UNITED STATES OF AMERICA
CENTERS FOR DISEASE CONTROL

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NATIONAL INSTITUTE FOR OCCUPATIONAL
SAFETY AND HEALTH

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ADVISORY BOARD ON RADIATION AND
WORKER HEALTH

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65th MEETING

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TUESDAY, OCTOBER 20, 2009

The meeting convened in the Conference Room of the Danford's Hotel and Marina, 25 East Broadway, Port Jefferson, New York, at 9:30 a.m., Paul L. Ziemer, Chairman, presiding.

PRESENT:

PAUL L. ZIEMER, Chairman
JOSIE BEACH, Member
BRADLEY P. CLAWSON, Member
MICHAEL H. GIBSON, Member
MARK GRIFFON, Member
JAMES E. LOCKEY, Member
JAMES MALCOLM MELIUS, Member
WANDA I. MUNN, Member
JOHN W. POSTON, Member
ROBERT W. PRESLEY, Member
GENEVIEVE S. ROESSLER, Member
PHILLIP SCHOFIELD, Member
THEODORE M. KATZ, Designated Federal Official
REGISTERED AND/OR PUBLIC COMMENT PARTICIPANTS:

ADAMS, NANCY, NIOSH Contractor
AL-NABULSI, ISAF, DOE
AQUINO, LITA, NIOSH
BRADFORD, SHANNON, NIOSH
BREYER, LAURIE, OCAS
BROEHM, JASON, CDC
CALHOUN, GRADY, NIOSH
CANO, REGINE, DOE
CARTER, JOHN, DOE BHSO
DIAZ, THERESA, BNL
ELLIOTT, LARRY, NIOSH
ERIKSON, NANCY, Petitioner*
FALCO, JOE, BNL
FITZGERALD, JOSEPH, SC&A
FRAZER, CAROL, AAHS
GEIGER, KATHLEEN, BNL
GLOVER, SAM, NIOSH/OCAS
GOULD, LIESL, BNL
HINNEFELD, STUART, NIOSH
HOWELL, EMILY, HHS
HOYT, ROSEMARY, Petitioner*
HUGHES, LARA, NIOSH
JONES, TOM, NIOSH
KOTSCH, JEFFREY, DOL
LEWIS, GREG, DOE
MAKHIJANI, ARJUN, SC&A
MAURO, JOHN, SC&A
McGOLERICK, ROBERT, HHS
McFEE, MATTHEW, ORAU
MOTTL, ADELE
NETON, JIM, NIOSH
OBERDORF, MIMI, Public
PASTOR, JOHN, BNL
PRESLEY, LOUISE S.
RUTHERFORD, LaVON, NIOSH
SCHEVERER, THOMAS, BNL (Retired)
SKELTON, RICHARD, BNL (Retired)
SOSNOUSKI, MARTHA, Office of Senator Gillibrand
VICTOR, ALEXANDRA, Office of Senator Schumer
WADE, LEWIS, Contractor
*Present via telephone

T-A-B-L-E O-F C-O-N-T-E-N-T-S

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

9:13 a.m.

CHAIRMAN ZIEMER: Good morning. This is the meeting Number 65 of the Advisory Board on Radiation and Worker Health, meeting on Long Island in the town -- or I believe they call it the Village of Port Jefferson, which is in the vicinity of the Brookhaven National Laboratory facilities.

We welcome each one here, and we'd like to remind you that there are copies of the agenda and also related documents on the table in the rear of this room. If you've not already done so, please register your attendance with us in the registration booklet, which is out in the foyer.

Also, any members of the public who wish to address the assembly later today during the public comment period, please sign the book in the foyer so that we have some idea of who and how many will be participating in the public comment session.

Just for the record, all of the Board members are here assembled, with the exception of Dr. Lockey. And we hope he will be able to join us in the very near future of this day.

But in any event, let me call on our Designated Federal Official, Ted Katz, to also make some preliminary remarks.

MR. KATZ: I have a short leash here. A couple things. Just for the Board members, note that we've turned down the mic levels because of a feedback problem. So try to speak directly into the mics when you speak so that you'll be recorded well and so that the people on the phone can hear you.

A couple notices I'd like to give. One, first of all I'd like to welcome everybody. We don't have a lot of people from Brookhaven here in the room right now but welcome, everyone on the telephone lines, as well. I want to note for you since the last full Board meeting, face-to-face Board

meeting, we have a new Director, again, at NIOSH, a new Director that we have had before, John Howard. And we're very glad to have him back for another term.

I'd also like to note that in this past week, President Obama appointed four additional members to the Board. And we're very glad to have the extra help. It's a great group. It includes:

Richard Lemen, who is a highly accomplished epidemiologist in occupational safety and health. He had worked at NIOSH. He's got a lot of background in policy making as well as research. And sort of a specialty in respiratory diseases and asbestos;

David Richardson, who is an epidemiologist from North Carolina who has done quite a bit of work related to Energy workers at different sites at the complex;

Bill Field, who wears both an epidemiologist hat and a health physics hat, a radon expert, and has, in the past when we

were dealing with Iowa Ammunition Site, was also an expert -- sort of an expert -- technical expert who provided sort of input to the Board when it was deliberating over the SEC petition for Iowa;

And finally, but not least, Henry Anderson, who some of you may recall, who have been following this Board, was with the original Board and served, I think, you know, six years on the Board previously and we're happy to have him rejoin the Board for another go.

Then just an administrative matter for the folks on the phone, please mute your phones except when you are addressing the Board, you know, in a public comment session or for an SEC petition. If you don't have a mute button, *6 will work. And then *6 again to unmute your phone. And if you need to leave a call at some point, please don't put it on hold. Just hang up and dial back in because a hold will disrupt the audio for

everyone here at the Board.

And thank you very much for joining us.

CHAIRMAN ZIEMER: Thank you, Ted.

And let me add a word of welcome to the four new Board members or three new plus one returning, as it were, and indicate how pleased we are to have them join us.

They will actually be seated as soon as the bureaucratic paperwork has been completed and all the associated details of that.

And then we hope in the very near future to have an orientation session, which we do for new members, to familiarize them with procedures and approaches that are used by this Board and related matters so that they will be able to, so to speak, hit the ground running. And we hope to do that as quickly as we can.

Some of those new individuals may, in fact, be with us today, not as official

members at this point but listening in. They're not all able to but some will and so may indeed even be on the line as we speak.

But in any event, we're pleased to have them aboard.

I should also mention for the record that there was a tour for the Board of the Brookhaven National Laboratory facility yesterday. A number of the Board members were able to participate in that.

And that was an excellent sort of orientation for those who had not been there and certainly a good review for those who had been there before.

So just for the record, we do thank the folks at the Brookhaven National Laboratory who hosted that tour and made it a very good one, as far as our Board members are concerned.

I should point out that we will proceed on the agenda, as much as possible, as it is given, but you must recognize that some

of the items are what we consider time-certain, particular those that deal with SEC petitions. Those will be, as much as possible, time-certains in order to accommodate Petitioners who may be available by phone or in person, as the case may be, to address petition issues that they may wish to speak to.

So as much as possible, all of those which are identified on the agenda as dealing with SEC petitions will be considered time-certains.

The other items are somewhat more flexible and we will proceed and flex ourselves in terms of how the timing goes on those. And sometimes we get behind, sometimes we get ahead, but we will be flexible on those to the extent possible.

With those preliminary comments, we are ready to hear from Larry Elliott from NIOSH OCAS. And Larry will give us his regular NIOSH program update.

Welcome, Larry.

MR. KATZ: While Larry is setting up, let me just check for the folks on the phone just to make certain, since we haven't, would someone from the phone lines just let us know if you can hear well?

PARTICIPANT: Yes.

MR. KATZ: Okay, great. Thank you.

MR. ELLIOTT: Thank you, Dr. Ziemer.

Good morning everyone. Can you hear me?

PARTICIPANT: No.

MR. ELLIOTT: No?

CHAIRMAN ZIEMER: It's on.

MR. ELLIOTT: It's on. Okay.

Well, as has been customary, I'll start with some news briefs from NIOSH and OCAS, NIOSH's Office of Compensation Analysis and Support. First of all, as a news brief, Ted stole a little bit of our thunder in mentioning that Dr. John Howard has been

reappointed as the Director of NIOSH. Dr. Thomas R. Frieden made that appointment happen a few weeks ago. And we're very much appreciative of Dr. Howard's return and welcome him back.

The second news brief goes to a procedural administrative matter. We are about to approach the Office of Management and Budget for an approval to use our special exposure cohort forms. You've heard us talk about OMB approval on our Computer-Assisted Telephone Interview form. Well, now it is time to approach OMB for approval on the use of our special exposure cohort forms.

And so if any Board member has thoughts or comments about that form, we would certainly welcome them. You can submit those to me or any of the OCAS staff members.

Thirdly, we've recently had some comprehensive ethics training for all OCAS employees. And particularly we had a special focus on conflicts of interest. This training

was provided by Chris Cox. You are familiar with him as a Board member. He has given you the ethics training in the past. He serves with the Office of General Counsel Ethics Division.

In addition to this training, we asked the CDC Ethics Office to clarify guidelines for OCAS employees with potential financial conflicts of interest with the program.

As you know, in accordance with NIOSH's conflict or bias policy, staff members who worked at a facility -- at a covered facility cannot do or perform certain program functions relative to that facility. So in other words, they cannot serve as a document owner relative to a facility for which they had prior employment.

In addition, we are revisiting the application of 18 USC Section 208 and 5 CFR Part 2635. These are regulations, laws that require all federal employees to acknowledge

any financial conflicts of interest. And we're doing this with the assistance of the CDC Ethics Office and the Office of General Counsel Ethics Division attorneys.

We've specifically requested clarification regarding the proper course of action to take when individual staff members have previous employment at one of the covered facilities and has been diagnosed with an eligible cancer.

Since an OCAS employee's work may have included work that is not specific to a single facility but could nonetheless have what is called a predictable effect, in other words an individual could be working over on a document that has overarching implications to many facilities, including the one they worked at, this can result in a -- can be perceived and can be an actual financial conflict if there is a predictable effect on the outcome of that individual's claim from the work that they performed.

Our lawyers are working with the CDC Ethics Office and the Office of General Counsel Ethics Division attorneys to determine whether these sorts of situations create financial conflicts. Each individual staff member who is so affected will be given guidance and be given specific boundaries within which to work.

For example, if a person is working on an implementation guide for the program that speaks to how dose is to be estimated across the weapons complex, across facilities, but was conflicted at one or two of the sites represented in the covered facilities list, that individual would not be able to speak in the discussion of a work group or in the Board deliberation process.

The fourth news brief that I bring to you today is a report of our worker outreach program. We had a workshop two or three weeks ago. Twenty-four members of organized labor representatives, former

Workers Screening Program representatives, and advocates joined us in Cincinnati for a two-day workshop to discuss the dose reconstruction approaches that we utilize and the SEC petition processes.

This Advisory Board had three members, a Board member and two members from your contracting support staff, in attendance observing that workshop.

We're very pleased with the outcome of these workshops. We typically are holding two a year. And they seem to be well received and the folks are very appreciative of the information that we provide them.

And the purpose of the workshop is to assist them in going back out into their communities and talking with potential claimants and/or people who may have not filed a claim but should file a claim about how the process works and how they can enable and help those folks make their way through this difficult process.

As you know, this month, our country recognizes a group of workers who made personal sacrifices to protect our country and our freedom. The U.S. Senate designated October 30th, 2009 as a National Day of Remembrance for American nuclear weapons program workers and uranium miners, millers, and haulers. We invite everyone to join NIOSH in honoring these workers on the National Day of Remembrance, October 30th, 2009.

These American nuclear weapons program workers, some whom sacrificed their health and many who lost their lives as a result of workplace exposures are the focus of our meeting this week and the focus of the compensation program that was enacted in the year 2000. Their sacrifices must always be at the forefront as we carry out our work in this program.

From the beginning of our involvement in EEIOCPA, NIOSH's core values have been an integral part of our activities.

Because of the history that led to this compensation program, NIOSH has focused in particular on the core values of quality of science, transparency, and accountability, which are at the heart of our actions, our decisions, and our communications in this program.

First and foremost, NIOSH strives to bring the best available science, transparency, and accountability to the reconstruction of radiation doses for cancer-related claims. It is important to note that Congress recognized the potential for a lack of monitoring records for workers eligible in the compensation program. And the Congress, in its law, specified that methods for radiation dose reconstruction be established by regulation.

Specifically this law requires the promulgation of a rule to establish scientific methods for arriving at reasonable estimates of radiation dose for those individuals who

were not monitored for radiation, for those individuals who were inadequately monitored, and for those individuals whose monitoring records are missing or incomplete.

In the process of establishing this rule, both the general public and more than 30 stakeholder organizations were asked for input. And NIOSH reviewed over 200 pages of their comments in the development of this regulation.

In addition, NIOSH was adamant that each claimant could have an opportunity to be interviewed prior to the dose reconstruction process beginning and again when the draft dose reconstruction report had been completed.

These interviews are an opportunity for claimants to both understand and to provide information to us to understand how this program works and how dose reconstruction works and to provide information that might enable us to complete their claim. Close to 100,000 interviews with claimants have now

been conducted.

Although the radiation dose reconstruction efforts have been ongoing in the United States for several decades, this type of radiation dose reconstruction for a compensation program was and still is unfamiliar to many people.

Each dose reconstruction is individual. It is dependent upon the circumstances of each individual claim. It has its own unique characteristics and complexities.

NIOSH has provided an answer for the vast majority of claims that have been sent to us for dose reconstruction. And you see on this slide more than 84 percent of over 30,000 claims have been provided a dose reconstruction report.

As of September 30th, 2009, 4,161 cases remained at NIOSH for dose reconstruction. That represents about 14 percent of the over 30,000 population that

we're still working on.

We have 577 cases that are currently administratively closed. And we cannot move those cases forward unless the claimant provides us with an OCAS-1 indicating that they have no further information to provide or if they provide new information that would affect the claim, we would reopen the claim for continuation of the dose reconstruction.

This pie chart presents the case status again as of September 30th, 2009. And you can see here that the majority of the pie in blue is represented by the completed claims.

The claims that have been pulled from our caseload population by the Department of Labor for various reasons represents three percent and is shown in the gray.

The SEC claims that have been pulled for eligibility for a class amount to about eight percent. And that's shown in

purple.

The administratively closed that I just mentioned, those 577 or two percent, are shown in red.

The active population are the ones in yellow and the ones in green. So if you combine those two numbers, you'll come up with the 4,161 claims, three percent of which are pended.

Of the 4,161 cases that are still at NIOSH for dose reconstruction, we show here in this slide that 1,581 cases are in the dose reconstruction process. There are another 385 initial draft dose reconstruction reports in the hands of the claimant, again waiting for an OCAS-1 form. And that leaves 2,195 claims that are in some stage of development toward advancing into actual dose reconstruction.

One thousand and twenty-nine cases are pended. And if we look at those specifically, the top four categories are presented here: 660 of those cases are pended

because of technical basis document issues, and I would add that, of that, there is around 500 -- close to 550 in that category that are Hanford-related pends.

There are 110 SEC cases pended before final designation. So as a class proceeds toward designation, cases become pended before -- so we don't take any action on them until we hear from DOL about their eligibility for the class.

Ninety-six cases are pending the development of the dose reconstruction methodology since they are non-presumptive cancer that didn't find its way into class eligibility.

And 71 claims are awaiting specific demographic information updates regarding the claim, a new survivor, or a change in employment information, or a correction on the type of cancer.

I think also I'd like to note about 300 of those Hanford claims -- you'll hear

more about that later this afternoon in the evaluation report -- but about 300 of those Hanford claims are going to be eligible for the class that we are proposing.

NIOSH has painstakingly pored over thousands of boxes of records and tens of thousands of individual documents to acquire the records and the data that is needed to provide claimants with answers to their claims. We've also integrated information that has been provided by the claimants, by petitioners, by site experts, and by subject matter experts as well as information that is gathered from our worker outreach meetings.

We're tracking down information from over 200 sites for which NIOSH has claims to do dose reconstructions for. It has been one of the biggest challenges in this program. The sheer volume of records and the data that's been acquired, cataloged and compiled into an electronic research database is truly remarkable, particularly when the difficulty

in searching out the records is taken into consideration.

For some sites, research is time-consuming and arduous, and NIOSH has worked with DOE as well as alongside staff at individual facilities to unearth paper records that were often buried in storage facilities among the boxes and the file drawers in that facility. And we have found data for other facilities when we have gone through these data searches.

NIOSH has made over 200 data search and capture missions during which the contents of almost 7,000 boxes plus various forms of data were reviewed and over 28,000 individual documents and things like binders, microfilm cartridges, photos, and compact discs were retrieved.

It's not unusual for us to go out and go through 50 or 60 boxes of data only to retrieve about 150 or so relevant documents for our use. It is also not unusual for an

individual site to have records stored at more than one place, and Brookhaven is a fine example of that situation.

Some records may be at a federal record center, some at the site, and some at another facility. Some records are filed by project. Some not by site or organization but by other indexing tools.

Because of this, NIOSH has turned up records for one facility during a search for records and found records for another facility. As an example, while researching the thorium exposure issue for the Fernald site, NIOSH ran across documents relevant to the thorium concerns at the Savannah River site.

In pursuing this discovery, NIOSH followed a trail of records from one box to another, from one location to another, and in the end, we were able to identify the data for thorium exposures at the Savannah River site.

This is just one example of our

detective work in locating and identifying data at more than 200 facilities for which NIOSH has claims. We can give many more examples.

In some cases, these data searches turn up exposure information that was not evident before. In examples like the Savannah River site, the data added thorium for some claimants which otherwise would not have been accounted for in their dose reconstructions.

In all, NIOSH efforts have made more information on the facilities and their operations available to the general public and the claimants than ever before.

Because the dose reconstructions in this program are individual and complex and because of the potential for a lack of monitoring records, the dose reconstruction methods used by NIOSH consistently give benefit of the doubt to the claimant whenever there is a question or uncertainty about the amount of radiation exposure the worker may

have received.

That is when there are two equally plausible exposure scenarios, NIOSH selects the scenario that provides the highest dose to the organ or the tissue that developed the cancer. This benefit of the doubt is evident in the Probability of Causation percentages for the 22,312 dose reconstructions that have been sent back to the Department of Labor for final decision.

As you can see in this slide, 32 percent of the cases had a Probability of Causation of greater than 50 percent, much higher than the Department of Energy's original estimate when the program was established.

When asked by the Office of Management and Budget and the Congressional Budget Office, the Department of Energy predicted less than five percent of the nuclear weapons workers with cancer would have a Probability of Causation greater than 50

percent. Keep in mind that this 32 percent does not include cases that were pulled from dose reconstruction because they were compensated under an SEC-class.

In this slide, you'll see the distribution of Probability of Causation broken out in ten percent increments up to the greater than 50 percent decision level. If we look at the distributions of PoC that have been returned to the Department of Labor for decision, you'll see here that there is a large number of claims that fall in the zero to ten percent PoC category.

And we work very hard when we see a claim that falls in the 45 to 49 percent category. As you know, we run those cases multiple times through our IREP scenario to make sure that they are statistically accurate.

The quality of science and the benefit of doubt for claimants are also the foundation for NIOSH's process for change to

the scientific elements underlying the dose reconstruction process. These changes are based upon scientific progress and discussion.

This is explicitly outlined in the dose reconstruction rule and updates to certain scientific elements of the dose reconstructions may be recommended by the public at any time. In this chart, we show the number of reworks that have been returned to us over the course of time.

We've received 9,583 cases to be reworked. Many times the rework is because of demographic information related to the claim. And the large spikes that you see here are those program evaluation reviews that were done in late 2007, primarily the Super S program evaluation review for the large number of claims as shown in that spike.

So what this program evaluation review means for claimants is that when new, relevant information becomes available, for example a scientific update, new information

on a site or a change in the dose reconstruction methodology for that site, and it appears that this new information may result in an increase for a completed dose reconstruction with a Probability of Causation of less than 50 percent, NIOSH is committed to working with the Department of Labor to reopen and rework the dose reconstruction as appropriate.

While this requires resources and time to investigate and change procedures as well as reevaluate cases that may be affected, we owe it to the claimants.

In EEOICPA, Congress stipulated that the assumptions, the methodology, and the data used in dose reconstruction be made available to researchers and the general public, with exceptions for the protection of privacy, and NIOSH emphasizes transparency and accountability in making NIOSH's process and methodology as open as possible for claimants, their families, and advocates.

One way that NIOSH makes information available is through our website that provides comprehensive information about NIOSH's dose reconstructions and other activities in support of this compensation program. The website includes over 100 web pages and over 2,500 PDF documents.

NIOSH has also designed the dose reconstruction and the SEC processes with an unusual amount of opportunity for public debate and public input. Although it is typical of the sciences for differences of opinion to be debated in public forums, it is not so typical to find it in this type of program.

This leads some people to misunderstand the nature of the debate. For example, when the Advisory Board or its contractor review NIOSH documents or methodologies, it is typical for them to raise a list of questions. These questions are then discussed and debated among NIOSH and its

contractor and also the Advisory Board and its contractor.

Generally these discussions are held in a public forum. The debates are not about who is right or wrong. They are about bringing the best available science from a variety of sources and perspectives to the process. And making sure it is as transparent as possible for claimants and their families and advocates.

We grant you that allowing for public debate and for the resolution of differences of opinion does take time and it adds to the process. Scrutinizing thousands of boxes and tens of thousands of individual documents to acquire records and data needed for these dose reconstructions also adds time to the process. Reworking cases when relevant new information becomes available adds time to the process, sometimes a significant amount of time.

However, we feel these claimants

are owed the best available science as well as an exceptional degree of transparency and accountability. We've worked hard to reduce the amount of time required to process a dose reconstruction including developing measures for estimating exposure where appropriate, developing the technical documents to enhance consistency and reduce the time required for individual dose reconstructions in creating a comprehensive database and tracking system.

As you can see in this slide, we continue to reduce the average days required to complete initial draft dose reconstruction reports. So go back to that one slide please. Is that it? Is this the slide I wanted? Yes. So if we look at the oldest cases we had, they were taking the longest time. And as we look at the relatively newest cases we're getting, we're showing a rather dramatic reduction in the time required to process those dose reconstructions.

Next slide. We also, if we look at

the efforts we're making to improve our timeliness from this slide, we can see that by these dates, we're also improving the amount of time it takes to complete a dose reconstruction.

NIOSH requests exposure monitoring information from the Department of Energy for dose reconstructions. DOE provides NIOSH with a response to the request within 60 days. This response from DOE may contain the dose information that we've requested or it may simply indicate where they're at in trying to track down the information.

We closely monitor the progress DOE makes on these data requests for information. We have had discussions with both DOE and DOL about ways to improve the efficiency of records retrieval process by asking DOE to provide exposure records to NIOSH at the time when DOL approaches DOE for claim employment eligibility verification. This would eliminate the time during the dose

reconstruction process and enable us to move claims through the system a little faster.

Here you see the number of outstanding requests we have before DOE at this time. It's 304 as of September 30th. Eighty of those were greater than 60 days. This has been a dramatic improvement also from your last Board meeting presentation when these numbers were almost twice as large.

Since it's the beginning of a new fiscal year, I wanted to give you a brief update on our program assessment rating tool or PART goals for fiscal year 2009. As you can see in the first goal objective, we were to complete 35 percent of the initial DRs within, dose reconstructions, within 180 days of receipt during the fiscal year. We surpassed that objective by coming in at 55 percent out of all DRs, dose reconstructions, completed in 180 days or less.

Our second objective was to complete 50 percent of the legacy cases. And

I'll note that when this objective was set at the beginning of FY09, we were defining our legacy cases as one which had been at NIOSH for more than two years. In June of 2009, this year, you remember that we set a management objective for no claim older than a year. And so eight months into the fiscal year, we changed the definition of legacy claims to reflect that management objective to complete initial draft DRs within a one-year time frame.

I'll talk a little bit more about that management objective in a few minutes. And as you can see, we only completed 12 percent toward this objective. But, remind you, we changed the definition of what legacy cases means twice. Obviously it was a much more difficult hurdle than the original objective with the original definition for legacy enabled us to achieve.

The third objective was to complete 40 percent of the DOL returns within 180 days

of receipt. And again we surpassed that goal by coming in at 47 percent.

The fourth objective was to complete 60 percent of our 83.13 special exposure cohort evaluation reports within 180 days. And we completed 43 percent of those. In each case where we did not make 180-day time frame, we provided the Advisory Board and the Petitioners and the public with an explanation of why.

Our FY2010 PART goals are divided into two categories: dose reconstructions and SEC petitions. And simply our first goal is to provide a dose reconstruction to all claimants in a timely manner. And in FY2010, we propose that we will do that for all cases and have no case older than a year during this fiscal year. I can see this goal becoming 180 days or less in the future, but for FY2010, we're saying we're not going to have any claim older than a year old in our hands.

Goal Two is to deliver an

evaluation report within 180 days for all of the 83.13 petitions that come to us so we want to complete 60 percent of those evaluation reports within 180 days. And if we are unable to do so, we'll provide a schedule and an explanation to the Advisory Board and the Petitioners.

As this program evolved over the past eight years, the early claimants, those who have waited the longest for answers, have always been a high priority. It weighs heavily on us that some claimants have not lived to receive an answer. Let me say I'm personally sorry that we did not fulfill our obligation to those claimants in a timely manner.

At the last meeting I introduced NIOSH's new initiative to continue our timeliness improvements. We have established a management objective which explicitly reinforces and intensifies NIOSH's commitment to the production of timely dose

reconstructions. And I hope that means that as few claimants as possible wait years without answers, at least the answer about the dose reconstruction from NIOSH.

The objective formalizes a policy to complete the initial draft dose reconstructions within a year. I'm going to walk you through what this initiative means to us now.

We realize it is an ambitious objective but it is one that we owe the workers who sacrificed and to the claimants who have waited for an answer. We believe we are now in a position to tackle it to achieve this goal because there are a number of program elements in place which provide the necessary foundation and continuity.

These elements include the development of technical basis documents, especially the completion of most of those site profiles for large sites, and the majority of technical basis documents needed

for the other sites. Remember that we needed to develop information for over 200 different facilities for which NIOSH has received claims.

A strong infrastructure is in place including the NIOSH IREP, including the tracking database systems that we have for claims as well as the information that we receive. We have promulgated the three rules that the law called for that are necessary to process claims both through dose reconstruction and special exposure cohort petitioning.

We have developed and shown experience in performing dose reconstructions for a wide variety of sites with a wide variety of exposures under the standardization of methodologies, procedures, and through our reports.

We have evaluated 78 special exposure cohort petitions, completed those, and 44 classes have been added. And by the

end of tomorrow, 24 SEC petitions will be with you, the Board, awaiting your recommendation.

A technical support contract is now in place with options for four one-year extensions based upon the needs of the program. Level funding is what we expect for this year -- level from what we had last year.

Without these elements in place, we do not have the foundation or the continuity that is required to take on this ambitious objective. So we've been working hard to put together a well thought-out plan to get to this goal and developing projections for progress along the way to the effective date of June 2010.

