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

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ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

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DAY THREE

ABRWH BOARD MEETING

The verbatim transcript of the Meeting of the Advisory Board on Radiation and Worker Health held at the Four Points by Sheraton, Denver, Colorado, on April 27, 2006.

C O N T E N T S

April 27, 2006

TRANSCRIPT LEGEND

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-- "uh-huh" represents an affirmative response, and "uh-uh" represents a negative response.

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P R O C E E D I N G S

(8:35 a.m.)

WELCOME AND OPENING COMMENTS
DR. PAUL ZIEMER, CHAIR

DR. ZIEMER: Take your seats and we will get under way. As we continue the 37th meeting of the Advisory Board on Radiation and Worker Health I start with my usual reminder for Board members, federal staff people, observers and members of the public, please register your attendance with us. If you haven't already done so, you can do so later this morning. In the entryway are the registration booklets.

I also point out that there are copies of the agenda and a lot of related materials on the table in the back. Some of those are materials from portions of the meeting that have already been covered, and some that will be covered today, so please avail yourselves of those as you may feel necessary.

ROCKY FLATS SEC

We're going to concentrate a good part of our session this morning on the Rocky Flats Special Exposure Cohort petition. And before we have

our first formal presentation I want to take this opportunity to see if any of the Congressional delegates or any of the staffers are here this morning from any of the Colorado -- yes, okay. If you would, please come to the mike and identify yourselves. And actually we do want to give you an opportunity, if you have any formal statements to make to the assembly, you can do that or you can wait till later if you prefer.

MS. MINKS: Sure. My name is Erin Minks. I'm from Senator Salazar's office. My coworker David Hiller will be here shortly. I would say right now we'll wait until the conclusion and then we'll --

DR. ZIEMER: And Mr. Hiller did present a formal -- made a formal statement to the assembly yesterday and that is on the record already.

MS. MINKS: And we would likely repeat that so we can --

DR. ZIEMER: Uh-huh.

MS. MINKS: Thank you.

DR. ZIEMER: You could if you wish. It's not necessary from the Board's point of view, but

it's entirely your call there.
Yes.
MS. ALBERG: Good morning. My name is Jeanette Alberg. I'm with U.S. Senator Wayne Allard's office. We made a statement last night during the --
DR. ZIEMER: Right.
MS. ALBERG: -- public comment period which was read into the record. I do have press releases on that statement, as well as a couple of copies of the statements, but the press release is on the back table. If you'd actually like a letter, please see me.
DR. ZIEMER: Do you have enough copies that the Board members could have a copy?
MS. ALBERG: I think I gave them to you guys last night.
DR. ZIEMER: Oh, that's the one you had last night.
MS. ALBERG: Yeah.
DR. ZIEMER: Okay, very good. Okay, thank you very much.
Then we will proceed and before the actual presentation of the SEC evaluation we're going to hear from Joe Fitzgerald, the representative

of SC&A. Joe, before you begin, I need to catch my breath a minute.

I neglected to ask our distinguished Federal Official, Dr. Wade --

DR. WADE: Thank you.

DR. ZIEMER: -- to make his opening comments.

DR. WADE: More distinguished every day, as it turns out.

DR. ZIEMER: Yes, aren't we all.

DR. WADE: Only that we do have a Board member who's conflicted on Rocky Flats. That's Brad Clawson. So Brad, while we will miss you, if you would please take a seat in the audience and then we will proceed. We'll welcome you back when we finish our deliberations on Rocky Flats.

DR. ZIEMER: Also we do need to double-check on Mr. Presley, who's -- can't travel because of health today, to see if he's on the line this morning.

MR. PRESLEY: Good morning, Paul.

DR. ZIEMER: Have we had him call in?

MR. PRESLEY: Can y'all hear me?

DR. ZIEMER: Not that we're aware. And --

MR. PRESLEY: Paul?

DR. ZIEMER: -- Dr. Lockey, also, who was ill and couldn't travel but may be on the line. Are either of you there this morning?

MR. PRESLEY: Hey, Paul, can you hear me?

DR. WADE: Supposed to be.

MR. PRESLEY: Hello?

DR. WADE: We're hearing --

DR. ZIEMER: Okay, here's -- here's -- I hear a distant echo.

DR. WADE: Get the volume up as...

DR. ZIEMER: Talk real loud and -- is that you, Robert?

MR. PRESLEY: It's Robert. I'm yelling.

DR. ZIEMER: Well, it sounds like you're way off in a cave there, up on a mountaintop in Tennessee, but can you hear us?

MR. PRESLEY: I can hear you all wonderfully.

DR. ZIEMER: I couldn't hear your response.

MR. PRESLEY: I can hear you all wonderfully.

DR. ZIEMER: Okay, very good. We can't hear you very wonderfully, but we'll proceed.

MR. PRESLEY: Okay.

SC&A PRESENTATION

DR. ZIEMER: Okay, thank you. So Joe Fitzgerald, representing SC&A, then will give

us the report from SC&A on their evaluation of the Special Exposure Cohort review -- or their review of the Special Cohort Evaluation. One of those. It's too early, Joe. Thanks.

MR. FITZGERALD: Thank you, Dr. Ziemer. Good morning, members of the Board, Congressional staff, NIOSH team and the -- certainly the audience. What I want to do is just give you a -- you're going to have a lot of different talks this morning on Rocky, but to give you our perspective on the -- a little higher?

DR. ZIEMER: Move it a little higher.

MR. FITZGERALD: Okay, let's do this -- is that better? Is that better?

MS. MUNN: Yeah.

MR. FITZGERALD: Okay, good. -- give you an update on the evaluation -- independent evaluation that we're doing as part of the SC&A audit role on behalf of the Board. And I want to -- take this down a little bit -- I want to sort of give you a little background as far as how we approach this.

(Pause)

Okay. First off, I think there's been much said about the intensity of the process, but I

just want to give you a real quick look at the number of meetings and interchanges that we've had on Rocky Flats since the site profile was issued in December and since we came up with the issue resolution matrix, which was right after New Year's. So it's been a fast-paced process over the last several months in order to be able to I think evaluate what's been done by the NIOSH team and to come up with some recommendations and feedback to the -- to the Advisory Board.

I think you heard much about Y-12 being sort of a model for how we're doing the SEC reviews from our standpoint. This was likewise a bit of a prototype in the sense that it's a focused review. We had a site profile. We did come up with issues related to the site profile. But we launched right into a SEC evaluation process, and in that process we focused on the issues that were critical to the SEC. And in particular we wanted to highlight those issues that were in fact raised by the petitioners that focus on establishing what some of the concerns would be from the standpoint of technical data and corroboration, and to

attempt over the last several months to converge in a working group environment on an understanding of what the issues seem to be and whether or not we agree with the NIOSH evaluation.

I might add there was no evaluation during this process. What we were looking at were the documents, the records and the analyses as they were emerging. This was a real-time review. A lot of the guidelines, a lot of the Technical Information Bulletins, were being generated and finalized during the same time frame that this exchange was going on. So a lot of the issues that we had initially were issues that were responded to by these documents as they were generated by NIOSH, and so it gives you some sense of the process and why we had so many interchanges. As these documents were provided us, we would then have comments and then we would have the interchanges and provide guidance back to the workgroup. The workgroup I think was a very effective mechanism, and I think it moved and propelled the process forward.

I'm going to go right into our key issues, and

you'll hear more about these issues from NIOSH and from the working group. But from our standpoint, we had four principal issues. The first issue -- the first issue had to do with the sensitivity of bioassay methods to detect highly insoluble super S -- or I think someone was calling it super Y, it's also the high-fired issue, so it goes by many names. But it's the question of whether or not you can detect the highly insoluble form of plutonium, and certainly at Rocky Flats that was -- that's an issue, the petitioners have cited the issue. And we're looking beyond the question of detecting lung burdens in the lung, but also looking at the relevancy of detectability in the respiratory and GI and systemic organs. We had two independent reviews of this. Now I heard Bob Bistline's name mentioned by some of the petitioners. Bob Bistline is on our team. He certainly is a site expert, as well as a subject matter expert on the subject of high-fired plutonium. And certainly we are going to rely on his expertise as a subject expert, but we also have Joyce Lipsztein, who is right here, who I'm going to ask to come up in a few

minutes, who has a wealth of information and knowledge and has been involved heavily with a number of ICRP task groups looking at this subject and other subjects. So I think we benefit from a considerable amount of expertise, both on the NIOSH team as well as on our group, on this particular subject. So I think the petitioners can be assured that for the subject of high-fired plutonium, the super S issue, we're certainly going to have a fairly comprehensive and detailed analysis and hopefully a answer on the questions by the next Board meeting.

Now before I go beyond this, I do want to have -- for the benefit of the Board, have Joyce Lipsztein come up and give you a little bit more of a flavor for what I think is a lot of analysis and work that's been going on independently within the SC&A team on this question, and perhaps not giving you a final answer, but giving you the process by which we examined this issue and where we're going to go with it. Joyce.

DR. LIPSZTEIN: Good morning, members of the Board. Good morning, members of the public and

fellow...
We have reviewed the NIOSH proposed method to evaluate the lung dose, systemic organ dose, ET and GI tract organ doses due to the inhalation of high-fired -- so-called high-fired plutonium oxides, also called super S because of its long retention in the lung.
The ICRP has not provided us at present with absorption parameters from the lung that should be used in case of inhalation of this very insoluble plutonium oxides. There will be no draft parameters from the ICRP before the end of this years (sic), and probably before the end of next year, so we recognize that NIOSH cannot wait that long.
So NIOSH has provided us with two documents, OTIB-0049 for lung adjustment factors, and a draft "Approach to Dose Reconstruction for Super Type S Material" that was dated March 2006. Those two documents give multiplication factors that should be used to derive doses from the so-called super type, SS or super S from calculations done with type S compounds. So the dosimetry for the type S compounds is well-established, so the NIOSH approach was to

give us an adjustment factors that we should multiply the doses that were calculated for a type S.

The first document, OTIB-009 (sic) gives the adjustment factors for the lung content for the super type S compounds. What -- the NIOSH approach was to look at several cases that has -- had this high retention in the lung. They took the two cases with the highest retention in the lung and derived an empirical model for them. It's an empirical model -- I'm saying it's an empirical model because the lung parameters were modified to fit mathematically the data. This fitting is not biologically realistic or it's not done in a way that would be accepted, for example, by ICRP. But in favor of the NIOSH approach, the only thing that is important in this case is to be claimant favorable. And in this document the adjustment factors that are used for the lung -- they are claimant favorable. They were made with the two highest cases of intake and they are favorable -- claimant favorable for the lung -- adjustment of lung.

