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

convenes the

THIRTIETH MEETING

# ADVISORY BOARD ON

# RADIATION AND WORKER HEALTH

## DAY THREE

The verbatim transcript of the Meeting of the Advisory Board on Radiation and Worker Health held at the Crowne Plaza Five Seasons Hotel, Cedar Rapids, Iowa, on April 27, 2005.

# C O N T E N T S

April 27, 2005

# TRANSCRIPT LEGEND

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

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

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## AGENDA SPEAKERS

(in order of appearance)

MR. LARRY ELLIOTT, NIOSH

## STAFF/VENDORS

CORI HOMER, Committee Management Specialist, NIOSH
STEVEN RAY GREEN, Certified Merit Court Reporter

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

(8:15 a.m.)

**WELCOME AND OPENING COMMENTS**

**DR. ZIEMER:** I'm going to call the assembly to order. This is our third day. I think we all feel like we're sort of on the home stretch, as it were. We -- we are going to continue with our discussions on Mallinckrodt as soon as we clean up the coffee here at the front.

(Pause)

A couple of reminders -- again, as I always do -- to remind you to register your attendance in the registration book at the entryway. Again I'll remind everyone there are copies of the agenda and related materials on the table in the back.

Let me give Lew Wade the mike a moment to see -- Lew, do you have any additional comments this morning?

**DR. WADE:** Well, there was just one comment made by a Board member that a petitioner or two asked last night if we could just very briefly review what happens to a petition once it's been approved by the Board. And I thought I would just walk through that in the broadest possible terms and I would ask Liz to correct

the mistakes that I made, but as you know, when the Board takes an action there are requirements as to the materials it needs to submit to the Secretary. And by your procedures yesterday you've tasked your Chairman with submitting your recommendation within 21 days.

Once that submission is made by the Board to the Secretary, it really goes to the NIOSH director, who prepares a proposed decision for the Secretary. And again I remind you that the NIOSH director, in preparation of that proposed decision, will consider the evaluations of NIOSH, the report and recommendations of the Board, the information presented or submitted to the Board and the deliberations of the Board. That package makes its way to the Secretary and the Secretary makes the final decision.

A clock starts -- a 30-day clock starts on the day the Secretary receives your recommendation. He has to send a decision to Congress within 30 days. So that clock starts and that will cause a great deal of action to take place within the Executive Branch to prepare the Secretary to

see that he makes his decision package available to Congress within 30 days. Liz, anything else that needs to be --

**DR. ZIEMER:** Then what happens?

**DR. WADE:** And then Congress acts upon that package as it -- as it sees fit.

**DR. ZIEMER:** I believe Congress also is mandated to act within -- is it 30 days?

**DR. WADE:** Thirty days, yes.

**DR. ZIEMER:** Thirty days.

**DR. WADE:** And if they don't act, then the proposed decision becomes effective.

**MS. MUNN:** Thirty calendar days?

**DR. WADE:** Thirty calendar days? I assume.

**MS. MUNN:** If they're not in session, that could be an issue.

**DR. ZIEMER:** One other item I would add parenthetically, Board members, you are aware and we have the letter which we approved. Please understand that I will have to append to the letter an additional paragraph describing a number of attachments which are required, and you'll understand -- I assume you're comfortable with that. There will be a letter describing that we will attach the minutes of

our meeting, which include the testimony of the petitioners, the -- the documents that are delineated in the rule itself, so there will be that additional paragraph.

**MALLINCKRODT SPECIAL EXPOSURE COHORT PETITION**

**DR. ZIEMER:** Now we're ready to proceed with our deliberations concerning the Mallinckrodt Special Exposure Cohort petition. We begin this morning with NIOSH presentation, and Larry Elliott is going to present that.

And Larry, let me just also preface your remarks by reminding the assembly of the action that this Board took in -- at the St. Louis meeting, and I'm reading from the minutes relative to that petition -- (Reading) The Board reserves judgment with respect to Mallinckrodt workers employed during the 1949 to 1957 time period until review of newly-located raw data is complete. This material may provide additional pertinent information on monitoring programs and worker exposure for that potential cohort.

And there was discussion on that motion and at the end of that discussion there is an indication -- I don't -- I'm looking for it

here now, but -- oh, here it is. A second motion made, seconded and approved -- (Reading) It is the intent of the Board to make a final determination on this potential cohort at the next full Advisory Board meeting.

So that is the backdrop for where we are today.

**PRESENTATION BY NIOSH**

**MR. ELLIOTT:** Thank you, Dr. Ziemer. Good morning, ladies and gentlemen of the Board and the audience. I'm here again to shift your focus from the discussion you had yesterday afternoon on the site profile for Mallinckrodt chemical workers to again look at the Special Exposure Cohort petition and our evaluation report of that.

As is becoming tradition within this kind of presentation, I will walk you through the petition evaluation process. I know this is probably becoming old hat by now, but I must do this for the record as well as for the benefit of the audience, who may not have heard this type of presentation before. I'll also give an overview and a timeline of this particular petition.

I'll again remind the Board, probably

unnecessarily at this point, but I'll remind you of your responsibilities and your role within this part of the process.

I present also a summary of the petition evaluation report, as well as go into the details of the supplement to that evaluation report that was prepared after the February meeting. And I'll conclude with the class definition and the summary findings.

Again, the evaluation process is governed by the statute and by the regulation that's listed on this slide, 83.13(c)(1) and 42 CFR 83.13(c)(3). Again, these are the two-pronged tests that must be addressed in evaluating a petition.

As well the evaluation process must examine all available data and information obtained. That includes the site profile development, information that is pertinent to this facility that may have been addressed at related facilities, the dose reconstructions that may have been attempted or -- and/or completed with regard to the petition. We are also required by rule to determine the completeness of our data resear-- data search. We have to evaluate

the sufficiency of data according to the HP -- health physics hierarchy of data that's listed in our dose reconstruction rule. And we evaluate the issues of data reliability that's raised by the petition itself.

As well, if we determine that we cannot reconstruct dose, we then have to address the second prong of the test and whether -- that includes whether health was endangered for this particular class.

Let me speak for a moment here about -- a little bit about -- in reflection of the discussion on the site profile yesterday afternoon, and I'd like to point out that I think there may have -- may be some confusion about site profiles and their -- their content and context as a living document. And in that light, these documents, from their genesis, have been portrayed as living documents. When we -- it goes back to the need to be timely in our efforts for -- for the claimant population in doing dose reconstruction, as well as evaluating petitions here. And so once we feel that we have assembled enough information to process certain types of claims under our

efficiency process, we put that into play and start using those documents, fully recognizing and hopefully trying to make it clear to people that -- with an understanding that as new information comes to light that may inform and enable us to treat other types of cases, we modify those documents.

A revision to a site profile we would consider as giving us the ability to move claims through the system. And as new information we make changes to those site profiles. Certainly we, again, appreciate our colleagues from Sanford Cohen & Associates who bring their perspective to this and call our attention to certain things that we feel and they feel we need to address. And once we address those things, we go back and we look at all claims that were processed under our previous site profile revision and evaluate whether the modifications to a newly-revised site profile would affect the outcome of those claims.

This is a standard operating procedure within my office. It's called a performance evaluation report and any time that a change occurs in any of these documents we go back and

evaluate those claims. If there is a change to a claim, we notify the claimant, we notify the Department of Labor and we work together with both and work through all that.

So I just offer that for the consideration of the Board, as well as the audience.

Let me speak a little bit about the overview and a timeline for this particular petition.

The Mallinckrodt Chemical Works for the Destrehan Street petition was submitted to us on July 21st last year, and the initial definition for that particular class, as we worked it out with the petitioners, were all employees that worked in the uranium division at the Mallinckrodt Destrehan Street facility in St. Louis, Missouri over the time period of 1942 to 1957.

The submission of this petition met the criteria as outlined in our rule under 42 CFR 83.7 through 83.9, and it was qualified on November 24th, 2004. As I said yesterday, we -- we work diligently with the petitioners to make sure that the basis of the petition addresses all of the requirements within our regulatory process.

The petitioners were notified by letter, and a notice of that submission -- that it had qualified for evaluation -- was published in the *Federal Register* and put on our web site on December 20th in 2004.

NIOSH evaluated this petition using the guidelines in 83.13, and we submitted a summary of findings and a petition evaluation report to the Board and to the petitioners on February 2nd, 2005. A summary of the evaluation report and finding was then published in the *Federal Register* on February 3rd, 2005.

At your February 8th meeting in St. Louis we presented the evaluation reports for Mallinckrodt. This eval-- the evaluation reports -- there were two, if you recall. One report spoke to all DOE, DOE contractors or subcontractors employed by the uranium division of Mallinckrodt during the period from 1942 through 1945. The other report covered the same workers and employees for Mallinckrodt through the period of 1946 through 1948, and then the last part of that report covered 1949 to 1957. We were, as you recall, seeking -- for the latter time period we were seeking

advice from the Board concerning the matter of data reliability.

During that meeting a number of additional issues concerning access to data, their reliability and various technical matters that pertained to the time period of 1949 to 1957 were identified during the presentation that we made to the Board. And in response to those issues and others, we submitted a -- or we developed and submitted a supplemental report to our evaluation report that addresses those issues.

The Board sent a recommendation to the Secretary of HHS on March 11th, 2005 recommending that a Special Exposure Cohort class be designated according to all -- accorded to all DOE contractors or subcontractors who worked at the uranium division at Mallinckrodt Destrehan Street during the period of 1942 to 1948. We -- the Board, based upon a recommendation that we made, combined the '42 to '48 period. It was broken down in '42 to '46, if you recall, and they -- or '42 to '45 and then '46 to '48. The Board reserved judgment with respect to workers

employed during the 1949 to 1957 time period until we -- NIOSH -- had completed its supplemental report.

On April 6th of 2005 the Director of NIOSH sent a recommended decision to the Secretary of HHS that was consistent with the Board's recommendation.

Based upon the considerations of the recommendations, the findings and the deliberations of the Board and the recommendations of the Director of NIOSH, and also the Director of Centers for Disease Control and Prevention, the Secretary of HHS sent his decision to Congress on April 11th, 2005 to add the -- this class to the Special Exposure Cohort. The class definition is (reading) The employees of the Department of Energy or DOE contractors or subcontractors employed by the uranium division of Mallinckrodt Chemical Works Destrehan Street facility during the period of 1942 through 1948, and who were employed for a number of work days aggregating at least 250 work days, either solely under this employment or in combination with work days within the

parameters, excluding aggregate work day requirements, established by other classes or employees included in the Special Exposure Cohort.

I'm not going to belabor the Board with this, your roles and responsibilities. I think you're very well familiar with them, but for the audience, the Board's responsibilities are governed by statute and by the Special Exposure Cohort rule that was promulgated last May.

The main role of the Board is to consider and advise the Secretary of HHS on whether to add a class. Again, you are to consider the petition, the evaluation reports and all available information, and develop and transmit to the Secretary your recommendation. And in that recommendation, as you know, you must include all of the relevant petitions and any information that is pertinent to that.

Lastly, we all are required to adhere to the Privacy Act and control information and prevent unwarranted disclosure of information about the petitioners.

And now I'll go into the summary of the Special Exposure Cohort evaluation report that we

provided for the class with the time period of 1949 to 1957.

Beginning in 1949 Mallinckrodt had established an operational program of radiation monitoring of its employees and its work areas, and this was overseen and directed by the Atomic Energy Commission's Health and Safety Laboratory out of New York. Notwithstanding the data reliability concerns that have been raised, there is sufficient information from the various monitoring activities, together with the information on radiological sources and processes, to reconstruct and validate dose estimates.

After 1949 there are multiple sources of exposure information, and through Dr. Neton's attempt to illustrate in his example yesterday, we feel that we can use the various data sources to complement each other and evaluate any deficiencies or data gaps that might exist in that dataset for Mallinckrodt.

In the SEC petition evaluation report 00012-2, section 7.3, items 2, 3 and 4, you'll find that we address how we might go about doing this. For example, in item 2 we talk about breath

radon and the limited number of data and the use of that data with regard to the entry of zeroes in that data. We indicate that urinalysis results are the solution for evaluating that kind of a data gap or that type of limitation in the data.

For item 3, lost medical records -- that is an issue that has been raised and one of concern -- NIOSH is -- has documented in its search that it did not indicate any loss of medical records, and thus we cannot confirm that medical records were lost, in fact.

With regard to item 4, altered records or conscious cover-up referencing a 1949 dust evaluation which was never finalized, our belief is that the cure for that particular situation is the availability of data from a fully operational health and safety health physics program from 1949 to 1957 that included the oversight of the AEC/HASL.

I won't go over -- this is just another slide of some of the data that was presented in the evaluation report, and you saw this yesterday, as well. And Jim I think did a very good job of summarizing the wealth of information that

exists in the variety of monitoring data that we have.

The purpose of the supplement report was to address a number of issues that were identified but not specifically addressed in the prior NIOSH petition evaluation report. The supplement identifies those issues that were raised at your Board meeting in February in St. Louis, and provides an evaluation of the effect that those issues might have -- might have on the proposed designation of this class from 1949 to 1957.

I'll summarize the issues that were raised. There were five that are listed here. NIOSH's access to data and reports identified in the 1972 Mason letter as being potentially lost or destroyed. Another issue, items raised in the 1974 Mont Mason notes presented at the February Board meeting. And third, a summary of the content of the six boxes of the Mallinckrodt data that were unevaluated at the time of the February Board meeting. Four, there was concern as to how to calculate exposure from isotopes other than uranium if urine samples were only counted for uranium. And five, the

ability of NIOSH to estimate potential radon -- radiation exposures in doses associated with the blowouts that occurred at Mallinckrodt.

With regard to issue number one, in the supplemental report we specify that NIOSH has recovered a record transmittal and receipt form from the Federal Records Center in St. Louis which identifies the 22 documents referred to in the Mont Mason letter, and these documents were identified as shelf V2161. In that NIOSH has obtained 21 of the 22 documents, which consist of reports associated with dust studies and other facility surveys.

The only document that was not located was entitled "An Annual Report for the Fiscal Year 1950 from the New York Operations Office of Health and Safety Division" which was dated November 13th, 1950. This missing document is an annual report and is -- these kinds of reports are very helpful to us in documenting the reason behind a particular action. But the environmental health and safety data that's summarized in these reports are usually found in other types of documents and other types of reports. So we don't feel that just because

this one report is missing that it leaves us with a huge data gap. We feel that we can -- we can use other information to cover the issues that might be raised from that lost document.

This slide explains the effects of the information that's compiled in the supplemental report, and the data that it's obtained from the documents would not increase the estimated doses calculated from the data that's already in the TBD. It probably, if we obtained additional information -- as I said yesterday for Iowa, additional information would tend to provide more precision in our dose estimates and perhaps even drive them down. The newly-obtained data will be fully analyzed and would -- will be included in the next revision.

NIOSH has -- has -- does not find that the records have been lost or destroyed. We feel that most of the data from the documents was found in other sources and was already evaluated and -- and most of it is used in Rev. 1 of the TBD. Those that are not used or not been incorporated will be incorporated.

Item number 2 regarding the 1975 Mont Mason

notes as presented in the February Board meeting, and these notes were generated from a trip that Dr. Mason took in 1975 to gather data for an epidemiologic study for Thomas Mancuso. The funding ran out for that study, evidently -- we understand that from other documents -- and it reflects -- this particular document reflects an evaluation in progress. It is not a completed evaluation of the data.

Although the study was not finished, the site data have been evaluated and the issues that were identified were revisited by other studies and in other epidemiologic reports. These data were reviewed by NIOSH and ORAU for the development of the Mallinckrodt Technical Basis Document.

Based on NIOSH's review of the data, NIOSH does not find any issues that would preclude an ability to reconstruct doses for compensation purposes under this program.

With regard to item number 3, this issue being the summary of the content of the six boxes, there were six boxes and two of the boxes contained information from Weldon Spring, so they were collapsed into five total boxes. And

for box one, Weldon Springs, with == about 75 percent of the contents of that box are film badges for 1945 to 1958 for Weldon Springs; 25 percent of that are -- that are left are air sampling data, breath analysis and contamination survey results and radon monitoring for Weldon Springs. And I'm sure that our ORAU contractor will be incorporating that information into Weldon Spring's Technical -- site profile, which I hope we see this week, as Dr. Toohey mentioned last night.

Box two also contained Weldon Springs information. About 75 percent of its contents are film badge reports for 1957 to 1961; 25 percent are bioassay data from 1961 to '65. There is breathing zone air sampling data from '63 to '65, contamination survey reports for 1959 and air sampling in the building 301.

Box three again contains Weldon Spring's film badge information, and box four contained Mallinckrodt dust studies from plant 4, 6, 6E, 7, shotgun lab and K-65. I would just mention that the distribution of the film badge reports from '57 to '61 have appeared -- appear to us to be pretty random in their order in our

evaluation of that particular box.
Box five, Mallinckrodt and Weldon Springs information. Approximately 25 percent are for the years of 1946 to '49 and they are film badge records for Mallinckrodt; 75 percent of the box is for Weldon Spring's badge records, and approximately half cover 1959 to 1965. The other half of that -- for Weldon Springs are bioassay data from '59 to '65 and area monitoring trends.
The initial review of these documents indicates that some of the data are duplicate data that we had previously accounted for and incorporated into our Technical Basis Documents. Some documents provide additional data that will also be addressed in a revision of the Technical Basis Document.
With regard to item number 4, how will exposures for isotopes other than uranium be calculated if urine samples were counted for uranium only, the inclusion of other isotopes in claimant-favorable assumptions can be made. We can do this through a -- specifically for source materials in which uranium isotopes were predominant, for source materials in which

radium 226 was predominant, and for source material which concentrated thorium. For air samples which measured gross alpha only, there are also general instructions and assumptions to be followed for conducting dose reconstructions, and those are found in our Technical Basis Document.

The last issue that's spoken to in the supplemental report, and that was raised at the February meeting, was can NIOSH estimate potential radiation exposures and doses associated with the blowouts. A blowout is an event that occurs during the reduction of uranium tetrafluoride to uranium metal. And the existence of a routine urinalysis program after 1948 allows NIOSH to put an upper limit on doses associated with blowouts or other incidences involving internal exposures. NIOSH can assume uranium excreted by workers on a routine monitoring program is a result of a blowout that occurred immediately after all the workers submitted their previous samples. The resultant dose calculation will provide a maximum plausible estimate of the exposure that was incurred. The calculated dose in -- in a -

- all likelihood then would be an overestimate because the urine samples would also include uranium inhaled from routine operations during the work in that plant.

To refine these values, NIOSH can also review information provided by Mallinckrodt workers during their interviews. When such incidents are identified, NIOSH would review the Energy employee's bioassay records for sample -- incident samples and also look at coworker data in that same regard.

The petition evaluation supplemental report addresses the petitioners' concerns regarding reliability and validity of the data. For the years 1949 to 1957, data reliability concerns notwithstanding, NIOSH finds that the radiation dose estimates can be reconstructed and validated for compensation purposes.

NIOSH welcomes the advice of the Board on the weight of evidence determinations involving data reliability for this and future petitions. Specifically, we asked you to consider this in your February meeting and we're looking forward to hearing your deliberations on this point at this meeting.

In conclusion, the proposed class definition that we offer in our evaluation report is that all DOE, DOE contractors or subcontractors who worked at the uranium division at the Mallinckrodt Destrehan Street facility during the period from 1949 to 1957, we find that for that time period we can do dose reconstruction with sufficient accuracy to achieve either a maximum capping dose or a more precise dose estimate, and therefore we did not have to attend to health endangerment under the Special Exposure Cohort petition. But I would offer that -- and I think we are ready to say that health was certainly endangered to this work force by the type of work that they did and they exposures that they had.

Again, I'll remind the Board, for the other two classes which are shown here, '42 to '45, we found it was infeasible to do dose reconstruction with sufficient accuracy, we felt that health was endangered. And for the period of '46 to '48 we also felt it was infeasible -- not feasible to do dose reconstruction, and again that health was endangered for that particular time frame.

That concludes my presentation and I'll stand ready to entertain questions.

**BOARD DISCUSSION OF MALLINCKRODT SEC PETITION**

**DR. ZIEMER:** Yes, thank you, Larry. Let's open the floor for questions. Dr. Melius?

**DR. MELIUS:** Got a couple of questions that came up last night that are sort of -- I think are -- think are relevant, though they're not directly related to your presentation. One, is there a petition -- I guess we know from your talk and from what was said last night that for Weldon Springs there's a -- a site profile that's about to go into review with -- at NIOSH coming in from your contractor. And is there also an active -- is there a petition for a Special Exposure Cohort relevant to Weldon Springs?

**MR. ELLIOTT:** No, I don't believe we have a Weldon Springs petition at this point in time.

**DR. MELIUS:** Okay. In terms of the work force there, I was a little confused by what was -- the interchange last night. To what extent is there an overlap between the two facilities?

**MR. ELLIOTT:** Well, as you -- as you heard last night, and I think perhaps Denise or somebody

else is better able to speak to this, there has been a -- there was a large migration of workers from Destrehan Street to Weldon Springs as they ramped up. I don't know what the specific numbers are, but I think I heard from Denise last night probably 50 percent. I don't know if anybody else in the audience can help us here with that, but...

**DR. MELIUS:** So you've not analyzed that overlap or have information that would --

**MR. ELLIOTT:** I don't have it at -- at my disposal right now.

**DR. MELIUS:** Okay. Another question -- this is related to more what you do with site profiles and -- and your -- your analysis of them. Are you -- when you're doing these site profiles and dealing with them in the context of a Special Exposure Cohort petition, do you go -- you're providing sort of a general evaluation. Do you evaluate subgroups at all within that -- within the work force in terms of your ability to do dose reconstruction?

**MR. ELLIOTT:** Yes. Yes, we do. In fact, I think it's apparent that we do that in this petition, as well as the Iowa petition that we

presented to the Board, where we have identified different classes based upon subgroupings -- or -- or events that occurred in that particular facility.

**DR. MELIUS:** I understand events. I don't see subgroupings necessarily in terms of --

**MR. ELLIOTT:** Well, the radiographers -- the radiographic technicians for Iowa --

**DR. MELIUS:** No, stay in Mallinckrodt, please. I don't --

**MR. ELLIOTT:** Stay in Mallinckrodt --

**DR. MELIUS:** Yes.

**MR. ELLIOTT:** We do evaluate the different process and the types of tasks that were employed in a process, the workers that moved through the process. We're very much interested in -- in not only the highest exposed workers, but those workers that were in a lower or moderate-exposed categories and whether or not we have enough data, enough information to evaluate their -- and reconstruct their exposure.

**DR. MELIUS:** Yeah, but -- but -- so -- but do you do any sort of a systematic analysis that's in a -- in the form of a report or... I mean -

- I mean you're telling me you generally --
**MR. ELLIOTT:** Well, yeah, the --
**DR. MELIUS:** -- I mean --
**MR. ELLIOTT:** -- the analysis is systematic in the sense that we examine the process and all of the information and all the dose data, the -- the programs that were put into effect to provide protection to the work force, who was monitored, who was not monitored. Do -- do we report that specifically in a separate report; no, it's all rolled up into our evaluation summaries. Could we do a better job of that; yes, I suppose we certainly could.
**DR. MELIUS:** Okay. That's all my...
**DR. ZIEMER:** Okay. Other questions? Yes, Dr. Anderson.
**DR. ANDERSON:** Yeah, Larry, we saw yesterday the -- kind of the process you go through in the validation, comparing the different data sources to look for discrepancies or gaps or whatever. And my question is, have you done that -- can you say that -- after having done that, that you have validated the data, or are we still into you -- you believe you have the means to try to do that and you'll do that as

you move along, but it hasn't been done yet. Is that -- that's my question.

**MR. ELLIOTT:** Jim, you want to come to the mike and speak to this specifically? This is down in the weeds for me, I'm...

(Pause)

**DR. NETON:** I think we need to be a little careful when we say "validated the data." I think -- it's our position, at least -- that the data that we have, the urine samples and air samples, are -- are -- were properly processed. Now to the extent of this data integrity issue and analyzing that for how we could use the data, we have qualitatively gone through and looked at the data, but we have not yet completed a detailed quantitative analysis to demonstrate that we have reached that conclusion. I think -- I tried to indicate that in my presentation yesterday by the hypothetical example that was discussed last night.

**DR. ANDERSON:** 'Cause -- 'cause I was just looking at the one slide here, basically, saying that you believe you can reconstruct and validate the dose estimates. My question is

if, when you get into it, you can't, then where are we left?

**DR. NETON:** Right. Well --

**DR. ANDERSON:** I mean you gave the --

**DR. NETON:** Yeah.

**DR. ANDERSON:** -- the demonstration of when there is a discrepancy, then you're sort of left with well, you either have to believe one or the other, or say ever-- all of it's suspect and then --

**DR. NETON:** Yeah.

**DR. ANDERSON:** -- then we're sort of into -- you go from a lot of data to very suspect data and that's --

**DR. NETON:** I think what we're trying to speak to here, though, is we have three -- three levels of data, the source term, the air -- the personal monitoring data and the air data. With those three pieces we can do a comparison, as I suggested. But what we're really saying here with this analysis is that, based on the site profile, we believe that not only can we cap the dose, but in almost all instances we can do much better than that. We believe we have sufficient data to do far better than just

capping.
Now if the analysis indicates, for instance, that both air data and bioassay data are suspect -- which I -- I don't want to prejudge, but so far my qualitative analysis doesn't indicate that -- then we're left with source term, and certainly then we can use those data to cap, to put upper maximums, which is relevant for the SEC petition evaluation.
I think you have to be careful not to confuse the profile that was designed to do better than maximum dose estimates, to do more detailed analyses, with the requirements of the SEC petition, which is can NIOSH cap the dose. And I think we would assert that given the quantity of the monitoring data we have, plus the knowledge of the source term and the detailed, hundreds of pages of descriptions of the processes, that we can certainly cap that dose.
**MR. ELLIOTT:** To add to that, I think there are various levels and ways of validation. And just the fact that in our site profile we identify issues relevant to data is calling recognition to that, and that, in and of itself, is some things that we use to look for

other data to determine whether or not we need to -- is the -- is the credibility or reliability of the data suitable or unsuitable for use in dose reconstruction, does it prevent us from doing a credible job of dose reconstruction. So we try to bring that to the fore. There are different ways of going through a validation process. Jim's example -- maybe it was poorly -- poorly presented or poorly designed yesterday, but it was just an example to illustrate one of those ways. The fact that we raised the blank issue in our report is another way. These things all have to be taken into consideration in validating data.

**DR. ANDERSON:** Yeah, I was just trying to step through our task of, you know, how -- how much -- there seems to be a lot of data. The question is -- and that -- I'm not sure it's been resolved. I mean we have a method for -- or you presented a method to go through how you would go about validating, but one of the things we have to decide is -- is there valid data --

**MR. ELLIOTT:** Is it feasible to even validate,

yeah.

**DR. ANDERSON:** -- is it feasible to validate, and then when you think in terms of Iowa, if you're left with capping, then is the capping process giving you sufficient accuracy. I mean you've shown you can cap, but the question is how meaningful is that -- that cap, and that -- that's why I was trying to sort this out. I mean qualitatively it's -- it's good to hear you've looked at it and it -- it seems, but that's kind of where I'm at at this point.

**DR. ZIEMER:** I'd like to pose a question, Larry, or perhaps to Jim. This relates to the missing document from the Health and Safety Lab. I assume there are other annual reports of that type in your data bank or in your collection. Can you characterize the kind of information those reports typically contain? I assume they're not necessarily focused on Mallinckrodt. They would have some sort of summaries from across the complex, or what -- what can you tell us? I put you on the spot here, but -- but I -- there are -- there are other such annual reports that you've looked at?

**DR. NETON:** Yes, this -- this is the AEC annual report that you're referring to?

**DR. ZIEMER:** Well, it's the one -- the missing document that was in -- in the box that was --

**DR. NETON:** Right. I think we've summarized in our slide -- maybe Larry -- could you go back to that slide where we talk about what's in there? But in general, these are -- these are broad brush descriptions of the processes, the work force, the general issues that were identified, some summary air sample tables possibly --

**DR. ZIEMER:** You would not expect them to contain raw data from Mallinckrodt, necessarily -- or even detailed data from Mallinckrodt.

**DR. NETON:** That's correct, these would be upper-tier documents that would rely on more of the raw air sample data, which we believe we have in most cases. So I don't expect that there would be new information that -- that would not exist somewhere else, if that's what you're referring to.

**DR. ZIEMER:** Yes, that's -- I wanted to clarify that.

**DR. NETON:** Yeah, I'm sorry, I didn't mean to

make a --

**MR. ELLIOTT:** These kind of reports summari-- I believe you're right, Dr. Ziemer. These kind of reports summarize issues or activities or problems identified across -- across the complex. They're -- they're a roll-up document. There are several other supporting documents specific from a given site that gets rolled up into this general -- general report.

**DR. ZIEMER:** What I was kind of getting at, if you're familiar with other reports -- for example, would one expect to find a Mallickrodt section in such a report or would the Mallinckrodt data typically be rolled up statistically with other data, anyway?

**MR. ELLIOTT:** I believe the answer to that is yes and no. I think it depends upon the type of incident or the type of issue that's being reported. And if it was critical enough to merit --

**DR. ZIEMER:** Special attention.

**MR. ELLIOTT:** -- special attention, it would have said Mallinckrodt had this issue going on, be aware of it for the other sites. And in some cases -- and Jim or Stu can correct me if

I'm wrong -- there would even be listings of summary data where you may not be able to pick out the Mallinckrodt component of that data.

**DR. NETON:** Right, it could be both ways, that's correct.

**DR. ZIEMER:** Thank you. Roy DeHart?

**DR. DEHART:** In February and again last night and today, the issue of quality and validation of the data has been brought up and discussed. Is there evidence, or perhaps even a suggestion, of issues tied to the quality of the data?

**MR. ELLIOTT:** Is there evidence or issues tied to the quality of the data?

**DR. DEHART:** Correct. Is -- is the data questioned because of -- of something you have found or something that -- that is missing that would question the quality of that data that you -- you're using.

**MR. ELLIOTT:** That's a matter of perspective, of course, but --

**DR. NETON:** I think -- could I maybe chime in?

**MR. ELLIOTT:** Go ahead.

**DR. NETON:** I think you'll find in the 248-page document there's going to be sections that

discuss some of the issues that arose over the monitoring practices. I mean this is a standard -- things that happen when you measure samples. I -- I don't believe, I don't think OCAS believes -- I know OCAS does not believe that these issues that are raised rise to the level that would question the ability to use the data for dose reconstructions.

**MR. ELLIOTT:** Yeah.

**DR. NETON:** For example, I'd like to -- this is a good opportunity possibly for me to address an issue that was brought up last night related to the blank samples. There was a -- it was brought up in the Board discussion and also at the evening session that there was some indication in our profile that blank samples were contaminated, and that's true, and I'd just like to read the relevant two sentences, if I may, that are in that profile that were refer-- being referred to.

And I quote (reading) An undated, untitled urinalysis listing found in dose reconstruction project files indicates that closed blank samples were found to have significant levels of uranium in them, indicating contamination in

the laboratory. It was suggested that this might explain the high levels of some of the non-blank, parentheses, worker samples. Thus at least some of the early urinalysis samples must be considered to have been potentially contaminated; i.e., some of the uranium content may have come from the laboratory analyzing them.

So the issue here is that -- this speaks to the quality control, actually, that they were running what I would call in current parlance a method blank. You run a blank with a -- every so many samples and you want to make sure that you're not reporting erroneously positive results because you may have contamination in the lab. And that appear -- that seems to be what's happened here. So if anything, those blank samples would have -- if there was contamination in the laboratory, would have biased the results for the workers high, not low.

So you'll see things like this in here, but again, I've looked through these and I don't believe that any of these rise to the level of really making them unusable for dose

reconstruction.

**MR. GRIFFON:** Can I just -- Jim, while you're at the mike --

**DR. ZIEMER:** Mark?

**MR. GRIFFON:** While you're at the mike -- I mean I -- I agr-- I -- I misread that yesterday, and so -- so this may be the case of contaminated equipment in this case on a closed blank. This comes -- from what I understand, this is from one -- one memo --

**DR. NETON:** Right, correct.

**MR. GRIFFON:** -- and -- and this does speak to my question of feasible to vali-- sort of feasibility, too, feasible to validate. This is one memo about one time period in the lab when they had some high blanks, and -- and they say in that case it would lead to higher -- abnormally high -- it almost might be a memo -- you know, if you want to be a complete cynic about this, it might be a memo sort of explaining away high results. But anyway, aside from that, it's one memo and -- and my question is do you -- do -- do you have a series of quality control reports from those early lab -- I mean this speaks to being able

to go back to the raw data --

**DR. NETON:** Right.

**MR. GRIFFON:** -- and say okay -- oh, here we have a bunch of low spikes. You know, you might have a situation where all of a sudden for several months they were running spike samples and they were all low, and that would throw your data the other way. So this speaks to my question of the reliability of the data. In this ca-- in this one situation, I agree --

**DR. NETON:** Right.

**MR. GRIFFON:** -- it would tend to raise your samples higher, but it speaks to the whole question of the reliability and the ability to go back to that source term data, and that's -- that's my question, is that feasible in a -- in a timely fashion?

**DR. NETON:** Well, if the standard is that for -- 50 years ago we had every sample with every blank and every calibration curve, the answer's no, we're not going to have that.

**MR. GRIFFON:** I'm not saying that --

**DR. NETON:** But -- but that's what you're suggesting that we need to have, and that's the gold standard. We're not going to be able to

produce that. We may have some of it. But I would -- I would suggest that in looking through these records, and having run bioassay laboratories and analyzed tens of thousands of samples in accredited laboratories, the methodology employed here is consistent with good laboratory practice of running blanks, pursuing erroneously high values based on precipitation and -- and calibration standards that you'll see in here. So it gives a good sense that this laboratory was indeed practicing good laboratory practices for what is actually a fairly standard technique. It's been in use for over 50 years for metric analysis of uranium in urine.

