**THE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**
**PUBLIC HEALTH SERVICE**
**CENTERS FOR DISEASE CONTROL AND PREVENTION**
**NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH**

convenes

MEETING 54

# ADVISORY BOARD ON

# RADIATION AND WORKER HEALTH

DAY ONE

The verbatim transcript of the 54th Meeting of the Advisory Board on Radiation and Worker Health held at the Crowne Plaza Tampa East, Tampa, Florida on Apr. 7, 2008.

STEVEN RAY GREEN AND ASSOCIATES
NATIONALLY CERTIFIED COURT REPORTERS
404/733-6070

**C O N T E N T S**

Apr. 7, 2008

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-- "*" denotes a spelling based on phonetics, without reference available.

-- (inaudible)/ (unintelligible) signifies speaker failure, usually failure to use a microphone.

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

(By Group, in Alphabetical Order)

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EXECUTIVE SECRETARY
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CLAWSON, Bradley
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BEHLING, KATHY, SC&A
BREYER, LAURIE, NIOSH
BROCK, DENISE, NIOSH
BROEHM, JASON, CDC
CHANG, CHIA-CHIA, NIOSH
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MILLER, RELADA, OCAS/NIOSH
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ROBERTS, KIMBERLEY, SAIC
ROBINSON, NELDA, NIOSH
RUTHERFORD, LAVON, NIOSH
SMITH, ROBERT, NIOSH
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ZIEMER, MARILYN

**P R O C E E D I N G S**

(8:30 a.m.)

(NOTE FROM THE COURT REPORTER: During the following meeting, severe difficulty with the telephonic connections ensued. The reader will find many "unintelligible" notations during these sections, signifying spots in the communication which were simply impossible for the reporter to decipher. Following is the ultimate effort by the court reporter.)

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

**DR. BRANCHE:** Welcome to the 54th meeting of the Advisory Board on Radiation and Worker Health. I'm Christine Branche and I'm your Designated Federal Official for this meeting. I'll start off by letting you know that the emergency exits for this meeting room are straight through the door and either to the right or to the left -- you have to go all the way out. If you go straight out through the door that's in front of you, you will go to the pool. But for emergency access purposes you need to all -- to the farthest extensions to the right or the left of the building.

The policy on redaction of Board meeting transcripts are as follows: If a person making a comment gives his or her name, either here in the meeting room or by telephone, no attempt will be made to redact that name. NIOSH will make -- the National Institute for Occupational Safety and Health will take reasonable steps to ensure that individuals making public comment are aware of the fact that their comments, including their name if provided, will appear in a transcript of the meeting posted on a public web site. Such reasonable steps include a statement read at the start of each meeting -- excuse me, each public comment period, stating that transcripts will be posted and names of speakers will not be redacted. A printed copy of the statement mentioned -- that I just mentioned will be displayed on the table where individuals sign up to make public comment. A statement such as that I -- that I just read will also appear with the agenda for the Board meeting when it is posted on the NIOSH web site. As well it will appear in the *Federal Register* notice. If an individual, in making a statement, reveals personal

information such as medical information about themselves, that information will not usually be redacted. The NIOSH Freedom of Information Act coordinator will, however, review such revelations in accordance with the Freedom of Information Act and the Federal Advisory Committee Act and, if deemed appropriate, will redact such information. All disclosures of information concerning third parties will be redacted. If it comes to the attention of the Designated Federal Official that an individual wishes to share information with the Board, but objects to doing so in a public forum, the Designated Federal Official will work with that individual in accordance with the Federal Advisory Committee Act to find a way that the Board can hear such comments.

Mr. Presley, are you still on the line?

**MR. PRESLEY:** I sure am.

**DR. BRANCHE:** Okay. Mr. Presley, given that you'll be -- you'll be participating for the entire meeting by telephone, if you lose contact for any reason, could you please take down the number that I'm about to give you? Area code 813-623-6363. That is the number for

the hotel, which is the Crowne Plaza, and we are in the Cypress Room. And if you could let someone know that you've lost contact, they will alert us here. Again, that number is area code 813-623-6363.

**MR. PRESLEY:** Got it.

**DR. BRANCHE:** Thank you. If everyone participating on -- by phone would please mute their lines, you can use the mute button. And if you do not have a mute button, then please dial star-6 to mute your line. That will allow the transcriber to be -- or the court reporter to be able to have a clear line and everyone will be able to hear all of the information that is taking place during the meeting. When you're ready to speak and you do not have a mute button, then please dial the same star-6 to unmute your phone.

Thank you very much, and -- Dr. Ziemer.

**DR. ZIEMER:** Thank you very much, Dr. Branche, and welcome, everyone, to this meeting of the Advisory Board. You notice that we usually start our meetings with a half-hour welcome by the chairman. Now I've learned from John Poston that the way you do that is you say

"Howdy" real slow, as they do in Texas, and even that's not enough to fill the half-hour. But we have a special treat today and I'm going to refer to that in just a moment.

I have to make my usual reminders that, if you haven't already done so, please register your attendance with us. The registration book is in the corridor just outside of this room.

Secondly, any members of the public who wish to address the Board at the public remarks portion of this meeting, there's a sign-up sheet for you as well. Please make use of that.

And thirdly, there should be a table -- and I think it's also in the corridor -- with -- or maybe -- oh, it's in the back of the room, with the papers and documents and other materials, including the agenda, for this meeting. So you can avail yourself of that.

**COMMENTS FROM DR. LEW WADE**

Over the past little over three years we've been privileged to have as our Designated Federal Official Dr. Lewis Wade. This is actually Dr. Wade's last meeting, and he is actually here almost as an observer now. But Dr. Wade, we welcome you this last time and, if

you would, come up and you -- you may address the Board, or you can use the podium if you wish, or if you have a special routine you can just do it right out here in the front -- whatever you wish to -- you're free now; you're not a member of this Board. You can do or say what you wish.

**DR. WADE:** Well, I'll do it from here. Thank you very much, Paul. It's indeed an honor to be here, as it has over the last three years. This morning what I'd like to do is just provide you with a bit of an update on the status of things, and then take a moment to thank the Board members for -- for their service.

By way of the update, Dr. Christine Branche is now the Designated Federal Official for this Board, officially named and sanctioned. She also has taken over as the Technical Project Officer on the SC&A contract, so she fills both of those roles.

As for me, I'll be around, helping as I can and filling in for Christine at an odd meeting of a workgroup or a subcommittee here or there as she needs me. The one thing I am committed to

do is to work with the Board and Christine to see that the recompete of the Board's contractor happens appropriately, and I'll work on that with Christine and see that through to its completion.

So those are sort of the updates.

My thank you really needs to begin, as I think any discussion of this Board's business needs to begin, by thinking about the hundreds of thousands of men and women at the hundreds of sites that helped this country fight and win the Cold War, that have given their life service to our security, our security as a nation. I think we can't forget those people in anything we do.

There is a national program, as you know, that was put in place to compensate those among that number who have contracted cancer. That program is not simply a compensation program, but it's a program that looks at compensating individuals if it can be demonstrated that their cancers was as likely as not caused by their exposure. People don't just join the Special Exposure Cohort. There's tests that they need to undergo. Those tests really go to

the issue of whether their doses can be reconstructed with sufficient accuracy.

The laws and rules that control those activities are clear, and they put some rigor between us and the compensation of those people. And this Board fills in in terms of that space.

Let me tell you about the very good news that 19,000 individual dose reconstructions have been completed. More than a billion dollars has been paid to those former workers based upon individual dose reconstructions and people joining the Special Exposure Cohort. There have been 28 new classes added to that Special Exposure Cohort. So a great deal of positive things have happened relative to those heroes of our nation.

Thanks go to many, many people. I would be remiss if I didn't look to my colleagues at NIOSH and commend them on their work -- their hard work that have resulted in these dose reconstructions and this compensation. The contractors that support this program, their efforts can't be overlooked.

But then you come to this Board in the role of

is the cancer as likely as not, has sufficient accuracy been met -- that begins to define the work of this Board. The Board has in its charter a review of the scientific validity and quality of dose reconstructions. The Board advises the Secretary of Health and Human Services on whether classes should be added.

I don't have to tell you the tremendous amount of work that's involved in that. Those of you who sit on the Board, anyone who's observed the Board, understands this tremendous undertaking. I count 16 workgroups. There are Board members who serve on six or more workgroups. This is a tremendous amount of work, hard work, dedication of your time, jetting across the country to all kinds of places -- as exotic as Cincinnati or Tampa, Florida -- and making the sacrifice.

But what I would leave you with is not just remembering your hard work, because we all know people who work hard, but the tremendous compassion that this Board has brought to its work. The Board has never forgotten who it truly serves, and those are those hundreds of thousands of people who won the Cold War for

our nation. This Board has demonstrated a compassion for those people that I think is worthy of note, worthy of my personal comment, and I thank you all for that. Your hard work and your service to those people have been a joy for me to watch, and I have certainly been inspired by it. And I thank you again for your public service.

**MS. MUNN:** Thank you, Lew.

**DR. ZIEMER:** Lew, thank you very much. I'm going to now read a letter into the record. This is a letter signed by the Board members, and I will transmit it on to you as well, Lew, after it is completely signed. We have to get Robert Presley's signature on it as well. That is if Robert doesn't object after hearing it. But anyway, without objection, Lew, this letter comes from the Board and I will read it on their behalf.

Dear Lew: As members of the Advisory Board on Radiation and Worker Health, we wish to thank you for your dedicated service as Designated Federal Official and Executive Secretary of the Board for the past three years. Your sage advice and sound wisdom have been beneficial in

helping the Board carry out its responsibilities fairly and efficiently. Your wise counsel has helped us focus and prioritize our activities, and to stay on track amidst the many complex issues with which the Board has had to deal. We all appreciate your gracious spirit and your regular words of encouragement. As you move on to other activities and responsibilities, we wish you the very best. We will miss you, of course, but if you ever find yourself bored and in need of excitement in the future, please know that you are welcome to join us at any future meetings. We will be more than happy to give you up to ten minutes for public comment.

Our sincere good wishes, signed by the Board.

Thank you, Lew, again.

And we're pleased to have Christine Branche to pick up the torch and -- and carry it, and although she's been here a while, welcome again, Christine, to these activities and responsibilities.

**DR. BRANCHE:** Never a dull moment.

**DR. ZIEMER:** We will follow the agenda as set forth -- as published. You recognize that the

time specified on each item is an estimated time. We necessarily will expand or contract, as the need arises. I told someone earlier I'm not sure if this is a four-day meeting squeezed into three or whether it's a two-day meeting stretched into three; we never know exactly how much time we need for some of these activities and discussions. But nonetheless, let us proceed.

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY SEC PETITION**

We will begin first with the petition on the Massachusetts Institute of Technology. LaVon Rutherford will make the presentation for NIOSH, and then we'll have an opportunity to hear from the petitioners as well.

**MR. RUTHERFORD:** Thank you, Dr. Ziemer, the Board and public, for giving me this opportunity to speak on behalf of NIOSH and our -- what we had attempted to, our evaluation of the Massachusetts Institute of Technology. We had intended to present the evaluation report for this site. However, late in the process we ran into some issues that we had to pull back that evaluation. I intend to give you a kind of a chronology of events, what occurred and

how we got to where we are, and what we plan to do to get that evaluation out.

On October 18th, 2007 we sent a letter to a petitio-- to a claimant, letting that claimant know that dose reconstruction was not feasible for the Massachusetts Institute of Technology. We also provided that claimant a -- the necessary information to submit a petition -- an SEC petition.

On October 31st NIOSH received that Form A back from the petitioner and initiated the 83.14 SEC process.

On January 17th we sent a -- the draft class definition, which is our standard process. We sent the draft class definition for MIT to the Department of Labor to ensure that they could administer the class as written.

On January 25th NIOSH received a response from the Department of Labor regarding that class definition. The Department of Labor requested that NIOSH clarify or specify that there are -- would be two separate class designations for this and that one would be for MIT and the other for the Hood Building.

We considered that comment by the Department of

Labor, but did not act on that comment. The Department of Energy web site currently identifies the MIT and the Hood Building as one facility under the MIT designation, with an AWE and a DOE period of operation. We found out later that actually a *Federal Register* notice had not been issued identifying a change in the facility designation.

On February 22nd of this year we issued our evaluation report for MIT. On March 11th we received a second letter from the Department of Labor raising the same concern with the class definition. We immediately contacted the Department of Labor to discuss their concern. The Department of Labor indicated that although the DOE web site web site lists the MIT and the Hood Building as one facility under the MIT heading, the process of officially designating them as separate facilities was underway.

At that time we felt we could still go forward with our evaluation, but we wanted -- what we would do was we would issue an addendum to our report and we would identify two separate classes, one for the Hood Building and one for the AWE period of MIT.

However, during the process, on March 19th, 2008 -- during the process of preparing that addendum we recognized that with it -- the Hood Building being a DOE facility, MIT may have not been the sole prime contractor for that facility. Additional contractors may have been operating that Hood Building, and in fact we recognized that Nuclear Metals, Inc. was contracted to perform metallurgical work in the Hood Building in 1954. We recognized at that time we had not reviewed Nuclear Metals, Inc. documentation for this evaluation.

So on March 21st we sent an e-mail to the Advisory Board pulling back the SEC evaluation report for MIT. We contacted the MIT petitioner to explain the situation.

So now we -- we pulled the report back. Now I'm going to discuss what we're going to do from this point forward to get this evaluation complete.

We have indication that there may be a file at the -- at MIT that might have -- may identify additional contractors who operated the Hood facility. We are going to go try to get that file and review that file. We're also

reviewing all documents associated with Nuclear Metals, Inc., and any other contractor that we do identify during the process, we will review their documents as well. In addition, if we do identify additional contractors, we will request any documentation they may have.

After we've received and reviewed all the documents, we will determine if this -- if the documents change our feasibility determination. If the feasibility does not change, we plan to issue an evaluation report prior to the June Board meeting, and we will present that evaluation at that meeting. And it will be specific to the Hood Building and its covered period.

At this time we have no existing claimants that worked at MIT during the AWE period of 1942 through 1946, so at this time we do not plan to issue an evaluation report for that period of 1942 to 1946.

And that's it. Questions?

**DR. ZIEMER:** Okay. Thank you, LaVon. Let me ask, Board members, do you have any questions before we hear from the petitioner -- and you'll have a chance again if -- after that as

well.

(No responses)

Okay. I want to check and see if [name redacted] is on the line. [Name redacted], are you with us this morning?

(No responses)

[Name redacted], are you on the line?

(No responses)

He's not going to be? Okay, I was told he would be, but -- oh, okay, I -- oh, I -- yes, I see now. I interpreted that wrong. Thank you. Thank you.

And since, in essence, this has been put back on hold till we get the new ER, so that's the status. Any further questions then at this point?

(No responses)

Okay, thank you very much. Thank you, LaVon. Then we're ready I think to move on. This is one of those cases where we didn't need the full time that we anticipated originally.

The next item on the agenda is an SEC petition from Texas City Chemicals, and Dr. Neton from NIOSH will make that presentation for us. Then, again, we'll have an opportunity in this

case to hear from some petitioners by phone. Let me check and make sure they are on the line. Christine Ray, are you on the line? And Dan McKeel, are you on the line?

(No responses)

One problem, if they have the agenda and they think it's not going to start till 9:45, that could be a problem.

(Pause)

I'm -- I'm -- give us a minute here. I think, in fairness to the petitioner since the -- the agenda called for this to occur at 9:45, I'm -- and I'm suspecting that they will want to -- they -- they indicated they would be here by phone, and it may not be fair to them to start that early. Let's take a minute and we'll see what we -- if we can juggle something here. Just stand by.

(Pause)

... check -- John Mauro, is Kathy Behling here yet, do you know?

**DR. MAURO:** She's flying in this morning. She --

**DR. ZIEMER:** Okay, so we can't --

**DR. MAURO:** -- probably won't be available till

--

**DR. ZIEMER:** -- move that one up. Thank you. Larry, what's the possibility of getting your presentation on quality assurance early? Is that -- catch you off-guard here, it was for this afternoon.

**MS. BEACH:** I think that should wait until a couple more Board members are here.

**DR. ZIEMER:** Yeah.

**MS. BEACH:** That's an important one, I believe. Sorry, Larry.

**MR. ELLIOTT:** That's fine.

**DR. BRANCHE:** I would say the same for procedures as well.

**MS. MUNN:** Plus we have to have Kathy.

**DR. BRANCHE:** Yeah -- we don't need to have Kathy, but -- she's critical to --

**DR. ZIEMER:** No, we do for that.

**DR. BRANCHE:** Is there something from...

**DR. ZIEMER:** Now I think -- let me just look here -- all of these have petitioner --

**MR. ELLIOTT:** Dr. Ziemer –

**NIOSH PROGRAM UPDATE**

**DR. ZIEMER:** NIOSH program update, can we do that? That might be --

**MR. ELLIOTT:** I think I can struggle through that.

**DR. ZIEMER:** Okay. Okay, we'll -- we'll pull that forward from tomorrow's agenda, the NIOSH program update.

**MR. ELLIOTT:** So we're ready?

**DR. ZIEMER:** Okay, Larry Elliott will present this.

**MR. ELLIOTT:** Well, good morning, Board members and members of the public, and colleagues. I'll try my best here, and I may need to follow up with information that I have upstairs in my room on some of these if I have questions relevant to a particular point, so if you would bear with me in that regard, I'd appreciate it. These are the standard set of slides that we go through to provide the Board and the public a program status report, as you've seen in the past. To date, or as of March 31st of this year, 26,876 cases have been referred to NIOSH for dose reconstruction. And of those, 71 percent or 19,046 have been returned to the Department of Labor for a decision or for a final adjudication. Of that 19,046, 16,780 arrived at DOL with a dose reconstruction

report; 701 were pulled by the Department of Labor from our case -- our claim pool, for a variety of reasons. And as we have talked about in the past, these can range from claims that were sent to us early on in the program that shouldn't -- not have been sent to us, they were toxic chemical exposure claims, or they might have been a chronic lymphocytic leukemia claim, a variety of other reasons why these were pulled from us, so we did not do any work on those 701 claims that were returned. There are 1,565 claims or cases that have been returned to DOL because we feel that they -- and DOL feels that they might fit into one of the classes that have been added to the Special Exposure Cohort. Twenty-three percent or 7,468 cases now remain at NIOSH for dose reconstruction.

We have a process where we complete a dose reconstruction report and we give it to the claimant, and we ask the claimant to assert in an OCAS-1 form that they have no further information to provide on that claim. And when we don't receive that form, we wait a total of about 74 days -- the rule calls for 60 days and

then we give another 14 days grace -- and if we don't hear from them -- from the claimants with regard to whether they have information or not, we administratively close the dose reconstruction. We can open this dose reconstruction at any point in time where the claimant may find that they have additional information, or they wish for us to move the claim on to Department of Labor. So we have 362 of those claims that are administratively closed at this time.

The pie chart that I typically provide you breaks down the case status of all of our claims into these categories -- those that are completed, those that are pulled, those that are pulled for SEC purposes and the administratively closed claims that you see here in red. The active cases are shown in yellow, and then the cases that are pending -- and pending means that there is some technical hold on the case or there's some issue that we're trying to resolve before the case can move forward.

Of the 16,780 dose reconstructions that we've returned to Department of Labor for final

adjudication, we believe that 34 percent had a POC greater than 50 percent, or were found to be compensable. That's -- that leaves 66 percent, or 10,811 cases, where a POC of less than 50 percent was determined by the Department of Labor and thus the claim was deemed non-compensable.

This bar graph shows you the -- in decile breakdown the probability of causation as it ranges across zero to ten percent and on up to greater than 50 percent. And you can see the -- these numbers total up to those 16,000 that we reported earlier.

Of the 7,468 cases remaining at NIOSH for dose reconstruction, 3,203 are currently assigned at some stage of development with a health physicist in dose reconstruction; 926 initial draft dose reconstruction reports are currently in the hands, as of March 31st, of the claimants. And here's where we're waiting for their review of this report and the return of the OCAS-1 form. There are 3,339 cases currently not assigned in dose reconstruction, means they're in some stage of development or awaiting assignment to a dose reconstructor.

4,476 claims are now older than a year, or 60 percent of our active case load.

We continue to maintain our vigilance in our attention on the oldest claims. We're trying to work those as quickly as we possibly can. And this slide reports our efforts on the oldest claims, or the first 5,000. We have generated dose reconstruction reports and provided those to DOL for 3,568. Of the first 5,000, 72 are sitting at administrative closed situations. We have 251 out of the first 5,000 that have been pulled by DOL for some reason, and we have 211 cases that were SEC-related cases and returned to DOL for that reason. There are three dose reconstructions currently with the claimant for review. And DOL has returned to us -- this number grows, as you know, because of our Program Evaluation Reviews, but they have returned 848 claims to us for a rework. This leaves a total of 47 claims awaiting dose reconstruction, and we -- I monitor these 47 claims on an individual basis, along with several of my staff. A number of these 47 claims are awaiting SEC determination -- NUMEC Apollo, NUMEC Parks are

listed in this mix of 47 -- and all of the remaining claims are at some stage of completion, either SEC or a technical issue being resolved with regard to their status. This line graph gives you a sense of trend of how the claims were initially received and how we've worked against those back -- the backlog from the initial receipt. The blue line here -- I'm sorry, I don't have a pointer with me, but the light blue line indicates those cases that were received from the Department of Labor, and you can see the huge number of claims we received in the early days of the program. The red line indicates those that we have returned to the Department of Labor for decision, and the green line indicates those draft dose reconstruction reports provided to the claimants. And you can see that in the third quarter of 2007 we started building another backlog, essentially, not working off as many claims -- thank you very much -- not working off the claims as quickly as we were receiving them. So right in here, I'm monitoring -- if I can get my -- well -- It bounces all over the place.

Well, you can see where I'm talking here, I hope. That's weird. And so we're watching this very closely. This is a result of I think several dynamics, this late building of a backlog. One dynamic, our inability to utilize all of our budget -- thank you.

Well, that won't work, either. Now I've got two pointers and I'll have to return all those to rightful owners.

At any rate, this backlog is a result of several dynamics, one of which is our inability to utilize all of our appropriated funds during that fiscal year.

Here we come with a third pointer so that I can be very illustrative to the audience, and I think this -- this one looks like it's working. Gotcha. Gotcha. I've got to be careful. I want Ms. Munn to sit down before I wave this one around.

The se-- oh, wow, look at this. Now there's a pointer for you.

Another dynamic has been an extensive frustration with us in the attempts to compete and award a new technical support contract on dose reconstruction. As many of you know, our

ORAU contract and the support they provide to us ended its first five -- ended the five-year award period back in September, September 11th, 2007. And so we've been operating on a contract modification extension process where we give them three or four more weeks, five or six more weeks, and we can't just infuse enough to get the capacity up in that regard. So there's a lot of things going on here.

It's my hope that once we get our -- we now are under -- we are under no continuing resolution process. We can utilize all of our funds, but we now have to face the award of this contract before we can get back up to full speed in our work.

This bar graph shows you, in 1,000 increments, the status of claims across our claim population. The -- and we start over here with the administratively closed in I believe a purple -- if you're not color blind and you can see that. It's generally at the top of this bar. So each purple -- the purple represents those that are administratively closed at this time. The yellow represents those that are an SEC case in that given column. The green --

light green here, lime green, indicates those cases that are pending for some technical reason or some demographic case-related reason that we're going back to DOL to find more information on in order to do our work. The brown or the -- this color, whatever that is, is the active cases that we're dealing with. And then the red are those that are pulled, for whatever reason, and then the blue -- light blue or almost white here is cases that are completed within those 1,000 increments. This chart shows you the number of reworks that NIOSH has received, as well as those that have been returned to the Department of Labor. As you know, our rework numbers increased dramatically at the second quarter of 2007, we started seeing this kind of a trend. That result is from our Program Evaluation Reviews, and primarily the -- the first one, the big one, onset of the highly insoluble plutonium super S issue. And so a number of these are relative to that Program Evaluation Review. Prior to that, typically what we were seeing was, you know, a set of claims that were going back and forth between us and DOL, returned to

us for rework because of some demographic issue, not so much technical issues that we were dealing with. And now we're starting to deal with these technical issues that are exhibited and reported out in our Program Evaluation Reviews. I'll have more on that set of reworks in another slide.

The number of outstanding requests -- as you know, we turn to the Department of Energy and we seek exposure information, bioassay information, monitoring information on these claims for that particular claim's employment at whatever site the Energy employee worked. We have 478 of these right now open, awaiting a response from DOE. We check these every 30 days. At 60 days we start asking hard questions about why is it taking so long, are you going to find anything, when will you find something, and so we follow up on those. We monitor -- after 60 days we've got 188 of those that we're -- we're watching very closely and DOE's response to our requests.

At one point in our program we changed our tactics a little bit. We -- at the start of the program we had tactically decided to expend

our resources and our efforts on those sites that had large numbers of claims, and that left unattended the smaller sites, mainly AWE -- Atomic Weapon Employer -- sites where we had really small numbers of claims. And so in 2005 we started working in that area very strongly and actually added another contractor to help us on that work. That was Battelle. We did that so we could see, you know, how quickly another contractor could get up to speed on doing some of these types of sites. And from that effort was generated two Technical Basis Documents, 6000 and 6001. And because of that, we realized that the variety of work that was done at these Atomic Weapon Employer sites required us to develop what we call appendices to those two Technical Basis Documents that speak to the unique exposures that were attendant to those types of operations at a given site. And so we have identified for TBD-6000 the need to have site-specific appendices for 16 -- or 15 different sites, and we have completed or -- excuse me, 17 of those were needed for TBD-6000. We have completed 15 of those. We have one that is now in review and

we have one that remains in development. For TBD-6001 there are six site-specific appendices and all six have been completed. Again back to Program Evaluation Reports, I probably should move that graphics slide closer to this slide and then I can follow on with the discussion about PERs here. To date we have 32 Program Evaluation Reviews that have been issued. These are on our web site. The affected claims that are represented in these Program Evaluation Reviews total up to 13,896. I caution you again that that's an inflated number because many Program Evaluation Reviews deal with the same claim, and we count each one separately, so that's why we have such a large number here. But we have to -- we have to look at each claim against each Program Evaluation Review. The claims that -- after we have done this review, the claims that we have witnessed to date that have changed and shown an increase to greater than 50 percent in a probability of causation has been 157, and the lymphoma PER is the primary contributor here with I believe 154 of those. The other three I think are sprinkled -- there may be a couple at Bethlehem

Steel PER, but primarily the lymphoma PER has resulted in the -- in the -- a large number of those that have become compensable. 6,700 -- or -- yeah, 6,769 claims have been evaluated and reviewed, and no change has resulted in the probability of causation, and perhaps no change in the dose reconstruction report itself. We have 6,970 claims still in evaluation under these Program Evaluation Reviews, and we're moving through those as quickly as possible. I think Dr. Ziemer mentioned in his letter -- or maybe Dr. Wade mentioned in his summary -- that there have been 28 SEC classes added, and that is true. But as of March 31st there were only 25 for this slide when it was made up. The other three I think are coming to maturity today. Those other three are mature today. The 30 days has passed for Congress to take any action and they took no action, and so this number shou-- is -- if I were to make this slide up today, it would say 28. I think it's important that we speak about the 16 here, 59 percent of those 25 were developed through the 83.13 process. That's where a petitioner has submitted a petition asking us to consider and

evaluate it. Nine of these 25, or 41 percent, have been processed through the 83.14 process, and that's where we have identified a claim that we cannot reconstruct the dose and we work with that particular claimant to file a Form A, and we process it accordingly to this Section of the rule. These 25 SEC classes represent workers across 19 sites. And I believe, if we look at the 28, that -- that would be -- if we're looking at 28 SEC classes, this would be 23 -- 22 sites -- 22 sites. All of this represents 1,565 potential claims, and I don't have the number for the additional three that were added -- completed today.

As I mentioned earlier, we're -- continue to be frustrated in our efforts to award the contract on support for dose reconstruction. It's taken us -- taken our procurement and grants folks a considerable amount of time and effort to process this competitive procurement proc-- award process, and so where we're at right today is -- well, back up. The request for our proposal was published back in May of last year. The proposals were due in June 15th and they were all received then. There was a set

of questions that were answered and the proposals were amended based upon those questions -- based on the response to those questions back in October of last year, and that also is after the conclusion of the current contract period. And so we entered into contract modifications at this point in time to extend the contract so that continuity of service would be provided to the claimants and to the government. So the proposals are still being processed in our procurement review process and they're still being examined there, and we hope that by May 31st, next month, we'll have an award issued.

And I think that concludes my presentation. I'm happy to answer questions if I may.

**DR. ZIEMER:** Thank you very much, Larry. Board members -- see who has first question -- Wanda Munn.

**MS. MUNN:** Larry, back in one of your early slides you indicated that we had approximately the same number of cases already assigned to health physicists for dose reconstruction and just a few more cases not yet assigned. Given the problems we've had with operating under

continuing resolution for so long and our concerns that we always have with respect to overload of the staff at NIOSH, do you feel that -- that you have what you need in the way of staff to address this almost even distribution between assigned and unassigned cases, especially given the problems that arise with the amount of time necessary to review the cases that are coming as a result of the PERs?

**MR. ELLIOTT:** We want to manage this program with excellence. And right now I feel what we're doing is managing the situation with excellence. That is that we don't have a full complement of staff because we can't put enough money on the table for ORAU to bring back everybody to work in a -- in a short amount of time. So really ORAU's operating with a -- not a skeleton staff, but a very scaled-down structure because they can't infuse -- we can't give them enough money and they can't bring everybody back to work like we would like under this contract extension phase. So as soon as that award comes, whoever that contractor is, I hope that we'll be able to regain the capacity that we enjoyed back in 2006. It's been that

long since -- that was our high water mark. We achieved a capacity of production and capacity of support that put out 6,000 dose reconstructions in that year, and handled a number of SEC classes. And we really need to -- in one year's time, with this backlog that we're building and oldest claims that we're still trying to work through, we really need to see, you know, that capacity and more. And so I -- I don't know if I've answered your question as clearly as you would like, but we're managing the situation with excellence, I hope and I believe. We'd like to manage the program with excellence, but we can't do that until we're able to infuse this new -- the contractor with the amount of money that's necessary to do that.