So as of June 1st, 2009, this past summer, there were 2,709 claims at NIOSH awaiting an initial dose reconstruction. Those claims were at risk of being one year or older as of June 1st, 2010, so they form the initial legacy claim population that we were speaking of.

On October 12th, 2009, last week, 931 claims have been completed and there were 1,778 claims remaining in the legacy claim population. This means that 34 percent have been completed and 66 percent remain.

By December 31st, 2009, we expect approximately 1,544 claims to be completed with 1,165 claims remaining without an initial dose reconstruction. This would represent approximately 57 percent completed and 43 percent remaining.

By March of next year, we expect approximately 2,234 claims to be completed with 475 claims remaining without an initial dose reconstruction or 82 percent complete.

And by June 1st, 2010, our objective is that no claims will remain at NIOSH that are more than one year old without an initial dose reconstruction.

In parallel with the management objective, we are also planning for the completion of rework claims. I showed you a

slide with reworks. Here, we're looking at, by June 1st, 2010, NIOSH would have no rework that has been with us for longer than a year.

So you see that we have evolved our definition of legacy. A year ago it meant a claim that had been at NIOSH for two or more years without an initial dose reconstruction. In June of 2009, the definition of legacy claim was updated to reflect the establishment of the management objective to complete initial draft dose reconstructions within a year. Now we are defining a legacy claim as any claim, initial or rework, that has been at NIOSH for over one year.

So as of June 1st, 2009, there were 1,614 claims without a draft dose reconstruction in the rework population. These claims would have been at risk of being older than a year on June 1st, 2010.

On October 12th, again, last week, 548 claims had been completed and there were 1,066 claims without a draft dose

reconstruction remaining in the rework population. This means 34 percent were complete and 66 percent remained to be completed by June 1st, 2010.

By December 31st, 2009, we expect approximately 916 claims to be completed with 698 claims remaining, awaiting a dose reconstruction revision.

By March 1st, 2010, we expect approximately 1,330 claims to be completed and about 284 rework claims remaining. That would be equal to about 82 percent completed, 18 percent remaining.

And by June 1st, our objective is that no rework claim will remain at NIOSH for more than a year without a dose reconstruction revision.

Now, we need to combine these two. And so this third slide does that for you. Combining the initials and the legacy, the rework legacy claims, as of June 1st, there were 4,323 combined that were at risk of being

older than a year by June 1st, 2010.

On October 12th, a total of 1,479 claims had been completed and there were 2,844 remaining.

By December 31st, 2009, we expect around 2,460 claims to be completed, leaving 1,863 claims without a draft dose reconstruction. Fifty-seven percent at that point would be completed and 43 percent would remain to be done.

By March 1st, 2010, we expect approximately 3,564 claims to be completed and 759 claims without a draft dose reconstruction remaining.

By June 1st, 2010, our objective is that no legacy claim will be at NIOSH that will have been here for over a year old.

There are several challenges which we have recognized that will impact our ability to achieve this goal. There are 114 sites represented by the population of combined legacy claims that remain to be

completed by June 1, 2010. Of those 114 sites, as of June 1st, 2009, there were 33 sites that had holds associated with them.

A hold is an issue associated with a covered facility or site. And those are obstacles that are currently recognized that prevent dose reconstructions from being done. We are closely tracking the progress toward resolution of each of these holds. And we'll continue to do so.

As of October 12th, last week, 27 of those sites had holds associated with them. We anticipate that by December 31st, 2009, 12 site-related issues impacting claim progress will be resolved, leaving 15 of the original 33 sites with holds.

All but three of these sites have estimated resolution dates prior to June 1, 2010. I should note, however, that the dates for the resolution of these holds are dependent upon the completion of site-specific issues. This does not take into account any

new issues that may arise during the resolution of the current holds.

The dates for the resolution of holds can be dependent on action by DOL or DOE. These are actions outside of the control of NIOSH.

An example of this is when a particular issue arises regarding the facility designation or the dates of a covered facility designation. Or another issue outside of our direct control can be dependent upon the Advisory Board activities and deliberations such as when the hold pertains to an SEC evaluation report or technical document review.

You can question how we can be shooting for these ambitious objectives when we know there are issues that need to be resolved and they are time-dependent. We agree. We understand. This is an ambitious effort.

And in order to achieve it, we know

we have to be on top of a number of different issues. We have to be closely tracking our progress. And we have to be pushing for resolution. Dr. Howard has made it extremely clear that we will do everything possible to achieve these objectives.

I also want to note that if there are any initial or rework claims that have been in the dose reconstruction process for more than a year after the June 2010 effective date of this policy, those claims will be critically evaluated within 15 days.

The evaluation will identify relevant issues and obstacles preventing the completion of that claim. A summary of that evaluation as a memorandum will be added to the claim file. The memorandum will also recommend how to best proceed in completing and returning the claim to the Department of Labor.

Similar evaluations will also be done for any additional claims which reach a

one-year anniversary following the effective date of this policy. So going into the future, we will not tolerate a claim over a year old without having a complete evaluation of the circumstances preventing its progress.

We will continue to update you at these meetings on our progress toward these objectives.

You've seen this slide before many times. And it is important to note that this simply shows the trend of claims that have been submitted to NIOSH and those that have been returned to the Department of Labor as well as to the claimants.

We still get around 200 new claim referrals each month. And an additional like number of reworks. We also continue to receive new 83.13 SEC petition evaluations and to initiate new 83.14 petitions.

NIOSH strives to bring the best available science, transparency, and accountability to the SEC process as it does

to the dose reconstruction process. We engage in painstaking records research and NIOSH has also provided assistance at all points in the petitioning process.

Our Ombudsman's Office and the SEC Petition Counselor walk a petitioner through the forms and explain the information needed to complete the forms. They offer advice on how the petitioner must meet the evaluation criteria for a petition. And they also help the petitioner by answering any questions about the process or the status of the petition.

Like the dose reconstruction process, the SEC petition process is designed with an unusual amount of opportunity for public debate and input. Again, it's NIOSH's objective to bring the best available science from a variety of sources and processes, and making sure that it is as transparent as possible for petitioners and claimants.

With regard to Brookhaven, the

Brookhaven National Lab, I want to just show where we're at currently with our number of claims. We have received 94 claims relative to Brookhaven, 28 or 30 percent have been completed and submitted to the Department of Labor. Seven of those were found by DOL to be compensable and 21 to be non-compensable under dose reconstruction. Four have been pulled by the Department of Labor for various reasons. And that leaves 62, or 60 percent of the cases, active at NIOSH. And we're anxious to present our evaluation report to the Board at this meeting on Brookhaven to add a class.

The Probability of Causation distribution is shown in this slide for the Brookhaven claims. And I think that's all I need to say about that.

I would like to close with the homepage of our website which reads, and if you'll indulge me, honoring quiet sacrifice. This month our country recognizes a group of workers who quietly made personal sacrifices

to protect our country and our freedom. The U.S. Senate designated October 30th, 2009, as a National Day of Remembrance for American nuclear weapons program workers and uranium miners, millers, and haulers.

These workers did not just do a job. During a time when our country was at war and later during the Cold War, they discreetly built a nuclear weapons program to protect and defend their families, neighbors, and fellow citizens across the country.

And in doing so, some of the workers were exposed, often unknowingly, to the types of workplace risks that NIOSH now strives everyday to prevent. Some of these workers sacrificed their health. And some lost their lives as a result of these exposures.

From the beginning of our involvement in this compensation program, NIOSH's core values have been an integral part of our activities. In particular, the core

values of quality of science, transparency, and accountability are at the heart of all of our actions, decisions, and communications.

As NIOSH continues to fill its role under EEOICPA, we recognize the debt of gratitude owed to the workers who quietly made sacrifices to protect our country and honor that debt with our commitment to quality of science, transparency, and accountability in our work.

We invite you to join NIOSH in honoring these workers on the National Day of Remembrance, October 30th, 2009.

I'll take any questions you might have.

CHAIRMAN ZIEMER: Thank you very much, Larry. And also thank you for reminding us all of the National Day of Remembrance which will be coming up very shortly.

I'd like to ask for a clarification on a few of your slides, specifically Slides 18, 19, and 20, which deal with the timeliness

issues. And first of all a minor point, I assume March 31st, 2009 on this slide should be 2010.

MR. ELLIOTT: It should be 2010, yes. Sorry.

CHAIRMAN ZIEMER: And it's probably true on all three slides.

MR. ELLIOTT: Yes, it's wrong.

CHAIRMAN ZIEMER: But I noticed in your presentation for the March 31st dates, in all cases, the numbers you gave us orally were quite different from what are on the slides. So is there a new -- is that an update?

For example, on the first slide, this shows 764. The number you gave us was 435. And I noticed on the other two slides the numbers for the March dates were quite different. So have the projections changed, or --

MR. ELLIOTT: My apologies. We were working on this presentation --

CHAIRMAN ZIEMER: I know it's very

current, obviously very current data. But just for the record, I wondered which of those numbers --

MR. ELLIOTT: The numbers I gave verbally are the --

CHAIRMAN ZIEMER: Are the correct numbers.

MR. ELLIOTT: -- ones that should have been on the slides.

CHAIRMAN ZIEMER: Okay. Thank you.

MR. ELLIOTT: My apologies.

CHAIRMAN ZIEMER: I think there were slight differences in December but very, very minor. But the March numbers were quite far apart in all three cases. Okay. So the verbal numbers are the correct ones.

MR. ELLIOTT: Right. If I could add, the projections are developed from our management plan.

CHAIRMAN ZIEMER: Yes.

MR. ELLIOTT: And what activities are included in that plan that need to happen

in order to --

CHAIRMAN ZIEMER: Right.

MR. ELLIOTT: -- advance progress on certain facility claims.

CHAIRMAN ZIEMER: I wonder if it might be possible, because some of us keep these slides and use them, if we could have an updated version of those --

MR. ELLIOTT: We'll get you an updated --

CHAIRMAN ZIEMER: -- three slides --

MR. ELLIOTT: -- version and I will also --

CHAIRMAN ZIEMER: -- just for our own records.

MR. ELLIOTT: -- I will also give you the -- make sure that you understand the correct numbers --

CHAIRMAN ZIEMER: Yes.

MR. ELLIOTT: -- that have to be placed there.

CHAIRMAN ZIEMER: Thank you very much.

Dr. Melius, some comments or questions?

MEMBER MELIUS: I have a few questions for Larry.

My first question is -- I'm just trying to understand some of the resource issues and so forth and, although there's a lot of activities on the part of NIOSH staff and your contractors, there have also been significant delays at a number of sites as you or your contractor, you know, works to complete reports and so forth with that.

And I think in the Hanford case, which we'll hear later, we've been essentially on hold for a couple of years. So a lot of that was an issue of access to records as I understand it. But, on some other sites, for example NTS, Nevada Test Site, I think there's been delay at least over a year in terms of responding to some of the SC&A comments.

And in the case of the Idaho site, it has now been a -- which is a site profile review, we've waited I think almost two years now waiting for a response for the site profile review by SC&A so the work group can take on, you know, the task of trying to reconcile issues with that site.

And I'm just -- I'm not as interested particularly in what's happening at the particular sites as much as, is there an overall issue with adequate support for being able to take on some of these tasks, or are there some other reasons for this?

MR. ELLIOTT: Well, there are, as I indicated in the presentation, there are over 200 covered facilities for which we've had claims and we have, of course, the resources that we have been given to accomplish the work.

We could certainly do more with more. Yes, the specific examples that you brought up, Dr. Melius, the Idaho Lab is

probably, in my mind, the one that we could have done a better job on.

I think the Hanford experience, I believe that there is a logical, rational due process that has occurred there. We've added two classes. We broke those classes into the situations where we recognized we could not reconstruct the dose.

We pursued data and other information that were necessary in order to answer questions about our ability to reconstruct dose in the later periods at Hanford. And we have processed the Hanford petitions along the way as best we could with the resources that we had and accounting for our access to the Department of Energy facilities out there and record systems.

We're doing what we can. And certainly, I'm upset that some things seem to get placed on the back burner when we should all be aware of where they are at and moving them forward. Idaho is one of those

situations.

I can say that Nevada Test Site, no claims have been held up there. Hanford, there were a number of claims that were in hold status until we had some resolution of the data issues and whether or not we could reconstruct dose.

Nevada Test Site is not similar to that. We have been processing claims as the Board deliberation has proceeded. Idaho, we have not had any claims put on hold because of technical issues or Board deliberation efforts in that regard.

MEMBER MELIUS: Well, I think there is sort of an issue of, are those -- should those SEC -- or should there be problems found in the site profile reviews, whether those claims would have to be reworked. But I guess we can cross that bridge at that time.

I have a second question which is related to the individual dose reconstructions. And I believe that we made a

commitment at that last meeting, if I understood it correctly, that we were going to sort of change the process in terms of how the individual dose reconstruction files were going to be kept.

Where they would now include a record of the procedure that is being used for various parts of those dose reconstructions. And I'm trying to understand if that's been implemented yet. Or am I misunderstanding the process or the commitment?

MR. ELLIOTT: No, the commitment was, when we have such worksheets or other information that is provided as guidance to the dose reconstructor that was influential in the development of the dose reconstruction, that will be recorded as a reference and included in the dose reconstruction file.

So some of these cases would not have that.

MEMBER MELIUS: Right. No, I know.

MR. ELLIOTT: Those that do have

that or have benefit of that will have that documented.

MEMBER MELIUS: So that part of it has been implemented?

MR. ELLIOTT: That part has. Stu? I'm -- yes, I'm correct in that. Stu is shaking his head in the affirmative.

MEMBER MELIUS: Okay. Good.

The third question is related to an issue that came up at the Amarillo, Texas meeting, which has to do with the security -- data security issue -- DOE security issue and how that should be handled in terms of how this program is run. And I think at that meeting I had asked a question about a policy we heard about, verbally, oh six, seven years ago from -- relayed to us, I believe, from somebody in the Department of Justice or something, that sort of secrecy of records and so forth was not the grounds for us to allow an SEC petition in terms of -- actually if those records couldn't be made public, that

were the basis for the decision there, so be it. There would not be any sort of public access or public debate about that. It would not be grounds for allowing an SEC petition.

And we discussed that again in the Amarillo meeting. And I'm just still trying to get an update to understand, since it is a policy we've never seen in writing or really had a good explanation for. And I'm trying to understand if that policy is still in effect and still applies to the program.

MR. ELLIOTT: Well, I would have to turn to the General Counsel folks in the audience. I believe it does. This is a Department of Justice determination that was made early in the program.

CHAIRMAN ZIEMER: Larry, I think in the discussion, as I recall it at the Amarillo discussion, I think there was -- I don't know if I would call it a commitment but I think NIOSH felt that we would always come forward -- we, being the program -- would always come

forward with information that was publicly available as the basis for either denying or approving an SEC class, if I understood that correctly --

MR. ELLIOTT: Yes.

CHAIRMAN ZIEMER: -- that you would not revert to classified information that was not otherwise available as a basis for a decision. Did I understand --

MEMBER MELIUS: Yes.

MR. ELLIOTT: That was my understanding of it though whether that's doable I think is problematic, I suppose. And it may be the basis.

Dr. Melius, your question was if, in fact, the basis for the information is classified, what do we do? And I think that's the issue that we continue to struggle with. But, I certainly understood NIOSH's intent was not to base a recommendation on classified information, if at all possible. So that, I guess, still leaves somewhat in limbo the

issue of -- which is the basis of the question -- what do we do if, in fact, that's the information.

And I suspect we don't know the answer to that yet. But perhaps you are seeking -- is it written somewhere?

MEMBER MELIUS: Well, I'm trying to -- if anybody recalls, we actually had asked for some information in writing or some better understanding of that policy. It was never provided to us. And it's now six or seven years later. And I'm just asking -- I'm trying to understand. We're certainly confronted with the potential for this again with Pantex and probably some other sites. And I don't understand what the basis is.

If you recall right, we were actually, I think, in the Iowa site. We had actually made a determination on that basis and were told that we couldn't do it. And then had to, you know, I won't say start over again but that added several months or a year

to the process while we had to then sort of figure out another way.

And it turns out the petition was granted. But I would like to avoid that delay and understand how to proceed.

MR. ELLIOTT: Well, I would like to avoid any such delays, as well.

MEMBER MELIUS: Yes.

MR. ELLIOTT: And my commitment -- thank you for reminding me, Dr. Ziemer, the commitment I made in Amarillo was that I don't have any intention or desire to bring forward a technical basis for recommendation on a class, either add or deny, that has behind it some sensitive information that can't be shared publicly.

Our intent in that is that we will work with the Department of Energy to find ways to express what we need to express in these technical basis recommendations.

And yes, is it possible that for Pantex or Mound or some other site, there may

be something that can't be spoken of publicly. That is a possibility. But we have ways of working with DOE to find words and language and phrases that enable us to communicate about these issues without divulging national security interests.

Will that be satisfying to the Board and to the public? I can't say. I can't predict.

But there have been many instances where, through our work with our contractor and our staff, we have found ways to describe events, circumstances, and exposure scenarios without divulging the fact that there's sensitive information behind that. And you have taken action on those things without question.

I can't answer for the Department of Justice. I can't answer for the General Counsel's Office, HHS, as to what will happen if there is such a scenario that plays out in the future where something has to be dealt

with behind closed doors.

MEMBER MELIUS: And I guess what I'm asking for is for some clarification on that from the attorneys. If you don't want to answer now, you don't have to. I mean you can brief us later. But I just -- it's a --

MR. ELLIOTT: Maybe Ms. Howell has a comment now. And it's not clear to me whether it is strictly a NIOSH legal issue or whether it goes beyond to Department of Justice. But --

MEMBER MELIUS: I'm trying to understand.

MR. ELLIOTT: -- some preliminary comments, Ms. Howell?

MS. HOWELL: Since the information that you received several years ago was based on information from the Department of Justice, we would have to revisit the issue with them because we can't release further information without speaking with them.

MEMBER MELIUS: I would think --

could you do that? I think that's actually what we asked for seven years ago and never received. I believe, as a Board, we asked for clarification on this.

MS. HOWELL: I believe several years ago you were told that we received the information that we could not release it. Like I said, we can revisit that now, if you would like or if NIOSH would like. But I believe that when this initially came up we requested to be able to present you with more and we were only given the ability to kind of make an oral presentation at that time.

CHAIRMAN ZIEMER: Well, let me suggest, since we don't task NIOSH or CDC, but perhaps Mr. Elliott and Ms. Howell can discuss this and determine if there is a way to get something in writing that would address this that would at least give some level of understanding to the Board as to how we would proceed in the future if, in fact, such a situation arose.

I think we understand the intent is not to have to base any decisions on specific classified information. But if, in fact, a situation arose where it becomes very clear that the sensitive information is part and parcel to the decision, in those kinds of cases, how do we proceed?

Now it may very well be that we can't anticipate all of the possibilities. So if we only have the kind of scenarios that Larry described where we can describe with proper words without revealing classified information, then maybe it is not an issue. But we don't sort of know that in advance.

So I would suggest if OCAS and HHS are willing to at least pursue whether or not there might be a more formalized legal recommendation or discussion or decision, that we could at least have a reference point-to. And if they tell us that we'll face the issue when it comes, then that's what they tell us. But I think -- I assume Dr. Melius and maybe

others on the Board would feel this way, that you would at least like some level of understanding of what will happen in these kinds of cases or what might happen.

MR. ELLIOTT: Correct. If we can avoid an unnecessary delay or, you know, mistake, then we think we should.

CHAIRMAN ZIEMER: Thank you.

Let me see if there are other -- did you have additional questions, Dr. Melius?

MEMBER MELIUS: I had one other.

CHAIRMAN ZIEMER: Okay. Proceed.

MEMBER MELIUS: Yes. That's a question -- I'm just trying to get clarification on what the practice is and so forth. My understanding is that at one point in time -- I may have asked this before, but I don't remember if I did it in the public session -- was that NIOSH had tasked ORAU with doing a follow-up on sort of public comments that were received at these meetings, during the public comment session to try to sort of

categorize and ensure some level of follow-up of the information presented here.

And then more recently, I was under the impression that that had either never started or had stopped. And so I'm just trying to understand the practice of what is the follow up now for people that make presentations during the public session.

MR. ELLIOTT: So during the public comment period?

MEMBER MELIUS: Correct.

MR. ELLIOTT: When people offer up comments or input, the practice has been and remains that I or somebody from staff will pull those individuals aside and speak to them about whatever comment they offered. In many instances, if the comment is related to communications between us and the claimant, we try to decipher whether or not it is our communications that is confusing the claimant or is it another piece of correspondence from one of the other agencies that's confusing the

claimant. So there is follow-up with that individual.

If it is input that we hear regarding a specific technical basis document or site profile, one of us will get with that individual and, again, follow up and try to elucidate more information about what is being provided and how we might factor that into our considerations and revisions of the documents that are being spoken about.

MEMBER MELIUS: Okay.

MR. ELLIOTT: No, I have not asked ORAU to go back and evaluate public comment periods. We have a worker outreach effort that does look at those kinds of things, reads the transcripts. The work group on outreach is examining our practices in this regard. So it is under review from that perspective.

MEMBER MELIUS: So your outreach contractor or whatever you call them does review the transcripts and follow up? Or what? I don't quite understand that.

MR. ELLIOTT: Well, both contractors I feel review the transcripts. Both contractors are attuned to what happens in public comment period that is relevant to our work that can be built upon, that can be used to address concerns, that can serve to show improvement in our efforts.

MEMBER MELIUS: Okay.

MR. ELLIOTT: And so yes, they both have that responsibility. They both have the responsibility of picking up on these things. Staff also pick up on these things and turn their -- focus technical leads on certain sites that would be most interested in information about -- that's given about that site and would follow up on that information.

CHAIRMAN ZIEMER: Let me insert something here, if I might, because this is an issue I've been giving some thought to recently.

I think, Ted, I may have discussed it with you as well in recent months but the

more underlying issue is a formalization of the follow-up and maybe even a tracking of what is done. Now we get different kinds of comments in the public comment session. We get some that deal directly with personal cases. And the Board can't specifically deal with those.

Others are more related to policies, approaches, procedures, and those kinds of things. And there are some reoccurring themes. For example, we often heard the reoccurring themes relating to the CATI interviews and the Procedures Work Group -- no, Subcommittee it is now -- has dealt with that recommendation on revising that and so on.

But one of the, I think, underlying concerns is, are there issues that are raised in those public comment periods that kind of fall through the cracks. Yes, we hear them but do they really get dealt with? And it's not always clear who has the responsibility

for following up.

The Board may feel that it has some obligations, since these occur in the public comment period of our meetings, to at least make sure that we're aware of what happens with these comments.

And I don't have a particular solution to that. I have some ideas on what one could do. But we don't want the Board duplicating something that NIOSH might be doing. And I think, in part, the question could relate to that, Dr. Melius.

But it seems to me that perhaps this would be a task, Mr. Gibson, that your work group could look at. And ask the question what should the Board be doing with respect to public comments.

Do we need to be categorizing them at the end of each meeting? And, for example, if they are individual comments on cases, we'd just say well, we've got this many. And we can't do anything with that. We just want to

make sure that they are, indeed, dealt with by the agencies.

And sometimes they are labor issues. Sometimes they are Part E issues. Sometimes they are OCAS issues. But the other kinds of issues that we hear about, and many of those have to do with what people think the Board should be doing. And are we following up on that?

You might talk in your Subcommittee about whether or not we should be tracking that. And if so, make sure that it wouldn't be something that we would duplicate, perhaps, what Larry's group is doing.

I don't think we want to try to solve that issue here. But I have had this ongoing concern that we hear these comments and we sort of intuitively feel like we know what they are. But it is very easy to say, well, didn't somebody mention that before? Or, you know, have we really tracked it and followed up on it?

So that's one suggestion. We start to at least be more deliberate and take a look maybe. Maybe your work group would say no, we think this is something that we must leave with NIOSH OCAS. Or maybe this is something we should do. And other members of the Board may wish to weigh in on this.

But I think it's certainly a valid question. And one we need to address.

MEMBER MELIUS: Yes, I mean, frankly Larry, I mean I often see you try to, you know, chase down, talk to the people making public comments. I often don't see anybody else very often at these public comment periods.

CHAIRMAN ZIEMER: Well, I think maybe the Board members do interact with the people.

MEMBER MELIUS: No, the Board, I'm talking about from the NIOSH staff --

CHAIRMAN ZIEMER: Right.

MEMBER MELIUS: -- point of view.

CHAIRMAN ZIEMER: Well, and sometimes we've sent them over to Jeff and the Labor people as well.

MEMBER MELIUS: Yes.

CHAIRMAN ZIEMER: But nonetheless, there can be items that fall through the cracks. And we want to be aware of that.

MEMBER MELIUS: I have one related question. These worker outreach meetings that are done, are there records kept of those? Are there tapes or transcripts? Or how is that handled?

MR. ELLIOTT: There are records. We have a database tracking system that you all can access through the staff tools. For example, the workshop that we held a few weeks ago, the presentations are there, the invitees, the review of the workshop filled out by the participants is included in that.

If you are asking me, do we -- how do we capture the discussion in worker outreach meetings, that's done by minutes that

are assembled and shared with the participants for their review and editing for accuracy and clarification.

No, we do not record or transcribe these meetings. We use a set of summary minutes to capture what was said at the meeting.

MEMBER MELIUS: Okay.

CHAIRMAN ZIEMER: Thank you.

MEMBER MELIUS: Thanks.

CHAIRMAN ZIEMER: Yes, Mr. Clawson, comment?

MEMBER CLAWSON: I just wanted follow up on what you had been saying earlier, Paul, because like any of the sites that I'm involved with or that I chair, when public comments come up, I want to make sure that they are addressed because many times as the Work Group Chair or whatever, the people follow up back to me and how come haven't you addressed this issue.

We've got to figure out a way to be

able to do this because many of them when we got into -- I try to keep track of them and when we get into the work group, I try to bring up that these need to be addressed. This was brought up in public comment. And to make sure that we do.

But, sometimes I miss them and I'm called to task by some of the people of, why aren't you addressing this. So this is an issue that many of us have.

CHAIRMAN ZIEMER: Thank you.

And I think Mark Griffon has a comment.

MEMBER GRIFFON: Yes. This is to follow up on the same issue. Larry, I thought at one point I know there was an early version of this. And I don't know if you got away from this or not.

But there was a tracking database developed to track the comments from the work groups or from the worker outreach sessions. And I don't know if that -- the last I heard,

that the initial database was being modified and they were coming up with a new -- and I'm just curious what the status of that is. And it's on the O: drive.

MR. ELLIOTT: Yes. ORAU had started, in the early days of the program, a platform called -- I believe it was WISPR -- yes, I think. But it wasn't adaptable. We couldn't migrate it to other -- to a more relational, searchable platform.

And so there is a new database tracking system that we have developed. It is capturing all of this information from our worker outreach efforts.

It incorporates, as I said, the purpose of the meeting, the materials used at a meeting to communicate with the participants, whatever that may be. If it is an SEC ombudsman petition discussion, those materials would be there. If it's a site profile discussion with a focus group, then what are the questions that are being asked of

the focus group, what is the information being gained. That's there.

Right now, I don't believe we track in that system public comments from the Board meeting. That could be something that we look at.