So I have a comfort level, OCAS has a comfort level with this. We cannot produce every calibration curve in every anal-- you know, reproduce every single result from first principles. That's not going to be possible.

**MR. GRIFFON:** No, I -- I'm -- and -- and you're -- you're --

**DR. NETON:** And where do you draw the line --

**MR. GRIFFON:** -- you're right -- you're right on that. The flip side of that I guess is this

paragraph sort of relies on one memo and one instance, and it draws that general conclusion that therefore all results, if they were biased, they could be biased high.

**DR. NETON:** Right.

**MR. GRIFFON:** So I think that might be stepping the other way. You're relying on one memo -- I -- and I -- I'm wrong -- if I suggested that, I'm wrong. I don't suggest that you could, you know, find all the source data, but I'm saying that that -- maybe more than one quality control report might be useful to get a sense of the -- and maybe you have more, I don't know, but one's referenced here.

**DR. NETON:** Yeah, we -- yeah, exactly. We referenced the ones here that appeared relevant. I mean we try to produce these warts and all so that the Board can look at them and eval-- make their own independent evaluation. From my -- from my experience in running laboratories such as this, it's -- it's -- contamination's almost always a problem and, if anything, you end up biasing the results high. But that's just been my experience.

**MR. ELLIOTT:** I think what we are learning here

is that we need to speak to the other source documents as well in the same series, how many did we look at, perhaps. And if this is the only one that raised our awareness and our atten-- draw our attention, that's important for -- for the public and important for this Board to understand, that it's not just one document with this one issue that's brought -- and, you know, been brought to attention, that there's a series of documents that we looked at. Maybe we didn't see the whole universe, but what I'm learning from this dialogue is that we need to be a little more comprehensive in our reporting about -- about this kind of an issue. I do know that we looked at more than just this one quality control document.

**DR. ZIEMER:** Jim Melius.

**DR. MELIUS:** Yeah. First of all I just would concur with Larry's conclusion. Based on that I think it really would be helpful for us to get a better sense of, you know, what's your overall, you know, support for a particular statement or for a particular process or, you know, whatever it may be -- some sort of exposure monitoring system so -- so we

understand the depth of that and so forth. My ques-- follow-up question has to do -- sort of a follow-up with what I asked earlier and what Henry -- Henry asked about, and maybe I can ask it more clearly, but as we discovered with Iowa yesterday, there are -- questions come up about sub-- saying -- called subgroups within the cohort or within the -- in the work site based on department, building or job title or whatever, and as to the quality of the data for -- availability of monitoring data for them. And I guess my question specifically for Mallinckrodt is have you gone through a systematic effort to look -- look at the population there and determine whether you have adequate data for, you know, sig-- significant subgroups within the -- the population in order to be able to complete dose reconstructions.

**MR. ELLIOTT:** Well, personally I have not gone through the data, Dr. Melius, but --

**DR. MELIUS:** No -- no, I'm not asking you --

**MR. ELLIOTT:** -- but I -- I believe -- I do believe that -- that the ORAU team and my staff have gone through the Mallinckrodt data to the point that they understand the different job

categories, the different tasks that were involved there, and the data that speaks to not only a department but also to those different jobs and tasks and job categories.

**DR. ZIEMER:** Jim Neton -- add to this.

**DR. NETON:** Maybe I can amplify a little bit on that. We -- we have, as we discussed yesterday and as Larry presented today, monitoring data on the majority of the workers after 1948, so in case -- almost all workers in the later years, so we have that to start with. Now that doesn't mean that that -- those data themselves are going to be able to reconstruct doses for some of the processes such as the filter cake operators and that sort of thing. But we do have air monitoring data to supplement that in many buildings -- in most of the buildings during those time periods. And Dr. Melius, you pointed out yesterday, some of the data the end/N* may be small. That may be true and I've asked for that answer. I'm still waiting -- hopefully I'll have that sometime later this morning.

But what happens when you do a dose reconstruction is you -- you look at the case

under evaluation, and we say is this -- where did this person work, what did they do. You look at -- do they have urine sample data, do you have air monitoring data, and then you -- you try to make a determination -- for instance, if the air monitoring data we have -- admittedly, if it's sparse -- but if it's enough for that particular case to put that case over 50 percent, then that is sufficient to do a dose reconstruction.

Now on the other hand, that end/N* may be small, but at the same time you may say well, let me not just use that one building. Let me take the maximum value in all the buildings in that year and assume the worker inhaled that, and if that value comes out very small, low PC, we have some pretty good confidence that we're forwarding the Department of Labor a dose reconstruction that is useful to them.

So you have to take this in context of how the dose reconstruction process works. In that context, though, we have looked at all classes of workers around the building -- around the site and made a determination that as far as we could tell, looking through all these

individual scenarios, we can do a dose reconstruction for the workers at Mallinckrodt in this time period.

**DR. MELIUS:** Yeah, and -- and just to follow up, is that available in a report? Is that --

**DR. NETON:** Well, I think it's -- in general terms, it's in the SEC evaluation report where we -- where we speak to -- we have the process knowledge, we have air monitoring, we have all those pieces of data that allow us to do that type of analysis when we do a dose reconstruction.

**DR. MELIUS:** Yeah, but the problem, Jim, and some of it has to do with we're marrying one process that's the site profile --

**DR. NETON:** Right.

**DR. MELIUS:** -- the individual dose reconstruction process with an SEC, so not sort of faulting you personally or the --

**DR. NETON:** No, I understand.

**DR. MELIUS:** -- the organization, but the problems -- you make very general statements about this in -- when it's presented, either an overview of the site profile or in the SEC evaluation, and -- and we're trying to look

behind that a little bit for the SEC evaluation process and -- and it's hard to do when all we get are general statements. I mean they may be true and they may be fine, but it would be nice to have some document or some documentation that backs that up that's specifically relevant to an SEC evaluation as opposed to the ongoing -- going -- going process, and maybe that's asking too much. But -- but I think it would be -- it would be nice to have and -- and -- and the problem is that when we probe behind it, you -- you -- and it may --it may be correct in terms of the site profile process. You know, you -- don't have an answer to that because you've looked at it generally. May-- maybe somebody at ORAU has, you know, looked at that who's -- who's done the document and under-- understands the details better, but it's not something that -- that we can see and readily reach conclusions on. It's much the same problem we had with Iowa, though --

**DR. NETON:** Right.

**DR. MELIUS:** -- fortunately Iowa was, I think, a simpler situation to deal with.

**DR. NETON:** Right, but short of having done all

the dose reconstructions and demonstrated that we can do every single one, I'm not sure how we could demonstrate that to you other than to provide you these analyses that talk about the quantity of the monitoring data, the quality of it and -- and the process knowledge and source term knowledge that all speak to doing a dose reconstruction with sufficient accuracy. We're trying to flesh out the picture, and I think we've made a very good case that we know the picture very well.

**DR. MELIUS:** Well, I --

**DR. NETON:** And outside of --

**DR. MELIUS:** -- I disagree with that in the sense that -- and I'll give you a specific example, and I know you've already been criticized for this, but the -- this hypothetical example you present isn't helpful. It would have been a lot more helpful -- I'd rather have seen five slides showing specific examples where one would expect or reasonably expect there might be difficulty, you know, because of missing data or the years involved or the department or, you know, sparse data, whatever, that you -- this is how you would --

would have done it in those -- in those cases and -- do that, and I don't -- you know, something like that, rather than hypothetical this is how we're going to -- going to do it. And again, that's not sort of appropriate for the site profile, but it is appropriate for SEC evaluation.

**DR. NETON:** I don't disagree with you. It would have been better to have that. But again, short of doing that for all 311 cases --

**DR. MELIUS:** Well, but --

**DR. NETON:** -- it can't be done.

**DR. MELIUS:** -- I gave -- tried to give a reasonable number, five, so...

**MR. ELLIOTT:** But with -- with that said -- with that said, we have the data that we could use to do that.

**DR. NETON:** That was the point --

**MR. ELLIOTT:** The data exists.

**DR. NETON:** -- I was getting at. The data --

**MR. ELLIOTT:** That's the point --

**DR. NETON:** -- do exist.

**MR. ELLIOTT:** -- of the illustration.

**DR. NETON:** I agree it would be better to have it done up front. I mean we're not --

**DR. ZIEMER:** Let me offer, also, that another report, for example, if it's sorted by job title or whatever, would still be a general report. It's simply another way of cross-cutting what we already have. So aside from individual discrete examples which certainly were helpful when we went through the original process of describing the efficiency process and so on where you took specific cases, that's helpful for illustrating. But whether that -- a specific case necessarily says you can do it for all cases, that question is always out there.

It seems to me that the information that we're talking about for all these jobs is already contained in what material we have. If -- if -- yes, perhaps if you wanted to look at it a different way and cross-cut it differently, you'd do a different sort on this. But in my mind, the information at least is there.

Mike, I think you're next.

**MR. GIBSON:** With respect to this information you've found that showed that there was a -- a blank sample with contamination at a -- was there additional information that told you what

they did to correct the problem?

**DR. NETON:** I have not personally reviewed that memo, so I can't tell you that. But again, if there were -- it was a problem, the indications are that the worker results would have been biased high, so --

**MR. GIBSON:** Well --

**DR. NETON:** -- I mean that --

**MR. GIBSON:** -- I think that depends on what they did with the lab. They also could have very well have increased the minimum detectable activity of the units that read the bioassay samples, which would have masked exposures to employees.

**DR. NETON:** But in the way we --

**MR. GIBSON:** Is that true?

**DR. NETON:** Yeah, a contaminated laboratory would increase the MDA, you're absolutely correct. But in the way we do our work, if -- an increased minimum detectable activity would have increased the missed dose that we use for the calculation purposes. The higher -- the higher the minimum detectable activity, the more the missed dose calculation using the internal dose models will be in our -- in our

analytical process. But I have not read the memo so I can't speculate as to what they did to correct it is the direct answer to your question.

**DR. ZIEMER:** Thank you. Henry, did you have another comment?

**DR. ANDERSON:** Just more of a general -- I -- I guess I'm looking as we move forward on these and we look at others that the issue of data validation I think is something you need to think about. And there may be -- you know, you can't do it today, but as you look at others to bring forward to us, I think -- and that's sort of what I think you were referring to. I think there are some issues that are separate from looking at the site profiles that in the SEC petitions it would just give us more to point to if we had that -- some examples or what has been done -- to detail that, I think that'd be helpful.

**MR. ELLIOTT:** I agree, I think there are many lessons learned here in these first two SEC efforts that we've brought to you.

**DR. ZIEMER:** I saw Dr. Toohey approaching -- approaching the mike. Perhaps you have some

additional comments on this issue.

**DR. TOOHEY:** Well, I have the answer to a question that was asked. We have in the files 316 Mallinckrodt cases, 200 Weldon Spring cases. Of those, 110 claimed employment at both sites.

**DR. ZIEMER:** Okay, 110 employed both Mallinckrodt and Weldon Springs.

**MR. ELLIOTT:** That's our case population now. That doesn't speak to the overall employee population for Mallinckrodt and Weldon Spring. That's just our case population. Right, Dick?

**DR. TOOHEY:** That -- that is correct, that's just pulled out of NOCTS, and it's all claims, so it would include some that have already been completed.

**MR. ELLIOTT:** I hate to ask another question, but just so we're all clear, we -- you know, the follow-up question to that would be how many of the Mallinckrodt cases worked at other sites besides Weldon Springs, because we probably have a few of those -- a minority, I'm sure, but --

**DR. TOOHEY:** Give me about ten minutes and I'll let you know.

**DR. MELIUS:** Well, while you're at it, can -- just someone tell how many of the Mallinckrodt have been processed already, how many are outstanding?

**DR. ZIEMER:** We'll -- we'll get that information. I think Mark is next and then --

**DR. MELIUS:** And of those -- of those -- excuse me, of those, how -- how many -- what's the overlap? I mean 'cause I assume there's some -- - some of the --

**DR. TOOHEY:** Overlap on the sites?

**DR. MELIUS:** No, in terms of being processed through the sys-- I assume the 110 haven't been because Mallinckrodt -- 'cause Weldon Springs -- - well, I guess you have done some Weldon Springs, so yeah, we'd want to know the overlap, also.

**DR. ZIEMER:** Okay. Mark Griffon.

**MR. GRIFFON:** Yeah -- yeah, not to be a broken record on this issue, but I -- I think the -- the question of the data's there, that -- that raises questions with me and -- and harping on the validation issue, I know I'm harping on it probably, but I -- I -- I think it's important to remember -- you know, one reason NIOSH is

involved in all this is that a lot of people in the public, a lot of claimants right now, have concerns or issues with DOE's data, with database data that's been used for previous studies, and -- and you know, one of my fears coming through this whole process has been that we don't want to just regurgitate the same data without independently -- and this is this NIOSH independence -- independently going in and validating it.

Now I -- I know that -- that, you know, Jim and Larry indicated it was more than one memo regarding quality. I have to trust them -- you know, 'cause we -- we just haven't had any more depth on that issue, but I think that is -- that -- that's why I raise it so often, because this is database data from the CER database used for epidemiological studies. Without going back one step, you know -- you know, it may be very -- it may be perfectly valid, but we -- you know, I think that was one reason that NIOSH was put in this role as -- to sort of have that independent look back to the raw data, at least -- and I'm not saying all raw data, but at least to the extent that you can

validate those database data that you're using. The second thing I wanted to point out that -- that I -- I am very happy, actually, in this profile and Jim's discussion of -- of -- of -- 'cause I pushed for this often, this concept of using air sampling and the urinalysis data to sort of check and see if urine intakes sort of are in the same ball park. That kind of a process is a good one, so I do appreciate that effort and there's a lot of data there. I guess the -- the time -- the problem that I'm having is that, you know, where we're at today is, you know, can we -- can -- can I make a judgment on -- on the validity of -- of the data being used, and that's -- that's where I'm sitting here today and it's -- it's different than reviewing the site profile, that we're in a petition evaluation process, so that's what I'm stuck on and I don't know that I have all the facts to answer that, which is making it difficult.

**MR. ELLIOTT:** Can I make a comment on Mark's first point? We -- we do take that very seriously, that -- that -- we see that as a -- not only a responsibility but an obligation to

provide an independent review. And I'd just offer this, Mark, as you -- as I think the Board knows you know, we're not just relying on CER data. Each case that comes in, we go back to DOE and we ask for the original badge or urinalysis data. We don't accept annual summary data. We don't accept roll-up data. We want to see the original badge and urinalysis or whatever source readings that we can get, and we use those. We do not -- you know, we don't trust the -- the roll-up, the cumulative summary, the annual reporting data. That's -- just so you know.

**MR. GRIFFON:** (Off microphone) Yeah, and Dick mentioned (unintelligible).

**DR. ZIEMER:** Jim Neton?

**DR. NETON:** Well, I wasn't going to address what Larry was, but I was going to say that on top of that, though, we have -- we're developing -- you know, we're doing a couple hundred sites at the same time, and -- and it turns out that the Health and Safety Laboratory was -- was intimately involved in many of the AWE or DOE type early operations, and so we are developing some knowledge base about the

processes and methodologies that were used. And I can speak directly to the air sampling analysis. That was questioned early on in the Mallinckrodt review. We have gone back and done some very extensive digging into that. AEC -- HASL -- was involved in the air sampling program there, so we're -- we're developing a comfort level with the techniques, the Whatman 41 filtration, the correction for self-absorption, the -- you know, the quantity of the air samples through the filters, breathing zone versus general area, so we're developing a very good picture of what was done in those areas. So we have the air sampling data. We believe we have a very good picture of how some of the samples were analyzed.

Now -- I see Mark is thumbing through the profile -- I'm sure there's some early indications in the '40's of some ion plate measurements that may or may not be valid, but once you get to the '49 time frame, you're really talking about typical scintillation-type counter measurements, a HASL counter, Cassidy counter some of you may know it by, so we have those data. So again, we can bracket that,

bounce that up against the urine data that we have, and even the fluorometric methods were done at some time periods in the '50's at HASL and so we -- we can have some comfort that they were providing guidance from the University of Rochester as well as the Barnes Hospital data. And so, yeah, we're trying to do that to the -- as best extent we can.

**MR. GRIFFON:** I -- I was scolded so I didn't get to the table I wanted to --

**DR. NETON:** I'm sorry, I didn't mean to censor your -- censor --

**MR. GRIFFON:** That's okay, I won't -- I won't (unintelligible). This is more of a follow-up 'cause -- 'cause Dick Toohey did mention yesterday that a lot of the individual DRs you have their individual data. Do you have any -- and probably not at your fingertips, I -- I understand -- any idea of the percentage -- and I guess for '49 to '57 is our time period of interest -- how much of that raw -- the raw records are you getting in these -- in your requests 'cause I think that's important to us...

**DR. TOOHEY:** Yeah, off -- off the top of my

head, I do not know the answer to that question. What our procedure is, when we get the DOE submittal and it appears to be incomplete -- which may be all the way from monitoring for a lot of years but not for a couple, or no data at all -- then we go to the CER database and search on name, Social Security number, whatever, for data that's in our database to see if the previous epidemiology study captured that data and we can plug it in. But what --

**MR. GRIFFON:** I guess that -- that was sort of --

**DR. TOOHEY:** -- what fraction of those that represents, I don't know.

**MR. GRIFFON:** Okay.

**DR. TOOHEY:** My -- my -- I -- I know in general terms what it is, and it's about 20 percent or so where we need to go into another source of monitoring data and attempt to capture it.

**MR. GRIFFON:** That's general terms for Mallinckrodt or...

**DR. TOOHEY:** No, general terms for --

**MR. GRIFFON:** Oh, okay --

**DR. TOOHEY:** -- the small -- I'll say the,

quote, smaller sites.

**MR. ELLIOTT:** Does that include AWEs?

**DR. TOOHEY:** Yes. Well --

**MR. ELLIOTT:** See, AWEs are a --

**DR. TOOHEY:** -- generally AWEs --

**MR. ELLIOTT:** -- whole different bag of worms.

**DR. TOOHEY:** -- we get no data.

**MR. ELLIOTT:** You get no data for AWEs --

**DR. TOOHEY:** Exactly.

**MR. ELLIOTT:** -- by and large.

**DR. TOOHEY:** But what we've then been able to do in data capture trips where we've gone to a health and safety lab or records repositor and found some of this data, we've now scanned that in and entered it and linked it to the claimant.

**MR. ELLIOTT:** Let me be clear on what I just said. For AWEs, DOE doesn't help us out. We get no feedback for AWEs from DOE, so we're left on our own devices and the data that we do get for AWEs is, as Dick says, through our own capture efforts, through our own search and retrieval efforts.

**MR. GRIFFON:** Well, I -- I guess that's -- that's sort of an important question in my

mind. If you had, you know, 80 percent of -- of the people for this '49 to '55 time period had individual -- along with the CE-- you know, you could -- you could mostly rely on the individual data, and only 20 percent you had to go ba-- you know, that -- I think that would play an important role in this -- in our discussions -- deliberations. I know that -- I know you don't have that answer, but...

**MR. ELLIOTT:** We don't stop when we don't get a response from DO-- or when we -- DOE says we don't have it, we go back and we push them again until we are satisfied they can't find it, they don't have it or it's lost.

**DR. TOOHEY:** Well, again with the caution, to the best of my knowledge and belief at this point in time, I don't think we have any cases of claim files missing data where we did not have something on that file in the CER database. The CER database I think is more complete than the DOE submittals we're getting, claim by claim.

**DR. ZIEMER:** Thank you. Gen Roessler?

**DR. ROESSLER:** You've mentioned the HASL laboratories, not only the importance in this

project but -- or this site but others, have you had -- I'm trying to do a little mental arithmetic here to think of how old these people would be now who were responsible back at that time, and I think they probably are still around. Have you had access to any of the people who were setting up the procedures? Have you been able to talk to them and ask them any questions with regard to their goals and --

**DR. NETON:** Yes, we've -- we attempt, where we can, to do that. And I think I presented some indication at the Bethlehem Steel presentation that we discussed this with Naomi Harley, Dr. Harley, who was -- must have started when she was five years old there because she's still very much young, but she has provided us some -- some input. She actually measured the -- the air samples at many of these early facilities and gave us a pretty good description of the quality control practices of those measurements.

We're trying to contact Al Breslin, who some of you may know. He's still living in New Jersey somewhere, but we've not been able to contact -- he was the architect of the early AEC/HASL

air sampling program. We have indications of write-ups by him in the '60's speaking to what the process was early on, but we felt it would be better to get it directly from his mouth. Some of you may know Sue Pazanne*. She was not there directly in those time periods, but she is a well-respected radiochemist who has quite a bit of institutional knowledge about past activities at HASL.

We have been there. We visited the laboratory. I have sort of a unique situation that when I was at New York University obtaining my doctorate, there was a very excellent collaboration between New York University and the Health and Safety Laboratory in lower Manhattan, so we -- we communicate fairly regularly with those folks.

**MR. ELLIOTT:** We actually had Naomi write up a description of the procedures and the practices as she could recall and we presented that doc-- I think that's -- that was for Bethlehem Steel, but it's applicable for this situation.

**DR. NETON:** Right, and we've also been to the HASL facility twice now for -- for data capture efforts, to collect records and also to look

for procedures. Some of the early procedures are actually still available, but not many.

**DR. ROESSLER:** I think from my perspective in health physics, HASL has been around for a long time, has a very, very good reputation. I can't say specifically on this site, but a very good reputation for running reputable, credible laboratories.

**DR. NETON:** I will have to qualify that, though, and say that HASL does have that reputation, but they did not do all the analyses at Mallinckrodt, just to be -- to be -- let the record show that. But I would say that one reason we have some comfort is after '49 much of the health physics work at Mallinckrodt was done under the tutelage of the HASL folks, which gives us a little more comfort there.

**PETITIONERS**

**DR. ZIEMER:** I think we perhaps are ready to move on and hear from the petitioners, and I'd like to thank you, Larry, for your presentation. I'd like to turn the podium over to Denise Brock at this time, representing the petitioners.

**MS. BROCK:** I would like to thank the Advisory Board for again affording me time on another busy agenda, and I'd also like to commend the Board on their decision and expeditious recommendations to the Honorable Secretary Leavitt on the SEC petition regarding Mallinckrodt years of 1942 to '48.

I'd also like to thank Dr. Lew Wade, Dr. John Howard, the OCAS staff, NIOSH staff, Department of Labor, as well as Senators Bond, Talent, Harkin and Grassley, along with all the members of the Missouri and Iowa Congressional delegation who have been so helpful in this SEC process.

I'd also like to state that I wrote this statement a few days before I even came here, and since we were here and we've heard statements from other people in the audience and myself, a lot of this is going to be repetitious, so please excuse me for that, but it's going to be too hard for me to kind of pick and choose through it.

I've also interjected some notes, even on notebook paper, so kind of bear with me with some of this.

Twenty-seven years ago yesterday while I was at school, my father died in my brother's arms. I remember waiting for the school bus that morning. I yelled goodbye, but my dad didn't answer. And I decided, for whatever reason, I was going to wake him up so I walked back to his room. I didn't really care if I missed the school bus. I was probably actually hoping I would, and I -- I walked back to his room. His oxygen mask was on and the room was cold and kind of damp. It always felt like that, even if the sun would come in through the windows. I always remember that feeling. So I said goodbye to him again out loud and I still didn't get any response. So I leaned down and I shook him and he woke up, startled. And I said bye, Dad, I love you. And for the last time in my life my father looked me in the eyes and said goodbye, my girl, I love you. Several hours later, while I was at school, my brother came to my classroom and told me that my father had died. Sorry.

I find it so ironic standing here before you today so many years later asking for justice for my father's coworkers. I've heard that we

are all put on this earth for a reason. I don't think I'm here by coincidence. I don't think it was just happenstance that in 2001 I heard about this program. I was blessed. I feel like, for whatever reason, God let this be my purpose, and I just hope my dad can see me and I hope that he's proud.

As I stated in my previous statement in St. Louis, my father worked at Mallinckrodt from 1945 until 1958. He died at age 52, but not before years of pain and suffering from his radiation-induced cancer. My mother, thankfully, has been compensated under this program. And I'm here today, as I was in St. Louis, not asking you for compensation for my family or for myself, but for those workers and survivors who cannot, for reasons of health or finances or who I've stated before cannot begin to fathom the complexity of this program.

I'm here to honor the memory of my father and the coworkers who will unfortunately never see or hear an admission of guilt, nor receive an apology or payment. I'm here to ask the Board to consider my statements, my findings and my pleas in the decision that they must render

regarding the remaining years of 1949 to 1957 requested in my SEC petition, 00012.

And I'm not here to deny that NIOSH has a collection of Mallinckrodt data. I am here to state that what data exists possibly has major credibility issues. I'm also here to say that quantity of data does not necessarily mean quality of data.

Mallinckrodt was the first U.S. feed material processor for the United States atomic weapons program for World War II. Their work began in 1942 by producing a ton of pure uranium a day. Mallinckrodt remained a prime contractor for processing until 1957 when the last Mallinckrodt plant closed and the last of its employees in those operations were terminated. Mallinckrodt hired at least 3,500 employees, and they were assigned to these secretive operations for a varying length of time, having multiple job titles and descriptions during this time period. The workers at Mallinckrodt who helped build this atomic pile helped win the cold war, and they gave their lives for their country, and they're known to be among the most highly exposed workers to internal and

external radiation in the entire history of the United States Atomic Energy Commission.

By NIOSH's admission, many of these workers worked long enough at appalling concentrations of alpha-emitting dust to accumulate more than a permissible lifetime inhalation exposure. I would like to restate again for the record that I respectfully disagree with the NIOSH conclusion that it is feasible to estimate dose for this time period.

NIOSH's position is that HASL did its own monitoring, and this means that there is verification on the Mallinckrodt data that was not in place prior to 1949. Again I'm unpersuaded that the post-1949 data is any more credible than that of Mallinckrodt's.

SC&A's audit report for Rev. 0 notes that there were dramatically different results for monitoring by Mallinckrodt and HASL of the same exposures. HASL data is higher in 15 cases and lower than Mallinckrodt in 12 cases. This is according to the chart in the SC&A audit report Rev. 0. If I understood correctly, NIOSH is actually using the lower on HASL than -- than the higher ones on Mallinckrodt, if I

understood that correctly. And on page 77 of Rev. 1 on the TBD, '50 to '54 it says it's unclear who actually did the urinalysis, whether it was Barnes or the AEC. So we cannot answer the question on who has reliable data or whether it's reliable at all. And this does not change the fact that there is evidence to doubt the credibility of any of this data due to the huge liability concerns of all involved. I'd also like to restate from the February meeting that there is no isotope-specific monitoring for raffinates. There was frequent exposure in plant six to these raffinates whose pathways for uptakes are not well understood. And I don't want to go into again -- Richard Miller touched on that yesterday about the lime and the exothermic reaction that happened, so I think you've all heard that I just don't feel the need to go back into all that.

But I do think that because of this reason and being no isotopic-specific urinalysis to quantify any raffinate uptakes, and the burden of proof on NIOSH is so high to establish internal dose, that this is the circumstances that Congress created the SEC, at least part of

it.
As noted above, the TBD does not address internal and external radiation dose from open wounds and burns, which I stated in the past workers have testified to and stated that it was quite prevalent. I was present at an SC&A interview with workers and I did videotape that. The workers discussed these burns, these acid burns and the open wounds, as well as numerous other things and -- I mean it wasn't limited to incidents or occurrences. They talked about a lot of things. I actually have a lot of these tapes and have offered those to NIOSH to share with their staff and the Board.
In the SEC petition evaluation report, SEC 00012-2, page 3, NIOSH is seeking the advice of the Board for the time period of 1949 to 1957. It also states that any documentation that raises questions concerning the integrity of data management or reporting at Mallinckrodt helps sustain the lack of credibility accorded by the Mallinckrodt claimant population to the government concerning the employees' radiological exposures at Mallinckrodt and concerning the dose reconstruction program

under the EEOICPA.

One of the issues brought to the Board's attention by NIOSH at the St. Louis meeting was an August 1975 memo titled "Notes and Summary of Visit by M.E. Mason, August 1975." This, according to NIOSH, disputed a 1972 memo from Mont Mason to Dr. Thomas Mancuso in where Mason states his concerns about the possible destruction of records identified as shelf list V2161. NIOSH further believed that the August 1975 memo confirmed the conclusion that these records were not only found, but complete. And even if NIOSH would be in possession of these records, it still does not speak to the credibility nor the completeness.

Since that February meeting, after NIOSH told the Board and the petitioners and the public that this particular memo was referencing to the records with the shelf list of V2161 and that they were in possession of such, they've now stated that their initial beliefs were wrong. This information can be found in the supplement to Mallinckrodt SEC Petition Evaluation Reports.

This obviously raised another red flag with me.

The memo was withheld until NIOSH was compelled at the February meeting to produce it. There was so much commotion over this revelation over this particular memo, and it was trying to discredit the memo that was in my petition. The initial findings of NIOSH were obviously an assumption and have now been changed. NIOSH now claims to have since recovered a records transmittal and receipt form from the Federal Records Center which appears to identify the contents of shelf list V2161. It actually says "appears". What does appears mean, exactly? Is this V2161? I've noticed it says 21, 22, 23, 24. I mean if it is, how do we know it's complete? How do I know? How does NIOSH know? How do we know it hasn't been altered or tampered with? And how do we know that NIOSH is not going to come back in a month from now and state that this wasn't it or that there's extra -- extra information or extra data? NIOSH also states in the supplement that because this records inventory form did not include actual exposure or process information of possible relevance to the development of the Mallinckrodt site profile, it was not grouped

with other records that were identified as relevant for that purpose. NIOSH also claimed that this memo somehow proves that the latter years of the record/data keeping at Mallinckrodt are above reproach because HASL or the AEC was involved.

This document, in my mind, does just the opposite. It confirms my views that there are numerous problems and inconsistencies. It also confirms that there remains much uncertainty about the validity and completeness of data for not just the '42 to '48 time frame, but the remaining years. And as far as the AEC, as I stated at the February meeting, they allowed this operation to continue with unacceptably-high levels and saw it as an opportunity to experiment on worker population and not as a moral outrage.

My first thought on this memo is that it's not authored by just one person. The first page speaks about Mason in the third party in three separate statements. The first statements says, and I quote, I can make a study without the AEC NYO documents but they are authentic references above the level of contractor bias

or Mason shortcomings, end quote. Number two, I quote, Becher-Mason conflict about usefulness of Mallinckrodt U.U. shortcomings, unquote -- I'm sorry, numbers as an indicator of body burden, end quote. Number three, Becher argues that I am contradicting myself in that at Weldon Spring Mason used U.U. values to report exposure to AEC in compliance with regulations of 100 CFR 20.

This not only shows that Mason clearly is not the author at the beginning of this memo, but clearly speaks to the contractor bias.

NIOSH again is assuming that Mason authored these notes. NIOSH also states in their supplemental issue response that Dr. Mancuso ran out of funding and his study for the Mallinckrodt populations workers (sic) was not completed or released.

Dr. Mancuso was terminated. He was blackballed. His findings or conclusions on the studies he did were inconvenient for the AEC. When they hired him I understand that they were so sure that he was going to come back and be government-friendly, they actually referred to it as Mancuso's Folly. When his

conclusions were not as they wished, Mason actually had to take his findings and move those to other places. Many years later I believe he was exonerated, but I believe that he had years of problems with the Atomic Energy Commission, and that was due to, again, the conclusions that he had that were inconvenient or not AEC-acceptable.

NIOSH states that based on their review of the 1975 Mont Mason notes, the context of those notes and the review of the data, NIOSH found no issues that would prevent dose reconstruction. I wonder if I'm reading the same notes, because this memo solidifies and confirms the many uncertainties that exist regarding the Mallinckrodt population and any data which exists.

On the first page of the August 1975 memo there are several different opinions on what numbers or data are even useful. On the second page the author states that the broad subject of measurement of internal depositions, the value of urine bioassay in assessing body burden, the relative worth of body gamma counts versus urine and fecal bioassay is as old as the art

of health physics, and older in industrial hygiene.

On page 77 of Rev. 1, the top paragraph again states it's even unclear who did the urinalysis on Barnes and Mallinckrodt. I also have a 1951 memo that was attached in my petition that actually tells Mallinckrodt to stop sending urine samples for a certain time period because the lab was overworked.

The 1975 memo also indicates that there are large numbers of these employees whose records did not list them by Social Security number and then later had to be manually cross-matched, still leaving some out. One must account for human error. We have no assurance that there is complete or accurate data for any individual Mallinckrodt employee, and neither does NIOSH. There is serious question as to the credibility and completeness of this entire Mallinckrodt data.

My daughter had a call from a worker who told her he was having a difficult time getting his records from Mallinckrodt or the Department of Energy, wanting to see individual records or whatever he had. Come to find out, he found an

old badge that he had been assigned, and the badge had his Social Security number on it, but actually had the wrong middle initial. So he remembered talking to his supervisor at Mallinckrodt and they had actually discussed some of his records being mixed up with either his brother's or somebody else's. And we've noticed through other workers a lot of times their records would say, for example, R. Jones -- and maybe that would be Ralph, and then you'd have a Richard Jones. And when you have to cross-match these things, there was concern that perhaps people's Social Security numbers with the name, with the data, were all being confused. And if anybody's interested, my daughter had written something up, has a copy of that gentleman's badge and all the information that was needed and it's actually been notarized.