**MS. MUNN:** Is there good news or bad news with respect to the budget line items?

**MR. ELLIOTT:** Well, each year we put forward a budget request, and for -- we know what our budget is for FY08 and we put forward a budget request for FY09 that should attend to this capacity problem that I've spoken about. And so the awarding of this contract and the timing

of that awarding we feel is beneficial. By that I mean it's mid-year. And so -- it's mid-fiscal year, so each time a -- our appropriations comes through in a fiscal year, we can look forward to this -- to the cycle of this contract being every mid-year we'll have two years -- we'll be working on two years' worth of money to infuse into that contract -- if anybody understands what I'm trying to say. It's very complex, but I think we will be able to show you increase in production up to the capacity that we once enjoyed.

**MS. MUNN:** That was essentially my concern. Thank you.

**DR. ZIEMER:** Josie?

**MS. BEACH:** Larry, back on slide 15 you have 16 percent the 83.13 and then you -- you indicated that some of those you determine will become an 83.14. Can you give me an idea of why some of them you recommend to go to 83.14s and why some of them you may use surrogate data for?

**MR. ELLIOTT:** This slide?

**MS. BEACH:** Yes.

**MR. ELLIOTT:** Okay. Sixteen of these were 83.13. That's where a petitioner sends us the

Form B, or a letter that says I want to petition for this class.

**MS. BEACH:** Correct.

**MR. ELLIOTT:** The other instance is where we've identified through our dose reconstruction efforts that we cannot reconstruct a given claim, and so we work with that claimant to become a petitioner. I don't know where the surrogate data comes in here. I --

**MS. BEACH:** Well, maybe I'll get to it later on. In all cases when there's not a dose, do you recommend for 83.14?

**MR. ELLIOTT:** Yes.

**MS. BEACH:** In all cases.

**MR. ELLIOTT:** Where there is an inability to reconstruct the dose --

**MS. BEACH:** Okay, thank you.

**MR. ELLIOTT:** -- we would recommend an 83.14.

**DR. ZIEMER:** Larry, on slide seven, which is those first 5,000 cases, the -- the 848 that are returned from DOL, now what specifically is -- where are they in the various queues? I mean some of those must be awaiting dose reconstruction again. Is that not true?

**MR. ELLIOTT:** There's -- yeah, we'd have to

look at almost every one of those 848 on an individual basis to tell you where they're at. There's a variety of reasons why these claims are brought back to us. These claims, though, would represent -- these 848 have already had a dose reconstruction.

**DR. ZIEMER:** Right, understood, I just --

**MR. ELLIOTT:** Okay, so they're not -- it's not they haven't been treated once. The 47, those are my prime concern 'cause they've not ever had an answer from us.

**DR. ZIEMER:** Those -- those are brand -- or --

**MR. ELLIOTT:** Those are -- those are active cases, without ever having had a dose reconstruction report or been told we can't do one.

**DR. ZIEMER:** Right.

**MR. ELLIOTT:** The 848 could be, as I say, a variety of reasons. One reason would be they're a Program Evaluation Review claim that DOL has returned to us and we have been asked to evaluate it or rework it. And we'll evaluate it and if -- if the claim is not affected by the Program Evaluation Review, we'll return that claim with a letter to DOL

saying this has been evaluated and there's no effect, no change to the dose reconstruction. If we look at it and evaluate it and say oh, we need to rework this, then we will provide a reworked dose reconstruction to the claimant and to DOL.

**DR. ZIEMER:** So ultimately those 848 will sort of subdivide into those other sub-categories eventually.

**MR. ELLIOTT:** Yes.

**DR. ZIEMER:** Okay.

**MR. ELLIOTT:** And some of those may be that our public health advisors have identified something wrong with the demographics of the claim and have talked to DOL and DOL said okay, here, we'll kick it back. So there's a variety of reasons. But I think the main point I want to make here on those 848, they've had -- they've had an answer at one point in time, and now they're being revisited because, for one reason or another, that answer is not satisfactory.

**DR. ZIEMER:** So there's really only 47 out of 5,000, which is --

**MR. ELLIOTT:** There's only 47, and that number

would drop to date --
**DR. ZIEMER:** -- that have never been --
**MR. ELLIOTT:** That number would drop to date 'cause some of those 47 are NUMEC Apollo, which came -- I believe -- Parks, Parks came final today. So --
**MR. RUTHERFORD:** Actually Apollo went final --
**MR. ELLIOTT:** Yeah, that's right.
**DR. ZIEMER:** Okay.
**MR. ELLIOTT:** But there are some here that are -- we're awaiting the designations.
**DR. ZIEMER:** That was Mr. Rutherford who said -- far away from the mike -- that -- that those were NUMEC Apollo cas-- some of those are NUMEC Apollo cases.
**MR. RUTHERFORD:** Actually some of those are NUMEC Parks --
**DR. ZIEMER:** NUMEC Parks cases.
**MR. RUTHERFORD:** -- which we are presenting at this Board meeting, so --
**MR. ELLIOTT:** I have --
**MR. RUTHERFORD:** -- Apollo has already went final.
**MR. ELLIOTT:** I have the full list of 47, and I can speak -- I don't have it here, I didn't

anticipate I'd need it right now; I have it in my room, but I can bring that if you -- if anyone wants to know what's going on with each one of these 47.

**MR. RUTHERFORD:** I will add, though, that some of those claims -- as Larry mentioned earlier, the three that went final just recently will take up some of those claims. That would be Combustion Engineering and Lawrence Livermore. I can't remember what the third one is off-hand, so...

**DR. ZIEMER:** Will be from this group of 47 --

**MR. RUTHERFORD:** Yes.

**DR. ZIEMER:** -- is what you're saying.

**MR. RUTHERFORD:** Yes.

**DR. ZIEMER:** Thank you. Okay. Further questions for Larry?

(No responses)

Apparently not. Again, Larry, thank you very much --

**MR. ELLIOTT:** My pleasure.

**DR. ZIEMER:** -- a very succinct update.

(Pause)

**TEXAS CITY CHEMICALS, INC. SEC PETITION**

Let's see, I now want to check to see if the

Texas City petitioners are on the line. First of all, Christine Ray, are you on the line this morning?

(No responses)

How about Dan McKeel?

**DR. MCKEEL:** Yes, I am on the line.

**DR. ZIEMER:** Good morning, Dan. Dan, do you know if Christine is going to be on the line with us?

**DR. MCKEEL:** I know that a bunch of people, including Christine, were supposed to be and so I definitely expect she was going to be there and I think she thought this was going to start at -- well, she should be there now.

**DR. ZIEMER:** Well, we're -- we're just a few minutes early, but we're going to take a moment here and call her and see if she's ready to go. We'll wait just --

**DR. MCKEEL:** We sort of agreed that my presentation would be first, so -- but I do think --

**DR. ZIEMER:** Well, in fairness, I do want her to be able to hear the other presentations, so we'll wait just a moment.

**DR. BRANCHE:** Yeah, when he was talking, the

buzz was on his end?
Okay. Dr. McKeel, could you please say something more as a test?
(No responses)
Dr. McKeel, can you hear me?
**DR. MCKEEL:** Yes, I can.
**DR. BRANCHE:** Okay. There's a bit of a buzz on your end. Is -- Mr. Presley, could you please say something into -- into your phone?
**UNIDENTIFIED:** (Unintelligible)
**DR. BRANCHE:** Yeah, now there's a buzz.
**MR. PRESLEY:** I didn't hear you.
**DR. ZIEMER:** Okay. Are either of you speaking by speaker phone?
**DR. MCKEEL:** No, I've got my -- I'm just using my hand phone.
**MR. PRESLEY:** I've got a hand set.
**DR. BRANCHE:** Okay. Is there anything else I should ask them to do?
Okay, I would just -- I would just caution you all to -- Dr. McKeel, thank you for submitting to my little test there. Dr. McKeel, when you speak -- and I'll ask Dr. Ziemer to say this when each person is given -- when each of the petitioners is given an opportunity to speak,

if you could please speak slowly, because apparently when you do speak, there's a bit of a buzz in the line.

**DR. MCKEEL:** I shall; is this better?

**DR. BRANCHE:** No, actually that's a little worse.

**DR. MCKEEL:** Okay, that's a little closer to the --

**DR. BRANCHE:** Oh, actually that's better, whatever you just started saying was much clearer, and I don't know what you did, but --

**DR. MCKEEL:** I backed away from the hand set.

**DR. BRANCHE:** That's beautiful. Okay. Thank you, we'll get started in just a moment.

**DR. MCKEEL:** Thank you.

**DR. BRANCHE:** If you could please re-mute your line.

**DR. MCKEEL:** Thank you.

**UNIDENTIFIED:** Dr. McKeel, this is the (unintelligible) in Texas City, Texas.

**DR. ZIEMER:** Oh, good, thank you. We were -- is Christine Ray there with you?

**UNIDENTIFIED:** Yes, Christine Ray is with us. We wanted to let you know we’re on line.

**DR. ZIEMER:** Okay, we're ready to proceed then

with the discussion of the Texas City Chemicals petition, and first of all we're going to have a presentation by NIOSH from Dr. James Neton, then we'll have the opportunity to hear from those who wish to speak on behalf of the Texas City petition. So here's Dr. Neton. And while you are listening, please mute your phone until you're ready to speak. Thank you.

**DR. NETON:** Good morning. As our usual practice, I'm here to present a summary of our evaluation report for the Texas City Chemicals petition that we received. I believe the report was completed at the end of January, and shortly thereafter was sent to members of the Advisory Board and the petitioners. It's also been posted on our web site for some time now. What makes Texas City Chemicals an AWE is listed here. They were engaged in phosphate fertilizer, plant production, which is somewhat different than the Blockson Chemical situation that we've talked about. Blockson Chemical was an existing phosphate fertilizer pla-- phosphate plant and the AEC opted to recover the uranium from the -- essentially their byproduct. In this situation the AEC actually

was engaged in a letter contract for Texas City to construct a fertilizer plant, which they could take advantage of the byproduct material and pull off the uranium concentrate from the phosphoric acid, so it's a little different than the Blockson Chemical situation.

In addition to the phosphate fertilizer plant and the capture of the byproduct material, there was also a letter contract that we found that indicated that the chemical extraction research was also conducted at Texas City, and that primarily involved looking at ways to have a cheap recovery process for some of the ore material that -- the leach -- the leach zone matrix, as they called it, to try to extract -- get a better efficiency for extraction of some of the byproducts of the original chemical -- the processing of the ores from the mines.

The covered period listed here is from 1952 through 1956. There also was a residual period for this site that goes from 1957 through '77.

The petition was qualified on August 17th of 2007, based on the information provided by the petitioners, and those are listed in the two bullets provided here. That is that radiation

monitoring records of the members of the class may have been lost, falsified or destroyed; or that information regarding monitoring records for Texas City Chemical workers is unavailable. NIOSH certainly concurred with that, that we have absolutely no monitoring records as far as personal dosimetry or bioassay samples from any workers at this facility.

The proposed class by the petitioners was all employees who worked in all areas at Texas City Chemicals from January 1st, '52 through the end of -- through December 31st, 1956. The NIOSH evaluated class was slightly different from that in the sense that we replaced "all" with the word "any," to indicate that a person would not have had to work in all areas of the plant in order to qualify for the class -- just a subtle switch in words there.

Okay. As usual we list the available information that we have to do dose reconstructions here. First I might add where did we look for monitoring data. We searched a number of places. Amoco Corporation took over the operation of the plant at one point so we went to Amoco looking for records. We found

none there. We also did some inquiries to various Texas -- State of Texas regulatory bodies, found nothing of use from those searches. Also looked for US EPA records, struck out there. And also did a Federal Records Center search in the Fort Worth-Dallas -- Fort Worth, Texas area and found no monitoring data there as well.

In addition, though, we did have information in the site research database related to contract information, as I mentioned. These typically were letter contracts that discussed the contract between Texas City Chemicals and the AEC that started in February of 1952 to construct this phosphate fertilizer plant. We had source term and production data. The source term at this site is natural-occurring radioactive materials; that is mined phosphate ore, in addition to the uranium that would have been recovered as part of the process. And we also had various AEC documents and memos to work with.

In addition to that, we had some information from the petitioners. We conducted interviews with two former workers at the facility, and we

held outreach meetings in Texas City on October 18th, 2007 and November 15th, 2007.

In addition to that we had numerous information on studies of the phosphate industry. The phosphate industry has been a fairly well-studied industry over time. Bodies such as the Florida Institute of Phosphate Research have done some extensive work in this area. The US EPA early on was involved in characterizing the radiation hazards associated with work in this industry as well, and we had access to those reports and we did use them in our evaluations.

We also relied on some Technical Information Bulletins that we had, most notably Technical Information Bulletin Number 43 that has to do with how we reconstruct doses from radium and progeny from phosphate operations. That TIB relied heavily on the US EPA data. And TIB 24 was used here, which has to do with neutron dose reconstructions, and TIB 6 which has to do with reconstructions of X-rays from medical -- medical expos-- medical chest X-rays.

In addition to that -- we had no site profile, I should say at the outset, for Texas City Chemicals. However, much of the process was

similar to that that was taken -- carried out at Blockson Chemical. So to the extent applicable, we used -- relied on the Blockson Chemical site profile to perform some of the analyses for Texas City. I would point out we are aware that there are differences in these processes in terms of the volume -- Blockson did much more volume of processing than Texas City. In addition there was a difference in the way the phosphate -- the uranium was actually recovered. The Texas City process was involved in a solvent extraction using organic solvent, as opposed to the precipitation process for -- chemical precipitation process that was used at Blockson Chemical.

Okay, a little bit more about the AEC operations that occurred at Texas City Chemicals. As I mentioned, they were contracted with the AEC in February of '52 to construct a fertilizer plant. Plant construction started and was completed during 1952. In our -- in the evaluation report, we believe that there was no indication of any radiological exposure that occurred during the construction phase. That is for the entire

year of 1952. In fact, the evaluation report speaks of three different periods. That is the construction phase, which is 1952; the start -- the pre-operational phase, which began in early -- began the beginning of 1953 and continued through October; and then the operations phase, which was after October of 1953.

As it says here, the construction was completed and the start-up operations occurred in October of '53, which is they started to make uranium product at that point. They produced a total of about 300 to 400 pounds of uranium during these shake-down operations, and in fact that is the sum total of uranium that we could identify ever having been produced at this facility. In fact, there's some reason to believe, as I'll talk later -- as I'll discuss later, that all of this product was produced between October of 1953 and December of 1953 -- essentially, over a three-month period.

Blockson Chemical (sic) filed for bankruptcy in July of 1956.

**DR. ZIEMER:** Texas City filed --

**DR. NETON:** I'm sorry, Texas City --

**DR. ZIEMER:** -- not Blockson.

**DR. NETON:** -- I'm slipping again, sorry. Thank you.

The evaluation report was issued on January 29th, 2008, and we believe, I will -- as I will discuss, can provide a bounding estimate of internal and external exposures for this particular operation. It assumes that the worker exposures from uranium recovery are at the operational levels from plant start-up to the end of the AEC period. That is, the plant started making uranium in October of 1953. Our evaluation report assumes that it was at a constant level of uranium production from that date through the end of 1956. So it certainly, in our opinion, is bounding, given that we do believe and have information now that there was really only a three-month production period for uranium.

This is a cartoon I think you've seen before for the Blockson facility, but it shows the different -- the way in which the uranium was manufactured from this process. You see the phosphate rock here on the left-hand side that came into the facility. That -- that part of the process would involve exposure to natural-

occurring radioactive material. That is, the mined phosphate rock contained uranium in it. I think it's .014 percent is a best-estimate of the content of the uranium, so fairly low levels of uranium. The uranium, though, is in equilibrium, or considered to be in equilibrium, with all of its progeny. There's also thorium-232 present that is there at a level of about 1-30th that of the uranium, and that is also in equilibrium. So in the plant where the uranium wasn't being recovered, that would be the exposure source term. As you move over to the bottom right of this slide, the uranium extraction, they developed the uranium recovery facility. And in that facility one would be exposed to the uranium product itself, and we've made some assumptions -- very much like we did at Blockson Chemical -- as to what progeny followed through the uranium in the process. In fact, we assume the thorium and many of the progeny follow the uranium through and the worker would be exposed in the extraction process to both uranium and the progeny. As you see in the top arrow going off to the upper right, when you dissolve these

phosphate rock in sulfuric acid, you create this phosphogypsum which the radium-226 primarily is considered to follow.

Okay, let's talk a little bit about how we can reconstruct the external dose at this facility. As I mentioned, we would have external dose from exposure to unprocessed phosphate ore. That's a natural-occurring radioactive material. We assume that that started in 1953 when they started -- in the beginning of '53 when they started to bring in the product. That was reconstructed using this TIB 43, which is "Characterization of Occupational Exposure to Radium and Radon During Recovery of Uranium from Phosphate Materials." That relies heavily on an EPA survey that was done of the phosphate industry, and I believe the external doses during this operation are somewhere in the vicinity of 70 millirem per year -- not a real high dose rate operation.

The external dose from recovery of the uranium is somewhat different in the sense that now you have uranium that has been concentrated into a drum, and it has its own constituent photons and bremsstrahlung associated with it. And

that was modeled exactly analogous to that at Bethlehem Steel. We did a Monte Carlo calculation using the MCMP code to estimate the dose rate coming off of a drum of uranium, and there are some assumptions in there about the workers' stay time and that sort of thing. The internal dose reconstruction is a little bit more complicated. It's broken also into several periods. One was the internal dose prior to start-up, and that is the phosphate ore process, before they concentrate any materials. The intakes prior to start-up were assumed to have occurred from the rock in all -- through all of 1953. And the intakes were bounded using measurements of dust loading in a -- in another phosphate plant. I believe that was a facility the EPA had followed in Idaho, and that was -- I think it was about 5.3 milligrams per cubic meter dust loading. We used the highest reported dust concentration in the facility, excluding the calcining operation at that Idaho facility because through our interviews with workers at Texas City we determined that calcining -- the ore was not calcined at Texas City. We assumed a certain

content of uranium in the phosphate rock. I mentioned I think that was .014 percent uranium by weight. And the thorium and progeny were added as a function of uranium intake. That is, they were all scaled to the amount of uranium that was there.

Okay. Post-start-up, the dose becomes a little higher. Intakes of uranium concentrates were assumed, as I mentioned before, to have occurred from October '53 through the end of production. They're based on reports of the alpha activity measured at AEC plants in the 1950s. Health and Safety Laboratory, HASL, actually did surveys of about -- I think 60 different facilities, collecting 20,000 different air samples to evaluate the characteristics of uranium plants during the '50s. And we chose to use the highest daily average dust concentration in those plants, which happened to involve the dumping and handling of the uranium concentrate. That's very similar to -- at Blockson in the sense that we recognize that the highest concentration would be when you're drumming uranium, you're dumping it out of pans into a -

- into a drum. We did not use the uranium values for Blockson, though, because that was specific for Blockson, the uranium urinalysis for the Blockson process, for the ventilation and that sort of thing, so we ended up using this default value -- or this high value from the HASL studies to put an upper bound on the inhalation of uranium. And it is higher than the Blockson values. As I mentioned, I think it's 190 dpm per cubic meter of uranium. And again, thorium and progeny were added as a function of the -- for uranium intake. They were all scaled to an assumed concentration levels.

A little bit about radon. Radon of course is one of the progeny that is a -- is a noble gas. It has no sink so it would certainly be present in the plant environment. The radon exposures were also based on estimates from similar phosphate plants, and this is what we used in the Blockson Chemical evaluation. We used the 95th percentile of the values that the EPA had characterized in these phosphate plants. It comes out to somewhere I think in the vicinity of a little over .1 working level months per

year. If you equate that to uranium concentration, it's somewhere in the one to two picocurie per liter range, not a tremendously high concentration, but we did pick the 95th percentile for this reconstruction.

Okay. We did receive some additional information after this -- literally within a day or two after this evaluation report was issued, I think, and those documents are out there now on the O drive that details -- the Department of Energy sent these, provided these to us, and they detail production problems at Texas City Chemicals. Also talk about the res- - a little bit more about the research activities that were done there, and there's more complete uranium production data. As I mentioned before, the complete uranium production data actually does pretty convincingly demonstrate that the uranium production really only occurred from October, 1953 through December, 1953, over a three-month period. So what we have here is a -- is a -- what we believe is a fairly large bounding overestimate for the production operation.

A little bit more about what was in those EPA -

- or those DOE-provided documents. They did document, as we did know, that the Texas City produced two main products. It was animal feed and fertilizer. The fertilizer plant was done under the AEC contract. The animal feed operation was running concurrently. And it turns out that the reason the production quantities were so low at Texas City was that the fertilizer production plant had a difficult time getting going. In fact, it almost didn't run at all, and that's why the uranium productions were so low. There was not enough fertilizer byproduct material coming through the process to be able to extract the uranium. As it says here, the fertilizer production equipment failed. This sort of -- this is well-documented in these letters that we've received from the DOE. So during the AEC period, the production consisted primarily of the animal feed only.

A little bit more about the research activities that was conducted. As I mentioned before, they were a contract -- Texas City was contracted to perform research into new methods or cheap methods to recovery of phosphorus

oxide, alumina and uranium from Florida leached zone ores. I mean this was -- this was try to optimize a process and collect some uranium from byproduct materials that heretofore had not been used. It was a fairly low level of involvement, though. They document that they received an ore sample from Tennessee Valley -- TVA, Tennessee Valley Authority, and I want to say it was -- it was a fairly small quantity, I forget how many pounds now, but it was on the order of tens of pounds, and they did receive one drum of phosphate ore. And that contract expired on September 30th, 1955.

A little bit about the status of claims within our system. There are 12 claims that meet the class definition that we have in our database, and three of those have completed dose reconstructions at this point. And none of these claims were -- these claims were evaluated and no monitoring information was identified in any of these claims.

Okay, you've seen this slide before, but the evaluation process involves a two-part process. One is we have to decide if it's feasible to estimate radiation with sufficient accuracy.

And if not, then is there a reasonable likelihood that health was endangered. The bottom line of our analysis was that we have sufficient process and source term information to bound these doses with sufficient accuracy -- I would say plausibly bound these doses with sufficient accuracy for workers during the time period petitioned.

And this is a summary slide of what we believe we can reconstruct. You see in the dose reconstruction feasible, we believe that we can reconstruct the internal dose from uranium and its progeny, from radon, from thorium and progeny, and all the external exposures including the beta/gamma and occupational medical X-rays. So our recommendation here is that we -- we can do this dose reconstruction, and the class should be not added to the SEC.

**DR. ZIEMER:** Thank you, Dr. Neton. Board members, do you have any questions at this point for Dr. Neton? Gen Roessler.

**DR. ROESSLER:** I think you answered the question, I just want to make sure. You indicated you found no monitoring records, and I think the workers also recall that there was

no monitoring?

**DR. NETON:** Yes.

**DR. ROESSLER:** There was no monitoring according to --

**DR. NETON:** I don't recall any worker telling us that they had monitoring data, right. Part of the issue -- it may be, though, that this is -- the production was so small over a limited period of time, that may explain why there was limited monitoring data. Again, we pretty much have demonstrated, I think, that -- or determined that it was, over a three-month period, about 300 pounds. Which is less than a half a drum of uranium, a half a barrel of uranium.

**DR. ZIEMER:** Okay, other questions from Board members?

**MR. CLAWSON:** I've -- I've got one.

**DR. ZIEMER:** Yes, Brad Clawson.

**MR. CLAWSON:** I'm -- I'm just sitting here -- we have no site profile, we're using Idaho chemical processing for the dust loading, the highest dust loading we can find -- I'm sorry, but I really have a hard time understanding how you can really do it. I know that these

processes are similar, but these facilities and so forth are not the same, and I just -- you know, when you come down to the feasibility and accuracy, it's -- it's hard for me to get my hands around how we can really say that -- within a sufficient accuracy that we can do that.

**DR. NETON:** Right. I think that gets to what the definition of sufficient accuracy is, and that is can NIOSH put a plausible upper bound on the exposures of these workers. And we believe, using these very similar processes and taking the -- well, we've done the 95th percentile of the highest exposures in similar operations and applied them. That is a plausible upper bound to the exposure of the worker.

**DR. ZIEMER:** Any other questions?

(No responses)

Okay, let's hear from the petitioners. Dan McKeel -- Dr. McKeel, did you say you were going first?

**DR. MCKEEL:** Yes, if that’s all right.

**DR. ZIEMER:** Yeah, now back away a little bit. We're getting the echo again.

**DR. MCKEEL:** All right.

**DR. ZIEMER:** That's good.

**DR. MCKEEL:** I backed away. Is that a little bit better?

**DR. ZIEMER:** That's a little better. Go ahead.

**DR. MCKEEL:** All right. I appreciate the chance to represent the petitioner's side of the Texas City SEC 00088. What I'm going to cover this morning concerns a long-term goal which is the hope that the Board will decide to avert NIOSH's recommendation to approve this SEC. And the short-term goal, Kathy Gillery (ph) of Congressman Langston's office in a (unintelligible) says, "Petition the Board prior to this meeting to please postpone their vote until the June meeting so we can gather together the necessary technical documents that we feel we need. Also I would ask that the Board task SC&A to review the NIOSH SEC evaluation report that the petitioners believe is scientifically (unintelligible) and seems to preclude (unintelligible) accurately bounded and reconstructed, using claimant-favorable assumptions. We believe we need expert help on that." So my remarks this morning will answer

prior (unintelligible).

The first one, the long term claim that NIOSH (unintelligible) reconstruct doses accurately and effectively (unintelligible). We would like to dispute those claims (unintelligible) as follows: (Unintelligible) is two of 14 cases that NIOSH (unintelligible) has completed dose reconstruction. This is direct evidence that NIOSH staff (unintelligible) claims impossible under the SEC. I heard Jim Neton just say that NIOSH believes they (unintelligible) include dose reconstructions (unintelligible) the DOL statistics from (unintelligible). I spoke with (unintelligible) at NIOSH again citing DOL statistics are not (unintelligible). (Unintelligible) is taking so long to post results (unintelligible) all of the dose reconstructions met denial. Point B under (unintelligible) long-term goal is that the NIOSH evaluation report and that NIOSH (unintelligible) March 13th. Mr. Tomes suggested that NIOSH, quote, use very little of uranium production processes at TCC. I believe that only two workers (unintelligible) inside

the recovering building during the production years, 1952 to '56, are alive today and neither of them are able to (unintelligible) for the November 15th meeting. Point C, there's no adequate coworker (unintelligible) monitoring data (unintelligible) totally missing SEC count for monitoring data for air, for ambient radioactivity, radioactivity in the soil or internal or external worker dosimetry, including film badge dosimetry and bioassay data. (Unintelligible) the Blockson chemical uranium intake data (unintelligible) inhalation ingestion rate is not feasible to use in TCC intake data without Blockson (unintelligible). And Dr. Neton just echoed that the Blockson data, bioassay data in urine was not used in these calculations.

Data used for intake, according to Mr. Tomes, was from quote (unintelligible) the handled uranium. And we assumed (unintelligible) the same level, end quote. This was in a pre-Board conference and I think that's a very loose definition of what was actually used.

The (unintelligible) model used a highly

problematical model. The intake parameters at TCC were not inclined at all except the atmosphere was (unintelligible). This is from worker testimony. (Unintelligible). (Unintelligible) production years residual period (unintelligible) for other surfaces. (Unintelligible) TCC.

(Unintelligible) we're asking the Board to give us time until the June meeting to (unintelligible) necessary technical documents. And I've listed (unintelligible) I just heard Dr. Neton a few minutes ago. The technical documents we're seeking include the following: We have two FOIA requests that are pending. One is to FOIA (unintelligible) 0420. That was submitted 12-14-07 for three AWE documents -- research database and that (unintelligible) concerning TCC -- concerning (unintelligible) on March the 14th this year reported the following documents were withheld from among those three. One was certain portions of confidential commercial/financial information (unintelligible) pre-decisional document not further identified and (unintelligible) other information was deleted. Priority number one

is the exact document (unintelligible) financial information were not identified. However, we believe the omission was from two of the four letter contracts between TCC and the AEC and specifically (unintelligible) they were missing from AEC (unintelligible) 49-1(^16), document E15005(unintelligible)9-1 (unintelligible) document E14994. But only five of 21 pages were transmitted to us.

In the FOIA (unintelligible) they were letter contracts, 18-49-6-9 and AC-05-1 (unintelligible) which were not supplied to us at all. (Unintelligible) the 41 letter contracts as quote, nature and time unknown. And I think that the work that the lack of (unintelligible) even by DOE of the AEC operations at TCC. This was a critical (unintelligible) of importance (unintelligible) radiation exposure to TCC. It was the major reason for FOIA (unintelligible) request of the Board (unintelligible) TCC (unintelligible) meeting in St. Louis.

It is difficult for me to imagine that any time (unintelligible) or financial information for the 1950s at TCC

(unintelligible) activities of the (unintelligible) in 2008. I remember (unintelligible) they refer to the fact that the (unintelligible) sign-in sheets from the October 18, 2007 and November 15, 2007 TCC (unintelligible) town hall meetings were provided. The (unintelligible) they did in fact contain 115 full names of attendees with certain organizations identified, with (unintelligible) organizations deleted, in addition to (completely inaudible portion).

...from any of the (unintelligible) that we are involved here. (Unintelligible) do represent those considerable number of people in the area (unintelligible) for this particular SEC. When you fund four of the 084204 (unintelligible) illuminating statement (unintelligible) deciding the openings of the joint TCC/AEC facility: quote, TCC was incorporated in the state of Texas, October 17th, 1950. It was organized primarily for the purpose of producing an animal feeding supplement and (unintelligible) fertilizer with (unintelligible) uranium. Now the second FOIA we are appealing is 08-0057; that was submitted

on February 8th of this year and was cited to on 3/14/08 and that was (unintelligible) references in the NIOSH evaluation of SEC-88. We were very surprised by the major discrepancies between 57 references, cited in NIOSH's evaluation report and the fact that we were told by OCAS that they only possess two Texas City Chemical documents in addition to the two worker meeting interviews that were being redacted at the time. We were given only the (unintelligible) of those three documents, which were uninformative as far as the nature of the documents and were told we had to get them through the (unintelligible) process, which we did. (Unintelligible) experience justified the problems being discounted (unintelligible) relevant documents related to this Texas City SEC.