But I would like to speak quickly about Dr. Melius' assertion that he doesn't see staff go out and do this. We try to do our business unobtrusively and without calling attention to the fact that we're pulling somebody out of the room. My staff may meet with somebody out in the hallway. I may ask that person to come back the next day and talk to certain members of the staff.

So we do follow up on these things personally and individually with each commenter as we see appropriate. And it's done -- I can show you claim files where I have added commentary to the file notes about our interactions with people from these situations.

MEMBER GRIFFON: Just to get back to the database question though, Larry, where can we find that? Is that on the OCAS website? Or is that on our O: drive? Or do Board members have access to that database?

MR. ELLIOTT: You're supposed to have access to the database.

MEMBER GRIFFON: Maybe someone during the break can help me find it.

MR. ELLIOTT: Yes, we can. Maybe Tom James can help you locate that.

CHAIRMAN ZIEMER: Okay.

MR. ELLIOTT: I don't know if it's on the shared drive or if it's -- for me it is in staff tools.

CHAIRMAN ZIEMER: We need to move along. Any follow-up questions, Board members, for Larry?

(No response.)

CHAIRMAN ZIEMER: Again, thank you, Larry, for your presentation.

We do want to hear now from the

Department of Labor. And Jeff Kotsch is here this morning. Again, Jeff, welcome. And we'll have the Department of Labor program update.

MR. KOTSCH: Good morning. This will be an update of the DOL's activities related to the Energy Employees Occupational Illness Compensation Program Act.

Just a little background. Most of us have heard this numerous times but I know there are a few people in the audience that may not have gone through the ordeal yet.

The Part B portion of the program became effective on July 31st, 2001. And since that time -- or as of, actually, October 8th of this year, 67,696 cases or 100,676 claims have been filed. As I always note, there are always more claims than cases because, for survivor claims, there may be more than one survivor.

Thirty thousand five hundred and eight cases have been referred to NIOSH for

dose reconstruction. On the Part E side of the program, which we'll talk about a little later, that became effective on October 28th, 2004. That was formerly the Part D program administered by the Department of Energy.

Again, as of October 8th, 58,916 cases or 83,154 claims have been filed. And over 25,000 cases were transferred from DOE when Part E came over to the Department of Labor.

As far as compensation for the program, again as of October 8th, 5.2 billion dollars have been paid out in total compensation, 3.09 billion of that for Part B. Part E was 1.74 billion. And there was 379 million in medical benefits.

As far as paid cases under the program, 54,645 payees in 40,591 Part B and E cases, basically, as of October 8th. A little over 38,100 Part B payees in almost 25,000 cases and about 16,500 Part E payees in 15,646 cases. So Part B is about -- what is it -- 61

percent of the payments.

A quick look at Part B. Part B covers radiation-induced cancers, including the special exposure cohort. It includes chronic beryllium disease and beryllium sensitivity, silicosis for the miners at the Nevada Test Site and the Amchitka Island Test Site up in Alaska, and provides a supplement per the statute for the RECA Section 5 uranium workers. That's the Radiation Exposure Compensation Act, which is basically done by the Department of Justice.

Who is eligible? DOE employees, DOE contractors and subcontractors, the atomic weapons employers, beryllium vendors, certain survivors of deceased workers that are listed there, and, again, the RECA Section 5 uranium workers.

Presumptive coverage. There is presumptive coverage for workers with the 22 specified cancers at the special exposure cohort or the SEC sites. There are the four

statutory sites, the three gaseous fusion plants at Portsmouth, Paducah, and K-25 plus, again, the Amchitka Test Site. And as of October 8th, 2009, there were 44 SEC classes that have been added by HHS.

Quickly, the Part B benefits include a 150,000 lump sum payment, medical benefits for the covered conditions that are addressed in the decision, and medical treatment and monitoring only for beryllium sensitivity.

This is just a breakdown of the final decisions. There have been 26,661 final decisions approved as of October 8th and 20,129 final decisions denied. And the reasons are broken out a little further on the right-hand side. A little under 600 for survivors not eligible, a little over 14,100 for Probability of Causations less than 50 percent, and a little over 5,400 for medical information insufficient to support the claim.

A quick look at Part E. Again,

created in 2004 to replace the old Part D. It is, again, a federal entitlement like Part B. It provides lump sum payments up to 250,000 dollars, usually on top of the Part B payment, plus medical benefits for the accepted conditions.

Eligibility includes DOE contractors and subcontractors. Unlike Part B it does not include the atomic weapons employers or beryllium vendor workers.

There is a little bit of a difference in the survivors of the deceased workers, too. It's -- Part E, by statute, is a little more restrictive as indicated up there on the slide. And it covers -- Part E covers any occupational disease, any toxic exposure, including Part B disease. So there is, in essence, dual eligibility under the two parts.

Part E also includes impairment. It's a determination of the percent of permanent whole body impairment due to the

covered illness. The program uses the AMA Guides to the Evaluation of Permanent Impairment, the fifth edition of that, and awards 2,500 dollars per each percentage point of impairment.

There is another portion of Part E which covers wage loss. If medical evidence shows -- or medical evidence must show the decreased capacity to work and the compensation schemes, by statute, are there. Basically, if you have 50 percent or less -- or less than 50 percent of the pre-disability annual wage, you get 15,000 in compensation. Between 50 and 75, it's 10,000.

And here is just the graphic of the Part E final decisions: 21,811 approved as of October 8th, 18,355 final decisions denied. Again, a little further breakdown on the right side. A little under 5,500 for cancers not -- with Probability of Causations less than 50 percent and a little under 13,000 when there is insufficient medical information.

As far as the referrals to NIOSH, we are indicating as of October 8th, 30,508 cases referred to NIOSH for dose reconstruction, 25,396 have been returned by NIOSH and are currently at the Department of Labor, 22,159 had dose reconstructions, 3,237 were without dose reconstructions. They may have been pulled back for SEC considerations or there may have been changes to the case information that would not allow us to go further with the dose reconstruction.

Fifty-one hundred and twelve cases we're indicating are currently at NIOSH, 3,017 are initial referrals, 2,095 reworks on returns.

As far as new SEC-related cases, the Department has withdrawn 2,955 cases from NIOSH for review. We've issued 2,621 final decisions, of which 2,539 had final approvals. There are 28 recommended but no final decisions. That means it is between the -- they are currently with the final adjudication

branch, 59 cases are pending, and 247 cases were closed. These numbers are as of September 30th.

Dose reconstruction case status, 22,159 cases were returned by NIOSH with a dose reconstruction -- that would be to the Department of Labor -- 20,356 with dose reconstruction in final decisions. So we've got about 66 percent with final decisions, 6,850 with final approvals of PoC greater than 50 percent, 13,506 final denials with PoC less than 50 percent.

These are Part B cancer cases with final decisions to accept. There have been 6,546 accepted dose reconstruction cases with 971.3 million in compensation. Accepted SEC cases, there were 9,864 for 1.4 billion in compensation. Where we had both SEC status and PoC greater than 50, there were 304 for 45.4 million in compensation. Those would be cases that also had dose reconstructions for medical benefits. And so the total of all

accepted SEC and dose reconstructed cases, 16,714 for 2.4 billion in compensation.

Just a graphic. For the last year for Part B cases received by the Department of Labor, fairly steady -- I mean moves up and down but fairly steady over the last few months anyway, running in the low 300s. We're showing 321 for September, that data as of September 30th.

And these are Part B cases sent to NIOSH on a monthly basis, again for the last year, it has been dropping over the last few months, this is both initial referrals and the reworks or returns to NIOSH. And I guess the numbers are -- we're running in the 300s and dropping somewhat for -- I'm not sure why but, you know, now into the low 200s, 219 for September.

Just a listing we've been providing more recently. The top four work sites of incoming Part B cases: Hanford, Y-12 Plant, Savannah River Site, K-25 Diffusion Plant.

For Hanford, last year's data shown there, again, dropping a little bit. It probably will -- hopefully, it'll go up again as we -- depending on the new SEC, if there is an SEC expansion. But it was in the 40s, down -- 30 for September. Again, as of September 30th.

Y-12, been running in the low, I guess, low 40s. Now we're about 39 for September.

Savannah River, moving up and down. But so 34 in August, 18 in September.

And K-25, running, at least over the last three or four months, fairly steadily at the low 30s.

Percentage of new Part B cases received monthly by Department of Labor, roughly running -- for the Department of Energy facilities in the 93, 94 percent. And then the next slide is the atomic weapons employers' percentages, which are obviously the remainder of that, running in the five to

six percent range.

And then as we like to do at each meeting, just presenting the numbers for the facilities that are on the agenda for this week's meeting. Blockson Chemical Company, 214 cases, just Part B only. So it's an atomic weapons employer. Cases returned by NIOSH with the dose reconstruction, 124, final Part B decisions, 137, Part B approvals, 54, for a total compensation and medical bills paid of 8.2 million.

Hanford, 10,032 cases, both Part B and E, 1,925 cases returned with dose reconstruction, 3,639 Part B decisions, 1,943 B approvals, 1,850 E approvals, total compensation of 416.3 million.

Brookhaven National Lab, 325 cases on 404 claims, again, both Part B and E, 33 cases returned with the dose reconstruction, 69 with Part B decisions, 26 with E approvals, 40 with B approvals for 4.3 million.

Oak Ridge Hospital, 77 cases, both

Part B and E, 14 returned with the dose reconstruction. Labor issued 24 Part B decisions, final B decisions for 11 B approvals, 14 Part E approvals for a total compensation and medical bills paid of 2.9 million.

Bliss & Laughlin Steel, 57 cases, both Part B and E, 26 returned with dose reconstructions. The Department of Labor issued 33 Part B decisions, ten of which were approvals. There was one Part E approval for 1.6 million in compensation.

The Piqua Organic Moderated Reactor, 22 cases, six dose reconstruction from NIOSH, Labor issued eight Part B decisions. There were four approvals in Part B, three Part E approvals for 872,158 dollars.

Metals & Control Corporation, 21 cases, Part B only, 13 dose reconstruction from NIOSH, 14 final decisions in Part B for, nine Part B approvals, and total compensation of 1.3 million.

Electro Metallurgical, 174 Part B only cases, 93 dose reconstructions received from NIOSH, Labor issued 121 Part B final decisions, 44 Part B approvals from that group for compensation of 6.4 million.

And the University of Rochester, six cases, Part B only, one dose reconstruction, three final Part B decisions, two approvals in Part B, and 300,000 dollars in total compensation and medical bills paid.

And that's just the pie chart of the Part B cases filed. And what does it say -- 35 were sent for NIOSH. The others, the chronic beryllium silicosis claims, things like that, 11 RECA -- 11 percent in the RECA and then the remainder SEC cases referred to NIOSH, two percent, SEC cases never sent to NIOSH because they were basically resolved at Department of Labor, nine percent.

Questions?

(No response.)

CHAIRMAN ZIEMER: Thank you, Jeff.

It appears that the claims submitted have dropped now monthly for what, the last seven months or so. It looked like a definite downward trend. Do we make anything of that? Or is that -- do you think that's just part of this cyclical thing? Or are there definitely less -- well, clearly there's less claims being filed. But are we --

MR. KOTSCH: Yes, well, I mean we're not sure. We are --

CHAIRMAN ZIEMER: Are you okay with that, I guess is what I'm asking.

MR. KOTSCH: We are continuing outreach. Obviously there are new SEC classes generated, you know, usually what -- two or three each time. There may be more this time. But I guess more recently they have been smaller sized but the impact would probably be less.

But I don't know that we've got -- and I don't know whether Larry has any idea. I mean it's just -- I don't know if it's

cyclical or what it is. But we haven't ascribed it to anything.

CHAIRMAN ZIEMER: Thank you.

Mark Griffon?

MEMBER GRIFFON: Yes, Jeff, I don't know if this is the appropriate time but you had mentioned -- I can't -- I don't know if it was on our phone call meeting or wherever, that DOL was reviewing the Rocky Flats Ruttenber database question. And that you would be prepared to offer your opinion during this meeting.

And I don't know if you're -- if we were planning on doing that later during the work group updates or if you're, you know --

MR. KOTSCH: Whatever your preference is.

MEMBER GRIFFON: I don't -- I'll ask the Chair.

CHAIRMAN ZIEMER: Well, let's do it during the work group update. I think it would be appropriate when were talking about -

-

MR. KOTSCH: Added suspense, so --

MEMBER GRIFFON: Well, also my concern was I didn't know if you were staying for all three days.

MR. KOTSCH: I'm here, I'm here.

CHAIRMAN ZIEMER: Thank you.

Other questions or comments?

(No response.)

CHAIRMAN ZIEMER: Apparently not.

Thank you very much, Jeff. We appreciate, as usual, the comprehensive coverage of the Labor statistics, as it were.

We're going to take our break at this time. We have a 15-minute break. And then we will resume.

(Whereupon, the above-entitled matter went off the record at 11:01 a.m. and resumed at 11:20 a.m.)

CHAIRMAN ZIEMER: We are ready to resume our meeting. Our next presentation will be an update from the Department of

Energy. Your agenda indicates the Dr. Worthington would be giving the update, but she's not able to be with us today, but we do have Greg Lewis here.

And, Greg, we're pleased to have you present the Department of Energy update.

MR. LEWIS: Great. Thank you, Dr. Ziemer. And Dr. Worthington just wanted to apologize. She wanted to make it here but due to events back at the office, she just wasn't able to. But she does expect to be here for the next meeting.

So, again, I'm Greg Lewis. I'm the Program Manager for the EEOICPA Program at DOE. And I'm going to talk to you about some of the things that we've been doing since the last meeting.

Our core mandate at DOE for the EEOICPA Program is to work on behalf of the program claimants to ensure that all available worker and facility records and data are provided to DOL, NIOSH, and the Advisory

Board.

We have a number of responsibilities as far as that goes in terms of supporting both DOL and NIOSH in their requests for individual information to reconstruct dose and to adjudicate claims.

We also provide support and assistance to the Department of Labor, NIOSH, and the Advisory Board on large-scale records research, facilities research such as SEC petition evaluations and things like that.

And then we also conduct research and coordination with DOL and NIOSH on issues related to facility designations that may be changing years or adding facilities and things of that nature.

We did have a recent initiative to try to communicate with -- both internally to DOE and to outside stakeholders some of our responsibilities.

So we launched an awareness campaign focused on current and former

workers. We wanted to lay out the roles and responsibilities at DOE that we do on behalf of the workers. And that's both for the Former Worker Program, EEOICPA, and some of our current safety initiatives.

And, again, that's the Worker Safety and Health Program, 10 CFR 851. It may be unfamiliar to some of you but that's -- it's a rule that we put out within the last year focused on current and the next generation of DOE workers. And it's, you know, with the aim of preventing work-related illness and injuries.

This is the EEOICPA brochure, Former Worker, and 10 CFR 851. They are brochures with information. We have them on our DOE website for HHS. So anyone that needs a link, I can provide that.

And then our main activity, the one that takes up the most of our resources is supporting individual records requests from DOL and NIOSH. We do approximately 6,500

employment verifications for the Department of Labor, about 3,000 dose reconstruction records requests from NIOSH, and about 6,500 document acquisition requests from the Department of Labor and those are for additional exposure information, industrial hygiene records, medical records, et cetera.

The total number of records requests that we completed have gone down slightly in 2009 from about 16,800 to about 16,000. We don't have our final September numbers in, but that's what we expect.

And I guess that goes back to Dr. Ziemer's point earlier. It looks like claims have gone down slightly this year. You know, as Jeff Kotsch said, we haven't really ascribed that to anything in particular. But we have noticed, you know, the requests have declined in the last year.

And then we do a number of things to support SEC research activities. Currently there are eight sites active. And I say

active although some of these, you know, we're doing more research than others.

Some of them are in the final stages but currently we are working on Hanford, Mound, Savannah River, Pantex, Los Alamos, Brookhaven, of course, the Nevada Test Site, and the Santa Susanna Field Lab.

Here are some statistics about some of the stuff we're doing at these various sites. At Hanford, we've produced over a million pages for review. That's both boxes of records and documents.

And then we've reviewed close to 8,000 documents for classification. That's page by page by our classification reviewers. So that's quite time-consuming. And that's probably -- the bulk of our resources at Hanford went toward classification review. But at this point, we've completed almost everything.

And I'm not going to hit all of these points for these sites. You know you

can get those handouts on the back table. And if anyone has questions, they can feel free to ask. But let's just go through some of the highlights.

We've supported a site visit at Hanford about once a month for the past year. I think they've slowed down in the last couple of months as NIOSH has approached their evaluation, you know, recommendation. But they've been about once a month or so.

We've provided tours of multiple facilities. And you can see some of them up there, B Reactor, the Plutonium Finishing Plant, T Plant, the 100N area, et cetera. You know these were pretty detailed tours.

I know that we provided some training and outfitted various members of the tour group to go into certain, you know, radiation-protected areas.

We arranged for subject matter experts, current workers that have extensive facility or site history, as well as some

former workers that had knowledge of some of the early days.

At Savannah River, we hosted 12 NIOSH site visits and have conducted document reviews for about 3,500 documents or over 260,000 pages of information.

At Mound, we facilitated a number of meetings. We've provided classification experts to give, you know, both the Advisory Board members and NIOSH, NIOSH and SC&A staff information on, you know, what they can or can't say in certain areas. We're making sure that, you know, their documents have been reviewed appropriately. And the information that they would like to present to the public, you know, they are able to do that.

And then, again, we completed most of the document requests or records requests at Mound although we continue to support individual efforts or specific follow-up questions from NIOSH and SC&A.

Here at Brookhaven, we've hosted

over six records review and data capture visits from NIOSH staff. We've identified hundreds of boxes of records and made them available to NIOSH. We've pulled boxes back from off-site storage locations, federal records centers, things like that.

We've arranged for subject matter experts, again both current and former employees, which is important, you know, I think Brookhaven, the site goes back to, I believe, before 1950. So, again, the current workers have knowledge that goes back only so far. So we've made sure to arrange for former workers with knowledge about site activities and historical exposures to be available to talk to NIOSH and staff.

And then yesterday, we facilitated a site tour for NIOSH, the Advisory Board, and, you know, their contractors. Subject matter experts were available. The lab director actually addressed the tour, both at the beginning and the end, and was able to

answer some questions. And so, you know, we hope that was informative and helped give you some perspective on the facility and its activities.

Okay, I'm going to talk about document reviews and I know at previous Board meetings, there was some, you know, concerns over the security plan that we put together last February and the requirement for document reviews at various sites and facilities that have classification concerns.

Since February of 2009 when we initiated the security plan, 179 documents have been submitted to DOE for classification review. The average turnaround time for those documents was less than ten calendar days, so approximately seven work days, I guess.

You know in certain cases where an expedited review is necessary when NIOSH or the Board needed the document for, you know, immediate action, we've returned documents in one to two days as needed if possible.

And then facility research is also an important part of what we do. We have -- there is a database with over 300 facilities covered under EEOICPA. This includes Department of Energy facilities, atomic weapons employers, and beryllium vendors.

We have the Office of Legacy Management. We have a separate contract with them. My office at DOE has contracted with Legacy Management for records research activities. They -- Legacy Management is unique in that they handle and manage most of the legacy records for the Department of Energy and are responsible for the sites that have closed or no longer exist.

So they have -- their staff have a unique knowledge of how to handle DOE records. And they also have an extensive historical knowledge of DOE operations and activities. So, you know, they are very well positioned to be able to work within DOE with our various sites and outside of DOE at research sources

to locate relevant records that can determine what was done on DOE sites and atomic weapons employers, and what material was supplied where so we really utilize them to locate information and provide it back to the Department of Labor and NIOSH.

And then the current facilities that we're researching are Baycock [sic] & Wilcox Technologies in Lynchburg, Virginia and the Wah Chang facility in Albany, Oregon. And just to speak to, you know, the point that Larry and Dr. Ziemer were discussing earlier, you know, with Larry's commitment to -- NIOSH's commitment to, you know, return all cases by June of this year and they did mention that certain cases are pending based on facility research. If there is a question about the facility designation or the years of coverage, you know, they can't proceed until that's resolved. And we realize that. And, you know, at DOE, we do not want to stand in the way of that. We are doing our best to,

you know, return these research issues and get them the answers they need in the time they need them.

However, you know, we do want to say that with research, you know, the more you look sometimes, the more you find. And it's very difficult to just stop it, you know, when you continue to find information.

So, you know, we may be going to, you know, ten or more different DOE sites to find information. And then we also rely on these, you know, AWEs, we contact them directly to find information. And in certain cases, we may go to a town or a reading room, a local library who may have information about the very early days of the site.

So it's not always in our control when we get answers, which one example is the B&W facility in Lynchburg. We were waiting for information from them. And there were a number of issues that they experienced. So there was somewhat of a delay in the

information. But we do have that now and are about to close our research. But that's kind of an example of it's not always in our hands but we are striving to, you know, get the information back in a timely manner and not hold up NIOSH in their efforts.

We have a number of initiatives that we have undertaken in the last couple of months, you know, to try to improve our service to the Department of Labor and NIOSH and the Board. We hold weekly conference calls with members of NIOSH and the contractors to make sure that we're getting them what they need and, you know, kind of review any outstanding issues, talk about our path forward, and expectations on both sides.

We provide subject matter experts to Advisory Board Working Group in conference calls as well as, you know, NIOSH and SC&A if they need consultation on certain issues. We facilitated secure meetings and video conference calls for NIOSH and Advisory Board

staff so they can discuss classified information in a secure setting. We're currently working with our CIO's office to revise our contracting provisions and acquisitions guide to ensure DOE sites retain the right to access and, you know, use records once contractors have left or have fulfilled their obligations under a certain contract.

This is particularly important because we realize that there are problems obtaining subcontractor records from the early days and the not-so-early days because, you know, subcontractors, when they were finished with their project, a lot of them took their own records and left. And if that contractor is no longer in business or has been sold a number of times, it is difficult to access those records.

So in a continuing effort to improve that and make sure that, you know, from now on and in the future we're able to access those records, we're changing our

contracting guide so future contracts should make sure that we're able to access those records. And then the Los Alamos Medical Center Project, which I think we've been talking to you all or giving you updates on for some time now, we're actually -- the project is basically complete.

We're just working with the hospital legal staff to, you know, transition ownership of the records to the Department of Energy. So as soon as that's complete, we will have the pre-1964 records. And once we have those records, you know, of course they will be integrated into our records system for future EEOICPA claims.

And then we're also working with the Department of Labor to reconcile all past Los Alamos claims to make sure if there are valuable records in this collection, they are provided to the DOL and, you know, if cases need to be reopened or whatnot, they will be if needed. That's, of course, Department of

Labor's decision.

And I just want to, you know, commit that we do everything we can to provide documents to NIOSH, DOL, and the Advisory Board. But, you know, we must do so in a responsible manner. So as I said before, you know, we've reviewed and responded to classification reviews for NIOSH and, you know, the Board, SC&A documents. And our average response time is two to nine business days, you know, depending on the need.

And then as far as outreach, you know, our DOE EEOICPA point of contacts out at all of the field sites are really the backbone of the DOE program. They are the ones who -- Gina and I, our office works with to gather records. They work with NIOSH and the Board on research projects. They manage all of the different site groups that may be responding to requests, the medical department, industrial hygiene, RADCON, human resources, et cetera.

So these POCs are -- who really drives this process, makes sure the responses are returned to you in a timely manner, makes sure that the quality is maintained, and, you know, answers -- arranges for subject matter experts, all of the things I've talked about.

And today we have -- Dr. Joe Falco is from the Brookhaven National Lab. He is their Occupational Medical Director. And he also wears the second hat as the EEOICPA Program Coordinator. So, you know, as part of his busy day he also has time for us, which, you know, involves quite a bit of working with the different groups at the lab and NIOSH, DOL, the Advisory Board, contractors, my office. So, you know, he really does a great job pulling together records and making sure that you all get the answers and information you need.

And then we've initiated a recent effort to coordinate outreach efforts with the Department of Labor, the DOL Ombudsman's

Office, the Former Worker Medical Screening Programs, and NIOSH. All of these groups in some form or another are trying to reach roughly the same population of DOE former workers. It's for different reasons but they are trying to talk to all the same groups.

And many times they are having separate events and we're trying to make sure that at these events, you know, the other groups are represented or at least there is information there, you know, trying to find some efficiencies, you know, so more people can be reached in a more effective manner. And then, you know, a little bit about the Former Worker Medical Screening Program, which ties in somewhat with EEOICPA in that it is a, you know, free screening program that identifies and notifies former workers at risk for various occupational diseases and offers them medical screening.

You know depending on the results of their screening, they are often referred to

the EEOICPA Program. They send them over to the Department of Labor program. Or, you know, it's useful, they can bring the information to their doctor to influence care. So further information on the Former Worker Program can be found at that link. And, again, that link is on the handouts in the back of the room. And just some information about the local Brookhaven Former Worker Program, for production workers, the principle investigator is Dr. Markowitz with Queens College. And the contact information is there.

And for the construction workers, the principle investigator is Knut Ringen, and his contact information is there as well. And I believe someone from the construction workers will be here today or may be here now, but certainly for the public comment session and tomorrow as well.

And then I wanted to close, as Larry, you know, you've heard, but Larry

mentioned as well, with the National Day of Remembrance. On May 22nd, the U.S. Senate designated October 30th as the National Day of Remembrance for the nuclear weapons program workers and uranium miners, millers, and haulers. Hundreds of thousands of men and women have served this nation in building the nuclear defense since World War II. These dedicated workers paid a high price for their service to develop the program, and it benefited everyone here, you know. These patriotic men and women deserve to be recognized for their contribution, service, and sacrifice towards the defense of our great nation. Congress has encouraged the people of the United States to support and participate in appropriate ceremonies, programs, and other activities to commemorate October 30th as a National Day of Remembrance for past and present workers in America's nuclear weapons programs.

So, you know, the Secretary of

Energy has encouraged the DOE sites and laboratories to, you know, mark this day with some special events. So we do have various events going on around the country, you know, with former worker involvement and, you know, to honor those people that have given so much.

So I think that's it unless there are questions.

CHAIRMAN ZIEMER: Greg, thank you very much for that update. Since I was picky with NIOSH on some slides, I thought it would be appropriate for me to be equally picky with Department of Energy.

But you had a slide talking about a facility in Lynchburg, Virginia, which was identified as Baycock & Wilcox. And I believe it's probably Babcock & Wilcox. And I'm looking to see if Dr. Poston is nodding because -- not that he's sleeping but he agrees that -- I think he may have even worked there. But I believe it is Babcock & Wilcox.

MR. LEWIS: That does sound right.

I'll get that changed.

CHAIRMAN ZIEMER: Yes. Just for purposes of accuracy, both in our transcript and in our written material. I believe it's slide 21.

MEMBER MELIUS: Ted and I have also done some research and Wah Chang is not a Chinese restaurant in Albany, Oregon. It is a specialty metals. I think it's either an only Teledyne or Allegheny Technology site. Teledyne? Yes, okay.

CHAIRMAN ZIEMER: The reason you know that is because you went there once to eat and couldn't get --

MEMBER MELIUS: Well, we were concerned --

(Laughter.)

MEMBER MELIUS: -- about the egg rolls.

CHAIRMAN ZIEMER: Well, kidding aside, Dr. Melius, I do believe you do have a question or comment in addition to that?