NIOSH provided a summary of what was in the five boxes that they have retrieved. Box one is approximately 75 percent film badge readings, many of which -- according to NIOSH -- are duplicative and already have been addressed in the TBD. Data from '46 to '49 has

already been incorporated. They state that some additional documents that support dose reconstruction can be incorporated into the TBD -- can be incorporated -- but that '53 to '58 time period is not yet incorporated, which this information is largely specific to particular operations. It can be incorporated into the next revision of the TBD. How many times are we going to revise this? Again, I understand it's a living document, but these workers are dying. They don't have years to wait for this. The remaining 25 percent is air sampling data, breath analysis, et cetera -- but for what years and for whom, and is this already incorporated?

Box two and three are insignificant to this petition because it retains Weldon Spring information.

Box four is Mallinckrodt dust studies and annual uranium urine results for '48 to '58. To that I must again state garbage in is garbage out. How do we know the credibility of this data? We already know that zeroes were recorded for dust and urine when no tests were even taken. And checking for uranium in the

urine does not account for other things such as thorium or plutonium.

And as far as the plutonium -- I'm actually looking for something; give me a minute here.

(Pause)

In Rev. -- it looks like Rev. 0, page 23 of 32, and I'll just take a part of this out of here -- there may have also been trace radiological impurities supplied, uranyl nitrate, hexahydrate, recovered from separations operations at Hanford and sent to either -- to K-65 or Mallinckrodt for processing. SC&A review of Rev. 0, pages 43 to 44. NIOSH has not found any data on these operations. Page 29. And I'm wondering if NIOSH has actually investigated that to see if in fact there was plutonium.

As I stated, I have several workers that feel that there was plutonium at the Destrehan Street site.

Box five is 75 percent Weldon Spring film badge and the remaining 25 percent is film badge for Destrehan during '46 to '49. This is largely not applicable. I already have a cohort from '42 to '48.

I'm curious if there's been any detailed discussion or explanation on what is in these boxes. Does NIOSH findings -- are they the same as with the TBD. And I -- I don't know if it's been assessed -- I think Larry may have just discussed this -- and by who or if there's been any individual assessing of this -- independent.

Back to the August 1974 memo, page 6 continues to talk about disagreements and information not matching. Page 8 of this memo refers to the J factor. In the same paragraph it states, and I quote, other adjusting factors were used in calculations to produce an I index value for each person where I equals 100 was presumed to equate to a potential lung dose of 600 rem from alpha dust.

Well, no wonder the company and the AEC had liability concerns. In my petition there is substantiating documentation as to these concerns and in graphic explanation as to allowing these employees to get to levels sometimes in excess of 1,000 rem to the lung. I understand that the annual limit at the time was 15 rem, a standard set by the AEC. But yet

by their own admission they allowed these workers to be exposed to over 40 times the set amount before even addressing the problem.

In my SEC petition I submitted a memo dated 10/3/1972 to Dr. Mancuso from Mont Mason. The third paragraph reads both Mallinckrodt and the AEC were mindful of the sensitive human relation problems and the health department bent over backwards to gain and hold the confidence of rank and file, as well as union representatives.

It goes on to refer to a 1949 dust study and subsequent removal of a number of over-exposed workers, and it then reads, and I quote, every action, every statement by management was carefully thought through. Carefully drafted explanations and responses were prepared in advance of announcing the transfer of people. Managers, supervisors, medical staff and health department staff were all coached and coordinated. As part of caution and on the advice of attorney, a formal report was never prepared on this study. Thus there is no document to subpoena, only a list of names and numbers and work sheets. There was no lengthy

description of the basis for calculations to be pulled apart by the scientific community, with the possibility that such controversy would undermine confident -- employee confidence in the company's safety measure, end quote.

Is not NIOSH and ORAU a scientific community? And are we to believe that after all of the lies, the cover-up, the mishandling of data, the liability concerns, that just because HASL has oversight that the surge of conscience and transparency and honesty just happened all of a sudden for these latter years? This was a joint effort to keep these workers in the dark and to quell any liability issues at that time or in the future. The mind-set of Mallinckrodt and the AEC was horrific.

As one reads through the remaining pages of the August 1975 memo that NIOSH has found, it appears repeatedly that the data are much in question. It seems as though the data has been reworked consistently. On page 23 there's reference to either Becher or Mason authoring at least this and the following pages, but I've yet to ascertain which one of those gentlemen actually did that. This entire document

illustrates the multi-faceted problems in collecting data, recording it at different times in different ways using different practices, and then trying to keep it all together. It confirms that there are multiple opinions as to the quality and completeness of any of this.

I don't want to insult anybody's intelligence by reading aloud from that or to con-- and continue quoting from the memo. I know that you've all probably had an opportunity to read it, and I'm quite sure that everyone has taken note of the numerous issues that I have.

I would, though, like to call your attention to a memo of January 31st, 1951 from Eisenbud to W.E. Kelley -- or from Eisenbud to W.E. Kelley states about a year ago you asked if we -- if it would be possible for us to estimate our potential liability among the long-term Mallinckrodt employees. As I explained at that time, you presented a rather knotty problem, one which, in the present state of knowledge, would not be answered even to a first approximation. This memo again was a 1951 memo.

I understand that SC&A have only been able to do a partial review for Rev. 1, so it's impossible for me as a petitioner to prepare my case and have further quality arguments and reference to a site profile when our auditors haven't been given a chance to complete the work.

It puts me at a distinct advantage (sic). I can't not (sic) argue or comment without reading and reviewing these TBD shortcomings. I realize that SC&A did the best they could, but because of this revelation of Iowa's cohort being withdrawn from them and it had to be reviewed again, it put me and my claimants at a disadvantage, as well. It was kind of put on a back burner, and SC&A were -- were trying to look at these at the same time, so it was rather difficult. It put us all kind of under the gun, so it made it really difficult for me. I was finally able to take a look, obviously, at the partial report. But I actually have a to-do list that I want to talk about in a little bit that NIOSH has.

I have another concern about the sperry cake and the issue of the dermal contact. I believe

that there were no specific numbers in reference to that. We know that dose consequences from exposure raffinates are significant. Routine inhalation of even a milligram quantity of sperry cake, one milligram per month over a few years, has a potential for significant internal radiation dose, notably to the bone surfaces and the lungs. Thorium 227, the main decay product of actinium 227, is a potential concern for the lung dose, as well.

Dose from the radionuclides has not been evaluated in any of the documents I've seen, and I don't see anything in Rev. 0 to help answer that, nor -- I don't think there's anything in Rev. 1.

I don't really understand a lot about the 95 percent confidence level, but I want to know if I understood correctly that workers who were marginally exposed were averaged down. It looked like the time-weighted averages discriminated against them, and that's a concern for me, as well.

And I obviously have no background in health physics, but I can read. And I know that Janet

Westbrook from the beginning has stated that NIOSH could dose reconstruct the entire population of Mallinckrodt workers. She's opposed this SEC from the beginning. I also know that in Rev. 1 from the beginning she's stating that dose can be performed from '42 to '48, and I guess I just didn't understand that. I understand now that it's been addressed. But something as simple as work hours is incorrect, at least the way I look at it in Rev. 1, it looks as though these workers were working maybe five days a week, maybe six days a week at -- at 40 hours or 44 hours. That is incorrect. My workers have told or the survivors' workers basically state that they worked seven days a week, 40 plus hours. That might be one of the few things that survivors know, but one of the few things. And the workers that are living always state to that fact.

I'd like to talk about the splitting of this petition again. I know we brought this up or I brought it up in February, but by breaking this up into these subclasses has serious equity issues. For example, if I have a worker that

worked in 1947 and worked his 250 days and he has one of the 22 SEC cancers, he has a coworker that started in 1948, but he's missing that 250-day mark, I would have to go back to these workers and try to explain to them how their coworker was able to have that same cancer and job and be compensated in an expeditious manner, and they're not covered. There just -- it does not seem equitable to me and it's very difficult to have to try to explain it. I don't think there is an explanation.

For the record, I would also like to talk about coworker data and survivor claims. I also wanted to state, in reference to that, that when I sent in the original claim for my mother's claim I happened upon something called a Leo Goodman incident report. It's been so long I don't remember exactly what was in that, but there was some information, probably two or three things, in reference to incidents or occurrences at the Mallinckrodt site. I noticed when I was reading through NIOSH's things that they had never heard or found anything in reference to any incident at

Mallinckrodt, and I just don't think that's accurate.

I've sat through telephone interviews with these survivors -- and granted, they don't know much. You're talking about people that are in their seventies or eighties who have years and years ago heard from a spouse that they were involved in some sort of accident, and that's usually how they refer to it, an accident. So during this telephone interview the NIOSH CATI question is raised to the survivor and claim -- you know, claimants in reference to this accident or occurrence. And if by some stroke of luck a survivor can remember their spouse telling them about a situation, they're asked specifics. This is a monumental task for a spouse or a child or even sometimes a grandchild to hurdle. They're asked if the worker ever had chelation therapy. Every claimant I've had asked me what is chelation ther-- I don't know what chelation therapy is. They're expected to know details that they received second or third-hand, or maybe not at all, and sometimes as back (sic) as the 1940's. They were also required to have two witnesses

to this accident.
Well, you know what, my dad was involved in an accident. He worked there before I was born. My mom was 78 when we filed her claim. She hadn't really remembered the accident, but my sister did. So we had to rely on that memory of -- of my sister triggering my mom.
My uncle was also involved in an accident there, and I -- I think I've brought this up before. When my aunt went through her telephone interview, I was with her like I'm with any of the claimants that ask for my help, and I was on the -- the phone, the extension, and she was going through the questions through the interview. Typically everybody we have from NIOSH or ORAU are very polite. They're helpful. They're empathetic. But every once in a while -- you know, when you get that volume of people, you get somebody that's maybe not so nice or has had a bad day.
This was horrible, because this woman began to ask my aunt questions about this accident, and she wanted to know if my uncle would -- had chelation therapy and my aunt didn't know what that was. She then asked her about being

hospitalized. He was. My aunt didn't have any specifics other than he was -- he was hurt and he was hurt badly, and that he was in a hospital for several days.

The lady actually was acting like she was deposing her. This is embarrassing. It's humiliating and my aunt began to cry. She also said well, I don't know -- she tried to finish a statement saying something about I was pregnant at my Grandma's house, and this woman actually said to her oh, let me get this straight, being pregnant somehow affects your memory. This is not -- this is inexcusable. You do not talk to anybody like that, but the-- they are -- they're acting like they're deposing these people or like these people are lying.

I did make a phone call to Dick Toohey and he's wonderful. He addressed it and took care of it, but I can't be with every one of these survivor claimants. There's lots of them that I'm not able to -- to get with and help. I'm one person, and I can't always do that, and they do become very stressed out. They have no way of knowing these things.

And when you talk about coworker data or wanting to talk to coworkers, there haven't been hardly any coworkers in my group that have been talked -- first of all, biggest part of them are deceased. And when you have a situation where all the coworkers are gone, how in God's name are you going to do a dose reconstruction when you have absolutely nothing to go by with a coworker? There's nothing. These survivors don't know that type of information. And if your individual records are missing or not complete, this creates a huge, insurmountable problem. It -- it's unbelievable to me. I -- I think there's all sorts of issues with that.

I have some things in my possession -- I actually had my husband make copies of it that he can hand out at -- will hand out at the end of this, and it's just some interesting things that I ended up getting ahold of I'd like to talk to you a little bit about.

The first one is an office memorandum from the U.S. government dated 4/12/1956 from W.B. Harris, chief industrial hygiene branch HASL, and I won't go into it word for word, but this

memo talks about laundry being a very hot item. And they have hot in parentheses (sic). It's very disturbing to me, talks about the contamination via the laundry and how it was transferred back and forth and -- and different things to that effect.

The second one is a letter to Mr. K.J. Caplan, Mallinckrodt, from W.B. Harris, HASL, dated 01/12/1951 thanking Mallinckrodt for supplying breath radon levels, but questioning why Mallinckrodt has not started using the respirators.

Number three, an October 16, 1951 memo, W.E. Kelley, New York Operation Office, C.L. Karl, area manager, St. Louis, area request for capital improvement project. Plant 7 has incomplete air supply, not properly ventilated, causing health hazards and poor operating conditions, requires air changes within all areas of the plant, but the funds were not even available and didn't know if they would even be able to get that.

The fourth, March 28, 1952 to Dr. C.D. Harrington from Mont Mason, health group monthly report. No engineering improvements of

any consequence completed during February. Plant 6 showing upward trend, but neither know the cause nor the cure.

January 21st, 1954, operations give rise to excessive dust exposures influenced by negligent housekeeping. This was R. Kirk, director production division to W.B. Harris, HASL.

May 23rd to Mont Mason from HASL, toxicity of thorium indicative of substantially more thorium in the body than ever reported.

May 27th, 1952 to Merril Eisenbud, Health and Safety Lab, from Ed Kehoe, chief fire and accident branch. I was going to try quoting this. I will have to find it. This has got to do with the ether house and the detached prose in this thing are unbelievable to me. They're actually discussing whether or not this ether house is going to blow up, and if it blows up, this guy's right; if it doesn't blow up, this guy's right. That is the mind-set of these monsters. They're talking about human life. They're talking about somebody's father inside of this building and they could give -- they don't care. I mean it was -- it was a joke.

You know, if it blows up, that guy dies, I guess you were right; if it doesn't, oh, well, you know, I lost $10 bucks. I mean that's -- that's the mind-set of these animals.

June 3rd, 1954, director C. -- D. -- I'm sorry, D.C. Moore, director of engineering and construction division, W.B. Harris, ether house again, modification, Mallinckrodt indicative of still a hazardous condition in the ether house that if not corrected will result in serious loss.

February 27th, 1953, Dr. D.C. Harrington from Mont Mason, dust control for maintenance work in plant 7, still and conclusively a serious dust problem in plant 7, completely closed system for handling dry powders, stating that it is logical that any opening of any part of this system could result in gross spillage. No attempts yet made to convert concentrations to an integrated exposure picture, but obvious additional dust control is needed.

The 1951 memo I referred to, W.B. Harris to C.L. Karl, urine samples, requesting that due to unusual workload Mallinckrodt discontinue sending these urine samples until after January

1st.
And number 11, January 30th, 1951, W.B. Harris from Knowlton Caplan, Mallinckrodt, tributyl phosphate toxicity and hazards more than realized. And I'm sure that obviously doesn't have anything to do with radiation, but I found that interesting.
I'd also like to talk about some things that are sort of promissory notes or IOUs. I understand that the TBD has been revised and that it's partially audited by SC&A, and SC&A found some weaknesses or some things that needed to be corrected. Well, again, in February we had this revelation of this 1975 memo. We had six boxes that turned into five. My claimants, my workers -- living workers, what are left -- and the survivors were put on hold because there was a possibility that there was going to be some -- something in these boxes or something in this memo that was going to change or be able to help dose reconstruction. There was no thing in there that was going to help. Nothing's changed. There is still assumptions, still -- still guessing. And I don't mean to be mean to

anybody at NIOSH or to be pointing a finger at anybody, but I'm looking at this from the side of the workers.

Congressional intent was not to do this forever and ever and ever. This SEC -- the petition was put in in July. It's been almost a year. There's something about the 180-day time frame, and I -- I haven't looked into that completely, but I understand that we need to look at what we have already. Nothing's changed since February. Credibility issue is still there. We have no assurance that any of this is complete. We have no independent review or independent assessment of -- of NIOSH's findings or any of this data. It's all guesswork.

And we also have this list of things that still need to be done. Number one, need to estimate the 95 percent values for intakes, for air intakes. Number two, you have to deal with the oro-nasal breathing. Three, you have to complete development of surrogate -- surrogate coworker data for external doses. You need to review the boxes of data, '53 to '58. That hasn't been incorporated yet. How to deal with

the integrity of this data that's not incorporated but made up by a set of numbers. You have to acknowledge that people had -- had zero entries, no measurements with film badges. We need to revamp and revise all radon data, with that statement in mind, not -- not average doses with uncertainties. You need to put on the table the quality of the data and -- that ha-- has to be fixed. The urinalysis until 1954 pertaining to the urinalysis or the methodology. They need to address large particle ingestion. It still hasn't been done. Questions on the specific area of cuts and burns and sperry cake. Film badge still needs to be -- film badge data still needs to be adjusted. A question of geometry, like where the badges are in reference to where the worker is working. I mean this is -- this is a pretty large list, to me. We need -- they need to fix the interview process for the survivors and the coworkers. There needs to be a comparison between the Mallinckrodt and the AEC data and why that Mallinckrodt sometimes is -- if it's higher, why is AC -- AEC being picked. That -- that needs to complete the accident

methodology. There's just this huge to-do list or promissory notes or things that need to be revised.

There's talk about revising an already-revised site profile. The constant revisions are great, I guess, if you're trying to perfect something and you have years. And as Dr. Ziemer stated the other day -- or yesterday, you know, if we had a decade. These workers don't have a decade, you know. They have now.

In conclusion, Congress emphasized the need of SECs in the FY 2006 Omnibus Appropriations Report when it urged NIOSH to grant SECs when individual monitoring was not performed, states radiation exposure. The committee strongly encourages NIOSH to expedite decisions on petitions filed under the procedure for designating classes of employees as members of the Special Exposure Cohort, 42 CFR Part 83.

It was Congress's intent in passing the EEOICPA of 2000 to provide for timely, uniform and adequate compensation for employees made ill from exposure to radiation, beryllium and silica while employed at DOE nuclear facilities or while employed at beryllium vendors and

atomic weapons facilities. The committee urges the Department to recognize that in situations where records documenting internal or external radiation doses received by workers at the specific facility are of poor quality or do not exist that workers should promptly be placed in a Special Exposure Cohort.

I ask the Board to consider the amount of uncertainties regarding the integrity of the Mallinckrodt data. I ask you to emphasize (sic) with these ailing workers and survivors, who many have had claims waiting dose reconstruction for years. I ask you to consider the fact that Rev. 1 has not been completely reviewed by the audit board, nor has NIOSH assessed the credibility of the data or independently had that assessed.

The August 1975 memo that was brought out at the last minute of the February meetings, and NIOSH's initial findings then, have now been retracted. The six boxes that were brought up at that same meeting are now five boxes which primarily are data that is already in the TBD, or not even pertaining to these years or the facility.

These workers were poisoned. They were lied to, experimented on, defeated physically, emotionally and financially, and we're allowing this abuse to continue. I have read the criteria one must meet to have inclusion in the SEC. I've spent years digging up records and memos. I've interviewed and taped numerous workers. I've even tried doing this legislatively. I have jumped through every hoop put in front of me. I feel it's certain that there are issues -- enough credibility issues to state that NIOSH cannot do internal dose reconstruction with sufficient accuracy. I respectfully state that what seems to be getting reconstructed is Congressional intent. There is no scientific evidence that NIOSH can do this dose reconstruction. They haven't assessed the credibility of the data. There are all sorts of issues with needing to do things to correct that TBD.

A procedure was set yesterday. The Board voted on the case or data before them, not promises to come up with something better later. Dr. Ziemer again stated yesterday that he wished we had a decade to find this information. Again,

I need to restate these workers are dying. The survivors are dying. We need to look at what's already in front of us, not the promises that NIOSH or anybody makes to revise and fulfill the things that they need to do on this list. These workers deserve closure. They deserve acknowledgement and they deserve to be in the Special Exposure Cohort. For the sake of timeliness and equity, I urge the Board to approve my SEC petition for the years of 1949 to 1957. I thank you again for your due diligence and your kind attentiveness.

I just want to state again that I understand NIOSH feels that they have enough information to do this. I understand that they are willing to correct things or take care of things like maybe the external dose. I think it was like chapter seven, if I remember yesterday, is on hold. I'm urging you to take a look at what we have in front of us now and to see that we have no assurance. When the AEC had these liability concerns and Mallinckrodt had these liability concerns, they did things to protect theirself (sic), not these workers. Their fate lays in my hands and in your hands. They can't

continue to go on like this. The emotional roller coaster, besides their limited life span, is just -- it's at its limit. So I thank you again and I hope and pray that you will grant them their SEC.

**DR. ZIEMER:** Thank you, Denise. Denise, do you have additional individuals that you wish to have speak in behalf of your petition today? I know you had a number of folks last night, but you do have an opportunity, if you have additional --

**MS. BROCK:** I do. I know Dr. Dan McKeel wanted to say something and possibly Tom Horgan.

**DR. ZIEMER:** And I think you have something to distribute. Your husband is making some...

I want to ask, if I could -- Dan, do we need to take a break or are you wanting to be fairly brief or --

**DR. MCKEEL:** (Off microphone) (Unintelligible) very brief.

**DR. ZIEMER:** You're brief. Please proceed. Thank you.

**DR. MCKEEL:** (Off microphone) I appreciate that.

So again good morning to the Board, and it

seems to me that we have the core issues well-defined for the Mallinckrodt 1949 to 1957 class, and they are data timeliness, sufficiency and accuracy.

As was true yesterday for the IAAP, NIOSH holds that they can perform adequate dose reconstructions. Testimony you just heard by Denise Brock and Sanford Cohen Association (sic) have provided to the Board evidence that suggests otherwise, that this is not feasible.

With respect to timeliness, I think we -- we have to pay attention to Congressional intent. And we have already heard very strong statements, the strongest possible, from four Senators, Harkin, Grassley, Bond and Talent, and also from two Congressmen, Leach and Akin, that the -- both the Mallinckrodt and the Iowa Ammunition Plant worker claims have not been handled in a manner consistent with Congressional intent.

I would note that we've also heard that claims have been submitted by 400 individuals who represent both the Destrehan Street and Weldon Spring facilities manned by Mallinckrodt. But there are also 3,200 to 3,600 total workers, so

we can also figure then that only ten to 15 percent of those people have even filed claims. And I think it's fair to say Denise has put forth heroic efforts on their behalf to do so. One reason I think is undoubtedly that the daunting nature of the claims processing and numerous bureaucratic snafus that have been well documented by the claimants and survivors themselves.

So I think on the timeliness issue it's time to vote this morning.

Is there sufficient and accurate data to do dose reconstructions, that's the key question. The class clearly passes the health endangerment test, so we don't have to worry about that. However -- and I think it's clear that they were harmed, and NIOSH acknowledges that.

As I mention on page 8 in paragraph G of my written comments, there are many instances -- some of them noted in Rev. 1 -- where the safety procedures were violated, even though it's fair to stress that on paper, as of 1948, a much stronger safety program appears to have been instituted at Mallinckrodt Destrehan

Street. However, those safety procedures were violated in many different ways.

Rev. 1 notes that a room door to the ore room was left open for convenience or negligence, so there was excess dust exposure to the men from that. Conveyor belts stuck and ore still had to be hand-scooped, even in this late period of, quote, automation. We also find out that the Atomic Energy Commission rejected extra shielding around the K-65 raffinates, and these are the ones that resulted from the very enriched K -- the Belgian core (sic) pitchblende.

All of those events -- to me, at least -- seem impossible to quantify with the data that's on hand, and I need you to bear that in mind, please.

NIOSH claims that they have voluminous data. But the key question is, can they do the reconstructions with what they have given us now. And I think the focus is now.

We heard that the CER database data, for example, which is the fall-back reference database if DOE or ORAU does not have data for these people, and we find out that the CER

database has not been validated independently by the contractors or by -- by NIOSH.
SC&A has listed many to-dos that Denise has well gone through. Some of those involve steps that have to be taken to validate the data. And as stressed by Denise, these are things in the future. They're not here today.
Dr. Neton's slide yesterday depicting theoretical ways the air, urine and source radioactivity I'm sure was interesting to all of us as a possible way that these kind of various data could be cross-validated, and I think that's true. However, what the slide showed me was -- and -- and graphically highlighted, I think -- is that he used data that had to be just made up. This has not been done yet with real data, and it needs to be.
If I may point out that another major departure occurred that's been brought before you on how NIOSH and SC&A viewed the material in those boxes. NIOSH examined them and they decided that there was nothing in the boxes that should in any way change their ability to do dose reconstructions, and they said the data basically was already captured and so no

problem. However, you heard also yesterday that Arjun Makhijani from SC&A showed his slide 13 that reported many different things that they felt needed to still be done to even validate the content of those boxes, 1953 to '58 data was not captured.

There were other bullet points indicating that further data analysis of job categories, radon assessment and air concentration still needed to be done.

So it brings me to my final point. If your mandate, which I think it is, is to be sure that the law is complied with in a timely way and with Congressional intent, which I'm sure we do indeed need to do, I urge the Board to weigh the many data flaws the petitioners have documented and recommend that the MCW 1949 to 1957 class be approved as a Special Exposure Cohort. Thank you very much.

**DR. ZIEMER:** Thank you very much, Dan. Denise, did you have any others that you wished to have address the assembly on behalf of the petitioners?

**MS. BROCK:** I don't think so. This is weird for me 'cause I'm used to about 1,000 people,

so this is a little odd.
I did forget to mention something, and I just -- I just want it for the record. I ended up getting ahold of a -- the -- what is it called, the professional judgment review, Ken Fleming -- I don't even know who that is, but I -- there was something in here so disturbing -- probably numerous things that were so disturbing to me and I just want it for the record, and I'd like to state something that I -- that I saw in here. The supporting documents provided by the petitioners were attached to the Special Exposure Cohort petition form B received via FAX on July 15th, 2004 and a supplemental FAX that was received later on September 30th. In short, the supporting documents provided for the SEC petition 12 neither, one, support the feasibility of conducting dose reconstruction using maximized exposure assumptions present in the existing TBD, nor do they provide information that indicates that there is a reasonable likelihood that such radiation dose may have endangered the health of members of this proposed class.
That is -- that's unbelievable to me. How

could anybody -- and they call it a professional judgment -- I don't know who that is. That's unbelievable to me.

**DR. ZIEMER:** Denise, perhaps you could identify what -- what is it you're reading from?

**MS. BROCK:** It's a profes-- it's professional judgment -- professional judgment. It's a memo and attachment describing professional judgment review of the supporting documents that were submitted by the petitioners of SEC petition 00012, and --

**DR. ZIEMER:** I think we did --

**MS. BROCK:** -- it's signed by a Ken Fleming.

**DR. ZIEMER:** -- we did receive that. That was --

**MS. BROCK:** And a Dan Stempfley?

**DR. ZIEMER:** The Board received a copy of that. I recall it from our last meeting. It was a review by somebody.

**MS. BROCK:** This was -- this thing was dripping with contempt and disdain for me -- I mean it was targeted at me. There's a lot of other things in here. To me, I found it offensive, though. I can handle that, but to say these workers were not endangered. I hope that

you're not using this person for a professional judgment because I think he even stated that '42 to '48 could be dose reconstructed goes against NIOSH's own findings. I -- that's --

**DR. ZIEMER:** Richard, can you identify for us?

**DR. TOOHEY:** I would just say that document was part of the petition evaluation process that was prepared by a member of my staff who is a certified health physicist working on the petition evaluation --

**DR. ZIEMER:** This is an opinion from someone who reviewed the petition --

**DR. TOOHEY:** That is --

**DR. ZIEMER:** -- on behalf of ORAU or NIOSH?

**DR. TOOHEY:** Well, both. ORAU does a petition review which we then provide to NIOSH for their review and approval.

**DR. ZIEMER:** Thank you.

**DR. TOOHEY:** I have lots more numbers, if you want them.

**DR. ZIEMER:** If you have a lot of them, I think we're going to get them after the break.

**DR. TOOHEY:** Okay.

**DR. ZIEMER:** Okay, let's take a break. Thank you.

(Whereupon, a recess was taken from 10:35 a.m. to 11:00 a.m.)

**DR. ZIEMER:** I think we're ready to call the session back to order.

(Pause)

We're ready to proceed. Leon I think will be back with us momentarily.

**BOARD DISCUSSION OF MALLINCKRODT SEC PETITION**

Board members, I want to ask if any of you have any questions that you particularly want to address to the petitioners who've just made their presentations. I give you that opportunity at this point. Is there any specific questions for the petitioners? Yes, Rich Espinosa.

**MR. ESPINOSA:** On the professional judgment, this is directed toward Denise -- on the professional judgment letter that you received, I'm wondering about the dates that it was issued and the date that it was received.

**DR. ZIEMER:** And while she's coming up there, Rich, I believe that was attached to the ma-- to our materials when we received from NIOSH their review of the petition. Denise --

**MS. BROCK:** I have it here. I need to look

through it but I believe that is right. It was attached, so I can look --

**DR. ZIEMER:** So as --

**MS. BROCK:** -- (unintelligible) copy.

**DR. ZIEMER:** As Rich Toohey indicated, that was part of their process where they send out the petition for some independent reviews or review, and that was an opinion that came back, and then was entered into the record on their behalf. Is that correct, Richard?

**DR. TOOHEY:** Yes, that is correct. I would also comment that one person's opinion on whether or not health was endangered is totally irrelevant because the definition of health endangerment is 250 days or a major accident. So...

**DR. ZIEMER:** Yes. But that -- that document I believe was part of the record that was provided to us because it was part of their review process and -- yes, Tom, did you wish to --

**MR. HORGAN:** Yeah, I'd like to address that last comment. I appreciate his candor on that, but when you have a professional judgment on this particular issue, and he is on -- paid

member on the staff of ORAU and they're -- and -- you know, how can you say that that is irrelevant? How can you say that one document -- it's just one document and the personal opinion of one of my staffers and it's a professional judgment document? How do we know it's really irrelevant? I mean what if you -- is it irrelevant if you're taking a lot of the guidance and recommendations from that opinion? I -- I -- you know, it may be one person, but it is not irrelevant. It is simply not.

**DR. ZIEMER:** I think he was talking about the use of the time period -- was it, Rich, the --

**DR. TOOHEY:** Well, what I said was irrelevant was in the opinion of anyone on my staff as to whether health was endangered, because that's essentially been defined.

**DR. ZIEMER:** Right, so that --

**DR. TOOHEY:** Now, let me --

**DR. ZIEMER:** -- the fact that he had made a statement in there was --

**DR. TOOHEY:** Where I assume Mr. Horgan is coming from, and I understand, he is concerned that because this person thinks health was not endangered, that will color his analysis of the

data and his opinion on what exposures might have been, and I can understand that viewpoint. I would also add that we, as health physicists, do have codes of ethics and our personal opinions do not come into play on this. We have to be objective with where the data leads us. And I would also add, as both you and Dr. Roessler know, there are many health physicists really don't subscribe to the linear no-threshold model --

**DR. ZIEMER:** Sure.

**DR. TOOHEY:** -- and (unintelligible) --

**DR. ZIEMER:** And this is one person's opinion.

**DR. TOOHEY:** -- any dose is carcinogenic.

**DR. ZIEMER:** And obviously this Board is considering many people's --

**MR. HORGAN:** And I appreciate that clarification. But then again, you know, it calls into a question, we don't know. What if this one person's opinion -- opinion, you know, that -- it may already be defined that the health is endangered. It could be defined. But what if this person who says -- this person on the ORAU staff gives his opinion and ORAU, in the decision-making, takes some of those

recommendations?

**DR. ZIEMER:** Well, Tom, the determination has already been made by NIOSH --

**MR. HORGAN:** Okay.

**DR. ZIEMER:** -- regardless of this opinion. NIOSH has made that determination already and that's what carries weight --

**MR. HORGAN:** I will -- I will let it go, but I'm just telling you, on Capitol Hill, it raises some --

**DR. ZIEMER:** Well --

**MR. HORGAN:** -- more questions and red flags.

**DR. ZIEMER:** -- fortunately we're not on Capitol Hill today.

**MR. HORGAN:** No, but you may be shortly.

**DR. ZIEMER:** We may be shortly, yes. Okay, we'll join you there. Thank you. Denise, did you have any --

**MS. BROCK:** I don't have a date on it and I probably -- the only reason I brought it up was because I look at it, not being professional or a scientist or health physicist -- so maybe his -- I -- I -- when I read it, I took it as I read it, that the health was not endangered, and it was offensive to me. If it wasn't meant

with that intention, I understand what Dr. Toohey's saying. But if a worker would read that -- and I don't if they could -- they would be crushed. It would just be a horrible thing and it kind of lesses -- lessens their comfort zone or their trust factor with, you know, ORAU or anybody because they're reading it like I did and thinking oh, my God, you know, I have four cancers -- four separate primaries, how can they say that my health was not endangered.

**DR. ZIEMER:** Yes, understood.

**MS. BROCK:** And -- so that -- you know, that's -- could create a problem, but I understand maybe he could just word it differently. I won't have to kick him now or anything, I guess.

**DR. ZIEMER:** Rich, did you have a follow-up on that?

**DR. TOOHEY:** Well, let me just reply. I understand completely and I -- there's no place for personal opinions in what we're doing and I will definitely counsel this person.

**DR. ZIEMER:** Okay.

**DR. TOOHEY:** But you know, where we're going on that, I also want to say that this is not the

only person involved in the petition review. So it's one of a number of opinions, and then what we come up with is thoroughly reviewed by NIOSH staff before you ever see it.

**DR. ZIEMER:** Yes. Rich, did you have a follow-up on that?

**MR. ESPINOSA:** Yeah, my next question may be a little bit out of order, but --

**DR. ZIEMER:** Use the -- get a little closer to the mike.

**MR. ESPINOSA:** And it's probably a Department of Labor question as well as ORAU/NIOSH question, but with the val-- with the validations of the documents and using coworker data and stuff like that, I'm just wondering how many of the claimants are actually survivor claimants.

**DR. TOOHEY:** I don't know the answer to that question for any specific site, but I do know for the whole population of claimants, about half are survivors and half are still-living Energy employees.

**DR. ZIEMER:** Dr. Toohey, while you're at the mike, you want to give us the other numbers that you agreed to provide to the Board earlier

today?