The requested documents also include a question-and-answer session from October the 2nd, 2007. Among the TCC workers is Chris (unintelligible), an ORAU employed co-author of the NIOSH SEC-88 evaluation report team. Unlike what Dr. Neton just said, the important factors would be over not workers in the

recovery building, but (unintelligible) film badges. However, no press conference interview data has provide to this time. It is not clear what sources, such as ideally HASL or Landauer records were searched to capture some of this TCC film badge dosimetry data, and I want to acknowledge that that region, being several sources that were served, I don't believe you mentioned that Landauer was (unintelligible). From the documents we are looking for and attempting to receive the uranium recovery building and (unintelligible) permit. This will define in absolute terms the end of the uranium residual contamination period. DOE and NIOSH are not able thus far to clearly establish (unintelligible) through their records for using TCC worker testimony at the October 12, 2007, NIOSH outreach session or at the November 15th, 2007 NIOSH town hall meeting. The testimony at both meetings showed the recovery building was still standing in 1976 or 1977. Galveston County Commissioner (unintelligible) is perhaps on the line, is assisting us with (unintelligible) for the record. Area photos of the site will be

submitted. The time the recovery building was still standing was late as 1975.

DOE document number 16646, on page 6, that we received under FOIA 0800420, states the following, and I quote: No information was available as to the exact amount of U-308 for the -- nor to the radiological conditions of the facility at its termination of the project by the contractor or the successor company, end quote. This is in spite of the fact that Oak Ridge Operation and Oak Ridge National Lab did a radioisotope survey in 1977 and found high radium-226 levels in some soil at the site. The site is (unintelligible) by DOE for further consideration as the FUSRAP remediation site nevertheless. And later on page 6 you'll find for the recovery building this excerpt, and I quote: The recovery building 10 was approximately 19 by 36 yards, and I refer to figure two, with the building used for uranium extraction was demolished -- and this is important in parentheses -- year unknown, end quote, and established. The location of building (unintelligible) was unknown. No information was available as to entry or use of

the (unintelligible), except the storage and (unintelligible) resulting from phosphate (unintelligible) processing, which occurred at demolition of the building. So what that says is that so far now when they made their radiological survey, was not really aware where the (unintelligible) piles were or where the uranium waste may have been on site, so their survey of the site may not represent the highest radioactivity level.

I am (unintelligible) that we are seeking uranium waste disposal permit. Workers testified in last October and November that TCC waste including the (unintelligible) was disposed of offsite eventually. (Unintelligible) super fund site in Harris County, Texas. Descriptions of the waste deposited at TCC (unintelligible). Radioactive waste is not attributed to TCC Chemical in document (unintelligible). Not knowing exactly how TCC rad wastes were handled, inserts another element of uncertainty in the DR equation that we believe needs to be explored in greater detail.

Another very important set of documents

that we are seeking includes the lawsuit between Gordon versus Amoco, and Gordon and Amoco were successive owners of the Texas City project. We believe these court records that may extend over a long period from 1978 to 1990 may contain quantitative data on uranium concentrations in the TCC waste stream (unintelligible) because the two copies argue who should pay for cleanup, and as far as we know this never has taken place but we think the contamination that was onsite. Congressman Lance's (ph) office has contacted the attorneys in this case; trying to assist us get these vital documents.

We are also looking for more documents from the (unintelligible) super fund site from the radiation period to see if by any chance TCC radioactive wastes were active out there. NEIC Board (unintelligible) on March 13th. Tom Tomes issued a new nationally (unintelligible) document that OCAS obtained. This was a 1965-year government memo dated 3/17/1955, and apparently involves an impending visit to Texas City Chemical on June 12th and 13th of 1955. We would like to have time to get that document

and to review it.

And as of a few minutes ago, we learned from Dr. Neton that DOE has provided OCAS documents that have been placed on the O drive that have to do with some new aspects of operations and research done at TCC. We have not only not known about these documents, but we don't have them and I think in all fairness we should be given the time to get them and review them.

Now one of our short-term goals that we are asking the Board to do is to task SC&A to review the NIOSH SEC evaluation report. (Unintelligible) report of the February 20, 2008, (unintelligible) control, please consider tasking SC&A with the (unintelligible) review of (unintelligible) NIOSH evaluation report of SEC 00088. The petitioners believe the assumptions underlying the external and internal doses may not be appropriate for Texas City Chemical. The reasoning is very complex, and experts used by SC&A is needed to adequately assess the findings underlying NIOSH's claim they can now reconstruct TCC doses accurately. The petitioners ask again

why only two or possibly three dose reconstructions have been performed and completed, representing 14.2 percent of the Texas City cases that NIOSH (unintelligible) dose reconstruction.

(Unintelligible) data, even by DOE following a radioactive survey by ORNL and Oak Ridge Operations in 1977. The effects (unintelligible) possible (unintelligible) site occurred long after uranium extraction ceased, and the site was then acquired by American Oil, B.F. Douglas, Gordon and Amoco. All TCC Chemical records except two of the four AEC letter contracts have apparently vanished (unintelligible).

The Board's (unintelligible) in February 20th, was premature and to report the NIOSH evaluation report (unintelligible) posted since January 8 (unintelligible) months early. Congressman Nick Branson and Dr. McKeel, writing for the co-petitioners, sent a formal request to the Advisory Board to task SC&A to do a targeted review of the NIOSH evaluation report and to postpone voting on Texas City Chemical SEC I88 Petition until SC&A reviews

could be completed. Postponing the votes until the June meeting would also allow the co-petitioners to obtain and review the documents we are seeking at this time.

In Item 2A, including the following FOIA EO: From the specific portions of the NIOSH evaluation, we believe needs to be examined by SC&A include: the model used for intake, due to the lack of photons and data, and (unintelligible) comparable data or coworker data for the intake. (Unintelligible) this model (unintelligible) to accommodate (unintelligible) for the uranium concentrations (unintelligible) period for example (unintelligible) NIOSH (unintelligible) uranium external doses at TCC at this point acceptable given total access (unintelligible) dosimetry data for the site.

For the petitioner (unintelligible) of the Board is the SEC (unintelligible) sample (unintelligible) records have been lost (unintelligible). There is no coworker data or (unintelligible) data. (Unintelligible) in performing accurate DRs and assigning possible data doses are therefore much higher than even

in most other unmonitored (unintelligible). We're asking the Board to please allow us more time until the June meeting to locate additional records we believe (unintelligible) of uncertainty. Records retrieval has been very slow, especially in getting the two NIOSH documents (unintelligible). Still the documents (unintelligible) intervention by Congressman Lance. With all that we still need to try to appeal to get all of the (unintelligible). And now today we learn that there are other documents that we've not seen at all.

I want to thank the Board for its attention today and for consideration of SEC Petition 88, Texas City Chemical, which is located outside of Houston, Texas. (Unintelligible). Thank you very much.

**DR. ZIEMER:** Thank you very much, Dr. McKeel. We'll also now have an opportunity to hear from any of the other petitioners. Christine Ray, are you on the line? Do you wish to speak?

**MS. RAY:** I'm here.

**DR. ZIEMER:** Do you have any comments, Ms. Ray?

**MS. RAY:** The only comment I have is I

(unintelligible) what because you don't have (unintelligible) information (unintelligible) to get the information to y'all. I would appreciate (unintelligible). Also I (unintelligible) the SEC and (unintelligible).

**DR. ZIEMER:** Okay, thank you. Are there other individuals listening today that have additional comments?

**MR. LOCKHART*:** Yes, my name is Joe Lockhart. I went to work at Texas City Chemical, January 1957. Phosphorus rock was shipped in there to the plant from Florida at that time when I was employed. They continued being shipped in there and went through (unintelligible) which ground into powder then made into phosphoric acid. Phosphoric acid was made until the plant shut down in 1977. I was in maintenance. I went there as a maintenance apprentice 1957 and I worked in the recovery building. I worked in the recovery building, which had security at the door. I (unintelligible) maintenance operations in there working off (unintelligible) and whatever. And whatever was being made in there was being made at the time I went to work there. After it shut down,

the recovery building stayed there without anything being made in there and (unintelligible) was in there. Later on in the years (unintelligible) went in there and removed all the (unintelligible), gear boxes and whatever could be salvaged and used in the rest of the plant. The recovery building stayed there until I left in November of 1977. The building was still there. It was used for storage -- to store (unintelligible) and whatever we had to store in out of the weather in this building. I don't know what -- who tore the building down. I was the last paid (unintelligible) employee to leave the plant. After that, I don't know anything about it. But all this stuff was being made when I went to work there in 1957.

And maybe someone else has anything to say. Do you have any questions? I can answer. I was maintenance superintendent when the plant shut down. Employees went in and out of that building continuously all the years that I was there.

**DR. ZIEMER:** Okay, so --

**MR. LOCKHART*:** That's all I have to say now.

**DR. ZIEMER:** Thank you very much. Were there others there that have additional comments?

**MR. WILSON:** Yes, I'm Roy Wilson from the Texas City group. We made some discovery that a company called SuTech* went in there in 1977 to 1978 on a clean-up operation at the Texas City factory, and they were -- they were -- they brought a (unintelligible) counter out there and -- and after they brought it to the site and the (unintelligible) cleaning of this -- this (unintelligible) facility, they had to wear special radioactive clothing to continue their work, and they did do some -- some monitoring out there. The company's name was (unintelligible), and -- and located here in Texas City area. We had testimony from one of these employees that worked on that cleanup operation and (unintelligible) details that two -- two workers had worked in his group for about five years or later came up with leukemia after the cleanup operations was complete there.

**DR. ZIEMER:** Okay. Thank you very much. Any further comments from petitioners?

**MR. LOCKHART*:** I forgot to add also -- my name

is Joe Lockhart, back again. While I worked there I had cancer while I worked there. My wife had lung cancer also and lost a lung. My son had liver cancer. Three people out of one family got cancer while I worked there. I have nothing else to say about it.

**DR. ZIEMER:** Okay. Thank you.

**MR. WILLIAMS:** My name is -- my name is Henry Williams.

**DR. ZIEMER:** Yes, Henry.

**MR. WILLIAMS:** I started to work (unintelligible) in '56 and (unintelligible) went there we was (unintelligible) labor, that's what (unintelligible) was. And we was in places that we shouldn't have been 'cause we had no one to stop us. We didn't know. We didn't know what was going on 'cause if we had known, we'd lose our job, so we -- number -- numerous (unintelligible) and (unintelligible) talking. Okay? But I just want to let you know we had to take what was given to us in the line of work. There was work there, and the work we was doing, we had to go in each room and clean up, and we didn't have no type of gear to put on, and that's why I'm like I am

today. There's numerous others and (unintelligible) is here and they have watched their (unintelligible) and it (unintelligible) all over and there's nothing that could be did because this has been going on a long time, and I think (unintelligible) it's time to bring this to a close and try to get this straightened out because -- that's -- that's all I'm going to say.

**DR. ZIEMER:** Thank you, Henry. Any --

**DR. MCKEEL:** Dr. Ziemer?

**DR. ZIEMER:** Yes.

**DR. MCKEEL:** I have one comment, and that is that --

**DR. ZIEMER:** This is Dr. McKeel, I believe.

**DR. MCKEEL:** This is Dr. McKeel, I'm sorry.

**DR. ZIEMER:** That's all right.

**DR. MCKEEL:** I'm sorry. But the -- Roy Wilson mentioned the (unintelligible) report in --

**DR. ZIEMER:** Yes.

**DR. MCKEEL:** -- 1977/'78. That's another document that I omitted mentioning, but we definitely need that cleanup report and I would think that NIOSH and the Board would also want to see that cleanup report because it may have

information about radioactivity, possibly (unintelligible), and in particular it may document what happened to the recovery building, exactly when, and therefore define a better end point for the residual contamination period. So I'd just like to put that into the equation for documents that we need to preview and look at (unintelligible) the Board (unintelligible).

**DR. ZIEMER:** Thank you very much. Board members, any questions or comments, either to the petitioners or to Dr. Neton?

Were there any other folks with the petitioners that had comments?

**MR. WILSON:** Yes, this is Roy Wilson again.

**DR. ZIEMER:** Roy.

**MR. WILSON:** Texas City group. I would like to further add, as Dr. McKeel has stated, we were being compared with the Idaho group and Blockson, and Blockson.

**DR. ZIEMER:** Yes.

**MR. WILSON:** Those -- those comparisons were made and we understand the -- the Blockson group and the Idaho group, they are -- they are able to use those sites as we speak. Is that

not correct? Is this correct? The Blockson facility is still being used today?

**MS. MUNN:** No.

**DR. ZIEMER:** I'm looking here to see -- I -- apparently not.

**MR. WILSON:** Oh, okay.

**DR. ZIEMER:** At least not for that purpose.

**MR. WILSON:** We want to make -- we wanted to make it known that the Texas City site has -- has been declared unusable since the closing of the (unintelligible) plant. That is a highly contaminated place there. And Dr. McKeel (unintelligible) some (unintelligible) on that due to a case filed by Amoco versus (unintelligible) Chemicals in reference to the purchase of the property. And we want to -- we couldn't understand how we were being compared when our property is totally unusable here in Texas City, hasn't been used since that operation was in effect.

**DR. ZIEMER:** Okay.

**MR. WILSON:** We would like that to be considered as far as our Texas City plant. Those guys worked in a highly radioactive situation out there. Thank you, sir.

**DR. ZIEMER:** Thank you for that --
**MR. WILSON:** (Unintelligible) one other gentleman here from Texas City would like to say -- make a comment. He's (unintelligible).
**DR. ZIEMER:** Okay, proceed.
**MR. INGRAM:** My name is James (unintelligible) -- James Ingram.
**DR. ZIEMER:** Give us your name again, please. Give us your name again.
**MR. INGRAM:** James Ingram, I-n-g-r-a-m.
**DR. ZIEMER:** Thank you. Proceed.
**MR. INGRAM:** (Unintelligible) in 1957. I worked as an operator (unintelligible) plant. All the time that (unintelligible) plant changed ownership, I was there from '57 on. And (unintelligible) front end loader (unintelligible). It was (unintelligible) a pond outside the boundaries of the main plant. I was (unintelligible) down there (unintelligible) 18-wheelers (unintelligible) gypsum (unintelligible). Then all of a sudden one day the plant manager and assistant plant manager came running into the plant and said stop, don't load no more of that stuff. And when I found out what the problem was, it was

radioactive, and that radioactive material was being shipped all over the United States for pasture lands, farmlands and what have you. So there's no telling who all was contaminated with this stuff, but just because of what we shipped out of there and didn't know what we was shipping.

(Unintelligible) phosphate. It was (unintelligible) uranium dust and they said (unintelligible) here today was we only made (unintelligible). I don't know what (unintelligible) amount, but I have (unintelligible) thing with a front end loader and it was (unintelligible) and I had to (unintelligible) load (unintelligible) front end loader (unintelligible) move it back (unintelligible) loaded out of there. I think that's all I can say right now.

Oh, by the way, since I've left there I have developed cancer. And the doctor said this cancer was caused by (unintelligible) out in the sunshine. I said how do you know that? He said well, 50 percent says we do, 50 percent says we don't. I said why (unintelligible) caught cancer, nobody in my family has ever had

cancer, and all of a sudden (unintelligible) working there I developed cancer. So that's all I have to say right now.

**DR. ZIEMER:** Okay. Thank you very much. Any additional comments?

**MR. LOCKHART:** Yes, I do, Joe Lockhart back again. Dr. Neton I believe said that the fertilizer plant had a hard time getting started. They was making fertilizer. When I went to work there in 1957, they were producing fertilizer when I walked in the door, and they produced fertilizer when I walked out of the door. So I don't believe they had a hard time making it. They made fertilizer for 40 years, and I was there.

**DR. ZIEMER:** Okay. Thank you.

**MR. (UNINTELLIGIBLE):** This is Frank (unintelligible). I (unintelligible) commenting on the fertilizer and stuff that I heard on (unintelligible) a few minutes ago. A lot of that information is wrong. I don't know where y'all got it from. It's just not right. Wherever you got it from, you need to check it again. We worked in that place, and nothing that I heard there compared to what I witnessed

while working there. And where the fertilizer's concerned, I load fertilizer in boxcars and 18-wheelers, and even people came to pick it up personally, and that went on for years. Then there's a comment there about a few months. That's not true. I think y'all need to get back and talk to the employees and let them recall and tell you what actually happened that they experienced while working down there, and it's a shame to have a report like that. Thank you.

**DR. ZIEMER**: Thank you.

**MR. CLARK:** I'm Leonard Clark, and I went to work at Smith and Douglas in '87, and we were admonishing the (unintelligible) belts and the protective siding that is made out of (unintelligible) wood (unintelligible) it was treated (unintelligible). And I sent for my records and Social Security, and somehow Social Security doesn't have them. So I sent to (unintelligible). I went to (unintelligible) where I was treated for cancer and they don't have the years that I started being treated. Seemingly something or somebody has covered their tracks real well. And now 27 men in the

construction and I'm -- I'm saying that construction workers are not being considered, when we were working with the same thing that the company was working with and I don't see how that could be.

**DR. ZIEMER:** Would the -- the gentleman who just spoke give us your name again for the record here?

**MR. CLARK:** Leonard Clark.

**DR. ZIEMER:** Leonard Clark, okay. Thank you very much. Additional comments?

**MR. UNINTELLIGIBLE:** Yes, my name is Bill (unintelligible). I went to work there at (unintelligible) in '57 (unintelligible). I went there (unintelligible) because we had (unintelligible) and that's what we did, 'cause if you didn't do what they would tell you, you're going to get (unintelligible). And I know that (unintelligible) working in there (unintelligible) get all in your clothes 'cause (unintelligible) looking, be (unintelligible) looking, and it's just all that stuff (unintelligible) have to wash your clothes. Ain't no telling who -- who (unintelligible) have these disease now. And now I've been

diagnosed with (unintelligible) cancer and (unintelligible). But anyway, I just want to comment on it (unintelligible) gentleman (unintelligible). Somebody needs to check (unintelligible) look into (unintelligible) right and diagnose (unintelligible) people justice on it. (Unintelligible) being so long in messing with this and ain't going to (unintelligible). That's all I have to say about it.

**DR. ZIEMER:** Okay, thank you very much. Any additional comments?

**MS. MCDONALD:** Yes, sir. I (unintelligible) and my name is Dolores McDonald and my husband was named Aubrey McDonald, and at that time he was working with (unintelligible) with (unintelligible) and the reason (unintelligible) at that plant. (Unintelligible) outside (unintelligible). I'm a mother of five kids, and my husband died a young man. (Unintelligible) probably one of the ones that NIOSH had (unintelligible) -- whatever they did. But anyway, it was a hardship for me to raise those five kids by myself and my husband was 49 years old when he

deceased and this has been going on too long. Something should be done to help the people because (unintelligible) I'm only one (unintelligible). (Unintelligible) my husband died with five men that worked with my husband, died one month behind (unintelligible) and (unintelligible) men (unintelligible) five at one time (unintelligible). Thank you.

**DR. ZIEMER:** Okay, thank you very much.

**MR. WILSON:** Confirming -- this is Roy Wilson confirming Ms. McDonald's comment. [Name redacted] was the contractor that brought in the rock over to the plant. They -- they brought it to the plant, so if you would make a note of that.

**DR. ZIEMER:** Okay. And any additional comments?

**MR. WILLIAMS:** Yes, this is Henry Williams again. (Unintelligible) phosphate (unintelligible) we had (unintelligible) such that we -- we shouldn't have been (unintelligible) but they never (unintelligible). And (unintelligible). Thank you.

**DR. ZIEMER:** Thank you. Okay, I'm going to ask

the Board members if they have any questions or comments for the petitioners. We need to come to closure here. We have several options before us. One option would be to approve or disapprove NIOSH's evaluation report. Another option, which is suggested by Dr. McKeel, would be to postpone action on this -- actually at the request of the petitioners, is that we postpone action till June, until at least they have a chance to review all the documents that have been identified. There was an additional request by the petitioners that the Board ask the Board's contractor, SC&A, to assist in looking at the evaluation report as well. That would be an option that we would consider separately, should the Board decide to postpone action on this.

Let me ask, Board members, what is your pleasure at this time? Mr. Gibson.

**MR. GIBSON:** Paul, I move that we postpone any action based on the petitioners' request.

**MR. CLAWSON:** I second it.

**DR. ZIEMER:** Okay, there's a motion and a second that the Board postpone action, as requested by the petitioner. Any discussion on

this motion? Wanda Munn.

**MS. MUNN:** Having listened very carefully to what the petitioners brought before us, and having heard the NIOSH report, it's fairly clear that there's a great deal of misunderstanding with regard to both what the potential for exposure of the radiation type was to individuals who were involved in this three-month production process. There's a great deal of question as well as to how the documents that were being requested would provide any additional information relative to radiation exposure, which is our concern here. There's not a question with regard to the issue of this plant having been a dirty, dusty plant to work in. When one knows, however, the amount of radiation available in the material that was coming into the plant, and the small amount of material that was produced from that production process, which lasted only for a short period of time, it's difficult to see that further information regarding the ownership of these facilities or how long the facilities existed afterward would provide any additional information outside the bounding

that can be done -- we know can be done of the radiation exposure. So we can certainly extend the claimants' desire to have more information available, but it's fairly clear that that additional information is not going to change the bounding capability of the work that was done there. So I have no objection to our postponing this, but I think we should do so with the expectation understood by the claimants that these pieces of information are not likely to change the ability to bound the radiation exposure. They can't give you any more information about other kinds of exposure, but our job here is radiation, and the significance of any additional information is likely to be remote.

**DR. ZIEMER:** Thank you. Other comments? So you're not necessarily speaking against the motion, but --

**MS. MUNN:** No.

**DR. ZIEMER:** -- the concern that the additional time may just delay the inevitable, in your mind. I think the petitioner may have been making the point that there may be -- since they haven't seen all the documents, there may

be something in those documents that would perhaps modify something. I don't think we know, necessarily, at this point.

**MS. MUNN:** That's understandable. Their concern is --

**DR. ZIEMER:** Yes.

**MS. MUNN:** -- understandable.

**DR. ZIEMER:** Any other comments? Then let me call for a vote -- yes --

**MR. GRIFFON:** Can I -- can I ask before we go to --

**DR. ZIEMER:** -- Mr. Griffon.

**MR. GRIFFON:** -- before we go to a vote, I think it might be useful for -- for NIOSH to clarify -- 'cause several of the comments on the -- on the phone were related to production levels, and I think when Jim Neton was speaking he was speaking to the years -- I think the '52 through '56 time frame, and I think many people on the phone --

**DR. ZIEMER:** Not restricting it to all the production of --

**MR. GRIFFON:** Right, and I --

**DR. ZIEMER:** -- the fertilizer years.

**MR. GRIFFON:** -- think production continued,

but it wasn't a part of the AEC program, is what I understand. I just want to clarify that for --

**DR. ZIEMER:** Here's Dr. Neton.

**MR. GRIFFON:** -- for everyone that's on the phone.

**DR. NETON:** Right, Mark -- Mark, thanks. I think you pretty much said what I would say here, is that the petition was -- the petition's request was for 1952 through 1956 solely. They did not petition for the residual contamination period. And we have no dispute with the fact that additional fertilizer operations continued after 1956, '57 through '70s, but those operations were not related to AEC activities at all. And most of the commenters that I heard actually were employed after 1956, so there's no doubt that they were exposed to some radioactive materials from the phosphate plant, but not related to AEC activities.

**DR. ZIEMER:** Okay, thank you.

**MR. GRIFFON:** So -- I mean so my mind -- I mean I have two sort of remaining questions. One is the residual period, but that's sort of out --

out of the context of what we're --

**DR. ZIEMER:** Of the SEC.

**MR. GRIFFON:** -- looking at today. And the other would be the question of -- of bounding. I don't dispute that the approach presented by Jim presents high numbers. The question then comes -- comes down to this is it representative enough of this facility, and I think we might want to even target -- targeted -- have a targeted review of that issue alone in the next couple of months.

**DR. ZIEMER:** Jim has an additional comment here.

**DR. NETON:** I'm sorry, I did fail to mention during my presentation that there are four example dose reconstructions that we have prepared that are out there on the O drive for evaluation. I'm sorry, I forgot to mention that.

**DR. ZIEMER:** Larry?

**MR. ELLIOTT:** Larry Elliott. I think there's also confusion among the claimant population at Texas City Chemicals around the residual period. And just for point of clarification for those folks, NIOSH does not disagree that

there was naturally-occurring radioactive material that was inherent in the fertilizer production process, in the gypsum material. As we all know, there's radon associated with the phosphate material that is being processed during that parti-- period. The confusion arises, I believe, with the way the law is written and their perception of what is covered under that period. So that -- that radioac-- naturally-occurring radioactive material inherent in the limestone and the phosphate, gypsum, would not be covered during that period. Only the AEC-related uranium and radon -- well, radon may not even reside but the progeny might -- during the residual period. So one, NIOSH doesn't argue that there was exposure during the residual period to naturally-occurring radioactive material, but it's not covered under this program.

**DR. ZIEMER:** Thank you for clarifying that, Larry. If this motion passes, we will discuss separately what actions the Board may wish to take in terms of studying this in any further way or what assistance we might want to have from our contractor in that regard.

Are you ready to vote on the motion? The motion would be to postpone. The anticipation is to the June meeting. That assumes that both the petitioner and the Board are able to get the information they need to come to a decision in the next meeting.

All who favor -- let's take a roll call vote here 'cause we have to get votes by phone as well.

**DR. BRANCHE:** Mr. -- Mr. Presley, are you available on the line still?

**MR. PRESLEY:** Yes, I am.

**DR. BRANCHE:** Okay.

**DR. ZIEMER:** Your vote?

**MR. PRESLEY:** I vote to postpone, with reservations.

**DR. ZIEMER:** Okay, the vote is yes.

**DR. BRANCHE:** Ms. Beach?

**MS. BEACH:** I vote to postpone.

**DR. BRANCHE:** Mr. Clawson?

**MR. CLAWSON:** Postpone.

**DR. BRANCHE:** Mr. Gibson?

**MR. GIBSON:** Postpone.

**DR. BRANCHE:** Mr. Griffon?

**MR. GRIFFON:** Postpone.

**DR. ZIEMER:** These are all yeses to the motion, by the way. We're not postponing the motion. This is -- these are yes votes on the petition.

**DR. BRANCHE:** Mr. --

**DR. ZIEMER:** Or not on the petition; on the motion.

**DR. BRANCHE:** Dr. Lockey is not here with us today. Mr. -- Dr. Melius?

**DR. MELIUS:** Yes.

**DR. BRANCHE:** Ms. Munn?

**MS. MUNN:** I'll abstain.

**DR. BRANCHE:** Mr. Presley -- Dr. Poston is on his way. Dr. Roessler?

**DR. ROESSLER:** Yes.

**DR. BRANCHE:** Mr. Schofield?

**MR. SCHOFIELD:** Yes.

**DR. BRANCHE:** Dr. Ziemer?

**DR. ZIEMER:** Yes. We don't need to obtain the others -- I declare that the motion has carried. This does not require that we obtain the votes of the missing members since it's not a recommendation to the Secretary at this time. Thank you very much. Thank you, petitioners. We are going to take a break for about 15 to 20 minutes, and then we will reconvene. Thank you

very much.

**DR. WADE:** You talked about what actions to take. You need to talk about what actions to take.

**DR. BRANCHE:** No, he said he was going to postpone the discussion of actions.

**DR. WADE:** Whether or not to have your contractor --

**DR. ZIEMER:** Oh, that's --

**DR. BRANCHE:** He's going to hold off on all that.

**DR. ZIEMER:** No, we're not going to do that right now. We'll discuss that later.

(Whereupon, a recess was taken from 11:00 a.m. to 11:20 a.m.)

**DR. ZIEMER:** First an announcement from our Designated Federal Official, Dr. Branche.

**DR. BRANCHE:** Again, for those of you who are on the phone, if you could please mute your line. And then if you don't have a mute button, please use star-6 to mute your line, and then when you are ready to speak, use that same star-6.

Dr. Ziemer?

**DR. ZIEMER:** I wanted to see if any of the

Texas City petitioners are still on the line, or Dr. McKeel, are you on the line?

(No responses)

Apparently not. For the record, I just wanted to make it clear that the issue of whether or not we will make an assignment to our contractor for assistance on the Texas City issue in terms of reviewing the evaluation report is a matter that we will take up during the Board work time later in this meeting when we discuss other assignments to our contractor and the various -- not only the assignments, but the levels of importance of different things. So we'll need to take that in the bigger context of what assignments we have pending and coming down the pike.

**MR. PRESLEY:** Paul, this is Bob Presley. I just wanted to let you know I'm here.

**SAM LABORATORIES (COLUMBIA UNIVERSITY) SEC PETITION**

**DR. ZIEMER:** Thank you, Bob. Okay, let's proceed then. Our next item is the SAM Laboratories, Columbia University. We have an SEC petition, and LaVon Rutherford will present that to us.

**MR. RUTHERFORD:** Thank you, Dr. Ziemer. Again,

as Dr. Ziemer mentioned, I will be presenting NIOSH's evaluation of the SAM Laboratory, the SEC petition.

**DR. ZIEMER:** LaVon, let me interrupt you just a moment. I want to make sure -- I think we do have a petitioner that may be on the line. Maria Zwolinski?

**MS. ZWOLINSKI:** Yes, I'm --

**DR. ZIEMER:** Okay, I just wanted to make sure you were there, Maria. We'll proceed then. Thank you.

**MR. RUTHERFORD:** All right. The SAM Laboratories SEC petition is a petition that was submitted under 83.14 to NIOSH by a petitioner whose dose reconstruction could not be completed by NIOSH. The petition evaluation also considered a class of workers similar to that petitioner.