MEMBER MELIUS: Yes, I do. In terms of your -- I have two questions -- first of all, in terms of your turnaround time, I'm glad that on average it is low. But can you sort of give me the range on the turnaround? Because I think what we're concerned about is that you can have a low average and have, you know, some turnaround in terms of document reviews that can go on for months. And I'm just trying to understand.

MR. LEWIS: Well, I don't have an exact range on me now in terms of specific numbers. I do know there are some outliers, you know, depending on the length of the document and the complexity. Most of what we review are actual reports compiled by NIOSH, their contractors, the Advisory Board, SC&A, typically those reports are not too long. And those fall well within the two to nine day range.

The ones that fall outside that are for whatever reason, if there is a longer

source document that the site reviewed and needs it re-reviewed or there may be various reasons. And these can be hundreds of pages, six, 700 pages. And those, of course, are very difficult to complete in the two to nine days. So sometimes it does take longer. I don't, again, have a specific range. And we do try to work with the requestor to figure out what the time frame is. You know, we know that some need to be expedited.

And we get some, you know, especially the four, five, 600-page documents. And we'll work with, you know, whoever submitted it to come up with a, you know, appropriate time frame. Something that works, something that is reasonable for us to achieve, but that isn't going to delay the requestor, you know, too much if possible.

MEMBER MELIUS: Okay. Well, I think it might be helpful just for us to understand what's going on if you could report, you know, things over 30 days or 60

days. Some sort of parameter that would help us to understand those circumstances. A second question I have is a question I asked Mr. Podonsky at the last meeting. And I believe he said he would get back to us on this issue. And it's a request that actually goes back to prior meetings also.

And that was a request that, given the ongoing concerns of many workers at these facilities, that they could be reprimanded for providing information to either the, you know, Medical Screening Program, or to this program, to NIOSH, to contractors or the Board's contractors involved in doing these evaluations and follow-up. They asked if it was possible to get some sort of directive from DOE out to the sites indicating that they're -- you know something in writing indicating that there would be no reprimand for people providing information to this program, you know, providing they followed the appropriate security procedures. And I'm

trying to understand if that's going to happen, not happen; where does that stand?

MR. LEWIS: Yes, I don't have a direct answer from Mr. Podonsky, and the issue hasn't been resolved. However, you know, we continue to work on, I guess, a solution. One of the problems that we've run into is a directive like this would need to come from each of the DOE program offices. So he's coordinating with, you know, the Office of Science, EN, Nuclear Energy, the various offices within DOE would all have to come out with a coordinated letter, which has made it a little bit difficult. But, again, he continues to work on it. And, you know, as soon as he is able to come, sort of, to determination as to whether, you know, or when this letter can go out, he will get back to you.

And then I do want to say in the interim, you know, we have taken some steps to work with groups that are concerned with, I

guess, potential retaliation. You know we've arranged for some offsite interviews or we've attempted to arrange for some offsite locations where people can interview in a secure setting.

And, you know, documents can be reviewed at headquarters instead of a certain site, you know, if individuals are worried about contractor retribution. So we have made, you know, some strides there.

MEMBER MELIUS: I think we appreciate the efforts. I think having some sort of directive from headquarters would be most helpful. It continues to be a concern and I think on the part of, you know, worker representatives and so forth, I think we're going to continue to have problems with people being willing to cooperate with these programs unless they feel that they are being protected.

CHAIRMAN ZIEMER: I believe that Mr. Podonsky also indicated that -- and, in

fact, I'm not sure he made that commitment actually -- but he indicated a skepticism about the effect of such headquarters' pronouncements. Because the history has indicated that down at the working level, there is an ability to ignore such pronouncements so that the real effort may take the form of what Greg has described and actually providing a climate or an environment where the information can be gathered in a way that is clear to the worker that the threat has somehow been removed.

I guess we would have to check the transcripts. I believe he did perhaps indicate that they would be willing to develop a statement such as you described. But it seemed to me he also committed to the idea that beyond the statement, it was very important to develop the actual working practices that made it possible and not just have it be a statement that could be somehow ignored. At least that's my recollection of

it.

MEMBER MELIUS: Yes, I don't have the transcript in front of me, but I think, again, if he's not going to do it -- if DOE is not going to do it, then they should say so. Secondly, I think it is important that there be something in writing specific to this program. I agree that changing the climate -- I think the climate probably has changed over the years and even over the recent years, but I think having something specific to this program would be helpful. And I'm at least under the impression that DOE is still working on that.

CHAIRMAN ZIEMER: And that certainly makes sense. And at least from my perspective, both are needed.

MEMBER MELIUS: Yes.

CHAIRMAN ZIEMER: Both a statement that it is the policy and then actually evidence that it is put into practice at the working level.

Other comments or questions? Oh, Gina, please.

MS. CANO: I just want to make a comment. As Greg mentioned on his presentation, DOE has been very committed on outreach and communication. And it is pretty much a two-phased approach. One of it being going out to the field and really educating the management about EEOICPA and Former Worker Program and part of this is having this discussion with management that these are some of the concerns because it is at the site level.

Again, it has to be supported at the site level. Management has to encourage the workforce to come forward and have to support the program. So that's one of the key messages we are delivering to management as we go out within this next year. We met with Oak Ridge, had a meeting with Hanford, and Livermore. I think, we had a short meeting with Livermore. But, again, that is, again,

part of our objective.

CHAIRMAN ZIEMER: Thank you.

Other comments or questions for Greg?

(No response.)

CHAIRMAN ZIEMER: Apparently not. So we will proceed.

Thank you, again, Greg for your participation.

MR. LEWIS: Thank you.

CHAIRMAN ZIEMER: And we look forward to working again closely with your group and Dr. Worthington and Mr. Podonsky.

Next we are going to have our science update. Dr. Neton from NIOSH-OCAS will present the science update.

Jim, welcome.

DR. NETON: Good morning. I'm going to -- what's become a semi-regular aspect of the Board meeting is to present an update on where we are with science issues within OCAS.

But I thought -- in the past few meetings, I've given sort of a discussion of what were emerging issues that we had to deal with. And, you know, how we resolve those issues.

And I sensed, especially from certain members of the Board, that we might want to go back and look at the original list that we developed several years ago, mostly to assure people we haven't forgotten about it and we continue to look at it, discuss any progress we've made on that original list or lack thereof.

Just to refresh your memories, there were two, sort of two flavors or two types of issues that we deal with broadly in what are considered the overarching science issues. And the first category I presented here are what I've titled -- you can't see the title very well -- I don't know, could we move that down a little bit -- okay -- so trust me, it says Original Risk Model Issues at the top. And I've listed what I believe to be the

seven issues that were identified fairly early at the inception of the program by the Advisory Board.

And so I've just listed them here. The first one -- and the ones that are highlighted in, I guess, that's a greenish color, are ones that we've actually either completed or have made significant progress on or about to complete. So three out of the seven have either been completed or we made significant progress.

The first one, the incorporation of nuclear studies -- nuclear worker epidemiologic studies in the IREP risk models has had some work done on it. We are collaborating with our sister organization over at the Department or Division of Surveillance Hazard Evaluation and Field Studies. There is still an organization over there known as the Occupational Energy Research Program that does risk evaluation of certain cohorts.

And we, OCAS, as a collaborating entity within that organization to look at an extended evaluation of leukemia in the worker chronic case control study, a multi-site case control study for leukemia incidence at many different DOE sites as well as Portsmouth Naval Shipyard and possibly some reactor facilities if we can get access to records. So that study is ongoing.

And secondly in that area, there is a draft paper circulated for publication that did an analysis and review -- a meta-analysis of about 22 epidemiologic studies for leukemia that particularly involved protracted exposures to low levels of ionizing radiation. So that issue has not been ignored but there is some ongoing work there.

Smoking adjustment for lung cancer, I think we all remember in 2006 we actually added the dual model for smoking adjustment based on the Radiation Effects Research Foundation update to the smoking adjustment

models. And we actually run both models and pick the one that gives the higher PoC. So that issue is complete.

The grouping of the rare and miscellaneous cancers, that is the situation where the RERF or actually the original analysis of the RERF data did not develop a separate risk model unless there were 50 cases of a particular site type of cancer. So they were forced to group certain types of cancers to come up with sort of a combined risk model.

We're looking into this. We have not done too much more on that. There is some work ongoing with the Radiation Effects Research Foundation, especially in the area of lymphoma and multiple myeloma to possibly tease those two out. Right now they are combined in IREP and analyzing them as separate entities and I'll talk a little bit more about that when I get to our discussion of where we are with chronic lymphocytic leukemia.

Age exposure analysis, of course, has to do with the concerns that there may be a population of workers who, when exposed at older ages, are more susceptible to radiation for whatever reason. And the current risk models don't necessarily reflect that condition. There are some interesting new studies coming out in this area. We're monitoring them and are aware of them. But thus far we've not produced any original research based on them.

The interaction with other workplace exposures is related to the sort of synergistic potential effects of radiation and other carcinogens. Again, we do monitor the literature in this area. However, at least in our opinion, there is not sufficient quantitative evidence to be brought to the table to combine the two in any good fashion.

The evaluation for chronic lymphocytic leukemia model, I'll talk about a little later. We've made some very

substantial progress on that. And I'll get to that in some subsequent slides.

And the final one on the table, which is -- on the slide, is the dose and dose rate effectiveness factor adjustment. That, of course, is the adjustment of the effectiveness of the radiation as the dose becomes more protracted as opposed to an acute exposure scenario.

We've commissioned SENES Oak Ridge, Incorporated, our risk model contractor, to evaluate the relevant literature up to within the last six months or so. They produced a several hundred page report that we are now in the process of farming out for subject matter expert review.

The next one may be of more interest, I'm not sure. But these are the original dose reconstruction issues. There's ten issues listed here. The one that I've highlighted in the green color are ones where, in my opinion, these are issues that actually

do require some type of analysis by NIOSH and some sort of formal documentation to -- like something that would require either a White Paper or supplemental information, a technical information bulletin. I omitted to highlight thoriated welding rods. I think that also falls in that category three.

So five out of the ten issues, in my opinion, do require some type of a formal documentation of our position. The other issues, a number of these, they may be overarching but they sort of handled on a case-specific basis. If you look at the dose from hot particles, wherever hot particles are encountered in terms of incidence and exposures and scenarios where there may have been large flakes or something of that nature, we certainly could deal with them technically using something like a VARSKIN calculation or whatever. So I tend to think of those as sort of site-specific evaluations.

The other three, assumptions for

unmonitored workers, cohort badging, interpretation of unworn badges are really three versions of all the same thing. They really are assumptions for unmonitored workers. How do you deal with workers who are not completely monitored?

We've gone through a number of discussions at various sites on these issues. In fact, you know, we've come to a standard practice now where we would use for internal dosimetry, coworker models, the 50th percentile with the full distribution for workers that were not monitored, that did not appear to have the potential for routine exposure in the workplace, and we would use the 95th percentile as the constant for workers who should have been monitored but weren't, you know had a much higher potential for internal exposure.

That's sort of become the default in our program. The cohort badging itself is, in my opinion, a subset of that. I mean the

idea here is that you didn't monitor the highest exposed workers but they sort of did a cross-sectional sampling of the workforce to see, you know, how the radiation controls were playing out. In that particular case, it really becomes a matter then of, if you have a cohort badging situation, does one default to the 50th or 95th percentile of the coworker model.

The interpretation of unworn badges is, I think, a site-specific issue. We thought early on that we might be able to have some sort of generic analysis that could be employed such as fitting a log normal distribution of the data and looking for a tail off at the upper ends. That turned out to be not workable.

So effectively what has to be done when there are issues at sites where it is indicated that workers may not have worn their badges is really -- it ends up being sort of a brute-force analysis. I think what comes to

mind is the analysis that was done at Nevada Test Site. SC&A can attest to this. There were a lot of monitoring records to go through. And at the end of the day, we were all comfortable after the evaluation was done that, yes, some workers didn't wear their badges but it would have minimal or almost no effect on the overall coworker model.

I think that needs to be addressed on a case-by-case basis. I can't think of any -- we couldn't think of any real generic way to address this issue.

The internal dose from Super S that is listed here, that is closed out. We've issued TIB-0049. And the Board is very familiar with the discussions that we had on that, particularly in relationship to how we reconstruct doses at the Rocky Flats site.

The nonstandard exposures has been sort of the poster child; nonstandard exposure that we've addressed with a TIB is the exposure to glove box workers. It can be up

to a factor of two difference from a glove box worker wearing his badge on his lapel or his left pocket area versus what his internal organs, maybe in the GI area, are experiencing -- what kind of radiation exposure.

So that issue has been addressed but then, again, outside of those issues they tend to be site-specific issues. Do you have overhead piping issues? Do you have planar sources of contamination to deal with? Those could all be modeled using the routine tools we have available to us which are either the MCNP Code or the ATTILA software.

That gets me down to what I think are the two areas where we still owe White Papers or some type of analysis. And that is the oral-nasal breathing and the workplace ingestion. And I'd like to talk a little bit about those.

Before I get to that, though, I do -- sort of parallel to what Larry Elliott presented earlier this morning, we keep our

own internal science goals for the fiscal year, which I presented to the Board, I think, in the December time frame. And these are not all that we do. Of course, there's a lot of other competing and conflicting demands on our time within the program. But we like to call out certain ones to make sure we keep the focus and attention on them.

And as you can see, the first two were very important to get done. And we have completed those, which was the formal verification and validation of the NIOSH IREP calculations. We have now implemented Version 5.6 of IREP, and it is up and running very nicely. And the second one was an issue that arose as part of our interaction with the Department of Labor. And that was to develop a dose reconstruction methodology for RECA, Radiation Exposure Compensation Act, cases. That has been complete and we are now well into our caseload. I think we're up to 150 RECA cases or something like that now in our

possession. These tend to be a one-size-fits-all model so they do go through fairly quickly.

And the other ones are more relevant to the Board here and that is the development of the chronic lymphocytic leukemia model and propose a model to the Secretary. The next one, issue a formal NIOSH position paper on ingestion or oral-nasal breathing. And then the final one, the review of the new solid cancer incidence data reported through the RERF.

Let me mention that one first. That was a goal that is not listed as completed but it is an ongoing effort. The solid cancer incidence data has been released by RERF. We have tasked SENES, our Oak Ridge contractor, to look through that. They have developed draft IREP programs that can run both the BEIR-VII and the new solid cancer incidence models. We are still awaiting the piece that has to do with the non-solid

tumors, the leukemias and lymphomas.

So although that issue is not listed as complete, it will be ongoing for some time as we try to incorporate all of the new relevant information into what will eventually become a new version of IREP, NIOSH IREP 6.0. We hope to engage folks at the National Cancer Institute in a collaborative effort to start moving that forward.

Let me focus on the chronic lymphocytic leukemia and the formal position papers for a bit. The chronic lymphocytic leukemia model we've talked about for quite some time now. And it was a complicated model to develop. We finally have got to the stage where we had four subject matter experts review the model in some detail. It was finalized as far as we were concerned.

And the four reviewers that we commissioned to help us evaluate the model were David Richardson from the Department of Energy Epidemiology at the University of North

Carolina; Mary Schubauer-Berigan is in-house with our Division of Surveillance Hazard Evaluation and Field Studies (Many of you know Mary from her earlier work on this program.); Dr. Richard Wakeford from the Dalton Institute University of Manchester of the U.K. (Those of you may remember Dr. Wakeford was originally with the British Compensation Program that is sort of a parallel program that exists over there.); and finally Dr. Lydia Zablotska, Department of Epidemiology and Biostatistics at the University of California, San Francisco.

The comments that we received were pretty favorable in general. I mean everyone agreed, thankfully, that chronic lymphocytic leukemia is potentially radiogenic. Even though there are no good epidemiologic studies that can definitively demonstrate that there is a radiogenic component of CLL, mechanistically there's no way you can discount it. And so we have a unanimous

consensus on that with our reviewers. And that was gratifying to see.

Where we did have some issues of divergence of opinion among our reviewers related to this using the NIOSH IREP model for lymphoma and multiple myeloma. I mentioned it's a combined model. It was done that way because of paucity of the data. They had to group cancers to get the requisite number of 50.

Some argued that we should go off on our own and sort of develop our own lymphoma model now. It would be kind of a lengthy process for us to do. And right now, frankly, the RERF is still in the process of pulling out, teasing out the lymphomas themselves. So we would prefer to wait to do that.

But we recognize the urgency of getting this out. So we are proposing to stick with the lymphoma/multiple myeloma model to move things forward. And as everything in

this program, as the science evolves, we will be happy to go back and look at that and see what effects the emerging scientific analysis has on the program.

One other area where there was some difference of opinion had to do with the length of the latency period for CLL. Those of you may remember I talked previously that we were going to use a 15-year latency period for chronic lymphocytic leukemia. That seemed to be the right number. There's some more recent analyses that suggest that maybe ten might be the right number. And right now we're leaning towards moving that latency period to be a slightly shorter interval.

The dosimetry model has been tested. We talked about that before, the weighted model using the various components of the lymphatic system throughout the body. And it does provide plausible outcomes given the exposure scenarios we reviewed. We actually took some real cases, kind of ran them through

just to make sure that, you know, we weren't getting 100 percent Probability of Causations for all cases we tested regardless of the input parameters. So I think we have a fairly workable model here.

And so our plan then is to prepare a transmittal package to the HHS Secretary by the end of the second quarter of FY010. That was originally a goal for this year. It slipped. I wish I could say we're done. We're not, but we're closer than we've ever been. And I'm fairly confident that we can meet this goal.

Moving on to the issue of the oral-nasal breathing and ingestion issues, I have talked about this at previous Advisory Board meetings, and I think I gave a fairly, at least in my opinion, a fairly good explanation of where we were with this. But just so I can refresh everyone's memory of what our opinion was on this, oral-nasal breathing and ingestion only effects cases that are

reconstructed using air concentration data. And almost exclusively -- air concentration data to reconstruct exposures is used almost exclusively at AWE facilities, in particular those that handled uranium.

So that limits the population down to probably somewhere -- ten percent or fewer of our cases. It doesn't mean it's not important. But I just want to point out what target population this effects.

The ingestion approach that we've developed for ingestion has been around for quite some time. It was one of our first TIBs that we produced, Technical Information Bulletins, and that is OCAS TIB-009.

We've had a difference of opinion with the Advisory Board through SC&A on how we handle this ingestion issue for quite some time but I believe that position has been evolving over time to where we are fairly close in our agreement. And there are a couple points of disagreement that are still

there but frankly I think where we are going to end up is we will agree to disagree.

So what we plan to do is rather than put out a separate standalone document, we will issue an appendix to OCAS TIB-009 that essentially -- I wouldn't say validates it but it provides supporting documentation and evidence why we believe the approach used in TIB-009 is appropriate. I think that's the best place for it to reside.

When that's done, that will close out a number of issues that are out there in the Procedures Working Group or Procedures Subcommittee.

Likewise the oral-nasal breathing position is to be incorporated into IG 001. That's the implementation guide for internal dosimetry. In my mind, that is a subset of how we do -- you know what the roadmap is to internal dose reconstruction. So we are going to include that as a supplement to that document. And we hope to have these -- well,

our goal is to have these completed by the end of the first quarter of this fiscal year, which would be by the end of the year -- end of the calendar year, December some time frame.

We're close. We have draft positions on these. They just have not been finalized. I had hoped to have them done before the Board meeting but we just didn't get there.

I'm going to skip the next slide and then go back. This is a slide that talks about the ingestion issue. And it summarizes our position on this issue. That is, it is our opinion the evaluation of ingestion requires knowledge of the process -- you have to know something about the surface contamination. The surface contamination, in our opinion, is clearly what drives -- the amount of surface contamination is clearly what drives how much a person can ingest. However, the surface contamination levels are

very sparse at these AWEs where we need to use these models.

So what we have done is developed a relationship that exists between what is in the air versus what gets deposited on the ground. And we believe we have a fairly firm idea of how that relationship goes. And then using that relationship, the amount that's on the ground, then we can determine an ingestion rate based on how many square meters per hour a person actually ingests of the contamination in their work environment.

And then I'll go back to the previous slide that shows the analysis that we've done of the TIB-009 values versus another code that's used by the NRC that is highlighted here. It's the RESRAD Program, Residual Radioactivity Program that's in a NUREG issued by the NRC.

And what we've done here is taken various air concentration data, computed surface contamination values, and then

calculated an hourly ingestion rate using RESRAD. And it is a range because they provide a uniform range of ingestion issues, versus what the TIB-009 hourly ingestion rate would be in dpm per hour. And, in fact, the values track very nicely. I mean I was very happy with how we were either at the upper range or the mid range for most of those values. So this will be all included as an appendix to TIB-009 to support our position on the ingestion.

When it comes to the oronasal breathing, we believe that the use of the default ICRP 66 lung model is acceptable for use in dose calculations. And this is based on some work that we did to first analyze what happens when you do oronasal breathing and you collect bioassay samples. It turns out it is almost self-correcting. The bioassay samples end up predicting the same intakes whether you have oronasal -- the same dose calculations whether you have oronasal breathing in place

or not. So that only limits it now to air sample data. And if you recall, we only use this at atomic weapons employer facilities. And not all the time but typically when we don't know anything about the facility, we'll use the 95th percentile of the air concentration data.

If one looks at that, the uncertainty at the 95th percentile is fairly large. It overwhelms the uncertainty added by the use of oronasal breathing. And we've done calculations to show that at the 95th percentile, the inclusion of oronasal breathing would tend to equate to maybe something equivalent to a person taking a 40-minute lunch break, that kind of difference in exposure. So the differences in the calculated intakes are very small.

There are some other issues I won't get into but we'll document this all in the update to IG 001.

And finally, I didn't talk too much

about this but thorium welding rods was an issue that was brought up at one point. We've looked at this in some detail. The intakes -- NRC has done some pretty decent evaluations of this, actually taking breathing zone air samples and such. And the highest amount of intake they come up with for direct current welding is somewhere around ten picocuries of thorium per year. The doses end up being fairly small. I mean very small compared to what we're calculating for most of these workers.

So, you know, if we're doing overestimating cases, the increase in dose is trivial. For best estimates, it's very small. The only way to deal with this then is to address it -- if a person has an unusual circumstance where they are continually doing welding or something, we would address it at that time. But other than that, we just don't feel this is an issue that we can adopt and apply to every dose reconstruction for someone

who may have been involved in thoriated welding.

So I'll just conclude by providing you our updated science goals for 2010. At the top of the list is to get the model to the Secretary for chronic lymphocytic leukemia by the second quarter, followed -- no, I gave second quarter for the oronasal breathing -- I'll stick with the first one, which is by the end of the first quarter. I think I might have had cold feet by the time I got to this slide but I think we're close enough to commit to the December time frame to issue a formal documentation on ingestion and oronasal breathing. And we'll add thoriated welding rods in there.

The OCAS review of the DDREF, we hope to get that issued by the third quarter. And then I haven't talked about it but our final goal here is to publish a review paper on the radiogenicity of cancer as it relates to compensation programs. There are some

interesting analyses one can do about radiogenicity and compensation. And strictly from a scientific perspective, we're not trying to get engaged in political thought here, but, you know, how does one determine what is a radiogenic cancer and what isn't? And what makes, you know, what the current literature out there speaks to that.

And, you know, we'll use as the basis for that some consensus scientific documents such as the BEIR reports. That's something that we would like to put out there in the public literature.

And with that, I think that concludes my presentation.

CHAIRMAN ZIEMER: Thank you very much, Jim. I wonder if you could just elaborate a little more on that very last point on radiogenicity of cancer? It certainly impacts on SECs if one changes the list. Are you anticipating addressing the presumptive cancer list?

DR. NETON: No, no. Just in general.

CHAIRMAN ZIEMER: Just in general.

DR. NETON: What the current scientific literature show or indicates for the radiogenicity of various cancers. I mean you can go down the list and --

CHAIRMAN ZIEMER: Well, the reason I sort of asked that question is your final phrase, the radiogenicity as it relates to compensation programs may be a somewhat different question than the radiogenicity of cancers period.

DR. NETON: Yes. And I think that's probably -- I probably should strike that last phrase related to compensation programs. I think it could be used to inform compensation programs. That's really what I meant.

CHAIRMAN ZIEMER: But the framework you're looking at is just what cancers are truly radiogenic. Is that more the issue? Or

what --

DR. NETON: Well, the relative radiogenicity, there is almost no way one can --

CHAIRMAN ZIEMER: Rule out.

DR. NETON: -- rule out anything. You know you have the extreme ends of the spectrum such as chronic lymphocytic leukemia --

CHAIRMAN ZIEMER: Right.

DR. NETON: -- versus leukemias, the lung cancers. And, in fact, one can envision a very nice chart that shows what is the central estimate of the excessive relative risk perceiver. And what are the confidence bands on that.

And in many cases, the confidence bands go well below zero. And, in fact, for our program, some of the cancers aren't radiogenic until you -- don't have a positive risk value until you get to the upper 99th percentile almost. Not that high but you have

to go fairly far out on the tail to get a positive excessive relative risk perceiver.

CHAIRMAN ZIEMER: So the paper is simply a review paper that will present sort of the state of the information on risk, including the uncertainties.

DR. NETON: Right.

CHAIRMAN ZIEMER: Okay. Thank you.

Dr. Melius?

MEMBER MELIUS: Yes, regarding those science goals, I'm trying to understand what the role of the Board is in these four issues -- your science goals for 2010. So does the chronic lymphocytic leukemia model come to the Board for input?

DR. NETON: Well, it --

MR. ELLIOTT: We prepare a package for rulemaking to deliver to the Secretary. That's the first step that Jim is talking about now. And that package will propose to the Secretary the scientific basis that we've arrived at for adding CLL to this program and

how we would go about reconstructing dose for claims that present with CLL.

We need the Secretary to review that and opine about that and give us the go-ahead for rulemaking. Once we have that then we would enter into rulemaking and there would be a timed public comment period where it would coincide with the Board's review of the risk model, of our proposed rule, of our proposed dose reconstruction methodology for this. And that would enable the Board and individual members of the Board to provide comment during the rulemaking and the public comment period for that.

MEMBER MELIUS: Going down the list, the documentation on ingestion, oronasal breathing and thoriated welding rods.

DR. NETON: Right. I think that would be, in my opinion, would be handled as any other document that NIOSH produces. The Board certainly has a right to review the document -- you know the technical approaches

that we've outlined either by themselves or with the assistance of SC&A or whoever they wish to bring to bear on the issue.

MEMBER MELIUS: Yes, I mean I would argue that if I understood you right, at least on the ingestion/oronasal breathing where the Board or Board and its contractors have expressed concerns about that which I won't say you are ignoring, but you disagree with, and frankly I don't think the Board, as a Board, has discussed these issues in a while.

Every time it comes up, we always say well, you're working on it. And I think it would be good -- I just want to understand that, you know, it comes back to the Board. And I agree as a document, it would make sense to handle it at that level. I just would do that.

And then the review paper on DDREF, what's --

DR. NETON: That would just be a peer-reviewed publication that we would issue

out of our program.

MEMBER MELIUS: So what does it have to do with the program? Well, I mean these last two, I just don't quite understand, particularly the last one, the radiogenicity, what -- this DDREF thing I think is an issue that is out there and it makes sense.