Then after you adjust the lung content, you

also have to adjust for the intake if the data comes from bioassay, from urinalysis. And the way they did this was through the other document, the one that was handed out in March 2006, and it's proposed that you should multiply the intake by 4 or 4.7, depending if it is chronic or acute intake, and then adjust for the intake, calculated using super type S. We are still evaluating this approach because you come from an empirical -- empirical lung fitting, and it's okay for the lung because the lung was adjusted like that. But then to go down to the systemic and to the adjustment of intake, I think it will require from us a little bit more work in order to validate that. NIOSH has compared the results they obtained with this multiplication factor for the intake with autopsy cases from Rocky Flats, seven cases of autopsy from Rocky Flats, where they have compared the lung content of these people and the liver content. And they say it's claimant favorable. Okay. So they -- if you do this adjustment, you come out with a number that is higher than the one that were found on those autopsy cases. They did not give us the

data for bone also, just liver and lung. But we have looked at the bone data from two cases that were published from the U.S. Transuranium Registry, and it also super-estimates the bone content on those two cases.

On the other hand, there were -- there is another model that is proposed in the literature that was done by Keith Eckerman and some coworkers from Russia using Mayak exposed workers also to insoluble plutonium. Eckerman and coworkers, they examined 58 autopsy cases, and 50 were smokers and eight were non-smokers, so Eckerman examined the data model for smokers and no smokers. The approach used by -- by Eckerman was to modify the absorption parameters to -- to the lung by introducing -- by using a bounding compartment and -- to -- with an infinite half-time in the lung.

The approach used by Eckerman is one that would be, for example, accepted by the ICRP. I'm not saying it is the one that ICRP is going to take, but it's one that is accepted by ICRP.

And we have compared Eckerman's prediction in organs from urinary bioassay data taken one year after single acute intake and the approach

taken by NIOSH, and we have come to the conclusion that NIOSH is more claimant favorable than Eckerman's model for systemic organs and GI tract and ET, also.

Also, in Eckerman's paper he also points out to the problem that he adjusted the lung -- the -- the model to fit the lung, and then his -- should not really be used for systemic.

So -- so now what we have to do is to take -- to take a further look on this approach to calculate systemic organs from this model. But we believe that NIOSH is going on the direction of claimant favorability. Thank you.

DR. ZIEMER: I wonder if you would remain at the mike just for a moment. I want while you're there, Joyce, to see if any of the Board members have any questions on what you've just related to us. Well, since I have a question, I will start.

Very quickly, did I understand you to say that there were two cases in the Transuranic Registry that actually involve super S --

DR. LIPSZTEIN: Yeah.

DR. ZIEMER: -- category?

DR. LIPSZTEIN: Yeah, that were published in

2004 --

DR. ZIEMER: Okay, so there --

DR. LIPSZTEIN: -- on the record, yes.

DR. ZIEMER: Okay. And then I was trying to understand what you said about the Eckerman model and a -- a compartment that had an infinite half-time -- basically you're saying there -- a compartment with no biological clearance, I believe. Is that --

DR. LIPSZTEIN: Yes, right. What -- the ICRP approach on the lung model, even from ICRP-66, has this bound compartment. It was never used. It's always -- like -- this is -- are all not, you know, mathematical compartments --

DR. ZIEMER: Yes.

DR. LIPSZTEIN: -- so the lu-- it's like as if there were small lungs in all those compartments, so there is a fast retention time and there is a long retention time compartment, so those two compartments were used until now. But the bounding compartment was always there, it just was never used. I know for sure that the ICRP is going now to start using for several nuclides this bound compartment to explain a longer retention of some nuclides in

the lung. It has not yet come with the parameters for this lung bound -- bound compartment, and Eckerman has proposed a model for these parameters, some numbers for those parameters, based on the Mayak autopsy data.

DR. ZIEMER: So in principle, the third compartment was there -- and I understand these are model -- these aren't physical entities, they are mathematical compartments, but in -- in the other cases you could always describe the clearance with the first two compartments, the long and --

DR. LIPSZTEIN: Exactly.

DR. ZIEMER: -- and the shorter half-time.

DR. LIPSZTEIN: Exactly, because when the lung model was derived there was not so many data on all the nuclides. Now the ICRP approach is going to be that for many compounds they are going to have specific parameters different from just type S and -- and S, so each compound will have a speci-- for each compound that we have enough information to derive those data --

DR. ZIEMER: And then --

DR. LIPSZTEIN: -- and the plutonium oxide is one of the --

DR. ZIEMER: And then one final question, and just asking for a sort of ball park answer, in terms of what we know in a preliminary way on the super S, and maybe based on the Transuranic Registry material, is it -- do we have some feeling for what percent of an intake of super S would remain in that longest-term compartment during our lifetime? Is that a major portion of the --

DR. LIPSZTEIN: No, it's a small portion, but it may -- because of the infinite half-time, then it remains for a long time. That's --

DR. ZIEMER: And delivers lung dose.

DR. LIPSZTEIN: And --

DR. ZIEMER: A small percentage, okay.

DR. LIPSZTEIN: Is a small percentage, yes, but it remains for a long time so it makes a --

DR. ZIEMER: Right.

DR. LIPSZTEIN: -- a difference, and I have also compared the NIOSH approach with some draft things from ICRP, and NIOSH is always claimant favorable, so --

DR. ZIEMER: Okay, and that was sort of my final question, are there some drafts that you know about -- 'cause I know you work with the

ICRP so even though they haven't published, you sort of know where they're going on this.

Okay. Thank you.

I guess Dr. Roessler has a question.

DR. ROESSLER: I think you answered one of them. I just wanted to verify what you said, Joyce, about the -- your evaluation, knowing what's happening with the ICRP models, that the NIOSH models are claimant friendly -- or favorable.

But I have one specific question. Just to repeat, when you talked about the Transuranic Registry, what I understood you to say is that the one thing you got answered was the dose to bone from that. And from those results, again, you have concluded that the NIOSH approach is claimant favorable. Is -- is that what you said?

DR. LIPSZTEIN: The content in bone. There are two cases that were published from Rocky Flats. One of them, even if you used type S, you are okay with bone and --

DR. ROESSLER: Okay.

DR. LIPSZTEIN: -- the other case, if you used the multiplication by 4 for the intake, then

you are -- you are super-estimating what was found in -- in bone.

DR. ROESSLER: So there actually were two cases from Rocky Flats.

DR. LIPSZTEIN: Yes, but --

DR. ROESSLER: Okay.

DR. LIPSZTEIN: -- NIOSH -- in their document they examined seven cases from Rocky Flat. I don't have the data for those cases, and they claim that they were all super-estimating, the liver content and the lung content.

DR. ROESSLER: Okay, thank you.

MR. GRIFFON: We have the data for those cases. Right? We have the data for those cases. Jim -- Jim -- he's going to...

DR. NETON: Yeah, this is Jim Neton. Yeah, those -- those data are on the O drive.

MR. GRIFFON: Right.

DR. NETON: They might be difficult to find, but they are there.

DR. ZIEMER: Okay. Thank you very much for that clarification.

Okay. Thank you very much for that presentation. Now we return to Joe Fitzgerald.

MR. FITZGERALD: Okay, we have -- the next two

issues, one dealing with the measurement of americium-241 and how it relates to the ability to measure plutonium, and the next one on neutron measurements, are two that we've spent a great deal of time on and I think have achieved a lot of convergence. There's been a lot of give and take on it.

These are issues that came from the original site profile that we've carried forward into the SEC discussions. And on the americium-241 it's just a question of whether DOE, and then secondarily NIOSH in its assessment, had a handle on what the americium assay would be in the plutonium handled at Rocky. And the implication there is the ability to measure plutonium because the americium, in terms of its gamma radiation, is what you actually peg to in terms of your in vivo counting. And I think -- this was a question of our seeing additional documentation than that which was provided as part of the original site profile that NIOSH produced. And what I just detailed there, for your information -- again, we can go into more detail, but -- additional documentation was given to us that -- that kind

of detailed the specifications which the Department of Energy used at the site; certainly indicated that there was blending going on to maintain the americium concentrations at a certain specification -- that was important for the weapons program -- and that there was a -- certainly a minimum content of americium at 100 parts per million, which in fact is the value that the TBD uses. So I think this was a useful process by which we were able to get additional information to confirm a concern that we originally had in our initial evaluation last year. So this is where I think the working group certainly served a good purpose, but I just wanted to report that since that was a key issue that came out of the site profile that we felt could have SEC implications. But I think we've gone a long ways -- we're not finished yet because we certainly have some questions about how one measures americium -- pure americium, particularly in the sludges and the process streams that existed at Rocky. So there's still one lingering issue, which I think we're pretty hopeful we'll get additional information

from NIOSH on.

The -- this next one here, this was a issue that had so many facets, I think we spent a lot of time just sort of getting the taxonomy right in terms of the different elements and different documentations that were being produced. This was in fact a real-time or just-in-time type evaluation where NIOSH was completing some very critical guideline documents. OTIB-50 is essentially how they would apply the NDRP data and interpret neutron dose estimates for Rocky. The NDRP database of course is the database which was made available for the first time and finalized sometime middle of last year, and OTIB-58, which is up there, is the -- in fact a NIOSH model for how coworker doses are going to be handled for external dosimetry. And again, that was the last piece or the last foundation block that we received, and we got that last week. So as these pieces, these guidelines, have come forward, we have reviewed them, have had I think very fruitful evaluations with the NIOSH team, and have come to a point where we do have some remaining issues, but certainly not as

many as we had before. And what -- our major thrust, as indicated in the last bullet, is -- we're doing two things, really. One is to now step back, now that we have all the essential I think implementation guidelines -- the OTIB-50, the NDRP database and now the coworker model -- and trying to figure out more holistically does that work on the neutron dosimetry side, and external dosimetry side, and make sure that -- I guess from our own standpoint to be able to inform the Board that, you know, nothing tends to fall in the cracks; there's no issue relative to the whole picture, because we have looked at this in pieces, and certainly the coworker model is one of particular concern because it deals with I guess an issue we heard last night, which is how do you deal with unmonitored workers working in environments where you do have neutron fields, which you would have had in Building 771 and some of these other facilities. So I think this is an important question and we're certainly going to have a detailed section in the review that we're going to produce in the next few weeks for the Board.

That's where we are right now on that particular question, but there's been I think a lot of progress in going through these different implementation guides and coming to a appreciation of the overall approach that NIOSH has taken on that issue.

I want to get to data reliability, and certainly that was a fairly strong subject from last night's public hearing. We share that concern. I mean I think in our original site profile review that we issued over the winter we did indicate in a section that we were concerned about the questions of -- of zero entries, of allegations of false entries, this -- this -- this terminology of no data available. And we certainly took those issues very seriously and we brought those forward into the SEC review. I think our initial impression was we had certain issues that, independent of the petitioners, we felt, based on our review, spoke to these questions of -- of data reliability. And certainly the petitioners have advanced, in their petition, similar but maybe somewhat separate questions. The Chairman asked us to go ahead and

consolidate the issues that came out of our site -- our site profile review with some of the issues that figured in the petition that was submitted, and that's where we came up with I think our starting point of 17 issues that deal with some aspect of data reliability or integrity that we felt needed to be pursued and taken to ground. And as we worked through this with the working group and with NIOSH, I think it became very clear that, you know, part of the problem is being able to corroborate in some fashion what happened, why it happened and to establish whether it was systemic.