**DR. TOOHEY:** Okay, I hope Ray's ready to copy on these, here we go. Okay, of the Mallinckrodt cases, 316 total, 188 worked only at Mallinckrodt Destrehan Street; 103 worked at Mallinckrodt and Weldon Spring only. That leaves us with 24 who also worked other sites in addition to Mallinckrodt, of which 20 worked at United Nuclear Corp., which I believe was a fuel fabrication plant in Metropolis, Illinois. Is that right?

**UNIDENTIFIED:** (Off microphone) (Unintelligible)

**DR. TOOHEY:** No.

**UNIDENTIFIED:** (Off microphone) (Unintelligible)

**DR. TOOHEY:** Oh, the Hematite plant, right. Thank you. Okay. And then there's -- there is just a scattering of a few worked another site or two.

**DR. ZIEMER:** Okay.

**DR. TOOHEY:** Okay, next set of numbers. Okay, of cases that worked only at Mallinckrodt, of the 188, 40 final dose reconstructions have been submitted to DOL. Three have been pulled

and there's 145 active cases awaiting dose reconstruction.
For Weldon Spring employment only, there are 86 cases, of which 26 final DRs have been submitted to DOL, and there are 60 active cases awaiting dose reconstruction.
Now this affects something -- I replied to Mr. Horgan last night when he asked what was the basis on which the -- I believe the 147 Weldon Spring claims were denied. Well, we've only submitted 26 final dose reconstructions to DOL, of which some would have been denied, as I said, on the maximum dose assignment and not getting a probability over 50 percent, some of which have probably been compensated with a minimum dose assignment and becoming compensable, so I would have to hypothesize that the remaining cases that have been denied must have been -- come -- included cases submitted under Subtitle D and now E, and may well also have been denied on the basis of no verification of employment or no verification of medical diagnosis or the other criteria that DOL uses to accept the case for evaluation.
Again, that's speculation on my part.

**DR. ZIEMER:** Thank you. Okay, Michael.
**MR. GIBSON:** To follow up a little bit on Rich's question, does -- does ORAU or NIOSH know at least maybe a rough percentage of how many of this class from '49 to '57 are survivors as opposed to claimants, just a percentage?
**DR. TOOHEY:** (Off microphone) (Unintelligible) can find out.
**DR. ZIEMER:** He -- he can find out, but apparently does not have that at the fingertips.
**MR. GIBSON:** I guess --
**DR. ZIEMER:** Would you like that information?
**MR. GIBSON:** Well, it is a follow-up to that. I guess I'd just like to -- well -- ask -- and maybe I'd like to ask our contractor their opinion on it, since we've heard from NIOSH and everyone else. On survivor claims -- and this is an aging population -- if they've got to go to coworkers to get interviews and what they've done and stuff, how many of those coworkers are still alive and what are the probabilities that they can get any data to do dose reconstruction? Maybe --

**DR. ZIEMER:** I suspect our co-- or our contractor may not know those figures of how many survivors there are.

**MR. GIBSON:** I'm just saying an idea of how they would go --

**DR. ZIEMER:** Oh, how would they do --

**MR. GIBSON:** -- could accu-- accurately...

**DR. ZIEMER:** Repeat the question, maybe Arjun can answer it.

**MR. GIBSON:** I was just wondering -- if the survivor didn't know what their spouse did as employment so ORAU and NIOSH would have to go to coworkers to find out where they worked so they could try to adequately determine what their dose may have been, most of these coworkers could very well be deceased, too, so what -- how would they go about getting a -- an adequate representation of what they did so they could reconstruct the dose and what do you think about that?

**DR. MAKHIJANI:** Yeah, as I understand it, you know, the first -- the first basis of dose reconstruction is the individual's dose record, and so if the -- if the dose record is substantially complete, then -- then the

coworker issue doesn't arise. But if there's any need to supplement -- and that's what all the surrogate information is about, a lot of the TBD is about that -- because there are gaps in the data, the bioassay monitoring wasn't frequent enough and so on, or the record may not be complete, then you need to identify coworkers. And I think -- I've looked at the interview process in some detail and, as I mentioned yesterday, I think coworker interviews would be essential -- and close coworkers. That is, people who did work -- know the employee and their work history in some detail, because I have some doubts as to whether a lot of the family members, from -- from what has been said by the petitioner, by Denise and others, would be able to identify the series of jobs that were held, given the secrecy and lapse of time and so on. So I -- I think -- I think whenever surrogate data is -- is needed, either in external or internal, it -- it would be rather difficult to -- to get the data to reconstruct without coworkers. And even with coworkers, if they were identified, it would be rather difficult.

Now this is a little bit speculative because we haven't actually audited any coworker interviews. Very, very few have actually been done. We know that.

**DR. ZIEMER:** Well, if the actual coworkers can be identified, however, there may be data in the database that -- perhaps Jim could address that, but it seems to me that one might be able to get the coworker data without necessarily interviewing the coworker.

**DR. NETON:** That -- that's true, we would certainly attempt that as a first pass, and I agree with Dr. Makhijani that the urinalysis and the TLD moni-- film badge monitoring data is the most appropriate. We -- as we discussed several times now, we have monitoring data for the majority of the workers and job titles for most workers.

However, if we find ourselves -- and also Mallinckrodt has pretty much stated that they have monitored people with their security credential using film badges, so anyone who was working in the Manhattan Engineering District area who had a potential for exposure was -- was monitored in these years that we're

investigating now.
However, if we did find ourselves in the situation where we knew nothing, we have the ability to use these 95th percentile distribution values, just as we've done at many other sites, and that would work very much to the advantage of the claimant. We would take -- if we could determine that the person was indeed a process area worker, generate the surrogate exposure distributions for the 95th percentile, select that, assume that they were in the heaviest exposed category and use those data. So in no way would -- we feel in that way we would capture the -- the upper bound of the worker's exposures without having to -- if we -- if we could not rely on any coworker data at all. In fact, that's a -- that's a much quicker process for the claimant to get an answer than to -- you know, the long process of calling six or seven people and -- and following that trail.

**MR. GIBSON:** If I could --

**DR. ZIEMER:** Mike, follow up?

**MR. GIBSON:** -- follow up on that.

**DR. ZIEMER:** Sure.

**MR. GIBSON:** Let's say I'm a deceased person and I have a spouse that's making a claim. My title's an electrician. What coworker data are you going to get?

**DR. NETON:** Well, certainly if we have electrician coworker data we're going to use that, and if we have no idea where you worked, we would use the 95th percentile of the electrician data that were badged and working in the facility.

**MR. GIBSON:** Well --

**DR. NETON:** And this speaks to the issue of timeliness. I mean it provides --

**MR. GIBSON:** I guess --

**DR. NETON:** -- the claimant a much more timely --

**MR. GIBSON:** My point is, let's say where I worked there -- there was 30 electricians, and it was typically one or two electricians and a couple of pipe fitters and a couple of mechanics working on a job on this end of the line and there may be an electrician or two and a pipe fitter and mechanic working on that end of the line. So if you take -- and then there's 26 other electricians working different

areas of the plant, I don't see how you could just group electricians in and say I -- we can take the aggregate data from them and find out what my dose was.

**DR. NETON:** Well, we've been doing that. I mean this -- this fits -- typically, worker data fits a distribution -- the [law of transformed distribution]* fits a fairly good straight line, and we go up to the upper end of that line and say we don't know what you were exposed, but we believe that if you were at the highest exposure category, this was your dose, and we would assume that. So we would not assume that you were at the low end of the line, the middle end of the line. You were at the highest end of the line for your entire period -- the period of time where we had no data. We've been doing that fairly consistently for many of these things, and I believe that SC&A has indicated that's an appropriate way to do this when you have no data.

We could go to the extent of calling people and trying to find out to potentially lower the dose, 'cause in most cases the interviews with

coworkers would -- would more than likely lower the dose because we're already at the upper end, so...

**DR. ZIEMER:** Arjun, you want to add to...

**DR. MAKHIJANI:** If I could supple-- complement that a little bit, the -- you know, the whole 95 percentile issue initially came up in the -- in the very specific context of Bethlehem Steel, and then we brought it up here also in a very specific context of how you actually do time-weighting. We've actually not audited the more general question that Dr. Neton has raised, you know, when -- when is it appropriate in terms of job categories to do it one way or another. And the reason I bring it up here is, in contrast to Bethlehem Steel, which was a one -- one type of operation. They were rolling uranium and you knew what the process was and there was one area, one type of material, no complications. Here you have -- at Mallinckrodt you have a considerable number of complications in that not only do you have many processes and many forms of uranium, you've got the radionuclides, you know, like radium and thorium, and in various different

types of areas you've got raffinate processing. And so I think, especially as we have evidence that workers were moving from one job to another and there are questions -- in a way not that different than Iowa in that what does a job title mean if people are going from one job to the next or -- or doing a variety of things or in particularly hazardous environments. I mean in a place like Mallinckrodt, to -- I'm -- I'm not confident and I'd be -- if I remember correctly, we did raise this in -- in our review of Revision 0, although didn't repeat it again here, that -- that the question of -- of job titles and the relation to the real work needs to be investigated at Mallinckrodt because -- because of the complexity of the operation, external dose radiation fields and the materials inhaled and ingested.

**DR. ZIEMER:** Jim Neton?

**DR. NETON:** I would certainly agree that it needs to be evaluated in the context of the exposure environments, and I assumed that I implied in my response that that was true. We need to take the context of the -- of the picture and how many -- you know, how many

samples we have and that sort of thing. But I still maintain that the use of a distribution at the 95th percentile is appropriate. Whether or not it's electricians or ends up, if we have a small number of samples, the entire facility, but it still can be done.

**DR. ZIEMER:** Okay. Board members, any -- oh, Richard Toohey, add to that?

**DR. TOOHEY:** Yes, I do want to add to that. The other solution to that problem, and I would agree with Mike Gibson, 30 electricians isn't a very large size population to do statistical analysis on. But then what you do is pool all the worker data. And an electrician could receive the 95th percentile dose that all workers receive, including the most highly exposed process workers.

**DR. ZIEMER:** Richard?

**MR. ESPINOSA:** You know, with what Mike's saying and with what I'm hearing is job titles are one thing and the task that a worker's assigned is another. And eventually it just creates different exposures. One of the things that I'm concerned about on this is the -- I believe there was a statement made from Denise

of 150, 151 being moved from one plant to the other and the use of the coworker data being done on that. I -- I can see somebody that only worked three years -- I could see a -- the -- like, for example, the use of a -- an employee working three years and them using that coworker data when in actuality the people that's filing -- the person that's filing the claim may have worked there 15 years. You know, it's just a concern of mine and I'm wondering how it's being addressed.

**DR. ZIEMER:** Jim?

**DR. NETON:** These coworker data analyses, the surrogate analyses, are time -- time-dependent. I mean they are by year, so --

**DR. ZIEMER:** So you would take it year by year --

**DR. NETON:** Year by year --

**DR. ZIEMER:** -- for all of the years that the person worked.

**DR. NETON:** Or if there's insufficient data, aggregate and use the higher value for several years, but it would be, to the extent possible, year by year analysis.

**DR. ZIEMER:** Thank you. Other questions? Yes,

Mike.

**MR. GIBSON:** What... Most of this population or if a majority of this population is deceased and it's -- and a lot of the coworkers are deceased, what would be the possibility of creating like a survivor's cohort? If you can't get re-- if you can't get an adequate dose reconstruction done on these people, rather than depending on -- like this 95 percentile when --

**DR. ZIEMER:** Well, I think you're asking a legal question, but it seems to me, by default, if you define the cohort and the person's deceased, the survivor is -- becomes the -- the claimant. Maybe I'm misunderstanding the question.

**MR. GIBSON:** I guess I'm just suggesting perhaps a -- a lesser cohort that just involves survivors that you cannot get good data on -- adequate data.

**DR. TOOHEY:** I'm sorry, did you mean --

**DR. ZIEMER:** Oh, I -- oh -- oh, I see what he's saying, yeah.

**DR. TOOHEY:** I'm -- I'm afraid I don't.

**DR. ZIEMER:** If you identify -- it sounds like

if you identify a subset for which there is insufficient data, could that be a cohort -- or a class --

**MR. GIBSON:** Class in itself.

**DR. ZIEMER:** Actually, and maybe someone from NIOSH could answer that. I suspect that technically if one were to find that -- let -- let's suppose that you have a facility where there is no Special Exposure Cohort, but in the process of dose reconstruction you find that there's a group -- let's say of electricians -- for whom you are unable to reconstruct dose, do you not sort of automatically then say that this would now be identified as a potential Special Exposure Cohort?

**MR. ELLIOTT:** Yes, that's exactly right, and that's what -- it goes back to the question that was raised earlier or during my presentation about how diligent are we at looking at different jobs and how do we define the class.

**DR. ZIEMER:** Even if someone hadn't petitioned for some group and you found in your process --

**MR. ELLIOTT:** Yes.

**DR. ZIEMER:** -- you could not reconstruct dose,

you are obligated --

**MR. ELLIOTT:** That's true, we are obligated --

**DR. ZIEMER:** -- to identify that to the Board and to the Secretary and that -- and --

**MR. ELLIOTT:** That is correct, that is how --

**DR. ZIEMER:** -- to initiate the process.

**MR. ELLIOTT:** That is how we would go about identifying a class. I would just add that this presumes that we don't have data for the deceased person. And in this case, for Mallinckrodt, we have a large amount of information and data for -- for the workers, by comparison to the -- to Iowa, where we had, you know, a small amount of the work force monitored. This work force for Mallinckrodt has had a majority of the work force monitored, in one way or another.

**DR. ZIEMER:** Dr. Melius, a question or comment?

**DR. MELIUS:** Well, I just want to point out, and I don't think we -- necessarily get us off on a separate track here, but we -- for some time we've expressed concerns about the -- the CATI interview and the fact that it's a very general interview and doesn't provide a lot of specific information. And this issue came up

again with Iowa where I think, at least to some extent, our decision was based on the information that our contractor had obtained from meeting with and interviewing the workers and -- and this cast questions about some of the approaches that NIOSH was using. And I just think in a general way this issue still needs to be addressed in a better fashion, much as the example Mike brought up that -- as to how do we approach this -- how -- is there a way of improving the data-gathering in a way that -- I mean 'cause it could work in some sense the opposite way, that there may be better information obtained from surviving workers that can be used to obtain, you know, better information that can be used where the workers don't survive and could add to the detail and the ability to do a -- a sound dose reconstruction.

**DR. ZIEMER:** Now I want to move us along in the process here, unless there are further questions or discussions of a sort of a general nature. Let me remind you of what sort of our options are here, if we're ready for that -- proceed to that point.

We basically have before us a recommendation from NIOSH on the handling of this particular petition. The Board could go on record as agreeing with and supporting that position. The Board could go on record as not agreeing or supporting that position. I suppose a third option would be that the Board could in fact instruct NIOSH and our contractor to get yet more information and defer a decision, although you recall that we did indicate our intent to reach closure today, if possible.

I -- I probably should also remark, since my casual tenure statement now has become memorialized several times, that it was intended to make a kind of point. I certainly didn't imply that it would necessarily take ten years for the Iowa group, nor -- nor had I intended it to apply to Mallinckrodt. The point was there is a timeliness factor. But I certainly don't want to imply at all that I believe that it will take ten years for us to reach that point for Mallinckrodt. In fact, it's my opinion that we have in fact a very solid dataset, a very extensive amount of data for Mallinckrodt and we have to deal with that

and where we are, and if there's any additional information that we need to come to closure on what we have before us.

So now Wanda Munn and then Jim. Wanda?

**MS. MUNN:** Rather than make a direct motion one way or the other, there are several things that need to be said, I believe, not only to this Board, but to the claimants and to the public generally. I attempted to say some of this yesterday, but in the rush following our decision with respect to the Iowa petitioners, it was impossible to say that. So this is going to be longer than a casual comment. My apologies.

Yesterday's vote, for which I gave an affirmative vote, was based -- from my chair -- on one factor and one factor alone, and that was common sense. Despite all of the other reasons that were given, it appeared unfair to me that a higher dose assessment -- under the process that was going to have to be used -- would be given to early workers, who probably had lower exposure, than to later workers who probably had higher exposure but had badge readings. That was the single item on which my

positive vote went forward.
In looking at this particular cohort class, as in most others, I believe, NIOSH has made it clear that they can, they will, and they have completed dose reconstructions appropriately for other groups, as well as for this group.
We have, over the period of the last couple of years, heard repeated insults to the integrity of individuals, agencies, data reliability, and we probably will continue to hear them. We are dealing in an emotional, dramatic area. That's understandable because we're talking about people's lives, a great deal of pain, a great deal of illness. Nobody can be totally unemotional when you're approaching that kind of situation.
But we have also heard repeatedly from petitioners, from elected officials, from staff, enormous misconceptions and incorrect positions with respect to radiation and radiation-induced illnesses. The media has routinely repeated, as have many others at the microphone here, that there are hundreds of workers who were made ill by reason of their work at one facility or another. There is no

doubt that there are individuals who have been made ill as a result of their work. A large number of them have actually already been compensated, as we have heard here even this morning, when the argument is being made that inadequate information exists and yet compensation has been given to some of these workers, and fairly so.

But for us to say, that in a case where dose reconstruction can be done and we do not allow that to happen, that we are doing the right thing is incorrect. There is no reliable data, to the best of my knowledge, that supports the assertion that the workers at this plant or any other plant have a higher rate of these dreaded diseases than the general population. There is no evidence to that effect. So when we say therefore all people will have to be included -- now it's not completely true, but for the most part it is true. I said reliable studies. When we are placed in the position of saying all the elderly people who, in the general population, are going to have one out of two suffer some type of cancer, and one out of four or five, depending on what year you look at,

are going to die from these diseases, then what that tells us is that many of the individuals who have worked on sites who have these types of cancers would have developed them even had they never been on any such site.

So to ignore our ability to do dose reconstruction and choose an SEC which incorporates all claimants is saying that we are not being good stewards and we are not following good science. It's only when we cannot have the science that we must do so.

When we hear the arguments with respect to these SECs, if you take away all of the chaff and leave only the wheat, there are two points that are made that we are asked to consider. They are dressed up in many different ways, but those two points are always the same. The point is, someone does not believe that we have reliable data because they know someone who lied about something that was related in some way in the past. The other point is that you can't possibly do a dose reconstruction for me because you don't know every place I've been and all I've done.

I believe that the process that's been

explained to us is very clear. We are never going to have perfect data. No one is ever able to make decisions that are 100 percent accurate in all cases because we will never have perfect data. Even if we have perfect data, we will not always have a body of individuals who will agree that the data is perfect. And so we are called upon to use our judgment, based on imperfect data, to resolve issues that are dramatic, that are heartbreaking, and that are going to be emotional regardless of whether we say yes or no.

The experienced professionals who work with us have stated that they have adequate data to perform appropriate worker-favorable dose reconstructions for this site. Remember, we will never have perfect data. Good science, good stewardship, fairness and personal integrity requires us in -- to reject this particular SEC. The claims for that class should be submitted for the standard review and process as dose evaluations are possible, they're feasible, and they'll be heavily based in favor of any claimant from this facility.

So I'm prepared, when this Board is ready to accept it, to make a motion that this SEC be rejected.

**DR. ZIEMER:** Thank you, Wanda. I interpret that as not being a motion, at least at this time. Dr. Melius?

**DR. MELIUS:** Yeah, first to address Wanda's statement, I just would point out that if we reject this petition we will end up with a situation where -- because we've already approved a petition covering earlier years where people working in 1948, for example, for 250 days will -- would be compensated, where someone working in 1949 -- starting January 1st, 1949 -- again, depending on their individual dose reconstruction, may very well not be. And I think we have to recognize that the way the law's constructed that that situation's bound to occur and one can argue about its fairness and so forth, but I think it's something that we -- we have to address and I don't think it should be something that should necessarily affect our decisions on -- on the SEC petitions.

Secondly, I don't think Congress ever intended

that there be an epidemiological risk evaluation applied to this. We're not asking that the petitioners or NIOSH to prove that there's an excess cancer risk at every one of these facilities. There's lots of reasons that's difficult to do, particularly when it gets down to smaller groups and so forth and I don't think that's a fair way of -- of assessing that -- that. That's not the test that we apply.

When I look at this situation, the three possible decisions that Paul outlined, I personally feel uncomfortable with all three. I don't think that NIOSH has necessarily proved its case, that it can conduct dose reconstructions with sufficient accuracy. There's more information I'd like to obtain from them, some more issues I'd like them to address. At the same time I think there are -- they have provided a lot of information and there is a lot of data there and it makes it difficult, based on what we have now, to approve the -- approve the petition. The third option of procrastination or delay is also uncomfortable, realizing that the claimants and

their survivors have already waited a long time, there's been significant delays.
I also feel it's very important, in terms of making a recommendation, in terms of what the Board has already essentially promised to these petitioners. One is that we said we would try to reach a decision at this meeting. At the same time, we said that we would try to reach that decision based on having our contractor do a review of a site profile. For various reasons that were out of the control of the contractor and to some extent out of our control, the contractor was unable to do that. There was not sufficient resources nor time to complete a review of Revision 1 of the site profile, so we're left with an incomplete review. And in fact in the report from the contractor dated April 18th, there's a table in there indicating what they were able to do and what they were not able to complete in time. And I guess my feeling is that -- belief is that the best course for us to take would be to complete that review so that we can fairly and completely address many of the concerns that have been raised by the petitioners, that we

can fairly and more completely address our charge in terms of evaluating this petition and evaluating what NIOSH says that it is capable of doing; that we also ask NIOSH to provide us with some further information in this regard, that there's some -- I think particular things that they could do that would help us to reach a decision.

And as uncomfortable as that approach may be in terms of further delay, I think it would be the best approach and I'd be intending to offer a motion to that effect.

**DR. ZIEMER:** Thank you. Again, for the moment I'm not going to interpret that as a motion. We're getting some sort of intents out of here. Let me go and get a couple of other comments, then we'll come --

**MS. MUNN:** I was just going to respond to Jim --

**DR. ZIEMER:** Just a response?

**MS. MUNN:** Yes.

**DR. ZIEMER:** Go ahead and respond.

**MS. MUNN:** Just a very quick one. I agree with him, this was not intended to be an epidemiological study. The only reason I

brought the point up is because it's so clearly a misconception in the minds of the public and the media.

**DR. ZIEMER:** Thank you. Richard and then Mike.

**MR. ESPINOSA:** Me personally, I'm standing on the fence over this issue, also.

**DR. ZIEMER:** Get closer to the mike there.

**MR. ESPINOSA:** Oh, I'm kind of standing on the fence over this issue, also, and personally I'd kind of rather stand on the fence until we get more information.

Also, and in terms of SC&A on the site profile and stuff, it'd be nice to see in our next 20 cases of the dose reconstruction that we also have some Mallinckrodt studies.

**DR. ZIEMER:** I don't recall if the second 18 included Mallinckrodt. We had some in the first 20. I -- I don't recall in the second 18 what was on the list, but that list has already been established, Rich, so we -- we can't change what was there.

Mike, why don't you go ahead with your comment.

**MR. GIBSON:** With all due respect to my colleague, Ms. Munn, I would like to just make the following response, that you know, there is

such a thing called the healthy worker syndrome and -- that's -- needs to be thought about. Also, you know, when I went to work at Mound, I was asked if I minded working in radioactive areas, and they said they would take every effort to protect my health and safety. I said I would accept that. And I'm not trying to suggest any class of professionals is without -- without good character, but just like some laborers are without good work ethics, there's some professionals that are without good ethics. And coming from a plant that's had a -- at least four or five Price Anderson fines totaling over a half a million dollars for violations of health and safety practices, specifically bioassay -- falsifying bioassay data, it just makes me want to make sure that the data that's being interpreted for dose reconstruction is good data and it's -- and that's -- a lot of -- some of the folks who worked at that site are now the ones doing these dose reconstructions.

**DR. ZIEMER:** Let's see, let's take Leon next.

**MR. OWENS:** I don't want this to appear that -- that I'm ganging up, either, on colleague, Ms.

Munn, but coming from a site where the United States Secretary of Energy admitted, in a public forum such as this, that the government had put workers in harm's way, it's somewhat difficult for me to not understand the workers' point of view.

Some of us that sit on this Board have also had the occasion to talk with workers on their deathbed. Some of us also have had the occasion to talk with surviving spouses who are at a loss as to where their husband worked, what their husband did, because of the cloak of secrecy that surrounded that work. I think that the Board owes due diligence to those workers from the standpoint of evaluating the petitions, using the statutory requirements that Congress enacted, to ensure that we provide timely deliberations.

Also, coming from a site that is an SEC site, it's a lot different for those individuals at Paducah and at Portsmouth and at Oak Ridge that have one of the 22 specified cancers, they receive an automatic payment. They do not have to go through this process. And so that is a measuring stick, I feel, as we view these other

petitions.
I think that NIOSH has done a commendable job. They continue to do a commendable job. But at the same time, I feel that our contractor, SC&A, does a very commendable job in reviewing. And I think that the information that's brought back to us by both of these groups needs to be considered.
And yes, emotion is always tied into anything, but I think that the Board has, in the last two decisions that were made, tried to not allow the emotion of the moment to dictate the way that the votes are made.
**DR. ZIEMER:** Thank you, Leon. Henry Anderson?
**DR. ANDERSON:** It's always easy to look forward and look back, and in my experience when one makes a hasty judgment, it's always potentially at risk. And as you move forward, you know, the timeliness of that decision becomes less important. So I guess I would agree. I think we've started a process with the review -- site profile review. I'm assuming whether we act today on the SEC petition or not, we're going to finish that site profile review. There may be things in that that'll be helpful or not.

I'm also very intrigued by the ability in this process to look at the various databases and see how well they correlate and use that as a validity of the data assessment. And we heard NIOSH was rushed and I'm sure Jim is regretting that he used a hypothetical rather than the other -- and I think that I would be very interested in, you know, not an exhaustive review of all the cases, but to pick some just to see that in fact the assumption that this will work, does. And you know, I think it probably will, but I think just for completeness' sake, I'd like to have the process work itself out and I think it would be a disservice to the applicants to not go that extra mile to get that added data, even though right now it would look like there's plenty of data and NIOSH has a process in place. So I guess I would -- I would like to see that additional information before we actually do a final judgment on it and -- and there -- at that point there won't be any new information coming in. I think on all of these, the process of getting it to us when things were under rush -- be it Iowa or Mallinckrodt at the

last meeting -- is just a warning. We need to be sure that when we get these there is a point in time that stands alone rather than on a rapid process.

**DR. ZIEMER:** The Chair is going to add some observations to the discussion before I call for a motion.

It appears to me that there indeed is a very extensive amount of data available. And in spite of concerns that -- and certain allegations made, there's no clear evidence that the dataset has been in any substantial way -- or in any way -- doctored or otherwise made invalid. In fact, the -- the magnitude of the data is such that there is that ability to do cross-validation.

Our contractor's review has focused on issues which -- which are admittedly unresolved, but do not have to do with the quality of the data as far as its ability to be used for dose reconstruction. It has more to do with how assumptions are made and used and how the validation process might occur. I see nothing from our contractor that would suggest that in fact proper and reliable dose reconstruction

cannot be done with the material that we have. There clearly in the past were a number of poor practices at Mallinckrodt, either with or without the consent of management, perhaps with a work force which had not been fully informed of the risks involved -- and certainly we all agree that there are risks. In fact, such poor practices do in fact get reflected in the dataset so that we have the ability to in fact show that workers got such high doses because of these poor practices. So I'm simply saying that in my mind we have a cohort for which valid dose reconstruction can be done. Admittedly there are some open questions, and I'm certainly, as a first step if -- if the assembly here wishes to delay a decision, I think that would be the prior motion to hear if there -- if there's a motion to delay or defer. I don't want to call it to delay. It's to defer for the reasons mentioned. Then if such a motion failed, then we would return to the issue of -- of making the -- making the decision today.

So Henry, did you have an additional comment on this?

**DR. ANDERSON:** Oh, I'm sorry, no.
**DR. ZIEMER:** Okay.
**MS. BROCK:** Dr. Ziemer --
**DR. ZIEMER:** Yes.
**MS. BROCK:** I would like to -- Denise Brock, for the record. I would like to ask that if there is a delay -- due to the delay itself, I would like to know if it would be possible to expedite that. I'd like to know from SC&A how long it would actually take to review this information and I'd like to ask for an emergency meeting to be called and see if we can't do this within 30 days in St. Louis. This is obviously better than a "no", but it's still a delay, so I would like to see if we could expedite this and do this as quickly as possible. I know that SC&A had no opportunity or had little opportunity to look through all this, but I want to know if it's possible that we could do this in a quick manner.
**DR. ZIEMER:** Let me address that in somewhat general terms, because John Mauro, who leads the team and who would have to make that decision, I think, Arjun, that would probably be John's call, unless you feel like you're

authorized to speak in his behalf on that issue as to what turnaround time might be. But we're talking about a process where there's some interchanges involving the contractor and NIOSH, as well as participation by Board members and so on. It certainly would be the intent -- if there is such a delay, certainly it would be the intent I think of this Board to move forward with -- as expeditiously as possible. Whether or not we can commit to a time today, I do not know. Arjun, do you --

**DR. MAKHIJANI:** Do you have a question for me, Dr. Ziemer?

**DR. ZIEMER:** Well, the question is what --

**DR. MAKHIJANI:** Yeah, right --

**DR. ZIEMER:** -- the turnaround time for --

**DR. MAKHIJANI:** John did authorize me to speak on Mallinckrodt issues, and I believe communicated that to Dr. Wade --

**DR. WADE:** Correct.

**DR. MAKHIJANI:** -- before he left. Joe Fitzgerald, deputy director, is here. I think -- you know, I'm -- I'm pretty familiar with Mallinckrodt by now, but I'd like a -- it would depend on the scale of the tasks. If I might

suggest --

**DR. ZIEMER:** I think we're talking about resolution of the issues --

**DR. MAKHIJANI:** Right.

**DR. ZIEMER:** -- that have been raised.

**DR. MAKHIJANI:** Right. And if -- if I might have a minute or two to caucus with -- with Mr. Fitzgerald and get back to you on that, I'd appreciate that.

**DR. WADE:** Certainly.

**DR. ZIEMER:** Jim, did you have a comment or a motion?

**DR. MELIUS:** My only comment was I -- I think we all agree and would like -- like -- it would be good to be expeditious on this, but I think in some ways we're better off -- you know, let's deal with a motion and see where the Board wants to go with this before we try to get, you know, too specific. Is it 30 days, 45 days or --

**DR. ZIEMER:** You're suggesting separating this. If we decide to defer the action, then deal with how soon we can do it.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** Wanda, did you have a comment

first on this?

**MS. MUNN:** I just was going to observe that if postponing this decision until such time as the ability of NIOSH to correlate the data will be instrumental in making the Board more convinced that that can be done adequately, then I'm prepared to move that we make such a delay.

**DR. ZIEMER:** I don't think we know a priori that NIOSH will be able to do that. I think the intent is to ask that there be a demonstration of whether or not that can be done and the resolution of the issues that were raised by our contractor. Joe Fitzgerald is approaching the mike. Joe?

**MR. FITZGERALD:** Yeah, to answer the question, certainly we could accelerate a review and not necessarily do a checklist of all the loose ends that -- you know, that were identified in the report, but with a very clear focus on the implementation question, which I think the Board is wrestling with here, and that would inform I think the kind of decision-making you have to do. So it would be with a very clear focus that we would certainly want to give you ahead of time, but with the recognition that,

you know, we would hone in on just those issues that we feel would be important and necessary to finish what we started, but also to be specific to what I think this Board's been discussing certainly over the day. And that would probably, again -- it will take us definitely to probably the first part of June to do a credible job of that.

**DR. ZIEMER:** I wonder if NIOSH has any input on this issue, too, before we have a formal motion. Let Larry Elliott speak and then -- Larry, go ahead.

**MR. ELLIOTT:** I'm not prepared today to commit to any time frame for you. I think you said it best earlier, Dr. Ziemer, that we came to the table with everything that we could at this point in time. We feel that we have adequate information to sufficiently provide a maximum dose reconstruction --

**DR. ZIEMER:** I think we're on--

**MR. ELLIOTT:** -- or a more precise dose reconstruction.

**DR. ZIEMER:** Larry, I think we're only talking about the resolution of the issues with our contractor, 'cause that process involves

NIOSH's --

**MR. ELLIOTT:** We certainly would work with them and we will do our level best to -- to accommodate this process, but I'm not -- not at a point where I can commit to a time frame in that -- in that regard.

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

**DR. WADE:** Could we have Joe come back to the microphone? Joe?

**DR. ZIEMER:** Joe or Arjun.

**DR. WADE:** I mean I appreciate your thoughtful response. Am I to assume that at that point in early June you would begin to engage in a dialogue with NIOSH on the materials you prepared, or would that include time for such a dialogue to have taken place?

**MR. FITZGERALD:** Well, I think that's something that we would have to discuss 'cause there's a lot of logistical issues as to -- one, what endpoint are we aiming toward? There's a question before the Board as to whether to be another session sort of on this issue, and that would give us a ultimate endpoint which we would back-engineer in terms of what necessary discussions would take place.

Now what we did with Iowa I thought was instructive in the sense that, rather than do this thing serially, we had discussions along the way so that, you know, we weren't waiting till the very end to start that process. And I think that served to accelerate what we did for Iowa. So you know, there's a certain method that might help that.

But again, I think there's a couple of issues that make a difference. One is scoping this thing so it's very, very clearly focused only on those issues which will certainly arm the Board with information and perspectives it needs, and also a process where, you know, we would accelerate the kind of interaction that would normally take place maybe over months, but try to do that, you know, within a shorter period of time.