The radiogenicity thing is not, as far as I know, is not an issue that's out there. It seems to be sort of an extraneous activity. And I'm just trying to understand.

DR. NETON: Well, I think -- well, at least my thinking was here that we've developed quite a bit of expertise within our program about radiogenicity cancers and going through various things, we've just put forth a paper to the Congress recommending that basal cell carcinoma be added on the presumptive cancer list.

So in doing that, we surveyed an extensive amount of literature to come up with that recommendation. And I thought -- at

least, we thought internally that it would be good to share that with the scientific community --

MEMBER MELIUS: Okay.

DR. NETON: -- as an outcome of our research.

MEMBER MELIUS: So it would essentially be a review paper?

DR. NETON: Yes.

MEMBER MELIUS: Okay.

DR. NETON: Exactly.

MEMBER MELIUS: So it's not -- because you really haven't done any original research.

DR. NETON: Oh, no, no.

MEMBER MELIUS: That's what I'm trying to understand.

DR. NETON: Sorry, I wasn't clear.

MEMBER MELIUS: Yes, okay.

CHAIRMAN ZIEMER: Yes. That was certainly my understanding. It was a review paper that just -- you know, the information

is there, but from time to time it is very helpful in the community to bring it all together so one can look at not only the numbers but the uncertainties and related issues. So it's certainly a good thing.

Phil, you have a comment or a question?

MEMBER SCHOFIELD: Yes, I've got a question.

When you're looking at these different facilities -- I'm going to use Rocky Flats for an example here -- I know how a lot of the technicians handled waste materials on the materials they were producing.

So you would expect, because of the way they were handled, that you might see a marked increase in cancers of the lymph nodes, I would think, and the armpit areas of a lot of these technicians.

And what I'm wondering is, when you look at these cancers that may or may not be added, in some cases, would you not have to

give a little more weight to the facility because of the way things were done?

DR. NETON: I guess I'm not quite following your question.

MEMBER SCHOFIELD: Okay. An example is Rocky Flats, a lot of the technicians, when they were removing materials from the glove box or line the stuff, they would actually hold it in their arm, up in their armpit while they did the wrapping and cutting.

DR. NETON: Oh, okay.

MEMBER SCHOFIELD: And because of this and some of the materials they dealt with were, you know, very high-level, it would not surprise me to see a marked increase over a facility where they, you know, held it between their knees.

DR. NETON: Okay. I see. If I'm understanding correctly, it seems to me that that would become more of a dosimetry issue. You know the development of the risk model

itself is somewhat independent of that. I mean we have to -- to develop a risk model, you need to have some good idea of what the exposures were.

And the best situation is parallel uniform beam geometry so you really can nail what their exposures may have been. But then converting that to some risk to the workers, that is related to how much dose they received.

And if we were aware that they were holding things under their arms and they developed some sort of a lymph adenoma or something like that, we'd certainly take that into consideration.

MEMBER SCHOFIELD: Okay. Thanks.

CHAIRMAN ZIEMER: Wanda Munn?

MEMBER MUNN: Jim, this is more of a matter of a curiosity question than anything else.

For those of us who are not likely to read the existing reports on solid tumors,

how far along are you in your review of that? And is there anything of any significance that you -- that we might glean from knowing something about the findings of the original report that you were reviewing?

DR. NETON: The original RERF data?

MEMBER MUNN: Yes.

MR. ELLIOTT: And the BEIR-VII?

MEMBER MUNN: Correct.

DR. NETON: Yes, boy that's a loaded question.

MEMBER MUNN: I know it is.

(Laughter.)

DR. NETON: I hate to comment on preliminary analyses. What I can say is that, you know, our model is fairly new as risk models go.

You know there is some concern -- in fact this came up with some of our stakeholders and claimants that BEIR-VII came out and discussed these major differences in bladder cancer that were coming out as

compared to BEIR-V.

And so the logical question was, well, why aren't we incorporating BEIR-VII in our risk models if there is such a major difference. And in particular it was a sex-related difference. I forgot now if it was males or females. I think it was females.

The fact of the matter was that our risk models are much more closely aligned with BEIR-VII than they are with BEIR-V because we were sort of in that era of the dose calculations.

So there are tweaks -- there are a number of tweaks that are going to be made if we end up embarking down this path. And that's one thing we're trying to be careful of.

If you think about it, if we go to IREP 6.0 and change the risk models, that essentially changes the PC calculations for possibly 30,000 cases or at least whatever cancer that risk model applies.

DDREF would effect 30,000 analyses. So we're being careful to make sure that when we jump, if we do jump, that it is based on the best available science at the time that shows some sort of a quantum shift that makes sense to us, not just minor refinements.

I know I'm kind of beating around the bush here because there is really no good answer I can give you for --

MEMBER MUNN: No, I didn't expect you to give me the results of your review so far.

DR. NETON: There are some differences in the, you know, the gender, maybe some gender analysis, differences in the populations. And more than likely, tweezing out these lymphomas versus the multiple myelomas could make a difference.

There are some early analyses that might indicate that, if you do that, the lymphoma risk model may go down. But, you know, it's too early to tell. I mean we kind

of look at this and --

MEMBER MUNN: It will certainly be informative to see your review. I'm glad you're doing that. Thank you.

CHAIRMAN ZIEMER: Okay. Thank you.

Further questions or comments?

(No response.)

CHAIRMAN ZIEMER: Dr. Neton, thank you again for this update. It is very helpful and we appreciate the work that you are doing on these various issues.

We're going to take our lunch break. And we will reconvene at two o'clock.

(Whereupon, the above-entitled matter went off the record at 12:29 p.m. and resumed at 2:05 p.m.)

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A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

2:05 p.m.

CHAIRMAN ZIEMER: I would like to call the meeting back to order.

We begin our afternoon deliberations with the discussion on Blockson Chemical SEC.

Just as a reminder to you that the main motion on the SEC had been tabled but we have been having discussions on the so-called radon model, which was an effort to quantitate or perhaps I should say bound radon exposures in that facility.

And there have been some technical exchanges and some other discussions over our past couple of meetings on the radon issues and how one would model radon exposures for the Blockson Chemical facility.

Also, we may have some of the petitioners on the line. And we will give them an opportunity, if they so wish, to make comment. But first of all, I believe the

Board members, since our last meeting, have received from NIOSH and more specifically from Jim Neton, some discussion on the radon model issue. And then, Mark, I believe you may have some comments on it as well, as I understand it. At least you did provide some comments to the Board members.

MEMBER GRIFFON: Yes, I sent some comments.

CHAIRMAN ZIEMER: And you may wish to amplify that somewhat. But let me first give Dr. Neton an opportunity to comment on the radon model and the radon issues.

DR. NETON: I don't have a formal presentation. So this should be fairly brief. But I'd just like to summarize what has transpired since the last Board meeting.

When we met in West Chester, Ohio, at the last Board meeting, NIOSH had a couple of tasks to undertake. One was that -- I believe it was Mark Griffon was curious about the genesis or the origin of the production

rate that was used in the radon model.

And to that end, Tom Thoms of our staff put together a White Paper that was distributed to the Board members on September 21st. And it is an eight-page White Paper that tries to get at whether the 6,000 pounds per week -- 6,000 tons, I'm sorry, 6,000 tons of processing of phosphate rock per week was a reasonable number.

And we approached -- Tom approached that from a slightly different direction. And we knew fairly well the uranium production rates -- I'm just summarizing briefly what was in the White Paper that was emailed -- from 1955 through 1960. And, in fact, in 1955, we had some monthly production data.

So what Tom did was, given the fact that the uranium concentration of the ore was variable, he actually took the uranium production numbers and back-calculated how much radium, being in equilibrium with the uranium, would have been put through the plant

on an annual basis. And in 1955, on a monthly basis.

And just to cut to the chase, the analysis showed that the 6,000 tons per week processing rate seems to be pretty reasonable. More specifically, actually, the 14,000 becquerels per second throughput of radium through the building is bounded reasonably well when you back-calculate using the uranium production numbers.

And there is a table in the White Paper that summarizes that quite nicely on page five. The only exception was, I think, one month in 1955, October, it was a little over that by 1.4 standard deviations. But if you take the average for the entire year of 1955, it is also bounded.

So NIOSH, at least, is comfortable with the 6,000 ton per week production rate that's used in the model.

Also, since the last Board meeting, SC&A put out a brief White Paper with some

strategies that they put forth to possibly use, undoubtedly, in the Blockson radon model. If you recall, that was a topic of some discussion.

NIOSH looked at the strategies and, in fact, this was discussed at the Board's conference call. I forget which date that was but the most recent Board conference call. And it was decided that of all the strategies that were put forth, strategy number three seemed to have the most traction. It seemed to be something that we might be able to get our hands around.

So OCAS NIOSH put forth an effort to see if we could do a -- look through the data that's out there, published data, to see if we could come up with some strategy to provide some further, quote-unquote, validation of the Blockson model.

As pretty much expected, we could not find any relevant literature in the 1950s to support the radon model. But that's sort

of circular logic. We developed the source term model because we didn't have any data so, you know, we wouldn't expect to find any. But we did another search, another pass-through, and couldn't find anything.

But in going through the literature we did run across this particular Polish study that was more contemporary, in the 1980s. But it sort of struck my eye, at least, in the fact that it was the first study that I had seen that had done a number of measurements at four different large-volume phosphate plants.

They actually processed -- made fertilizer, produced over 75 percent of Poland's annual production of four million plus tons of phosphate and fertilizer. So these are pretty large plants.

So they took four plants and they did a lot of other analyses but the one that is relevant to our case here is they put I think it was a total of 80 track-edge radon cups throughout these four plants and measured

the concentrations principally in the fall/winter months. So the plants were not open and breezy. They were presumably somewhat closed up.

And they didn't report a distribution, unfortunately. They reported in a range of measurements from low to high of these 80 values. Well, we took a little liberty with the data, assumed they were log-normal.

And if you do that, you come up -- we came up with a geometric mean for these 80 measurements that were taken in these four different facilities in the winter of about a picocurie per liter, 1.3 picocuries per liter, which is interesting in itself but more significantly, the geometric standard deviation of those measurements was 2.3, which was actually kind of comforting because if you compare that to the geometric standard deviation of the Blockson radon model, it is 2.9.

So it is a little bit higher, but in the same ballpark, which kind of makes you wonder. Well, it seems that the data, at least in this Polish study, did not have a very large distribution -- a geometric standard deviation as might be speculated. So that was one piece of information that I thought was fairly relevant.

The other part of the study was we were, you know, we talked at the last meeting about looking at the Mallinckrodt data as possibly useful in helping to define the bounding nature of the Blockson model.

I personally looked at a lot of radon data until my eyes were red at Mallinckrodt but at the end of the day, the issue was that the Mallinckrodt data had a lot of issues that we couldn't really get our hands around.

Probably most significantly was the fact that the source term at Mallinckrodt was quite variable. They processed uranium

pitchblende ore concentrates that varied anywhere from less than ten percent or around ten percent to 56, 60, 70 percent uranium by weight. I mean these are hugely concentrated ores unlike Blockson that had very low concentration.

That's not really relevant. It is just relevant that they had a variable source term coupled with the fact that if you read the data at Mallinckrodt, the plant appeared to be somewhat more compartmentalized than you would expect. In other words, there are reports of doors being shut and opened and changing, you know, the radon concentrations throughout the plant and that sort of thing.

So we weren't comfortable with developing -- or at least comparing our model to see if it worked at Mallinckrodt because we didn't know the source term very well, the production rate very well, nor the dimensions of the rooms. And those are three things that you've really got to know to come up with some

reasonable tests to be made.

So that's where we ended with the Mallinckrodt. I did put out an email subsequent to that that, you know, I thought about putting in the original report and I left out. And it has to do with the Mallinckrodt data itself. That is sort of the absolute magnitude of the data.

There's pretty good data. And, for example, in 1951, you know, we found a set of over 500 weekly radon measurements made at Mallinckrodt, you know, multiple locations, every week for pretty much the entire year.

And interestingly, the geometric mean of that data -- and it fit a log-normal distribution very well -- I think our score was somewhere around .95 -- the geometric mean of that data set was 13.7 picocuries per liter with a geometric standard deviation of 4.3.

So, again, you know, it's hard to make comparisons. But at least given that the Mallinckrodt source term is probably at least

a thousand times more concentrated than it was at Blockson, at least in my mind it's noteworthy that the data are not that far apart. I think there is a factor-of-two difference in the 95th percentile between Mallinckrodt and Blockson given the source term was a thousand times, at least, more concentrated.

So that's the extent of the analysis that we've done since the last meeting. I'd be happy to answer any questions folks might have.

CHAIRMAN ZIEMER: Okay. Let's take questions for Dr. Neton. And then Mark will have an opportunity to make his comments.

(No response.)

CHAIRMAN ZIEMER: Okay, Mark? Mark did also distribute to the Board last week, I think, some comments. But in case people either didn't receive those or read them or in any event, why don't you either amplify those or make additional comments, Mark?

MEMBER GRIFFON: Yes.

CHAIRMAN ZIEMER: I'll remind him of what he said.

MEMBER GRIFFON: Yes, I mean I guess that, you know, I was -- and Jim sort of went over what I expected to hear as a response as far as the parameters, you know, define the parameters. I mean I guess, you know, I anticipated some of this.

I think even in the last meeting I said that, you know, I know there was probably a variable source term. I'm just -- I guess I'm a little surprised that there wasn't some time frame by which you knew the source term. And even if the place was compartmentalized, I don't think that even really matters.

I mean, you know, we got a big box, we got a little box. You can still model a big or little box, you know, based on the model that you used. I mean I think it is a similar approach.

DR. NETON: You need to know the

size of the box.

MEMBER GRIFFON: Yes, you do need to know sizes, right, right. So, you know, I guess that was my -- a little bit of dismay there that, you know, that there wasn't much more there.

I thought we had a decent opportunity with actual values that could be compared to validate that model. So that was my one reaction.

And then I guess my initial response was that I thought in the initial report it suggested that therefore these -- if I read the report correctly, it sort of suggested that therefore, you know, there's no way that we could use the Mallinckrodt as a surrogate for Blockson.

And I had to sort of restate, you know, that's never what I intended for this analysis to look at. So I was kind of thrown off like, you know, is that what they were -- is that what NIOSH was investigating? If so,

I think, you know, you need to turn it around a little bit because I was saying I wanted some validation of -- going back to that model, validation of the model, not the values at Blockson.

I know it is a different type of facility but this was a case where we had measured data and we can use the predictive values and compare it actual data is what I was hoping to see some of.

And, you know, I see a discussion of it. I don't see any really -- numbers where you really tried to get down and get the source data and try to do it, you know, so that was my one dismay with this attempt.

DR. NETON: Well, the fact is I couldn't find data. I mean, I've looked through all of our reports. I've looked through the Mallinckrodt files. You'd have to be able to identify the size of those individual rooms and the percentage of the uranium in the ore coming through. And

frankly the production rate as well over time.

This is a little different. You know the Blockson model assumes, you know, three shifts per day, seven days per week type operation. I don't think Mallinckrodt was -- I don't know if Mallinckrodt was that way or not.

So there's that variable. There's a source term variable. There are just too many variables.

We did approach it with the idea that we could use it to validate the model or at least the proof of principle type scenario.

MEMBER GRIFFON: Yes, okay.

DR. NETON: But we just couldn't find the data to do that. Or couldn't identify the parameters sufficient to do that. And frankly, anything we came up with, if it agreed with the -- you know it could be accused of being, you know, fortuitous or whatever. I mean it just -- if you start making up -- not making up but guessing at the

sizes and stuff and then all of a sudden the model fits, it leaves one to really question --

MEMBER GRIFFON: To question your estimates or whatever, yes, yes.

DR. NETON: I mean we could easily have come up with volumes of rooms that could have been there to demonstrate what the concentrations might have been given certain source terms and stuff but I'm not sure that exercise would prove anything.

MEMBER GRIFFON: No, I think you need actual values or else you're right, we would question you -- you know you just made this box fit, you know.

DR. NETON: Exactly.

MEMBER GRIFFON: But I -- well, I guess and I'm trying to -- I don't have it open right now but the initial, the first White Paper, the response didn't really say that about validation. That what I was --

DR. NETON: Yes.

MEMBER GRIFFON: -- my initial concern was that you weren't, you know, looking at it the way I had hoped, according to John's criteria three or whatever, you know, that we had discussed. So I was a little bit confused on what you had actually investigated.

DR. NETON: Well, criteria three was to actually establish a geometric standard deviation of the variables. And, in fact, I presented that in that follow-up email, which is 4.6. But I question the validity of the 4.6 value given that this was different rooms, different size compartments.

I mean, it's -- you know, you could take that 4.6 value and plug it into SC&A's proposal and say okay, this is a 4.6 GSD on top of the already existing 2.6 or whatever it is. And say then my new 95th percentile becomes x.

That's possible. But I was not comfortable with the GSD that came out of that

analysis. So it would be more bounding than what we have but I'm not sure if -- I thought the Polish plant data was interesting in itself though that, you know, over four different plants in the wintertime with 80 different track-edge measurements, which are integrated measurements over the entire -- I forget how long they left them out there -- four months -- these are not spot measurements. These are, you know, integrated four month-type measurements.

You end up with a geometric standard deviation fairly tight, 2.something, which probably --

MEMBER GRIFFON: Yes, good.

CHAIRMAN ZIEMER: John Mauro, additional comment?

DR. MAURO: Yes, this is John. When we came up with the idea of strategy three, it was toward the end of coming up with a normalized spread on data from a building that if you actually are measuring long-term

measurements, let's say this room, and took three months of measurements in that part of the room, and that part of the room, and that part of the room, and you looked at the numbers and you could see how variable they are from place to place in the room, you start to get a sense of the stratification.

So that number three was more a way to get a handle not on validating the model but trying to get a handle on if we wanted to explicitly address the possibility of stratification, that's one way to do it.

And then when I saw your data, I said this is how you do it. And in theory, what I had in my mind when I read that, I said, gee, I would have another term in the equation that would say, if you normalize distribution with the geometric standard deviation of two, and you would sample from that as another one of the variables. And that would explicitly address stratification.

Now the question could be, you

know, that's one measure of what the spread might be due to stratification. That spread, of course, is due to more than just stratification. It's due to all of the parameters that effect spread.

So it would be an overestimate of the contribution of stratification. So I guess I'm coming back saying that I could see you actually now inserting that parameter in the model and explicitly addressing stratification.

DR. NETON: One could do that. And, in fact, I've done that. And it, of course, raises the 95th percentile to, I believe, from 17.6 picocuries per liter to 20-something, 20.9, or 21. It doesn't change it, substantially.

But I guess my opinion is that I thought the two was sort of in agreement with what we had for the distribution in the Blockson model by virtue of the fact that what drives the GSD is changes in the air

concentration. We allowed the air concentration at Blockson to vary from one to five air turnovers per hour.

And that is, to a large extent, what drives the geometric standard deviation of the distribution in the first place. So I think the reason you have a GSD of 2 or 2.3 in this Polish facility is because of variations in localized air concentrations. That's one of the main reasons, given that you have a constant throughput.

This was the same kind of operation. It was a 24 hour a day, seven day a week operation. So you've got the same kind of throughput. And so I thought that it would actually be double counted.

If you started to put another -- a GSD of 2 point whatever on top of our geometric standard deviation, it would be double counting the uncertainty. It doesn't mean it would be incorrect to do that. I suppose it could be done. It's mathematically

possible. We've done it. And it comes out about 21 picocuries per liter by my recollection. It's not a huge difference.

You know what you do, like John suggested, you sample that -- you make that a unity distribution, a value of one, with a GSD of 2 point whatever. And then sample that as one of the terms in your Monte Carlo equation.

MEMBER GRIFFON: I mean, I have to wrap my mind around that a little bit. But I'm wondering how that addresses stratification. I mean it's --

DR. NETON: Well --

MEMBER GRIFFON: -- you're getting a bigger number but are you really addressing -- I mean because in these examples you gave, aren't the --

DR. NETON: Well, these are stratified, presumably these are stratified samples. I mean they took 80 sample measurements --

MEMBER GRIFFON: Right.

DR. NETON: -- over a four-month period in four different phosphate factories. And these are stratified numbers. I mean they range from X to Y with a GSD of 2 point something. That's the stratification that was measured within this facility.

MEMBER GRIFFON: Yes.

DR. NETON: It's an empirically measured value. That's redundant. It's empirical value that was determined through, you know, integrated track-edge measurements over a fairly long period of time.

MEMBER GRIFFON: Yes.

DR. NETON: So I don't know how much better one can do. I mean, the only missing link here, and I'll admit to it, is that we don't know where they put these samples.

MEMBER GRIFFON: And that's my --

DR. NETON: But, presumably there are 80 measurements in four facilities taken. So it's, you know, 25-plus per -- or 20 at

each facility. One has to assume that they didn't stick them in the corner offices, you know, where the concentrations were going to be low and less variable.

I mean, they seem to be -- it seemed to be a well-designed study, is what I'm saying. You look at what they've done and it seemed to be a fairly well put together piece of work.

I forget where it was published. I think it was --

MEMBER GRIFFON: Did you give us that study?

DR. NETON: Yes, it's on the O: drive. It's in the Blockson Chemical folder.

MEMBER GRIFFON: Okay.

CHAIRMAN ZIEMER: Okay. Other questions or comments? Mark, additional comments?

Now, Board members --

MEMBER GRIFFON: I should say -- but one more comment, Paul, I'm sorry. I

should say that I was confusing the two. My Mallinckrodt request was more for the validation. And the criteria three was the separate -- the stratification issue. So I was confusing the two things.

CHAIRMAN ZIEMER: Thanks.

One thing, Board members, you'll need to determine for yourself is whether or not you believe the radon model, as it was developed and as it currently exists, is a reasonable estimate of the bounding value for radon or whether, in your mind, there are still questions to be dealt with.

And then beyond that, whether or not you are prepared to remove the original motion from the floor, which was the action on the SEC, which needs to be taken if we're going to move this Blockson matter forward.

So let me ask if there are more questions on the radon model. I don't believe we necessarily need to vote on the acceptability of the model although if someone

wishes to make such a motion, we can certainly do that.

But if you are at a point where you believe that the model is reasonable for bounding radon doses at the facility, then you would be in a position to say, okay, I'm ready to act on the original petition motion, which would have to come off the table first.

So it would be in order if someone wished to do that, to remove the original motion from the table. In the absence of that, it will remain there.

Wanda Munn?

MEMBER MUNN: Can't pass up this opportunity to review a little bit for the Board how we got to where we are.

Please recall that we are not operating blind with respect to Blockson. The Working Group pursued at least a dozen different issues. There were originally, as I recall, a small number of findings. We disposed of those fairly early with the

exception of one or two.

By the time all of the findings had been dealt with, both our technical contractor and NIOSH were in agreement that dose reconstructions could be done for these folks.

Recall this is a small plant with a relatively small amount of production. It was a dirty plant but not a hot plant. The source term is fairly well known and could be dealt with.

Also, please be aware of the fact that compensations are being made. You've already seen that. Workers at Blockson have been compensated. It's not as if they are being ignored. It's not as if there are no claims that are being paid.

At the time that a recommendation vote came before the Working Group, the Working Group, which was evenly split, came to you with the Chair's recommendation that we not accept the recommendation for an SEC. But it was a split vote from the Working Group and

so you did not have a clear recommendation from the full Working Group.

At that point, this became a matter for the Board to debate. There have been one or two additional issues raised during that period of time that we've been looking at this, which is now well over a year. In each of those cases, information has been brought to you which would substantiate the position that I believe the Chair of your Working Group took to begin with.

And in each case, it has made no difference in the standing that each individual on this Board has taken with respect to this site. And with the recommendation for the SEC.

I am prepared to recommend that we accept the information that has been given us with respect to the radon model, and that we move from there to the business of addressing the SEC.

It is highly unlikely that there is

going to be any astonishing new news that is going to affect additional information that will be brought before you one way or the other.

You've had adequate opportunity. We've had adequate information. We can continue to pick at this for as long as we want. But the petitioner, in my view, has a right to a decision one way or the other. And individuals are being compensated.

My recommendation is that we accept the model and take the recommendation with regard to the SEC off the table.

CHAIRMAN ZIEMER: Before I recognize that as a full motion, I want to see if either of the petitioners are on the phone. And if they are, if they wish to make comment. I won't identify them at this point but if they are on the phone, they can identify themselves and make comment.

Are either of the -- do either of the Blockson petitioners wish to make comment?

MR. RIVER: Hello?

CHAIRMAN ZIEMER: Yes?

MR. RIVER: Yes, I've got a question to ask you.

CHAIRMAN ZIEMER: Please identify yourself.

MR. RIVER: Yes, my name is Sherman River. I'm from Crystal, Illinois.

CHAIRMAN ZIEMER: Are you a petitioner?

MR. RIVER: Well, I got a claim against --

CHAIRMAN ZIEMER: Well, the appropriate time for you to raise this would be during the public comment session.

MR. RIVER: I'm sorry. I apologize.

CHAIRMAN ZIEMER: Yes, this is only the petitioners for Blockson who we can hear from right now.

MR. RIVER: I apologize.

CHAIRMAN ZIEMER: Thank you.

Either of the Blockson petitioners?

(No response.)

CHAIRMAN ZIEMER: Apparently not.

Let me ask, Wanda, were you making a motion to remove the original motion from the table?

MEMBER MUNN: It was my understanding you had asked for some agreement from the Board with respect to the radon model that we've discussed.

CHAIRMAN ZIEMER: Well, if we --

MEMBER MUNN: And --

CHAIRMAN ZIEMER: -- want agreement on that, that has to be done separately from a motion to un-table.

MEMBER MUNN: I recommended that we accept the radon model and that we remove the tabled motion.

CHAIRMAN ZIEMER: Well, the Chair will split that then --

MEMBER MUNN: That's fine.

CHAIRMAN ZIEMER: -- into --

because the motion to remove from the table cannot be debated. The radon issue can be debated.

MEMBER MUNN: Understand.

CHAIRMAN ZIEMER: So we will split that. The motion is to accept the radon model. And what accepting means, in my mind, is that you would consider that it is adequate for bounding radon doses in the facility.

Is there a second? And then we can discuss it. Is there a second to that?

MEMBER ROESSLER: I second.

CHAIRMAN ZIEMER: It's been seconded. Okay, it's open for discussion.

Mark, I'll recognize you.

MEMBER GRIFFON: I was just going to say, are we accepting that we can't -- that NIOSH can't validate this model? That we've requested it to be validated and are we accepting that? Is that --

CHAIRMAN ZIEMER: My interpretation of the --

MEMBER GRIFFON: -- that they attempted but they cannot validate?

CHAIRMAN ZIEMER: Yes, my interpretation of the motion is that the model is being accepted as presented, which, I believe, Jim has not described what they did as validation, per se. He has done some things to, I believe, show reasonableness as I would understand it.

Dr. Melius?

MEMBER MELIUS: And does this acceptance mean that we are accepting the use of this model at other sites because that's, I believe, is NIOSH's intention, at least as stated to us in the Work Group and, I believe, at the Board? So that this model would be what would be utilized at all similar sites.

CHAIRMAN ZIEMER: Jim, can you answer that? I don't think the motion necessarily implied that but there may be some implications as a precedent.