Is this an isolated case? You know, maybe it just affected one worker. Or was this reflective of a pervasiveness or a systemic nature of a problem that figured at Rocky? We wanted to get to the root of that issue. Is this something that -- really typi-- is really typical of the site? And that I think required a degree of investigation that we didn't quite foresee, but we're certainly in the midst of it now.

I think some of you -- I'm talking to the petitioners -- have met Katherine Robertson-

DeMers. She's working from our standpoint and interviewing petitioners, and actually trying to identify document sources that would help us establish the veracity of some of these allegations and corroborate some of the concerns over the reliability of the data. I just listed some of these, but certainly there's -- in the back there's a report that we issued on the 19th which is a status report on the specific issues that we felt strongly about in terms of pursuing to grounds as far as documents and interviews.

So -- and together with NIOSH, we have established a -- essentially a action list on behalf of the workgroup to pursue each and every of the 17 issues and establish a resolution of those issues in terms of the documents that we can find and what the interviews can take us to. And we're in the process of doing that right now. We are obtaining log books. We are obtaining further documents that would serve to corroborate the affidavits, serve to corroborate some of the concerns that have come out of this issue.

It's not an easy process. It's a time-

consuming process because, again, we have to go to DOE, obtain the documents, bring them back, examine them, compare them and what-not. And what we have established is a process by which I think NIOSH is going to proceed to obtain a broad band of documentation and go through the analysis. We're going to do samplings of the same analysis and try to bring this thing to a point for the Board where we can establish here's the best we can do in the time that we have in terms of what the records and the interviews tell us about these issues. But again, I think that's pretty much where it stands.

This is happening in real time. We're collecting documents this week and we hope to have some assessment that would be available by the middle of -- certainly by early June and have a report by the middle of June.

I think the Board's been pretty informed on this thing as we've gone along. There's been a high level of activity. A number of documents have been submitted over this month, so I won't, you know, take any more time with them unless you have any questions on -- on the

process. I think all of us have been very devoted to this particular question and trying to figure out how to resolve it.

And again I'm not going to spend too much time on it, these are the three specific actions that have -- had come out of the April 19th review in terms of taking us forward for the next several weeks, and the process is ongoing as we speak in terms of obtaining documents and also looking at these documents from the standpoint of corroborating some of these issues. And we're hopeful that we're going to find some certainly information in these log books and accounts that will give us some indication of what really happened in these particular situations and whether you can establish whether the zeroes in fact were zeroes, or is there some evidence that perhaps, as we heard last night, that these were being driven by incentives or management decisions that had something -- nothing to do with the actual measurements.

This is a wrap-up. We are, as Joyce pointed out, spending considerable time focusing on I think bringing the super S analysis to a close.

We are going to have sort of a expert review with Dr. Bistline, Joyce and some other folks that we have to -- to really cross the T as far as this issue's concerned. This issue is a prototype issue. We're going to see this issue again and again at other sites, so I think it's well worth the time to get the science on the table and to be able to come to a conclusion on it because we're going to be using this information at other sites as we go. And I certainly can tell you for a fact -- I just got back from Mound and Los Alamos -- we do have this issue, and we have this issue for other nuclides.

The -- and we of course finished the series of reviews on the neutron dose assessment. We are doing the on-site interviews. Again, we're working on the data integrity and reliability question.

We just got the coworker models over the last week or so, and I think that's probably the last piece of information that we're now focusing on. We're reviewing it as we speak this week, both the external and internal coworker models, and that's going to have a big

bearing on of course the unmonitored worker issue.

And I think the rest of this is pretty obvious. Next step, we are in the process of working up the review of the NIOSH SEC evaluation. It's going to certainly have the same format and details that you saw in the Y-12 review, and we certainly are aiming toward having that in advance of the -- of the next meeting of the Advisory Board and hopefully with a couple of weeks of lead time so there'll be enough time for interchange and review.

That's -- that's pretty much it.

DR. ZIEMER: Okay, thank you, Joe. If you'd stay put for a minute, let's --

MR. FITZGERALD: Sure.

DR. ZIEMER: -- see if there are questions that Board members have regarding your presentation, the SC&A report so far. Any questions?

(No responses)

Okay. Thank you very much then.

MR. FITZGERALD: Uh-huh.

DR. ZIEMER: I've been told that Libby White from Department of Energy, who's had some involvement I guess in obtaining the data -- or

the records, may be on the line. Libby, are -- are you on the line?

MS. WHITE: Hi, yes, I am on the line. Can you hear me?

DR. ZIEMER: Yes, we can hear you quite well. Libby, I'm told that you may have some comments relative to the Rocky Flats dose -- and other information. Is that correct?

MS. WHITE: You know, we have nothing other than a brief comment, which is just that DOE will be as responsive as we -- as we can in pulling the records and additional documents that the team needs to look at in -- in working through these issues. And -- and just as much lead time I guess as they can give us in advance, that will help us to have all the records ready for their review when -- when they get to the site.

DR. ZIEMER: Thank you very much, Libby, for that expression of cooperation. Certainly the issue of obtaining records in a timely fashion has -- has been important to this Board and to our contractor and to NIOSH, so we're pleased that -- that there is that willingness to be cooperative. I know you need more than a

minute or two of advance notice, and we're all working in real time here and we're all pressed, so we do thank you for that effort.

MS. WHITE: Certainly. Certainly.

DR. ZIEMER: And Libby, hang on just a minute.

MS. WHITE: Sure.

DR. ZIEMER: Dr. Wade has some --

DR. WADE: Libby, could --

DR. ZIEMER: -- comments.

DR. WADE: -- you just give us your name again and your position, your title?

MS. WHITE: Sure, it's Libby White, and I'm the director of the Office of Health Services with the Department of Energy.

DR. WADE: Thank you.

DR. ZIEMER: Okay. Thank you very much, Libby.

MS. WHITE: Thank you.

DR. ZIEMER: And Mike Gibson has a comment here. Mike?

MR. GIBSON: LIbby, this is Mike Gibson. I just want to know, are all relevant -- are all documents available or have any been disposed of? With regard to Rocky Flats.

DR. ZIEMER: And Libby, are you still on the line?

MS. WHITE: I am on the line. I'm not sure that I'm capable of answering that question. I think we'd need the records people with Legacy Management to help -- to help with that. But anything that we have -- that we currently have certainly we'd be more than happy to make available, and we work with our records people out in Colorado to do that in our Legacy Management office.

MR. GIBSON: Could -- maybe we could get an answer from the Legacy Management people?

DR. ZIEMER: Maybe we could, or maybe -- I guess one part of this would be if NIOSH or if SC&A identifies in fact records that they need that they are not able to get, that would in part answer that -- or at least tell us. Have there been -- are we running into any records issues now where we're -- we're identifying records that are not being able to be located on this --

MS. WHITE: Not to my knowledge.

DR. ZIEMER: Joe or Larry, do you know? Any -- any Rocky Flats records so far that you've requested that people don't know where they are or have not been found?

MR. FITZGERALD: No, I -- I think certainly given the pace that we're under, I think DOE's been very responsive. What's happened of course is, you know, there's a lead time to identify and to generate the records, and you know, we find ourselves moving in a time frame of days and weeks and I think DOE's been very responsive in terms of providing those documents. So I appreciate that support, as well. And no, I don't have anything to report as being a problem.

PRESENTATION BY NIOSH, DR. BRANT ULSH

DR. ZIEMER: Okay. Next we'll hear the formal presentation by NIOSH. Dr. Ulsh is going to do that presentation. This is the presentation on the NIOSH -- basically the NIOSH recommendation, their evaluation of the SEC petition.

DR. ULSH: Thank you, Dr. Ziemer. I'd like to thank the Board for giving me a chance to come back to Colorado. I did some of my graduate work right up the road in Fort Collins, so -- I was also relieved to see the weather break yesterday. I've been telling all my colleagues about how great the mountains are in Colorado,

and of course when we landed you couldn't see them. So as of yesterday when the clouds lifted, in fact yes, there are mountains in Colorado, so that was a relief.

I'd like to start by thanking a few people and me just explaining my role in this process. I'm a research health scientist with NIOSH. I've been there for about three years. And I am the -- I guess, for lack of a better word, project manager for NIOSH's evaluation of the Rocky Flats petition.

I'd also like to acknowledge a few other folks explicitly. Bob Meyer and his team from the TBD team. They've provided some very valuable technical input -- I'd say invaluable technical input to this process. And also Karin Jessen and her team for putting together the evaluation report. She had a huge part in putting that together, and without the help of those two people and their teams, I wouldn't be here prepared to talk to you about our evaluation today, so I just wanted to acknowledge them.

There are a couple of other people who I think deserve some thanks, and that is Tony DeMaiori

and Jennifer Thompson. I think the workers already know the debt that they owe those two people, and I would just like to take the opportunity to speak for NIOSH and to thank those two individuals in particular for putting together a very thorough, very good petition, and it really got us to take a good hard look at how we're doing dose reconstructions at Rocky Flats. It's been a grueling process, I can say that. I think SC&A would agree and the working group would certainly agree. But it's been a productive process, and I think that as a result of going through this process our efforts at Rocky Flats are stronger.

And finally and most importantly, I'd like to thank the workers who came out last night and told us their concerns, and also expressed those concerns through the petition. This is the most valuable information that we can get. And the more specifics we have -- it's kind of like trying to put together a puzzle. The more pieces that you start with, the easier it is and the faster it is to get to the big picture. So I can't over-emphasize how important your input into this process is.

All right. So let's move right into the presentation then. First of all, for those members of the Board who may not be as familiar with Rocky Flats as most of the people in the audience probably are, let me just go through a nickel tour of what happened at Rocky Flats. The main mission of the Rocky Flats Plant was the production of plutonium triggers for nuclear weapons. And another important mission that was performed there is the processing of retired weapons for plutonium recovery.

I hope y'all can hear me over the weed-eater. If not, give me the high sign and -- I don't know what I'll do; try to talk louder, I guess. In terms of the site history, ground-breaking actually began in 1951 and production activities commenced in 1952, and those continued through 1989 when the focus of the Rocky Flats Plant switched to decommissioning and decontamination. And that effort is far along now. If you go out to Rocky Flats, as most of the people here know, you won't see a whole lot. There's only a building or two left, so that's what's been happening since 1989.

All right. In terms of the SEC petition qualification, the first step, once we receive a petition, is to evaluate that petition in terms of getting it into shape so that we can evaluate it. And we went through that process and the petition was formally qualified on June 16th of 2005. And upon that qualification the petitioners were notified and a notice was published in the *Federal Register* in late June of last year.

The original proposed class in the petition was all United Steelworkers of America members employed between April of 1952 and February of 2005. We fairly quickly determined that we couldn't really just limit this -- this class to just union members. It -- it wouldn't be feasible for us to do that, and non-union members, we determined, should also be considered in this petition because they also had potential for the kinds of exposure and the kinds of concerns expressed in the petition. So we expanded that class to include all employees in that time frame.

Okay, I want to tell you about some of the petition-related activities that have occurred.