**DR. WADE:** Thank you.

**DR. ZIEMER:** Denise?

**MS. BROCK:** And I hope you'll excuse me but I'm just really confused. I'm curious, and this is probably a question for SC&A and NIOSH and the Board. Is SC&A going to work with NIOSH and assess the credibility of this data or -- I

guess I'm perplexed, and is this possible? Because my concern here, too, is that -- if I'm understanding correctly -- many of the Board members that I've spoke with and know this case could be gone by the time this actually comes up again. And new people will not automatically know the history of this without having to look at transcripts or what have you. That makes me uncomfortable. And I know it was done for Iowa and I've been put at a distinct disadvantage and my claimants have been put at a distinct advantage (sic) by no fault of their own, and this was because of this automatic thing that popped up at the last minute with Iowa. They were given an SEC, then it was taken away, and then we had to have this re-evaluation of it. I was told in February that this was all going to be addressed by SC&A. We figured the TBD would be -- would be done and be assessed and the comments would have been made, and now this -- we were put on the back burner. And so it's doing an injustice and a disadvantage to my claimants and to me as a petitioner -- SC&A wasn't even able to finish their -- their audit. And so I'm curious as to

the length of time -- I mean that they would need to actually -- and I guess maybe Joe answered that -- to look at this data.

**DR. ZIEMER:** Yeah. In fact, Denise, that's exactly what we're talking about is to finish the process that they started roughly a month ago, maybe a little longer than that. They -- and you've -- you've indicated previously in your comments and in your comments just now that in fact they had not finished that process. You noted it in your comments earlier that it was incomplete. They had a list of -- of items in their report that had not been finished, and that is what we're referring to in our discussion. We're not talking about a new process where they are going to validate something.

**MS. BROCK:** I see.

**DR. ZIEMER:** We're talking about --

**MS. BROCK:** Then --

**DR. ZIEMER:** -- them completing their review of the document. I think we also talked about perhaps some specific examples as to how validation could in fact be done by NIOSH. That would be my understanding.

**MS. BROCK:** Okay, so I guess my confusion here is then why -- respectfully, to Larry, why is there not a -- how do you have to interact if you -- your Rev. 1's already done. I'm not trying to be smart, I really don't know.

**DR. ZIEMER:** No --

**MS. BROCK:** Rev. 1's done --

**DR. ZIEMER:** No, let me answer that --

**MS. BROCK:** -- what is it that you need to do?

**DR. ZIEMER:** Let me answer that. Our -- the Board's process requires an interaction by our contractor with NIOSH because there are open questions, and these interactions are done with Board members present so that if -- if in fact there's factual accuracy issues or sort of miscommunications, or if our contractor is making assumptions that are not the ones that NIOSH made, we're trying to make sure that we're doing those things -- we're interacting properly. So -- and this is the process we've used on other site profiles, on our dose reconstructions, so we're talking about completing that normal process.

**MS. BROCK:** Correct me if I'm wrong, but that process should have already been done --

correct? -- if -- if that was what was supposed to have been done, but because Iowa took precedence over Mallinckrodt, that's been put on the back burner. So however much time frame was left here between me getting here and this should have been going on, whenever -- whenever Mallinckrodt got put on the back burner, whenever SC&A started the two of these parallel, I'm not understanding why it's going to take a huge length of time --

**DR. ZIEMER:** Well --

**MS. BROCK:** -- to do what should have already been done.

**DR. ZIEMER:** Yes. We did not specifically put things on the back burner. I think this Board moved as rapidly as it was --

**MS. BROCK:** I don't mean the Board.

**DR. ZIEMER:** -- what was able and with the material we had, and you know, but it's the Board's -- it's the Board's work that we're talking about here. NIOSH obviously had their platter full, too. I --

**MS. BROCK:** I'm not referring to the Board, Dr. Ziemer. I'm referring to something that should have been done that wasn't, through no fault of

my claimants and through no fault of the Board, and through no fault of SC&A. For whatever reason, this situation with Iowa arose, and what I'm saying is that due to that situation, the work on Rev. 1 for Mallinckrodt has not been completed. So what I'm asking is I think the delay is great. That's fine. But what I'd like to have done is have it immediately taken care of. It shouldn't take very long. I don't understand what the hold-up is because what I'd like to have done, if it's at all possible, to have this done by June to see if we could get a meeting -- an emergency meeting in St. Louis that would make it comfortable for my claimants again and get this done as expeditiously as possible without removal of certain Board members.

**DR. ZIEMER:** I think we can commit to moving as rapidly as we're able to on this. I don't know what you're referring to by removal of Board members. I'm not aware of any Board members being removed. But in any event, I certainly want to commit this Board to trying to move ahead as rapidly as we're able to. Dr. Toohey?

**DR. TOOHEY:** I have more answers to previous

questions. Of the 188 Mallinckrodt-only cases, 131 were submitted by survivors and 57 by the Energy employees, so that's about 70 percent survivor claims. However, I want -- do want to point out that the age of the worker would be correlated with working only at Mallinckrodt. Consequently that's why I think the survivor percentage is higher. The workers who started in the early '50's and were younger would have been the ones who moved on to Weldon Springs.

**DR. ZIEMER:** Yeah.

**DR. TOOHEY:** Okay. That being said, also Mr. Espinosa asked the question about dose reconstruction reviews under that task for Mallinckrodt cases. I guess from what I know that's probably not going to answer your question, because the completed dose reconstructions for Mallinckrodt will have been one end or the other, minimum dose estimates for compensable answers and maximum dose estimates for non-compensables. So it's not really going to give you a feeling for how we can do best estimates.

Going from there, I would also like to mention that there are two different questions involved

here in the Board's oversight contractor review of the site profile document. One question is, and it's the typical review of the site profile document, is that site profile adequate to do best-estimate dose reconstructions for the cases who are in the middle of those two extremes. The question for an SEC petition is is that site profile or data adequate to put an upper limit on doses for everyone. And most of what I've seen and heard on the issues that Cohen & Associates have raised address the first question, more best estimates, than the second question of being able to cap the doses.

**DR. ZIEMER:** Okay. Thank you. Tom, did you have a question?

**MR. HORGAN:** Yeah, thanks. I guess I'm -- I'm kind of confused right now, as well, and I'm sorry about that. I think the one issue that seems to be looming from listening to the dialogue among Board members is this either -- whatever term you use, credibility of the data, integrity of the data and -- and quality of the data. That seems to be an issue that -- where a lot of question is. You know, we hear we have a lot of data. The question -- is it

accurate, is it reliable, valid.
I'm a little -- let me ask a question 'cause I don't know the details of the SC&A contract and everything. Are the contractors allowed -- or have they been tasked, I guess, or asked to examine this integrity of the data issue -- I mean this issue -- or have they been allowed to focus in on that, and have they been asked to examine the integrity of the data issue? Can somebody answer that for me?
**DR. ZIEMER:** I'll answer that.
**MR. HORGAN:** Arjun, do you know?
**DR. ZIEMER:** I'll answer that for you. The task doesn't specifically call for that. It's inherent in what they do.
**MR. HORGAN:** Could you elaborate on that for me?
**DR. MAKHIJANI:** Dr. Ziemer, as -- as we understood it, the falsification question -- if I might use the more blunt term that was used earlier in the petition and in our last review -- was an SEC question and we noted simply in this context that it was not covered in the revision, and even that mention aroused some comments from the Board as to why was it a

bullet point in our review. So we -- we didn't feel that we were asked really to investigate the falsification question.

Of course there the quality of data question that are more normal that are covered in the TBD on which we have commented, but at least I have felt in looking at this and in the comments that I've heard since it -- since we don't have a task for SEC petitions, that we would need somewhat of a more explicit authorization from you. And in that same context, I'm a little bit un-- if I might express a little uneasiness, and some confusion, also. The thing that we are doing currently is a TBD review.

**DR. ZIEMER:** Right.

**DR. MAKHIJANI:** And the thing that you are discussing currently is an SEC petition, and the questions that those two things seek to answer is quite different. I think Dr. Toohey put it very well in that a TBD review doesn't necessarily seek to focus on the question that you are seeking to answer, which is is it possible to use the data to do a maximum. So -- so I would -- I would just suggest that as we

-- as we proceed, if SC&A is to be asked to do something with-- within a short period of time or whatever period of time, that there be some clarity in the forum with -- with the petitioner present that -- as to what will be delivered and what it will mean.

**DR. ZIEMER:** Right now the review of the TBD has built into it inherently some issues relating to the quality of the information. It's not directly answering the site profile thing.

Tom, this is not a public comment period, I --

**MR. HORGAN:** Dr. Ziemer, hold on a second.

**DR. ZIEMER:** I'm going to return to the Board here, if you would have a seat.

Mark Griffon.

**MR. GRIFFON:** I just -- I just have to raise a question -- I mean we've heard -- correc-- and I agree that there's a lot of data at this site, lot of information, and -- and the next step is, there-- some people conclude, therefore, that you can do a bounding estimate. I -- I have to -- and I brought this up on the subcommittee phone call, so this is no surprise, but I have to ask a question on page

64 of the Rev. 1 it basically says that the site profile authors conclude that the 1948 data -- I'm paraphrasing here -- did bound or were representative of the figures of the earlier years. That means '42 through '48, if I'm interpreting this right. There were three new pages added in this section on this whole topic.

To me -- and -- and Jim, I know -- I know they've disagreed with me on the subcommittee meeting, but maybe -- maybe I need better clarification on this. To me, that seems to be an inconsistency. On the one hand we have an evaluation report that says NIOSH recommends those -- that class be included, and this says that they can bound.

Now we're in a situation where NIOSH is not recommending and I'd like to know what's the -- what's the difference in this situation.

**DR. ZIEMER:** Jim?

**DR. NETON:** I -- I mentioned yesterday that we are going to issue a page change notice to the profile that discusses that issue about bounding, and what that really means in the context of -- of the -- of the SEC cohort

moving forward is that that is really a lower bound dose. We -- we acknowledge that we cannot put an upper bound. This is a lower limit that we can place so that we can move dose reconstructions forward for non-presumptive cancers. That's -- that's the intent of that -- that -- we will clarify that with a page change notice.

**DR. ZIEMER:** Okay. Jim Melius.

**DR. MELIUS:** Larry's got --

**DR. ZIEMER:** Yeah, Larry.

**MR. ELLIOTT:** I guess I'm compelled to add to that, because I want to recognize that -- that -- here's another lesson learned for us at NIOSH. When we're advancing two documents, one a site profile revision and another an evaluation report for a Special Exposure Cohort petition, we've got to make sure that -- that at some point, before they're presented, that they marry up and they're coordinated. In this instance, that did not happen, and I regret that. And Jim's absolutely right, the intention behind that set of passages on page 65 is to try to do our level best to attend to non-presumptive cancers for the -- for the

class, for '42 to '48, and that's what we intend there. And I apologize for the confusion that it's presented and this is another lesson learned that we will take full stock of.

**DR. ZIEMER:** Okay. Jim Melius.

**DR. MELIUS:** And can I just add to that? I think it would be helpful if guidelines were developed, some sort of public document that sort of addresses this in a general sense 'cause I think we have to wrestle with it, but that's probably for another discussion, though. I'd like to offer a motion.

**DR. ZIEMER:** You may proceed.

**DR. MELIUS:** And I've written this out and I think it's pretty straightforward, and I think it addresses a number of the issues that have been raised so far, including some of the questions from members of the public.

The Advisory Board on Radiation and Worker Health has evaluated SEC Petition 00012 concerning the Mallinckrodt Destrehan Street facility for the years 1949 to 1957 under the statutory requirements established by EEOICPA. Based on the information available to us at

this meeting, the Board is unable to reach a decision at this time. Rather, the Board is seeking further information in order to reach a final determination on this petition.

The Board has instructed our review contractor to complete their review of Revision 1 of the site profile, with particular attention to issues relevant to this petition. The Board has also asked NIOSH to prepare further analyses relative to their capability to complete dose reconstructions with sufficient accuracy, based on the information currently available to them.

As soon as this additional information is available, the Board will meet to complete our review of this petition.

The Board recognizes that this action will further delay an already lengthy process, and that this delay poses significant difficulties for the claimants or their survivors. However, the Board must also address the need to have adequate information in order to make a fair and complete evaluation of this petition.

**DR. ZIEMER:** That is your motion. Is there a second?

**MR. GRIFFON:** Second.

**DR. ZIEMER:** Motion is seconded. I'd like to ask the Board members if they would like to have this motion in writing and delay discussion until after lunch. Is that the desire, or would you wish to proceed and have the discussion now? It's -- we are past our lunch hour.

**MS. MUNN:** My preference would be for us to discuss it now. I think the discussion that has already foregone this motion is probably adequate for most of us.

**DR. ZIEMER:** Let me ask if -- if everybody's comfortable in discussing and acting with only the verbal material, you understand the motion? Okay, are there any who wish to speak to or against the motion? Dr. Roessler.

**DR. ROESSLER:** I would like to go on record as saying that I'm going to vote for the motion, but it's not because I have any questions about the data. I personally think that at this point in time NIOSH could do a very valid dose reconstruction for this site. However, I would like to see the Board get the information -- each member get the information they need so

that we can proceed as a body.

**DR. ZIEMER:** Thank you. Any others wish to speak for or against the motion? Yes, Leon.

**MR. OWENS:** Dr. Ziemer, I speak in favor of the motion.

**DR. ZIEMER:** Thank you. Any others? Are you ready to vote?

It appears that we're ready to vote. All in favor of this motion, please say aye.

(Affirmative responses)

Any opposed, no?

(No responses)

Any abstentions?

(No responses)

The motion carries. We will dismiss for lunch. After lunch, if needed, we can entertain specific motions on implementation, although there was a caveat in the end -- or one of the provisions indicated that we would proceed as soon as the material is available, which could include an emergency meeting, if necessary, and -- and I would hope that in fact we could have such a meeting in -- in St. Louis, subject to availability of hotels and so on on fairly short notice.

**DR. MELIUS:** When we come back from lunch I think it would be helpful to try to specify certainly what we would be requesting that NIOSH do. I've had some brief discussions with Jim Neton, but I think we need to sort of scope that out a little bit in order to -- at least for NIOSH to be able to reach a timetable on that, be fair to them and make something that's reasonable, and there may be some further information that our contractor may want, though I think that's a little bit more straightforward.

**DR. ZIEMER:** The Chair will also -- Tom, I certainly will recognize you now, if you have some comments. Promise that it won't go into our lunch hour too long.

**MR. HORGAN:** Let's see, where am I here -- can everybody hear me?

**DR. ZIEMER:** I'm sorry to cut you off earlier, but we had to get to the Board's deliberations.

**MR. HORGAN:** Sure. Sure, no problem. What I was going to say during the dialogue with the contractor and the Board was the cred-- going back to the credibility of the data issue and whatever term you want to use, like I said. I

asked if the contractor had been examined -- been tasked or -- to examine the credibility of the data. You asked -- answered for them that it's inherent, or somewhere along those lines in there. I heard from Arjun that that's -- they were not specifically tasked to examine --

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

**MR. HORGAN:** -- the credibility of the data, and they were specifically not asked to address the -- whatever term you use for falsification, erroneous recording, whatever.

All I can say is that's the -- after listening to this dialogue to members of the Board, and it's been great, it's really been informative, that seems to be the over-- a big overriding question, one of -- I think there's two or three issues -- you know, timeliness, this toolbox thing, which I don't understand, and the -- the credibility of the data. I -- I was wondering, has the Board -- I mean as long as this issue is not addressed and as long as the contractor doesn't have a right to address this, rightly or wrongly or whatever, there's going to be a cloud over this process. And I was wondering, has the Board considered giving

SC&A a task order to address the falsification or erroneous credibility of the data issue? I think -- I think -- you can have another meeting in a month or another meeting in two, as long as that issue is not addressed I don't think you're going to have any type of closure on this and I would hope you would consider that.

**DR. ZIEMER:** Thank you. So noted. Let us recess for lunch. And again, I urge you to come back as rapidly as you can. We'll try to reconvene around 1:30. We do have the ability to compress some of our things this afternoon. They are perhaps less controversial, so -- oh, a comment --

**MR. GRIFFON:** Remember to read your matrixes over lunch.

**DR. ZIEMER:** Oh, a word from Mark Griffon, read your matrix.

**DR. WADE:** You all got your matrix. Thank you.

(Whereupon, a recess was taken from 12:25 p.m. to 1:40 p.m.)

**DR. ZIEMER:** I'm going to call the session back to order. We're a little bit pressed for time, but in fairly good shape. We have a couple of

presentations this afternoon. We have on the schedule NIOSH program update and DOL program update. And I think since Jeff Kotsch is here and ready to go, we're -- can we start with Department of Labor and then -- and then we'll catch NIOSH when Larry gets back, so --

**MS. MUNN:** Mr. Chairman?

**DR. ZIEMER:** Wanda.

**MS. MUNN:** I'd like to request that if it's at all possible we try to keep all of the Mallinckrodt information, all of the activities that we have related to Mallinckrodt on the agenda early rather than leave them till the very tail end. We have several people who might be leaving early and --

**DR. ZIEMER:** Yes, do we have some additional Mallinckrodt items?

**DR. MELIUS:** I would just like to try to talk to NIOSH a little bit -- I think we need to wait for Larry to come back -- about what specifically we would like them to do in preparation for (unintelligible) --

**DR. ZIEMER:** Yes, we can do that. We can delay this just a moment and Larry is now coming in, so --

**DR. MELIUS:** I also have --
**DR. ZIEMER:** -- Jeff, we'll just hold off just a second.
**DR. MELIUS:** I also have an issue related to transparency and classification that I'd like to get addressed --
**DR. ZIEMER:** We don't need to do that before the Mallinckrodt --
**DR. MELIUS:** No, I'm just saying before we lose too many Board members --
**DR. ZIEMER:** Right.
**DR. MELIUS:** -- I think it'd be better if we did it --
**DR. ZIEMER:** Sure. Proceed, Jim.
**DR. MELIUS:** About -- oh.
**DR. ZIEMER:** You wanted to raise the -- or you were going to suggest an approach here for --
**DR. MELIUS:** Larry, this is --
**DR. ZIEMER:** -- a timetable.
**DR. MELIUS:** -- directed at you and Jim Neton and so forth, but in terms of dealing with the Mallinckrodt petition, at least what I'd like to see you do for the next time is, rather than sort of a hypothetical example but with that same approach, look at a number of different

groups. And I don't -- it's feasible to do ten or whatever, but try to take a look at -- at what -- how well that approach is going to work, how comprehensive and, you know, will it be -- I guess will it be sufficient for dealing with what may be some of the more difficult groups to deal with in -- among the Mallinckrodt, whether it's some of the earlier years right after '49 or some of the groups for which there's a -- the data is not quite as complete or comprehensive. Again, I think we have to recognize that it's not going to be comprehensive for everybody and there are provisions for dealing with that within the approach you use and so forth, but that we have some examples to present that -- that would look at that, whether it's by department or job title -- some of the ideas that Richard and Mike brought up this morning. And again, we're not looking for you to do the dose reconstructions on everybody, per se, but just sort of be a little bit more convincing that that approach is going to really fill in the gaps and that you will be able to address the sufficient accuracy.

**DR. ZIEMER:** Thank you, Jim. What I'd like to do, and we don't have to do this in a formal motion, but this is an idea that Jim has expressed. But before we sort of mandate this to NIOSH, I want to make sure it's the sense of the Board that this is what you would like. Does anyone else wish to speak to that or indicate general agreement or ascent to that idea that addresses the issue that we had discussed. Wanda, did you wish to?

**MS. MUNN:** Yes. Generally I agree with what Jim had to request. My personal feeling is that the number he suggested may be unnecessarily large. From my point of view, four or five such examples certainly should serve.

**DR. ZIEMER:** I'm not sure you were mandating exactly ten. It's sort of, you know, enough to convince but not so many as to use all the time between now and then.

**DR. MELIUS:** Exactly, yeah.

**DR. ZIEMER:** A reasonable number, is that what --

**DR. MELIUS:** A reasonable number, and I think --

**DR. ZIEMER:** Using judgment on that, perhaps.
**DR. MELIUS:** And some care going into the selection so that it's -- you know.
**DR. ZIEMER:** Let me ask for others -- general consent that you're agreeable?
Let the record show that there is general agreement on the part of the Board for that approach and we look forward to getting that information.
I've had a chance to talk a little bit with Lew over the break about the schedule and so on, and Lew, in term-- you have a better feel now for turnaround time for addressing the St. Louis issue in the -- in the next meeting and so on?
**DR. WADE:** Yes. I mean I -- I think we all understand the need to proceed with dispatch on this issue, but I also think we understand the need to do this right. Given Joe Fitzgerald's considered comments about the need for SC&A to -- to really be tasked clearly and to look into the issues to depth, and I've talked to Jim Neton over the break about his needs to do what Dr. Melius just asked, it would occur to me that the timing will probably take us to our

next regularly-scheduled Board meeting. And I apologize for that, but I think, again, if we've learned any lesson here today it's to do the right things right, but to give us time to do them right. So I think that's probably what it will take us to.

**DR. ZIEMER:** All right. We're almost to the end of April here now and our next meeting is in July, so --

**DR. MELIUS:** Actually early July, if I remember right.

**DR. ZIEMER:** Yes.

**DR. ROESSLER:** Could we meet in St. Louis then instead of...

**DR. WADE:** I think we -- I mean there's a sentiment to that. Why don't you leave it to us to see about hotels and availability and -- before we commit to anything.

**DR. ZIEMER:** Our hope is to be able to do that, but we do need to make sure that we're able to. Okay. Thank you --

**DR. MELIUS:** Can I just add to that? I mean if I -- this tentative Board agenda that someone passed out --

**DR. ZIEMER:** We're going to come back to that,

by the way, but --

**DR. MELIUS:** Well, but just in terms of location, it also mentions Y-12 and I just think --

**DR. ZIEMER:** Right, and there's another --

**DR. MELIUS:** -- we need to account --

**DR. ZIEMER:** There are other petitions coming down the line --

**DR. MELIUS:** Yeah, exactly.

**DR. ZIEMER:** -- is the issue, right. Right.

**DR. WADE:** So with the wisdom of Solomon, we'll sort that out.

**DR. MELIUS:** Helluva bus ride.

**DR. ZIEMER:** Yes. Let me ask now, do we have any other issues particularly pertaining to the Mallinckrodt site that we need to address here, for efficiency, so that we don't drag that topic out further?

(No responses)

Okay. Then I think we're ready to proceed, and maybe we can go back to our original order then. Jeff, with your agreement, we'll let Larry proceed on his report. We had Jeff up at the mike and then we pushed him back down, but Larry, we're I think ready to hear the re-- the

NIOSH report.

(Pause)

Is Larry -- you have a question for Larry, Denise, before he begins his formal presentation?

**MS. BROCK:** Not really. I was just curious if -- is there anything else that I need to be here for?

**DR. ZIEMER:** That's why I asked the question. I think we have completed our discussions on the Mallinckrodt issue today. I'll kind of promise we won't bring up anything once you have left --

**MS. BROCK:** Okay.

**DR. ZIEMER:** -- some major issue that could --

**MS. BROCK:** Okay, great.

**DR. ZIEMER:** We'll -- yes, I --

**DR. WADE:** But if one comes up, we will inform you.

**DR. ZIEMER:** I think we have completed today.

**MS. BROCK:** All right.

**DR. ZIEMER:** We thank you for being here.

**MS. BROCK:** Well, I wanted to thank everybody on the Board. I appreciate everybody's comments and your time in doing this. I know

it was a difficult decision and I greatly appreciate all you've done. Thank you very much.

**DR. WADE:** Thank you.

**DR. ZIEMER:** Okay, one more thing having to do with Mallinckrodt, Rich Espinosa.

**MR. ESPINOSA:** One of the things that I would like to see happen, and I'm asking that the subcommittee of dose reconstruction look into this, is a blind review happen on some Mallinckrodt cases. It's just a suggestion for now.

**DR. ZIEMER:** We do have some blind reviews to be scheduled. We have not selected the cases yet, and that certainly can be done. Whether or not that could be done before the next meeting is problematical. That -- is that what you're requesting? It may be that we could.

**MR. ESPINOSA:** I'm not too -- I'm not too sure that it would have to be done before the next meeting, but as the next subcommittee meeting adjourns, I'm requesting that the subcommittee look into it and suggest -- and --

**DR. ZIEMER:** Select?

**MR. ESPINOSA:** -- select some cases --

**DR. ZIEMER:** Okay.

**MR. ESPINOSA:** -- for a blind review. I just see a lot of good things coming out of a blind review, such as validation of the documents and stuff like that.

**DR. ZIEMER:** Yes, okay. Very good. So noted, and if Dr. Wade will help me remember that, we'll make sure that gets on the agenda.

**DR. WADE:** I think we both need help in that regard.

**DR. ZIEMER:** We both need help.

**DR. WADE:** We'll work on it.

**DR. ZIEMER:** Okay, thank you. Now Larry will proceed.

**NIOSH PROGRAM UPDATE**

**MR. ELLIOTT:** Thank you, Dr. Ziemer. It's been a while since I gave you a program status report, but I'm here today to do that and I intend to give you as informative and an illustrative report as some of my staff have in the past, and I hope I can measure up in that regard.

With regard to submittals from the Department of Labor for dose reconstruction to NIOSH, you can find that on this slide. I would note for

you that this data is current as of the end of March of this year and it's -- this slide shows, in red, those -- excuse me, those cases in blue that we have received from the Department of Labor; cases in green that have been sent out to claimants with their draft dose reconstruction report for their review and sign-off of the OCAS-1 form; and then those cases in red that have then made their way on to the Department of Labor for final adjudication.

Things to point out on this slide, we still see a trend of incoming cases from DOL around the 200 level mark -- 200 per month. There's a spike there you see in the January time frame, but it averages about 200 a month right now, between 200 and 300.

We're somewhat consistent right now in our cases that we're sending out to claimants at about 500 per month, and then those that we send on to DOL range from 475 to 500 a month, as well.

This slide gives you a little information about the -- where the cases come from, from which district office, and reflects the larger sites

that you might expect. For Jacksonville's district office, Oak Ridge, Savannah River. You can see the Cleveland office handles a lot of AWE sites. It's coming in at about 21 percent of the pie chart here, and Seattle next and then Denver bringing up the trail. I think when you see Jeff Kotsch's presentation from Labor, they'll be talking a little bit about a shift that they've made in their district office handling of certain cases for Missouri and -- I'm not sure which other state, but they have made a shift and I'll let Jeff speak to that -- that go to the Denver office from the Seattle office, so there's been a shift in that and he'll speak to that.

The cases that we receive from the Department of Labor by quarter are depicted in this particular slide, and as you note -- I hope you note -- this is as of April 18th, last week. And I note for you that in the fifth (sic) quarter of this year, that only reflects cases received up through part of April.

This graphic presents -- again, in a different way, portrays the draft dose reconstruction reports that have been sent to claimants. It

shows it on a monthly basis. As of April 18th -- again, last week -- we had sent -- or week before last, I guess -- we had sent out 8,537 cases. Again, the month of April not being completed yet, that number of 193 doesn't reflect the full month.

Draft modifications is portrayed here. And just so you know, draft modifications refer to the changes that occur in a draft dose reconstruction report while it's in the hands of the claimants, before that report has been sent on to the Department of Labor. A DR draft is considered modified when DOL provides NIOSH with new information that would affect the case, such as a new cancer, new employment information or something of that sort, or a change in the survivorship. Modified dose reconstructions are illustrated in blue and represent the draft dose reconstruction reports that have been modified due to the receipt of the new information from Labor. And the modified DRs that are sent back to Labor after they've been changed are shown in red.

The final dose reconstruction reports that have been sent to DOL are depicted in this slide on

a monthly basis. I'd be pleased to note for you that as of Monday this week, we went over the 8,000 mark. This slide was prepared last week, as of April 18th, and at that point there was 7,851. We have now gone over the 8,000 mark back to DOL.

With regard to our request for exposure information from the Department of Energy, we have sent 18,543 requests. We have received 18,053 responses to those requests. The age of the outstanding requests are shown, those greater than 60 days being 74; 18 for greater than 90 days; 30 requests we've been waiting on for 120 days; and 50 requests we have been waiting on for over 150 days. I can speak -- I know this question's going to come from Dr. Melius, so I'm going to speak to it before he has to ask it. I'm going to save him a little time and it'll save us all a little -- little energy and just give you a quick summary. Albuquerque operations office, particularly with regard to the site for Lawrence Livermore, we have seven requests that are over 60 days past due, and we have one request that's over 120 days past due.

Amarillo operations office, Pantex being the site, three requests over 60 days.

Chicago operations office, that would include Argonne East and Argonne West as the sites in question, five requests over 60 days, two requests over 90 days and four requests over 120 days.

The General Electric facility in Vallecitos, California, we have 12 requests over 150 days and two that are over 120 days.

Let me just run -- Richland operations office -- this is Hanford and PNNL -- we have 29 requests over 60, 13 over 90, 20 over 120, and 25 over 150.

The remainder are from Savannah River, Fernald, Nevada, Honeywell, and they vary in the dates. We follow up on these on a monthly basis. The numbers do change and we are digging into specifically now what's holding up any case beyond 90 days, and we will be making some determinations as to whether or not there is ever any information that's going to be forthcoming. So we have renewed our vigor in following up on those cases, besides just a 30-day follow-up period.

Cases here that are shown are telephone interview statistics. These are the CATIs, the Computer Assisted Telephone Interviews. Cases for which at least one interview has been completed, 18,130. This is -- these numbers are, as you -- as you recall, a case can have more than one survivor and so we interview everybody associated with a case. So these numbers represent actual interviews beyond the -- just the single cases that we have. Interview summary reports that have been sent to claimants, around 24,000 -- or 20 -- close to 25,000, and the number of interviews that have yet to be conducted for the claimants right now, or as of April 18th, were 270. Since January 1st of 2005 we have been conducting between 300 to 400 interviews per month, and you can see that on this slide -- shows how -- how the CATI process has -- has, I think, been a very successful aspect of our program, at least in showing some completion here. And these folks that do the Computer Assisted Telephone Interviews are also tasked with doing what is called the closeout interview, and that's not captured in this kind

of -- in this slide. These are only the interviews for the dose reconstruction that are shown here. Any closeout interviews -- everybody gets a closeout interview to make sure that they understand the report and we can answer any questions that they might have, or encourage them to sign the OCAS-1 or to provide additional information that might better inform the dose reconstruction on their claim.

We have -- these statistics are -- basically can be found on our web site in the claim information page and shows the process of handling a claim. And as of April 18th, 2005 we had 8,952 cases that were in a pre-dose reconstruction assignment development part of the process where information is being collected, interviews had been done, reports were being exchanged on those interviews with claimants, et cetera.

Cases that have been assigned to a DR-ist (sic), a dose reconstructionist, 1,197. We have 477 draft dose reconstruction reports that had been sent to the claimants, were in the hands of the claimants. Again, this is as of April 18th. And we had sent, as of that date,

7,851 cases -- completed cases to Department of Labor.

This graphic illustrates a cumulative figure of cases received by NIOSH in 1,000-block intervals or increments, with a breakdown of the overall cases by tracking number that have been completed. That's the number indicated on the top. And represented in red, the cases by tracking number that have been completed prior to January 1, 2005 -- that would be these (indicating), and then those that are represented in blue are the cases by tracking number that have been completed since January of 2005. This graphic's intended to give you a perspective on how we're doing with regard to the oldest cases, how we're doing within each one of these 1,000 incremental blocks, how we've done since January 1st of this year. There are pulled cases that are accounted for in these figures. A pulled case has been a case that DOL has retrieved from us for many reasons, perhaps -- the most -- it could be that -- that -- there have been cases sent to us that were CLL, and at this point in time we're -- CLL's the only cancer that's not

adjudicated under this program. It could be that -- the most unfortunate and most disturbing, to me, reason would be that the Energy employee or the only survivor of that Energy employee has deceased, and those are not -- those are very few, but I do watch those on a -- on a close -- very close basis. They have my attention.

As mentioned at the previous Board meeting, we are focusing on completion of the first 5,000 claims. We have been somewhat successful at reaching this goal. Since January 1st, 2005 we've completed 120 cases in the 1,000 block, 117 cases in the 2,000 block, 81 cases in the 3,000 block, 87 cases in the 4,000 block, and 103 cases in the 5,000 block.

It's our -- we have a concerted effort underway and have set a goal that by June 30th of this year we will have attended to all of the remaining cases in that first 5,000, either through dose reconstruction or assignment to a Special Exposure Cohort class or a -- by completed dose reconstruction it could be actually a dose reconstruction sent to the Department of Labor or one that has been

drafted and placed in the hands of the claimants. So ORAU has some incentives to do this and we're working very closely with them to make sure that this goal is achieved. I think it's very important that we attend to this. This is part of our timeliness concern that we're facing.

Administratively closed records are shown in this graphic by month, since we first started tracking these. And what happens here is where we have a situation where, for whatever reason, the claimant decides not to sign the OCAS-1 form, not to return it to us, has perhaps got to the point of a height of frustration with the program or with us or whatever and they -- they've just shut off communications with us. We do go back to them. We try to talk them through the process, try to encourage them to file the OCAS-1. We encourage them to do that. We explain to them that if they have another cancer, if they have additional employment, we could follow up on that together. We explain that the signing of the OCAS-1 is not an agreement that they sign saying they are in full agreement with our dose reconstruction,

but it is simply that they have no further information to provide and it allows the case to move forward so that a decision can be proffered from DOL. And as you can see, we're dealing with a few of these but not very many. Reworks. I talked about modifications earlier. Well, reworks are a little bit different breed here. A rework refers to a process that occurs at the final dose reconstruction report stage, meaning that the case has been in the hands of the Department of Labor. And in this situation, something has been identified by the Department of Labor or by the claimant that would require us to go back and revise our dose reconstruction report, redo the reconstruction or add new -- because of new information, add to that report. These -- these revisions can be initiated because of additional employment, additional cancer, new information that the claimant identified after they had signed the OCAS-1 and sent it on to -- and we had sent it on to DOL. So there's a variety of reasons as to why these are -- are kicked back to us from the Department of Labor.