DR. NETON: We would propose where

appropriate -- what we're saying is that we would use, where appropriate, an analytical model of this type where we have a very good handle on the source term, the building volume, you know, the sort of the primers that are in this model. They don't have to be the specific parameters.

In other words, we're not proposing that would apply 17.6 picocuries per liter at every site. But, for example, I could conceive of using this model -- in fact we have a draft in process right now for Texas City Chemicals that would use this type of an approach.

So yes, it could be used at other facilities but we're not proposing we use it at all radon sites. It depends upon the type of information that is available. For instance, if we don't know the building size at all, it would be difficult for us to use this model. We have to have certain known parameters.

MEMBER MELIUS: So --

CHAIRMAN ZIEMER: Go ahead, Jim.

MEMBER MELIUS: Can I -- just a quick thought.

CHAIRMAN ZIEMER: Yes.

MEMBER MELIUS: Then what would be used at other sites? You are confusing me a little bit because --

DR. NETON: It depends on the time frame. I mean if it is in the 1970s, we would clearly have some information from the 1970s that indicates what the levels may have been in those type of facilities.

If they are Florida plants, you know, the phosphate -- for instance, we have done a lot of research in the Florida area. And we believe those data are probably applicable to Florida phosphate facilities. So we would entertain using those values if we had them in the 1970s.

For anything in the 1950s, clearly we're not going to be able to find -- we have

not been able to find any measurements, real data in the `50s. So we would end up more than likely using an approach such as this.

I would like to clarify a little bit. I don't know that you are actually accepting the -- you are not voting necessarily to accept the exact NIOSH model as it stands. I think that you would be voting to accept the fact that the radon levels could be bounded with a model of this type.

In other words, there is still a slight discrepancy between what SC&A might recommend for an upper bound versus what NIOSH is recommending. But, conceptually the models are the same. It's just a matter of which parameters are tweaked a little bit to get slightly different values.

CHAIRMAN ZIEMER: For the Blockson site?

DR. NETON: Right. For SEC purposes, you would just be voting that the model is a valid approach to bounding the

value.

MEMBER MELIUS: Thank you. I'm now more confused but it was -- it was helpful. You were helpful. Okay.

CHAIRMAN ZIEMER: Well, yes, the applications beyond this are as Jim described, obviously. But I believe the Chair is interpreting the motion as being one that pertains to the bounding of radon doses at Blockson per se.

Further discussion? Anyone wish to speak for or against the motion?

Mark?

MEMBER GRIFFON: Can I ask -- back to the Mallinckrodt question. I'm just -- and it took me a while to log back on. I got kicked off of the -- our O: drive. But looking at the Mallinckrodt folder, I mean, was there any -- in your process, Jim, through assessing this, did you assemble any of this -- I mean, I imagine if I were trying to do this, I think I would have assembled source

term information into a spreadsheet, looked at what I had kind of. Do you have any of that available that we can look at?

I mean, I'd like to -- and maybe I would come to the same conclusion as you would, which is that, you know, it's just -- it's too -- you know, there's not enough, it's got too many gaps, it's -- your mic's been turned off for a reason. I don't want a reply.

No, you know, I'm just wondering if you have any of this information, sort of like your working files when you were considering whether the data was sufficient to use as a validation of the Monte Carlo model?

DR. NETON: Well, I didn't approach it from that perspective. I was actually looking for data that could be used, you know.

I mean, so we looked through all these files of, you know, the O: drive files, the site research database. And I could not find anything that, you know, delineated the

size of the facility.

I mean, that was a given right there. I could not find the compartmental size to use in the model. I mean, so right there is nothing to assemble. I just couldn't find that.

Then it became very obvious to me looking through even the site profile that the concentrations of uranium that were in the ore that were processed were variable. I mean ten percent up to 70 percent uranium ore content. So you've got a factor of seven right there. You've got an unknown room size.

You know, I didn't need the -- I didn't feel the need to sit and have a spreadsheet to convince myself that this was an --

MEMBER GRIFFON: But I thought, and I'm going by memory here, that's why I'm asking because I remember the Mallinckrodt site profile, at least the initial one, being incredibly robust with tables at the back.

And I don't know if any of that was source term.

But also I would expect -- and maybe I'm wrong on this -- but I would have expected that these concentration variations were in campaigns sort of, weren't they, that they got a run of the Congo ore and then they got a run of, you know -- I thought there would have been some definition to that source term change over --

DR. NETON: I certainly didn't find any. And also I didn't turn this into a Ph.D. dissertation. I looked through as hard as I could to find -- I thought I exercised due diligence looking for data to be able to do this.

You know, the data, the annual data we have is quite robust. I mean 560-something samples over the entire year. I mean that's a lot of good data. But I have no idea what the concentrations were of the ore that went through there, the processing volume per unit

time, the size of the room.

So, you know, there's a lot of unknowns there that we don't know that we have a pretty good handle on at Blockson. I mean that's why we can have this model because we know about the relative size of the room and the concentration of the ore and the production rates.

MEMBER GRIFFON: I guess I wasn't expecting that you could have defined that for all time periods for the plant history. But I thought there must be some block of time --

DR. NETON: Well, I didn't look for every single block of time in the 15-year period.

MEMBER GRIFFON: Well, where some of those things were known, you know, and I really did expect that you knew quite a bit about the facility. I mean, we've had a lot of people involved in reconstructing what went on there. The petitioners were very active.

DR. NETON: Yes, yes, I mean

especially when you get to the point where they close the door -- there is a whole report on they closed this one door and it sucked the -- you know, changed the air balance such that, you know, it sucked the radon and it went up by a factor of two or three in another room.

And then they realized -- on top of that -- and I think I put this in the original write up that it was recognized pretty early on after 1949 or so that radon was a problem there. I mean it was -- you know there were concentrations.

The values that I reported here, this 13 picocuries per liter are actually values in the plant. Plant Six. I purposely tried to get plant ore processing values.

There are ore storage rooms that are much higher than that. I mean they are in confined spaces and drums being opened and stored for long periods of time.

But, yes, I did not find anything

like that.

MEMBER GRIFFON: And just to -- I mean to Wanda's point, I don't -- I think this is sort of to Jim Melius's point and Wanda's point that, you know, I'm not necessarily just nit-picking this for the sake of nit-picking it. But I do think it has broader implications.

I mean, I think we've realized that this approach, at least, could -- is being considered for Texas City and probably several other sites. So that's part of the reason that we're, you know --

DR. NETON: Right. And that's why I said --

MEMBER GRIFFON: -- some of us anyway are interested in making sure it's correct.

DR. NETON: I wouldn't get hung up on the 17.6 picocuries per liter. I think it's the model concept itself. You know, is this model significantly robust to put an

upper bound in? Obviously we think it is.

CHAIRMAN ZIEMER: Okay. Further discussion? Anyone speaking for or against the motion? Or are you ready to vote?

The motion would be -- if the motion passed, it would be an acceptance of the radon model for Blockson. It would have no specific impact on the final decision as far as action on the broader question of the SEC. That would have to be handled separately.

So this would simply be a matter to go on the record as to your comfort level with the radon model itself as it applies to Blockson.

We'll need to take a roll call vote on this. So let's proceed. A yes vote is a vote that is supportive of the motion, which basically says that you believe that this model is sufficient for the bounding of radon doses at Blockson. I may not have worded that quite the same as the original, but that's the

intent.

Okay? Are we ready to vote then? Okay, let's vote.

MR. KATZ: Dr. Poston?

MEMBER POSTON: Yes.

MR. KATZ: Mr. Presley?

MEMBER PRESLEY: Yes.

MR. KATZ: Ms. Roessler?

MEMBER ROESSLER: Yes.

MR. KATZ: Dr. Roessler, excuse me.

MEMBER ROESSLER: Yes.

MR. KATZ: Mr. Schofield?

MEMBER SCHOFIELD: No.

MR. KATZ: Dr. Ziemer?

CHAIRMAN ZIEMER: Yes.

MR. KATZ: Ms. Munn?

MEMBER MUNN: Yes.

MR. KATZ: Dr. Melius?

MEMBER MELIUS: No.

MR. KATZ: Dr. Lockey?

MEMBER LOCKEY: Yes.

MR. KATZ: Mr. Griffon?

MEMBER GRIFFON: No.

MR. KATZ: Mr. Gibson?

MEMBER GIBSON: No.

MR. KATZ: Mr. Clawson?

MEMBER CLAWSON: No.

MR. KATZ: Ms. Beach?

MEMBER BEACH: No.

CHAIRMAN ZIEMER: It's a tie, so the motion fails.

Now this does not preclude us considering whether to move the main motion back to the table although the Chair recognizes now, based on that, that it is not likely that a motion to remove from the table would pass. But I need to allow the opportunity for that.

It would take a majority vote to bring the main motion, which is the motion to -- well, the main motion originally was to, I believe, and I have to remember which way it was worded. But I believe the motion was to agree with the NIOSH recommendation that doses

could be bounded at Blockson.

A comment, Mark?

MEMBER GRIFFON: Yes, just a comment with respect to the last vote. I mean I'm glad, Paul, you said some words that rang very true of me in your statement that this is a vote of your comfort level with the model currently. And I just want to say that this doesn't mean that I'll never vote for this model. It just means that I'm not comfortable where we are now.

CHAIRMAN ZIEMER: All right. Does anyone wish to make a motion to remove the original Blockson motion from the table?

MEMBER MUNN: I have made that motion.

CHAIRMAN ZIEMER: It's been moved. Is there a second? And there's a second. This is not a debatable motion. We will immediately vote in a different order.

MR. KATZ: I'm trying to mix this up every time.

MEMBER MELIUS: Can you clarify the motion first?

CHAIRMAN ZIEMER: We had put on the table several meetings ago, and I don't recall the exact date, a recommendation, which recommendation occurred following the NIOSH evaluation report, which -- where NIOSH indicated that they believe that they can bound or can reconstruct dose at Blockson and therefore, they were recommending that a new class not be added to the SEC.

I believe the motion for the Board at that time was to agree with the NIOSH recommendation. The Board was split six to six on that. And therefore, the motion to support the NIOSH position was not approved.

Later, that same motion was tabled, partially so that we could address issues such as the radon issue. I may not have the sequence details, but the motion on the table was the motion as to whether or not we support the NIOSH recommendation.

So removing it --

MEMBER MELIUS: A vote yes is to remove that from the table?

CHAIRMAN ZIEMER: Yes. It does not --

MEMBER MELIUS: So it would keep it tabled?

CHAIRMAN ZIEMER: A vote no is a vote to let it remain on the table. A vote yes is to remove it from the table. A tie vote leaves it on the table as well. It has to have a majority to come off the table. Everybody clear on that?

Okay. So we now vote on whether to remove it from the table. This has nothing to do with the actual action. It's just to bring before us a previous motion.

MR. KATZ: Ms. Munn?

MEMBER MUNN: Yes.

MR. KATZ: Dr. Melius?

MEMBER MELIUS: No.

MR. KATZ: Dr. Lockey?

MEMBER LOCKEY: Yes.

MR. KATZ: Mr. Griffon?

MEMBER GRIFFON: No.

MR. KATZ: Mr. Gibson?

MEMBER GIBSON: No.

MR. KATZ: Mr. Clawson?

MEMBER CLAWSON: No.

MR. KATZ: Ms. Beach?

MEMBER BEACH: No.

MR. KATZ: Dr. Poston?

MEMBER POSTON: Yes.

MR. KATZ: Mr. Presley?

MEMBER PRESLEY: Yes.

MR. KATZ: Dr. Roessler?

MEMBER ROESSLER: Yes.

MR. KATZ: Mr. Schofield?

MEMBER SCHOFIELD: No.

MR. KATZ: Dr. Ziemer?

CHAIRMAN ZIEMER: Yes.

MR. KATZ: It's a tie.

CHAIRMAN ZIEMER: Therefore, the motion to remove from the table fails. And

the original Blockson action remains on the table. And that's where it will remain for the time being.

Let me also suggest in the meantime, and partially direct this toward Mark but also to the rest of the Board, is that you may want to have the opportunity -- well, Jim said there wasn't a spreadsheet to look at.

DR. NETON: Right.

CHAIRMAN ZIEMER: So I'm not sure where we go from here.

MEMBER GRIFFON: Yes. And I was just thinking of where to go from here. And a unique problem we have this time is that -- because I was thinking well, maybe it would be worthwhile to get our independent, you know, audit contractor to help us in looking at this and seeing if they felt there was anything in the Mallinckrodt data that, you know, could be used to validate.

However, in this particular case,

which was much to my chagrin early on, SC&A developed the model. So I don't know that they are -- you know, it's an inappropriate assignment for SC&A to validate the model that they developed.

CHAIRMAN ZIEMER: Let me pose one question that -- and maybe it can be easily answered. It appears that one of the big hindrances at evaluating the Mallinckrodt data is the room size issue.

MEMBER GRIFFON: It's multiple --

CHAIRMAN ZIEMER: But that was kind of the back-breaker that even if we knew there were campaigns and had subsets of data, if we don't know those room sizes, what can we do with it? Is there any way to get either blueprints, plans, or any information in the records?

I mean maybe it is not something that has even been looked for because it didn't arise as an issue before. Do we know that room sizes are not available?

DR. NETON: I don't know that for sure, no. I mean I looked through the site research database the best I could and didn't find any -- essentially floor plans or diagrams of the building much like we had at Mallinckrodt. I mean I would have taken a small diagram to scale and kind of blown it up if we could find it.

It doesn't mean they don't exist. You're absolutely right. But my other concern though is this processing source term. I mean you have a factor of seven possible variability in the uranium radium source term, you know, concentration-wise, which is huge.

CHAIRMAN ZIEMER: Right. I was thinking in terms of what Mark said about if one could identify a subset, a particular campaign where you knew that the concentrations for a particular time set in a particular location -- it may not be doable.

DR. NETON: Yes.

CHAIRMAN ZIEMER: And I don't know

-- and SC&A, as you looked at any of the Mallinckrodt stuff, do you recall seeing any room dimension information or any blueprints or anything?

DR. NETON: Now I'm not saying there aren't any because I honestly did not do an exhaustive, you know, we have thousands of files, a lot of files, a lot of data out there.

CHAIRMAN ZIEMER: Well, and the other part of this is sort of the question of reasonableness. Is the bounding -- I think there is a reasonableness test in the law on these things. And is the bounding value proposed by NIOSH a reasonable value? Is there reason to think that for some reason there is something unique at Blockson that would drive that value way up?

You know if the number is 20 or 17, I don't think we're going to quibble. But I do want the Board to make sure that we're looking in these bounding things at what is

also reasonable. And if a refinement, whether it is the concentration or the room size, is not going to change that value very much, we need to know that somehow.

DR. NETON: Right. Well, a couple issues there. The reasonableness issue, I think, is there in the sense that it is true that there are no 1950s era data. But at the same time, I have looked through and my associates have looked through a lot of information on these processes and radon measurement.

And nowhere in the literature do I find any indication that says oh, by the way, all of a sudden we realize radon is a problem. We need to do some sort of mitigation efforts to get it down to these currently low levels that we're seeing in the 1970s.

I see nothing in the literature. I mean I've not seen one article that says oh, by the way, this was a problem in the `50s and now we've increased the ventilation to

accommodate, you know, to reduce the radon emissions and concentrations.

You would think if it were such a major problem, you would see something like that, some kind of paper trail in the literature. It's quite possible, I've worked long and hard to work through this, but this ore was calcined at a very high temperature, like 1,400 degrees or something like that.

I have an opinion that the radon is probably -- most of it was driven off before it ever got into the plant. And that's another reason why these levels are high. Can't prove it so we're not putting it in our model at all. So I think the 17 picocuries per liter is quite a reasonable bounding value given that what we saw in the `70s was in the one to two picocurie per year ranges and no higher than that.

In fact, if you looked at -- and I never talked about this before, but the storage locations where they have the ore in a

very enclosed space with almost no air turnovers, doesn't usually approach what we're assigning here at 17.6 picocuries per liter.

If you look at the Florida phosphate data, which is -- admittedly, that's outside but the ore was stored in these tunnels, the storage tunnel with fluorophosphate areas were not -- were on the same par as what we're seeing here. And these are fairly enclosed, unventilated spaces.

And it's well known that radon has an emanation fraction of something like 30 percent, you know, in the ore. So, again, you know, I can't think of any mechanism that would make the radon concentrations higher than what we're proposing at Blockson.

CHAIRMAN ZIEMER: Okay. Thank you.

Okay, Board members, when we get to our work time later this week, I guess I'm going to be asking you for guidance on a path forward. We need to ask each other because we can't just let this sit here forever. This is

unfair to the -- I mean we need to drive toward a decision, whichever way it goes. We need to drive toward that.

And you know, I'm somewhat at a loss as to what to do beyond what we've done. We seem to be pretty split on this. And at some point, I ask the question, you know, we may have to report to the Secretary about this. I don't know, Ted, we'll have to look into that. What do we do with this? And we may need counsel to help us on this.

If we remain split on this issue, at some point, we may have to close it. But -- and I don't know if you want to speak to that, Ted.

MR. KATZ: Well, I wasn't really going to speak to that so much as to say, I mean, we -- as I noted at the beginning of the meeting, we have four new members. One of them is a radon expert. So maybe new perspectives to this dialogue will help, too.

CHAIRMAN ZIEMER: Well, certainly

that may be the case. But keep in mind that here's a group of people that have been dealing with this for well over a year or a couple years. And so to sort of expect new people to sort of come aboard and then suddenly bail us out, I don't like the idea of relying on that. Maybe that would occur, but nonetheless, I'm not so comfortable with that.

Wanda, did you have an additional comment?

MEMBER MUNN: Well, that probably will occur. It's difficult to imagine why one would not want to take this off the table because up or down, it's logical for us to move forward with it. And there's only a limited number of additional efforts that can be made with respect to additional data, to additional methods of approach.

When we have a vote of this kind, which occurs all too often, and we know that we are going to be adding individuals to our number here, without allowing this particular

process to move forward, it's most disheartening. And I can't imagine how disheartening it must be for the petitioners in this case.

The fact that this decision has some bearing on future cases that are coming along is not lost on anyone here I'm sure. It also is very clearly a reason for attempting to maintain our current position longer.

It just does not speak well, I think, for science or for the enormous amount of effort that individuals have put into this to try to move the science forward.

CHAIRMAN ZIEMER: Okay. Any further comments?

MEMBER MUNN: None.

CHAIRMAN ZIEMER: Thank you.

We need to proceed then with the next item, which is the Hanford SEC petition. This is a so-called 83.14 petition. And Sam Glover is going to make the presentation for NIOSH.

And he will, as part of his presentation, explain how this petition fits in with two earlier Hanford petitions that this Board has already processed. And then we may hear from several of the petitioners, including the one for which this petition is the focus as well as some of the earlier petitioners on the previous Hanford petition.

And Ted, did you have a comment?

MR. KATZ: Yes, just before we get started, I just wanted to remind the Board we are dealing with a lot of SEC petitions and going forward, based on -- in the agenda for today and tomorrow -- but based on the most recent training that we had related to ethics, conflict of interest, one of the implications there -- what we learned was when we are dealing with SEC petitions, I mean, we already have a standard practice of leaving the table although the guidance was to, if it's a small room, to leave the room or to be somewhere where you are not visible to the Board in

particular.

But the important point I just wanted to note in addition is we got guidance about tasking, that we need to also be careful about tasking when someone has a conflict. There are some situations where it is unavoidable that everybody will be at the table, and I will give some guidance about that when we get to our working session on Wednesday.

But with SEC petitions, we can avoid any trouble because we already have people with conflict that are already leaving the table. So I would just say we need to do all of our tasking related to SC&A if there is going to be any related to an SEC petition during the SEC petition session as opposed to ever leaving that for the working session when everybody is sitting at the table.

CHAIRMAN ZIEMER: Okay. And on Hanford, we have Mr. Clawson is conflicted, I believe -- no, not Mr. Clawson.

MEMBER CLAWSON: No.

CHAIRMAN ZIEMER: Ms. Beach, Ms. Beach.

MEMBER MELIUS: We just assume you're conflicted.

CHAIRMAN ZIEMER: All those northwestern sites look alike, don't they?

(Laughter.)

CHAIRMAN ZIEMER: Idaho, Hanford --

MEMBER MELIUS: Then they all should be included in the --

CHAIRMAN ZIEMER: Right, right.

Ms. Beach, for the record, has left the table. And Ms. Munn, for the record, has left the table for this discussion.

So then we'll proceed and turn the podium over to Sam Glover.

Welcome, Sam.

DR. GLOVER: Thank you, Dr. Ziemer. I'd like to start out with a little bit of history, and we're a little bit off -- this started about three years ago. We've been at

this a long time. There are a lot of different things that have happened on data security and different things that have held issues up.

We certainly have been working and SC&A has been working very hard on this for a long time. So I thought we'd go back and start at the beginning, how all of this kind of came to be.

So in the beginning, we had three Hanford petitions, which were qualified essentially at the same time. These included an all production workers from the 100 and 300 areas from `43 to `46, and all the 200 area workers and guards basically from December `44 through September 1st, 1946, associated with the DuPont era. That was SEC-00050.

On November 21st, we had another one associated with all employees and facilities from January 1st, 1942 through December 31st, 1990. That was SEC-00057.

And then there was a third one,

which was all roving maintenance carpenters in the 100, 200, 300, and 400 areas from April 25th, 1967 through February 1, 1971.

Those were all merged into one petition. And those three petitions were then evaluated in two separate parts, the DuPont years, which was 1942 through September 1st, 1946, and Part 2, September 1st, 1946 through 1990.

We issued the evaluation report for Part 1 in May of 2007. And that was presented to the Board in July of 2007. And an evaluation report for Part 2 was presented in October 2007, and an update to that was presented in April of 2008.

The early petition stated that personnel monitoring gaps existed for several individual workers, particularly in the pre-1946 operational time frames. And so we qualified it based on the absence of bioassay data pre-1946.

There was -- the plutonium bioassay

didn't start until that time frame. There were certainly several years of operations where there is no bioassay.

The class that was added was actually formed by the Board on October 12th, 2007 for Part 1, and that was all employees -- I'm sorry, get this correct -- employees of the Department of Energy or DOE contractors -- this writing is even small for me, I'm trying to read this very fine writing -- basically the 300 fuel area fabrications and research areas from October 1, 1943 through August 31st, 1946, the 200 area plutonium separations from November 1st, 1944 through August 31st, 1946, and the B, D, and F reactors in the 100 area from September 1, 1944 through August 31st, 1946.

August 31st is when GE took over for DuPont, just a bit of recalling some of the different things that occurred at Hanford. So that was the first class that we recommended and was acted on. A second class

we proposed was based on americium and thorium infeasibilities at various parts of the Hanford site. SC&A issued several White Papers regarding the topic. We continued to research that.

And at the time -- actually I left it in the present tense -- it was hindered by the inability to access DOE data. It was slowed down. So it took some time to work through that class. And that's when we came back in April 2008 and basically it was part of this revised evaluation report.

And the class was added effective June 29th, 2008, which essentially is the September 1st, 1946 through December 31st, 1961 in the 300 areas, and that's associated with thorium, and then from January 1, 1949 through December 31st, 1968 in the 200 areas east and west at the Hanford Nuclear Reservation. And that was associated with americium separations.

So at that time, we still had

numerous matrix items. Those items were moved by the Board to get an expedient class, to get that to begin process. Several hundred claims, I think over 400 cases, were found to be within the SEC as part of that. So it was timely.

It has taken a long time to get access to the data. Some things we're still getting in.

The Board, at the time, Dr. Melius and the Work Groups, we identified basically three priority items amongst this 25- or 26-item matrix. And those were americium, thorium, and uranium. How much data, how well had we defined the class basically within that time frame, kind of focusing on that and moving to the others.

The problem was at the same time we had data security or access issues. And a lot of different MOU -- all these different things came at the same time and essentially slowed progress down. So while we focused on those,

we really couldn't just say we are going to do these and move to the next thing, we actually had to do a number of different research projects at the same time.

So we began a large database search. We had several hundred thousand responses back to go through, looking at americium, thorium, and uranium. We had 13 separate data captures. And those aren't just -- some of those are one-week periods, some of those are multiple-week periods.

We had at least 15 additional interviews with site experts, numerous facility tours, and those included site experts with us, people who actually were there in 1948, 1949, who would have been doing that work, SC&A accompanied us, and Board members accompanied us on those sites.

We have over 18,000 Hanford-related items in this SRDB now associated with this. It has been a very large undertaking.

In some cases we did not receive

the data until early this year. And some data is still coming in. Security classification review takes a long time. And so it has been a very lengthy process.

I do want to say that DOE has worked very hard. They had to work within the framework of their guidance. But to get us access, these things would not have happened without Gail Splett, her management and staff supporting us.

So we developed a number of draft reports -- not draft to the Board but internal drafts of different research items. Some of those were presented to the Board, the 100, the single-pass reactor data. We issued a final report on that.

We also developed N Reactor, neutron dosimetry, the 200 area and 300 area, and the research facilities, thorium, uranium, americium, curium, neptunium, polonium, thulium, highly-enriched uranium, U-233, promethium-147, tritium, technetium-99, and

also some issues associated with the alpha-beta activity at the tank farms. We had a lot of different projects going on.

So what I want to say when we look at this is while I'm going to present three particular issues, an 83.14 does not intend to try to delve into everything you can't do. It is essentially the icing that covers a broad swath of topics. There is a lot -- there's potential other infeasibilities, but this covers a broad scope of time.

So polonium began production -- you are well familiar with the Mound facility -- Hanford began producing polonium for initiators back in 1945. And that continued through December 31st, 1971.

Early indications was that it was all done at Mound. That's not necessarily the case. They did do some work at Hanford in separations for that material and various research activities throughout those time frames. In the Area 200, we also see that

they, again, did some experimental solvent extraction work for a limited time from `65 to `66.

The 300 Area, we see from `63 to `69, they were doing some additional polonium experiments, particularly in the 325 building. For monitoring we see while they have discussed that there's an early procedure for bioassay, there's nothing until you get to `68 and `69 they are for very particular incidents or processes that were going on. And they don't necessarily relate well to the history of activities at Hanford regarding polonium. We see in `72 and `73 microspheres being produced at PNNL.

So we really just don't have a broad basis for which to go back and try to do dose reconstruction for a highly volatile and complex compound which is mobile, which you guys have a lot of experience with at Mound Laboratories.

For neptunium, we see activity from

May 1st, 1948 through June 30th, 1972. In the 200 Area, operations began at crude separations for metal waste, but they also became very highly refined and essentially pure neptunium-237. The 300 Area, from January 1, `66 through December 31st, 1970, target element fabrication work beginning in `66. In monitoring, there's no bioassay prior to 1972, in which case we see four baseline bioassay measurements.

For thorium in the 100 Area, we do see a few element failures beginning to be reported in the `65 though `68 time frame. For the Area 200, we see major thorium operations beginning with the Thorex process in `65. And these continued through the final campaign to fabricate, irradiate, and process pelletized thorium oxide in 1970.

Area 300, October 1, `45 through December 31st, 1970, they had large campaigns to irradiate or fabricate, irradiate, and process pelletized thorium oxides in the later

years and also trial canning periods in the beginning. They handled thorium for a large block of time. Essentially there is extremely little data regarding thorium operations monitoring data at Hanford that we have been able to find.