Some of these started even before the petition was submitted, and the first milestone I think that we came to was the issuance of our Technical Basis Documents. There are six Technical Basis Documents that make up our Rocky Flats site profile, and those six TBDs, Technical Basis Documents, were issued between January and June of 2004.

NIOSH and SC&A held a series of conference calls to discuss each TBD after SC&A was tasked with a review of the Rocky Flats TBD, and those conference calls occurred in early September of 2005. SC&A then issued their draft TBD review, and as -- as Joe described earlier, we quickly moved into a very focused review to support the evaluation of the SEC petition. And their draft report was issued December 8th, and I think, Joe, you said it was shortly after New Year that you issued the issue matrix. This is also the second Advisory -- the second meeting of the full Advisory Board to consider Rocky Flats TBD and SEC issues.

The real bulk of the evaluation -- the work that went into this evaluation was conducted during five working group meetings. And I can

only describe that process as grueling. I saw Arjun out in the hall a couple of days ago and we just kind of looked at each other we were so tired. This has been a very exhausting process but, as I said, it's been a very productive process. And there's just been enormous amounts of work put in by -- certainly by NIOSH, also by the Board working group members and by SC&A.

Okay, some of the communications that we've had with the petitioner. The first submission was received on February 15th of 2005, and we received a supplemental submission on May 24th of 2005. The first submission I think was approximately 500, give or take, pages -- so very extensive, very thorough. Then the second -- the supplemental submission I think was around 700 pages, so there's an enormous amount of documentation that went into this on the part of the petitioners and also on the part of we who are evaluating the petition.

In addition, the petitioner submitted 13 questions to NIOSH. These -- this was a result of the petitioners' participation in our working group meetings, and that was very

helpful. So they -- after one of those meetings, they had some questions that were related to that and they submitted those to us, and we responded to those questions in March of 2006.

We also requested some -- some further information specific to the data integrity concerns raised in the petition. I sent a letter to the petitioners on March 16th of this year, and we received a response on March 28th. And then I conducted a further -- a follow-up telephone conversation with -- with Tony. And what we were looking for here is some specific examples of concerns that he had with -- with data integrity that we could then go run down and -- and see if we could figure out what was going on. So those were very helpful.

And we also have now, especially after last night -- we heard a number of concerns, some of which were pretty specific, so our -- our research in this area continues, and I'll get more into that a little bit later.

Okay, the available information that we had to inform this evaluation of our -- of this SEC petition included dosimetry records. And these

are contained in a number of electronic databases -- I've got them a little out of order here. I think the first electronic database was the HSDS, which I believe stands for Health Science Data System. That was preceded of course by handwritten records since this was prior to the computer era, and that was up through about 1969. With the implementation of the HSDS, those records were migrated into that -- that database. And then there were a number of subsequent databases where the records were migrated to follow-up databases. So we started with handwritten records. We went to HSDS. Later was the RHRS, now let me see if I can remember that one -- Radiological Health Research System, I believe. Don't quote -- don't quote me on all these acronyms. I can't be certain that I'm getting all the acronyms correct. And then finally, just very recently, HIS20. This is the most recent of the electronic databases that contain dosimetry records.

We also had access to CEDR database which contained internal and external data. That was useful to us in coming up -- especially with

the internal coworker model that we put together.

We also accessed the ORAU Site Research database, which is a compendium of documents and information about not only Rocky Flats but sites all across the complex. Of course we focused on Rocky Flats for this particular effort.

We also had documentation provided by the petitioners in the petition, and by site experts that we consulted with. And again, as I said before, a really valuable source of information was information from you, the workers. Keep in mind, I didn't work at Rocky Flats. I'm coming at this from the outside. So you folks are my window into what happened at the Rocky Flats site, so anything that you can tell us, that -- that is absolutely critical. It's very valuable to us.

So SC&A issued a report on April 19th that Joe mentioned suggesting additional documents for review. And at the time that the report came out, we weren't sure whether we would be able to locate these documents. We were going to investigate the feasibility of it. We've

actually had some conversations with the DOE records folks, and we're encouraged. They seem optimistic that we can get -- I don't want to say 100 percent, but certainly a large part of the documents that SC&A has suggested, so we're very encouraged by that and our research on those documents of course is going to continue.

Okay, in terms of the availability of dosimetry, these are numbers that I pulled out of our tracking system, NOCTS -- which is the NIOSH/OCAS Claims Tracking System -- as of late last week. If you go on there today, the numbers might be a little bit different because they're continually being updated, but this is an approximate picture.

The cases that meet the class definition -- now remember, the class definition is all workers at Rocky Flats, so this number tells you the number of claims that have been referred to NIOSH by the Department of Labor for dose reconstruction. It's approximately 1,100.

In turn, we have completed dose reconstructions for almost 700 people -- I think the number's actually over 700 now, as of early this week -- so that represents about two-thirds of the

cases that were referred to us we had actually completed the dose reconstructions for those cases.

Now I've actually got the -- these last two numbers reversed. One of the people on my support team kindly pointed that out, but I couldn't correct it in the write-up in time, so those two numbers should be reversed.

In terms of cases with internal monitoring records, there are approximately 1,000 -- about 1,015 -- so that's a great many of these cases have internal monitoring records.

The same with external monitoring records, that number's actually about 1,056, so we've got pretty extensive dosimetry records here for Rocky Flats. And that's in contrast to some of the -- in particular the AWE sites, maybe some of the other DOE sites. We've got a large body of -- of dosimetry records here, and this is the primary information that we use for dose reconstruction.

Okay, now let's get to the petition. There were seven bases -- seven main bases that formed the basis of the SEC petition, and I'll just walk through these briefly and then

consider some of them in detail.
The first was exposure to highly insoluble plutonium oxides, and you heard SC&A -- Joyce talk about some of the issues that we've looked at related to this particular basis. Just to avoid confusion, let me repeat that when we're talking about highly insoluble plutonium, some other terms that you might hear to refer to the same thing are super S or super Y. That all refers to this -- this issue, this form of plutonium that's very insoluble.
The next basis for the petition was the inability to link exposures to specific incidents. That was a great concern in -- in the petition.
And the next one was periods of inadequate monitoring. Again, I'm going to go into some of these in more detail.
Those first four petition bases were the ones that qualified the petition. They -- they directly speak to NIOSH's ability or inability to conduct dose reconstructions with sufficient accuracy, so we focused most of our efforts on -- on those four.
The last three, the first of which is negative

effects of site closure, the -- the concern here was that since the site is now in a closure phase that the subject matter experts that have insights into what happened at Rocky Flats and -- and the details of the dosimetry would not be available to us. We didn't find that to be the case. The DOE Legacy Management office maintains archives of the files that were generated during the history of Rocky Flats, and we've had very good success working with those folks to get access to the records that we need, and we've found them to be very responsive and very timely. We also have had access to subject matter experts to inform our -- our evaluation. That -- that really hasn't posed too much of a challenge for us.

The next issue was the cessation of worker recall monitoring programs. And while this is a very important concern, it -- it really doesn't impact our ability to conduct dose reconstructions because we rely on biodosimetry -- I'm sorry, we rely on dosimetry that was collected during a worker's time at -- when they were actually employed.

Now don't get me wrong. If we have results

that are available after employment was terminated, we will use them. They -- they can be helpful. But the absence of -- of that kind of information really doesn't prevent us from doing dose reconstructions of sufficient accuracy. So while this is a very important issue, maybe not in the -- in the framework and the context of an SEC petition.

And the final basis of the petition was the link between plutonium exposure and cancer. It's well understood that there is a link between ionizing radiation exposure and several types of cancer. And plutonium, as a radionuclide, emits ionizing radiation. So you could, by analogy, link plutonium to cancer. And in fact that's -- that's the whole reason why we're here talking about this, because ionizing radiation is a potential carcinogen and that's why we do dose reconstructions. So we didn't really see that that prevented us from doing dose reconstructions of sufficient accuracy.

So we -- again, we focused mainly on the first four bases of the petition, so let me walk through some of these.

The first is super S, and we are very encouraged by the preliminary results of SC&A's analysis and we look forward to discussing that with them once that's finalized, but we're very encouraged that it at least appears right now that we're being claimant favorable with the way that we're going to approach this.

The particular concerns that were expressed in the -- in the petition related to super S were three, primarily, the first of which is self-shielding. The idea here is that super S particles are ceramicized, and so the concern expressed by the petitioner was that this would prevent the ability to detect this type of plutonium in the lungs through lung counting.

The second concern related to super S was particle size. The petitioner was concerned that we were using in -- in our bioassay models that the particle size that we were using was inappropriate.

And the final concern was the detection of -- of super S through bioassay. And I think the concern here is that since this form of plutonium is so highly insoluble, that urinalysis results are going to relative

insensitive to detecting this. So I'd like to go through and tell you about our evaluation of each of these concerns.

First -- the first thing that we determined was that yes, in fact there is evidence of super S material -- super S plutonium at Rocky Flats. And Joyce mentioned a couple of the sources of data that we used to make that determination, primarily the results of autopsy cases that we obtained from the U.S. Transuranium Registry. And in fact they do show evidence of plutonium that is more insoluble than type S. So that's the first thing. It does appear that there is super S at Rocky Flats.

Now in terms of the specific concerns that the -- that were in the petition, the self-shielding -- this was kind of a head-scratcher for me because when we do lung counts to try to detect plutonium, what we're using to measure that is the gamma radiation that comes off of the daughter of plutonium, americium-241. And I'm just not aware of any physical mechanism that would shield that radiation inside the particle. I went back to first principles and looked at a particle of the appropriate size.

If you just consider a plutonium atom encased in a particle made of lead, which is a very effective gamma shield, the attenuation or the shielding is just -- it's negligible. So we're -- we're just not aware of any plausible mechanism of self-shielding. And in fact the Transuranium data that we looked at supported the ability to detect plutonium, in whatever form, through lung counting.

The next concern was the particle size, and Joyce mentioned our approach that we have put out to handle super S plutonium, and smaller particle sizes that might result from fires at the site are explicitly considered in that -- in that approach.

We also took a look at what this means in terms of bioassay results. And it is certainly true that if the plutonium is very insoluble and sits in the lungs, then it doesn't get out into the rest of the body as readily as some of the more soluble forms and therefore it doesn't show up in the urine. The concentrations in the urine are less than you would expect to see from more soluble forms of plutonium.

However, it's not infinite. The solubility of

-- of this type of plutonium leads to bioassay detection limits that are high, but they are finite. There is a number. And so what we determined is that the intakes that we calculate with our bounding approach for super S, those intakes, when you back them off from bioassay results, result in claimant-favorable estimates of intake. So while this is certainly an important issue and it will affect the way we do dose reconstructions, it doesn't prevent us from doing dose reconstructions of sufficient accuracy.