We maintain a high level of contact with the

claimant population through phone calls and correspondence and e-mails, and that's shown on this slide. Our contractor receives the bulk of the phone calls, and I believe this also includes the CATIs, as well as the -- this 150,000 number of phone calls to ORAU includes CATIs and closeout interviews.

Pardon me?

**DR. WADE:** (Off microphone) (Unintelligible) finish up (unintelligible).

**MR. ELLIOTT:** Okay. Pick it up -- pick it up, he says.

Last time we had some interest in hearing more about the compensation rates by cancer model, and this slide presents some of the caveats associated with the slides that I'm going to show after this. These results that I'm about to present to you are through April 20th of this year. They're based on claims which NIOSH received notice from the Department of Labor of a compensation decision, so there's a number of claims that won't be included in this that are still at -- are at DOL, but we haven't learned from DOL what the final decision was. These rates may be skewed by the DR efficiency

process. The rates may not be predictive of any future results. And unless otherwise noted, the rates reflect claims with only one reported primary cancer. Does not include secondaries or multiples, unless so indicated. As you might expect, lung tops the list here at almost 70 percent. Leukemia's a close second at 67 and 61 and 56, then we see liver and other types of leukemia, endocrine gland and other respiratory.

**DR. MELIUS:** Lew, if you and Paul could try not to get your heads together because --

**DR. WADE:** We will not get our heads together again.

**MR. ELLIOTT:** Thank you. I thought that was just a bump in the road trying to get me to hurry up.

But non-melanoma skin is shown here, and several other cancers. I'm not going to go through this. You have it -- have these slides, as well, in your briefing packet and they're on the table for the public. But I think it's indicative of the radiogenicity of the cancer, as we suspected, based upon the scientific knowledge and understanding of

cancer causation.

Nothing much here I want to say about this slide. You can peruse the numbers as you can. Trying to pick up the pace here, this is -- this is where I need to make notice for you that at least one secondary cancer, primary cancer unknown, we see about a 71 percent compensation rate. For cases where we have multiple primary cancers, we show about 42 percent.

The percent of -- there are -- for those cancers where we have 30 or more claims and we have not seen anything -- any -- any of those claims compensated are listed at the bottom of this slide. I do know that there is one female genitalia that I think Labor has in their hands right now that may be compensable. We have to wait and see what happens with that one, a very high dose.

Petitions received, we're moving on to a different topic here, but petitions that we have received, 26 total. We have 20 active in our hands. HHS decision has been made on one, that would be Mallinckrodt for the years '42 through '48, as you know. There have been six

petitions administratively closed for lack of basis.

Our -- briefly, our accomplishments since the last Board meeting, we have exceeded sending 8,000 dose reconstruction reports to DOL.

We've seen Secretary Leavitt's final decision to add a class of workers for Mallinckrodt. That was sent to Congress on April 11, 2005.

We have participated in 33 meetings at 13 sites since March 1st. This is a huge commitment of staff effort. We send not one, but we send several people -- PHA, a public health -- or a health physicist, public health analyst, a communications specialist -- typically to these meetings, and it's been a very resource-intensive effort. But I think it's been very beneficial to us and to the people who show up at those meetings. We can answer questions.

You may have seen a different presence here at this meeting for NIOSH. We've had public availability sessions at this meeting where we've asked claimants -- we noticed all of the Iowa claimants that we would be here. I've had mixed results on this -- from why'd you tell me that you were going to be here when you can't

tell me that anything's changed, to hey, it's good to see a face associated with my claim. So we're evaluating our presence and our -- how we represent ourselves at these meetings, and I would appreciate hearing any thoughts or comments that the Board members have, on an individual basis, about that.

Finally, we would lay claim that 12 Technical Basis Documents have been approved since January, and seven Technical Information Bulletins have been approved.

I think that will conclude mine and I'll gladly answer questions, and I'm sorry if I was too quick and I glossed over things that you wanted to hear more about.

**DR. ZIEMER:** We'll have time for a couple of questions, and I should tell you why Lew and I had our heads together. We are eliminating Jeff from the program. He's aware of it. You have the Labor report in your document, so that will help us with the time a little bit.

Jim, and then Leon.

**DR. MELIUS:** Larry, I thought you --

**DR. ZIEMER:** Larry already answered your question, Jim.

**DR. MELIUS:** Yes, I know, and I was saying he stymied me, but I've got to come up with some new questions or a new way of asking 'cause I'll give you credit, the cases completed by tracking number -- my usual question is how many have you -- what have you done for me lately, and you know, you've got that on there, so that's -- that is helpful.

I have a comment and a question. My comment is sort of the half-full, half-empty sort of argument, but if my calculations are right -- and they're certainly at least ballpark -- it still leaves you within the first 5,000 with about 2,400 of those first 5,000 to be completed; 3,200 of the next 5,000 to be completed, and so on. And at the completion rate that you're going at now, assuming even no new cases, I believe that's at least two years to catch up with the backlog and presumably with the current rate of increase -- of claims coming in, I think that stretches it out to about three to four years to -- or closer to four years to catch up with the backlog. Now that's assuming no SECs and making lots of other assumptions. So I guess I'd like to have

a little bit more information. One, on what you're doing with the backlog to catch up, and secondly, how we're dealing with -- who is that backlog?

**MR. ELLIOTT:** Who is that backlog?

**DR. MELIUS:** Yeah, what kinds of ca-- I believe in the past I've asked for information on -- can you tell us the -- why -- why are we having problems with these? Is it -- what --

**MR. ELLIOTT:** Well, since there's two -- over 200 sites represented in our caseload, as you know. Several of those are AWE sites. Several -- we have several individual cases where just one or two cases from a given site. We won't have a site profile for those. We're looking at what we can do for those on an individual basis. We have employed an overestimation approach, a new Technical Information Bulletin that provides an overestimation approach, and if the case is compensable, we move it on. If it's not and we have to refine our dose reconstruction or find information to process that case, we do so.

I think you're going to -- from this meeting to the next meeting you're going to see a dramatic

increase in our rate of production, given some of the things you just alluded to, that SEC classes are going to help us out with reducing our backlog. This overestimation approach that we've approved for the ORAU folks to use is going to help. We're -- we've talked to them about adding staff where we need to add staff to get this work done. There's a variety of efforts underway. Now without, you know, going into greater detail -- that I don't have at my fingertips right now -- I can't -- I can't add any more.

**DR. MELIUS:** My recollection is that ORAU was working on some evaluations or reports related to some of this -- these backlog issues -- again, specifying who was rep-- who was included in that backlog by type of case or site or something.

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

**DR. MELIUS:** Could those be made available to the Board, at least, if you don't have time to...

**MR. ELLIOTT:** No, I don't think they're -- they're in a shape or form that I'm happy with yet. We're working with the contract-- our

contractor to get to a point of understanding on how we're approaching our backlog issue in a variety of ways, and I'm not at a juncture where I'm ready to commit publicly to how -- the different approaches that we're applying. We're working on that, and as soon as we have something that I can make publicly available, I will.

**DR. MELIUS:** Is there a time frame on that?

**MR. ELLIOTT:** I hope we'll be able to say more about that at the next meeting in July.

**DR. MELIUS:** I mean I'd just point out -- I mean this -- there's a lot of frustration which we've heard today from Mallinckrodt, and we heard yesterday with Iowa, about the length of time it's taking for cases to be processed through this program. And I mean I think a much more -- I mean I think a plan needs to be developed and it needs to be shared with the public --

**MR. ELLIOTT:** I agree --

**DR. MELIUS:** -- as soon as possible.

**MR. ELLIOTT:** -- I agree 100 percent. But let's keep things in perspective here. Iowa, we -- we sent letters out to the Iowa claimants

once we were dealing with the revision to their site profile and indicated that we were no longer processing dose reconstructions until we had a revised site profile. Now that we have a decision -- a recommendation for a class, we're watching what's going to happen with that decision on that class.

Mallinckrodt, we have a revised site profile. We are dealing with a petition. We have -- have no recommendation. We will go back and start processing claims under Mallinckrodt Rev. 1 site profile immediately, and we're going to start moving those claims through as we await this Board's deliberation on -- on Mallinckrodt, and then finally a decision on Mallinckrodt as an SEC, so I'd just offer that. I agree with you 100 percent. We need a cogent plan and we're working toward that end.

**DR. MELIUS:** Well, I think we need to re-evaluate the approach entirely. I find it increasingly unacceptable that people are having to wait this long.

**DR. ZIEMER:** Leon Owens.

**MR. OWENS:** Larry, I had an opportunity to attend three of the DOL outreach meetings in

Paducah, and I would like to compliment Mr. Stu Hinnefeld and Ms. Heidi Deep. Particularly -- Stu fielded some very tough questions. We had a large -- large group of workers in attendance, and so I do think it adds a lot of benefit, a lot of value to have NIOSH representatives present at those meetings.

**MR. ELLIOTT:** I thank you for that, Leon, and it's kind words like that that keep us going with these difficult challenges. I would like to add, though, that the 33 and the 13, the statistics in those outreach meetings, do not include our worker outreach, our worker input. Those are just the town hall meetings that DOL has sponsored. So while we're doing that, we're also going out and doing our own worker outreach. As you know, we spent a session down in Paducah during this time period since the last meeting, so...

**DR. ZIEMER:** Thank you. Henry and then Mark.

**DR. ANDERSON:** Just quickly, you mentioned the -- we're now going to be getting into some of the site profile updates. What -- what's the process? I think you mentioned you would potentially go back through those that have

already been adjudicated to see if it'd make a change? How -- how's that happen? I mean --

**MR. ELLIOTT:** Well, we do that --

**DR. ANDERSON:** -- that could get to be very onerous.

**MR. ELLIOTT:** Oh, it is resource-intensive, as everything we do here in this program. It consumes us. But we have a standard operating procedure, one of those procedures which has been reviewed in task three, which is called program evaluation reporting where if a change is made -- and we've made numerous changes, numerous revisions in site profiles, as you may know. And each time one of those is -- is completed, one of those revisions is completed, we look back through the cases that were dose reconstructed under that particular version, and the evaluation must include whether or not the modification that was made or a change in the site profile that was made would affect the compensability outcome of the case. So if the case was already found compensable, we disregard it.

If it's found non-compensable under the prior version, we evaluate the change and whether it

would make a difference in the compensability. If it does, we reprocess that dose reconstruction, notify the Department of Labor and the claimant that we're doing so and we send that revised dose reconstruction back. To date, I do not believe -- Jim could correct me if I'm wrong, if he's still in the room, but I do not believe that we have made any changes -- we've not seen any non-compensables turn into compensables based upon revisions that we've made.

**DR. ANDERSON:** That was my next question, yeah. Thanks.

**DR. ZIEMER:** Mark.

**MR. GRIFFON:** Just -- just a quick one, Larry. I -- I think it might have been last meeting you mentioned that -- or it was -- I think the question was raised and you had mentioned that ORAU was doing a report for you on self-identified SEC classes, and I wondered if that was completed yet. And if it is, if the Board can get a --

**MR. ELLIOTT:** We -- we -- it's not -- I've sent it back because I wasn't -- I wasn't fully satisfied in how that was developed. I want to

see more detail in it and more effort put toward that end, and we're awaiting a revision of that report. I can tell you that some of the -- some of the sites that involve early years we're really focusing our attention on that. I've asked specifically, because I know -- we've got Linde site profile in our hands, and if you've looked at it, you know that it is reserved for the early years, and I'm saying that right there, in my opinion, is a potential class and so we should look at that. We are looking at Linde, we're looking at NUMEC, there's a variety of those sites that have -- in the early years where their data is non-existent to very minimal, or the monitoring program was not what we would hope it should have been, we would like to have seen it.

**MR. GRIFFON:** That can be -- when it -- when it's completed, it can be provided to the Board?

**MR. ELLIOTT:** Yep.

**DR. ZIEMER:** Thank you. Okay. Thank you very much, Larry, for the update. I think we're ready to move on. We have one item on our afternoon agenda that may have some substantial

discussion, and that's the first 20 dose reconstruction case wrap-up, and we have -- the subcommittee met earlier this week -- was that this week? Monday -- Monday morning, and most of you were actually here for that, but we have the materials that come to us as a recommendation from the subcommittee. I think it would be helpful if the Chair identified to you again what those materials are.

**MR. GRIFFON:** Paul, I --

**DR. ZIEMER:** Mark, can you help us?

**MR. GRIFFON:** -- I was just going to ask, does it make sense -- I know Jim said he had a motion, and then we have a task order for SEC task to consider.

**DR. ZIEMER:** We have --

**MR. GRIFFON:** And I -- this is going to be a lengthy process, so I'm just afraid that we might lose --

**DR. ZIEMER:** Well, it's an issue of what should --

**MR. GRIFFON:** -- (unintelligible) numbers --

**DR. ZIEMER:** -- go first. Actually the --

**MR. GRIFFON:** I know.

**DR. ZIEMER:** -- the task order for SEC was --

we had a draft of that, I think, in our telephone --

**DR. MELIUS:** And we said we would take action...

**DR. ZIEMER:** And we would act on it here. Perhaps --

**DR. MELIUS:** I have a copy if we need --

**DR. ZIEMER:** Perhaps we can act on that quickly since --

**DR. WADE:** (Off microphone) (Unintelligible) have it.

**DR. ZIEMER:** -- that was developed. We've had that for a month or so. Would you like to do that next? It is the next item.

**MR. GRIFFON:** I think tho-- yeah, those two.

**DR. MELIUS:** And with -- with the Chair's permission, can I hand out the issue related to --

**DR. ZIEMER:** Yes.

**DR. MELIUS:** -- transparen-- so these people can glance at it.

**SEC PETITION REVIEW TASK ORDER**

**DR. ZIEMER:** Okay, let's -- let's get the document before us. It's called Special Exposure Cohort petition review task order.

The draft does not have a date on it. I guess, for convenience, put today's date on it.

(Pause)

This would be task five for our contractor.

**MR. GRIFFON:** And we --

**DR. ZIEMER:** Jim -- Jim is passing out an item which is a different issue, so that doesn't -- this is not part of the item before us here.

**MR. GRIFFON:** We had a -- I mean we had a fairly lengthy discussion on this on the previous Advisory Board phone call meeting, and I -- I think -- well, I think we just need to consider it now, and there might be --

**DR. ZIEMER:** Sure.

**MR. GRIFFON:** -- possible amendments to it that we want to consider, I don't know, but...

**DR. ZIEMER:** Does everybody have a copy? I'm actually trying to recall whether this came out of the subcommittee. Lew, can you help me --

**MR. GRIFFON:** It was --

**DR. WADE:** Yes, it was prepared in -- really during and after our subcommittee meeting in Cincinnati, and then it was placed before the Board on its phone call on -- I think it was April 11th, and there was discussion of the

full Board, reserving for this meeting action on the -- on the task.

I think there's also the possibility that if this task document is agreeable to the -- to the Board, the Board might instruct me to undertake the independent government cost estimate, which would expedite the matter. But I think first there needs to be an intellectual agreement on this document.

**DR. ZIEMER:** I'll interpret the document as coming from the subcommittee. It constitutes a motion, does not require a second. It's open for discussion. Basically what we have before us is a motion to approve a task concerning Special Exposure Cohort petition reviews.

Wanda Munn.

**MS. MUNN:** I don't know whether my note on this -- the copy that I have -- is something that I made during the time we were discussing it and whether it was something we agreed to, or whether it's just a note that I've made to myself.

Item number three, (reading) the contractor will be required to review -- I have inserted "up to" --

**DR. ZIEMER:** That's correct, we --
**MS. MUNN:** That was a part of our discussion, wasn't it?
**DR. ZIEMER:** We basically agreed that we weren't guaranteeing that there would be eight, so the scope would be up to eight. I think we had agreed on that. I don't see that in this, but in paragraph three, without objection, add the words "up to" eight SEC petitions. That scopes an upper limit for purposes of the cost estimate, not guaranteeing to the contractor that there would necessarily be this many petitions. We don't know how many we would need reviewed. Thank you.
**MS. MUNN:** And I have --
**DR. ZIEMER:** Another?
**MS. MUNN:** -- one other issue. Although there is nothing in this particular item which would point to my concern, nevertheless it's a concern I want to raise.
When we first began looking at task orders for our contractor, we -- I was under the impression that the contractor was going to be providing -- specifically -- technical, scientific expertise that we were not able to

provide here in our own group. And I -- I had no -- at that time, we reviewed some of the credentials of virtually all of the people that was my understanding would be the primary actors in what SC&A would be doing for us. On our last telephone call we had a considerable amount of input from a policy individual that I questioned afterwards and was told that that individual had become a part of our -- our SC&A task force. I was a little taken aback by that because I did not -- I was unaware of the fact that -- that we were providing our -- our contractor with instructions to follow our -- our directive by way of inviting policy makers on the team. I guess -- because we're now in the process of putting together another task, I guess -- although I don't see that it's the Board's requirement to review the credentials of every person that our contractor chooses to -- to take on, I do have to question that particular item as -- with respect to credentials.

**DR. ZIEMER:** Thank you. This may be an issue we would have to discuss with the contractor in that particular case. Lew, do you have any

comments on that or can you shed any light on that?

**DR. MELIUS:** I have some comments when --

**DR. ZIEMER:** I was not on the phone call. To address this?

**DR. MELIUS:** Yeah, my recollection is that -- if I'm guessing right at the individual you're referring to -- is that he was listed as a member of the team when we approved the initial contract, and so it was not a surprise to me to see him and hear that he was involved in -- in doing this and was listed in a -- I thought at the time when we approved it -- in an appropriate fashion and in an appropriate role, and -- again, if I'm guessing right at who you're referring to 'cause I was not part of this more recent phone call -- was that he was also -- has a considerable knowledge about the DOE complex and I believe has been -- if he's -- to the extent that he's played a role, and I don't think it's been a major one, has been based on his historical knowledge of information throughout the -- the complex, particularly on specific sites.

**DR. ZIEMER:** Not necessarily technical, but

information on or knowledge of --

**DR. MELIUS:** Availability of technical information. I mean --

**DR. ZIEMER:** -- availability of technical information.

**DR. MELIUS:** -- the particular individual is fairly knowledgeable technically, but -- again, my sense is he's -- and recollection at the time is he's being used -- was to be used and involved in an appropriate way, given his knowledge and background.

**DR. ZIEMER:** Wanda?

**MS. MUNN:** If that is in fact the case, then I must have been completely blind at the time that we were -- time I thought I was paying attention. I am not comfortable with that. I am not at all comfortable with individuals other than the technical expertise I clearly understood we were seeking from our contractor.

**DR. ZIEMER:** Thank you. And again, that may be an issue we would explore, perhaps with our -- with our contractor. Whether or not that impacts directly on this motion, I'm not sure.

**DR. MELIUS:** Can I just -- I would hope, given some of our past history, that if we're going

to try to deal with issues like that, that we would do it with full involvement of the Board.

**DR. ZIEMER:** Thank you. Any other comments on -- on this particular document?

**DR. WADE:** Could I ask a clarifying question, Mark, since -- I assume that you're listing here a number of tasks, any or all of which could be engaged, depending upon the Board's wishes. So it's not that all of these things will be done, it's up to the Board as to what would be done. Is that correct?

**MR. GRIFFON:** Yeah, I guess we -- I mean we had -- you mentioned on the conference call that we had, and I don't know if we want to amend this to give an option at the discretion of the Board to make a decision as to whether we want a more limited scope for certain reviews or the full scope. And that mi-- you know, that might be something we want to consider.

**DR. ZIEMER:** It would seem to me that if we had a task that was sort of encompassing, then we could use that for a particular issue, or portions of the task, could we not? Is it not better to have a broad task under which work can be done rather than a very narrow one that

confines you so you cannot do certain things?
**DR. MELIUS:** Yeah, my sense was also that number two here would be developing the procedures that were going to be used and very well that one of those procedures would be the option to sort of focus on different --
**DR. ZIEMER:** Procedures would --
**DR. MELIUS:** -- evaluations as we --
**DR. ZIEMER:** -- spell that out.
**DR. MELIUS:** -- go --
**DR. ZIEMER:** Right.
**DR. MELIUS:** -- along, and -- and again, I don't know if we need to include it here, but certainly as we operationalize this that we should take that into account 'cause it may very well be appropriate, and to make these more timely, also, I think.
**DR. WADE:** I am comfortable with that. I just wanted to make sure that was the sense of -- of the Board. I think this gives me that flexibility, but I wanted to clarify that sense.
**DR. MELIUS:** And as I said on the conference call, I am uncomfortable with trying to do this piecemeal, one question at a time, or two

questions, 'cause I think it's just going to tie us up and we're going to lose consistency over time.

**DR. ZIEMER:** Thank you. Other comments?

(No responses)

Okay. Are you ready to vote on this document then? Let us vote.

All in favor will say aye?

(Affirmative responses)

Any opposed, no?

(No responses)

Any abstentions?

(No responses)

Motion carries. Thank you.

**DR. WADE:** And then a clarification. Do I have the permission of the Board to undertake developing an independent government cost estimate to this task?

**DR. ZIEMER:** Any objections to have our...

**DR. WADE:** Thank you.

**DR. ZIEMER:** Okay. Our official will proceed with that.

**DR. MELIUS:** I actually think the sooner we can get this in place, the better -- given the numbers Larry just showed.

**MR. GRIFFON:** Just a logistic question. I think you have the most electronic version, minus the "up to" eight ca-- so if you can just -- I don't need to send any revised versions --

**DR. WADE:** No, I'm fine with that. Thank you.

**DR. ZIEMER:** Okay. We have a proposed motion from Jim Melius. We also have -- which may or may not be a long issue, but I believe the -- the case report -- the 20-case wrap-up is really the important issue that we need to address before we lose a quorum.

**MR. GRIFFON:** I don't know, I think if we want to -- you want to -- I would -- I would defer to this motion first and then -- I think that makes more sense.

**DR. ZIEMER:** Okay. The Chair will recognize Jim for the purpose of making a motion.

**DISCUSSION, LEGAL OPINION FROM DOJ**

**DR. MELIUS:** Yeah. This motion cames out (sic) -- (unintelligible) from our discussions yesterday and -- or maybe it's out lack of discussions or ability to discuss the reported legal opinion from the Department of Justice. And I'm not sure whether we want to task NIOSH with this or whether it would be better to be a

letter to the Secretary asking -- 'cause this is a response 'cause at least it's implied to us that the Office of General Counsel for the Department is where -- at least this was communicated for -- this opinion was communicated from, so let -- why don't I read the motion into the record.

The Board has serious concerns about the reported Department of Justice legal opinion regarding the handling of classified information as the basis for decisions within the Special Exposure Cohort program. While fully supporting the need for preventing the release of classified information, the Board also recognizes the importance of transparency to the EEOICPA program. Due to the long history of secrecy at DOE nuclear facilities, former workers are very suspicious of secrecy related to any health-related information used as the basis for their claims.

The Board respectfully requests the following information: One, who requested this legal opinion and what was the rationale for the request; number two, what agencies were involved in the discussion of this legal

opinion and to what extent does this opinion apply to programs in those agencies; number three, requesting a copy of the legal opinion and a presentation by an attorney familiar with the basis for the opinion at our next meeting. The Board believes this information is critical for the Board to properly and fully carry out our responsibilities under EEOICPA.

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

**MR. ESPINOSA:** Second.

**DR. ZIEMER:** The motion has been seconded. It's open for discussion. Wanda?

**MS. MUNN:** I feel I have to repeat the question that I asked yesterday. I don't understand why bullets one and two are of any consequence. Who requested it, why it was requested, doesn't seem to be an issue. The Department of Justice is within its prerogative to do that. Asking for a copy of the legal opinion and an attorney familiar with the basis is, in my view, certainly within our prerogative and we made the statement in the first paragraph that workers are suspicious and that concerns us. I really do not see that bullets one and two are,

frankly, germane.

**DR. ZIEMER:** Are you making a formal motion to exclude them or are you just raising the question?

**MS. MUNN:** I would move that we exclude bullets one and two.

**DR. ZIEMER:** Okay. There's a motion to exclude bullets one and two. Is there a second?

**DR. DEHART:** I second.

**DR. ZIEMER:** And seconded. Now what is open for discussion is the removal of bullets one and two. You may speak in favor of the motion, you may speak in opposition to the motion. Indicate what your -- Roy.

**DR. DEHART:** I'm speaking in favor of the motion. I'm not certain that that information has any bearing on the action of the Board. The impact of the legal opinion does, but who may have instituted the inquiry or whether or not it was done solely from the Department of Justice I think is immaterial.

I would also ask the question, have we seen the full opinion, so I think that needs to be put in the motion.

**DR. ZIEMER:** The motion asks for a copy of the

opinion, I believe, yeah.

**DR. DEHART:** Yes.

**DR. ZIEMER:** Bullet three --

**DR. DEHART:** Well, how can we have a concern when we haven't seen the full opinion?

**DR. ZIEMER:** We've seen a slide depicting the opinion.

**DR. DEHART:** I would put that in there, we have not seen the opinion.

**DR. MELIUS:** Well, I tried to address that by saying the reported Department of Justice legal opinion, in the first sentence. That was what I was trying to get at.

To speak --

**MS. MUNN:** Alleged.

**DR. MELIUS:** To speak against the motion to remove --

**DR. ZIEMER:** Go ahead.

**DR. MELIUS:** -- I'd like to explain -- was -- I thought it would be helpful to understand the context for this opinion, and that would be knowing who requested it, what was the rationale for that request, as well as in bullet two, what other agencies were involved. For example -- and I guess we didn't get to

hear this presentation today, but I'm aware that the Department of Labor is developing their regulations regarding Subtitle E, and so issues of classification versus due process and so forth may be something they're wrestling with at the time. That would sort of put this in context and I think help to -- help us to understand what was involved. Also to know how this was being applied, was there a related opinion that was being developed for Department of Labor's program or for some other part of this program, and it would just, I think, more fully inform us about this opinion and be able to understand it better. And that was the rationale for bullets one and two.

**DR. ZIEMER:** Henry?

**DR. ANDERSON:** Yeah, I guess I'm speaking against. I -- I would agree, I -- I guess what I'd like to know is was this done specifically, narrowly and for our program or what's often -- it could be that this is a general opinion related to classified information that then sweeps us up in the late notification as somebody looked at this and said this may impact you, when in fact it was developed for

other programs. And that places our issues in context and might then result of a need for a more detailed review or comment on specifically our program. It's for -- if it's for our program and it was apparent nobody here knew about it, that is also important to know. So you know, I think it would be -- the context of it and how broad-sweeping it is -- we may learn that when we get a copy of it, and it may all be in that copy as to who it's being sent to, but I just think it would be helpful to know how specific is it to they reviewed our program versus other issues.

**DR. ZIEMER:** Okay. Wanda, do you wish to speak for your motion?

**MS. MUNN:** It still doesn't matter whether it's just our program or whether it's the whole wide world. The Department of Justice is within their prerogative to do that. As a matter of fact, it's their responsibility to do that. And so since they're doing it, from our perspective our only concern needs to be how it affects our program.

**DR. ZIEMER:** Okay. Others who wish to speak in -- okay, Michael?

**MR. GIBSON:** I think it's important to leave the first two bullets in there only because we've tried to -- been open and honest and work in good faith with NIOSH and Department of Labor and everyone else in this program. I think it's just -- it'd be a good road map and a good history to determine how this was -- was -- what the genesis was for this, since no one seemed to be able to tell us earlier.

**DR. ZIEMER:** Thank you. Henry, did you have another comment?

**DR. ANDERSON:** No.

**DR. ZIEMER:** Anyone else wish to speak for or against the motion?

(No responses)

Are you ready to vote? This is a motion to delete bullets one and two. If you vote yes, you are voting to delete those two bullets. A no vote is a vote to retain them. Okay?

Those who favor deleting bullets one and two, raise your hand, we'll get a count here -- one, two, three and the Chair will vote, four.

And those who oppose deleting the bullets -- one, two, three, four, five, six, seven, so the bullet -- the motion loses and the bullets will

remain in.

We are now back to the original motion with all bullets in place. Now this may pose a dilemma for those who voted against the bullets because they may favor the main motion but be concerned about the bullets. That's the nature of what happens when things are amended or not amended. Sometimes you take the good with the bad.

But let me ask if there's any further discussion, in which case we will vote for the main motion as unamended. Are you ready to vote?

Okay. All who favor the motion, say aye -- or let me ask for a show of hands. Okay, one, two, three, four, five, six, seven, eight, nine, ten.

Opposing? One. And no abstentions? And the motion thereby carries.

It appears to the Chair that this should be a request to the Secretary.

**DR. MELIUS:** I believe so, yes.

**DR. ZIEMER:** And if that's the case -- and I may need some help here.

Our normal role is to advise the Chair -- or to advise the Secretary. Lew, is there any

problem if we simply -- we are asking the Secretary if this -- if this information can be provided. Is that appropriate or should -- should we go through NIOSH on this.

**DR. WADE:** I don't think there's any problem with it, in my opinion.

**DR. ZIEMER:** Okay. With that added comment, then, the Chair will proceed -- do I have to do this in 21 days? We will -- we will send this forth as soon as possible. Thank you. Mark.

**DR. WADE:** Could I take up an issue before Mark, just -- the future schedule?

**DR. ZIEMER:** We're going to run out of time.

**FUTURE SCHEDULE**

**DR. WADE:** It'll take two minutes. But would someone get Cori in the room as I start to do this? I would refer you to this piece of paper you have, a future schedule. The only reason I do it, there is a key decision that needs to be made, triggered by this piece of paper. Very briefly, all I'm trying to do with this is at every meeting to look two meetings out and give you a sense of what might be coming downstream. I think it is terribly important that we coordinate, for example, comments back from

your contractor on the TBD as we might be contemplating an SEC petition, for example. And I think there are many things that will come from this.

If you'll look at the July meeting, there are some changes already. You've asked that we take some of the task three work and move it from the October meeting to the July meeting, and I'll take that as an instruction from the Board. We need to add the Mallinckrodt SEC work now to the July meeting. You have just asked in your letter to the Secretary for a transparency issue briefing at the July meeting. I am operating on the assumption -- Larry, correct me if I'm wrong -- that the IAAP -- IAAP SEC rad workers issue might not have to be worked, given the action with regard to the SEC, or does it still need to be worked?

**MR. ELLIOTT:** I think it still needs to be worked up and given to the Board as an evaluation report because the Board took separate action on that. They're awaiting our evaluation report.

**DR. WADE:** Okay. Thank you. The only issue that requires work is you'll notice that we

would expect to discuss a Y-12 SEC petition in July. The Y-12 site profile review is on your contractor's list. Right now it's late in their scheduling. I would like you to consider elevating it in the scheduling so that they can begin to work on it now, so you would have as much possible benefit of their review as possible when we come together in July. So I ask for the sense of the Board that that would be acceptable to you. If it is -- I've already discussed this with Joe and I think he's ready to proceed. I didn't want to take that action without consulting with the Board.

**DR. ZIEMER:** Any -- any comments by the Board members or --

**DR. MELIUS:** I think that'd be good.

Can I have one other comment -- agenda comment, though?

**DR. ZIEMER:** Yes.

**DR. MELIUS:** Yeah. The Bethlehem TBD or the review of it and so forth, I believe -- well, I actually know, because of -- I was copied on some correspondence. The Congressional delegation in western New York and our two senators had -- had requested clarification

from DOL. I think it's -- the issue is were there additional runs at the -- Bethlehem Steel. And last I heard, which was a couple of weeks ago, was that there had been no response from Department of Labor on that issue. I just think it'd be worth exploring on the part of NIOSH to -- just as a scheduling issue, 'cause potentially the DOL response could change the site profile one way or the other, and I'd hate to have us deal with it, particularly given the long history there, and then have -- suddenly have a -- some change come down from DOL. It may very well be that it doesn't affect it, but --

**DR. WADE:** Okay, I understand, and I will take on that action.

**DR. ZIEMER:** Okay.

**DR. WADE:** Now we have a Board meeting scheduled in early July. Cori, the tentative dates are?

**MR. GIBSON:** Sixth, 7th and 8th.

**MS. MUNN:** Sixth, 7th and 8th.

**DR. WADE:** The 6th, 7th and 8th? We were contemplating meeting in Oak Ridge. We now have this competing need for a St. Louis

meeting. I don't know that we can resolve that today. I know, Mr. Presley, you had comments you wanted to --

**DR. MELIUS:** Paducah, half way.

**MR. PRESLEY:** I've got a real concern. If we meet in Oak Ridge July -- or anywhere else, especially Oak Ridge -- Oak Ridge has -- for the last 20 years we in Oak Ridge, including myself, we get two days holiday. This year it lie-- it goes for a Monday and Tuesday. A lot of people in Oak Ridge are off and take vacation that whole total week, 'cause that gives them nine days. I do not feel like that that would be fair to the people in Oak Ridge if we have a meeting on a holiday weekend. I also do not feel like that it would be fair to people in -- anywhere else if we have a meeting on a holiday weekend. We get enough concerns and bounce-backs about some of the other things that we do, without having meetings on holiday weekends and have to travel on weekends ourselves and things like this. That's my concern.

**DR. WADE:** Thank you. I don't know that we're going to be able to work through this right

now. I think I -- I understand that concern. If you would leave it to myself and staff to try to work through these issues, realize that there are -- there are definitely competing demands on us and we will try again with the wisdom of Solomon to work through this.

**MR. PRESLEY:** With the wisdom of Solomon, if we can work through this, can you do it as early as possible? I hate to get down a week or two before a meeting and then have to start making arrangements. I think that goes for all of us.