As you heard Dr. Neton earlier, the evaluation process is a two-pronged test -- is it feasible to reconstruct dose with sufficient accuracy; and if it is, then we do not have to go to step two. If it is not, then we have to determine is there a reasonable likelihood that the health was endangered.

SAM Laboratories, a little background, Special Alloy Materials or Substitute Alloy Materials. SAM Laboratories, Columbia University, is located in New York City, New York, and it was involved in determining whether it was feasible for the United States to build a nuclear weapon. And it actually started prior to the establishment of the Manhattan Engineering District. In 1939 it actually started work on feasibility.

Work at the SAM Laboratories ended in 1947 with the establishment of the AEC.

A little background on the processes. There were a number of radiological activities occurring at SAM Laboratory. Isotope separations, which included centrifuge process to isolate uranium-235, there was a lot of enrichment work. Research on the gaseous diffusion process for uranium enrichment. Neutron cross section research with plutonium and other isotopes, and nuclear research and development work.

From those processes the radiological sources were uranium compounds and uranium progeny, and those were associated with isotope separations

and enrichment processes in addition to research activities. Plutonium from neutron cross section work and research and development activities. And then polonium, strontium, potassium, phosphorus, carbon, iodine, fission products and other radionuclides were also used in nuclear research.

During our determination of dose reconstruction feasibility we looked at -- we attempted to capture data from a number of sources. We looked at National Archives, OSTI -- the Office of Scientific and Technical Information, Nuclear Regulatory Commission, DOE Germantown, site research database. We also contacted the State of New York. We contacted the university and talked to the Associate General Counsel and radiation safety officer. And we also did Internet searches, which has become a standard practice for us with all of our evaluations. From the data capture attempts we were -- or internal monitoring data, we found no internal monitoring records. We have eight claimants currently with NIOSH, and with those eight claimants we have no internal monitoring data. We found no urinalysis results, breath samples,

in vivo counting, fecal or other bioassay monitoring results for the SAM Laboratory employees.

And there was no air monitoring data been located during the covered period. We did find some radon samples post-'47, in 1950 period, but during the covered period we had no air monitoring data.

External monitoring data, they had no -- we found no external monitoring data for SAM Laboratory employees. We found one radiation survey in 1947 that was radiation levels in areas around the Cyclotron, and we have no radiological source term information sufficient for dose reconstruction.

Petition overview -- again, the petition was -- NIOSH was unable to obtain sufficient information to complete dose reconstruction for an existing claim. On November 2nd a claimant was notified that dose reconstruction was not feasible, and we provided that claimant a Form A to submit an SEC petition if they desired. The petition was submitted to NIOSH on November 19th of 2007.

Our feasibility determination, NIOSH lacks

monitoring, process or source term information to -- sufficient to estimate external or internal radiation doses to SAM Laboratory employees for the period of August 13th, 1942 through December 31st, 1947. We believe we have sufficient information to estimate the external dose for medical exposures for that period.

Health endangerment, we -- once we determined -- as you remember, the two-pronged test. Once we determine if it's feasible whether or not to reconstruct dose. If we determine it's not feasible, we have to determine health endangerment. We determined that it is not feasible to estimate with sufficient accuracy the dose, and that the health of the covered employees may have been endangered. Evidence indicates that workers in the class may have accumulated intakes of uranium and other radionuclides during the covered period.

In summary, our feasibility findings are that dose reconstruction's not feasible for internal exposures or external exposures, with exception of medical X-rays.

And our proposed class is all employees of the

Department of Energy, its predecessor agencies and DOE contractors or subcontractors who worked in the Pupin, Schermerhorn, Havemeyer, Nash or Prentiss Buildings at the SAM Laboratories of Columbia University in New York City from August 13th, 1942 through December 31st, 1947 -- and then the standard end to that.

And again, our recommendation is to add a class for the Special Exposure Cohort class from August 13th, 1942 through December 31st, 1947. We determined it's not feasible to reconstruct dose and that health was endangered.

That's it.

**DR. ZIEMER:** Thank you very much, LaVon. Before we hear from the petitioner I want to ask one question. Have you established whether or not those facilities were -- or utilized any student assistants, individuals who would not show up necessarily as employees?

**MR. RUTHERFORD:** We have not. I don't think we got -- we went to that -- we looked into that. I mean 1942 to '47 period, you know, we didn't look at -- those were specifically associated at that time for AEC research activities, so...

**DR. ZIEMER:** Yes, but this is on the Columbia campus, is it not?
**MR. RUTHERFORD:** Yes, it is. Are you asking whether they had access to those facilities?
**DR. ZIEMER:** Well, for example, would there -- could there have been Ph.D. researchers working on this project that would not have showed up as employees?
**MR. RUTHERFORD:** You know, I don't know.
**DR. ZIEMER:** Okay. It's --
**MR. RUTHERFORD:** That's something we didn't look --
**DR. ZIEMER:** -- a question to ponder on a facility like this. I assume, also, that -- since this was at a time --
**MR. RUTHERFORD:** Very national security.
**DR. ZIEMER:** -- of the Manhattan Project that it'd be highly restricted in terms of -- ordin- - ordinarily students can roam in and out of facilities on campus, but they probably couldn't in this particular case.
Larry, can you speak to --
**MR. ELLIOTT:** I don't know that I can answer specifically. I can answer in a general sense. This would be a DOL-related question as to

covered employment. And in some situation -- I don't know -- Jeff can add to this or not, but in some situations I know that a fellowship, you know, that is sponsored by DOE was considered -- has been considered covered employment, but I don't know about a Ph.D. grad student --

**DR. ZIEMER:** Well, I can tell -- tell you that students who are not on fellowships, and there are always some of those, don't show up as employees. And if you go into employee records, you may never find them.

Well, let's go to the petitioner and let's see if -- Maria, are you still on the line?

**MS. ZWOLINSKI:** Yes, sir.

**DR. ZIEMER:** Yes, do you have some comments for us?

**MS. ZWOLINSKI:** No, I don't -- I don't believe I do, but --

**DR. ZIEMER:** Oh, okay.

**MS. ZWOLINSKI:** -- (unintelligible) listening for (unintelligible).

**DR. ZIEMER:** Okay. Thank you. I have an additional question. LaVon, was the Cyclotron itself included in this -- in these facilities?

**MR. RUTHERFORD:** Yes, it was, it's --
**DR. ZIEMER:** It was -- physically it was there?
**MR. RUTHERFORD:** Yes, actually it was in the -- if I remember, I can -- I could tell you fairly quickly, but yes, it was in one of the five buildings that -- that -- I think Pupin, if I remember correctly, but it is in one of the five buildings. If you look in the evaluation report -- in fact, I'll tell you real quickly which one it was in -- Pupin. And if you look at page 11 of the evaluation report, Pupin -- small Cyclotron in Lab Room 128.
**DR. ZIEMER:** Okay, thank you. When you -- when you say you could not reconstruct dose, did that include the Cyclotron work, or just the nuclides that you named?
**MR. RUTHERFORD:** It -- it included all -- all activities at that time, so yes, the Cyclotron work there, we would not -- we did have the one dose -- or we had the one survey in 1947, but that was at the end of the AEC period. It did not cover any of the activities preliminary to that, and we did not feel that that, in itself, could -- we could bound the exposures for that Cyclotron activity.

**DR. ZIEMER:** Okay, thank you. Other questions?
**MR. PRESLEY:** Hey, Paul?
**DR. ZIEMER:** Yes.
**MR. PRESLEY:** Bob Presley. To add to your comment, there were some undergrad people that did leave Columbia University and possibly go out to Los Alamos to work at about that time frame that might have worked on that Cyclotron.
**MR. RUTHERFORD:** And that actually makes sense, just because of the fact that some of the material that was received at SAM Laboratory was from what became Los Alamos.
**MR. PRESLEY:** That's correct. 'Cause some of those people actually did train some of those people out there, I believe.
**DR. ZIEMER:** Well, what I was wondering, in a case like this -- and I don't know a priori, I guess, but where the class definition says they have to be employees, that was my question. And I -- something to think about, whether or not they have to be employees to be covered. If they were indeed working there, that's my -- sort of my question. Jim, do you have a comment?
**DR. MELIUS:** I mean, again, I think it's what

Larry said. I think they ha-- by the definition of what's -- the Act, I think they have to be employees -- yeah, but it's (unintelligible) DOL. I mean where -- where the line gets drawn is going to be up to DOL.

**DR. ZIEMER:** Yeah, I -- I suppose someone may argue if -- if you act like an employee and look like an employee, are you an employee. But -- but the law may -- may very well exclude folks.

**DR. BRANCHE:** It does. It does. I'm looking at the law. It does.

**DR. MELIUS:** It's like -- those issues -- I mean it comes out with volunteer firefighters --

**DR. ZIEMER:** Sure, right, right --

**DR. MELIUS:** -- there's all sorts of tests --

**DR. ZIEMER:** -- it's that kind of -- right.

**DR. MELIUS:** -- so depending on the benefit and -- and how it's defined in the relevant Act and so forth.

**DR. BRANCHE:** The law specifies the word "employee" in every --

**DR. MELIUS:** Yeah.

**DR. BRANCHE:** The law specifies -- this is

Christine speaking. The law specifies the word "employee" in every part of the Act. Now how the Department of Labor then further delineates what an employee is is the issue -- again, as you've said, it's for the Department of Labor to sort out.

**DR. ZIEMER:** Thank you. Okay, other questions by Board members? Dr. Melius.

**DR. MELIUS:** With the agreement of the other members of the Board, I'd like to enter a -- a motion.

**DR. ZIEMER:** You may do so.

**DR. MELIUS:** Do so on that. Some of this will sound familiar. Let you know that I was working when I was on my airplane this morning.

**MS. MUNN:** You're so (unintelligible).

**DR. MELIUS:** The Board recommends that the following letter be transmitted to the Secretary Health and Human Services within 21 days. Should the Chair become aware of any issue that in his judgment would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay and the reasons for this delay, and that he immediately works

with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health, parentheses, the Board, close parentheses, has evaluated SEC Petition 00102 concerning workers at the SAM Laboratories of Columbia University in New York City, New York, under the statutory requirements established by EEOICPA and incorporated into 42 CFR 83.13 and 42 CFR Section 83.14. The Board respectfully recommends Special Exposure Cohort -- SEC status be accorded to all employees of the DOE, its predecessor agencies and DOE contractors and subcontractors who worked in the Pupin, Schermerhorn, Havemeyer, Nash or Prentiss Buildings at the SAM Laboratories of Columbia University in New York City, New York from August 13th, 1942 through December 31st, 1947 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.

The Board notes that although NIOSH found that they were unable to completely reconstruct

radiation doses for these employees, believe that they are able to reconstruct the occupational medical dose.

This recommendation is based on the following factors: One, people working in the areas of SAM Laboratories during this time period were involved in atomic weapons research and development.

Two, NIOSH was unable to locate sufficient monitoring data or information on radiological operations at these laboratories in order to be able to complete accurate individual dose reconstructions. The Board concurs with this conclusion.

Three, NIOSH determined that health may have been endangered for the workers exposed to radiation in these areas of the SAM Laboratories at Columbia University during the time period in question. The Board concurs with this determination.

Enclosed is supporting documentation from the recent Advisory Board meeting held in Tampa, Florida where this Special Exposure Cohort class was discussed. If any of these items are unavailable at this time, they will follow

shortly.

**DR. ZIEMER:** You've heard the motion. Is there a second?

**MR. PRESLEY:** This is Bob Presley. I second.

**DR. ZIEMER:** Presley has seconded. Okay, discussion? Wanda Munn.

**MS. MUNN:** May we see a hard copy of the motion before we make a final vote?

**DR. ZIEMER:** Yeah.

**DR. MELIUS:** Sure can, I was just trying to move it along, but fine.

**DR. ZIEMER:** Actually what we will do, as we have done in previous meetings, is provide hard copy of these motions before the end of this week's Board meeting so everybody can see them for a final look on the wording. This is indeed our standard wording on these motions and incorporates the class definition as provided by NIOSH. I was tracking along here and the other words are, surprisingly enough, identical to other recommendations to the Secretary.

**MS. MUNN:** Thank you, Dr. Melius.

**DR. ZIEMER:** Further comments or questions on -- discussion? Are you ready to act on this

motion?
Okay, all in favor -- well, we'll take the roll call here since we have Mr. Presley on the phone.
**MR. PRESLEY:** (Unintelligible)
**DR. ZIEMER:** Mr. Presley?
**MR. PRESLEY:** Aye.
**DR. ZIEMER:** That was Tennessee for aye.
**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:** I'll get Dr. Lockey's vote separately. Dr. Melius?
**DR. MELIUS:** Yes.
**DR. BRANCHE:** Ms. Munn?
**MS. MUNN:** Aye.
**DR. BRANCHE:** We heard the Tennessee version of "aye" from Mr. Presley.
**MS. MUNN:** Now you've heard the Texas version.
**DR. BRANCHE:** I'll get Dr. Poston's vote when

he arrives. Dr. Roessler?

**DR. ROESSLER:** Yes.

**DR. BRANCHE:** Mr. Schofield?

**MR. SCHOFIELD:** Yes.

**DR. BRANCHE:** Dr. Ziemer?

**DR. ZIEMER:** Yes. The motion carries, and we will present that recommendation to the Secretary as -- as noted. Again, we will provide you with a copy of the wording, probably Wednesday during our work session, so everyone has a copy of that.

I see that we are in fact approaching the lunch hour. This is the time then for us to experiment with the -- with the buffet. Where do we cast our votes on this?

**DR. BRANCHE:** With Zaida -- Zaida Burgos.

**DR. ZIEMER:** Okay. We're recessed until 1:00 p.m. Thank you very much.

(Whereupon, a recess was taken from 11:44 a.m. to 1:00 p.m.)

**DR. BRANCHE:** Dr. -- Mr. Presley, can you hear?

**MR. PRESLEY:** I'm on.

**DR. BRANCHE:** Can you hear?

**MR. PRESLEY:** I'm on.

**DR. BRANCHE:** Okay, good. Thank you very much.

Again, this is the Advisory Board on Radiation and Worker Health, and if you are participating by phone we would appreciate it if you would please mute your line and when you're ready to speak you can then unmute your line. If you do not have a mute button, then please dial star-6 so as to mute your line, and then please use that same star-6 to unmute the line when you're ready to speak. Thank you so much.

Dr. Ziemer.

**PROCEDURES WORK GROUP SUMMARY**

**DR. ZIEMER:** Thank you. The first item on our afternoon session is a -- it's labeled as a procedures workgroup summary. Let me make a few comments before the workgroup chairman takes over, and that is that this particular workgroup, in the course of their work on reviewing the procedures, has -- the group itself has developed a kind of procedure that they want to share with the full Board, and that is a methodology for tracking the actions of the workgroup, the actions that relate to a typical findings matrix. SC&A has been very helpful in this regard, too, and Kathy Behling will be giving us a presentation on that

shortly.
But first let's have the workgroup chairman, Ms. Munn, kick this off and then she'll introduce Kathy. Wanda?
**MS. MUNN:** As those of you on the Board and who work with the Board know, the procedures workgroup has a significant burden of material that we need to go through. We have been probably the most active of the workgroups for the longest period of time --
**DR. ZIEMER:** They're all claiming that, Wanda, but we --
**MS. MUNN:** Yes, I know, but those of us who are on this group know it's been necessary for us to meet on a much more regular basis than most groups. It's unusual for us to go more than a month without either a face-to-face or teleconference meeting, simply because of the burden of materials through which we must work. We've, over a period of time, had three separate sets of procedures which the Board as a whole has chosen as selected materials for our contractor, Sanford Cohen & Associates, to review for content and potential technical deficiency. In each case when the contractor

has done so, they've provided us with a significant report which the working group then undertakes to review and to work through each of the findings.

As you can imagine, over a number of years -- since each one of these findings is not only addressed, but in most cases is worked to reach a solution -- what started out as a manageable matrix of information has become so cumbersome and so lengthy for some of the findings that it's very difficult for us to follow where we are and to, by looking at the matrix, quickly and easily identify what is and is not open, what is completely closed, what has been transferred to some other group for solution, or what is currently in abeyance as some other activity is underway.

A little over six months ago our contractor brought to us the suggestion that, in order to assure that we had the ability to track each action as we wanted to, and make certain that when we were complete we had the kind of record that could be traced at any time, perhaps a new approach was necessary. They have brought that approach to us. We've been working very hard

with them to fine-tune it over the last several months, while at the same time attempting to continue with our process of findings and solutions to activities of the individual procedures.

The leader on this effort has been Kathy Behling and her associates. She is providing for us today, so that you may see for yourself, an overview of how this electronic system is going to work. Its enormous advantage is its ability to sort for a variety of items. We feel -- those of us on the working group who have followed this, Dr. Ziemer, Mr. Griffon, Mr. Gibson and myself, feel that this is definitely the way for us to go given the cumbersome nature of the material with which we're working. We've asked Ms. Behling to be with us today to give us that overview and to encourage you to present any questions that you might have -- since you're not quite as familiar with that as we have been. If you have issues after you've seen what SC&A is doing for us, please -- we're -- we're trying to allow enough time for you to be able to provide those questions to us.

Kathy, would you like to show us what you're doing -- what we're doing?

**DR. ZIEMER:** While Kathy's coming to the podium, Board members, let me mention to you that on your -- the flash drive that is provided for you with the various documents for today's meetings, this particular presentation is called "matrix presentation." You can find the file so named. You will have Kathy's PowerPoint slides, I believe -- or whatever they -- it may not be PowerPoint. Powerful, is that -- that's what they are, powerful slides.

**MS. MUNN:** It will be powerful.

(Pause)

**MS. BEHLING:** Good afternoon. Thank you for the opportunity to show this matrix that we've been working on, and I would like to begin by acknowledging and applauding Ms. Munn and the procedures workgroup for their willingness and their effort in taking a table-based matrix and turning it into an issues tracking database. We envision, with the help of Dr. Branche, that this tool will be used as a template for designing similar databases for other workgroups and for all of the important work

that the Board is doing.
The procedures workgroup designed this database to capture and track findings from their initiation to their resolution, and they worked with SC&A to develop this system. So today I'd like to present an overview of the database, and I'm actually going to walk you through the mechanics of logging onto the term-server where this database is currently stored on the O drive. And so I did make a handout -- a presentation for those on the phone who can -- that can -- you can follow along, to some extent, but I felt if we could, we could actually walk through logging on to the system and working through the database as it currently exists.
So as we see here, we're going to get onto the O drive and there's been a separate folder put onto the O drive called "the Advisory Board SC&A" folder.
Am I pointing at that? Do you -- okay, you're seeing that. Very good.
And under that folder we have a sub-folder called "procedures review tracking system."
Now one of the things I'm going to make mention

-- I'm going to look at the details here, so if we can open this up -- okay. You'll -- this is what you'll see, obviously, when you open up our procedures review tracking system, and there are three separate files. This is an Access database. If you were to log on to the system at this point and you actually see five files, there -- that would indicate that there's someone else on the system, and that's fine because the system allows multiple users. You would see a second -- a duplicate of the first file, the procedures issues tracking file, plus you'll also see a duplicate of -- I believe it's the data file. And you'll also take notice, we have another sub-folder here, the referenced documents sub-folder, and I'll get into more details of that folder, but that's a folder that actually is going to contain white papers or any supporting documents that we've used during the procedures review process in order to come to a resolution on a finding.

So when you open up your folder -- it takes a little while here to actually open up our summary screen -- and also, let me go back. In

the process of logging on on the previous screen we were in, Access will recognize your username, and based on that it will determine what level of access you have, whether you have a read/write access or a read-only access. And at this point the Advisory Board has made the decision as to who will get the read/write access and the read-only access. At this point it's -- most of the data has been entered by SC&A and by NIOSH, and so obviously we have the read/write access.

**MS. BEACH:** Kathy, I'm sorry, I didn't get the first part where you log on. Is it under the AB pages or --

**MS. BEHLING:** Yes, let's go back.

**MS. BEACH:** I apologize.

**MS. BEHLING:** That's all right.

**MS. BEACH:** I was trying to get on the O drive when you were.

**MS. BEHLING:** If I'm going too fast, stop me. In fact, we can make this interactive, if you like, and we can -- let me get all the way off here. Okay.

See -- now you'll see, as you saw just briefly there, you do see two addition-- two additional

sets of files, so to your left, you're under the O drive, and then you're under Advisory Board slash -- dash SC&A, and then procedures review tracking system.

**MR. GRIFFON:** I think that's where the problem is.

**MS. BEACH:** I don't see it.

**MR. GRIFFON:** I'm getting restricted from that folder.

**DR. BRANCHE:** Did you get in?

**DR. ZIEMER:** I'm not on line.

**DR. BRANCHE:** Gen, are you successful in getting to --

**DR. ROESSLER:** I can see it, but I can't do anything with it.

**MR. GRIFFON:** Advisory Board-SC&A, I'm getting a restricted -- that's a restricted folder for me, so...

**DR. ROESSLER:** I see exactly what --

**MR. GRIFFON:** But I was in there before, so --

**MS. BEACH:** No, I actually got in.

**DR. BRANCHE:** You're in?

**MS. BEACH:** Yeah.

**DR. ROESSLER:** Yeah, see, it just has that little --

**DR. BRANCHE:** What about you, Paul?
**DR. ROESSLER:** So I'm on the Internet.
**DR. BRANCHE:** Josie, you got in?
**MS. BEACH:** I did.
**MS. BEHLING:** And I believe I have backup support on the phone with me. Don Loomis, who's an SC&A team member, he's developed this database for us and if we run into any technical problems maybe Don can help us. Don, are you there?
**MR. LOOMIS:** Yes, I'm here.
**MS. BEHLING:** Okay. Thank you, Don. Some of the Board members, are you able to get on now?
**DR. BRANCHE:** Josie, you're in?
**MS. BEACH:** I'm close.
**MS. BEHLING:** I see Mr. Gibson's in.
**DR. BRANCHE:** Josie's in.
**MS. MUNN:** See, I'm just now saying I can get on the network. You're connecting to a wireless hot spot.
**MS. BEHLING:** Okay, everybody's in?
**MS. MUNN:** No, I'm not even on line yet.
**DR. BRANCHE:** Gen, are you in?
**DR. ROESSLER:** That's all right, let her go ahead.

**MR. GRIFFON:** Yeah.

**MS. BEHLING:** Okay.

**MS. MUNN:** Go ahead.

**MS. BEHLING:** Thank you. As you see on the screen now, because we do have other users on the system, there are now five of the tracking files that you'll see. You'll see a duplicate of, as I said, the procedures issue tracking, and a duplicate of the tracking, underscore, data file. And you -- to get into the actual database, you obviously want to select the tracking folder that has the 944 K-bytes associated with it and not just the 1K.

And I also make mention that -- as I said, there -- you can have multiple users on the site, and if there would be two users with read/write access -- say Stu Hinnefeld and myself were both on and we were making changes to the database -- Access will give us a warning -- you are -- you are allowed to do that, but it will give us a warning if we've opened up the same record and we're trying to make a change to the same record. So it doesn't allow that to happen, but otherwise you can get onto the system and view and change

things simultaneously.
Okay, are we ready to move on? I'll go back to opening up the database.
Okay, the database opens up to our summary page, and I'll just go across this page and explain to you what -- what you're seeing here. the first column is our finding date, and we've selected a finding date based on what the -- the finding date is the same date as the report was issued to the Advisory Board. In other words, our first set of findings had -- I think there were 33 documents and all the findings associated with those 33 documents are dated 1/17/2005.
The second column, you'll see our procedure number, and the third column is the finding number and the SC&A page number. That indicates the page number in the hard copy report that was forwarded to the Board.
Fourth column is a rating. Most of you are familiar, our procedures review process includes a checklist, and so we rate each of the findings and we've captured that in this database.
Then you get -- we have -- the fifth column is

the SC&A finding description, and the final column is status of the workgroup process. Now I'll just give you a little bit of an explanation as to the various status. We captured, or we have identified a cat-- certain categories of statuses. In fact, we have a drop-down box so that you can't put just anything in this field. We have very specific statuses so that everything is consistent. The status that you see in our -- in the first item that we've opened is "in abeyance," and in abeyance means that, according to the Advisory Board -- or to the working group, they've come to resolution on that finding; however, there may still be additional work that's necessary such as -- a good example is NIOSH has agreed to modify their procedure. So we keep this in abeyance until that additional work, such as modifying that procedure, has been completed, and then we will go back to this finding, ensure that that finding -- that modification does satisfy the concerns that we had in that finding, and then this item would become closed.

Some of the other status are obviously "open,"

and then we have an "open in progress" -- now open in progress meaning that we've already started some discussion of this particular finding. An open finding means that SC&A has introduced this into the database, but we have not discussed this. We haven't had any issues resolution meetings regarding -- regarding that particular finding, so we did distinguish between open and open in progress.

We also have, obviously, "closed," meaning that to the workgroup's satisfaction we've closed that particular finding. We have lastly a "transferred" file -- or transferred status, and this is where I feel the -- this database really benefits, hopefully, as I said, not only the procedures workgroup but all the other workgroups that are out there. Currently we only have this database developed for the procedures workgroup, but "transferred" can indicate that at some point, if we determine that this particular finding is more appropriately addressed under the site profile work, we can -- we can identify this as transferred, and current-- and currently we've been transferring things within the procedures

to global issues, some issues that come up on a routine basis, such as ingestion and inhalation, and we've categorized them as global. But ultimately we might want -- we might select "transferred to site profile." At that point what this database will allow us to do, once the site profile database has been developed, it will automatically write a -- write that particular finding directly into the site profile database, and it will get a status in that database of "imported," and you will know that it was imported from the procedures database. And I'll talk about that a little bit more when we get into the details page so that -- I'll show you where we're going to capture that imported status so that we always know that that was an imported item into the various work-- workgroups.

While we're on this page I should ask is -- is there any questions before I move on? I may answer maybe some of your questions once we go through this, but I can entertain questions.

(No responses)

Okay, we'll move on then. I'm going to scroll down here and pick a file that I can show you

the details screen. Here we are.
Put your cursor on ORAUT-OTIB 17, and it's finding 06. If you put your cursor on any of these fields -- now I lost my screen here, I'm sorry. Let me do something. I (unintelligible) something here so I can see my tabs again. I lost my tabs at the top because I have too many screens open -- too many --

**MS. MUNN:** Too many icons.

**MS. BEHLING:** Yes. See if I can get some of these -- oh, here we go. Let's go back, start over.
Okay, what I was trying to get to is the details screen, and I was actually going to scroll down and use a different details -- open up a details screen for a different finding, but I take notice I did lose my tabs there. So let's open a details screen and I'll give you an understanding of what is on this details screen.
What we had initially envisioned when we -- when we -- we looked at designing this database is -- I know Wanda and the workgroup were interested in having a summary sheet which will list all of your findings up front, and then an

individual sheet for each finding that describes what happened to that finding from its initiation through its resolution. And that's what you're seeing on this details tab. Again, you'll see the procedure number, and we repeat some of the issues -- the first line pretty much repeats everything from the summary sheet. And we also have an internal review objective that, again, is an item that comes off of our checklist and SC&A can put that information in to capture that also. In fact, we've used that information on our summary report.

As you go down then you'll see the SC&A finding date and a full description of that finding. And underneath there you'll see NIOSH response date and their complete response.

The bottom portion of the screen is -- each -- what gets captured through -- at each of the workgroup meetings, and currently you see for the -- for the -- the finding that I have identified on the screen, the -- there's been only one workgroup meeting, and we can capture the date of that workgroup meeting, any discussion that was held by NIOSH and SC&A, and

then any directives that were given to either NIOSH or SC&A during -- during the working group, and then follow-up. And as you can see on this record, in the bottom, we have one record -- because there's only been one workgroup meeting. If there were several workgroup meetings at the bottom here you'd see this would be record one of two.

Also the related link section right here where I have my cursor, this is where you will put the PDF file name of any white papers or supporting documents that may have been required as part of resolution to this particular finding. And you will actually have a link to the referenced document sub-folder, and it will open up that PDF file directly from -- from your details screen.

The other thing that you can take notice of is under the internal notes, when we do have other databases developed -- and I talked about adding a status for "imported" -- once we import a finding into a new database, we will also have a note put into the internal notes section indicating that this particular finding came from this workgroup, so that we always

capture that. Because as we start to work through this finding, that status will change to open in progress and ultimately closed. But we want to be able to capture the fact that this was a finding that was imported from some other workgroup.

And at the bottom you can see -- rather than going back to your summary screen to look at a previous or the next details screen, we do have buttons that will take you directly to the next summary.

Okay. Now we're going to go to the filter and sort section -- the button -- and this -- this is the screen that will be pulled up when you hit "sort and filter." On the left-hand side, as you can see, we have three levels of sorting. And in this particular example any docum-- or any of the findings that are pulled up will be sorted first by procedure number -- and I might go on to say, we tied procedure number and finding number together because we thought it was important that when you pull up a certain procedure the finding numbers are sequential after that. So those two fields on your summary are also -- are tied.

The second-level sort on this example would be the finding date, and then you can go as far as a third-level sort which -- as you see here on the radio button that's selected, that would be your stat-- the status of the workgroup process.

Now for filtering, we have -- first of all, our first filter is -- we can actually sort data on key terms. I'm going to use the term "ingestion," and hit the "OK" button and go back to my summary screen, and you can see there were five findings found with the word "ingestion" -- I use ingestion because that is one of those -- it's a finding that we also often have with our global issues. And that word can be anywhere in our details list, our -- in an-- in any of the fields of our details screen. It just so happens in this particular case the ingestion is in the -- the SC&A finding description, but that -- if that word were to show up in NIOSH's response, or anywhere else in this details screen, it will pull that record.

And I'll also just walk through a few other sorts. As you can see, you can -- if you

uncheck certain things, that takes it out of the list and so right now I'm going to check only "open" and "in abeyance" and look at the number of records we have. The other thing I will point out -- if we go back to our summary screen it shows -- that's -- go back one more time -- oh, it's -- I kept "ingestion" in there. Let's take "ingestion" out and -- "open" and "in abeyance" -- and our summary screen then shows -- and at the bottom of the summary screen you can see we have 309 records that were identified as a result of filtering for "open" and "in abeyance," and they are sorted by "in abeyance," as we had requested. Now the "print summary" screen -- and I just selected that screen. It's going to take a little bit longer. I should have used less data here, and I won't stop it at this point, but what that "print summary" screen is going to do is it's going to set up a file for us so that it will print this summary screen, and I'll show you how we save this to a PDF-type format that can be used during your working group meetings. Unfortunately there were 309 records on this particular sort and so the

print screen -- it takes a little bit longer. I should have used -- I should have used my "ingestion."