The next basis in the petition was that there are instances when it is not possible to link intakes to specific incidents. And the concern here -- if I can just present a hypothetical situation to you. A worker's going along on a routine biomonitor-- bioassay program, let's say for plutonium. He gets a plutonium bioassay; it's negative. Gets another one a few months later; negative. Gets another one a few months later; positive. Well, then the question is where did that intake come from? Without having special bioassay results -- if an incident is recognized at the time that it

happens, for instance a glovebox fire, what will typically occur is that special bioassay would be requested. But in the absence of that -- I mean there -- there are exposure scenarios where the worker wouldn't even know that he had been exposed. That has certainly -- that certainly occurred at Rocky Flats, and other places throughout the complex.

And so in some situations we als-- we agree with the petitioner that it's not always possible to link intakes that you observe in bioassay results back to specific incidents. It's helpful when we can do it, that is true. But this is an issue that is -- has been widely recognized in the science of dose reconstruction. In fact, the International Commission on Radiological Protection has weighed in on this issue, and I've listed the citation there, and they've recommended methods for obtaining unbiased estimates of intake when you can't pin it to a specific incident.

And so Rocky -- Rocky Flats is certainly not the first time that we have encountered this issue. I mean we -- we -- it happens all the time in -- in dose reconstruction, and we have

developed methods to arrive at claimant-favorable estimates of organ doses when this occurs, usually -- I don't want to get too much into the details of those, but we assume a chronic intake scenario that analyses have shown is bounding. It gives a claimant-favorable estimate.

So while it is certainly true that these incidents occur and we can't always tie an intake to an incident, again, that doesn't prevent us from doing dose reconstructions of sufficient accuracy.

Okay, the next basis was the periods of inadequate monitoring, and the concern here -- again, there were -- there were three sub-concerns that fall under this umbrella. The examples presented in the petition included no routine lung counting until the late 1960s. In fact the lung counter at Rocky Flats came on line in 1964. Prior to that there was no lung counting at Rocky Flats.

The next two deal with neutrons. In the petition the concern was expressed that there was no neutron monitoring prior to the late 1950s. The specific year is actually about

1957. That's when they came on line with routine neutron monitoring.

And furthermore, there was a concern expressed about erroneous neutron measurements prior to 1970. This is the neutron film badge area -- film badge era, from about 1957 up through 1970. That's when neutron dosimetry transitioned to thermoluminescent dosimeters. The concern is for that film period.

So in our evaluation of these concerns we concluded that, again, while lung counts are helpful when they're present -- when we have them, you know, we use them -- but the primary data that we use to conduct internal dose reconstructions is bioassay data, urinalysis. And those types of data -- those types of results are available for the entire time span that the plant operated. That is our first and our preferred data that we use. So we didn't see that the existence of the period before the lung counter came on line as preventing us from doing sufficiently accurate dose reconstructions.

Now the next two deal with neutrons. In terms of the periods when Rocky Flats employees may

have been exposed to neutrons but were not monitored for that, and also the concern that once they were monitored that there were problems, there were issues with the NTA film that was used to do that monitoring, these problems were recognized. They were the genesis of the Neutron Dose Reconstruction Project, and that project was intended to address these issues. We have access to the Neutron Dose Reconstruction Project results. We are using them in dose reconstructions. So again, we don't see that this prevents us from doing dose reconstruction with sufficient accuracy.

Now I should mention that that Neutron Dose Reconstruction Project also was overseen by an advisory board similar to this one, which contained -- which included individuals both from the site and from outside the site, experts in neutron dosimetry from outside of Rocky Flats. So we are using -- we are accessing that. We are using it in dose reconstruction.

Okay, the next basis for the petition was unmonitored exposures, and the examples that

were provided included super S plutonium. We've already talked about that one. It also included a concern that there were certain areas where there was no monitoring, or there was monitoring but dosimetry chips were lost or destroyed, and this would have applied to the era when they were using TLDs for dosimetry, so we're talking post-1970. And finally there was a concern about lack of accurate work location records, so let me walk through the evaluation of these concerns.

First of all, in terms of unmonitored exposures -- we've talked about how to handle -- how we propose to handle super S. But if we're talking about other issues, other -- unmonitored exposures that might have occurred either from intake of radioactive material or to external sources, we have coworker data that we can use for unmonitored workers. But I have to tell you that the need for this at Rocky Flats is pretty minimal, in contrast to other sites. Of the approximately 700 cases that we've completed, we're aware -- currently aware of two cases that are on hold for coworker data. So it's not zero, but it's pretty small

in comparison to what we see at other sites. And I think I'd like to take the opportunity just to explain a little bit about how we apply coworker data when we do it. There seems to be a pretty large misconception that we take -- if -- if John has a gap in his dosimetry, we give him Joe's dose when Joe stood beside him. That's not the way that we do coworker data. Instead, what we look at for an individual who has a gap in their monitoring history, we look at the entire population of monitored workers at the particular site for the time period in question, and we look at the distribution of that data, the population of that data. And we pick a percentile value, usually if -- if the worker had a significant potential for radiation exposure, that usually is the 95th percentile that we pick and assign for that gap in monitoring.

Now what that means is that for that time period that worker is assigned a dose that exceeds the dose that 95 percent of the people on site received. We think that that's pretty claimant-favorable and so that -- that's why we have used this approach.

We also have other techniques to deal with gaps in dosimetry. If a worker was going along, he was monitored and there was a break in his dosimetry, and he was working along again and there's dosimetry results, we can use what's called the nearby technique -- assuming of course -- this technique would only be applicable in situations where we're confident that the worker was doing the same job through the whole time period, there were no conditions that could have led to differences in exposure, so we can use his own dosimetry results to fill in gaps in some situations.

Okay, the absence of work location information. We do have actually quite a lot of work location information, but I won't tell you that it's 100 percent complete. I can't tell you where every worker worked every minute of the time he was employed at Rocky Flats. That is true. But this is more of a concern when we're doing dose reconstructions through a source term approach, in situations where the workers aren't wearing -- don't have dosimetry results and we have to estimate doses based on the material that we know was there that he was

working with. This has -- this has happened at other sites. But at Rocky Flats, again, we have extensive, actual personal dosimetry information. So that information about work location, while it is important and it is helpful to us in dose reconstruction, it's not as critical as it might be at some other site where we don't have the types of dosimetry information that we have here.

Okay, the -- I think everyone would agree that the primary issues that are still on the table here for Rocky Flats, the outstanding remaining issues, revolve around data integrity, questions about data integrity. And we heard a lot about that last night. I'll get into that a little bit more in just a minute, but the Advisory Board established a working group to deal with this issue, how do we demonstrate data reliability. And one of the -- one of the things that we -- the Board wanted us to address was the internal consistency of the data. So for instance, we've got -- for external dosimetry, for instance, we've got beta/gamma worksheets. These are the handwritten records from the earlier period in

Rocky Flats. And then we've got a series of electronic databases as those records were migrated over the years.

So what -- what you want to do is look and see if we've got internal consistency. Do we see agreement between the handwritten records from the early period and the databases that they were migrated into. And what we have found, first starting with external dosimetry, is that we do have pretty good agreement between these two repositories, two sources of external dosimetry data.

We did a comparison of approximately 120 worker quarters, so 120 quarters of data for workers, and we compared the results from the original beta/gamma worksheets -- so this was prior to 1969, when they were doing handwritten records -- compared those to the latest database, HIS20. And what we found was that 73 percent of all those quarterly data were found, and the total annual dose was in complete agreement with HIS20. So that was a pretty good number. We also found in 17 percent of the cases there was one quarter missing from our handwritten data, but the annual total for that year agreed

with HIS20. So what that told us was that we weren't successful in locating all of the beta/gamma worksheets that would have applied to that individual, but the annual totals were in complete agreement.

So that's where I got that 90 percent number, the 73 plus 17 percent. And we felt that that was -- that gives us some degree of confidence that the external data is internally consistent.

Now I also want to take this opportunity to tell you that we don't rely on only HIS20 data, and we don't rely on only the handwritten records. We take all of the data that we have available to look at for dose reconstruction so that we have the most complete dataset to inform that dose reconstruction.

Okay, next internal data integrity. We also did some statistical comparisons to look at this, and what we found was that we again had pretty good agreement. We compared approximately 306 worker samples -- so what that means is an individual sample on an individual worker -- and we looked for agreement or disagreement between the

handwritten records, bioassay cards, when that was the method of recording the data, and later HSDS printouts -- we compared those to what we saw in the latest database, HIS20.

And so we -- for workers for which both bioassay cards and HIS20 data were available, that was approximately 215 cases -- 208 of 215 cases of the records were in complete agreement. And all 34 comparisons of the printed data from HSDS were in complete agreement with HIS20. So if you total those two you get that 97.1 actually percent agreement.

In only seven of those cases -- seven of the 215, that's about three percent, was there an imperfect match between the data found on the bioassay cards and HIS20 data.

So that -- that could raise a flag for you. You could say well, do we see any evidence of systematic censoring of high data. In other words, when these data were migrated into the electronic database, did they censor out high data. That's what we took a look to see if there was any evidence of that. And what we found was that in the instances of the seven

where we didn't have -- where we had bioassay data and we didn't find it in HIS20, six of those were in fact non-de-- let me get this right. In six of those we found that the value in HIS20 database were larger than the card data, so it doesn't, in our mind, indicate that there was systematic censoring of high data.

Now as expected with record systems this large, there were some discrepancies. There were about 41 individual records from three workers for which there was bioassay card data, but we couldn't locate them in HIS20. So again, you would naturally ask the question, is there any evidence of systematic sampling -- systematic censoring of high values. And we continued to investigate this, but what we have found is that in 40 of these 41 cases, 41 individual comparisons, they were non-detects. They were below the detection limit. In only one was there a positive value, and that was just slightly above the detection limit. So this doesn't really indicate a censoring of high data, because this is the low data.

So in summary, there's pretty substantial agreement on both the external and internal

site between these various repositories of data, and that demonstrates that there is pretty good internal consistency.

But this is not the end of the story on data integrity. This is only one piece that was raised in the working group's report. The other concerns that were included in the petition are, first of all, workers don't trust the dosimetry results. And I'll go into this in detail.

We also heard -- I don't know if this was actually in the petition or if it was just expressed during the working group meetings by the petitioners. We heard that workers sometimes manipulated their own badges, and I'm going to talk about both of these concerns.

So first of all let's talk about the issues that lead workers to mistrust their dosimetry results. There were several examples provided in the petition and, to the extent that we could locate specific information or the specific information was provided, we have investigated that as far as we could, and I'll talk about some specific examples.

But the concerns that kept coming up repeatedly

included a concern that when the badge results were too high they just assigned zero. That was a concern that we heard expressed repeatedly. And you have to separate out the time periods here in terms of film badges and the TLD era.

For film badges, one of the concerns was that when the film badges were blackened, they would just assign a zero dose. So I -- what we have here is a situation where some workers are saying -- you know, the workers who were wearing the dosimetry are saying that other workers, those who worked in the dosimetry department, falsified data. And so we're coming at this from the outside and we have to evalu-- as best we can, we have to objectively evaluate what the data tell us about these situations.