So as previously described, NIOSH determined it was not feasible to complete dose reconstructions for virtually all radionuclides during the DuPont era because of lack of bioassay. We simply just didn't have bioassay in the earliest years. Americium and thorium during specific time frames in the 200 and 300 Areas, those are things we predefined. Those are previous classes that were already added.

Conclusions of research, basically we've come to the conclusion that based on the results of this research in numerous areas, it is not feasible to complete dose reconstruction with sufficient accuracy for the time period October 1st, 1943 through June

30th, 1972.

So because the previous SEC-00057 was acted and moved upon, we needed a route -- a path forward, which is an 83.14, to essentially add to the class. So an 83.14 was developed using a claim for which NIOSH issued a decision, which it could not reconstruct dose. The claimant was a technician and laboratory supervisor in areas with neptunium and thorium with no associated bioassay. The claimant submitted an 83.14 petition, and NIOSH issued its evaluation report on September 28th, 2009.

So you may ask why the class. There are several infeasibilities that exist during the time frame in question. And these are presented in a form which provides broad coverage. Not necessarily every infeasibility but a series that provides a broad coverage in time and place. The decision was based on lack of adequate biological monitoring, sufficient air monitoring information, and/or

sufficient process and radiological source term. It's extremely difficult to get your hands around all the different source terms at Hanford.

Why everyone? Based on our dose reconstruction experience and records, NIOSH thoroughly determined that there was not sufficient information available to enable us to accurately assess whether an Energy employee or class of employees did or did not potentially enter specific areas of Hanford during the time associated with both the previously-designated SEC classes and the recently identified polonium, thorium, and neptunium dose reconstruction infeasibilities.

So what about everyone else not included? So as I said, we did a lot of additional research projects, neutron/photon ratio, the single pass reactors, all this additional work with thulium. And if there is a dose reconstruction methodology which we have in place or which we have data for, we

will employ that. So, therefore, dose reconstructions for individuals employed at Hanford site during the period from October 1, 1943 through June 30th, 1972 but who did not qualify for inclusion in the SEC, we will use these data as appropriate.

Evidence reviewed in this evaluation indicates that some workers in the class may have accumulated chronic radiation exposures through intakes of radionuclides and direct exposure to radioactive materials. Consequently, NIOSH is specifying that health may have been endangered.

The proposed class? All employees of the Department of Energy, its predecessor agencies, and its contractors or subcontractors who worked at the Hanford site in Richland, Washington, from October 1, 1943 through June 30th, 1972 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, including the special exposure cohort.

I wanted to give you some flavor for what is the potential impact. The total number of cases that are Hanford and PNNL is about 3,500, 3,457. Previously, 415 were withdrawn as part of the SEC. The total number with the dose reconstruction at DOL was 2,095 cases, total number without a DR at NIOSH, some of these cases have been held for a long time because of changes to the technical basis document, there are 888. Total before 1972, 718 cases to be done. Number of case claims at NIOSH, which the current proposed SEC may effect, is 321 cases.

So our recommendation for the period October 1, 1943 through June 30th, 1972, NIOSH finds that radiation dose cannot be reconstructed for compensation purposes. So we have a feasibility of no, with health endangerment of yes.

CHAIRMAN ZIEMER: Thank you very much.

Sam, just to reiterate or emphasize, now as I understand this, this new -- this recommendation picks up the other two as well. Does it not? Everything now is covered by this, is that right? The two previous ones are subsets of this as I read the actual report.

DR. GLOVER: This would -- yes, that's correct.

CHAIRMAN ZIEMER: The other two existing ones now become, in essence, part of this SEC. Is that correct?

DR. GLOVER: Yes.

CHAIRMAN ZIEMER: Or this class?

DR. GLOVER: That is correct.

CHAIRMAN ZIEMER: Because it covers -- right. Okay.

Now let's open this up for questions. First, Dr. Melius?

MEMBER MELIUS: Yes, just to

clarify this because I'm a little confused by what you said. There is still -- I mean there is still an active petition through the period 1990 so this does not preclude further evaluation by the Board of that evaluation report -- further review of that evaluation report by the Board?

CHAIRMAN ZIEMER: Well, I don't know if you're asking me. I believe you're correct on that.

MEMBER MELIUS: No, I'm asking NIOSH. Essentially --

CHAIRMAN ZIEMER: This doesn't close off the --

MEMBER MELIUS: -- yes, this is sort of a customized new evaluation report that covers a select period here.

CHAIRMAN ZIEMER: And, again, in an effort to cover those cases that we already know about.

MEMBER MELIUS: Yes, yes.

MR. ELLIOTT: This proposed class

subsumes the previous two classes. It does not answer in finality the open petition.

MEMBER MELIUS: Right.

MR. ELLIOTT: We can still continue our evaluation. We can still continue retrieving data. As Sam mentioned, we still have data coming back in. There could be the possibility of an additional evaluation report beyond this.

MEMBER MELIUS: Yes, and there will be -- there is an ongoing review by the Work Group and SC&A, and there are outstanding issues that are related to the time period beyond 1972.

MR. ELLIOTT: That's correct.

MEMBER MELIUS: Yes.

MR. ELLIOTT: And I think part of the Work Group's chore now is working with us trying to figure out what issues have been removed by this recommendation.

CHAIRMAN ZIEMER: Right, some of the existing matrix findings that the Work

Group would have been looking at, yes.

MR. ELLIOTT: Yes.

CHAIRMAN ZIEMER: At least for certain time periods, yes.

MEMBER MELIUS: No, I just wanted to get that on the record, that's all.

CHAIRMAN ZIEMER: Further comments or questions?

MEMBER MELIUS: I'll just -- further comment -- we got this -- we didn't get this report until very recently. A little after the -- the data on it is a little bit misleading in terms of when we got it. And so I don't believe a lot of us have had time to review it.

I've had a chance to read the evaluation report. I asked Arjun, who we have been working with from SC&A, also to look it over. And, you know, I think -- I would say, you know, we are in agreement with the proposal. We think it addresses a number of the concerns we had that was still underway.

We've not been able to do much because of this data issue and because we've obviously known for some time that NIOSH was working on this to do that.

So I guess we would, you know, to the extent of our limited review, what we've had time, we would agree with this conclusion. And, you know, we will be identifying other areas that need to be looked in to beyond 1972. But we now have to sort of regroup because -- figure out what data is available and where we stand with this.

But I'd also like to compliment NIOSH on their efforts in doing this.

CHAIRMAN ZIEMER: Yes, and I agree with that, too. And on the part of the Hanford group.

But this particular report didn't get to us in time for the Work Group to specifically act as a group on it. But we've all had the opportunity to read through it. And it seems to make sense not only to pick up

the other two petitions but to basically extend this -- what now becomes the new class for Hanford since the findings seem to be fairly straightforward at this point.

We do need to allow opportunity for petitioners to comment if they wish to. Let me ask if any of the petitioners --

MEMBER GRIFFON: May I --

CHAIRMAN ZIEMER: Oh, a question first. Hang on. Yes, Mark?

MEMBER GRIFFON: Just one follow-up question. I see your slide on the why everyone slide. But can you elaborate? I mean that's the only thing in this that, I guess, troubles me is that it is all employees. And it doesn't so much trouble me as the question of equity with prior decisions, you know, that we have tried to separate out in prior SEC petitions, you know, certain production workers, whatever.

And can you expand on that? I mean it seems that you weren't able to in this

case. And that's fine. But I just want to understand it a little better.

CHAIRMAN ZIEMER: Yes, and I think it was covered in the evaluation report. But why don't you elaborate.

MR. ELLIOTT: Well, we tried to be very clear, and I think Sam's presentation of that particular slide was as clear as we could make it. As we vetted this class definition with DOL and with DOE and we went out and actually met face to face with the local DOE management at Richland, it became apparent to us that they couldn't identify people who actually went into these areas. This definition will include those individuals who worked in the Federal Building downtown in Richland, Washington, recognizing that their assignments, their tasks, would take them out into the 100, 200, 300 areas.

Also, there's migration between areas, you know, people can be assigned to the 1100 Area, which is primarily administrative

area, I think, or perhaps a non-exposed situation for most people, but they could leave that area and move into the 300, 200 area to do their work. And it's clear to us that there is no way feasible to identify over the course of time, through the many eras of work out there, where these people moved.

MEMBER GRIFFON: Thank you.

CHAIRMAN ZIEMER: I'd like to just ask a question. This is more of a curiosity thing, and it may be how DOL administers things. But if you had such an individual at the Federal Building and it was clear from either the CATI interview or the record that that individual went to the work site once a week, is the 250-day determination adjusted for that? Or is it 250 days regardless of where he was?

MR. ELLIOTT: I would have to refer and defer that question to Jeff.

CHAIRMAN ZIEMER: I think that's probably a Labor --

MR. ELLIOTT: It is a DOL question.

CHAIRMAN ZIEMER: Maybe Jeff wouldn't be prepared to answer it but --

MR. ELLIOTT: I can give you this much, sir.

CHAIRMAN ZIEMER: -- in sort of similar cases, how is that sort of thing handled? Is it a case-by-case or --

MR. ELLIOTT: Let me say this. We were told and we do understand, we do know this to be a fact, that those folks who worked in, like, the Federal Building that had assignments out in the 200, 300 areas, were given a badge, an external badge.

CHAIRMAN ZIEMER: Yes.

MR. ELLIOTT: So these infeasibility issues go to internal dose problems for us, bioassay problems. So by the badging aspect, that could be used to determine when a person entered the risk areas and how many days they might have spent there. But I don't know how you all --

MR. KOTSCH: I mean as always, those things are done on a case-by-case basis. And it works both ways. I mean if there is evidence that he only entered once a week, that is used in the -- you know, that is used in the assessment of the 250.

CHAIRMAN ZIEMER: Okay. As a general principle. Obviously, it's a case-by-case.

MEMBER MELIUS: So you wouldn't be a Hanford site employee -- I guess it is sort of -- the way the class definition is it was, you know, who worked at the Hanford site. So somebody in that federal -- so you would have to move from that federal office building into the site. So then it is a question of documentation? No?

MR. ELLIOTT: The federal office building is part of the site.

MEMBER MELIUS: Okay. So that's considered --

MR. ELLIOTT: Yes, it's Hanford --

the Hanford Works, Richland Facility.

MEMBER MELIUS: Okay.

MR. ELLIOTT: And our understanding is the Federal Building is considered part of that, the 1100 Area, which had some of the administrative offices and programs are part of that also. It is all inclusive.

MEMBER MELIUS: Okay. So I guess -- I go back to Mark's question, which is -- I mean, again, not for this particular site but in general, this seems -- it seems to me that on some of the other older sites, 83.14s and some 83.13s that were going to a much broader definition, much broader class, we're not qualifying the class or restricting the class in some way.

And I think it does raise sort of equity questions with how we've handled this before. And now is probably not the time to try to go through the different sites and so forth because I haven't done it. But it seems to me that we need to start thinking about

what are going to be the criteria and is what we've done in the past fair to those employees at those sites when we suddenly appear to be taking up a new policy in terms of how we're crafting class definitions.

MR. ELLIOTT: No, no, no, I'm going to disagree strongly. There's no new policy. Each one of these classes stand alone on their own merits with the information that is reviewed in the evaluation. And yes, in some instances, we are able to designate certain buildings where work was performed. In other situations such as Hanford, we cannot do that. And when we recognize we cannot do that, that's what we're saying.

So it is not a policy change. These SEC petition evaluations are exactly like claims. All claims are individual. They are dependent upon the circumstances around the claim. The same goes for these SEC petitions and the classes that we are evaluating. So I don't see -- I mean we could

talk at length about disparities that are presented in this program by the law. But in our actions and our processing of these, we are trying to be as consistent as we possibly can, yet recognizing that there are individual situations and circumstances that drive the recommendations that we bring forward.

I think LaVon has a comment.

MR. RUTHERFORD: I just wanted to add that we also -- I mean we also have taken the opportunity when we have some of the earlier classes that we have added and we've recognized ultimately when it came to the administration of that class that DOL's interpretation of that class may have been somewhat different than ours, and we have went back and we've done 83.14s to modify that class. If you look at the Y-12 early years, we modified that class. Los Alamos National Lab, Lawrence Livermore, again, those have been modified because we recognized implementation was not working the way we

thought it would work.

And so I think that opportunity is out there for any of the previous classes. If ultimately we get a claim in back from the Department of Labor that we look at and we identify that, well, we thought that claim would have fit into the class, then we need to take that under consideration and look at maybe we haven't defined the class appropriately.

But I think that process is there.

MEMBER MELIUS: Well, how many times has that worked? How many times have you gone back?

MR. RUTHERFORD: Y-12 early years, Lawrence Livermore National Lab twice at this time, at this time.

MEMBER MELIUS: Okay.

MR. RUTHERFORD: Again, if we end up in situations where we feel that a claim has not been appropriately administered, then we would look at going back again.

MEMBER MELIUS: And do you actively look for claims that haven't been appropriately --

MR. RUTHERFORD: Yes, we do. Actually we do.

MEMBER MELIUS: Okay.

MR. RUTHERFORD: During the process, when a dose reconstructor gets a dose reconstruction in, part of the process is looking at each claim and see how the decision was made, ultimately whether it is in or not in the SEC. And looking at how you would anticipate the exposures to that individual.

MEMBER MELIUS: I'd like to request a presentation on that process for the next meeting.

MR. RUTHERFORD: I will accept that one.

(Laughter.)

MEMBER MELIUS: Excellent.

CHAIRMAN ZIEMER: It almost sounds like a challenge there, doesn't it? Thank

you.

Let me again see if any of the petitioners are on the line and wish to speak. These are Hanford petitioners. Any of the Hanford petitioners wish to speak?

MS. HOYT: Yes. My name is Rosemary Hoyt. Can you hear me?

CHAIRMAN ZIEMER: I can hear you, Rosemary. And I'll, just for the record, point out that Rosemary was a petitioner on one of the earlier versions, I believe. Rosemary, is that not correct?

MS. HOYT: Yes.

CHAIRMAN ZIEMER: Yes, please give us your comments.

MS. HOYT: Well, I would also like to hear from the current petitioner, if possible, and would like to speak after that person, if that person is on the line.

CHAIRMAN ZIEMER: We had received a note that the person might possibly be on the line but did not wish to speak. But that

would be her call if she's on the line.

MS. HOYT: Okay. Well, then my first comment would be that I would dearly love to hear from that person and would like my contact information given to her. And I, again, ask her to please contact me.

The questions that I have are is americium included in this current SEC because it wasn't mentioned.

CHAIRMAN ZIEMER: The question is was americium included in the current ones? I believe the answer is no, but let me see.

Sam, can you answer that? At least it was not one of the named ones that you couldn't reconstruct, I guess, in the current petitions. Is that correct?

Hang on, Rosemary, we're --

Rosemary's question was -- I believe it was do the current classes cover americium? I don't think they specifically named it as --

DR. GLOVER: So the previous class

we'd already set forth for americium and thorium. We didn't necessarily have to restate them as being we can't do it or that we -- americium continues past that. But we do have bioassay data. It was unnecessary to continue to restate --

CHAIRMAN ZIEMER: Because you covered the other.

DR. GLOVER: -- those infeasibilities.

CHAIRMAN ZIEMER: Okay. So that's sort of a yes then.

MS. HOYT: Okay. I'm making notes.

Another comment is I know that matrix has been very large and there were a lot of unresolved issues. Has the matrix been updated at all lately since it's my understanding that the Working Board -- Hanford Working Group has not met in almost two years. So --

CHAIRMAN ZIEMER: Let me give a preliminary answer. And then perhaps Dr.

Melius, the Chair, can answer further.

But my understanding is that if this class is approved, that is if the recommendation of NIOSH is approved by the Board as well or if we make a similar recommendation, that would automatically take care of a number of the matrix issues. So we would need to update and revise the matrix.

But let me ask Dr. Melius to comment further.

MEMBER MELIUS: Yes, that is correct, Dr. Ziemer. And we have already got that in process. Sam Glover has been keeping us aware of their activities and with more information, providing additional information on some of their data collection and so forth. We need to get caught up with that a little bit, but I think that can be done relatively quickly.

And Arjun Makhijani and I have had discussions of this already. And we'll be proceeding as rapidly as we can to get it

updated and then to organize a Work Group meeting to go forward. We've already identified on a preliminary basis some issues that we think need to be looked at.

CHAIRMAN ZIEMER: Of course, once that's updated, we need to make sure that the petitioners get copies of that as well.

And, Rosemary, we'll certainly make sure that you are kept apprised of that.

MS. HOYT: Okay.

CHAIRMAN ZIEMER: Did you have additional comments or questions?

MS. HOYT: Just one. Again, at the very beginning, it seemed that NIOSH was gung ho and said no, they could reconstruct everything. And the more they got into it, the more they realized that data was missing. So I appreciate that NIOSH has taken the lead on this and is recognizing that it is very complex and that they were not able to do a lot of the dose reconstructing that they formerly thought they could do.

CHAIRMAN ZIEMER: Okay. Thank you. So noted.

Any other petitioners on the line that wish to speak?

(No response.)

CHAIRMAN ZIEMER: If not, then Mark Griffon has a remark here.

MEMBER GRIFFON: Just a follow up on Rosemary's first point there -- the americium question. I mean I'm not sure -- this certainly becomes important for the non-SEC cancers. I wasn't -- when I read through this, and, granted, I didn't have a lot of time with it -- but if you can do the americium, plutonium, other nuclides in later years, it becomes relevant for the non-listed cancers obviously.

So can you restate -- is that -- you said we should presume that they are still infeasible all through `72. Is that --

DR. GLOVER: We didn't restate that -- you know we didn't extend anything beyond

what was minimally necessary to state the class. Right now we have an infeasibility stated though `68. We won't do those for thorium during those current time frames.

If we have data then we will use that data. So the more we state that we can't do, the less dose I can apply for these non-SEC cancers.

CHAIRMAN ZIEMER: Thank you.

Any further comments on this one?

(No response.)

CHAIRMAN ZIEMER: It would be appropriate if the Board is ready to make a recommendation on this evaluation report. You have the possibility of two possible motions. Or you can defer action, depending on your -- I guess I would say your comfort level with the information provided, whether you believe that you are ready to take action. A motion to agree with the recommendation and to so notify the Secretary would be appropriate or a motion not to agree.

Dr. Melius, did you wish to make a motion?

MEMBER MELIUS: I move that we accept the recommendation of this evaluation report.

MEMBER SCHOFIELD: I second it.

CHAIRMAN ZIEMER: Okay. It has been moved and seconded that we accept this evaluation. If the motion is approved, this automatically will generate a more formal wording of the motion as it goes forward to the Secretary following our usual format, and that wording would come to the Board during our work session later in the week.

Let me ask if there is any discussion on the motion to approve this -- or recommend this action to the Secretary that a class be added?

(No response.)

CHAIRMAN ZIEMER: There appears to be no discussion. We will then vote by roll call.

MR. KATZ: Mr. Clawson?

MEMBER CLAWSON: Yes.

MR. KATZ: Mr. Gibson?

MEMBER GIBSON: Yes.

MR. KATZ: Mr. Griffon?

MEMBER GRIFFON: Yes.

MR. KATZ: Dr. Lockey?

MEMBER LOCKEY: Yes.

MR. KATZ: Dr. Melius?

MEMBER MELIUS: Yes.

MR. KATZ: Dr. Poston?

MEMBER POSTON: Yes.

MR. KATZ: Mr. Presley?

MEMBER PRESLEY: Yes.

MR. KATZ: Dr. Roessler?

MEMBER ROESSLER: Yes.

MR. KATZ: Mr. Schofield?

MEMBER SCHOFIELD: Yes.

MR. KATZ: Dr. Ziemer?

CHAIRMAN ZIEMER: Yes.

MR. KATZ: Unanimous.

CHAIRMAN ZIEMER: There are 12

yeses, no nos, no abstentions -- ten rather. That's right because we have two members who are conflicted on this one. So it's -- the vote of the voting members on this is unanimous, and the motion carries. And we will so recommend to the Secretary in this particular case.

We are a little behind schedule, but we do need to go ahead and take our break. It will be a 15-minute break. And just for the Brookhaven folks who might be on the line, we will reconvene here at four o'clock and discuss the Brookhaven SEC petition.

(Whereupon, the above-entitled matter went off the record at 3:45 p.m. and resumed at 4:01 p.m.)

CHAIRMAN ZIEMER: There is a petition from Brookhaven National Laboratory for an SEC class. The evaluation report that has been prepared by NIOSH will be presented today by Grady Calhoun of NIOSH staff. We will also have an opportunity to hear from the

petitioner, I believe by phone because, as far as I know, the petitioner is not here in person.

But first we will hear from Grady and then have a chance to hear from the petitioner and then have discussion.

Grady?

MR. CALHOUN: Okay. Thank you. Can everybody hear me okay?

CHAIRMAN ZIEMER: Yes.

MR. CALHOUN: All right. Here we go.

All right. We started out with the Brookhaven petition on May 9th, 2008. And the proposed class definition was all employees who worked in all areas of the lab from 1947 to present. We qualified the petition June 27, 2008, but we ran into some problems as far as obtaining data. So we had to notify the Board twice, once in October of 2008 and once in March 2009 that we were not going to meet our 180 days for the evaluation report.

Finally, October 1st, we finalized the evaluation report and issued it.

Okay, some of the bases for the petition were that there really wasn't adequate monitoring. The 1980s was specifically listed, but, again, we took a look at the entire time frame, and there were also some thoughts that areas were improperly monitored during that -- or improperly posted so that the people didn't know what they were getting into when they were working.

Okay, the information that we had available to us and that we made available to us throughout this evaluation, we had the site profile that had already been approved for BNL, we had some interviews performed both by the OCAS-ORAU staff and by SC&A. And we looked at all the interviews from current and former Brookhaven employees while we were there. I actually was there myself a few times on data capture and talked to several people at the site.

When we started this around May 2008, we only had about 300 documents in our site research database. We have made a lot of data capture efforts at the site. About ten were made, and we captured an additional 2,500 documents. That doesn't mean we just looked at 2,500 documents. We looked at thousands and thousands and thousands of documents to capture an additional 2,500 that were relevant for this evaluation.

Other sources of information that we had, we had annual reports that the site had completed and sent to the AEC, ERTA, and DOE. We had some of the bioassay data that we were looking at. This is the beginning of part of the problem in that the bioassay data was not maintained in a single location. As you can see, there's -- I won't read through all of these different possible repositories, but we found bits and pieces of bioassay in many, many, many locations, none of which were consolidated.

We also have a database, the Landauer database, and microfiche from 1985 to 1996 with film badges, that's external dose primarily, we have the tritium database from Analytical Services Laboratory that covered 1995 to 2003. There is a health physics records storage system that the site has got up and running and we have from 2001 and later, we have a nice consolidated spot for internal doses and external doses from 1996 and later are in that database. We also have had case files that we've received from Brookhaven when we've made requests for dosimetry data and X-ray data just during the normal course of our dose reconstruction process.

What we have currently I'll say in-house is we have 92 claims. And these numbers are as of September 10th. Actually, a surprisingly low number for the size site it was -- is -- we have 92 claims. And since we evaluated the entire time period, all of those

claims could have been affected by the results of this evaluation report. We've completed 28 of those claims. Of the 92 claims that we've got, 21 contain internal dosimetry, and 43 contain external dosimetry. Just a little note, of the 92 cases that we've sent data requests for, as of September 10th, we've only received 64 responses back from the lab.

The operations, some of the operations at the site -- I know there was a tour there this weekend or yesterday, I guess -- they did a lot there. A very wide, diverse site. Got into areas of medicine, biology, chemistry, physics, materials science, nuclear engineering, environmental research, very, very large, diverse group of activities at the site. Some of them involved radiation and radioactive material. Some of them didn't.

They have reactors at the site, research reactors, BGRR graphite reactor, a high flux beam reactor. They also had a medical facility with a reactor that they used

to produce radioisotopes. And they also had a radiation therapy facility that contained rather large sources for external dose studies. They also had a bunch of accelerators at the site, a bunch of accelerators. Some of these started in the early, early years. And some of them are still in place today. And they are operational.

We also have the Department of Applied Science there, a target processing lab. That's one of the places where they put a target in an accelerator, induce radioactivity, and then they can do separations in that lab. So that's a potential hot spot, a potential area for internal and external dose. They also had a waste management facility and, of course, throughout this -- all these operations, radioactive wastes were generated and the waste management facility took care of the waste at the facility.

As far as external dose data that we've had and that we've seen throughout this evaluation, the external data has been centralized pretty much throughout the BNL's history. We have been able to find records of what was done, how many people were monitored, what kind of doses that we've seen throughout the history. Like I said, in 1996, we have -- that record system was launched. Newly generated records were stored electronically, and they are in the process now of going back and getting some of the more historical records uploaded into that database.

As far as what kind of external dosimetry did they use, from startup through `84, they used film and NTA. They used NTA early, `85 through `95, multi-element film, again, but they had the CR-39, which is helpful for the neutrons, and the Lexan as well. In `96 to present, they started with TLDs.

This is just to give you a little

bit of an idea -- I think my pointer is easier for me to press the button on here -- this is the number of individuals. This isn't dose. Just to give you an idea of throughout time with the site, these were taken from annual reports that they submitted every year. We couldn't find the one for 1971. And these were all found during our data capture efforts. And basically it just shows that the number of people monitored was very high. And then it goes down.

The green bars are the number of people less than one rem for the year and the yellow is one to four rem basically. And over four is the red bars. Okay, just a little bit of an idea of the number of people that were monitored at the site externally.

Okay, here's just another graph showing kind of the same thing but instead of the number of individuals, it's the dose. There is a maximum range of dose that was here. These have the arrow bars on them

because in the reports they were giving, for example, right here it would be four to five rem is how the numbers were reported through the years. So these are the maximum exposures that were reported throughout the years.

This green diamond, these are the average. And you'll see the Y axis over here is different. So that's a much smaller dose. And you can see that the doses -- the average doses are very, very small -- external doses.

Okay, now we go on to internal doses. And what kind of exposure potential did we have here? We had uranium, in our early years we had ton quantities of uranium of various enrichments, they did some fuel rod fabrication with that and they did some research, target fabrication for the accelerators.

We had fission and activation products because we had the reactors at the site obviously. And we also had accelerator-produced activation products. And we had

these products because they were key in doing research for radiopharmaceutical production at the site. We also had a bunch of tritium there. And that resulted from one of the heavy water reactors there. They also did a lot of research with tritium -- biological and medical research with tritium at the site.

They had thorium at the site. Not a lot of it but we had thorium at the site for nuclear engineering research. Had some plutonium for research, americium, polonium, multiple other radionuclides in smaller quantities. The reason I point these out is just to show you the diversity of the internal sources of exposure that were here at the site.

BNL internal dose data, what kind of data do we have? We go through this evaluation report looking to see what kind of information do we have available to us to do dose reconstruction. We've got urinalysis results. We know the urinalysis started in

1949. Throughout time, we've seen urinalysis for plutonium, gross beta, mixed fission products, strontium, uranium, polonium, gamma, tritium. Now a bunch of other special analysis is required. We also have whole body counting. It started in 1960 at the site.