**DR. WADE:** Understood.

**MR. GRIFFON:** Can I --

**DR. ZIEMER:** Thank you, Lew. Yes, Mark?

**MR. GRIFFON:** Just -- just one question along the lines of our future agenda here, and this is a -- we spoke -- or we questioned Larry earlier on his backlog. This is quickly becoming our backlog. I'm looking at the Savannah River profile on there. We've had that for a while. The task three procedures review, we've had that for a while. And I wonder if we -- I think we committed in -- in the subcommittee meeting to working on the procedures review in between these next two

meetings via workgroup, subcommittee, I'm not sure what that process is going to be. But I wonder if we can do the same thing for the Savannah River -- my concern is -- I mean, quite frankly, this week has been a challenge for everyone to get through. And if we load up this meeting again with five -- four or five major items like this, we're not -- it's not going to work, and --

**DR. WADE:** Understood. The Sava-- for the record, the Savannah River profile I think we've just received or are about to receive?

**UNIDENTIFIED:** (Off microphone) It's been submitted.

**DR. WADE:** It's been -- okay. But your --

**UNIDENTIFIED:** (Off microphone) (Unintelligible)

**DR. WADE:** Okay, your point is well made. Thank you.

(Whereupon, several Board members commented, off microphone and simultaneously.)

**DR. ZIEMER:** We have it. Yeah, Mike.

**MR. GIBSON:** It seemed, you know, here a few months back, a year ago, we met more often than four times a year. And it just seems to me,

with -- with the addition of the SEC process, the dose reconstructions and everything else that four times a year is not enough for this Board to meet, and I just wonder why we can't pick up the pace and go back to maybe every six weeks or so like we did before.

**DR. WADE:** Certainly.

**DR. ZIEMER:** Yeah, we -- actually -- you have four meetings here. We had a meeting in February, and we had one or two telephone meetings plus the subcommittee meeting, so we actually have ended up having about six or more meetings a year right now. A few -- a couple of those didn't involve everybody, but it actually has -- it has seemed to me to be a fairly rigorous pace, but --

**MR. GIBSON:** I guess --

**DR. ZIEMER:** -- but if we have business we need to conduct, we'll -- we can do that.

**MR. GIBSON:** I'm just -- I was just agreeing with Mark that, you know, the pace is picking up and even if we have six a year and it's not enough, you know -- I mean I think it's our duty, that's what we were appointed to do is to do this business. And so, you know, this has

been a pretty taxing week...

**DR. ZIEMER:** Henry?

**DR. ANDERSON:** Yeah, I was going to say that's one thing we may be able to do is the subcommittee meetings, maybe those could be done by phone, and that would give us an extra half-- I mean we've already started -- they were two-day meetings. It's fairly easy to find two days together, but when you move that out to find three days, and then a travel day as well, it starts to get problematic. So I think a two-day is a lot easier to find, and if we're going to do three days, I would rather pick up an extra half-day by doing the subcommittee on an alternative maybe phone schedule issues, and deal with the -- these issues in a close -- by the -- the number two is -- is -- I'd like to get October dates as soon as possible 'cause there's a number of key meetings that are in October already, so before we start to try to get three days and not have them be a Friday, Monday and Tuesday.

**DR. ZIEMER:** Right. Right.

**MR. ESPINOSA:** I'm in the --

**DR. ZIEMER:** Rich.

**MR. ESPINOSA:** I'm in the same lines with Henry, just a little bit different. I schedule my agenda -- I schedule my schedule around these meetings, so if I don't know in advance and the meeting changes, like we talked about the July meeting changing, you know, if I have the notification now, I might be able to address it. But if I don't have the information till later, I'm looking at missing a meeting or days of that meeting.

**DR. WADE:** I'll commit to trying to put out dates for the July and October meeting the next week.

**DR. ZIEMER:** Jim?

**DR. MELIUS:** Can I suggest since we're re-looking at this issue that we also re-look at this issue of the subcommittee as a whole, that -- that we may really have to split up into -- have more than one subcommittee, and that way it spreads the work out a little bit more clearly and it would also I think make the scheduling of some of these meetings -- subcommittee meetings easier -- easier to do. And I don't know whether something -- whether you want to work on, Paul, or whether you want

to work on it with a workgroup, but -- but I think for our July meeting I think we should -- I think we have a -- we have a sense of what -- well, SEC petition reviews are very hard to do other than as a committee, so those are going to have to be (unintelligible). Site profile, dealing with dose reconstruction, some of these other issues, I think that we can -- dose reconstruction reviews, I think we can do better as subcommittees. Again reporting back to the Board, but I think it may be a more efficient process and --

**UNIDENTIFIED:** (Off microphone) Workgroups.

**DR. ZIEMER:** We can do workgroups, but remember that if it's a sort of regular process, then we get into the subcommittee type action.

**DR. MELIUS:** Our charter is up the end of August, and so a July -- make a decision on this at our July meeting and it would be appropriate 'cause we could then amend the charter to deal with the subcommittees, and I --

**DR. ZIEMER:** Well, the subcommittee does not have to meet as a committee of the whole, obviously. For example, there could be a

subcommittee meeting between April and July if -- for a group of four or five is all that we need, actually. In fact, that was the original intent. We named everybody to the subcommittee in order that we could choose any four or five who were available at a given time.

**DR. MELIUS:** But -- but as you pointed out, you -- you were -- it seems like you feel like you're meeting all the time, and that's because you chair the subcommittee and therefore at every meeting you have to be at. And again, I -- maybe that's not practical and -- not taking away from the amount of effort you're putting into it or anything, but -- but again, let's just --

**DR. ZIEMER:** Well, I was --

**DR. MELIUS:** -- let's just --

**DR. ZIEMER:** -- I was a little protective of the -- of the subcommittee's work during the early days, but they've matured and actually they get along better without me sometimes, but we can certainly do that and -- and think about, for example, having a separate subcommittee for dose reconstruction and a separate one for the site profiles, for

example. Right now it's a combined thing, but -- understood. And if necessary, Lew, we certainly can -- I think the ones who are sort of the main ones on that initial subcommittee could meet, with or without the existing Chair, in between our next -- or before our next meeting.

**DR. WADE:** Right, I think -- I think we'll push to see a subcommittee meeting before our next meeting, with the task three issues on it at a minimum.

**DR. ZIEMER:** Now we've just been avoiding getting to these final 20 cases, Mark, but --

**MR. GRIFFON:** I got to do it now?

**DR. ZIEMER:** -- the time has come.

**MR. GRIFFON:** All the crowd's gone, it wor-- no.

**DR. ZIEMER:** Let's make sure that we all have the documents.

**MR. GRIFFON:** That's what I was going to ask, can we take like a 10-minute -- and I can hand out --

**DR. ZIEMER:** Oh, okay, Mark, you --

**MR. GRIFFON:** One more delay.

**DR. ZIEMER:** Yes, we will take a 10-minute

break and then reconvene.

(Whereupon, a recess was taken from 3:05 p.m. to 3:15 p.m.)

**DR. ZIEMER:** We're ready to resume deliberations. We have already lost one person -- we didn't lose him; he had to leave. Rich Espinosa had to leave. We still have a quorum. Mark is all set to go, but the Chair discovered that there is yet another item, Mark.

**REVIEW AND APPROVAL OF DRAFT MINUTES**

We actually did not approve the minutes. We have two sets of minutes. The first, the minutes of the subcommittee, of our last meeting. I'd like to ask if there are any additions or corrections to the minutes of the subcommittee.

Motion to approve the minutes?

**MR. PRESLEY:** So moved.

**DR. ZIEMER:** Second?

**MR. OWENS:** Second.

**DR. ZIEMER:** All in favor, aye?

(Affirmative responses)

Opposed, no?

(No responses)

Minutes are approved for the subcommittee.

Now the minutes of the Board itself, this is the February meeting in St. Louis. I'm going to first point out a couple of changes. In the Executive Summary, page 6 -- Executive Summaries don't have to have a lot of detail. I'm going to ask that the sentence under Tuesday, February 8th, where Ziemer announces to members of the public to utilize the microphones and so on, I don't think that needs to be in there. If there's no objection, we'll delete that from the Executive Summary.

I assume that you all have looked at your places. There's one place where we talk about Mark Griffon's motion, and I'm -- I have a feeling it was a motion, not notion. Mark, you didn't discover that?

**MR. GRIFFON:** I have no notion.

**DR. ZIEMER:** You have no notions.

**MS. MUNN:** Sometimes it's right.

**DR. ZIEMER:** On -- there are actually several versions. I'm looking -- in my version it's page 15. It's probably 15 on yours -- broad heading: Site Profile Modifications and Schedule, Status Report. Is that on page 15 for you? Go down under Mr. Kenoyer, second

paragraph, the 19 site profile cases, last sentence, minor change but change it to read "teams remain intact and are moving ahead" -- teams remain intact and are moving ahead -- minor grammatical change.

On page 16 -- and I need some help on this. This was the issue of holding the vote open. The last sentence is fairly -- that whole paragraph, which is one sentence, is long and convoluted. I would like the Board's permission to break it into pieces and to explain -- by adding some words such as "the vote was held open so that the votes of Dr. Anderson and Dr. Andrade could be obtained," and then in parentheses -- and here's where I need help -- I was going to add "Dr. Anderson voted for the motion" as we have the vote but then we don't indicate -- the vote was held open, but then what, so we would indicate Dr. Anderson voted for the motion. And then we've got to say something about Dr. Andrade. I was going to say Dr. Andrade -- Andrade's untimely death on February 10th precluded his participation. Does that sound too crass or --

**MS. MUNN:** No. No, that's appropriate. That's

to clarify.

**DR. ZIEMER:** He was unavailable?

**MS. MUNN:** No. Demise. Demise, yeah.

**DR. ZIEMER:** Is untimely death okay?

**MS. MUNN:** Untimely death or demise.

**DR. ZIEMER:** Okay.

**DR. ROESSLER:** No, untimely death. It's factual and --

**DR. ZIEMER:** So I will give Cori words to that effect, but that's agreeable. I want to be sure to show the open vote and close that loop on that one. Okay. Thank you.

Without objection, I'll make that change.

**UNIDENTIFIED:** (Off microphone) No objections.

**UNIDENTIFIED:** (Off microphone) (Unintelligible) give all these to Cori?

**DR. ZIEMER:** Yes, I will. On page 17, Board Working -- Board Discussion/Working Sessions. It starts out (reading) Returning to the issue of the SEC evaluation. Dr. Melius, I didn't understand that at all, and I wondered if you did. (Reading) Dr. Melius offered he didn't feel it would have been more helpful than having the site --

**DR. MELIUS:** I was just noticing the same

thing.

**DR. ZIEMER:** Could you help us -- if it's agreeable with the group, we'll ask Dr. Melius to tell us what that means. No, maybe we can work on this afterwards. I don't think the sentence makes much sense, as written. It's not clear to me, at all.

**DR. MELIUS:** I'll give you a change.

**DR. ZIEMER:** Yes. On page 20, Board Discussion, where it says (reading) Dr. Ziemer cited the Board -- I'm suggesting we just omit the words "the Board to" and just say Dr. Ziemer cited the section. It's the section being cited.

There's a spot that -- oh, here it is, page 38. Mr. Griffon, his motion was -- is this a motion or a notion? This is what I was asking about, Mark.

**MR. GRIFFON:** I think it is notion, right? Yeah.

**DR. ZIEMER:** I wasn't sure whether that was referring to a previous motion that you had made --

**MR. GRIFFON:** No.

**DR. ZIEMER:** Okay. So it is notion then?

**MR. GRIFFON:** Yes.
**DR. ZIEMER:** Okay. Very good.
**MR. GRIFFON:** Great notion.
**DR. ZIEMER:** So the notion will remain. On page 55, the second paragraph from the end, it says (reading) An unidentified member of the audience indicated Congress had been aware dose reconstruction wouldn't happen overnight.
I remember that particular part of our meeting and in fact the unidentified member was Tom Horgan, and I think the minutes should so note that, and in fact I pointed that out to Tom and he indeed would like that statement to be attributed to him.
**UNIDENTIFIED:** Where is that?
**UNIDENTIFIED:** Which one?
**DR. ZIEMER:** That's on page 55, at least in the copy I'm looking at. Second to the last paragraph where it refers to an unidentified member of the audience. The unidentified member has now been identified.
**MS. MUNN:** Who was it?
**DR. ZIEMER:** Tom Horgan from Senator Bond's staff.
Are there any other corrections or additions to

the minutes?

(No responses)

Then with those changes, I can have a motion for approval, as amended.

**MS. MUNN:** So moved.

**DR. ZIEMER:** Second?

**MR. PRESLEY:** Second.

**DR. ZIEMER:** All in favor, aye?

(Affirmative responses)

Opposed, no?

(No responses)

Thank you very much, the minutes are approved. Now we're ready -- does anyone else have anything that we can put in here before we get to Mark?

The documents that you need now --

**DR. MELIUS:** Quit stalling, Mark, let's get going.

**DISCUSSION OF FIRST 20 DOSE RECONSTRUCTION REVIEWS**

**DR. ZIEMER:** I think the latest version -- there should be an April 27th draft. It's a -- it's a mark-up draft called individual dose reconstruction case review progress report, first 20 cases. You should also have a summary

of findings matrix, cases 1 through 20. And do we need to have the SC&A checklist?

**MR. GRIFFON:** Yeah, they -- they actually just gave me a -- a revised checklist, so I don't have copies of that and I should have --

**DR. ZIEMER:** Perhaps everybody --

**MR. GRIFFON:** It's only two pages.

**DR. ZIEMER:** Everyone has their original checklist. You can -- are there many changes in it?

**MR. GRIFFON:** Yes, it's -- it's kind of different. Number one they -- they -- they did totals on those deficiencies now.

**DR. ZIEMER:** Okay.

**MR. GRIFFON:** And the second thing, they made a new column for unknown or uncertain, so it looks a little cleaner.

**DR. ZIEMER:** Okay. Are you able to proceed, though, Mark, with what we have at hand and --

**MR. GRIFFON:** Yeah, yeah --

**DR. ZIEMER:** So let's proceed with --

**MR. GRIFFON:** -- let's try this then.

**DR. ZIEMER:** -- what we have here.

**MR. GRIFFON:** Okay. I guess it makes sense to start off with the text.

**DR. ZIEMER:** Yes.
**MR. GRIFFON:** The summary report that we discussed in the subcommittee meeting.
**DR. ZIEMER:** Yes, and incidentally, the subcommittee approved this document conceptually for the full Board, so this constitutes a motion. It is before us for action.
**MR. GRIFFON:** Right.
**DR. ZIEMER:** There were some places that needed to be filled in, some numbers and other things like that, but this is for formal action, and most of you have already seen it in subcommittee session. Thank you.
**MR. GRIFFON:** Yeah, and -- and there still are some places where numbers need to be filled in, but we've made a lot of progress these last couple of days, and I thank Kathy and Hans Behling from SC&A. They helped me pull some pieces together.
The third paragraph -- let's see, actually -- I guess the -- the first changes that really take place in this draft are -- don't occur until the second page, the second paragraph.
**MS. MUNN:** The aforementioned SCA?

**MR. GRIFFON:** Yeah, and it says (reading) The aforementioned SCA report includes a summary checklist -- I identified that as a checklist now -- with findings in behalf of -- that's the way it reads on -- in the report -- 20 case reviews, instead of the 15. And then I left -- I left the numbers in here. I know we had had some discussion about not reporting the numbers, but I -- I tried to include their summary numbers from their checklist, which we're getting copies of right now, and it indicates that a total of 69 identified in the 20 cases -- SCA considered the majority of deficiencies, 49 out of 69, to be low level deficiencies, with four scored as medium level deficiencies. The question here is, someone's going to add that up and see that it doesn't equal 69. The rest are unknown, and I wasn't sure exactly how to integrate that into -- into this summary report. I also feel a little uneasy submitting a report to the Secretary where we have 16 unknown that we can't -- you know, unknown ranked findings. That's a little interesting position.

**DR. ZIEMER:** Yeah, maybe we can talk a little

bit about what that means --
**MR. GRIFFON:** Right.
**DR. ZIEMER:** -- in terms of unknown. Can you describe that --
**MR. GRIFFON:** Well, yeah --
**DR. ZIEMER:** -- whole thing?
**MR. GRIFFON:** -- if -- I think for the most part, if we look at the matrix, it -- it -- it -- most of these unknowns come on on the AWE cases and -- which are the first one through five in our listing, and the -- if you notice in the last column, the Board action, number six, that means -- and NIOSH's resolution actually is written there so you can see it. These have been deferred to site profile reviews, so you know, SC&A basically said well, since we've deferred discussion on these issues and resolution of these issues, we don't know how significantly it could affect the case at hand, and that -- that's sort of why they ranked it as unknown, I guess.
**DR. ZIEMER:** I wonder if -- terminology-wise, if we used words such as "the impact of which has not yet been determined" or something, so that it's clear that it has -- it is yet to be

resolved, as opposed to we just don't know. What we need is some wording to that effect, I suppose.

**MR. GRIFFON:** Yeah, "yet unresolved" or something to that ef-- I agree with your notion -- notion.

**MS. MUNN:** Could that be incorporated in the --

**DR. ZIEMER:** Should I make my notion into a motion?

What -- do you want to suggest particular words right now or do you just want to ponder that? Maybe -- maybe we can try to solve that. I mean we need something here to act on.

**MR. GRIFFON:** Yes, I mean if someone can come up with -- we can insert a sentence right after that, where we talk about the numbers, saying that 16 deficiencies are -- are -- they're -- the potential -- the potential significance of 16 deficiencies remains to be determined, or -- or is -- is as yet undetermined. Or has yet to be resolved, yeah.

**DR. ZIEMER:** The potential impact of the other 16 deficiencies --

**MS. MUNN:** Why don't you just say the remaining deficiencies?

**DR. ZIEMER:** -- has not yet been resolved or -- or determined?

**MS. MUNN:** Or still in resolution.

**DR. ZIEMER:** Yes.

**MR. GRIFFON:** Potential impact of the remaining deficiencies --

**DR. ZIEMER:** Of the remaining 16 -- is it 16?

**MR. GRIFFON:** If you want to put -- yeah.

**MS. MUNN:** Of the remaining deficiencies.

**DR. ZIEMER:** How many is it?

**MR. GRIFFON:** It is 16, yeah.

**DR. ZIEMER:** We have 40 --

**MR. GRIFFON:** It is 16.

**DR. ZIEMER:** Of the remaining 16 deficiencies --

**MR. GRIFFON:** Is yet --

**DR. ZIEMER:** -- is yet or remains to be resol-- is yet -- has not yet been resolved? Or not yet been determined?

**MS. MUNN:** I would say are still in resolution.

**DR. DEHART:** (Off microphone) (Unintelligible) which implies --

**DR. ZIEMER:** Or is -- is --

**MR. GRIFFON:** Still in resolution?

**DR. ZIEMER:** Yeah, are still under review?

**DR. DEHART:** (Off microphone) Under review, something sounds (unintelligible) --
**DR. ZIEMER:** Let's see, potential impact is singular -- is still under review. Right?
**MR. GRIFFON:** Is still under review, okay.
**DR. ZIEMER:** Potential impact of the remaining 16 deficiencies is still under review.
**MR. GRIFFON:** Potential -- I said potential significance, otherwise, the same thing.
**DR. ZIEMER:** Significance.
**MR. GRIFFON:** 'Cause that's the way the checklist is labeled, potential significance.
**DR. ZIEMER:** Yes, thank you. Of the remaining -- is still under review. So that will take care of the ambiguity of the unknown.
**MR. GRIFFON:** Right. Okay, thank you. Yeah. And then the last sentence, (reading) It is noted by the -- by SC&A that the sum -- and this is an addition in the bottom of the checklist which has just been handed out to -- this is just a clarification of how to interpret these numbers, which we discussed in the subcommittee.
**DR. ZIEMER:** Yes, right.
**MR. GRIFFON:** (Reading) It is noted by SCA that

the sum of the deficiencies for these 20 cases should not be used to gauge the impact on individual cases since several low level deficiencies for one individual case may raise the potential significance of (sic) that case.

**DR. ZIEMER:** Very good.

**MR. GRIFFON:** Is that --

**DR. ZIEMER:** Uh-huh.

**MR. GRIFFON:** Okay.

**DR. ZIEMER:** Let's ask if that is agreeable. Conceptually we agreed that that sentence should be added. Is everybody comfortable with that?

Appears to be, okay.

**MR. GRIFFON:** The next paragraph, the only -- I just added parenthetically case ranking and site/program-wide ranking in there to better define -- as Wanda pointed out, this -- this -- you know, we have SC&A's checklist, then we have our matrix, and it's still going to be a -- may be a bit difficult to walk through, but I tried to better define the Board's names for these things, case ranking and site/program-wide ranking.

And then the next paragraph, toward the bottom

I -- I did some editing to say (reading) case rankings are the same as those listed in the aforementioned SCA summary checklist.
This -- we spent quite a bit of time -- I spent quite a bit of time with Kathy Behling and she really did the grunt (sic) of this work trying to match up the checklist against the matrix.
In the future I think -- the -- the good part of this was in the future we're going to have SC&A develop the checklist and matrix so that we won't have this -- this merge issue.
Right now, as it stands -- and this -- I don't know if this is going to create confusion, but right now, as it stands, the number of items on the matrix does not equal the 69 mentioned in the checklist, but that's because Kathy pointed out -- and -- and where in the matrix -- like under 1.1 we put in parentheses that G.2 refers -- in the summary of the findings, G.2 refers back to that checklist. We wanted to have some way to tie them together. And what -- what happened here is that in the discussions -- my matrix was developed from the early discussions of all the findings, and I think that when they did the checklist they sometimes rolled two of

these findings into one deficiency, so there -- there's more of -- more of these in the matrix than there are in the checklist. I think it's like 80 to 69 -- you know, it's slightly different.

That won't happen the next time. I think that would be a lot better if it just matches up neatly.

**DR. ZIEMER:** Yes.

**MR. GRIFFON:** Yeah. Anyway, moving on to that sentence, (reading) Case rankings are the same as those listed in the aforementioned SCA summary matrix -- summary checklist. The site/program-wide ranking considered the broader potential impacts of the findings and resulted in 49 -- I don't know if I need parentheses there -- 49 low level deficiencies, 35 -- that number is actually wrong. I just -- and this is -- this is what we really have to go through the matrix and -- and discuss these, the site/program rank, low level, medium and high level findings -- 49, 35 and three high level deficiencies. And that -- that number, 35, actually has gone down by -- just looking through as I'm editing. Not making apologies,

but doing this at 5:30 in the morning, you know, I made some mistakes, so we -- we should go through these and make sure that -- I think it's more like 32 now, something around 32, but I'll -- I'll sum those up again after we go through our discussions of the individual findings, anyway, so...

**MS. MUNN:** (Off microphone) So this is the same 49 (unintelligible).

**DR. ZIEMER:** Did you have a question, Wanda? I -- we -- need to use the mike there.

**MS. MUNN:** I don't really know what I'm asking. Is that the same 49 where -- I'm --

**MR. GRIFFON:** No, yeah, it -- this --

**MS. MUNN:** A different 49.

**MR. GRIFFON:** Yes. It's a different 49 'cause the total number of findings on our matrix -- it doesn't match up, so to make that happen we'd have to -- we'd have to go back and -- and it might be worth it, just for clarity, although I don't look forward to the -- to the task. It doesn't match up one-to-one, so that's -- might be confusing.

**DR. ZIEMER:** Well, as long as we know what -- we're using it -- I suppose you're concerned

about if it goes forward in some form to the Secretary, that that may raise confusion. We could add a sentence to explain that, I suppose. I'm not sure which would be the better route.

**MR. GRIFFON:** Right.

**DR. ZIEMER:** To try to match it up one-to-one or simply indicate that there was this -- would you call it an overlap or something of that sort?

**MR. GRIFFON:** Yeah. Yeah, I -- you know, I think it's -- it's -- it's an over-- they rolled -- they rolled some of the findings under discussion into one -- one deficiency in their checklist, so that was -- that's how that hap-- that's how it happened.

**DR. ZIEMER:** Right.

**MR. GRIFFON:** But there's no -- there's no different findings. I should say that. You know, they're all the same set of findings, it's just that sometimes they rolled them into one finding as opposed to keeping them separated out.

**DR. ZIEMER:** Yeah.

**MR. GRIFFON:** Anyway, I'm -- I'm willing to do

it either way you want there, if we want to add some clarification or if we want to go back and make it match, either way. I can work with SC&A on that and -- if we need to.

**DR. DEHART:** Mark, I hate to suggest it, but I think -- for clarification for ourself --

**MR. GRIFFON:** Yeah, I know, I know.

**DR. DEHART:** -- that it's -- that you'll probably need to do that -- or somebody do that.

**DR. ZIEMER:** Wouldn't a single sentence, though, rather than have him go back and try to re-do that whole matrix -- you're talking about re-doing the matrix otherwise, are you not?

**MR. GRIFFON:** I think I'd have to re -- re-do the matrix anyway.

**DR. DEHART:** Yeah.

**MR. GRIFFON:** So that -- that -- but that's fine. I think we need to. And like I said, this next -- the next round, with SC&A developing the matrix as they go, this won't happen. You know --

**DR. ZIEMER:** It won't happen --

**MR. GRIFFON:** -- we won't have this match-up issue, right. So I -- I will -- I will do

that. I still think we -- we could step through --

**DR. ZIEMER:** Sure, let's --

**MR. GRIFFON:** Yeah.

**DR. ZIEMER:** -- do that.

**MR. GRIFFON:** The next paragraph was also modified. (Reading) SC&A concluded that 19 of 20 dose reconstructions reviewed during this initial basic audit were considered to be sufficient for the purposes of determining probability of causation -- parentheses, case 6 DR may be -- may not be sufficient -- for the specific cases reviewed; however, concerns were identified which could have a broader impact on the overall dose reconstruction program. That's a little -- that might still need some editing 'cause it's not really a "however" anymore.

**MS. MUNN:** (Off microphone) That (unintelligible) be taken out (unintelligible).

**MR. GRIFFON:** Yeah.

**DR. ZIEMER:** Is there -- it's not clear to me why that one sentence -- Case 6 DR may not be sufficient -- is in parentheses. Isn't that simply the next statement?

**MS. MUNN:** Yeah.
**DR. MELIUS:** Yeah.
**MS. MUNN:** It's a stand-alone sentence.
**MR. GRIFFON:** All right.
**DR. ZIEMER:** In fact, you might say "However, case 6 -- the case 6 dose reconstruction may not be sufficient." Is that what --
**MR. GRIFFON:** Yeah.
**DR. ZIEMER:** -- basically what is being said?
**MR. GRIFFON:** Yeah, okay.
**DR. WADE:** Is there any chance of that being resolved? I mean it would seem to me if -- if we knew that issue, it would be more complete, or will we not know that issue?
**DR. ZIEMER:** I think that goes back to -- we may not even need to know that.
**DR. MELIUS:** Yeah.
**DR. ZIEMER:** That -- that becomes a NIOSH issue, I believe. This is -- this is simply a finding. There's one case where the DR may not have been sufficient. We're not asking that that -- that that be resolved for this report.
**MR. GRIFFON:** Right.
**DR. ZIEMER:** We're simply reporting it --
**MR. GRIFFON:** I think that --

**DR. ZIEMER:** It seems to me it goes back to NIOSH. Right here it's just one de-identified case. NIOSH will know what case it is. It's -- the burden on them would be to take action. I don't think the purpose of this is for us to resolve issues on cases individually.
Is that the understanding of the group? Yes. Oh, I ended up -- however, Mark -- with two "howevers".

**MR. GRIFFON:** Yeah, I was going to say we might want to have that sentence read, after the parentheses with POC -- finish it up to say "for the specific cases reviewed," period. Then say "However, case 6 dose reconstruction may not be sufficient," period.

**DR. ZIEMER:** Period.

**MR. GRIFFON:** And then "Additionally, concerns were identified which could have a broader impact on the overall dose reconstruction program." That's a little better.

**DR. ZIEMER:** Did everybody get that? Doesn't change the concept -- a little bit of wordsmithing. Okay.

**MR. GRIFFON:** No.

**DR. ZIEMER:** We'll agree that that's

acceptable. Proceed.

**MR. GRIFFON:** Okay. I actually don't think there were any other -- there was a -- an editorial change somewhere in the last paragraph, but that was -- that was it. Oh --

**DR. ZIEMER:** The last paragraph on the conclusions, or that section?

**MR. GRIFFON:** The last paragraph on page four, there was just a change editorial to where --

**DR. ZIEMER:** Ongoing concerns?

**MR. GRIFFON:** Where -- yes, consistency of cases.

**DR. ZIEMER:** And the change is just that deletion?

**MR. GRIFFON:** Just there are -- "there are" instead of "you have" similar--

**DR. ZIEMER:** Oh, yes, that was just an editorial --

**MR. GRIFFON:** That's all -- yeah. That was the only other -- I believe the only other changes.

**DR. ZIEMER:** Okay, any questions or comments on this -- this --

**MR. GRIFFON:** I also -- one thing -- one other thing I should point out, on page two it says

insert table with one through 20 and sites, POC, et cetera. Stu Hinnefeld did provide this. I don't know if he handed or --

**DR. ZIEMER:** Yes, that was distributed and should be at your place.

**MR. GRIFFON:** So we'll probably just ask to get this in electronic form and insert it in there and --

**DR. ZIEMER:** Right, so this is Table 1.

**MR. GRIFFON:** Right.

**DR. ZIEMER:** Which lists the case number, using the pseudo-number 1 through 20, it gives the probability of causation, the IREP cancer model, the location, working years and work decade. Which is what we had when we did the selection, so that gets inserted. Okay?

**MR. GRIFFON:** Right.

**DR. ZIEMER:** And then attached to this would be the scorecard and the matrix.

**MR. GRIFFON:** The checklist and the matrix. I think we were -- did we refer to the Board -- or the Board methodology I think we referred to, also, did we not?

**DR. DEHART:** You intended to put that in there.

**MR. GRIFFON:** I don't know, may...

**MR. PRESLEY:** (Off microphone) On -- on Table 1, (unintelligible) get that?

**MS. MUNN:** Yeah.

**MR. PRESLEY:** Third one down, you need to change that from 1040 to 1940.

**MR. GRIFFON:** Oh, yeah.

**DR. ZIEMER:** Yeah, that was one of our earliest -- earliest work decades.

**MR. GRIFFON:** Yeah. We refer to this -- the Board has developed a methodology, attachment 2, so this would be this -- this other text.

**DR. ZIEMER:** Okay, Attachment 2 will be the methodology previously approved. Right?

**MR. GRIFFON:** Did we previously approve that?

**DR. ZIEMER:** Did we approve that? I thought we had -- or did we?

**DR. DEHART:** I don't think so. We talked about it.

**MR. GRIFFON:** I don't know, 'cause we added -- I added on these -- these ranking -- or not rankings, but these action -- action numbers, six different actions may be taken, and that's the last column in the matrix now.

**DR. ZIEMER:** Right.

**MR. GRIFFON:** So we should look at that.

**DR. ZIEMER:** So we do need to look at that.
**MR. GRIFFON:** Yeah, I think we can look at that along with the matrix. That would make sense.
**DR. ZIEMER:** Now that document is entitled Methodology for Categorizing and Ranking DR Case Review Findings. That would be Attachment 2.
So Mark, are you ready for us to review that then?
**MR. GRIFFON:** Sure, yep.
**DR. ZIEMER:** Okay. There's an introductory paragraph. Does anyone have any issues to raise with that?
(No responses)
The rankings -- it simply describes a graded approach and gives the bullets -- criteria, basically.
**MR. GRIFFON:** Yeah, the difference -- one difference from before is that we -- we had one -- I had one ranking before and now we've got these -- these case-specific and site/program-wide rankings, so that paragraph on the ranking of findings changed a little bit.
**DR. ZIEMER:** Yeah, how --
**MR. GRIFFON:** The bullets -- the criteria are

similar, though.

**DR. ZIEMER:** Right, how -- how have you changed? Do we have the latest copy?

**MR. GRIFFON:** Of the matrix?

**DR. ZIEMER:** My copy still says there's a 1 to 5 ranking system. Do I have --

**MR. GRIFFON:** Oh, you have the right copy and I didn't cha-- I changed the matrix, but I didn't change the numbers on there. I have low, medium, high now on the...

**DR. ZIEMER:** Okay, so that first paragraph under Ranking the Findings, let's -- let's look at how that should be worded.

(Reading) The graded approach should be based on the importance of the identified finding, other cases at the facility or other cases program-wide. Two separate rankings will be assigned, case ranking and site profile -- site/program-wide ranking.

And then we would say what, a low, medium, high ranking system? Or --

**MR. GRIFFON:** Are based on a low, medium, high ranking system? To rank -- two separate rankings will be assigned based on a low, medium, high ranking system -- low, medium,

high qualitative ranking system? I don't know.
**DR. ZIEMER:** So in parentheses, rather than a 1 to 5 ranking system, we would say a low, medium, high ranking system.
**MR. GRIFFON:** That's fine.
**DR. ZIEMER:** We don't have to explain that; it's self-explanatory then. Is that agreeable?
(No responses)
And then you would have your bullets saying what the rankings are based on. Any comments on those? They remain the same.
(No responses)
Anything on the categorization? We have actually now the -- the six categories that Mark has suggested, I think these we need to agree on, that would be used in the summary ma-- matrix. Those are on that second page, options for Board action, 1 through 6.
Let me ask if there's any changes or modifications.
**MR. GRIFFON:** And -- and number 4 and 5, I should just note that, you know, NIOSH disagreed; Board and NIOSH reach compromise. Sometimes in -- in the -- in the matrix notes you'll see, you know, SC&A and NIOSH are in

agreement. I think SC-- you know, it really is the Board -- SC&A on our behalf, I guess, so...