And in terms of film badge blackening -- I want to take an opportunity to communicate some of the known limitations of film badge dosimetry, and blackening is one of them. As with any photographic film, if it's exposed to light, it turns black. And these film badges were contained in foil packs to prevent light from

reaching the film badges. But as with any other human device, these are not perfect devices. Sometimes that foil pack could be damaged and it could lead to light contamination. Now that's usually pretty easily to dis-- easy to distinguish because it doesn't -- typically it doesn't blacken the whole badge, and you can go to another area on the badge and read it. But that could lead to film blackening. We also know that film badges are subject to environmental conditions such as high temperatures, humidity conditions, can lead to film blackening.

Of course another thing that can lead to film blackening is high exposure. That is certainly the case.

So we looked at the specific examples that were provided of film blackening, and we simply didn't see any evidence that -- that this constituted deliberate manipulation or deliberate falsification of data. We just don't have the evidence for that yet. We continue to investigate. We continue to accumulate your concerns, some of which were expressed last night, and we're going to

continue to look. But to date, we haven't located a particular example that makes us think that these results were -- were falsified.

Now the TLD era. The concern here is that when a TLD chip read high they would just assign a zero dose. Well, similarly to the film badges, we know that TLDs have certain limitations. Contaminants on the badge -- for instance, hair or body oil or detergent -- can lead to anomalously high film ba-- TLD results. It's also a limitation of TLDs that the crystals can sometimes be dropped. They can sometimes be missing. If the badge is damaged the crystal can be lost. That -- that is one of the limitations of TLDs.

At Rocky Flats the design of the TLD badge contained multiple crystals, and so when one or more crystals were lost, most often they could recon-- they could estimate the dose from the remaining crystals in the badge. So again, we -- we arrived at the same -- in the same place. We don't yet have an example that demonstrates, in our mind, conditions that are outside of what you would expect in a dosimetry program

like -- like was in existence at Rocky Flats and at other DOE sites. But we continue to look. I mean this is obviously still a concern to the workers and we are going to continue to look. We took notes last night. We're going to try to track down some of the specific examples that were presented then.

Okay, the -- in a situation where we have a suspect badge result, we do have the same techniques that I described for dealing with gaps, those same techniques can be applied here to deal with suspect badge results. So it's not -- it's not like we're out in the cold if we don't have, you know, 100 percent complete dosimetry record, or a period where we have a suspect dosimetry record. We do have methods to handle those types of situations.

Okay, now the next concern, that workers manipulated their own badges, this is -- this is a sticky one. I mean there are some ethical implications here that I'm going to leave to the Board to consider in their deliberations. I'm only going to speak to the scientific, quantitative aspects of -- of this particular concern.

Okay. The situation here -- first of all, let me describe the system -- the radiation control system at Rocky Flats. It is certainly a fact that there was a radiation control system at Rocky Flats, and workers were encouraged to keep their doses as low as reasonably achievable. That's -- that's a standard feature of radiation control programs and it's a standard feature at Rocky Flats.

It is also true that workers could be restricted from certain jobs if their radiation -- recorded radiation doses approached limits. That's -- that is true. The goal there is to make sure that the workers are not getting doses that exceed the regulatory limits.

So the motivation that was expressed by the petitioner during the working group meetings for this kind of situation where workers would be motivated to manipulate their own badges were so that they could remain eligible for premium work, for overtime work, and not be restricted from -- from that kind of work. Now this going to be a tough issue to deal with quantitatively, because as you can imagine, workers may have some reluctance to discuss

doing this. I mean that -- that's certainly the case.

So what I'd like to do is talk more qualitatively to you about how pervasive a problem this could be. Let's try to establish some perspective on how big an issue that we're talking about here. And it occurs to me that a chain of events has to occur for this to present a problem in our dose reconstruction program. 'Cause as a first link in this chain is that a worker has to be motivated to do this, and we've talked about the motivations that were advanced for this. And presumably the motivation to do this would be strongest when a worker actually approached a limit, an administrative limit or a regulatory limit. Now that may not be the only time, but that -- that is when the motivation might be strongest.

Again, I'm going to walk through a series of steps here, and none of these steps individually is impossible, none of them. They are all possible to some degree or other. I think that some of them are fairly unlikely, but absolutely not impossible.

And the motivation in terms of a worker

approaching a limit certainly existed. There were some workers at Rocky Flats who approached regulatory limits, but not -- a great majority of the population at Rocky Flats did not approach the limits, but there were some. So again, not impossible that a worker could be motivated to engage in -- in this.
Secondly, that same worker would have to be willing to do it. And I spent some time at a nuclear facility and -- just qualitatively speaking now, I think most workers would not be willing to engage in this, but some would.
And if they were motivated and they were willing, then they would have to leave their badges in their locker or stick them in their back pocket, and they would have to not get caught while doing it. Again, not impossible.
The petitioner described some situations and the statement that really stuck with me is these people were not stupid. If they wanted to do this, they could come up with a way to do it. And I can per-- I can easily accept that.
But I don't want to also represent this as being an easy thing to do, especially during the period when the badge was combined. The

site access -- the security badge was combined with the dosimetry results from 1964 up into the 1990s. So a worker would have to be not wearing a security badge or a dosimetry badge. Again, not impossible, but maybe not as easy as -- as -- as you would think.

So if a worker was motivated and willing to do this, and was able to do it without getting caught, that same worker -- in order to prevent a problem in our program, that same worker would have to get cancer and file a claim in our program. Now I don't know the total figures of the number of workers that worked at the Rocky Flats Plant over the entire operating history, but I know that it's at least in the tens of thousands, if not more. We have 1,000 claims from Rocky Flats. Is it impossible that one of those workers who was motivated and willing to do this and able to do it without getting caught could get cancer and file a claim in our program? Absolutely not, it is possible. But look at the odds here. There's not going to be a pervasive number of people doing this.

Next, that same worker who filed a claim in our

program would have to have a probability of causation less than 50 percent. Again, that can happen. If it's over 50 percent, it's not going to be as big an issue in that dose reconstruction because that individual's most likely going to be compensated. But if the probability of causation is less than 50 percent, we may have an issue.

So let's consider that situation a little closer. It's not all cases that are less than 50 percent, it's those cases that have a probability of causation close enough to 50 where the dose that would be missed or would not be recorded on this badge could have an impact on the compensation decision.

Now I don't have a quantitative number for this, but I think it's going to be probably our best-estimate cases, those where the PCs are in the 40s, maybe. So again, that's a pretty small number. In fact, at Rocky Flats -- now since we're talking about external dosimetry, I took a look at our claim population at Rocky Flats of the 700 or so that we have completed. Our best estimates are where we did a full-blown external dose reconstruction. Out of the

700 that we've completed, nine were best estimates for external dose. Nine.

Is it possible that one of these workers is in that nine? Yes, it is. Absolutely it is. But is it likely? I don't know. I'll let you draw your own conclusions there.

And finally, the last step in the chain is that we would have to not know about this instance. Now I think that -- that is probably more likely than the other steps, because as I said, workers are understandably reluctant to talk about doing this, and in some cases we're dealing with survivors so they may not even know that the employees might have -- might have done this. So it's certainly not inconceivable that we wouldn't know about it. Now in some cases we have methods for detecting this kind of thing. If we're looking at a best-estimate case and we see a tail-off, which could indicate that the worker was pulled out of the area, restricted from work, or it could indicate that his badge was pulled out of the area, left in his locker. But I don't want to represent to you that that is a foolproof method. It's certainly conceivable that we

would not know about this if it happened, and that's just -- that's just a limitation that we have to deal with and the Board has to deliberate about.

So what we have here is a string of events, none of which are impossible. Not one of them is impossible. But I think, to varying degrees, they're unlikely. And when you string those unlikely events together you arrive at a pretty unlikely scenario that would present a problem for our dose reconstruction prog-- a widespread problem for our dose reconstruction program.

Okay, let's talk about our evaluation report. I've given the regulatory citation here that governs -- governs our evaluation report. And that report was issued -- it was completed and issued on April 7th, and the Board has access to that.

And the evaluation process that that report covers -- the Board members have seen this. This is familiar to them, but for the members of the audience it may not be as familiar. Our regulations established a two-pronged test for evaluation of an SEC petition, and I've again

given the regulatory citation there.
The first prong of that test is this question: Is it feasible to estimate the level of radiation doses to individual members of the class with sufficient accuracy? If the answer to that first question, that first prong of the test, is no, then we are obligated to go to the second prong of the test. And that question says, given that you can't reconstruct doses with sufficient accuracy, is there a reasonable likelihood that radiation doses experienced by this class could have endangered the health of -- of the members of the class. But you only go to that second step if the answer to the first one is no, it's not feasible.
So our conclusion from this report, based on the evidence that we have so far -- and I want to emphasize that we are continuing to investigate. We are working with our colleagues at SC&A. We are working with the working group and the full Board to continue to investigate the concerns. Our conclusion is that the monitoring records, process descriptions, source term data that we have are sufficient to estimate radiation doses with

sufficient accuracy for this class of employees.

Again, we are continuing to investigate your concerns. And to the extent that you can help us, give us examples -- as specific as you can -- that will help us. Now I'm not saying that the burden is on you to reach back 40 years and tell me the specifics of where you were on a given day. But as complete a picture as you can give us, that will help us to zero in, help us to go get the records and -- and determine what -- what happened in these situations.

So in summary, the class was 1952 to present. We determined the first prong of the test, that it is feasible, based on the evidence that we have on hand now, that we can feasibly reconstruct doses. So we didn't go on to the second prong of that test. If we had, I think the answer would certainly have been yes. I mean there were condition-- potentially hazardous conditions at Rocky Flats that could have endangered the health of the workers. But again, that -- we only satisfied the first prong of the test which asked if it was feasible.

Okay, that concludes my slides.

DR. ZIEMER: Thank you very much. Let's open this up now for questions or discussion. Mark?

MR. GRIFFON: I think a couple things that you mentioned, especially on the coworkers, the -- the coworker models and how limited that would be to -- I think you said two cases that remain for coworker type dose reconstruction.

DR. ULSH: Right.

MR. GRIFFON: I'm trying to understand, and we've talked about this a little bit and started to bring it up in the workgroup, but I'm trying to understand if any of the -- does that mean they -- they -- when you said certain number of workers had -- one of your early slides said how many records -- how many --

DR. ULSH: Right, about 1,000.

MR. GRIFFON: -- claimants had internal records, how many claimants had external. Does that mean they had a full set, enough to do dose reconstruction --

DR. ULSH: No, that doesn't imply that there aren't gaps in some of those 1,000. What it says is that for -- of the 1,100 cases there is at least some external data and there is at

least some internal data.

MR. GRIFFON: I just wanted to be clear with that on the record, yeah.

