, when a casting leaves a Betatron I'm told it can remain activated as -- as long as (electronic interference) hours. It takes a half-hour to remove the casting from the Betatron and to set it up (electronic interference). Now if -- last shot fired in the Betatron was a 60 Roentgen shot, which takes about (electronic

interference) minute to fire, let's say, would the -- would the activation time be the same as a 10,000 (electronic interference) shot where there was an hour -- hours running on the machine, would the casting say -- stay activated the same length of time?

DR. ZIEMER: John, I don't know that I personally can answer that, or have all the parameters, but certainly the NIOSH dose reconstructors would be able to answer that question based on --

MR. DUTKO: The reason I ask (electronic interference) it's -- we are told -- we are told that the castings, as they're work-- worked on, dissipate, the radioactivity dissipates before (electronic interference) work on. It's hard to believe that if I fire a 10,000 Roentgen shot into the casting before it leaves the Betatron that it's going to stay active in shorter -- than the -- than the other shot. I would say it would be active (electronic interference) longer. I -- I -- I can't see a 10,000 (electronic interference) shot deactivating in two hours, the same as a 60 Roentgen shot.

DR. ZIEMER: Well, the only comment I'll make at this point is that, in general, the typical activation products are all very short-lived. I think for -- for your -- the specific case you're talking about, we would have to examine the details of that. But in general, those are fairly short-lived activities from the nuclides that are activated. But in a particular case, the dose reconstructors would be able to handle that information and make an appropriate estimation of dose.

Do you have any further comments, John?

MR. DUTKO: I thank (electronic interference), sir.

DR. ZIEMER: No. Okay.

MR. DUTKO: I -- I -- it bothered me, though. It bothered me, saying that a casting would dissipate within a two-hour period and it -- and it -- when -- when many different (electronic interference) lengths of shots are fired in (electronic interference) Doctor.

DR. ZIEMER: Uh-huh. Okay, thank you.

MR. DUTKO: Thank you, sir.

DR. ZIEMER: Any others by phone?

(No responses)

Okay, let me offer the opportunity again -- anyone here in the assembly that has any comments to make?

(No responses)

If not, then we will recess for the evening and the Board will reconvene tomorrow morning at 8:30. Thank you very much. Good night, everyone.

(Whereupon, an adjournment was taken at 7:47 p.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of June 25, 2008; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 25th day of July, 2008.

_____

STEVEN RAY GREEN, CCR, CVR-CM, PNSC

CERTIFIED MERIT COURT REPORTER

CERTIFICATE NUMBER: A-2102