**DR. ZIEMER:** Let me make sure I understand number 5. This would be one where NIOSH says that they disagree, and basically the Board says okay, we're not going to do anything about that. In essence, we are accepting the disagreement if we do nothing.

**MR. GRIFFON:** That's correct, yeah. Maybe I should say Board accept --

**DR. ZIEMER:** I don't know, I'm asking --

**MR. GRIFFON:** That was the --

**DR. ZIEMER:** -- how you wish to characterize --

**MR. GRIFFON:** That was the intent.

**DR. ZIEMER:** I think the -- I think the effect is, if we drop the matter, the Board is accepting NIOSH's --

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** -- disagreement.

**MR. GRIFFON:** Right.

**DR. MELIUS:** And I apologize 'cause I haven't been involved in the subcommittee meetings so I may misunderstand, but the prior point that you brought up, Paul, regarding SCA and NIOSH -- excuse me, SCA and the Board being the same

entity, my understanding of the process is that there's a resolution process that goes on between SCA and NIOSH prior to our involvement, and so I guess I'm a little concerned that it sort of somehow implies that the Board has approved of whatever SCA's...

**DR. ZIEMER:** This is the final wrap-up --

**DR. MELIUS:** So it just applies --

**DR. ZIEMER:** -- where --

**DR. MELIUS:** -- to the final.

**DR. ZIEMER:** -- the final thing that would go in the right-hand column after all of the back-and-forth iterations have occurred, how the Board finally disposes of all issues.

**DR. MELIUS:** Okay.

**DR. ZIEMER:** For example, if -- if -- where -- where it says NIOSH --

**DR. MELIUS:** No, I -- I understand that.

**DR. ZIEMER:** -- NIOSH agrees, they'd be agreeing with SC&A and accept that that closes it.

**DR. MELIUS:** Okay, I may have misunderstood Mark then 'cause I thought he said -- Mark was saying that S-- was implying that the Board and SC&A were equivalent and --

**MR. GRIFFON:** No, no, I --
**DR. ZIEMER:** No, the Board is ultimately taking an action.
**MR. GRIFFON:** Yeah, I meant -- I meant as far as it applies to this --
**DR. MELIUS:** Yeah.
**MR. GRIFFON:** Right. I'm sorry.
**DR. MELIUS:** So -- so it should say the Board.
**MR. GRIFFON:** Yeah.
**DR. ZIEMER:** Yes.
**DR. MELIUS:** Okay.
**DR. ZIEMER:** So number 5 would say, rather than the Board drops it, the Board accepts? But what -- what -- that's -- NIOSH disagrees; the Board accepts --
**DR. MELIUS:** The Board concurs with NIOSH, I think.
**DR. ZIEMER:** Board concurs, 'cause that's the effect.
**MR. GRIFFON:** Yes. Yes.
**DR. ZIEMER:** And then -- any others?
(No responses)
We may find as we proceed that some of these are not useful or we may need others, and of course the Board can change these at any time.

I think Mark is suggesting this may be a good starting point, and it enables us to come to closure, at least on this first set of 20.

**MS. MUNN:** Sorry.

**MR. GRIFFON:** I'm sorry, we had a sidebar.

**DR. ZIEMER:** I'm just saying, Mark, it seems to me that once we put these into use, if we find that some of these are not useful or we need others, we can always modify this, but --

**MR. GRIFFON:** We can always revise that, right.

**DR. ZIEMER:** -- as a start, this seemed -- based on your work on the matrix -- seemed to be a useful way to come to closure on the issues that have been identified.

**MR. GRIFFON:** Right. I tried.

**DR. ZIEMER:** Do I take it by consent then that, with that minor change, these six categories are agreeable?

(No responses)

Stu?

**MR. HINNEFELD:** I didn't want to interrupt, but I was just curious who said --

**DR. ZIEMER:** Yes, you did.

**MR. HINNEFELD:** I have, okay, sure. Who should we send Table -- the electronic version of

Table 1 with the changed date in it?

**DR. ZIEMER:** I think get it to Mark so he can insert it. He has the electronic --

**MR. GRIFFON:** (Unintelligible) forward it to -- yeah.

**DR. ZIEMER:** Or Cori? Who?

**MR. HINNEFELD:** E-mail's easy, I can send it to everybody.

**MR. GRIFFON:** I guess send it to me first and then I'll send the dra--

**DR. ZIEMER:** So he can incorporate it, yeah.

**MR. GRIFFON:** I'll make these changes and forward the draft to everyone.

**MR. HINNEFELD:** Okay.

**DR. ZIEMER:** Send it to Mark.

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

**DR. DEHART:** Could I ask that the next time we see it -- it's been a while since I've seen a clean text -- if we could see one without lines.

**MR. GRIFFON:** This was for full transparency of the changes I was making along the way, so it makes for difficult reading, I agree.

**DR. ZIEMER:** Actually you could send bo-- you could send --

**MR. GRIFFON:** Yeah.
**DR. ZIEMER:** -- a red ver-- or a mark-out version plus a clean version.
**MR. GRIFFON:** Okay, yeah.
**DR. ZIEMER:** Yeah. Are we agreeable on this Attachment 2 then?
Jim, another comment?
**DR. MELIUS:** Not yet.
**MR. GRIFFON:** He's thinking of one.
**DR. MELIUS:** No, I don't have any right now.
**DR. ZIEMER:** All right --
**DR. MELIUS:** Or I actually do have a comment.
**DR. ZIEMER:** Yeah, go ahead.
**DR. MELIUS:** When I read this summary of findings and where this code is put as the Board action, I just -- the heading on the table that are NIOSH resolution, I'm -- I find it a little bit confusing 'cause sometimes it says NIOSH and SC&A agree and sometimes it doesn't, and it's -- it's unclear. I just think, for future -- not to make you go back through and change this -- that we ought to be -- some consistency in the language that we use 'cause that's what confused me --
**DR. ZIEMER:** Actually I believe we may want

both. This -- this tells about the resolution going on with our contractor, but the final column is the Board's handling of everything up to that point. I believe that's the intent. Mark?

**MR. GRIFFON:** That is the intent, yeah. Yeah.

**DR. ZIEMER:** I believe -- I believe this is intentional that he --

**MR. GRIFFON:** So it's probably --

**DR. ZIEMER:** -- SC&A and NIO-- that -- that tracks what happens until we finally take a final action, which shows up in the last column.

**MR. GRIFFON:** But still there's probably inconsistencies, I would -- I would --

**DR. ZIEMER:** But that intent is to have those two entities --

**DR. MELIUS:** Okay, then label it more clearly --

**DR. ZIEMER:** -- as you go across, and then the Board action. Okay?

**MR. GRIFFON:** Label them more clear-- yeah.

**DR. ZIEMER:** Gen Roessler.

**DR. ROESSLER:** Since this final column is the most important one, I think a footnote on the

bottom of the page on this document would help to put down what number 1, 2, 3, 4 and 5 and 6 mean.

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

**DR. ROESSLER:** We could footnote everything, but I think it -- that one thing would help.

**MR. GRIFFON:** Yeah.

**DR. MELIUS:** Well, I would even suggest that we, where necessary, make that column a little bit wider so that if there's -- if we've gone beyond just a simple 1 through 6 in terms of what action the Board has taken, that we sort of write that out a little bit.

**MR. GRIFFON:** Maybe I'll spread this onto legal paper and just write out that they -- yeah. We were trying to fit it on one page, too.

**DR. ZIEMER:** Dr. Roessler, did you get your comment in?

**DR. ROESSLER:** Yes.

**DR. ZIEMER:** Are we ready to look at the matrix itself then? And do we have -- oh, we do have the -- we do have the checklist, and that would -- Mark, is there anything else we need to say on the checklist? You've already pretty well explained it. That would be inserted in the

packet, too.

**MR. GRIFFON:** Yeah, the -- I don't think I got -- did I get...

**DR. ZIEMER:** It -- it now has the 69 --

**MR. GRIFFON:** Yeah.

**DR. ZIEMER:** -- deficiencies, the 49 lows, the four mediums and the unknown --

**MR. GRIFFON:** Which we can label --

**DR. ZIEMER:** -- which I think we probably are going to call that something else, SC&A folks, un-- not yet resolved or -- yeah. We understand what it is so we're -- we're okay on it. I think we're going to call it something else here. It's not as if we don't know what --

**MR. GRIFFON:** Right.

**DR. ZIEMER:** -- the deficiencies are. They're going to be addressed in a different way.

**MR. GRIFFON:** The one thing I would ask, and I -- I told SC&A I would -- I would ask this of the Board, this has been revised to include some sections, especially -- I think Section G was revised -- to accommodate the use of the single checklist for DOE and AWE sites, so this is slightly different than the one you've seen

before, and they asked if we could review and approve this because they're planning on using it for the next 18 they're already -- you know, so they wanted us to take a close -- closer look --

**DR. ZIEMER:** Mark, you've already seen this, so what is your advice to us on that?

**MR. GRIFFON:** My -- my advice is -- is that they -- they made some changes to the footnotes, which I think were important, especially the one -- the sum of the deficiencies, which is similar to the language we put in the summary report, that you shouldn't pay attention to those percentages too much, too closely.

**DR. ZIEMER:** And then Section G --

**MR. GRIFFON:** And I -- I think overall, Section G seemed -- seemed appropriate. I still -- you know, my generic concern -- and we'll get into that when we get into the matrix -- is this unknown column or yet-to-be-determined column. I -- I think -- I'm not sure how we can handle that. But as you'll notice when we look in the matrix, a lot of these key issues that we raise in this review have been deferred --

**DR. ZIEMER:** Right.
**MR. GRIFFON:** -- to site profile reviews, and so how complete can our report be on -- you know, and I -- and I understand this is an ongoing --
**DR. ZIEMER:** But -- but at the moment --
**MR. GRIFFON:** Right.
**DR. ZIEMER:** -- you feel that it's appropriate that we have the contractor proceed with this new format?
**MR. GRIFFON:** I think so, yes.
**DR. ZIEMER:** Is the -- is the committee -- or the Board agreeable to that?
(No responses)
Appears to be no objections. Without objection, we'll consider that that has been approved for use in the next round.
Now let's proceed to the matrix. We actually -- Mark, I think you actually need to individually look at each of these items, do we not, and make a judgment on them?
**MR. GRIFFON:** Yeah, yeah.
**DR. ZIEMER:** And there --
**MR. GRIFFON:** Well, and it -- to complicate this matter of one -- just a little bit, that

last column, which Jim rightly pointed out is -- is not -- I guess it's really SC&A and NIOSH's resolution, but it was provided by NIOSH and SC&A hasn't reviewed that, I don't believe. So -- so I think --

**DR. ZIEMER:** You're talking about --

**MR. GRIFFON:** -- we're not clear if that's --

**DR. ZIEMER:** -- the column --

**MR. GRIFFON:** -- a final resolution --

**DR. ZIEMER:** -- called NIOSH resolution?

**MR. GRIFFON:** Yes. Yes.

**DR. ZIEMER:** So SC&A has not yet seen that and agreed that -- particularly in those cases where it says that they both agree?

**MR. GRIFFON:** Right.

**DR. MELIUS:** Need to resolve the resolution.

**MR. GRIFFON:** We need to resolve the resolution.

**DR. ZIEMER:** As far as the -- this Board's action has to be with respect to the last column, and there are a number of items in the list -- for example, if -- if the last column is number 1 -- or is item 1, basically the Board really has to do nothing. I believe that's correct.

**MR. GRIFFON:** Right.
**DR. ZIEMER:** If the designation is 2, the Board really has to do nothing. I mean we can approve. If it's number 3, we would -- we would have to take a specific action. Likewise for 4. Likewise for 5. And 6, perhaps we would have to agree that that's what's going to happen. So there's a number of these where --
**MR. GRIFFON:** Yeah, and --
**DR. ZIEMER:** -- we would have to say yes, that is what --
**MR. GRIFFON:** I should point out 3 actually -- you know, it says "unless the Board recommends action through..." so we may recommend, if it's a 3. I think that's a -- you know.
**DR. ZIEMER:** Right, in the absence of action, 3 remains, but we would have to look at 3s to determine whether we want to take action.
**MR. GRIFFON:** Right.
**DR. ZIEMER:** Now my question is, does the Board -- does this require SC&A to actually review this before we take action? I mean we can -- we can approve -- we can approve these documents and the matrix as a -- as a -- as a document format-wise and content-wise, with the

exception of approving the last column in terms of the actions. Or -- particularly if it requires SC&A to do some review before we finalize.

**MR. GRIFFON:** I -- I guess the -- the -- the question on the NIOSH resolution column is that -- and I've pointed out a few that they've -- as I was working with them, they found a few where they -- 10.1 is one example where they indicated that -- it says (reading) SC&A concurred with the assigned medical dose in the February, 2005 report.

And they -- they indicated to me that they did not agree with that, so I don't want to have a misstatement of facts in this matrix as we move it forward, either, you know.

**DR. ZIEMER:** Well, it appears to me, although we're close to closure, there may be another small step --

**MR. GRIFFON:** Yeah.

**DR. ZIEMER:** -- that has to occur before we are ready to actually close on this. Is that -- am I correct on that?

**MR. GRIFFON:** I think it's probably -- yes, yes.

**DR. ZIEMER:** Then what I'm going to suggest is a motion that we accept all of the documents and attachments, including the matrix, except for the Board -- well, except for the -- the rankings --

**MR. GRIFFON:** I don't know that we can --

**DR. ZIEMER:** What -- what I'm trying to say is that we accept the matrix as a vehicle for doing this, but we're not yet agreeing to either the rankings or the Board actions until SC&A has an opportunity to review the NIOSH resolution column. That would be a motion that would seem to me to be in order, if someone would wish to make it.

**MR. OWENS:** Dr. Ziemer, I'll make a motion that the Board accept all the documents that we have reviewed and that we accept the matrix in principle, awaiting final resolution of a column -- I guess it's NIOSH resolution -- where SC&A would be involved.

**DR. ZIEMER:** And our Board action, therefore.

**MR. OWENS:** Yes.

**MR. PRESLEY:** I'll second that, but I'll ask a question, also. Do we want to make it the last two columns where --

**DR. ZIEMER:** Yeah, it's the NIOSH resolution column which SC&A would review, plus the Board action column.

**MR. PRESLEY:** Right.

**DR. DEHART:** Yes.

**DR. ZIEMER:** Now I'm going -- since officially this was on the floor as a motion from the subcommittee, I will regard the current motion as a substitute motion that replaced the original one if there's no objection. It's a similar motion, but it is more specific on what will happen here.

(No responses)

Now, comments on that motion? Jim.

**DR. MELIUS:** This is a question I think is relevant. In regard -- again, I was not at the subcommittee meetings or discussions of this, but in regard to the number 3s where -- has there been discussion among the subcommittee as to which ones we would want to move forward in some way?

**MR. GRIFFON:** No.

**DR. MELIUS:** No.

**MR. GRIFFON:** We didn't get that fa-- I don't think we had this form of the matrix available,

did we? In the subcommittee meeting?
**DR. ZIEMER:** Not -- not fully and --
**MR. GRIFFON:** Right.
**DR. ZIEMER:** -- and you can look down through here and there are some 3s in here currently, and you'll see the nature of them. They are -- they are valid cases where there's bona fide disagreements between NIOSH and our contractor as to how one might approach things. So --
**DR. MELIUS:** Well, I would just -- if we're going to close this out, do we want to put out a -- a document that is sort of our final report where we haven't resolved those 3s?
**DR. ZIEMER:** No.
**MR. GRIFFON:** No.
**DR. ZIEMER:** No, we're only approving this as a -- as an instrument that still remains to have that last step occur before it's closed out.
**DR. MELIUS:** Okay. And just --
**DR. ZIEMER:** We're approving the text, the types of attachments that would go with this report, the matrix, the form of the matrix, the content --
**DR. MELIUS:** Uh-huh.
**DR. ZIEMER:** -- with the exception of those

last two columns.

**DR. MELIUS:** And again, this is a question -- does this mean this Board action coding, are we really going to move toward something that would be a 3A and a 3B or something -- 3A where we've taken -- at some point taken a step and recommended to the Secretary that some change be made, or 3B where we did not, or does -- or are we intending to then change the code? I'm just confused by sort of the --

**DR. ZIEMER:** Well, I don't know the answer to that. Mark, did -- I don't know if the subcommittee addressed that, per se.

**MR. GRIFFON:** We didn't get that far, no. I mean I'm fine with that. That seems like a reasonable approach, to me, that we need to know whether we did or did not send any recommendation to the Secretary on that certain finding, and 3A and 3B is just as good a system as -- you know, does that make sense? But -- but that -- but --

**DR. ZIEMER:** Well --

**MR. GRIFFON:** -- that isn't done until we go through all the findings.

**DR. ZIEMER:** I don't know, I -- I can't pre-

judge what -- which of -- whether that would be better to break it out right now or just to go through it and if there's a specific action for a -- for a 3 item, we just act on it.

**DR. MELIUS:** Uh-huh.

**DR. ZIEMER:** It definitely requires some action.

**MR. PRESLEY:** This is Bob Presley. I believe you're going to have to act on it and then the final -- you're going to have to change that code to something you can send to the Secretary.

**DR. MELIUS:** Exactly.

**MR. PRESLEY:** Or if not, you're -- you've still got an open-ended problem.

**DR. MELIUS:** Yeah.

**DR. ZIEMER:** Okay.

**MR. GRIFFON:** All right.

**MR. OWENS:** Dr. Ziemer, the motion was just to accept the -- you know, the documents and -- and the matrix in principle, and whatever revisions or changes might need to be made before we finalize it, I think we could do that, hopefully.

**MR. GRIFFON:** Yeah.

**DR. ZIEMER:** Actually if -- if -- in case of a number 3 finding or closure on a report, there -- there will -- the Board would have to take an action. Whether we call it 3A and 3B or not, there would be an action sort of up or down as to whether you go forward.

**MR. PRESLEY:** You might want to call it 3-1 or 3-6. I mean it's something you'd have to show closure on.

**DR. ZIEMER:** Right.

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

**DR. ZIEMER:** Yes, Wanda.

**MS. MUNN:** Just a question that puzzles me a little, whether -- I assume we want to have as many of the last two columns complete as possible before we send this away. I'm wondering on 12.9 whether that can be one of those that can disappear by putting the response in the resolution column. I can understand not having anything when you have an item that hasn't --

**MR. GRIFFON:** Yeah.

**MS. MUNN:** -- been discussed, but --

**MR. GRIFFON:** Here -- here's another -- another reason for -- that -- that we still need some

work on this table. The NIOSH resolution column came to me in one file and SC&A sent me another file that had additional findings that weren't in the matrix that NIOSH was reviewing, and I merged the two. So where you see blank on NIOSH resolution, it's often that they -- they hadn't considered that one at all, so they need to re-look at this, as well -- if that made any sense. So -- so this is still not a -- quite ready for prime time, obviously. It needs -- needs to be edited.

**DR. ZIEMER:** The motion is not -- will not preclude doing that.

**MR. GRIFFON:** Right. Right.

**DR. ZIEMER:** In fact it would mandate following up and coming to closure. So there may be some of these that NIOSH also needs to look at. Is that what you're saying?

**MR. GRIFFON:** Yes, yes, probably only -- probably only four or five that they hadn't -- that weren't in the version that they were reviewing. This was in real time, as we know.

**DR. ZIEMER:** Yes. Okay.

**MR. GRIFFON:** So...

**DR. ZIEMER:** Other questions or comments?

(No responses)

So we will vote on this, and if approved we recognize that we have not yet come to closure on the first 20 case. We're getting closer and closer.

**MR. GRIFFON:** Believe it or not.

**DR. ZIEMER:** Are we ready to vote? I do want to thank Mark especially for a lot of time and effort put into developing and filling out in the matrix, together with our contractors and -- and NIOSH folks who helped pull this together. It's been a good process for us to develop a methodology for handling our -- our reviews.

**MR. GRIFFON:** The only thing I'm comforted by is that I think going forward we have a much cleaner system.

**DR. ZIEMER:** Yes.

**MR. GRIFFON:** 'Cause I'm not looking forward to editing this matrix to make -- to making the numbers match up. We went through two days of this, Kathy Behling and I --

**DR. ZIEMER:** Right.

**MR. GRIFFON:** -- and it -- but going forward, it'll be much cleaner with --

**DR. ZIEMER:** Yes.

**MR. GRIFFON:** -- SC&A filling in the matrix.

**DR. ZIEMER:** Very good. Are we ready to vote then?

**MS. MUNN:** Yes.

**DR. ZIEMER:** Okay, let's vote. All in favor of accepting the document under the terms indicated, please say aye.

(Affirmative responses)

Any opposed, no?

(No responses)

Abstentions?

(No responses)

Thank you very much. The motion carries and we are close to closure on the first 20 dose reconstruction reviews.

**PUBLIC COMMENT**

We have on our agenda at 4:15 a public comment period. I've received requests from a couple of individuals to address the assembly. First, Delbert Moore -- I believe from Iowa. Is Delbert in the assembly?

(No responses)

Does not appear to be. Also -- well, this is Dan McKeel, it's -- but he's addressed us

already. It says after the -- after Denise and the SEC, which he's already done, so this -- this one's already been covered.

Were there any other members of the public who had a desire to address the assembly? Please approach the mike and you can identify yourself, please.

**MR. RUBY:** Hello, I'm Doug Ruby.

**DR. ZIEMER:** Doug.

**MR. RUBY:** I'm here representing my dad, John W. Ruby.

**DR. ZIEMER:** Uh-huh.

**MR. RUBY:** I had a -- quite a lengthy little thing I was going to read, but I noticed in the paper articles that a lot has happened since we came up Sunday to meet with NIOSH, and that you guys apparently have come to some resolution on --

**DR. ZIEMER:** Are you -- are you from the Iowa group?

**MR. RUBY:** Yes, my father worked at IAAP.

**DR. ZIEMER:** Yes, then you may be aware that the Board has -- has made a recommendation to the Secretary to approve --

**MR. RUBY:** I just read --

**DR. ZIEMER:** -- Special Cohort status --
**MR. RUBY:** -- that article two minutes ago, so I'd come up and I had a nice long spiel for y'all, and I would like to say that Silas Mason was the contractor my father worked for and that I don't think that -- we were pretty upset when NIOSH wanted to review the declassified DOE information they told us about Sunday. See, they originally denied my father, and I had to appeal it based on the ground water -- it was quite alarming a year ago to find out that NIOSH did not take ground water contamination into consideration on that first dose in construction (sic) at that meeting, and then subsequently they've done the right thing. I just want to thank you guys for, you know, being stand-up on this. You've got to realize that a contractor -- DOE may hire somebody to do something, but back then what did we know about these kind of hazards, you know. And second off, you know, contractors have been known to fudge on the rules, so to speak. And they have some -- some blame in this, but they also were ignorant, as the whole country was, as -- you know, the dangers of working with

this kind of stuff. But after eight years of frustration, I just want to thank every one of you guys for being stand-up and doing the right thing.

To me, NIOSH was not our friend. But I -- you know, I just felt like they were working against us from the start, but you guys have pretty well shot my statement all to heck, so I guess that's all I wanted to say. Thank you --

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

**MR. RUBY:** -- very much.

**DR. ZIEMER:** -- you for coming, in spite of the change in what you were going to say. I think probably you're more comfortable than you would otherwise have been, so -- but we're glad you're here.

Are there any other folks -- yes, please approach the mike.

**MS. WILBURN-YOAKUM:** Yes, my name's Linda Anne Wilburn-Yoakum and my father died 29 years ago May 7th this year. This is my mother in the pink. She'll be 92. I've been five years fighting this and I -- I agree with the gentleman. It's been a bad fight. My father also worked for Silas Mason, and records is

something that just wasn't -- and the government, also. They just said no, we didn't do anything there. Oh, yes we did. And no, we don't have any records.

I've got a couple of questions. I'm sure you've heard lots of crabbing from everybody. You basically approved the (unintelligible) variation on what the radiation levels were going to be. I was unable to make it here Monday and Tuesday. I'm sorry, I know I missed a lot. I did the St. Louis. I just couldn't get my mother and be here.

My father's levels are unknown because of records. He was a steam-fitter and a pipe welder. He worked all over the plant. He didn't work on Line 1, he didn't work on Line 6. He worked all over the place, and I guess I've -- I've got a couple of questions. Iowa City at the University Hospitals told him two weeks before his death that his death was due to his work, and that was what he did at Burlington in the Armory. It's -- it's -- it's known and accepted that my father had a rate of -- diagnosis of cancer during the period when they said it was. He had the thyroid cancer.

He had the bladder. It -- it's not a problem there, but the problem is they say he only had 12 and a half percent. Well, who are they gauging these records against and where are they getting their records? What are they made from, other plants, other places? I mean I know you've heard it all.

But my biggest question is, I pushed the button on everything I can. Deb McCurran*, Congressman Leach's associate in Ottumwa, has been wonderful the last two years, but it's been very flustrating (sic) for both of us. Now I have -- I have taken and filed, my mother's been denied. We appealed. I told them they had to come here. My mother wasn't well enough to go, so they came here and they said unless you've got new information, Ms. Hill said you're just going to be automatically denied, and we were. So I had to get a request in a certain amount of time to keep her case alive, so to speak. Now where does that put her since they only give him a 12 and a half percent? And I mean like he -- he told us all kinds of things before he died. That was a hush-hush secret you didn't talk about. Had he

not been dying, he wouldn't have told us nothing.

**DR. ZIEMER:** Perhaps one of the NIOSH people can answer that, but if -- if in fact he was a member of IAAP during the designated time period and if in fact the action that this Board took yesterday proceeds through Congress -- which is the ultimate step -- then I would assume -- and NIOSH, you can help me out here -- I would assume that all of these folks are part of that cohort, are they not?

**MS. WILBURN-YOAKUM:** Are they accepted in this even though they've been denied for like -- they told us she -- they told her she -- he had to have 50 percent to qualify.

**DR. ZIEMER:** I suspect we may have to have one of the individuals look at the dates and so on to confirm that the -- there are some criteria in terms of dates and numbers of working days, but --

**MS. WILBURN-YOAKUM:** The dates coincided with the dates.

**DR. ZIEMER:** -- that -- I think we can have that done and should be done privately, not in open session, since there are privacy issues.

But please be aware that the action already taken earlier this week was to recommend Special Cohort status --

**MS. WILBURN-YOAKUM:** I read that.

**DR. ZIEMER:** -- for the Iowa group, so that may indeed change your situation.

**MS. WILBURN-YOAKUM:** Okay. I thank you for your time. I know the Board has a lot to do.

**DR. ZIEMER:** Thank you very much.

**MS. WILBURN-YOAKUM:** Appreciate it.

**MR. RUBY:** (Off microphone) Can I ask one more question?

**DR. ZIEMER:** Yes, please.

**MR. RUBY:** This Special Cohort did pass. Okay, the articles in the paper -- my question is related to this. It says that it's going to Mike Leavitt next and they're actually -- the article says they are -- in 60 days they may be sending checks.

**DR. ZIEMER:** Well --

**MR. RUBY:** Because in 2000 it already went to Congress. It still does have to go to Congress after Mike Leavitt?

**DR. ZIEMER:** Keep in mind that this Board is advisory. We -- we have -- we are advising the

Secretary of Health and Human Services that this class be added to the Special Exposure Cohort.

**MR. RUBY:** Okay.

**DR. ZIEMER:** That -- the Secretary of Health and Human Services has yet to take our advice and do something with it.

**MR. RUBY:** Right. Now, see, the paper says in 2000, though, this -- that it wouldn't have to go to Congress this time because in 2000 they passed something it refers to in the newspaper. Are they incorrect?

**DR. ZIEMER:** Well, the initial legislation of course is in place, but Congress has to approve addition of classes. Is that right, Jim --

**DR. MELIUS:** Well, I think Congress -- be -- correct, Congress has a chance to turn down --

**DR. ZIEMER:** Yes, if they don't act on it within 30 days to turn it down, it's -- automatically becomes part of the class, so in that sense --

**MR. RUBY:** That's all they need.

**DR. ZIEMER:** -- yes, they -- they can -- Congress can turn it down. If they do not, then it --

**MR. RUBY:** Okay. Thank you.

**DR. MELIUS:** Essentially the time frame would be 21 days our letter will get up to the Secretary. Secretary has 30 days then to make a recommendation. If the Secretary agrees with our recommendation, then Congress has 30 days to act. If Congress doesn't act to stop it, then DOL would be able to process the...

**DR. ZIEMER:** We're -- we're not in a position to say the check is in the mail, but -- other -- other members of the public who wish to address the assembly? Thank you very much. If not, I just want to double-check. We may have some odds and ends here. Lew, help me out. What have we not yet covered?

**SC&A, INC. CONTRACT UPDATE STATUS**

**DR. WADE:** The only thing that we've not covered at this point, and I don't know that we would do it other than to make mention of it, is that -- you know, the SEC (sic) contract was originally awarded for $3 million for five years. That was two years ago. We're coming to the expenditure of that $3 million for the work that's currently on the books. This Board will need to make a decision as to what work it

wants SC&A to do next year and will need to build that into an estimate of cost, and then I'll need to proceed to try and secure that money. So at the July meeting we'll need to have a discussion of what you would like to see your contractor do next calendar year.

**DR. ZIEMER:** And that would involve identifying perhaps numbers of dose reconstruction cases, numbers of site profile reviews and any assistance with petitions that the Board may wish to identify.

**DR. WADE:** Correct.

**DR. ZIEMER:** Is that correct? We --

**MR. GRIFFON:** Do we have to do a cost estimate at that meeting?

**DR. WADE:** No. We have -- we have cost figures. Now just for you to start to think about -- it costs approximately $200,000 for your contractor to review a site profile and approximately $350,000 to review 20 dose reconstructions. So with those kinds of multipliers, you can begin to estimate what you would like to see done. I have no figure to offer you in terms of the SEC task.

Now it's well possible that these numbers will

be high estimates because we are developing -- SC&A is developing more efficient procedures, but I only have the numbers available that -- that are real at this point. Again, to complete the record on this, it -- those numbers are about twice what was originally estimated when you looked at this contract. But I must quickly point out that the Board has really more than doubled the work of the contractor through its six-step process. So I think all of this is in order.

I think you need to think about what you would like to see done and then I have to try and secure the funding for that. That is not a given. I'm very supportive of the process and will work very hard to secure that funding.

**MR. PRESLEY:** Lew --

**DR. ZIEMER:** Robert?

**MR. PRESLEY:** -- Robert Presley. Before our next meeting can you come up with a list of the task that are on the board -- I mean that would be on the books, the possible tasks for us so we will all be playing on a -- on a same sheet of music, and also the ones where you have an estimate for cost, could you please put that in

-- estimate for -- per job so that we can look at that before we go to our meetings so we've got some idea of what to talk to before we get there, please?

**DR. WADE:** I understand. What I'll try to do is -- I think it's appropriate that I would write to the Board and provide you with this information before the next meeting. That information would be public at the next meeting, obviously.

**DR. ZIEMER:** Okay. Wanda?

**MS. MUNN:** That was the question I was going to ask, this will be a public meeting?

**DR. WADE:** Yes. I think when we discuss numbers at this level, without getting into the details of the labor rates of the contractor, I think we can have these deliberations in public.

**MR. PRESLEY:** We can have them.

**DR. ZIEMER:** Yeah, I think -- and -- and Lew is sensitive to -- to the level at which you can discuss the numbers. We can't discuss individual hourly rates and those kinds of things, but we can discuss costs of total contracts.

Yes, Arjun, did you have a --

**DR. MAKHIJANI:** Yes, I had a question --

**DR. ZIEMER:** -- comment or question?

**DR. MAKHIJANI:** For Dr. Wade or -- or you, Dr. Ziemer, I presume in view of the motion that was passed in regard to the SEC task order that you would be expecting a response from SCA in the form of a proposal and cost estimates by a certain date.

**DR. ZIEMER:** Lew is going to touch base with John on that --

**DR. WADE:** I'll have to go to the contracting officer and then we'll approach SC&A.

**DR. MAKHIJANI:** Okay, fine. Thank you.

**DR. ZIEMER:** You don't have to do anything at this point.

**DR. MAKHIJANI:** Right, I just -- I just -- since I'm not personally familiar with it, I just wanted to be clear about the process. Thank you.

**DR. WADE:** I think that's all, Paul.

**DR. ZIEMER:** Let me ask if there are any other items to come before the Board today?

(No responses)

Thank you very much. It seemed a little bit

like a marathon --

**MR. PRESLEY:** Can I say -- can I say one thing before --

**DR. ZIEMER:** You bet.

**MR. PRESLEY:** Now that it's all over and deliberations are all over with, Mark and I went to Germantown last week and met with Sanford Cohen & Associates, went through a lot of -- tremendous amount of paperwork up there. I want to thank Sanford & Cohen (sic) for going up there with us, allowing us to look with them, and also thanking -- Larry Elliott's people did a fabulous job on getting that stuff ready for us to look at in a timely manner. They did a very, very good job. I want it on record that they did.

**DR. ZIEMER:** Thank you very much. Mark, you want to add to that?

**MR. GRIFFON:** Yeah, and I would just add I was impressed that you got the clearances as quickly as you did, so that trip worked out pretty nicely.

**DR. WADE:** Yeah, I mean when we last met by phone, or even the last time the subcommittee met, I wasn't sure it would all come together,

but it did. And there are many, many people to be thanked for that, but I think good process was followed.

**DR. ZIEMER:** Thank you very much. We are adjourned.

(Whereupon, the meeting adjourned at 4:35 p.m.)

# C E R T I F I C A T E  OF  COURT REPORTER

**STATE OF GEORGIA**

**COUNTY OF FULTON**

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of April 27, 2005; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 27th day of May, 2005.

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**STEVEN RAY GREEN, CCR**

**CERTIFIED MERIT COURT REPORTER**

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