DR. ULSH: I appreciate that clarification. As I -- all I can say is that of the 700 cases that we've done so far, we only have identified two. I know, Mark, you'd expressed a concern about neutrons -- neutron and does that constitute coworker data, so let me ju-- shall I answer that question or --

MR. GRIFFON: (inaudible)

DR. ULSH: Okay. And I talked about the early time period when we -- when there was no neutron monitoring and we apply a neutron to gamma ratio. And it is true that that neutron to gamma ratio is a measured value, and in some cases it could be based on other workers. So in the strictest sense, that could constitute coworker data. But I'm referring to it in the sense that we normally refer to it at other sites where we have no dosimetry for this person and we assign doses from coworkers. In this case that we're talking about here, applying a neutron to gamma ratio, we start with that individual's gamma reading. So we

have gamma dosimetry for that person. And then we apply the neutron to gamma ratio to calculate the neutron dose. So in the strictest sense, that might constitute coworker data, but I was referring to it in the more limited context.

MR. GRIFFON: And -- and the -- the only other question was, you mentioned a -- a nearby technique --

DR. ULSH: Yes.

MR. GRIFFON: -- which we understand how that works. Has that been applied to any of the cases, to your knowledge, that you've done?

DR. ULSH: Oh, gee, Mark --

MR. GRIFFON: 'Cause I don't know that you -- you normally -- or -- or often use that.

DR. ULSH: We don't often use it.

MR. GRIFFON: Right.

DR. ULSH: I can't say whether there are any cases at Rocky Flats where we have used it. It's pretty uncommon.

MR. GRIFFON: I guess some concern that we've heard expressed from the petitioners and from some people last night is that, you know, if there was -- if they have records for a couple

of quarters, then missing records, then records for a couple more quarters, the records that were missing might in fact have been because they were in those high exposed areas. So --

DR. ULSH: Yeah --

MR. GRIFFON: -- I think caution would -- should be applied to that --

DR. ULSH: I completely agree.

MR. GRIFFON: -- nearby technique.

DR. ULSH: The appropriateness of the nearby technique is predicated on the fact that exposure conditions are constant. If we can't demonstra-- if we can't validate that that is the situation, then the nearby technique would not be appropriate.

DR. ZIEMER: Further comments, questions?

(No responses)

Okay, thank you very much.

DR. ULSH: Thank you.

DR. ZIEMER: I think it would be appropriate if we had a comfort break for the assembly for about 15 minutes, and then we'll resume and hear from the petitioners.

MR. PRESLEY: Paul?

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

to 10:40 a.m.)

PRESENTATION BY PETITIONERS

DR. ZIEMER: We're ready to reconvene the assembly. Next in connection with the Rocky Flats SEC we will hear directly from the petitioners, and Tony DeMaiori -- am I pronouncing it correctly?

MR. DEMAIORI: Absolutely.

DR. ZIEMER: Close enough. I'm good on the Tony part. Tony, welcome back to the -- the podium, and please -- and others who may be with you, we're pleased to hear from you at this time.

MR. DEMAIORI: Good morning, Dr. Ziemer, members of the Board. As -- My name's Tony DeMaiori. I'm the former president of the United Steelworkers Local 8031. We represented the Rocky Flats facility. During the height of the D and D we had 1,600 members active that we petitioned on behalf of. As -- we'd like to open up our presentation with a video to give everybody an idea of the type of work that we did at Rocky Flats, and the people that were there, as we think we need a little bit of the human aspect here. So as -- if it would please

the Board as -- we'd like to show this video.

DR. ZIEMER: Thank you. Please proceed. The court reporter is trying to figure out how to record this now, just --

UNIDENTIFIED: Well, we can give you a copy 'cause I --

DR. ZIEMER: No, we understand. We like to kid him now and then.

(Whereupon, a videotape was played for the Board and the public.)

UNIDENTIFIED: Excuse me, ladies and gentlemen, this is why I'm here, because ten years down the road, the gestation period for radiation inhalation, a lot of these people are going to be sick. This is why I'm here. I care about these people 'cause these people are my people and I can't let them go through what we did. This -- this can't -- this can't happen. We've got to figure out what to do because it's not going to go away. It's here. And a lot of this stuff these people worked with are (inaudible). That means 24,000 years to that (inaudible) so we've got to remember this. Ten years down the road we're going to be buried with people getting sick, wondering

why. This is reality. Thank you.

DR. ZIEMER: Thank you. Go ahead, please.

MR. DEMAIORI: Thank you. And I'd like to thank everybody for giving us the opportunity to recognize the workers and to get -- get an idea of the type of work that we did at Rocky Flats all those years as this video was dedicated to all the people who had dedicated their lives to the production and the protection of special nuclear weapons, and the ultimately the cleanup of the Rocky Flats facility. As make no mistake, members of the Board, as Chairman Ziemer, that in fact the workers at Rocky Flats were true patriots as we worked a lot of hours, we worked a lot of hardships. Rocky Flats was a 7-day shift. That is, it never closed. We worked 24 hours a day, seven days a week.

Our working conditions were abnormal, to say the least. There are several incidents that I can cite that weren't day-to-day operations, you know, with myself personally as I laid in a supplied breathing air suit for nine hours below tanks that contained resins. We were trying to separate the plutonium, but we just

started the facility, 371, and we had to flush the facility with water, H2O, because the piping was so massive during construction, it filled up with dirt, dust. So we did, we flushed it with water, and then we couldn't get the DOWEX resins to extract the plutonium, to grab it -- that's in the ion exchange. So I laid there for nine hours with my dosimeter in my front pocket, taped, shielded by my torso, with my head at the bottom of the ion tanks. And every 15 minutes my boss would say hey, Tone, take another sample, and I'd take another sample. Every two hours he'd say give me the bag of samples. We'd slide it back under the door. But these are the types of things. Now when we go into dose reconstruction they're going to say well, Tone, during 1982 you were caustic treatment. You were treating caustic from the SOE operation, and that's a low-dose job. Absolutely the truth. But I also did the job up on the ion exchange, the sampling. I was a young man. The money was really good, time and a half. That's -- it helped feed my family, buy houses, clothing, that's -- I have to tell you, no regrets. It was a wonderful

job that I had out at Rocky Flats, and I think most people would tell you that. But we're here today to discuss the adverse effects, the health effects due to ionizing radiation and the -- the exposures, the chemical cocktails. Let us not forget the chemical cocktails, the plutonium nitrates that we worked with at Rocky Flats. That's...

So anyway, at this point in time I'm gong to refer to Jennifer Thompson and she's going to start the presentation. Thank you.

MS. THOMPSON: Good morning. Can you hear me? I wanted to thank you for giving us the opportunity to present to the Board. We greatly appreciate the role that you play in bringing a pure scientific, objective and fair treatment to our petition for Special Exposure Cohort.

My role in this process has been as a former Rocky Flats employee, worker and a volunteer. I've worked long hours, evenings and weekends, to help the steelworkers prepare their petition. I do this as an individual and former worker.

I also want to appreciate all of the workers

who have contributed to the petition, all of the hourly workers, and thank Kaiser Hill* and the Department of Energy at Rocky Flats for being supportive of our efforts back in the -- December of 2004 and January of 2005 time frame when we were actually preparing this petition.

At this point I wanted to make a couple of clarifications based on the earlier presentation by NIOSH. As you could see by the video, Rocky Flats is gone. There are not a few facilities left standing. The project is completely over. In October of 2005 they hung the lock on the gate out at Rocky Flats, signifying completion.

I also wanted to clarify that the class of the petition that we submitted -- that the Steelworkers submitted on behalf of its membership was a much smaller class than what you see today. And the class that was submitted was submitted based on the legal right of representation of the Steelworkers for its membership, and that was the limitation.

In addition to that, we limited our class as -- as we thought was instructed through the legislation to clearly define a class of people

that had -- either wore dosimetry or worked in areas that had been sense proven to require dosimetry, rather than addressing a broad population of -- of 10,000 people, which is what the case is now.

I also wanted to clarify the issue with closure. I'm sure -- and I'm grateful for DOE that NIOSH has had great access now in obtaining records, but what about five years from now? And in addition, the workers who are involved in their own individual dose reconstructions are required to remember back that many years, so closure is a factor. When the facilities are not there, it is a factor.

Another clarification is that plutonium actually emits alpha. It's not ionizing. The daughter product of plutonium is where the ionizing radiation comes from.

The other clarification is that it was listed that the preferred data analysis to be used is urinalysis, and I understand that. But that does not account for, as -- as recognized, that does not account accurately for high-fired oxides, so the preferred method of analysis that NIOSH employs does not account for high-

fired oxides.
Another clarification or -- or point from that presentation is it showed a 73 percent correlation of data, and that may be acceptable to some people, but I don't think if you have cancer that 73 percent is acceptable to you.
Another issue I'd like to clarify is an issue on limits. The presentation earlier said that not very many Rocky Flats people approached the legal regulatory limit. Well, that may be true. What the presenter failed to recognize is that at Rocky Flats we had an administrative control level of 500 millirem, so people actually were -- were relocated from job positions when they approached a 500 millirem level, not the regulatory legal limit, so that is a -- is a -- is a big difference there.
Okay. I've never used one of these before so I'll probably mess up, but -- one other thing I wanted to say is -- is that the gentleman early talked about a picture and a puzzle. And if you don't know what the picture is that you're trying to build, how do you know you have missing pieces from the puzzle? You don't know

the pieces even exist.
Okay. The basis for our petition has already been presented by others at this point so I'm going to skip -- skip that.
What I'd like to talk about first is the petition time line. The law requires NIOSH to make a recommendation to you folks, the Advisory Board, 180 days from receipt. Health and Human Services has decided in its own rules that 180 days from receipt actually meant 180 days from the point that NIOSH certified the petition. Today if 440 days later, and now it appears that NIOSH is pressuring the Board for a quick decision. This delay has cost the petitioner a lot, a lot in terms of the fact that all of our workers are now laid off; a lot in terms of the fact that Rocky Flats is now gone; a lot in terms of the fact the Rocky Flats Union is gone; a lot in terms of the fact that site experts are gone. We have lost our ability as petitioners to access records because now Privacy Act limitations prevent us. We have no official capacity. We have been crippled by this delay in terms of our ability to respond --

(Pause)

There we go. I know this is hard to read. I apologize for the small type, but basically this is a detail of the time line. In 2000 the EEOICPA was passed by Congress. It took NIOSH four years to publish the rules, and then in October of 2004 it was amended, and it was amended to put in the requirement for 180-day turnaround after receipt. Congress noted the importance of a timely review and a timely response.

On February 15th of 2005 the Steelworkers submitted their petition. That's day zero. That's when the clock started ticking. On day 61 Health and Human Services issued a letter to the petitioner asking for additional information and gave us a 30-day turnaround, which we met, 26 days later submitting 500 additional pages of documentation in 28 days. On day 113 our petition was certified, June 16th, 2005. On September 13th of 2005, many months after our petition was submitted, Health and Human Service amended its rules to accommodate the 180-day requirement and determined that what Congress really meant was

certification and not receipt, as the law states.

In December of 2008 (sic) S. Cohen & Associates submitted a site profile review, and we believe that that review, which was done with great detail and high quality, supported the premises of our petition in very, very many ways, and we're grateful for the work of S. Cohen & Associates in putting that together.