We found several incident reports, many incident reports actually. And the incidents seemed to be well documented. There is a description of what happened, who was involved, what were the potential contaminants, what did we do to follow up, did we monitor the people, what did we monitor them for, and what not.

Again, just as a little illustration of the type of different radionuclides we have here, some of the incident reports that we have list bunches of different radionuclides that I kind of turned exotic here that were in use at the site. And if something was involved to the point where we had to actually -- they had to do some type

of bioassay to determine what kind of intakes/uptakes were received.

The problem that we found is that the internal dosimetry records had been maintained in multiple locations. They still are. There's personnel work files, there's medical files, there's project files. And these dosimetry records are scattered all over. They are not in one particular place, at least up until a certain time. We found them in off-site facilities. We found them in on-site facilities. Okay? And most bioassay data currently exists in hard copy form only.

One of the things that we did as a test was we knew from looking at the site, doing all the data capture, looking at the program manuals, looking at the reports and everything, they had a good program there. They were conscientious. They knew what to monitor for. They monitored for it. And one of the things that we found was we'd find lists. And let's just say, you know, there

are several different areas on the site. And let's just use a certain accelerator, just for an example.

We'd find a list from that project report that said here is five people or seven people, whatever, that need to be monitored. Here is what they need to be monitored for because they could be exposed to this during the course of this operation. So they need to get a urinalysis. They need to get a whole body count, whatever.

So to test, what we did is we took a sample of those individuals throughout a time period of operation and said okay, if Joe Smith was told to get a urinalysis or a whole body count or whatever, some kind of bioassay, did he get it because it is not good enough for us to know that he was told to get monitored. We need to know that he was so we can do dose reconstruction. So what we did is we went through all of the information that we captured. We went through everything that BNL

had for us and tried to determine were these individuals monitored throughout the time when they were told to be monitored or when their project manager, whatever, made the determination to monitor them.

As I said earlier, Brookhaven was a whole bunch of different projects. And it wasn't like everybody was going to be monitored for every radionuclide or everybody was even going to get external monitoring. It was done on a project-specific and even a person-specific basis. So we thought the best approach to see how good the monitoring was or if the monitoring actually took place was to try to find the records when the individuals were told to get monitored because you can make the assumption, and I think it is a reasonable jump, that these were the highest potentially exposed people.

So we had 69 individuals that we found on some of these records. And we plotted them throughout decades, and we found

that we have not been able to consistently find the dosimetry results from people who were told to get monitored until 1980. And here is our graph of this. We had representatives in each of these decades, `40s, none, `50s, just a couple, `60s, none, `70s, we're up to about 75 percent of the individuals that were told to get monitored, we could find the monitoring results, `80s, we're up to about 92 percent, and by the `90s, we had 100 percent.

Now in the 1980s, this spot right here, that's just a -- that's one individual that we couldn't find the monitoring results for. We ultimately did find the results for that person, but it was in excess of 12 months after the whole body count was requested so we didn't count it.

So what happened in 1980? Well, besides the fact that it appears we're much more able to get reliable data from these people, we have a memo that we found that

actually was in 1979, it was October 1979. And it basically said, you know, we've got to consolidate the whole body count program and the bioassay program. Because of a lack of a centralization of responsibility, we're not following up on these counts. And we're not reporting the data. And we're just not doing a good job. So it seems that this probably contributed to the fact that we, you know, beginning in the `80s, we're much more likely to find the data from the individuals who were asked or told to be monitored.

As far as how we do the dose reconstructions, external dose reconstruction I mentioned. Here is the kind of monitoring that we have, the film badges used over time. That's basically the same thing. TLD started in `96. Data availability for external, we have individual monitoring records available throughout the operational history of the site. For unmonitored workers, we've got something established in our Technical Basis

Document on how to take care of that for external dose. And we believe that the external dose can be reconstructed throughout the history of the site based on the information that we have seen.

As far as internal dose reconstruction goes, we know that urinalysis began in 1949. We know that whole body counts began in 1960. But because of the poor records management practices, we cannot reliably retrieve records prior to 1980. If I've got something that gives a group of individuals an order to go get monitored and I can't find their monitoring records, I can't do the dose reconstruction. I just don't know how -- what kind of assumptions I would have to make, especially since those people are identified as the more highly exposed individuals.

So due to our inability to consistently obtain internal dosimetry data, we cannot -- we don't believe that internal

doses can be bounded with sufficient accuracy prior to 1980.

We did the evaluation report. And we issued the evaluation report. It became final on October 1st, 2009. We evaluated whether or not it was feasible to estimate dose with sufficient accuracy and if there is a reasonable likelihood that health was endangered. We found that the available monitoring records, process descriptions, and source term data are adequate to complete dose reconstructions with sufficient accuracy after December 31st, 1979.

NIOSH believes that there is a reasonable likelihood that the radiation doses received at Brookhaven may have endangered the health of the members of the class. NIOSH recommends additions to the class consisting of all employees who worked in any area of Brookhaven National Lab January 1st, 1947 through December 31st, 1979.

Oh, what happened there? That was

the last slide. It was. I promise. And the last slide basically just had a little table there that basically said that internal dose cannot be reconstructed prior to 1980. All the way to the end there. It's the very last one. There we go. Okay. Our recommendation is internal doses, `47 to `79 cannot be done. We believe that we can do everything post-1979. External doses included, we can do before 1979 as well. That's it.

CHAIRMAN ZIEMER: Okay. Thank you, Grady.

Let's see if any of the Board members have questions for you before you sit down.

Dr. Melius?

MEMBER MELIUS: Yes. Grady, could you explain the sample of `69. How was that selected?

MR. CALHOUN: As I said, we found individual -- I'll call them memos, and they were usually from a project manager that said

these individuals need to be monitored for X, Y, and Z because they have the potential to be exposed to it.

And we took several of these memos and tried to -- and, you know, there may be five, ten people on that list -- and so we took as many of those memos as we had specifying monitoring. And we separated those into decades as far as when the individuals worked.

We made requests, because these are for people who are claimants and non-claimants, we made requests to Brookhaven for that data that they had. We got the data from them.

In addition, we looked through the data that we had captured. And in some cases, we have data that are not in the individual's files. And we matched that up to the kind of analysis that was requested by that project manager for that individual.

MEMBER MELIUS: Okay. So is there

a place -- I guess I'm having trouble in -- actually it's slide 22 here -- I don't know if that -- where you have a parallel little bar chart by percentages by year of when you could -- percent of requested bioassay results retrieved.

MR. CALHOUN: Right.

MEMBER MELIUS: I guess I'm having trouble understanding what the denominators are for those different --

MR. CALHOUN: They are different. They are going to vary a little bit by year. I believe in 1980, we had 12.

MEMBER MELIUS: Okay.

MR. CALHOUN: And we got 11 of the 12 within 12 months. But the 12th one wasn't received until after 12 months. We could have counted it, but we didn't. That could have brought that up to 100 percent. But that was done I think 13, 14 months later.

MEMBER MELIUS: Okay. Thanks.

CHAIRMAN ZIEMER: Dr. Roessler?

MEMBER ROESSLER: My question is on slide 26.

MR. CALHOUN: If that's 22 -- 3, 4, 5, 6, is that it?

MEMBER ROESSLER: Okay.

MR. CALHOUN: Is that it?

MEMBER ROESSLER: I think so.

MR. CALHOUN: Okay.

MEMBER ROESSLER: The general question is that you've determined you can't do internal doses, and yet I'm wondering just how complete your search of records has been. It seems you found a lot of them. It seems you found that they were not centralized. And you did do the sample of the `69 people. And from that, you've decided that you can't find some records for some of those people.

But I'm just -- I guess we talk about a comfort level. My comfort level is -- I need reassurance that you really feel you have searched the records enough that you just cannot do internal dosimetry.

MR. CALHOUN: Yes. What I can tell you is we did at least ten data captures. We had people involved with us while we were there. I was actually there at the site. We had rad engineers who used to be technicians. And the reason that I say that that is important is because they were involved with the actual processes.

And I'm not making a joke here. They would say, you know, let's check under Bob's desk, okay, and we'd go to Bob's desk and we could find something. We did that for days. And I don't believe that we're going to be able to find anything else.

They had set up a room for us there that had just hundreds of boxes of records that we went through. And I believe that Brookhaven has actually undertaken some efforts to try to get their records into order. And they have been helpful at times in finding documents in different locations.

We went through their records --

management folks who would point us to different places. And we would try to find the documents. I don't know where else we would look. We've looked off-site, on-site. It's been years that this effort has been going on.

CHAIRMAN ZIEMER: Okay.

MR. CALHOUN: I don't think that the Brookhaven folks will think that we are going to find anything that we haven't found either.

CHAIRMAN ZIEMER: Okay, Dr. Melius?

MEMBER MELIUS: I have a follow-up question back to slide 22. But -- okay, so for the 1970s, you found it looks like 75 percent of the bioassay results.

MR. CALHOUN: Yes.

MEMBER MELIUS: What is prohibiting you from doing some sort of coworker model or something like that? You've got -- again, I don't know what this stands for --

MR. CALHOUN: Well, that's a good

question. And my answer to that is going to be when I have a memo that tells me that these guys need to be monitored because they are the highest exposed, or at least that is how I'm going to interpret it, if I don't have those records, I don't believe that my coworker data is feasible. I'm missing some people.

If I don't have the data from people that were supposed to be monitored because they have a higher potential, I can't base, you know, my coworker study is going to be skewed low potentially.

MEMBER MELIUS: Yes, but I guess has that stopped you before I guess --

MR. CALHOUN: Sure, sure.

MEMBER MELIUS: But at 75 percent?

MR. CALHOUN: Well, I can't give you a number.

MEMBER MELIUS: No, no, I'm just trying --

MR. CALHOUN: This is a completely different world, Brookhaven. And the way that

we've looked at this data and the lack of organization there caused us to try to take a little different tact with this.

CHAIRMAN ZIEMER: Well, and this is not necessarily 75 of all the -- this is 75 percent of the what's in the memos --

MR. CALHOUN: Of the sample.

CHAIRMAN ZIEMER: -- that you found.

MEMBER MELIUS: No, no, I know, I know. I'm trying -- but that's the data we have.

CHAIRMAN ZIEMER: Right. Right.

Yes, Larry, you have a comment? Okay, I took the words out of your mouth which is actually very unsanitary.

(Laughter.)

CHAIRMAN ZIEMER: Wanda? Wanda Munn?

MEMBER MUNN: I have only one question, Grady. And only one problem really.

Whenever an SEC says all employees,

that starts raising red flags for me.

MR. CALHOUN: Yes.

MEMBER MUNN: I have never been on a site where all employees were exposed to anything, large, small, or mediocre. And I know that it is difficult to sort out who might not be in that all category, but it is bothersome to see all employees when there is prima facie evidence that all employees were not exposed.

MR. CALHOUN: I agree with you. And -- but, again, I agree with you with the idea that we can't separate them out. The type of environment that is there, it is entirely possible for people to walk into -- whether they be janitor types or management types, it is entirely possible for those individuals to have gone into these sites.

As sketchy as the records are for dosimetry prior to 1980, I don't have a whole lot of confidence that I could determine where they worked. So I don't know any way to

separate them out.

Now I thought, well, what about the people who were monitored externally only. Maybe that could be our basis. But given the type of work that they did at that site, it could be a good health physics decision to monitor somebody internally and they didn't need to be monitored externally, you know, depending on what kind of operation they were doing.

So I wasn't comfortable with that either. So it does, it all comes back to prove who wasn't. And, you know, if I get a case in and, you know, they make an assertion that they worked here, there, and everywhere, and I got to rely on DOL to say no, they didn't, it's tough in this site.

I don't think that the controls were there to keep people in or out of those areas. So I'm with you. But it's a tough decision.

MEMBER MELIUS: Can I ask that

question in a slightly different way because I was going to ask that also? But where on the report do you make that case? I didn't see it in your evaluation report. So where is your --

MR. CALHOUN: I don't know if it's in there. It may not be.

MEMBER MELIUS: Okay, because to me it's like my crucial question here.

MR. CALHOUN: Yes.

MEMBER MELIUS: Here we have a situation where we're saying reconstruction is feasible for almost all exposures except for internal doses, which is a big category albeit. And we're saying that everybody would have had an internal exposure.

So to me there's two parts of the case. One you make with your, you know, sampling going back and so forth, slide 22 and so forth. I don't see the case for all employees being included, the documentation for that. I guess that bothers me a little

bit, too.

CHAIRMAN ZIEMER: Larry?

MR. ELLIOTT: I'm trying to recall from the evaluation report, and I don't believe it is explicitly stated to address your concern. I would say it is implicitly stated because of what we have to say about the various activities that this site found itself performing over the course of time.

It is essentially a laboratory situation, as you might imagine. And things changed quite drastically over the course of time. And so with the inability to retrieve records for those who were actually exposed, the inability to know who went into those areas where exposure could occur, we're in the same kind of a situation here at Brookhaven as we talked about earlier with Hanford where we can't track people's work and their migration through the facility over the course of time.

So it doesn't explicitly say that. I guess we could go back there. But

implicitly I think what the report is arguing for is that the variety of activities and work performed at this site doesn't lend itself to saying here is a certain campaign.

Do we know who worked on that campaign? Like we know at Mound who worked with the certain tritium compounds. We can't do that here at this site.

MEMBER MELIUS: Yes, and I guess -- again, and I don't know if this would be -- should be required or is necessary to do, but if we have, you know, trouble sort of quantifying some of this -- so if there was a sample of 100 people or 200, you know, we'd have some sense of how people moved around and so forth, which they may very well have. I doubt it, but I just don't see that in -- I don't see the documentation for that. But it is hard to get at.

CHAIRMAN ZIEMER: John Poston?

MEMBER POSTON: I have a clarification and then a question. On your

slide there, if I understood you correctly, the 1980 bar represents 11 people out of 12?

MR. CALHOUN: Yes. That is correct.

MEMBER POSTON: So would one imply from that that the number of folks that potentially are exposed to internal uptakes would be small?

MR. CALHOUN: I think that that just is the number of memos that we captured that we could get that sample from. I do think that generally speaking, that especially in the later years, the internal, the people potentially exposed to internal radioisotopes was small. However, there was a bunch of different ones. And they were in a lot of different areas.

MEMBER POSTON: Okay. Well, that leads me to your last slide then that same internal dose from `47 to `79 but then you say that you can assess the internal dose for periods after that, after `79.

So the question I have is how is this going to be divided because if I remember your class statement, it says until present. And I'm trying to understand --

MR. CALHOUN: We can do it -- we believe that we can do dose reconstructions from January 1st, 1980 to present.

MEMBER POSTON: Okay. So I'm trying to understand how that's going to be handled.

MR. CALHOUN: We have the internal monitoring records. Is that what you're asking?

MEMBER POSTON: No. Are you going to divide the folks from `47 to `79, and you're not going to do dose reconstruction for them, but you are going to do dose reconstruction for those from `79 on?

MR. CALHOUN: Prior to January 1st, 1980, we'll use any -- we'll be able to do external dose reconstruction. If they have internal monitoring records in their files, we

will use those for people who do not fit into the class -- non-presumptive cancers.

MEMBER POSTON: So maybe this is the wrong question, but do we need two classes?

MR. CALHOUN: No.

CHAIRMAN ZIEMER: Well, you're only asking for the class through `79.

MR. CALHOUN: Correct.

MEMBER POSTON: No, it says present. Through present. I'm pretty sure.

CHAIRMAN ZIEMER: No, that's the original petitioner's request.

MEMBER POSTON: Okay.

MR. CALHOUN: The class that would be added would go up to December 31st, 1979. That's it. Okay?

CHAIRMAN ZIEMER: All right. Let me follow up though on -- and this sort of relates to your question, Jim -- is there -- can one make an argument -- well, let me ask it a different way.

How much difference in what the activities were after `79 versus the early activities? Is there any way to do a coworker model based on the later data with the argument that the external -- or the internal dose potential could not have been that much greater or might it indeed have been less? Or you get the idea.

MR. CALHOUN: Are you talking about doing a coworker model for later data to apply to earlier times?

CHAIRMAN ZIEMER: Yes, that's what I'm asking you.

MR. CALHOUN: No, I don't think so because if you look at the activities, especially involving, you know, thorium and plutonium, they've gone down significantly since back in the day. So I don't think -

CHAIRMAN ZIEMER: Yes, I guess I read that but had forgotten.

MR. CALHOUN: I don't think that that's --

CHAIRMAN ZIEMER: Yes.

MR. CALHOUN: -- a good idea.

CHAIRMAN ZIEMER: So you can't really make the case that --

MR. CALHOUN: I don't believe so.

CHAIRMAN ZIEMER: Yes, thank you.

Other -- Gen, did you have a comment?

MEMBER MELIUS: Can I just point out something for those of you that have been confused by that slide 22, if you go to the evaluation report on page 54 and 55, there is some more description of that information.

CHAIRMAN ZIEMER: Dr. Lockey?

MEMBER LOCKEY: Just -- after 1980, does everybody have internal monitoring dosimetry?

MR. CALHOUN: Not everybody. Like I said, it was a case-by-case, project-by-project basis.

MEMBER LOCKEY: After 1980?

MR. CALHOUN: Yes. We have found

that the individuals who were requested to have monitoring, we can get the data. It wasn't everybody at the site were monitored. There were people who were at risk for internal exposure that were monitored.

CHAIRMAN ZIEMER: Did that answer the question, Jim? Yes.

Mark Griffon?

MEMBER GRIFFON: Just to follow up on that. After 1980, are the records all hard copy records still?

MR. CALHOUN: It's a mix, but the majority of the internal monitoring records are hard copy, yes. The tritium records are in a database.

MEMBER GRIFFON: And this -- I wanted a clarification on that. You referenced this memo, Hull 1979, I looked in the full report, your evaluation report, and the title of that is Whole-Body Counting Program Review and Recommendations.

In your presentation, the slide

said Whole Body Count. It was consolidated kind of. But in your presentation, you said whole body count and bioassay program were consolidated. Was the bioassay program consolidated at that point?

MR. CALHOUN: It was primarily the whole body count.

MEMBER GRIFFON: Okay.

MR. CALHOUN: Yes.

MEMBER GRIFFON: So this bioassay data is still presumably around the site.

MR. CALHOUN: Yes, it's -- however, when we're looking at some of that data, we do find urinalysis when they asked for urinalysis data as well.

MEMBER GRIFFON: But that data is not necessarily as centralized as far as -

MR. CALHOUN: None of it is centralized. It's just a matter of the ability to find it now. We have to look in two or three different repositories still after 1980. But we're able to find it.

Before that, we're not.

MEMBER GRIFFON: Okay.

CHAIRMAN ZIEMER: Okay. Further questions or comments?

(No response.)

CHAIRMAN ZIEMER: Let me give the petitioners an opportunity to comment. Is the petitioner on the line? And if so, does the petitioner wish to comment?

MS. ERIKSON: No.

CHAIRMAN ZIEMER: I guess the no means the petitioner -- let me ask, is this the petitioner?

MS. ERIKSON: Yes.

CHAIRMAN ZIEMER: But you do not wish to comment?

MS. ERIKSON: No, I'm satisfied with what I'm hearing so far.

CHAIRMAN ZIEMER: Thank you very much. We don't need to identify, I don't believe, unless she wants to.

Okay, further comments, Board

members?

(No response.)

CHAIRMAN ZIEMER: Then you have a couple of options before you. One is if you are satisfied that you are ready to respond to this particular recommendation, you can do that. If you wish to defer and feel that you need more information, you can do that as well. Or we can entertain a motion to either effect.

If you are ready to make a motion to recommend this class, we can do that.

Dr. Melius?

MEMBER MELIUS: Yes, forgive me but my -- I'm not familiar. Have we had any work done by SC&A on Brookhaven?

CHAIRMAN ZIEMER: SC&A has done the site review. We have a report from them. And I'm trying to remember if you identified some SEC issues also. I know we have a site review.

MR. FITZGERALD: Yes, this is Joe

Fitzgerald. Yes, we completed the site profile review this summer. And I think the Board received that probably a week or two ago after DOE clearance.

CHAIRMAN ZIEMER: Right.

MR. FITZGERALD: Being a site profile review, we didn't, you know, highlight SEC issues. But certainly a lot of our conclusions paralleled those in the ER, and we did present some new issues that we'll have to consider in light of this evaluation report now.

CHAIRMAN ZIEMER: Certainly the issue of the problem of internal dosimetry records in the early years was, indeed, one of the issues -- it was one of the findings in the site review that was SC&A's report.

MR. FITZGERALD: Right. It was pretty apparent. You know we talked to a lot of the health physicists. It was pretty apparent that there were a number of severe problems in the record keeping. You've heard

some of the same things that NIOSH heard here.

We had some questions certainly in the 1980 time frame. I don't think in our site profile review we arrived at a, you know, boundary condition in 1980 such as was presented in the ER.

So it's certainly -- it was a site profile review, but based on what we saw, I think there are some questions in the early `80s and what have you that still present themselves.

CHAIRMAN ZIEMER: And let me point out that -- two things, one is if the Board wishes to defer this action, we definitely have to have a Work Group address the SEC issues right away.

Even if we recommend approval of the SEC, in the Chair's opinion, we will need to establish a Work Group for this site in the very near future to deal with both the site profile issues and the possibility of other issues that could be SEC related in the later

years. I mean, the petitioner has asked for a longer time period, but in any event, we are going to need to establish a Work Group on this site.

MEMBER MELIUS: Can I ask Joe a follow-up question --

CHAIRMAN ZIEMER: You bet.

MEMBER MELIUS: -- which is based on SC&A's review, can you -- do you want to render an opinion on the class definition to this issue of how widespread internal exposures might have been in terms of covering everybody at the facility or not being able to identify who was and who wasn't?

MR. FITZGERALD: Well, from the site profile review, you know, we certainly identified sources of internal exposure that were focused on certain operations.

But being a multipurpose laboratory, there were sources, plentiful sources across the site. So, you know, again, I think we left it at that given the fact that

this was the review that we did.

MEMBER MELIUS: Okay. No, that's helpful. I just --

CHAIRMAN ZIEMER: Okay.

MR. FITZGERALD: This is not different from any other multipurpose laboratory we've looked at. I mean you do have a spectrum of sources that have internal dose implications. So that's certainly not different.

MEMBER MELIUS: Okay.

CHAIRMAN ZIEMER: Okay. Does anyone wish to make a motion as far as this particular recommendation is concerned?

MEMBER MUNN: Yes. I do.

CHAIRMAN ZIEMER: Wanda Munn?

MEMBER MUNN: Although I retain my reservations with respect to covering all employees, I can understand how it is impossible to sort people out in this. You can't prove any negatives.

So I am prepared to move that we

accept the NIOSH recommendation that an SEC be granted to all employees of DOE, its predecessor agencies, its contractors and subcontractors who worked at Brookhaven National Laboratory from January 1st, 1947 to December 31, 1979.

MEMBER PRESLEY: Second.

CHAIRMAN ZIEMER: Okay. This is a motion to add a class to the SEC. And it has been seconded. Is there discussion on the motion?

(No response.)

CHAIRMAN ZIEMER: There appears to be no discussion. Are you ready then to vote? We will vote by roll call.

MR. KATZ: Ms. Beach?

MEMBER BEACH: Yes.

MR. KATZ: Mr. Gibson?

MEMBER GIBSON: Yes.

MR. KATZ: Dr. Lockey?

MEMBER LOCKEY: Yes.

MR. KATZ: Ms. Munn?

MEMBER MUNN: Yes.

MR. KATZ: Mr. Presley?

MEMBER PRESLEY: Yes.

MR. KATZ: Mr. Schofield?

MEMBER SCHOFIELD: Yes.

MR. KATZ: Dr. Ziemer?

CHAIRMAN ZIEMER: Yes.

MR. KATZ: Dr. Roessler?

MEMBER ROESSLER: Yes.

MR. KATZ: Dr. Poston?

MEMBER POSTON: Yes.

MR. KATZ: Dr. Melius?

MEMBER MELIUS: Yes.

MR. KATZ: Mr. Griffon?

MEMBER GRIFFON: Yes.

MR. KATZ: Mr. Clawson?

MEMBER CLAWSON: Yes.

MR. KATZ: It's unanimous.

CHAIRMAN ZIEMER: Thank you. The ayes have it. And the motion carries.

And we will prepare the exact wording, which is very close to the actual

motion this time, for the Board's review for Thursday. But we will be recommending then to the Secretary the addition of this class to the Special Exposure Cohort.

CHAIRMAN ZIEMER: We are actually into our public comment period already. And I'm going to officially open the public comment period.

While Mr. Katz gives us the rules of engagement for public comment, I'm going to check with our administrative assistant to see who has signed up for public comment. And there may be folks on the phone as well who wish to comment.

MR. KATZ: Thanks, Dr. Ziemer.

This is just with respect to these meetings, these are fully transcribed so there is a verbatim transcript made. And that's posted on the NIOSH website for everyone to see and have.

So if you speak on the record and give your name, that name will be retained.

Any personal information you give about yourself will be retained in the record for the public.

If you speak, however, about a third party, another individual, that person's privacy will be protected. So that person's name and any other identifying information about the third party would typically be redacted.

So those are the basic rules. There is a full explanation of the Redaction Policy in the back of the room here. And for those of you who aren't present in the room, on the NIOSH website, along with the petition, is this Redaction Policy.

And I think that will take care of the basic issues there.

CHAIRMAN ZIEMER: Okay. I have been informed that there has been no one here in the assembly that has asked to make public comment.

We do perhaps have individuals on

the phone who wish to make public comment. And let me ask now if there are any individuals on the phone lines who wish to address the assembly? If so, just say yes and identify yourself.

(No response.)

CHAIRMAN ZIEMER: I hear none. Let me, again -- I also want to ask Jason, do we have any Congressional input that you are aware of that we need to bring to the group at this time?

MR. BROEHM: I'm not aware of any. There was one letter I was expecting, but it is not going to come.

CHAIRMAN ZIEMER: Okay. Thank you.

I will, although no one has signed up, provide the opportunity for anyone here assembled that wishes to address the group to please do so. Any members of the public who wish to make public comment?

(No response.)

CHAIRMAN ZIEMER: There appear to

be none. If that is the case, our public comment period has then ended.

And let me make sure, Mr. Katz, it is okay to have that short of a public comment period, I guess, if there are no identifiable comments.

MR. KATZ: Emily, do you have any concerns about this? It is posted to be comment period from 4:30 to 6:00. Do we need to sort of leave the lines open and sort of recess waiting for someone to come on line?

CHAIRMAN ZIEMER: Okay. What we're going to do -- there is always the possibility, and we've had this happen before that people, particularly phoning in, have regarded this as the period at which they can come in any time and make public comments. So we are going to leave the lines open. A couple of us will be here to monitor that.

The rest of you, if you wish to stay here until 6:00, you are welcome to. But if you feel that you need to leave, please

feel free to do that.

We're going to recess the official meeting here as far as the participants in the audience are concerned. We will have Board members here on hand in case we do get public comment. And if public comments do come in, they will be on the record so everyone will have an opportunity to see them.

So thank you very much. We are going to also then reconvene tomorrow morning at nine o'clock. So we stand in recess.

(Whereupon, the above-entitled meeting was concluded at 4:54 p.m.)

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