But while this is working, I guess the mechanics of entering all of this data was initially done by SC&A. We went back to our original matrix tables and we were able really to fairly quickly convert what is on those tables into an Access -- or into an Excel file and then into this database. So we weren't able to capture -- at least from the first set -- all of the information from the workgroups, and we didn't think it was necessary to go back to all of the transcripts to try to capture everything, but we at least were able to load that data rather quickly by going back to the initial table format.

I apologize here for this...

The other thing I will make mention of, on this particular screen at the top you see, in red, "Filter is ON," indicating that you're not looking at a complete database. And when this is done printing I'll go back and show you this complete database at this point has 472 records, I believe.

Does anyone have any questions while we're waiting?

**MR. CLAWSON:** Not yet, but I'll betcha in the middle of the night we will.

**MS. MUNN:** One of the things I'd like to point out, from a previous page that Kathy was showing you, was the advantage that the completed page is going to have as a permanent archive record. You will be able to go to that page, long after it's closed, and identify when the finding was identified, what response to the finding was first given, what activity occurred in the working group, how many times it was discussed in the working group, what the -- each step of the process was, and what the final resolution will be -- all on a single page on a single document. That would be for any given finding, not just for the procedure itself but for any given finding on that procedure. That's foreseen as being very helpful historically as these similar kinds of issues arise from one site to another.

**MS. BEHLING:** Okay. And I think we're ready here to move on, but the -- after the print screen is ready, you get an opportunity to type

into this area a header. And typically I would identify the date and the fact that SC&A printed this document out -- I'll use that as an example, and we'll click "OK," and this is the type -- this is the first page of 25 pages for a summary report.

One of the things I'll also point out is -- and this is a unique feature to this database -- is we have -- if we want to go ahead and print out the details for everything that's identified in the summary report, you see the fourth column is a details page number, and so it automatically numbers each of the details page behind this, so we can go directly to that page to identify the details of each of these findings.

In order to print this, you will go to "file," "print," and then you will select your Adobe PDF, and at that point you would save -- you would name your file and save it to your U drive, as I'm walking through here -- because this is the type of documentation that you'll be actually using during your working group meetings for -- it becomes your -- your new matrix.

I want to go back and show you just a few more features of the filter screen because not only can we filter on a particular phrase, you obviously -- as you see -- can filter on any of the categories of the status. We can also filter on a particular procedure number. And they're in a drop-down box and as you start to type them, it will automatically go to -- let's go to an ORAU -- as you can see, it opens up the first ORAU-OTIB and it automatically goes there.

Also, as I talked earlier, the finding dates -- we have specific finding dates in here that are based on our first set, second set, third set, additional finding dates for some of the procedures such as PROC-92 that we were requested to submit separately, and you can sort on any of those dates. Also our ranking, you can sort by ranking, and then lastly by updated on or after. And this is for people that have read/write access and want to be sure that they have truly updated a particular record, you can put a certain date in here and go back to make sure that you have updated the records that you wanted to update. I'll give

you... and that shows you as of 3/14/2007 we had made an update to 14 different records. There is also -- next to your print summary screen there's a print details screen, and as I indicated on the -- when you looked at your summary, it would print all of those details. In this particular case it would be 14 pages of details, and it would print all of those. And our last button here is -- if I select one particular finding and select my print details for the selected finding, I can print just that particular finding -- that particular detail finding. And here it gives us the opportunity to put a footer in so that you can keep track of the date that you printed these, which is useful, obviously, when you're getting ready to have a meeting and you want to put a particular date that everybody should be following -- or using for this particular matrix.

And I believe that sums up the matrix. I've walked you through most all of the components, and I don't know if anyone has any other questions.

As I said, I think one of the nice features is the sorting that has been put in, and also the

fact that ultimately you will be able to link findings between one workgroup and the other. I know we've always been concerned about the fact of have we really captured that finding when it's transferred to a new workgroup, and this will certainly ensure that we have.

Also I'd just make mention that all of the documents that are ultimately going to be put into the "referenced" folder, those documents -- we will follow all the same protocols that we use now, such as putting the disclaimers on them and ultimately making sure that they are PA-reviewed -- Privacy Act-reviewed.

And that sums up my presentation.

**DR. ZIEMER:** Okay. Thank you very much, Kathy. Wanda, do you want to lead this?

**MS. MUNN:** I'm astounded there are no questions.

**MR. CLAWSON:** Well, we're still trying to figure our way through it.

**DR. MAURO:** We'll call you about 3:00 in the morning.

**MS. MUNN:** Dr. Melius.

**DR. MELIUS:** I have a question, but not for Kathy. It's for you, Wanda. Where are we in

terms of a report from the workgroup for Board action -- which was my original question at the last meeting. I mean this is very helpful and so forth, but I'm not sure it sort of tells where we are -- sort of trying to come to closure with -- overall with the workgroup's activities.

**MS. MUNN:** That was my next topic --

**DR. MELIUS:** Well --

**MS. MUNN:** -- after Kathy had completed her --

**DR. MELIUS:** -- then I will take --

**MS. MUNN:** -- her presentation.

**DR. MELIUS:** I'm sorry. You asked for questions, I --

**MS. MUNN:** Yes, I did.

**DR. MELIUS:** -- was trying to accommodate.

**DR. ZIEMER:** They do have a report on that as well, but let's -- let's get --

**DR. MELIUS:** Okay.

**DR. ZIEMER:** -- focus on this for a moment.

**MS. MUNN:** If there are no questions, Kathy, I assume you are available by telephone or e-mail for puzzled members who are trying to get through to a specific piece of information and are not exactly sure where to go.

**MS. BEHLING:** Yes, I will certainly make myself available. And also as I indicated, if there are more technical type questions or any problems with getting onto the system, Don Loomis within SC&A will also be able to help and I can share his e-mail and telephone number with the rest of you.

**DR. ZIEMER:** Basically this takes off our original matrix type of system that we've had a fair amount of experience with, and it allows I think just to keep track of what -- many of these matrices, and I know Mark faces it with the dose reconstruction matrices, you kind of lose track of what you did on each item and how it was fully resolved or what you did along the way. And this allows a good mechanism for tracking all those things.

John Mauro.

**DR. MAURO:** If I may, we're going to be having a procedures work-- meeting that's scheduled, coming up, and I think one of the things that's always most important is when we arrive at the meeting we want to sit down and open up all of the procedures that are active. Other words, usually -- I mean based on this setup, there

are a lot of questions you might ask of it, and one of the first things is okay, we're ready to start. What we're going to do today is we're going to go and revisit all of -- let's say the first group or whatever group of procedures, maybe the second group, and in that group we'd like to start -- get back to reviewing all of the findings that have been open and active, because we are still working on them. So if -- and -- so we'd like to let's say generate a -- a matrix that we could all work from, because if we all agree around the table that's what we'd like to do today -- and I guess I'm putting you on the spot 'cause I know from a practical standpoint, that's usually what happens.

**MS. BEHLING:** Uh-huh.

**DR. MAURO:** You sort of sit down, say okay, we're going to go and take on this batch. Is there a way for you to produce that file that is -- let's say all the procedures that are open and active, and that's what we're going to look at today.

**MS. BEHLING:** Yes. And one second and I'll -- I logged off here, but one second and I'll just

try to do that. In fact, before our last procedures workgroup meeting I contacted Wanda and said what type of matrices would you like for me to generate for you and gave some suggestions as the fact that we're still working on the second set, we have -- we have discussed most of the items, the findings, on the second set but there's still some things that are open and in progress. So we could select that as a filter and generate a matrix in a PDF-type format that can be distributed to the workgroup and we can work from there. But let's use John's example. Okay, there we are. One of the things I also want to show you is I'm going to select all of the records that we have in the database and show you -- currently, from the first three sets of fin-- of procedure reviews and some supplemental reviews, we currently have 472 findings identified in the -- in this database, as you can see in the lower left-hand corner. And in order to sort that database we can look at -- let's look at open and in progress for our second set, which was 6/8/2006. So based on the selection that I've made on this filtering,

we're going to -- hopefully the database will produce for us all the open and in progress items from the second set of procedures that we reviewed. And as you can see, there are 53 findings and it has identified them by procedure number and finding number, showing us all the open items -- well, there's some in abeyance.

**DR. MAURO:** Kathy, I notice you left "in abeyance" in the -- in this section --

**MS. BEHLING:** Did I -- did I --

**DR. MAURO:** Yeah, you did that.

**MS. MUNN:** "In abeyance" was still in there.

**MS. BEHLING:** Well, that's a good thing. If I would have unchecked that and we would still see "in abeyance" I would have been more concerned.

There we are. There are 42 findings from the second set of procedures that we reviewed that are open or open and in progress. So this would be a starting point for -- let's say the next workgroup meeting. Obviously we have a lot of open items that haven't been discussed yet, and so we would print this summary page and the print details for these 42 findings and

that would become -- save them as PDF files and the working group chair would then distribute those as the matrix for the next meeting. That was a good example to walk through the process.

**MS. MUNN:** One of our processes that we have followed in this workgroup, given the enormous number of findings that we have, is to approach the most critical ones first, which leaves us with a large number of open items that are, in numerical status, large. But the actual number of significant open items may be considerably lower than that. We've -- we've, from time to time, also postponed the work that we were doing on existing procedure findings because the work of the Board has brought up an item or a procedure of some type that we felt needed immediate attention, and the workgroup has -- has made an effort to work directly with SC&A to resolve that outstanding issue on a timely basis. So these pieces of data that you see before you are all individual pieces of -- of a much larger picture, a significant number of which have been closed in the process of our activities. And in our future meetings we will undoubtedly begin with this type of printout in

front of us. We will, however, continue to focus on the dozen or so outstanding items that we have from findings that are in work right now and/or in the process of technical exchanges between NIOSH and the contractor with respect to final closure.

**MS. BEHLING:** If there's no other questions, I will close -- close down.

**MS. BEACH:** Kathy, I have a real quick question. When I went to print, I got a detail report footer and I -- you probably mentioned it, but --

**MS. BEHLING:** Yes, it just allows you to put in maybe a date that you're printing that footer, and I put in -- I typed in "test" as we were going through this process, just to show you -- we decided to do the headers and footers just because when you look at the print screen, there was really not a lot of room for the header on the details screen so we made it a footer, but it's just a means of being able to identify a date.

You'll also see at the bottom of the summary and the print details screens on the lower right-hand -- there's your detail footer --

detail report footer, and I'll just put in our date today -- I believe that's the date. The other thing you'll see is the last time that the database was updated, and --

**MS. MUNN:** Which is today.

**MS. BEHLING:** -- which I have to enlarge to be able to see -- which is today. I think earlier today I may have -- I thought it was -- yeah, 4/7/2008, I'm already jumping ahead of myself. But you do see number of pages and the last time that the database itself was updated. And as I indicated under the filter screen, if you want to determine which records were updated, that's an option -- as of such-and-such a date, that's an option with your last filter, where it says "updated on or after," you can determine what records were updated as of a certain date.

**MS. MUNN:** A question I should have asked you earlier, Kathy, is the third set of data completed now in terms of population or are we part-way through that?

**MS. BEHLING:** Yes. No, the third set of data has been populated in the database. And in fact, I believe that's what I used -- I did

take this database and that's what I used to forward to you and to NIOSH to start working on our third set. Those will all be open items.

**DR. ZIEMER:** Thank you very much. Wanda, are -- are you going to proceed to the second question that Dr. Melius --

**MS. MUNN:** Yes.

**DR. ZIEMER:** -- asked now or --

**MS. MUNN:** Yes, I am.

**DR. ZIEMER:** -- do you want to do that during your workgroup session -- or during the -- you're prepared to --

**MS. MUNN:** Well, I think we need to report on where we are with that, yeah.

The workgroup had felt that, because of the enormous amount of data that we have handled since our inception, it was time for us to report to the Secretary what the progress was of this particular group. Doing that is not an easy task. It simply does not lend itself easily to numerical reports.

SC&A has done us a great favor of providing a draft for us to begin our work. The draft attempts to cover the scope of what we have done, and to report on this particular work

gives some feel for what it will allow us to do in the future.

We're well aware of the fact that if the report's going to be of any value there has to be an executive summary of it that is cogent and brief enough to be meaningful to the staff and to the Secretary when that report is received. So I had committed to work with the draft that was before us. We were making an attempt to compile a full report on the first set of 33 procedures that we have been working with.

I was unable to manipulate my own files in a way that I could provide the original authors as smooth a piece of work as I had hoped we might be able to provide as a draft for the Board to review here today. This is seen as being a relatively short report, but with a two-page executive summary and several appendices that will provide the reader with enough information to understand where that first set of procedures are and what we -- how we intend to proceed in the future.

It's my expectation that we'll be able to have that draft in a format for the Board itself to

take a look at and make comments on sometime within the next few weeks. Our -- our next workgroup meeting is scheduled for May 20. Certainly well before that we hope to have a very smooth copy in your hands. We don't want to delay this much longer because it has indeed been a significant amount of time and we have not given any report at all to the Secretary. So if the Board in itself is amenable to that, we'd like to propose that we try to get into your hands sometime in the next few weeks the draft of what we would like to have, as a workgroup, go forward to the Secretary -- simply as a report. No recommendations, simply as a report of what this workgroup has been involved in in the last few years and what the new process for tracking the materials is going to look like.

**DR. ZIEMER:** I might add, the workgroup did look at a draft of a proposed report and asked SC&A to make some modifications in that to put it in a format that was -- looked more like what we would expect to send to the Secretary. So it will be a brief -- I think you described it -- two or three-page report with some

attachments which summarize the extent of the reviews and the findings of the reviews. So --

**DR. MELIUS:** Yeah, let me just -- 'cause I was -- keep getting confused whether -- so basically that would be at the point at which the Advisory Board would concur or not concur with the findings of the reviews.

**DR. ZIEMER:** I -- I think what -- what we're talking about is two different things here. One is what you just -- and with the -- concurring with the findings.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** The other is a report to the Secretary which will describe how the -- how the review was done and yet summarize those findings, and in fact what we're trying to do is express in some way -- and this is -- this is what has delayed it a little bit -- what the impact of those findings has been as far as feedback in to NIOSH and what has changed as a result of the review. So I think that's what's being looked at.

But the findings themselves remain to be fully clos-- closed out as a separate action. I believe that's the case. It would be --

**MS. MUNN:** Yes, yes.
**DR. ZIEMER:** -- the first set of 33 -- yeah. So those have to be separately closed out, in a sense.
**DR. MELIUS:** Then -- then what is the timing on that? I mean I -- 'cause this is the actions of a workgroup that -- that the other Board members have had not had any input into, and -- and with the other situations we're in, we have -- and we need to do this to get the work done, so I'm -- I'm not trying to underestimate the amount of work involved or the difficulties of coming up with a quick summary. It doesn't lend itself to the kind of summary that we do for the individual dose reconstruction reviews. But for the individual dose reconstruction review, two things. All the Board members could or -- you know, and have participated in that, at least on some of the individual dose reconstruction reviews that are -- that are part of each set. Secondly, there's -- there's an opportunity when that now subcommittee but was a workgroup reports back to the Board with a report, we -- we essentially have an opportunity to discuss the findings. And we've

actually -- particularly early on, but -- but continue on, we've sort of -- certain kinds of findings get highlighted and we've had debate and discussion over what's an appropri-- you know, is that finding appropriate, how do we express it and so forth.

And what I'm concerned about is with the procedures workgroup we haven't had that opportunity yet and I'm still not clear that we even are with this first report. And I -- you know, I -- but I mean I could wait and see what -- what's in the report, but -- but I think the -- you know, if we're going to take a Board action and report to the Secretary, I would certainly prefer to do that having had the opportunity to review the -- the substance of those reviews and an opportunity to concur or not concur with -- with the findings of the reviews as they've been passed on to -- to NIOSH. And I worry that these are getting passed on and a long period of time has gone by and -- again, without Board involvement, there's -- activity.

Now again, we have that with some of our SEC workgroups and it's just -- you know, some of

it's just the nature of the process, and I think this is even a more difficult process to decide how to manage, given the number of procedures there are to review. But I think we need to think it -- sort of how do we, you know, get the Board involvement -- and particularly, you know, this is the first step so -- time we've reported, so...

**DR. ZIEMER:** Well, process-wise, we have to close out the issues before the report goes to the Secretary, so that has to happen and that would be a natural outcome of the workgroup's --

**DR. MELIUS:** Okay.

**DR. ZIEMER:** -- work. But at the same time, I basically -- and Wanda has agreed -- that we need to be thinking about reporting -- I don't think we're mandated to do this, but to think about reporting these findings -- or reporting this activity to the Secretary. So there's been developed what you would call a template of what -- what that is going to look like.

**DR. MELIUS:** Okay, it was just --

**DR. ZIEMER:** But you're quite right, the -- we've got to close out the findings before we

can report --

**DR. MELIUS:** Okay.

**DR. ZIEMER:** -- to the Secretary.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** And again, the other part of it, as I suggested, was that we need to -- to evaluate what the implications of those findings, or the impact, is. In other words, is this exercise, you know, having any impact on the program.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** And if it's not, why not, or if so, do -- or if not, what do we change.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** So that's -- that's the other part. But Wanda, you -- has additional thoughts on this.

**MS. MUNN:** I have a couple of additional thoughts, yes, strangely enough.

First of all, I don't believe the concept of bringing all of the resolved findings to the Board for validation has been on my list of priorities. I haven't thought of doing that particular action in that way. I would suggest if the Board wants to in fact look at each of

the resolutions and concur on them that we need to have a full Board meeting of at least three days to look at the findings that have already been closed and taken care of, because there's a bunch. And I'm not -- I -- I suppose my thinking had been that once we had essentially closed the major findings on a procedure, that perhaps procedures, as an entity, might be discussed by the whole Board.

**DR. ZIEMER:** Well, this may be perhaps a little like what we had with the dose reconstruction findings. The Board can't go through every procedure. You -- Kathy told us how many findings there were -- you know, 400 and whatever it is.

**MS. MUNN:** Yeah.

**DR. ZIEMER:** And to sit here individually and debate those findings is probably not beneficial. On the other hand, many of those findings -- a lot of the findings group together. They're repeated kinds of findings, as we have in dose reconstruction, so there -- there can be a pooling of those things. We can say there were -- findings of this nature and here's how they were resolved. There's

findings of another type and here's how they were resolved. So with the -- I think with a proper summary of what was handled and the highlighting of really what -- somebody has to make a judgment -- and I think the workgroup is the one that does this initially -- is make a judgment of what are the really significant and thorny issues that were uncovered in the process, and then ask for the full Board to look at that. We can make all of the background information and the full matrix available, and anyone would be free to go through that and -- and at -- you know, look at particular things that might be of interest. But I think it's not unlike what we do with dose reconstruction.

**MR. GRIFFON:** I think it's similar. You have the opportunity to weigh in, but -- but it's more we're going to discuss groups of types of findings. We're not going to go through every one again, I don't think, so -- I don't think anybody here wants to do that.

**MS. MUNN:** It's a little difficult to know how to proceed and how to sort whether the workgroup's evaluation significance is going to

be the same as the Board's desire to weigh in on significance.

**DR. ZIEMER:** But in a sense, we do something like this even as we prepare the summary report because we have to be able to summarize it to the Secretary. And we have, in our draft, categorized -- I think it's five categories of issues that are looked at. Is it five or seven, I forget?

**MS. MUNN:** There are -- there are actually seven criteria --

**DR. ZIEMER:** Yeah, seven criteria --

**MS. MUNN:** -- by which they're judged.

**DR. ZIEMER:** -- and we -- and we can look at it in terms of those frameworks.

Jim, you have an additional --

**DR. MELIUS:** Yeah --

**DR. ZIEMER:** -- comment here?

**DR. MELIUS:** -- only if -- I mean if -- recalling back to when we were starting to do the dose reconstruction reviews, I think most of us -- or at least many of us -- read all the initial 20 reports, and we struggled with the same issue of how to -- how to pull it toget-- you know, together and what were significant

findings and so forth. And you know, we probably have to take it on -- on incrementally and do that, and I don't see if there's a problem that should there be a particular procedure that's problematic or particularly significant in terms of what the recommendations would be or, you know, what should NIOSH's follow-up be, that we don't devote some time at a full Board meeting to discussing that specific procedure. But I think we start with -- and whether it's 25, 50, whatever it is, I don't know how you -- you've gone about it, but I think we -- we need to have some way of coming to grips with this.

**MS. MUNN:** May I suggest that we provide for the entire Board the draft of the overview of this first set of procedures so that you can see the tack that this report is expected to take. If you find issue with that, if you feel that it needs to be expanded, or if you feel there are specific procedures in that group that you would like more clearly defined, then we can certainly work with the full Board's recommendation to go into more detail or to approach this in a different way. We'll be

glad to provide the -- I -- it's our intent to provide a draft for you to take a look at in the coming weeks. This is only the first set that we're looking at. We have not undertaken the same activity for the second or the third sets.

**DR. ZIEMER:** And in fact I think we're learning here how to evaluate what the findings are and what to do with them, so -- and as I say, I think the summary report at least gives a good framework from which this Board can discuss those findings if -- and -- and make that evaluation.

So I -- I do -- I do want to make sure that everybody has an opportunity to weigh in on -- on issues, if necessary. The Board -- or the workgroup is doing really the foundational work here, and the matrix will be very helpful so that you can easily track what was done and how it was resolved on every single issue.

So -- any other comments or questions for Wanda or the workgroup?

(No responses)

Thank you very much. We appreciate everything that was done, and also Kathy and the SC&A team

that helped develop the -- the matrix -- the new matrix, I'll call it. Thank you very much.

**HORIZONS, INC. SEC PETITION**

Our next item is Horizons, Incorporated. And let me check -- before we have the presentation from NIOSH by LaVon for Horizons, I want to see if Glenn Abraham is on the phone.

**MR. ABRAHAM:** Yes, I am.

**DR. ZIEMER:** Thank you, Glenn. And after we hear from Mr. Rutherford we'll give you an opportunity, if you have comments, as well.

**MR. ABRAHAM:** Thank you very much.

**DR. ZIEMER:** I think -- I think the Board members have received a statement from you by e-mail, as I recall. I believe it was distributed -- yes, I'm -- I'm getting confirmation here. The Board members did receive as well your statement, Mr. Abraham, and we'll give you opportunity to comment here shortly. So here's Mr. Rutherford first.

**MR. RUTHERFORD:** All right. Thank you, Dr. Ziemer. As Dr. Ziemer mentioned, I will be presenting Horizon's evalua-- or NIOSH's evaluations of the Horizons, Inc. SEC petition evaluation.

As indicated, NIOSH received the SEC petition on July 26, 2007. The petition was qualified on October 11th. The qualifying basis provided by the petitioner was that, to the best of that petitioner's knowledge, there was no monitoring data for Horizons, Inc. And NIOSH reviewed our existing documents, our claimant files and other things, and came pretty much to the same conclusion, that there was very little, if any, monitoring data for Horizons, Inc. So NIOSH went through and completed our evaluation and issued our evaluation report on March 14th, 2008.

Petitioner proposed a class of all employees who worked at Horizons from January 1, 1944 through December 31, 1956, the operational period, and all employees who worked in all locations at Horizons, Inc. from January 1, 1957 through July 31st, 2006. This is -- which is the residual period. This was the -- the class -- or the covered period defined in the DOE facility database.

NIOSH reviewed -- during NIOSH's evaluation, NIOSH concluded that we would recommend a class that would be all AWE employees who worked at

Horizons, Inc. for a number of work days aggregating at least 250 days from January 1st, 1952 through December 31st, 1956.

We did evaluate -- we qualified the petition and evaluated the time period -- the entire time period identified by the petitioner.

A little background on Horizons. Horizons, Inc. is located in Cleveland, Ohio. Facilities -- actually the facilities are still in Cleveland, Ohio. Although the DOE facility database indicates the facility covered period started in 1944, all documents we have indicate that Horizons, Inc. was not licensed to work in the state of Ohio until 1947, and AEC activities did not start until 1949. We have -- start -- AEC operations starting in 1949 through 1956, which was looking at the feasibility producing ductile zirconium. That -- in all -- review of all of our documentation indicates that was a non-radiological activity.

In 1952 Horizons was contracted by the AEC to determine the most economical method for the production of thorium metal.

1953 to an unknown date -- I say unknown date, but it stopped at the -- all the material, we

do know, was shipped back in -- and the -- toward the end of 1956 -- was research and development work with uranium. They were looking at some type of cladding work with zirconium and uranium, and in addition they also had drafted a proposal for -- using a similar electrolytic process for production of uranium that was also submitted to the AEC and turned down.

In 1954 to 1958 they did research work with radioactive silver to determine the surface diffusion rate of silver on gold, and it appears -- a license was obtained from the AEC for this material, but it does not appear that it was AEC-related work. At that time, to get the -- to get that source material, you had to subm-- request that from the Atomic Energy Commission.

Our sources reviewed for information on Horizons, Inc. -- looked at site profile Technical Basis Documents, anything that -- which there is no site profile for Horizons. We looked at other Technical Basis Documents. We looked at Technical Information Bulletins. We had an excellent interview with a former

worker who was the metallurgical engineer, and we received a lot of good information from them. Case -- we looked at case files in the NIOSH database, we -- site research database, and documentation affidavits provided by the petitioner.

Did I bounce one? Okay.

Radiological exposures to employees were -- occurred from the operations I previously identified. The principal exposure was from the thorium metal production operations.

External exposures -- beta exposures from thorium metal production, research work with uranium and silver research activities; gamma exposures from thorium operations and uranium research. And based on the radioactive materials present, there was no appreciable source of neutron exposure.

Internal exposures -- thorium and thorium progeny, including radium and thorium -- or radium and thoron from the thorium production operations; uranium from research activities, and silver from research activities.

Availability of dosimetry data -- we have a July, 1953 trip report that indicates that

Horizons management instituted wearing film badges. However, we have no film badge data located prior to May of 1954. Of the four claimants that we have, three of those have external dosimetry data. And our interview that we conducted with the metallurgical engineer did indicate when full-scale production went into place he remembered film badges were -- were used at that time.

Again, we have -- weekly dosimetry results exist from May of 1954 through June of '55, and monthly results from '55 through December of '55 -- from October '55 through December of '55.

We have no bioassay data, no urine sampling, whole body counting have been located for the time period.

Air sampling, we have a December -- early December of 1954 HASL survey took place. It was reported in a February 1955 HASL survey report. We also have some general area air sample data in September of 1955. We have air samples -- four air samples for uranium that are available in 1953.

Again, this is fairly consistent with our

interview that we conducted. The interview with the engineer indicated that he did not recall any in-place monitors for the facility -- air monitors for the facility. He did remember on occasion a person taking air samplings, which is kind of consistent with what we found.

As you've seen a couple of times today, our process is a two-pronged test: Is it feasible to reconstruct the dose for individual members of the class. And then if it's -- if it's not feasible, then is it likely that the health was endangered for members of the class.

NIOSH found that the available monitoring records, process description and source term information are insufficient to complete dose reconstruction for the proposed class of employees. NIOSH currently lacks access to sufficient monitoring, source term data and process information to estimate the complete internal dose to members of the class.

Again, I mentioned we could not reconstruct the internal. It was focused on occupational thorium and thorium progeny dose. We initially looked at the 1954 air data, which was a very

detailed survey that was conducted by HASL in 1954. It identified in that report -- we looked -- we looked at using that report, and based on what we had thought was -- that thorium production levels were probably around the highest at that period, we thought that would be good bounding data to reconstruct the earlier years. However, after we went back and we reviewed further documentation, and recognizing that the scope of Horizons -- Horizons was contracted to look at the most economical method for production of thorium metal. If you look at some of the earlier reports, they went through a number of different iterations and design changes and -- during the pilot skill activities before they went into production. We could not -- we did not feel that that air data in 1954 really could bound our results for those earlier years.

So based on the little information concerning the initial process, process changes and process controls implemented during the research and development activities, we concluded that we could not use that data to

bound the earlier operational years.
We looked at using that '55 HASL report again to bound the period from February 1955 to the end of operations in '56. If you look at the HASL report, it identifies a number of recommendations for the contractor to reduce air concentrations. At the time they were exceeding the air concentration limits consider -- in a -- a large percentage of the areas, and they had identified a number of practices and a number of controls to go into place to reduce those concentrations. However, the only air data we have post-- that February '55 is some general air samples that were taken in September of '56, and we also have documentation that indicates that actual levels of material on-site increased all the way to June and July of 1955, up to 10,000 pounds of material. So based on the data that we had, we did not feel that we really had enough data to -- to conclude that that '55 HASL data could bound that one year of operations from '55 to '56.
In addition -- in reviewing the process, the electrolytic process and the temperatures

associated with that process, we noted that there was a high likelihood that -- and the release of radium, thor-- thoron and associated progeny. The delay period between the collection and the counting of HASL air data and the associated short half-lives of the radium and the thoron directly impact our ability to reconstruct the dose. If you looked at -- the samples were collected on December 3rd and 4th period. The first counting of the samples was not until late December, roughly 27th time frame, and a number of them rolled all the way into 34 days -- to count those samples, so the short-lived activity would have gone.

NIOSH believes that the internal and the external exposures from the residual period can be reconstructed using the data from the 1955 HASL report, and the 1977 FUSRAP report data, to determine the upper and lower bounds, respectively. Now I know you're thinking okay, you said you couldn't use the 1955 report for the operational period. But if you think what we're doing here, we're taking that 1955 report when we were in production and operations,

we're using air concentrations from that '55 report which clearly, during operations, would have been much higher than the shutdown when -- when no longer -- when operations were no longer occurring. So we take that 1955 air data and we take the 1977 FUSRAP data, which includes surface contamination and air concentrations as well -- we take the surface contaminations -- we -- we used resuspension factors and we came up with an air concentration in 1977. That air concentration we came up with for 1977 using resuspension factors was actually 1,000 times higher than the air concentration that were in the report. We used that data as our lower bound. We took that and we used an exponential model to come up with a -- exposures for the -- internal exposures for the residual period.

The external exposures, we took the 1955 HASL report using general area dose rates -- again, when there's a significant amount of material on site, we use those general area dose rates as our upper bound. We contin-- we used a straight-line approach from 1955 to 1977 for exposures from that 1955 report, and then 1977

we took the dose rates from that 1977 FUSRAP report out to 2006 for our later years for external exposures. Again, this del-- this methodology is actually detailed in our evaluation report and -- can take a look at that.

Health endangerment, we have -- we have discovered no information for any operation or activities at Horizons, Inc. site in Cleveland prior to September 4th, 1947. We actually contacted the Department of Energy -- Department of Energy and asked them for documentation that they used to support their covered facility. When we -- we received that documentation and reviewed that documentation, and again have no indication that there was any work that occurred prior to September of 1947. In addition we have license -- we have information that supports that they were not licensed to operate in the state of Ohio until September 4th, 1947.

Therefore, at this time we have concluded that there is no health endangerment for that 1944 to 1947 period because we have no indication of any work ever occurring at that time.

In addition, we have discovered no information for any radiological activities, or the presence of radioactive material, at the Horizons site prior to 1952. We know that they were doing zirconium work and non-radioactive work. They were looking at the production of ductile zirconium. We have information on that. But we have no indication of any radioactive material being on-site prior to 1952. Now -- and so based on that, we're identifying that there's no health endangerment from 1947 to 1952.

Now we -- I want to point out, if -- if evidence is found at a later date that there is -- there was radiological operations that occurred during that period, we can move forward with an 83.14 to include that period in our evaluation. But at this time we have nothing to support that there would be any health endangerment from that period.

Again, NIOSH determined that dose reconstruction is not feasible from 1952 to 1956 at the Horizons, Inc., and that the health of the employees covered may have been endangered. The evidence reviewed indicates

that workers in the class received chronic internal and external exposures from production and research and development activities at Horizons. And our recommended class is all AWE employees who worked at Horizons, Inc. for a number of work days aggregating at least 250 days from January 1, 1952 through December 31, 1956.

Our findings in summary, internal exposures from thorium and thorium progeny cannot be reconstructed during the operational period. External exposures can. I actually didn't go over this, but we have -- as I mentioned earlier, we have external exposure -- we have film badge monitoring data for a number of years. In addition, we've taken that film badge monitoring data and developed a coworker model for -- that will be used in support of partial dose reconstructions.

The residual period, we've indicated we can do all dose reconstruction -- uranium, thorium, thorium progeny, and both the -- all the external exposure.

And again, our class is recommended '52 to '56, and it's not -- we concluded that dose

reconstruction is not feasible and health was endangered.

That's it.

**DR. ZIEMER:** Okay. Thank you very much. Could you clarify the usage of the silver again?

**MR. RUTHERFORD:** Yeah.

**DR. ZIEMER:** I think it was 110 or 110M --

**MR. RUTHERFORD:** It was 110M.

**DR. ZIEMER:** -- it was the longer-lived one, the 110M.

**MR. RUTHERFORD:** The 110M -- yeah, the 110 would have gone away.

**DR. ZIEMER:** And you -- I think I read in the report that was outside of the --

**MR. RUTHERFORD:** It actually went -- you mean the period?

**DR. ZIEMER:** Yeah.

**MR. RUTHERFORD:** It went actually till roughly 1958. However, our reports indicate that '56 to '57, all the material was shipped back and they closed out the license in '58. The amount of -- or actually 1956 the material was shipped back and they closed the license out in '58. Either way, the -- the residual period would not really address that because it wasn't an

AEC-covered activity.

**DR. ZIEMER:** Yeah.

**MR. RUTHERFORD:** And even if it was an AEC-covered activity, I think the half-life -- if I remember correctly -- is 100 days. It's going to be very -- very -- it's in the report, I can't remember, but it's not a significantly long half-life that it would be exposure concern for more than a year or two.

**DR. ZIEMER:** 250 days --

**MR. RUTHERFORD:** Oh, okay.

**DR. ZIEMER:** -- is what you say in the report.

**MR. RUTHERFORD:** Yeah, three to four years. Okay.

**DR. ZIEMER:** So -- yeah, well, 250 days is -- if you're talking about, you know, up to ten half-life periods, that's --

**MR. RUTHERFORD:** That can be relatively significant.

**DR. ZIEMER:** Okay, thank you. That clarifies that.

Other questions? Josie.

**MS. BEACH:** I just want to make sure I'm clear. During the residual period, '57 to 2006, did you have any bioassay data at all?

**MR. RUTHERFORD:** No.
**MS. BEACH:** Okay. And then the lab, the HASL lab --
**MR. RUTHERFORD:** Uh-huh.
**MS. BEACH:** -- where was that located?
**MR. RUTHERFORD:** Where was the survey located?
**MS. BEACH:** The Health and Safety Laboratory that you're --
**DR. ZIEMER:** New York.
**MR. RUTHERFORD:** In New York.
**MS. BEACH:** New York?
**MR. RUTHERFORD:** New York Operations Office.
**MS. BEACH:** Thank you.
**MS. MUNN:** Manhattan.
**DR. ZIEMER:** Jim.
**DR. MELIUS:** Yeah, can you clarify some of this confusion on the time period that this was in operation?
**MR. RUTHERFORD:** Yes.
**DR. MELIUS:** I believe the petitioners went back to 1944, seem to indicate that the facility was in operation from '47, but only became involved in this program in 1944, so --
**MR. RUTHERFORD:** Actually --
**DR. MELIUS:** -- excuse me, 1952.

**MR. RUTHERFORD:** Right. What -- actually what we found -- again, and we are working with the Department of Energy and the Department of Labor on this issue. Right now, and from what -- everything we've reviewed and all the documentation we've reviewed, we have no indication that the facility even existed until 1947. Okay? So we're working with -- again, with Department of Energy and Labor on that. In addition, all our documentation indicates that there was no radiological activities or radioactive material on site until 1952, you know. And we've talked to -- we talked to this -- the metallurgical engineer and we've, you know, reviewed all this documentation. Our existing claimant pool starts in 1952. We have no one that works prior to that period, so no one's affected by this at this time. In fact, our existing claimant pool of four, all of them worked during the operational period, so...

**DR. ZIEMER:** Let's hear from Glenn Abraham. Glenn, are you still on the line?

**MR. ABRAHAM:** Yes, indeed, I am.

**DR. ZIEMER:** Please give us any comments you may have.

**MR. ABRAHAM:** Well, (unintelligible) for everybody, so (unintelligible) --

**DR. ZIEMER:** Glenn, let me interrupt you a minute. You're breaking up. Try moving back a little bit from the phone, let's see if that's better.

**MR. ABRAHAM:** Is that better?

**DR. ZIEMER:** Yes, a little bit, yeah. Go ahead.

**MR. ABRAHAM:** Okay, great. (Unintelligible) went into this. (Unintelligible) be repetitive (unintelligible) to thank everybody once again (unintelligible) people (unintelligible) report (unintelligible) Ms. Laurie Breyer (unintelligible) through this, she kept me informed that (unintelligible). I just want to thank (unintelligible) everybody (unintelligible).

**DR. ZIEMER:** Okay, thank you very much for those comments.

**MR. ABRAHAM:** Thank you.

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

(No responses)

Okay, we have a possibility for taking action

on this if you so desire. Yes, Dr. Melius?

**DR. MELIUS:** Yeah, if -- concurrence of the other Board members, I'd like to offer a long motion -- again.

**DR. ZIEMER:** Very -- very briefly, though, is your long motion a motion to recommend this class?

**DR. MELIUS:** Class -- according to the NIOSH definition of the class.

**DR. ZIEMER:** Please proceed.

**DR. MELIUS:** The Board recommends that the following letter be transmitted to the Secretary of Health and Human Services within 21 days. Should the chair become aware of any issue that in his judgment would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay and the reasons for this delay, that he immediately works with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health, parentheses, the Board, close parentheses, has evaluated SEC Petition 00094 concerning workers at the Horizons,

Incorporated facility in Cleveland, Ohio under the statutory requirements established by EEOICPA, incorporated into 42 CFR Section 83.13. The Board respectfully recommends Special Exposure Cohort status be accorded to all AWE employees who worked at the Horizons, Incorporated facility in Cleveland, Ohio from January 1st, 1952 through December 31st, 1956 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. The Board notes that although NIOSH found that they were unable to completely reconstruct radiation doses for these employees for January 1st, 1952 through December 31st, 1956, they believe that they are able to reconstruct the external radiation doses and the occupational medical dose during the time period in question. NIOSH also believes that they can reconstruct individual doses during the residual period, parentheses, January 1st, 1957 to July 31st, 2006, close parentheses.

This recommendation is based on the following

factors: Horizons, Incorporated facilities involved early research and development work for the manufacture of atomic weapons. NIOSH was unable to locate sufficient monitoring data or information on radiological operations at these -- at this facility in order to be able to complete accurate individual dose reconstructions involving internal exposures to thorium and thorium progeny for the time period from January 1st, 1952 through December 31st, 1956. The Board concurs with this conclusion. NIOSH determined that health may have been endangered for the workers exposed to radiation at the Horizons, Incorporated facility in Cleveland, Ohio during the time period in question. The Board also concurs with this determination.

Enclosed is supporting documentation from the recent Advisory Board meeting held in Tampa, Florida where the Special Exposure Cohort was discussed. If any of these items are unavailable at this time, they will follow shortly.

**DR. ZIEMER:** Okay, you've heard the motion, which the Chair is going to modify with a

friendly word. The last sentence has to have the word "class" in it.

**DR. MELIUS:** Yes.

**DR. ZIEMER:** Which will be added. This is not a Special Exposure Cohort, it's a Special Exposure --

**DR. MELIUS:** Class.

**DR. ZIEMER:** -- Cohort class. But that's the motion. All -- a second, we need a second.

**MR. GIBSON:** I'll second.

**DR. ZIEMER:** Discussion? Any discussion?

(No responses)

Are you ready then to vote on this motion?

**MS. BEACH:** I just have a quick clarification. Was that for internal and the external, or are we excluding external?

**DR. MELIUS:** Which? The --

**DR. ZIEMER:** If you look at --

**DR. MELIUS:** -- the basis for the lack of feasibility is the internal. They --

**MS. BEACH:** Right.

**DR. MELIUS:** -- they're able to do external and occupational, so that so states that.

**MS. BEACH:** Thank you.

**DR. MELIUS:** And then for the -- it's a little

confusing 'cause for the residual period it's -- they can do everything.

**MS. BEACH:** Right. Just wanted to make sure.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** But again, the effect of that is for the -- the non-specified cancers, they can go in for partial dose reconstructions if -- if they wish.

**MS. BEACH:** Right. Got it.

**DR. ZIEMER:** Okay.

**MR. GRIFFON:** The effect also is denying the residual period. I think people are straight with that. Right? That we're accepting NIOSH's recommendation on the residual period.

**MR. RUTHERFORD:** Correct.

**MR. GRIFFON:** And the -- I mean the only question I would have is the -- I haven't had a chance, I don't know if other Board members are comfortable -- this looks like a slightly different approach handling the residual period where you're using data that was sort of -- and LaVon mentioned this, data sort of that was rejected for the use during the operational period to bound in between the 1977 cleanup data and extrapolate internal doses from that.

It's a -- it's a new model on me, anyway. I don't know that we've seen that before.

**MR. RUTHERFORD:** I don't think the model's new. The exponential model is what we've used in -- in other residual periods. The -- I think I -- I said the reason why we excluded the -- I explained why we excluded the -- that '54 -- or '55 HASL survey for the operational period, but I also provided why it would be bounding for the oper-- or for the residual period.

**MR. GRIFFON:** Okay.

**DR. NETON:** I think I might clarify a little bit -- this is Jim Neton. I'm pretty sure LaVon said that the air samples that we had were general area air samples --

**MR. RUTHERFORD:** Yes.

**DR. NETON:** -- is that correct? And we've never really been -- it's never been our practice to use general area air samples to reconstruct internal dose during the period when the activities were occurring. But we certainly have used general area air samples to bound non-process-related activities. And that would be the intent. The non-process activity related to the general air sample we feel very

confident bounds the -- the -- any air that would be -- any air that would be generated in the residual period, if you can follow that logic.

**MR. GRIFFON:** Yeah, yeah. And -- and there are other sites that we've looked at where we've extrapolated between data? I know you back-extrapolated --

**DR. NETON:** Well, it's the subject of a TIB that's out there. We have a -- TIB-71?

**MR. RUTHERFORD:** TIB-70.

**DR. NETON:** -- TIB-70 just came out that --

**MR. GRIFFON:** Okay.

**DR. NETON:** -- goes over these residual models and it's -- it's been reviewed and approved for use internally. I would say that --

**MR. GRIFFON:** I'm -- I'm not familiar with that one, but yeah, okay.

**DR. NETON:** We did use general area air samples at Simonds Saw and Steel, if you remember, to reconstruct the residual activity at Bethlehem Steel. That was the basis for coming up with the resuspension in the air at Bethlehem Steel.

**MR. GRIFFON:** And at -- at Chapman Valve -- I'm just going through a lot of these sites 'cause

I think we have equity issues, too, on how we treat these -- at Chapman Valve how did we handle the residual period -- or -- or did we leave that on hold for now? I'm not sure where that stands.

**DR. NETON:** You know, you caught me here, Mark. I can't remember what we did at Chapman Valve right now.

**DR. MELIUS:** The -- the -- the -- there's one site you had a question on, Mark, and I can't remember which one it is, whether it's Chapman or one of the others, and actually -- actually when I first saw this I thought it was an 83.14 so I spent a fair amount of time going through it. In fact I even corresponded with LaVon a little bit about that -- about the residual dose issue, and I think this is different in the way they did it, and I was satisfied. But you should take a look and see if you think --

**MR. GRIFFON:** Yeah.

**DR. NETON:** Seems to me we did address the residual contamination at Chapman Valve up through I think before the DOE took over. The DOE operation is covered, but I don't exactly remember the model for that.

**DR. ZIEMER:** This action --
**MR. GRIFFON:** I mean I looked quickly at it, and it looks reasonable. I just haven't looked at it in depth, and I was also looking -- from a consistency standpoint I was concerned that -- you know.
**DR. ZIEMER:** This action today, however, would not preclude some other action later if -- if something arose.
**MR. GRIFFON:** Well, I don't know if we can reopen that --
**DR. NETON:** I would suggest, though, that -- I think that we can bound this -- this residual activity. Now whether the model is deemed to be totally accurate is the subject -- could be the subject of some review and -- and deliberation. I mean if that was the Board's desire. But I don't know --
**MR. GRIFFON:** Well, I think the question would be is the model a bound-- you know, is the -- is the model bounding, I think would be the question at hand.
**DR. NETON:** Well, the question -- can we bound residual contamination period with some model.
**MR. GRIFFON:** Right.

**DR. NETON:** And we proposed one, and whether it's totally accurate in the Board's opinion I guess could be reviewed outside --

**MR. GRIFFON:** Oh, I see what you're saying.

**DR. NETON:** -- the scope of the SEC --

**MR. GRIFFON:** It's like a site profile sort of --

**DR. NETON:** Correct, exactly.

**MR. GRIFFON:** -- issue, right -- okay. Yeah.

**DR. MELIUS:** Yeah, I -- I'd just add that the 1955 area monitoring data that they're using is from a time period when the facility was operational, so it's not necessarily at its peak of operation, which continued into the next year, so it's a sort of a -- it's sort of a unique set -- dataset in some ways. And so I think it -- their argument would be that it -- it is high, then they're using 95th percentile on that, so that follows through.

I also would add that our -- our usual way of expressing this is only stating it. We aren't really saying we fully concur with that particular finding, because we're not really -- we haven't really evaluated the full, you know, dose reconstruction method any more than we've

really, you know, evaluated the full -- their ability to use external dose during the -- the time period, so...

**MR. GRIFFON:** And I think Jim's right, it's more the -- the thing for us to look at is is the information there.

**DR. MELIUS:** Yeah.

**MR. GRIFFON:** If we agree with that particular TIB's approach, we always have options to go back and review that, but right now we're looking and it looks like the pieces are there. How they exactly modeled that can be -- can be commented on later -- yeah, I guess -- yeah.

**DR. ZIEMER:** Okay. Additional comments? Are you ready then to vote on this? Okay, we'll vote -- take a poll vote.

**DR. BRANCHE:** Josie Beach?

**MS. BEACH:** Yes.

**DR. BRANCHE:** Brad Clawson?

**MR. CLAWSON:** Yes.

**DR. BRANCHE:** Michael Gibson?

**MR. GIBSON:** Yes.

**DR. BRANCHE:** Mark Griffon?

**MR. GRIFFON:** Yes.

**DR. BRANCHE:** Dr. Melius?

**DR. MELIUS:** Yes.
**MR. GRIFFON:** With reservations -- no.
**DR. BRANCHE:** Wanda Munn?
**MS. MUNN:** Yes.
**DR. BRANCHE:** Robert Presley?
**MR. PRESLEY:** Yes.
**DR. BRANCHE:** Gen Roessler?
**DR. ROESSLER:** Yes.
**DR. BRANCHE:** Phillip Schofield?
**MR. SCHOFIELD:** Yes.
**DR. BRANCHE:** Paul Ziemer?
**DR. ZIEMER:** Yes.
**DR. BRANCHE:** We have to get John Poston's vote later.
**DR. ZIEMER:** You have to get John's later, but the motion does carry, nonetheless, and we will --
**DR. MELIUS:** And Lockey's.
**DR. ZIEMER:** And Dr. Lockey's as well, and we will then prepare a recommendation to the Secretary in accordance with that vote.
We'll go ahead and take our break now before we start the next subject. Let's take a 15-minute break.
(Whereupon, a recess was taken from 2:45 p.m.

to 3:10 p.m.)

**DR. ZIEMER:** Are the phones...

**DR. BRANCHE:** Could you unmute the phone now, please?

**MR. PRESLEY:** Paul, I'm on.

**DR. ZIEMER:** Thank you. I hear you, Bob. I will call the meeting back to order.

**NIOSH QUALITY ASSURANCE AND QUALITY CONTROL**

Our next item of business is the report from NIOSH on quality assurance and quality control, and back at the mike is Larry Elliott.

**MR. ELLIOTT:** Thank you, Dr. Ziemer, and I certainly appreciate that this subject was placed on the agenda at this point today. Had it been placed -- you know, it's such an exhilarating piece to present that if it was given after the lunch break I probably would have numerous people sleeping in the audience. But at any rate, I am pleased to make this presentation to the Board on the quality assurance and quality control procedures that are utilized in our program at NIOSH. I have presented to the Board on a number of occasions about various aspects of QA and QC that we do at NIOSH in the Office of Compensation Analysis

and Support. I mentioned some of these on October 2005 at your Board meeting, again in June 2006, December 2006 and again in January 2008, so let it not be said that we haven't talked about QA/QC before, but never in this breadth or depth that I'm about to take you to today.

I think that this presentation needs to start from the perspective that NIOSH has processed over 27,000 claims, which requires us to have communication directly with -- with tens of thousands of individuals relevant to those -- handling those claims. We have completed numerous SEC evaluation reports and have produced numerous technical documents over the last seven years.

With any program of this size there's going to be human error. And given that truth, I think and I believe that the goals of a strong QA/QC program are three-fold. One, that they -- the program limits the amount of human error to the least amount possible; two, that we learn from our mistakes and that -- that are made and we try to prevent future mistakes; and three, that our QA/QC program that is -- that in our QA/QC

program we are constantly evaluating what can be done to improve the program.

I believe that -- I hope that as I get to the end of this presentation you will see that those goals are inherent in our program, and are reflected in the various areas that I'm about to speak on today.

Quality assurance and quality control is incorporated in all aspects of the program at NIOSH, in our dose reconstruction process -- I'll talk about this at length, I have a number of slides that I'll go into for you. In the development of our technical basis approaches and documents, site profiles, et cetera -- I'll also speak about QA/QC that is done in that regard. We also have quality assurance and quality control components involved in our Special Exposure Cohort petitioning process, and I'll speak on some of those.

There's another aspect in our QA/QC program, and that is called program oversight. I have a contractor oversight team that monitors our contractors that we also do self-assessments within OCAS as well, so I'll speak to that.

And finally what's not on this slide is -- the

one last bullet that should be there, the Advisory Board's review process and how we incorporate what we've learned from that, and I'll speak about that in the last set of slides.

With that said, our quality assurance/quality control program has evolved over the course of these seven years as the needs and the complexity of the processes were more fully understood and developed.

To start with, we have to have an overarching goal, and here's our overarching goal. I first presented this to you in 2006, I believe, in June at the Washington, D.C. meeting. And this overarching goal at NIOSH for our quality assurance/quality control process is to ensure that each dose reconstruction or SEC evaluation is of sufficient quality to yield a correct Department of Labor recommended decision on compensability.

I'm not going to get into a great deal of depth on each one of these topic areas -- dose reconstruction, technical basis document, contract oversight -- but I am going to give you in that the breadth of what we call QA/QC

control, quality control measures.
In our dose reconstruction process there are seven steps that I'll go through here for you and speak about how we do our quality control checks and where our quality assurance comes into play.
The workgroup on procedures has reviewed, or is currently reviewing, a number of procedures that are related to dose reconstructions as they are moving through this seven-step process, and certainly we could go back and visit those types of procedures that that working group has examined or is involved in examining.
In step one, the -- of the dose reconstruction claim process, all required data that we receive from the Department of Labor in a claim packet is entered into our NIOSH/OCAS Claims Tracking System. You've heard us call this NOCTS. Well, that's the acronym, NIOSH/OCAS Claims Tracking System. And this is done in a couple of ways. All of the paper information that is submitted by a claimant and all of the development of the eligibility for that claim that DOL does is documented and, in paper form,

sent to NIOSH. We scan all of that paper into a claim file and enter that claim file, in electronic version, into our NOCTS database system.

There are also some information that is electronically keyed into that NOCTS database system -- the Social Security number, the date of birth, the name, the address, the contact information -- a variety of things have to be keyed in, based upon what we see in the hard copy information that comes from Department of Labor.

We run an electronic verification on that information that's keyed into the database. This is done every night, and here you see on this slide some of those variables that are examined under this electronic check that's done every evening. So Social Security number is entered, does it already exist elsewhere in the NOCTS database system. If it does, we've got a problem. We've got two people with the same Social number, or we've got a wrong Social number on one of these two claims, perhaps. So that spits out a report for my public health advisors to go examine the issue and follow up

with either the claimant or with -- and/or DOL. For skin cancer claims, of course, the ethnicity is a requirement that we ask the Department of Labor to provide us information on from the claimant, and that has to be there for all skin cancers, and so we do an electronic check of that as well.

Additionally, smoking history is a requirement for us to reconstruct dose for any lung cancer-related claims, so we have a check on that.

And then this, are all reasonable and what -- and what the -- makes sense as far as the way they've been electronically entered into the database system. So in other words, the date of death is not prior to the diagnosis date. That would spit out an error report and we'd follow up on that discrepancy.

As I mentioned, discrepancies are evaluated and resolved internally, or they may be referred to DOL for additional development and resolution.

Our public health advisors review all hard copy files that are in a particular claim, and they compare the data that's been entered into NOCTS for the Energy employee's name and -- or the survivor contact information, the type of

cancer, the date it was diagnosed, and making sure that the ICD-9 code that is associated with that cancer makes sense.

There are several forms, other documents, that are relevant to employment history that are also examined by the public health advisor to make sure that the quality is up to snuff in order for the claim to move through the system.

The quality control checklist has been generated for every case, and a final electronic verification is completed once that case achieves full completion and is returned to Department of Labor -- and I'll speak a little more about that in a later slide.

We're still -- we're at step two now, and the re-- there's a need to go to Department of Energy and request DOE-related information relevant to the claim. And so once that information is returned to us, it comes in to our contractor or it comes in to us, our contractor reviews all of those data and documents that DOE has supplied us regarding the exposure for that claim. And again, the information associated with the Energy employee, the correct data for that Energy

employee and the -- whether the documents that we receive from DOE are legible or not -- are examined, the completeness, whether there are scanning errors that occurred during the uploading and scanning of the information to the electronic database are also performed. There are additional data and/or clarifications that may be requested from DOE. And if that is needed, we track those. We document that we made the request and we track the response or lack of response to that particular request. That has to be done so that we can make sure that when we have a final request fulfilled from the Department of Energy, we can move the claim into the dose reconstruction process. Until that point, we cannot do so.

In the -- make sure I didn't skip a slide here. Step three, we seek the claimant's willingness to cooperate in an interview regarding the claim. This interview -- as you know, we have a set of questions that are asked of an Energy employee and a set of questions that are asked of a survivor for a claim. The interviews are scheduled. They are then completed. But that's not the end of the trail for interviews.

The discussions are documented and the claimant is asked to review and comment and edit that report of the Computer-Assisted Telephone Interview. They can correct any information they feel has been added in error or any errors made to the report, or they can also provide information that they forgot to give us or didn't realize that -- that we needed until they had had a chance to review this report.

In step four of the processing of dose reconstructions, prior to completing a dose reconstruction all of the ORAU health physicists who are deemed dose reconstructors are required to participate in formal classroom training. There is a documentation that this occurs and this is a -- there is a trackable record here of who got what training when. And when site profiles or Technical Basis Documents or a technical approach changes for a given site or a given exposure scenario, then there is a retraining session to elucidate those dose reconstructors who would need that level of training.

All DRs, dose reconstructions, are completed using approved implementation guides, Technical

Basis Documents and Technical Information Bulletins. And so you ask me how is that a quality control check. Those are the only ones that can be used by the dose reconstructor, and they have to be referenced in the report. So if they're working with some document that has not been final-approved for use in dose reconstruction, they will not be allowed to advance that report. They will be told by a reviewer that they need to use only approved documentation.

Continuing in step four, once a dose reconstructor has completed a draft of a dose reconstruction, there is an initial quality control review that's performed by a non-health physicist. This person is not looking at the technical basis of the approach used in reconstructing dose, but they are looking at has everything been spelled correctly in the claimant's name and address, and do we have the employment history right, do we have the cancer designations captured correctly in this report. All of the demographic information associated with the claim is checked by this individual. They're also asked to look at the IREP

spreadsheet and make sure that it is full in its content and that it is consistent with the dose reconstruction that it is accompanying. Still in step four, once the draft has been drafted and prepared by a dose reconstructor, it is then sent to a senior health physicist for review -- peer review. This review is looking at the consistency, the accuracy and the appropriateness of the demographic and the dosimetry information in NOCTS. The IREP and the input summary files are examined and the DR inclusion of the information gained during the CATI. So in other words, did the individual in the Computer-Assisted Telephone Interview identify that they were involved in an incident; and if so, has that incident been captured in the dose reconstruction report; and if so, do we have documentation of the incident or are we basing it on the interview itself. So those issues are examined in this process. Any issues that are identified by a peer reviewer are communicated to the drafting HP, health physicist, and are resolved to the satisfaction of the peer reviewer. This is captured in a documentation file that goes

between the author and the peer reviewers so that documentation exists and is available to other reviewers.

Continuing along in step four, there's a technical editing step that's completed to verify that the format of the report is appropriate to our standards, that all spelling and grammar are accurate and appropriate.

There's a final quality control check performed, and the draft dose reconstruction is then sent to my offices for folks in my office to take a peer review of -- of the document. There in OCAS each draft is reviewed and evaluated to ensure that the approach is technically valid, the DR is completed according to all of the approved applied procedures, and that the IREP input files produced the same results as the IREP summaries that were provided in the report.

I think this is the last slide on step four -- I hope -- but again, it goes to show you the degree -- one more -- the degree that we go through in developing these drafts.

For drafts that are not approved and those that are returned to ORAU, there are written

comments describing the deficiencies that the reviewer and OCAS identified. And those draft DRs are -- when they are approved by an OCAS health physicist in peer review, they receive at OCAS an additional technical review to ensure that the general approach is sound again, and no obvious errors exist. So there's a second level of -- this is actually the third level of technical peer review a document would get, one at ORAU and two within our own staff at OCAS.

The approved dose reconstructions are then printed and sent to claimants with an OCAS-1 form. In that regard, every draft is reviewed again by a public health advisor to ensure that the tracking number is consistent on each page of the document, all pages are accounted for, an OCAS HP, or health physicist, approval signature is present, and the Energy employee name and Social Security number are correct, and it is being placed in the right envelope. We do a number of these in a day, and so these are hand-checked now to make sure the right report goes in the right envelope.

In conjunction with the multiple levels of

review that I mentioned, each individual dose reconstruction, there is a five percent review of all draft dose reconstructions. And this five percent is randomly selected. We have a checklist of 18 individual items, with the opportunity for whoever's doing the review to add items to that checklist. So a five percent is pulled and folks are assigned within OCAS to do these after-the-fact evaluation reviews using this 18-item checklist. These checklists are -- serve as formal documentation. The checklists are reviewed on a quarterly basis and trends are evaluated, and the information or direction is sent to our contractor for any improvements that we might see.

Here I've shared with you a graphic -- and this may take a little bit of explanation. This graphic speaks about this five percent review that is done after a draft dose reconstruction report has already made it through these other peer reviews and is sent to -- to the claimant. And when we started this back in the first quarter of '05, we were seeing about an 80 percent acceptance rate. In other words, 20 percent was found -- something was wrong and we

would send it back to ORAU for revision. And I've added here a trend line that shows you that we're increas-- it's going in the right direction. We want to see this line get up to 100 percent. We'd be happy not to be able to send anything back to ORAU, but at least this is going in the right direction.

This blip that we see here we equate to a series of wording changes that we employed in our dose reconstruction report about this time frame in first quarter of '07. And rather than make these wording changes ourself, we've asked our contractor to do that and so when we did our five percent evaluation review, we saw some and we kicked them back for those wording changes.

In step five of the dose reconstruction process we conduct a closeout interview. And this is an opportunity once again for the claimant to hear from us about how their dose reconstruction was conducted, and an opportunity for them to ask questions, an opportunity for them to gain a better understanding of what our work really means to them. The claimant receives this draft dose

reconstruction report, a closeout interview is scheduled, and the claimants have an opportunity to make at that time any comments or corrections they wish to provide us about the dose reconstruction report.

Those issues that are raised during this closeout interview process which we believe could affect the results of dose reconstruction are documented and sent to a health physicist for further review. And if needed, those are then incorporated into the dose reconstruction and a new draft is sent to the claimant.

In step six of the dose reconstruction process we finalize the dose reconstruction report. The claimant provides us OCAS-1 indicating they have no further information to provide and are accepting our sending this report on to the Department of Labor for a decision. Our public health advisor will confirm by visual inspection that the signature is the claimant's and that the form is uploaded into the correct file. A final dose reconstruction report is then sent to the claimant, and for every dose reconstruction report sent out, it's reviewed again by a public health advisor to ensure that

the tracking number that we've assigned the claim is consistent on each page, all pages are accounted for, and the Energy employee name and Social Security number are correct.

In our last step of the dose reconstruction process, step seven, where we send the claim back to DOL, again a public health advisor will look at each of these individual claims and the dose reconstruction reports and all of the information that's associated with that claim, and conduct a quality control check on all of the electronic documents in the database. Our database for a claim has what we call a set of four folders, I believe. They're so labeled A, B, C and D, but they contain different things. One folder has the DOE information, one folder has correspondence, one folder has all of the DOL-submitted information. And so they're going to look and make sure that things are properly filed within the electronic file for the claim in the appropriate folder.

They're going to verify that all of the required documents -- which is different than what I just said -- all the required documents are in this file that we return to the

Department of Labor. And so they're looking for the dose reconstruction report and all of the submitted information from the claimant. There's a -- there's a phone log that's also included in this, so they also look to make sure that that information, our communications with the claimants, is included in the information we return to DOL as the analysis record, and that's provided to DOL on a compact disk.

Did I jump or not? Let me...

At the end of that dose reconstruction process, once we have finalized the dose reconstruction report and are prepared to send the analysis record back to DOL with the report, we again run -- this is a nightly check, and it checks 55 different parameters, and there are sub-parameters under some of those 55. And I have not provided you a list of those 55, but we can get you that list if you're so interested. But this is an electronic verification that's done every night, and this is the record of that where we show the percent error observed.

And so what does that mean? That means that the percent here is the total errors observed

per month -- this is based upon a month -- so each month we're looking at the total errors per month, divided by the total data changes that are -- were -- took -- took place in that month. So let me step back a moment and make sure everybody -- I didn't lose anybody. Every case that has a change in the file for a claim, any new claim that is added that day, would go through this verification electronically each night, and then we'll sum up those changes and we'll sum up those errors, and this is what you get. What we see here, we have -- the black line indicates a trend, which is in the right direction in this graph, we want to see this go down, and also I would point out that these are the percentages and you've seen how that line goes there. And this shows that we are -- there's good news here in that this is very, very low. There's one -- less than 16/100 of a percent from this effort to verify electronically that the data has been captured accurately in our claim file system. Now we move on to -- that's dose reconstruction process. Again, I can go into much greater detail on any one of these program areas if you

so desire.
But in the development of Technical Basis Documents or technical approaches, all technical documents must undergo a multi-faceted review. Each document development is completed in accordance with the NIOSH conflict or bias policy. The technical documents that are drafted by our contractor follow this scheme that I'm about to outline for you, but also those Technical Basis Documents that are created and crafted -- drafted by a NIOSH technical person would go through a similar process. So if ORAU drafts a technical document, they're going to submit it to us once they have completed an internal peer review on that document. Their comments are resolved between that subject-matter expert who reviewed the document or crafted the document, the document owner, and the commenter. Those comments and resolutions are all documented at ORAU. And then the document, once it's been agreed to by those individuals, is forwarded to OCAS for a review.
OCAS reviews and comments on the document. Our OCAS review is chosen based on his or her

expertise -- and again, without conflict or bias in regard to -- let me make sure I'm correct in that. They could be conflicted, but they would be -- also others involved in the review. If there's a subject-matter expert that we want to hear on, we can listen to them. The comments are then documented and forwarded to ORAU for resolution. Those comments are reviewed, and they're resolved between the document owner and the commenter. The document is then approved by ORAU and sent to OCAS for final approval authority.

This is another area, this Special Exposure Cohort process area. An SEC petition is received and personal information is reviewed against our NIOSH/OCAS Claims Tracking System. If the petitioner is a claimant in NOCTS, then demographic information is verified for consistency for that petitioner. If the petitioner is not a claimant in NOCTS, the employee records are requested from the Department of Labor to verify employment and verify survivor information.

There's a daily review of every new document uploaded into the Special Exposure Cohort

database, and that review is to ensure that each document is labeled appropriately and correctly, all documents are legible -- they're readable, documents that have been uploaded to the correct and proper petition -- as you might imagine, we're getting a number of these in and some of the volume on these are quite large and so we want to make sure that we get the information placed in the proper petition -- and that the correspondence has a correct name, address, petition number and its document type associated with it.

In the Special Exposure Cohort process on a weekly basis all active petitions are verified to determine if the petition status is correct. The SEC petition summary report is uploaded and verified. A query is run against the NOCTS database system to update the number of claims that have been returned to Department of Labor for each petition that has been added to the Special Exposure Cohort.

Lastly in the SEC process, an audit table exists that tracks every change that has been made to the SEC database. The ORAU folks periodically review documents to cert-- and

ascertain the petition status and the petition demographic information is correct, and submits a quality control report to OCAS in that regard. The quality control report is used to locate problems such as duplicate documents, missing files and unexpected file extension formats.

Now we'll move into the program oversight business. This is where we or our contractors perform assessments or surveillance activities on our procedures and on our program areas. We have internal and external assessments. They are performed according to a written procedure. The procedure outlines the details on how the assessment is to be performed and documented as well. The procedure on conducting assessments has been reviewed by SC&A, although we have not responded to SC&A's comments at this time.

Also within the oversight process, I'll note for you that there have been 29 assessments that have been completed by NIOSH. And you have a handout associated with this presentation -- I believe it's also in the back table as a handout for the presentation.

You'll see in that handout, the first series of

pages shows 30 OCAS assessments being listed. One of those is not fully complete, and by that I mean we have not followed up and made sure all of the corrective actions have been taken. But 29 have been completed.

Many of those assessments have resulted in findings that require changes in OCAS and/or ORAU programs. The findings that have been identified require formal documentation and corrective action plans be put together. We at OCAS must approve the corrective action plans and schedule the completion dates for those efforts. After a corrective action is implemented, OCAS evaluates the actions to determine if they are complete and effective. In those -- that handout, we also give you a series of examples. I think there are 13 or so examples of -- of reviews where changes have been made.

Process improvements that have resulted in Advisory Board review -- this is another factor, the bullet that I asked you to add to that first slide. I wanted to speak a little bit about what goes on here with regard to our listening to the Board and taking action when

we feel it appropriate to the best advantage of the claimants.

So from your Board review of dose reconstructions reports we have documented that dosimeter badge readings where a value was reported that is less than detectable level divided by two, we are now treating that as zero in the missed dose portion of the dose reconstruction report. Previously these values were included as reported in the measured dose portion of the DR, and nothing was included for the cycle of the missed dose portion in the DR. This comes out of the Board review.

Another item that resulted in change at OCAS was this issue of mixed geometry exposures and how we accounted for the proper -- appropriate geometry to be used, and you can see that here we're considering 100 percent AP geometry as the most favorable, as recommended by the Board.

The third example of where we've heard the Board is with regard to the practice of assigning the dose received by the highest exposed organ rather than the actual target organ or a proper surrogate. And this has been

discontinued, unless this practice clearly represents an efficiency approach that's beneficial to a claimant.

And lastly as an example here, a number of procedures and technical documents have been revised for clarity based upon the Board's review of dose reconstruction reports.

Furthermore, I would like to say that, with regard to the dose reconstruction reviews and comments generated from those reviews, we are taking action now to identify and track and monitor the implementation of change for any Board DR review deficiencies that we feel are substantive and require such a change. We're starting with the first review -- set of review that you've done and we're working on developing that and we'll be happy to report our progress on that very soon.

Also with regard to the working group procedure -- on procedures and the issues tracking database that Kathy showed you earlier this afternoon, we feel that's a very important step forward by the Board and this working group and plan -- and I'm asking that my folks take a look at how we can incorporate that and couple

it into our tracking system on issues related to the Board's reviews so that we can make sure that we're coupled there and coordinated with that tracking system. So we appreciate the work that went behind that and we think it'll be a great utility to us in knowing just where things stand on any given issue and what we can make of that issue.

So with that, I think that concludes my slides and my remarks, and I'm sure there are numerous questions and I'd be happy to try to answer them if I can.

**DR. ZIEMER:** Thank you, Larry. We appreciate the detailed discussion on this issue. We'll begin with Dr. Poston, Dr. Melius, Dr. Roessler -- John, welcome.

**DR. POSTON:** Thank you. Larry, just a clarification, if we could go back to your percent and error visual, could you give me some help with the abscissa?

**MR. ELLIOTT:** This slide or the previous -- this slide --

**DR. POSTON:** (Off microphone) (Unintelligible)

**MR. ELLIOTT:** So you're wondering about this slide?

**DR. POSTON:** No, I'm wondering about the units on the abscissa.

**MR. ELLIOTT:** Oh, the units, I'm sorry.

**DR. POSTON:** I'm trying to understand and I don't want to make any assumptions as to what you're trying to tell us.

**MR. ELLIOTT:** Okay, again, on this slide -- let me go back to my notes to make sure I speak correctly -- maybe I spoke incorrectly earlier, I hope not. Bear with me, if you please.

(Pause)

The abscissa here is the total errors observed in that given month.

**DR. POSTON:** No, the abscissa is the X axis.

**MR. ELLIOTT:** The abscissa is the X -- well, that's -- that a month.

**DR. POSTON:** Yeah, but you've got three August, two Septembers, two Octobers --

**MR. GRIFFON:** Oh, yeah.

**DR. POSTON:** -- two Novembers -- I mean --

**MR. ELLIOTT:** Oh, well, here my qua-- quality control presentations is not where it should be. Thank you very much.

**DR. POSTON:** I'm not picking on you, I just -- I'm trying to understand the data that you're

presenting and when I can't understand the abscissa, I can't understand --

**MR. ELLIOTT:** I understand.

**DR. POSTON:** -- the (unintelligible).

**MR. ELLIOTT:** I understand. Not -- I'm going to say to you that I believe these three Augusts would really represent -- I hope -- June, July and August, I believe. No?

**MS. BEACH:** No, you've got two September --

**MR. ELLIOTT:** Got two Februarys -- well, I'm going to have to go back to my folks and say what did you give me here.

**DR. NETON:** (Off microphone) (Unintelligible) go back to the previous slide?

**MR. GRIFFON:** Oh, you think it's from '07 to '08.

**DR. NETON:** It's a quarterly report.

**MR. ELLIOTT:** The next slide? Thank you for catching that, Dr. Poston.

**DR. BRANCHE:** Neton said go to the previous slide.

**MR. ELLIOTT:** No, there's nothing there that --

**MR. CLAWSON:** It's -- it's back on I think --

**MS. MUNN:** I think it depends on how often they reported during the month.

**MR. ELLIOTT:** Well, the other chart is different than this one.

**DR. POSTON:** Yeah, but if you had three reports in August, wouldn't you (unintelligible)?

**MR. ELLIOTT:** Well, my apologies for the confusion that this has created, and I assure you that my staff and I will have a discussion. We'll figure out what happened here and we'll get you a -- we'll substitute this slide with the appropriate, accurate information.

**DR. ZIEMER:** Okay, thank you. Dr. Melius.

**DR. MELIUS:** Yeah, go back to your 11th slide, which is step -- part of step four. It's the draft DRs then reviewed by a senior HP there.

**MR. ELLIOTT:** Yes.

**DR. MELIUS:** Now is that done by an ORAU senior HP, or is that done by a NIOSH?

**MR. ELLIOTT:** If you allow me, let me see where I'm at in the process of this step four.

**DR. MELIUS:** Non-health physicist does the peer review and then there's a...

**MR. ELLIOTT:** Okay, so that's done -- that's a non-health physicist at ORAU who does that, then we go to the next slide.

**DR. MELIUS:** And reviewed by a --

**MR. ELLIOTT:** Yeah, this is still with ORAU. Draft DR is then reviewed by senior -- should say ORAU health physicist for a peer review.

**DR. MELIUS:** Okay. So --

**MR. ELLIOTT:** 'Cause I think, if we go to one --

**DR. MELIUS:** Go to 14 -- step -- slide 14, then you -- then you have a five percent review of all draft DRs.

**MR. ELLIOTT:** Well, I think you've jumped too many slides 'cause if you go back to that 11, and then you go -- this is the slide you're questioning about, go to the next slide, 12, it says there "and the draft DR is sent to OCAS for review."

**DR. MELIUS:** Right.

**MR. ELLIOTT:** The DR is reviewed by OCAS -- la, la, la.

**DR. MELIUS:** Right.

**MR. ELLIOTT:** And then yes, later on there is a five percent that are randomly selected for review.

**DR. MELIUS:** Okay.

**MR. ELLIOTT:** That is by OCAS.

**DR. MELIUS:** Okay. Any my question then is

what are the -- what issues are reviewed there? What is in this checklist of 18 individual items that they're --

**MR. ELLIOTT:** Can one of my health physicists help me with what's on that individual checklist of 18 items? I don't know for -- I've got an idea, but I'm afraid I would mis-speak.

**MR. TOMES:** This is Tom Tomes. I can answer that question just because I've seen a number of those. That checklist simply is a list of various things that's checked routinely through all -- all -- basically through all the dose reconstruction reports. This is formalized as that process and be sure that all these are checked for that particular claim. Some of it's basic information such as how the report is written, the format is correct. Some of it is just is the dose reconstruction methodology correct. For example, one of them is the missed dose done correctly, and that's either yes or no or comment. And there's just various things like that.

**MR. ELLIOTT:** We can get you a copy of this checklist --

**DR. MELIUS:** Yeah, I'd like --
**MR. ELLIOTT:** -- if you'd like.
**DR. MELIUS:** -- to have a copy. How long does that review take? I'm just trying to get a sense of what the de-- the focus and depth of that review is, that's --
**MR. TOMES:** Well, for me, it's a very -- on the ones that I reviewed, it's a very fast process because I tend to over-review such that these things that are on the checklist, I've pretty much already checked those things. So in other words, may-- what I'm trying to say is this like comes in the middle of the process, we go through and review the DR and hit the approved button and it randomly submits one of these to be checked -- excuse me, I have to calm down here -- it randomly submits one of the claims to be reviewed from one of the checklists. And so on my -- for the ones that I do personally, I have pretty much checked every single thing on the list, but this is a reminder that that particular claim has to have each and every one of those items checked.
**DR. MELIUS:** Okay.
**MR. ELLIOTT:** We can get you a copy of the

checklist.

**DR. MELIUS:** I'd like to get a copy. I'm just trying to understand the --

**MR. ELLIOTT:** Sure.

**DR. MELIUS:** -- process. And is there any documentation -- we go back to slide 12, the -- each -- each DR is reviewed by OCAS and is evaluated to ensure -- what's -- I'm just trying to get a sense --

**MR. ELLIOTT:** Yes, if the --

**DR. MELIUS:** How comprehensive are these reviews?

**MR. ELLIOTT:** Well, if --

**DR. MELIUS:** Is this the comprehensive one, or is the five percent sample -- or is the five percent sample just sort of a -- a checklist that, you know, tries to make sure that certain things are -- have been covered in the earlier review -- I mean it doesn't make sense why it's a five percent. That's why I'm having trouble if it's not comprehensive.

**MR. ELLIOTT:** Jim, you want to answer that?

**DR. NETON:** I think I can answer that. All the dose reconstructions are reviewed by an OCAS health physicist and signed by an OCAS health

physicist --

**DR. MELIUS:** Right.

**DR. NETON:** -- before they go out the door. You've probably seen covers of the reports.

**DR. MELIUS:** Yeah.

**DR. NETON:** But as Tom Tomes has mentioned, during the review process, the normal review -- this is all done on a computer screen. The dose reconstruction comes up and the health physicist has access to all the records associated with the case. Five percent of the time, on a random basis, essentially it's selected for being audited. It'll -- it'll get this additional tracking questionnaire, and so it's a matter -- a way of trending the issues that arise in the ORAU-provided dose reconstructions on a five-percent random basis. So it's not necessarily an additional review where they're pulled out. It really is part of the review process in general.

**MR. ELLIOTT:** It becomes a quality assurance step -- the five-percent random selection is a quality assurance. The -- I would answer your question this way, Dr. Melius. The comprehensive reviews occur during the peer

review process, and those comments and the resolution of those comments are documented and are trackable.

**DR. MELIUS:** So that peer review process is done by ORAU.

**MR. ELLIOTT:** Peer review is done by ORAU. Peer review is also done by OCAS. And technical peer review for approval is also done by OCAS. There are three distinct, if you will, technical peer reviews.

**DR. MELIUS:** Okay.

**MR. ELLIOTT:** One -- one ORAU -- at least one ORAU, and then two OCAS. An OCAS technical staff person will review it as a peer, and before the dose reconstruction is approved to be sent as a draft to a claimant, there's another health physicist at OCAS who examines that and makes sure it's ready to go.

**MR. GRIFFON:** I -- I'm just questioning -- 'cause there's three signatures on the cover page. Right? Usually. The preparer, the peer review, and the last one is an OCAS signature?

**MR. ELLIOTT:** Is an approval authority.

**MR. GRIFFON:** But the -- but the --

**DR. NETON:** Right, the last on e--

**MR. GRIFFON:** You mentioned two OCAS reviews, they all wouldn't sign off, necessarily, they'd just --

**MR. ELLIOTT:** No.

**DR. NETON:** Essentially, that -- the last review before it goes out is essentially a team leader type person --

**MR. GRIFFON:** Authorization --

**DR. NETON:** -- who would authorize it to go out the door, but he doesn't necessarily sign the report.

**DR. ZIEMER:** Okay. Dr. Roessler?

**DR. ROESSLER:** You mentioned the training for the people who do the dose reconstruction. I have a two-part question on that. What credentials do you look for, first of all, before you put a person on line as a dose reconstructor. And then secondly, in that classroom training, I'm wondering about the extent of it. Well, first of all, who does it, how long is it, is it hours or days, and in the training do these people get some review of basics of dosimetry? And then I would assume how to use the procedures that you have set up. I just want a little more information on -- on

that training.

**MR. ELLIOTT:** Sure, a very good question, and I am not the one to go in great detail, but maybe Stu can step up to the mike and help us out. This -- this goes a lot to ORAU's procedures.

**MR. HINNEFELD:** I -- I can provide partial information. There is -- there's a contract requirement in the contractor's contract about speci-- or qualifications a person has to have in order to be a dose reconstructor, and it includes I think -- well, they have to be a health physicist with two years of experience, I think. But there's a qualification in the contract in order to even put somebody in that position, before they even start to train them. Anyone with that limited amount of experience has to have their work reviewed by a more senior or more experienced person, someone with at least five years of -- I think the experience has to be in radiation dosimetry or -- or things like that. So you start with a health physicist in ord-- before -- in order to make a dose reconstructor.

And then for the training part, the training -- the formal classroom training, when a new

document comes out or a new workbook tool or something comes out, the trainer is usually either one of the principal dosimetrists for the contractor's staff. They have individuals who are designated -- you know, principal internal dosimetrist, the principal external dosimetrist, and they have certain assigned duties for those people in those areas so they're -- in their program and they will oftentimes write that training. Or if the training's about a new tool, meaning an electronic, you know, workbook that facilitates the completion of the calculations, it may be the tool developer who actually explains the use of that tool.

Now there -- there's training that's provided on a less formal basis by their team leaders. There are team leaders on the contractor side who provide training to their teams with a more -- when there are less major rollouts, when there were essentially modifications to things that were done.

**MR. ELLIOTT:** We can -- I'll make a note and we'll try to get you more detailed information about the training that is provided, to include

the procedure that ORAU had produced. And I believe the working group on procedures has looked at that. May not have -- we may not have reacted to it yet, but I believe they have examined it.

**DR. ZIEMER:** A little bit of follow-up, Stu. When you say that the contract says they have to be a health physicist, I know the Health Physics Society has a hard time figuring out who a health physicist is when they take members in.

**MR. HINNEFELD:** Beg pardon? What'd you say?

**DR. ZIEMER:** I know that -- I said -- I think even the Health Physics Society sometimes can't figure out who a health physicist is. I don't know what they are, but I know one when I see one. But --

**MR. HINNEFELD:** Are you looking at one now?

**DR. ZIEMER:** -- is it somebody who has a degree in health physics or who claims to be one, or --

**MR. HINNEFELD:** No, there's -- there's a degree requirement, and --

**DR. ZIEMER:** Okay, a degree req--

**MR. HINNEFELD:** -- whether it says health

physics or health physics or a related field -- I mean it may -- oftentimes that's used instead.

**DR. ZIEMER:** Right.

**MR. HINNEFELD:** There is an allowance for work experience in lieu of education.

**DR. ZIEMER:** Okay.

**MR. HINNEFELD:** It's very similar to a lot -- what you'll see sort of in a hiring posting very often.

**DR. ZIEMER:** Thank you.

**MR. HINNEFELD:** There'll be an experience requirement or applicable work experience in lieu of some education.

**DR. ZIEMER:** Okay, thank you. I think Dr. Melius has another question.

**DR. MELIUS:** Yeah. Could have fun here with who's a health physicist, but I'd better not -- too many in the room.

**DR. ZIEMER:** Better be careful.

**MR. GRIFFON:** You're outnumbered, yeah.

**DR. MELIUS:** Do that. Just back to the -- this step-wise reviews, if you could provide the -- not only the checklist, but if there's a procedure or something that documents what's

done at the ORAU review -- ORAU review and at the OCAS review, it would be -- I think it would be helpful. I'm just trying to --

**MR. ELLIOTT:** Sure.

**DR. MELIUS:** -- understand the process.

**MR. ELLIOTT:** The ORAU procedure is ORAU-PROC 59. I don't have a NIOSH number for you, but that ORAU-PROC 59 will describe for you their peer review process and provides a fairly comprehensive checklist in itself.

**DR. MELIUS:** Okay.

**MR. ELLIOTT:** And then I'll have to get you the other. There's also an ORAU procedure -- let me get to it here -- that I have -- I just happen to have these 'cause I was interested in knowing the details on this -- ORAU procedure PROC 77 talks about dose reconstruction error tracking and reporting, and I believe both those procedures have been in front of the procedures workgroup.

**DR. MELIUS:** Okay. Slide 16, closeout interview?

**MR. ELLIOTT:** Yes.

**DR. MELIUS:** Now -- now this is done by a non-HP. Correct?

**MR. ELLIOTT:** The interview?
**DR. MELIUS:** Yeah.
**MR. ELLIOTT:** The interview -- the closeout interview is done by typically a non-HP. An HP can be called in if ORAU feels it is necessary to have a health physicist, dose reconstructor, involved to answer questions. But typically the closeout interviews are performed by a non-health physicist.
**DR. MELIUS:** Okay. That's what I wanted to know.
**MR. ELLIOTT:** Many of these interviews don't get to the details of how the dose reconstruction was done. But if they do, then they have the luxury, the ability, the flexibility to bring in somebody who can speak to those level -- that level of detail.
**DR. ZIEMER:** Okay, thank you. Other questions?
**MR. GRIFFON:** Just -- just one follow-up.
**DR. ZIEMER:** Uh-huh.
**MR. GRIFFON:** Larry, have you -- I know those reports exist on the peer review process where the peer reviewer will submit kind of --
**MR. ELLIOTT:** Comments.
**MR. GRIFFON:** -- comments and -- and then a

resolution column on those. Have you in any way put those in any kind of database or looked at trends on those? I know there's quite a few of them.

**MR. ELLIOTT:** I'll have to get back to you on that. I -- I know that in house, in OCAS, we have a document resolution tracking system that Grady Calhoun monitors and keeps track of. I'll have to make sure what ORAU does, and I don't know right now. Yes, we can look at Grady's system and get a feel for whether or not certain people are not addressing comments or, you know, trying to --

**MR. GRIFFON:** Or -- or --

**MR. ELLIOTT:** -- the system, or if there is --

**MR. GRIFFON:** -- if procedures --

**MR. ELLIOTT:** -- some individual that's constantly --

**MR. GRIFFON:** -- come up again and again --

**MR. ELLIOTT:** Yeah.

**MR. GRIFFON:** -- as being mis-implemented, there would -- yeah. Yeah.

**MR. ELLIOTT:** Yeah, we can look at that in Grady's system, but I have to check on ORAU's part.

**MR. GRIFFON:** Okay.
**MR. ELLIOTT:** Get back to you. Let me make a note of that as well.
**DR. MELIUS:** I have --
**DR. ZIEMER:** Another question.
**DR. MELIUS:** -- two -- two more questions. They're relatively straightforward. If -- you had a slide 25 in your presentation with QA/QC in the SEC process. In slide 25 you refer to the SEC database, and I'm -- wasn't sure what you were referring to there.
**MR. ELLIOTT:** That's probably something you never have seen.
**DR. MELIUS:** Yeah, okay.
**MR. ELLIOTT:** We -- as we -- this is a relatively new convention in our work to -- we've developed a -- what do they call it, the PERM? We have an acronym for everything --
**DR. MELIUS:** The PERM?
**MR. ELLIOTT:** No, it's not the PERM, it's not the PERM, it's the --
**DR. MELIUS:** I resent that.
**MR. ELLIOTT:** The PERM goes to the Program Evaluation Reviews, I'm sorry.
**DR. MELIUS:** Okay.

**MR. ELLIOTT:** This is SEC.

**MR. RUTHERFORD:** It's the OSA, it's the OCAS SEC Applications.

**MR. ELLIOTT:** And this is -- this is -- LaVon has asked to have this database set up so that all of the petitions that we have received can be tracked. Not only those are being eva-- have been evaluated, are being evaluated, are being considered by the Board, but all of them that have been received. We can go in and identify those that have not qualified for you, we can identify those that have, we can speak about the number of Energy employees that are -- and claimants that were affected by each class. That's the kind of thing that's in this tracking system.

**DR. MELIUS:** So -- so LaVon, a couple of years ago I think -- I think we had reviewed -- there was a workgroup that was looking at --

**MR. RUTHERFORD:** Yes.

**DR. MELIUS:** -- non-qualified, that's that database?

**MR. RUTHERFORD:** It's actually a --

**DR. MELIUS:** Or has that expanded since then?

**MR. RUTHERFORD:** It's expanded a little --

**DR. MELIUS:** Okay.

**MR. RUTHERFORD:** -- a little bit. We can -- we actually can produce a summary report that defines -- I mean in addition to not having -- or in addition to petitions that didn't qualify, we also can tell why they didn't qualify, reasons for non-qualification. We can -- we have the number of petitions we've received to date, number of qualified, number not qualified, number of classes added, number of classes denied, classes -- or petitions prior to the rule being implemented -- there's a number of different things.

**DR. MELIUS:** Okay, thanks. I have one final -- it's more of a comment than a question, but also brief -- the issue of reworks, these -- you sort of described a process you have to sort of -- how do you take into account, you know, areas that you're concerned about or findings that come up at various levels, and have you looked at the -- the reworks that have come back from DOL as one possible source of, you know, potentially changing your procedures or methods or something like that? I was just curious how those break -- break down in that

way. I mean a lot of the reworks have to do with -- with other issues, so --

**MR. ELLIOTT:** So a lot of the reworks right now -- you missed my -- my fabulous status -- program status report this morning, but a lot of the reworks we're dealing with now are driven by Program Evaluation Reviews where there's a technical change that results in potential for an increase in dose, and when that happens we are obliged to look at all the claims previously done found to be non-compensable. And yes, this -- you're absolutely right, Dr. Melius, the magnitude of that effort has caused us to take stock of where we're at and how we're monitoring and processing and tracking our -- our progress on all of these Program Evaluation Reviews that we have before us. And that's where we decided, again, we needed a tracking system. So that's the PERM that I --

**DR. MELIUS:** Okay.

**MR. ELLIOTT:** -- mis-spoke about a moment ago. That is the Program Evaluation Report Management -- Manager tool or something -- my folks are very adept at coming up with these

acronyms that I get lost in, so -- but yes, we are looking at that. And I also think there's -- you know, we need to address a QA/QC component in that aspect of what we do now.

**DR. MELIUS:** Okay, okay, thanks.

**DR. ZIEMER:** Larry, when you do these analyses -- for example, the table that we looked at before with the -- the month by month by month by month table -- but there you have some -- whether it's percent error -- I think -- I guess that's -- you're hovering around a tenth of one percent, it looks like.

**MR. ELLIOTT:** For those things that are checked.

**DR. ZIEMER:** Right, for those items.

**MR. ELLIOTT:** For those items, and this is electronic check, so...

**DR. ZIEMER:** Right. When you have something like that -- and you could have other such trending datasets, I suppose -- how do you know -- 'cause at the front end of this program this sort of says okay, here's where we are. But at some point can you use these to set some kind of quality goals, or do you set some quality goals from this, based on what you already

know, and say okay, I think we can achieve this -- as opposed to simply reporting this?

**MR. ELLIOTT:** Right, we --

**DR. ZIEMER:** To what extent are these -- are you at a point where you can use these kind of datasets to drive the quality of whatever it is in the system that you want to drive? Are we there yet or are we still sort of getting a foundational set of numbers, or somewhere in between?

**MR. ELLIOTT:** We can employ a whole quality assurance/quality control cadre, if we wanted to here, and I would answer your question that we're not at the point I want us to be -- or others in OCAS want us to be. We do have the ability, as you see here in these two graphs, to look at trend -- do trend analysis. We have the ability in that to say to ourselves what's going on, why this dip; can we ascribe the reason for why we're seeing a decrease in the number that we're finding to be acceptable reports. And the graphs I've given you today are based upon our electronic checks. We need to come forward with the ability to dem-- and demonstrate an ability to look at what Mark

asked about a minute ago. You know, how much trend analysis do we see in comment resolution; is there something to be made of that. And we can spend a lot of time and a lot of money trying to refine our programs to the point where we're -- we're trying to get to 100 percent quality, but we have to remember our overarching goal, too. And quite frankly, what is -- what -- where is good good enough? And so we want to make sure in our overarching goal --

**DR. ZIEMER:** Well, that's sort of what I'm asking, how do you decide that?

**MR. ELLIOTT:** Yeah.

**DR. ZIEMER:** Yeah.

**MR. ELLIOTT:** Yeah, so we've -- we've identified --

**DR. ZIEMER:** It's sort of a rhetorical question now.

**MR. ELLIOTT:** You know, I could give you probably a couple of examples, Stu could give you a couple more, where we've looked at something and we say hey, that doesn't seem right, and we've gone back -- look at our assessments and -- and their findings, the

observations and the recommendations for improvement there, and you'll see a number of these things. Why does an assessment come about? Because somebody's said something's not right here. We look at -- at this and it doesn't seem right. We -- we're -- or we have a situation like we had with one claim where it seems like a lot of compounding problems existed with one claim, so we go in great length and detail looking at how that occurred for that one claim and can we find any other claim that would exhibit the same set of problems. So those things do go on. They may not go on with the rigor that -- that many of us want to see, but I think we're -- we're doing a very good job in quality control and quality assurance to meet our overarching goal at this point.

**DR. ZIEMER:** Thank you. Okay, any other questions?

(No responses)

Thank you. Thank you very much, Larry. We have a break on the agenda for 45 minutes, and then we have an hour public comment period. I noticed before when I was in the corridor,

there was only one or two -- there's two individuals that wanted to make public comment, although there may be others that would come in later to do so. But I was going to offer the opportunity, if those who signed up to make public comment, if they wished to do it earlier, we could accommodate that. I'm not requesting necessarily that they do it, but if they are here, we could certainly accommodate it if it's convenient to them.

Maybe I could get the names. I think one of them may be from Senator Nelson's office.

**DR. BRANCHE:** Yes, she is. I'm looking for her now.

**DR. ZIEMER:** And --

**MR. EVASKOVICH:** Yeah, I'm on.

**DR. ZIEMER:** You were the other? Do you -- do you prefer to wait till later or would you --

**MR. EVASKOVICH:** It doesn't matter to me. I suggest (unintelligible) take a break (unintelligible) for myself.

**DR. ZIEMER:** Okay. Well, that's one way to keep it short. Right? You can't leave till you're done.

Okay. Well, we will take a break and then I'll

check with the others. Okay, let's go ahead and take at least -- let's at least take a ten, 15-minute break here and then we'll -- we'll reconvene, yeah. Comfort break, thank you.

(Whereupon, a recess was taken from 4:15 p.m. to 4:30 p.m.)

**PUBLIC COMMENT**

**DR. ZIEMER:** If you'll take your seats, we'll reconvene. We're going to begin our public comment session. Before the members of the public who wish to comment do so we're going to have our Designated Federal Official give us some words of wisdom on the redaction policy.

**DR. BRANCHE:** I'm going to do a slight modification. Please understand that if a person making a comment gives his or her name during this period, no attempt will be made to redact your name at that -- to redact your name in any way, shape or form. We're using this period now to make you aware of our redaction policy. Please understand that your name will appear in a transcript of the meeting posted on a public web site, and that we've taken reasonable steps for you to know that this is what we're going to do.

If you would like to make a statement to the Board but would like -- not like to have your name used or would not like to make the statement in person, if you could please see me, we'll take care of that.

For those of you participating by phone, we ask that you -- that you please mute your phones until you're ready to speak. You'll hear Dr. Ziemer giving you an opportunity to do that. At that time you can unmute your phones. If you do not --

**UNIDENTIFIED:** (Off microphone) (Unintelligible) all cell phones shut off in the room, please.

**DR. BRANCHE:** Okay. If you do not have a mute button, then please use star-6 to mute your phones. If -- when you're ready to speak, please use the same star-6 to mute -- to unmute your phone and then make your statement. At the conclusion of having made your statement, we then ask that you use star-6 again.

And a request has been made that everyone in the room to please mute, silence or --

**UNIDENTIFIED:** (Off microphone) Turn off, please.

**DR. BRANCHE:** Oh, turn it off.
**UNIDENTIFIED:** (Off microphone) Yeah, I'm getting feedback on (unintelligible).
**DR. BRANCHE:** Turn off the phones. Thank you. Dr. Ziemer?
**DR. ZIEMER:** Thank you very much. The first person that wishes to address the Board is Andrew Evaskovich, and Andrew, we also have a copy of your presentation which will be made available to the Board later as well. I think -- I think Andrew has some slides he's going to use as he addresses us.
Andrew represents petitioners from Los Alamos National Laboratory -- or potential petitioners, at least.
**MR. EVASKOVICH:** Well, potential and prior, also -- well, the intention was prior, but the -- some information came available today that I have to make some corrections --
**DR. ZIEMER:** Pull that mike down, too.
**MR. EVASKOVICH:** Better?
**DR. ZIEMER:** That's good.
**MR. EVASKOVICH:** Okay. Good evening, Dr. Ziemer and Board members. Thank you for taking the time to listen to me and look at my

presentation. As you recall, I spoke at the Board meeting in Denver on May 3rd, 2007. The information that I'm presenting here I also discussed there. It was concerning the Los Alamos National Laboratory cohort -- Special Exposure Cohort class that was added up until 1975.

My intention was to address issues tonight concerning adding certain areas that were left off. However, I was talking to LaVon Rutherford today and he explained to me one of the reasons was a date. However, I still think the information pertains to the site profile review that's being conducted, and there is some other areas that I wish to discuss that would still probably be included.

I'm going to go ahead and begin my presentation.

I was going to discuss some concerns here, and to start with, this Technical Area 28, which is a magazine area, A. Magazine area A is an explosives storage area located near the southern edge of TA 16.

This is a map of the area, for your review. These are the bunkers where the material was

stored. And that point right there is where Technical Area 28 is located on Los Ala-- Los Alamos National Laboratory. If you review page 280 of the verbatim transcript of the meeting that I've already addressed TA 28. However, it wasn't included in the class and, as I stated, it's because of the date that it became operational. So this would pertain to the petition that I have submitted, and if it's qualified and evaluated then this information will probably be included in that one.

This is a Google earth view of the area, as you can see, the five bunkers there and the road. That's called Morro Road, and that's commonly referred to as Morro Road bunkers.

And the reason I wanted to address this is because of the LANL site profile. That information there indicates that depleted uranium was stored inside the area. Now this is a closer view of that, referring to -- it shows the document numbers and the actual TA 28 depleted uranium. And if you notice, it says "firing site, 1979," that's the date when it actually became operational -- and I learned that from Mr. Rutherford, so I'd like to give

him credit for correcting me.
In the evaluation report it also demonstrates that DU was present there, so this would be application -- applicable to the upcoming SEC if it's successful.
I'd also like to discuss TA 57, Fenton Hill. Fenton Hill was originally developed to study the use of hot dry rocks to general geothermal energy. The geothermal project has been completed and the site is now being processed as the location for an astrophysics laboratory.
This is a map of LANL and surrounding areas. The laboratory is located here. This is the Caldera Preserve, or -- and Fenton Hill would be located over here. The caldera was a very large volcano that was active about one million years ago and there is still volcanic inc-- not incidents, but geothermal properties in the area and that's why they were doing the testing there for the Department of Energy in order to develop alternative sources of energy.
This is another map of the area which actually illustrates where TA 57 is located, to give you a better picture of the location of the site.
And another view of the area -- this is the

actual area here. One of the concerns is the -- there are two ponds here, and information I developed concerns -- well, I'm not sure which pond it is, and then there's also a leach field that's of concern.

In order to qualify the information I'm going to present, I need to discuss RCRA, which is the Resource Conservation and Recovery Act, the federal environmental law designed to account for and ensure proper management of hazardous waste from creation to disposal. The term "disposal" means discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste, or hazardous waste, or any constituent thereof, may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. This explains some of the information and guidelines that are necessary, and it was established for the protection of public health and welfare, protection of the quality of groundwaters and surface waters and leachates, protection of the quality of surface waters from runoff to

compliance with the effluents limitations of the federal Water Pollution Control Act, and protection of ambient air quality to compliance with new source performance standards or requirements of air quality plans under the Clean Air Act.

Requirements of permit application are listed here, and estimates with respect to the composition, quantities and concentrates of any hazardous waste identified or listed under this sub-chapter, or combinations of any such hazardous waste, and any other solid waste proposed to be disposed of, treated, transported or stored, and the time, frequency or rate at which such waste is proposed to be disposed of, treated, transported or stored. And the description of the site.

Now this is taken from the NMED application for the permit. As you can see, I've highlighted here type of release and, as indicated on the permit application, total uranium. This is concerning drilling that was conducted in the area, and then the material was sent to the pond. The justification was there were samples taken for the area, so it's -- it's kept in an

active status on the permit, so it's something that they still need to evaluate.

And this is the leach field in the area, also, as you can see -- type of release, total uranium. So these areas need to be evaluated for the radionuclide content.

I would also like to discuss some canyon discharges in the area. It's documented that radionuclides have been discharged into Pueblo Canyon, Los Alamos Canyon, Mortendad Canyon and Ancho Canyon. A lawsuit was recently filed -- and this was on February 7th of 2008 in the District -- United States District Court for the District of New Mexico. Several members have filed the lawsuit or they've come together to file the lawsuit and it's versus the Department of Energy, Samuel Bodman is the Secretary, Los Alamos National Security and Michael Anastasia was the Director of the Laboratory. This is the complaint for declaratory and injunctive relief.

Some information contained in the complaint -- this is from the introduction, specifically that LANL is failing to comply with the NPDES* permit's prohibitation (sic) on violating water

quality standards, failing to comply with the permit's monitoring and reporting requirements, and failing to adhere to the permit's mandate that LANL have effective effluent limitations and pollution control measures in place for each of the approximately 59 sites.

This is stated in the complaint in the background portion. According to LANL, plutonium is moved down Pueblo Canyon through Los Alamos Canyon, off-site across San Ildefonso Pueblo lands and reaches the Rio Grande near the Otowi Bridge. Also stated in the complaint in an April 1, 2005 submission to EPA, individual permit application LANL states that there are approximately 1,300 sites; 960 (unintelligible), which are solid waste management units; and 350 AOCs, which are areas of concern. These are at the facility and they remain active and have not received NFA status. And NFA means no further action.

Following rain or snow-melting events, contaminants from these approximately 1,300 to 1,400 sites, runoff into the soil, surface water and shallow groundwater for the Lab's seven watersheds and canyons, and eventually

traveling down gradient to the Rio Grande. These storm water runoff events are well-documented by LANL and MED and EPA. EPA determined that LANL was failing to effectively monitor and control runoff from all of the sites.

These are the counts charged in the complaint. Count One, violation of water quality standards; Count Two, failure to conduct representative monitoring; Count Three, failure to conduct quarterly visual monitoring; Count Four, failure to conduct benchmark monitoring; Count Five, failure to conduct compliance monitoring; Count Six, reporting violations; Count Seven, pollution control violations.

As you can see from the red highlights, the runoff flows through these Technical Areas. They were not included in the LANL SEC petition up to the years 1975. They were not cons-- they were considered buffer areas to the Laboratory, and their intent was to provide a zone where operations does not take place but were to protect the environment and property. However, the canyons tend to flow down into these areas.

And my argument basically is that due to the runoff and collection of the runoff, there is a possibility that radionuclides are in those areas and that they should be included in the SEC. TA 28, because of the new information, should not be included in the class, but should be considered for the upcoming petition. TA 57 should be evaluated also for the upcoming petition, as well as the site profile, for total uranium. TA 70, 71 and 74 should be evaluated for radionuclide contamination due to runoff.

And that's the end of my presentation. Are there any questions from the Board?

**DR. ZIEMER:** Thank you, Andrew. I have one brief question. So in those areas that you identified, are there actually workers in those areas or -- you said they were buffer areas of some sort?

**MR. EVASKOVICH:** Well, we know for a fact that guards used to patrol in those areas in the early days on horseback, and then later in jeep.

**DR. ZIEMER:** Oh, thank you.

**MR. EVASKOVICH:** There were a lot of patrols on

the outlying areas. In fact, when -- when the Laboratory grounds were much larger, you know, up in the mountains and stuff like that, so around the boundaries guards were patrolling in there. And other possibilities for workers, I'm not sure of. But with contract workers -- say archaeologists, or possibly the other workers -- could be in those areas, depending -- water quality people. There's a lot of different work that does occur or monitoring that does occur in those areas.

**DR. ZIEMER:** Thank you. Josie.

**MS. BEACH:** I just want to add to your question. What were the frequencies of those patrols?

**MR. EVASKOVICH:** I don't have that information. I haven't actually discussed it with one of the guards, but from what I understand they were quite frequent in the earlier days.

**MR. SCHOFIELD:** I can answer that question. Daily. It was daily in the -- in the summer, late spring and summer and fall.

**DR. ZIEMER:** Use your mike, Phil.

**MR. SCHOFIELD:** In answer to your question, those patrols were done on horseback and jeep

on a daily basis, from early spring up until early in the fall.

**DR. ZIEMER:** Thank you. Thank you, Andrew.

**MR. EVASKOVICH:** Thank you.

**DR. ZIEMER:** Next we're going to hear from Sherry Davich, and she is with Senator Bill Nelson's office. Sherry, welcome.

**MS. DAVICH:** Is this good? First of all, from Senator Nelson, he wanted me to welcome all of you to the Sunshine State, and we're glad that you chose to have your 54th meeting here in Florida. He also wanted me to thank you for your service to the Advisory Board and, from my brief time here this afternoon, I can see that's a huge undertaking, and thank you.

I just have some brief comments from him that he -- since y'all were here, we thought we'd take this opportunity.

I'm here on behalf of United States Senator Bill Nelson, who is gravely concerned about the high rate of illnesses among former workers at the Pinellas Plant. And as y'all know, that plant is very near the location here. He is eager to ensure that the steps required to obtain compensation are carried out in

adherence to the law and with expedience so that those who are entitled to benefits receive them quickly and efficiently as possible.

In our letter to the Advisory Board dated November 28, 2007 Senator Nelson requested that a working group be convened to discuss the Pinellas Plant site profile review and act upon its findings. The site profile review raised several serious questions that must be addressed. Senator Nelson has not yet received response to his letter, and I ask, on his behalf, that the Board consider his request and provide an answer. I have a copy of the letter.

And earlier I talked to Dr. Ziemer and he said he did have some information to share with me, so I'll go ahead and give you this letter. I think you already have it.

**DR. ZIEMER:** Yes, I do. And -- thank you. And the letter from Senator Nelson actually was distributed last fall to the Board, so you should all have copies of it. But we have a rule, and I've explained that previously to Sherry, that the rule is that the Chair must have the Board approve responses to

Congressional letters. And so I've put at your places a proposed draft for Senator Nelson, and I'd like to read that into the record and ask for the Board to approve transmitting this to the Senator.

So the Honorable Bill Nelson, U.S. Senate, Washington, DC. Dear Senator Nelson, Thank you for your letter of November 28, 2007 expressing your concern about the status of Board actions relating to the review of the Pinellas Plant site profile. Although the Board's agenda for closing issues raised by our contractor for this, and many other facilities, has been extremely full, it appears that we are now in a position to focus more directly on Pinellas issues.

As you know, the Board has scheduled its April meeting to be in Tampa, in the vicinity of the Pinellas Plant. This will provide an opportunity for former Pinellas workers to share their views and concerns with the Board through our public comment process. Further, it will be appropriate at that meeting for the Board to consider the establishment of a workgroup to deal specifically with the

findings of the SC&A review of the Pinellas site profile.

We will keep your office informed of all workgroup meetings and other activities related to the Pinellas Plant. Sincerely, Paul Ziemer, Chairman.

I might add parenthetically, if the Board approves this, during our working time later in the meeting we would actually discuss then the formal establishment of a workgroup and -- and assuming such a group is established, whenever they met we would inform your office so that you could attend either by phone or in person.

**MS. DAVICH:** Thank you.

**DR. ZIEMER:** And all of our workgroup meetings are open to the public as well.

**MS. DAVICH:** We appreciate that. Thanks.

**DR. ZIEMER:** Board members --

**MS. DAVICH:** Does anyone have any questions?

**DR. ZIEMER:** -- questions or comments? Mr. Clawson.

**MR. CLAWSON:** Yeah, I'd just make a comment that we have the other two Board members on the other side, Ms. Beach and Phil.

**DR. ZIEMER:** Actually this must have been a

pasting and cutting error because --

**MR. CLAWSON:** Well, our QA/QC program.

**DR. ZIEMER:** Actually --

**DR. MELIUS:** The Executive Secretary got updated.

**DR. ZIEMER:** Actually if I show you a copy of the original letterhead, you'll see that their names are on it, and who knows what happens between -- between the copier and -- and whatever. I could also claim that I just did that to see if you guys were alert, but --

**DR. MELIUS:** Yeah, Larry already tried that.

**DR. ZIEMER:** -- didn't -- didn't work. But I will ask for a formal approval of this letter that we might transmit -- with any additions or changes the Board may wish to make.

**MR. CLAWSON:** I move to approve this letter.

**DR. ZIEMER:** Is there a second?

**MS. BEACH:** I'll second it.

**DR. ZIEMER:** Any discussion?

(No responses)

All in favor, aye?

(Affirmative responses)

Mr. Presley, if you're on the phone, you may have heard the letter. Any objections from

you?

(No responses)

I hear no objection. He may not be there, but we do have a majority. The motion carries and we will transmit an original copy of the letter. I'm also going to provide this letter to the press. There is someone here from the media -- yes, in the back -- and you'll have to ignore the part of the letterhead that's incorrect with the naming of the Board members. The ones who aren't listed feel slighted, for some reason.

Thank you very much, and we will proceed from that basis.

**MS. DAVICH:** Okay, thank you. Thank you.

**DR. ZIEMER:** We appreciate your being here very much, Sherry.

**MS. DAVICH:** Okay.

**DR. ZIEMER:** I'd like to ask now if there are other individuals here in the assembly that wish to address the Board at this time who may not have had a chance to sign on the sign-up sheet.

(No responses)

Is there anyone present by phone who wishes to

address the Board in this, our public comment session.

**MS. JACKSON:** Yes, I -- I do.

**DR. ZIEMER:** Please give us your name and then you may proceed.

**MS. JACKSON:** My name is Sandra Jackson.

**DR. ZIEMER:** Sandra Jackson, thank you. Please proceed.

**MS. JACKSON:** This is concerning my dad, Donald (unintelligible), who is number 2076 (unintelligible) NIOSH number. How much time am I allowed?

**DR. ZIEMER:** Ten minutes is the timing we allow for public comments.

**MS. JACKSON:** All right. My dad was listed as a bomb assembler and handler. He was (unintelligible) trained in 1957 at Nevada Test Site. He died of pancreatic cancer that mastatized (sic) to the liver. He had many skin cancers, including one documented melanoma, and he also had a thyroidectomy that was removed because of growth after the time that he spent in Tonapah -- the Tonapah test site and at NTS as well. We lived in Tonapah from the early '60s through December of 1962.

He was assigned to the Tonapah test site, but we know that he was going from Tonapah test site to NTS on a regular basis to oversee tests. The only records that have been given on him were shown up for NTS, which was an affidavit from somebody (unintelligible) that worked with him on several (unintelligible). He told us of the times that he was told to remove his badge, put it in the refrigerator, and go about his work, especially walking down to ground zero within 24 hours after a test shot to clean up while the area was still flaring. He complained about leaky suits, canisters and how so many men got sick in Sandia. He actually originally worked for Sandia National Lab, and he told us that (unintelligible) problems. When he knew he received heavy doses of radiation upon turning in his badge (unintelligible) results came back as inconclusive results due to a lab malfunction.

As a bomb handler -- assembler and handler, the only dosimetry records that we were able to find were in 1957 when he was just starting to be trained, and 1964 to 1965. It's ludicrous

to even think that a bomb assembler and handler would not be required to wear a badge at all times. Dad told us he wore his badge all the time, and it's a well-known fact that these records conveniently disappeared.

(Unintelligible) regular newspaper reports of people that are aware of boxes of old records that are purged and dumped from NTS.

Right now the cohort for compensation is 250 days at NTS. My dad would most likely fit into that, but there is no record to prove that he was there (unintelligible) prove he was there (unintelligible) affidavit we have.

(Unintelligible) for the sign-in sheets that have to be filled out every time somebody enters NTS, and nobody has the slightest idea, so we figure they've gone with rest of the problematic records.

We have an affidavit of an employee for (unintelligible) Electric Engineering who worked with the Sandia crew my dad was part of in the SEDAN test on July 6th of 1962, and also worked with my dad on numerous other occasions as well from the late '50s to the late -- to the mid-'60s. He described what my dad and

Sandia crew did. My dad locked the bomb in, which he assembled. He (unintelligible) the canister that held the nuclear device for the test, ran diagnostic tests to record the action and resistance of the test, (unintelligible) to be sure of the continuity of the test. The next day after the test went in with the crew and released the cable and clean up, many times while the test was still flaring.

We have also asked how many bomb handlers and assemblers were trained (unintelligible) of the numerous amount of tests (unintelligible) nuclear tests that were done in that area, just to get an idea of how many test shots for each of these bomb assemblers and handlers had. From 1951 to 1962 there were 1,021, of which 921 were underground, just as an example. I took a range of Operation (unintelligible), which was -- there were 44 tests that ranged from 43 kilo-- .43 kilotons to 67, and Operation PLOWSHARE, which ranged from .37 to 12 kilotons. The biggest one that I have the affidavit in that my dad was (unintelligible) into was the SEDAN test, which was 104 kilotons. It yielded I guess at this point

more than 11 million tons of soil, went to 12,000 feet into the air, and created a 324-foot-deep diameter and 1,200 feet wide -- a (unintelligible) that it created.

My contention is being exposed to one test like SEDAN from assembling a 104-kiloton bomb, placing it and cleaning up at ground zero, plus who knows how many other tests, leaves little doubt to the high probability of the cancer that caused his death.

In 1963 when we returned from Tonapah back to Albuquerque my dad had to have a thyroid removed that was caused by growth, such as we see at Chernobyl. It was not even considered -- we have the proof of the surgery -- because it was not cancerous; he caught it too soon. He had many skin cancers, of which essentially only one melanoma was documented. In 1973 he went through radiation decontamination as directed by a friend that helped at Hiroshima because of him being so sick and the doctors not being able to help him.

In looking at an aerial picture of the potholes that NTS created by these tests, knowing that the half-life of plutonium is 24,000 years, and

that Trinity, New Mexico has been permanently closed because of contamination and safety is just a few of the issues that we see. The government still has paid out only a fraction to those who have suffered untold pain, sickness and death due to the radiation they were exposed to because records were lost, destroyed or covered up.

My question is, what kind of protective screening was given to these people during assembly, handling of the bombs and cleanup after -- after the tests, or even how good back in the late '50s and early '60s were these? NIOSH admits that there was no monitoring on certain respirators. How safe were the respirators? Tonapah test site recently added testing for insoluble plutonium. What is insoluble plutonium? And dad was not even considered for that because he was said to be administrative only, which by this affidavit proves that that is not right. The earlier bombs were also considered dirty bombs that created far more radiation and fallout than our newer bombs. This is a situation (unintelligible) due to compensation -- is due

the compensation for (unintelligible) heroic efforts in the Cold War. He suffered untold radiation, covered up by our knowing government and Sandia National Labs, causing more suffering and a horrible death due to cancer. (Unintelligible) sacrifice of his own life helped to protect our country in his efforts to stay ahead of the (unintelligible) the technologies of the Cold War. What can we do to (unintelligible) legislation to be passed to fix the flaw in this previous legislation of 250 days, and are there any working groups to address this particular situation?

**DR. ZIEMER:** Okay.

**MS. JACKSON:** Those are my questions.

**DR. ZIEMER:** Thank you, Sandra, and some of those questions at the moment are -- have to be treated somewhat rhetorical. There are some of the issues, such as the 250-day issue, that are being addressed by some of our workgroups. Not all of the questions you asked are currently being addressed, but we thank you for raising them and that gives us here food for thought as well.

Let me ask now if there are other individuals

on the line that wish to make public comment?

(No responses)

Any other individuals here in the local assembly that wish to make public comment?

**MS. HOYT:** Excuse me, my name is Rosemary Hoyt and I am on the line.

**DR. ZIEMER:** Okay. Hello, Rosemary.

**MS. HOYT:** How are you?

**DR. ZIEMER:** Yeah, Rosemary Hoyt. You may proceed, Rosemary.

**MS. HOYT:** Thank you. My comments are (unintelligible) day from the procedures workgroup. It sounded like three-fourths of the time and effort went into producing that database. It was my understanding that that database was to track findings. Later Mr. Elliott (unintelligible) database would be (unintelligible) also.

During past Advisory Board meetings other issues have been brought up. (Unintelligible) seem appropriate to have a method to track these issues as well. (Unintelligible) questions and follow-up items from workgroup meetings (unintelligible) Advisory Board meetings be added to the database.

I also suggest the status of the findings and issues be posted on the (unintelligible) web site (unintelligible) occur. It has been an ongoing problem with (unintelligible) submitted to the Advisory Board and workgroup that (unintelligible) worker outreach that -- to the web site in a timely manner. As Sandra Jackson just pointed out, she had several questions that she would like to have answers to, and I would like to know how these answers are going to be followed-up on. In the past it seems like many of these questions are accepted, but there's no follow-up and follow-through.

**DR. ZIEMER:** Thank you, Rosemary. That's -- actually is a very good suggestion. We are in fact trying to do a better job of -- of keeping issues from falling through the cracks. We have a person who has joined the NIOSH staff -- somewhat recently -- but Nancy is trying to help us track issues and -- and hopefully we can do a better job. It may very well be that some of these other issues could be placed in a database for follow-up. That's a good suggestion. Thank you very much.

**MS. HOYT:** Thank you, Dr. Ziemer.

**DR. ZIEMER:** Other comment-- commenters on the line?

**MR. DUTKO:** (Unintelligible)

**DR. ZIEMER:** Yes.

**MR. DUTKO:** (Unintelligible)

**DR. ZIEMER:** Your -- your voice is breaking up. Let's -- move a little bit away from your phone and try that again. Let's see if we can hear you better. Are you on a -- are you on a land line phone?

**MR. DUTKO:** Yes, sir.

**DR. ZIEMER:** Yeah --

**MR. DUTKO:** (Unintelligible) if you don't receive the --

**DR. ZIEMER:** We're having a -- we're having a great deal of trouble understanding you. I -- your -- your phone line seems to be breaking up so it's very sort of intermittent.

**MR. DUTKO:** Is this any better, Doctor?

**DR. ZIEMER:** That's a little better. Try it from that angle and see if that works.

**MR. DUTKO:** Sir, my name is John Dutko. I was a Betatron (unintelligible) operator at General Steel in the early (unintelligible). I (unintelligible) pieces (unintelligible).

(Unintelligible) Roentgens we fired, none of it seems to be documented. (Unintelligible) legitimate and active dose reconstruction team (unintelligible) in our case when there is no records of the many (unintelligible) Roentgens (unintelligible). Is this not (unintelligible) error? Is (unintelligible) not in error (unintelligible) we're told (unintelligible) not qualified in this manner? I'm not trying to be -- I'm not trying to be (unintelligible). It shouldn't be hard for me to understand (unintelligible) no records (unintelligible) how did those accurate dose reconstructions apply to us operators who wound up (unintelligible) case of cancer (unintelligible) our cancer -- our type of cancer to (unintelligible). Thank you, sir.

**DR. ZIEMER:** Okay, thank you. And as you know, we're still working on the General Steel issue, so hopefully we'll be able to come up with some reasonable answers on that sort of overriding question that you raise.

**MR. DUTKO:** Sir, I -- I fully understand (unintelligible) quality (unintelligible) excellent procedures you have. We just have a

difficult time understanding how any (unintelligible) accurate dose reconstruction can be made with no records. Is it guesstimates? When we (unintelligible) our records. We have (unintelligible) on paper. (Unintelligible) record of this at that time. But how all the different types of radiation to be applied (unintelligible). We should (unintelligible) neutron, how (unintelligible) can apply to us if there is no accurate records (unintelligible). Thank you, sir.

**DR. ZIEMER:** Okay, thank you. John, give us your last name again for our court reporter. He didn't get it.

**MR. DUTKO:** My name is John G. Dutko, D as in dog, u-t-k-o.

**DR. ZIEMER:** D-u-c-k-o.

**MR. DUTKO:** T -- T as in (unintelligible).

**DR. ZIEMER:** D-u-t-k-o.

**MR. DUTKO:** T as in (unintelligible).

**DR. ZIEMER:** Got it.

**MR. DUTKO:** Thanks, Doctor.

**DR. ZIEMER:** Thank you very much. And NIOSH and some of our other folks are in fact trying to gain information from you and your coworkers

on answering some of those questions about the -- in the absence of records, what -- what can help us fill in some of those gaps, so --

**MR. DUTKO:** Doctor, we (unintelligible) done the best we can.

**DR. ZIEMER:** Yes, we understand that, and we're -- also [name redacted] has been helping with that, as has Dr. McKeel, so hopefully with everyone's help we'll be able to come up with some -- some answers.

**MR. DUTKO:** Thank you.

**DR. ZIEMER:** Thank you. Let me ask now for others who may wish to comment. Anyone else on line that wishes to comment?

(No responses)

Okay, I hear no others. Again I'll ask if anyone here in the assembly wishes to make comment.

(No responses)

If not, then we will recess for the day and we will reconvene tomorrow morning at 8:30. Thank you very much.

(Whereupon, the meeting concluded at 5:12 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 Apr. 7, 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 10th day of May, 2008.

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**STEVEN RAY GREEN, CCR, CVR-CM, PNSC**

**CERTIFIED MERIT COURT REPORTER**

**CERTIFICATE NUMBER: A-2102**