On day 303, 179 days after the petition was certified -- and there's no coincidence there -- Health and Human Services Director Larry Elliott issued a letter saying that their recommendation was to delay the recommendation of the petition.

Day 440 after receipt of petition, 315 days after certification, we believe that today was the formal recommendation but I'm not certain.

This other issue is a sensitive one, and I have to preface it with -- with that sensitivity. The Steelworkers would love for everybody at Rocky Flats who gets cancer to be covered under this legislation and under this -- this cohort status. However, the law was quite clear when we submitted the petition. That was that we

had to submit only on behalf of those folks that were legally represented by the union. In fact, we had to provide copies of all the union agreements, proving that we had legal right of representation for those people. So by law we could not have petitioned on behalf of other folks. As such we did not gather affidavits from salaried workers. We did not ask for their input into this petition. They have dose reconstruction challenges and examples of failures -- systematic failures that were not included in our petition because this petition was never intended to represent the total universe of people at Rocky Flats.

Now NIOSH has decided to expand the class -- covered class under this SEC petition. This dilutes the class, creates too large of a group to ever get funded. You all know the politics involved in Special Exposure Cohort. It's a sad thing, but it is reality. It took our group's size from less than 1,500 people to nearly 10,000 people. If Congress has a problem funding Special Exposure Cohorts, do you really think that a 10,000-person class is a realistic way to go about doing a Special

Exposure Cohort petition or class of people? The most sad part of this is that this denies people who are not involved in preparing the petition, and who are not represented by the petition, but yet denies them Special Exposure Cohort status. We -- we take issue with that, obviously.

Uh-oh...

(Pause)

DR. ZIEMER: This one's still working. That one must have gone into a sleep mode or...

MS. THOMPSON: Okay. Can the AV person maybe -- I'll continue, but can somebody try to get the other screen up?

DR. ZIEMER: Go ahead.

MS. THOMPSON: Okay. My next premise is -- is best described using a visual description, and -- and we feel like that the Rocky Flats petition and the situation of dose reconstruction at Rocky Flats is like a dam that's failing. And a hole breaks in one point and NIOSH just puts its hand over that hole, and that's a new Technical Information Basis Document (sic). And then a hole comes over here and they put their foot over that one, and

that's another Technical Information Basis Document (sic). And then there's another hole, and we've got an assumption for that. And then there's another issue, and we've got an excuse for that. But all the while they're putting their hands over the holes and blocking the water, they're failing to see that the dam is failing. They fail to look at the systematic, systemic failures of dose reconstruction.

Yes, you can come up with an assumption, an excuse, to explain nearly every thing. And I'm sure if we brought 100 more issues, there would be 100 more assumptions and 100 more excuses. These are band-aids. They're not fixing the problem.

The new -- the new TIB for high-fired oxides, great, should have been put in place years ago, it's not even final yet, but that's one of the band-aids. The changes for co-located worker, the new TIB -- another one, great. Adjustments for lead aprons, you have factors you can use, you have assumptions you can make. The zero versus missing data assumptions. What we have here is degrees of separation. Each time you make an assumption, each time you use

reconstructed dose from another source, you're getting further and further away from reality, further and further away from your ability to accurately construct dose.

The question is not can someday we accurately reconstruct doses. The question is as of February 15th, 2005 when this position (sic) was submitted, could dose be accurately reconstructed. And we believe the answer is no. Dose reconstruction is flawed, no matter how many band-aids NIOSH is willing to put in place.

The site profile does not even still acknowledge the D and D operations at the site. Post-1995, none of the incidents, none of the operations, none of that is taken into account by the site profile. And I believe there's no intentions to modify that. You saw the video. That's the type of work these people were involved in the last ten years, not production operations.

The band-aids put in place are not -- not going to heal the problem with dose reconstruction. High-fired oxides and their effect on the human body and how the body processes them is not

sufficiently studied to produce an accurate TIB. Okay? And the TIB is not even approved yet. This is a new phenomena (sic). In 2003 people said wow, we've got this new thing and we're not really even sure what it is. It's only three years later, and now we're going to say we can accurately put together something that's going to allow us to reconstruct dose? The lead apron adjustment only works if the worker knows that they had that issue and reports it during their dose reconstruction. Many people might not even think to mention it. And also, this assumption that -- that lead apron use was not very prevalent at Rocky Flats is not true. During the clean-up operations lead aprons were used in D and D residue operations, thermostabilization and plutonium packaging. But again, the site profile does not account for any of those.

This issue of the zeroes on your dose records, and I'm going to speak to this personally in a little bit, are inconsistently used. And you can cite that there's a procedure in place at the site that says you're supposed to do it this way, but practice and procedure are not

always the same thing. There's too many varied situations in which a zero is entered onto a person's dose record.

And -- and finally, the six cases that are cited in the NIOSH evaluation report -- they used six cases and then applied it to 9,537 people. I'm not a statistics person, but that doesn't seem like a very good population to be basing assumptions from.

Okay. So now the other is that -- is that -- as I mentioned, it's every time an issue comes up, there's an answer. But there's lots of other issues that haven't even come up yet.

Our -- our NDA folks carried cans of plutonium --

(Pause)

The NDA folks carried cans of plutonium under their arms, under the armpit. The dosimeter's on the front of their body. Okay? They're getting exposure under their arm that's not being measured by their dosimeter.

Workers working in lead-shielded gloveboxes, their dosimeter is against the lead shielding. Their face is against the plexiglass. The plutonium is in front of their face.

And there's many others that haven't been brought up. And the incentives for workers to mask dose in order to remain in the areas of job preference or higher earning potential, NIOSH spent a lot of time on that, and this is not an issue that we -- we want to say is an issue of credibility for our work force. It's a -- it's a reality when you have work that requires you to wear a dosimeter and you're approaching your level and you might get relocated, that could become a factor in the decisions you make on a day to day basis.

The third thing we want to bring up is the bias of the data credibility of information presented to the Board. There's a letter by Congressman Hostettler regarding a -- a -- I don't even know what it is. At Rocky Flats, he says, a manager of health physics programs prepared NIOSH's site profiles, TIBs, is actively involved in the evaluation of an SEC petition -- and that's our petition -- which includes validation of the results used in his previous work. We believe that that is a conflict of interest. Individuals who have testified against workers in Worker

Compensation hearings are serving key roles in the NIOSH process, and we believe that is a conflict of interest. This results in information that skewed the in-- has skewed the interpretation of reality.

The government's own General Accounting Office has identified conflict of interest as an issue.

This gets to -- to my individual case, and I want to clarify something. I, in my job at Rocky Flats, probably did not have the potential to get enough exposure that I would ever file a claim, so this is not driven by my personal desire to get compensated. This is just to give an example, and the reason this example is so good is because my dosimetry file is probably like that thick. I only maybe have three in there, incidents over time. I brought up an issue where a dose reconstruction had to be done because my dosimeter showed an abnormally high reading, and the dosimetry department did an investigation, asked me to remember all the places I'd been for the previous six months and who I'd been with.

But because of the nature of my job, I had been

into nearly every plutonium facility at Rocky Flats during that six-month time period. It was impossible to ascertain the cause of that exposure. And at the time I understood that. And at the end of the -- of the evaluation and the investigation and construction, they entered a zero on my dose record. And when I got my report in the mail it showed zero. Instead of recording the dose that my dosimeter said, because we couldn't find the source of it and they didn't believe the credibility of the -- of the dosimetry reading, I got a zero. This incident was brought to the attention on one of the working group meetings and NIOSH went off and pulled my records, and then later reported to the Board on one of the only other of the three incidents that I had in my history, about the time that I left my dosimeter on my coveralls when I exited the area and it ended up in the laundry basket. Okay? That -- that is not the incident I was talking about. And then they said that the dose reconstruction was done based on that incident, which I find very hard to believe because I was never spoken to regarding that.

The dosimeter was left in the laundry basket on my way out of a radiation area. My dosimeter was with me the whole time I was in the radiation area, so I fail to see the need for the dose reconstruction in that incident.

And I just give that as an example. It highlights a bigger issue than that.

And the effects of closure, I kind of touched on this earlier that it's interesting to me at one hand that -- that we're hearing that all of the records are readily available and that there's no problem with the closure in terms of the ability to do dose reconstruction, but in the evaluation report NIOSH recommended that -- that -- against the Special Exposure Cohort status, but then stated that it would take two to four months to get the dose investigation report that the petitioner suggested might be helpful for this -- this petition. So on the one hand they say they can get everything, and on the other hand they say it will take too long.

As -- I alluded earlier to the politics that come into play, and I'm sure the Board is feeling some of the pressures of -- of the

political situation. An OMB past back member to the -- memo to the Department of Labor outlines a plan to contain growth in benefits from new Special Exposure Cohorts by requiring administrative clearance before the Health and Human Services Secretary can make a decision, and calls for a White House-led inter-Agency task force to address any imbalance in the Advisory Board's membership. In this context, this appears to intend to tilt the Advisory Board's composition against approval of Special Exposure Cohorts.

Now I -- I want to talk about what we thought the law was asking us to do. We thought that the law was asking us to prove that there was a class of Rocky Flats workers that existed for whom it was not feasible to accurately estimate the radiation dose they received, and then to show that they had had their health endangered by their exposure to radiation. Number two it appears everybody is in agreement with. Number one is what -- what we're having issues with here.

In terms of proof about it not being feasible to accurately estimate dose, S. Cohen &

Associates' December 8th report says that the Rocky Flats site profile falls short in fully characterizing underlying issues that are fundamental to die-- guiding dose reconstruction. In terms of proof, the report also says a number of historical issues and discrepancies cast doubt on the validity of dose records being relied on for dose reconstruction. The precise nature of super class Y material is not known. Upper bound doses from external gamma, neutron and beta exposure are often underestimated, sometimes considerably, particularly when doses are reconstructed.

We believe just the fact alone that now these new TIBs are being put in place that the site profile's changing and not -- acknowledges the fact that at the time we submitted the petition dose could not be accurately reconstructed. And we believe the situation will exist even after those band-aids are put in place for the reasons I mention -- mentioned before.

(Pause)

Members of our Colorado Congressional delegation asked NIOSH not once, not twice, but

three times to grant our petition a fair and timely review. U.S. Congress required NIOSH to make a timely recommendation. NIOSH has not complied on either account. It is obvious we can no longer get a timely review. Now we are asking the Board to ensure that we get a fair one. Thank you.

DR. ZIEMER: Thank you very much. Tony, do you have additional individuals to present? Thank you.

MR. DEMAIORI: Thank you, Jennifer. Thank you, members of the Board. The next person I'd like to introduce is Charlie Wolfe. Charlie.

MR. WOLFE: Can you hear me? Does it work? My name is Charlie Wolfe. I was the project manager from 1995 to 2000 at Rocky Flats in the 771 facility, and also I was a deputy project manager when we tore down the first facility on 779. Previous to that I am a -- you got to excuse me, sometimes I forget things. 1991 I graduated with a chemical engineering degree from Ohio State and an MBA. When I left school I went to -- to Savannah River and worked there. I worked in two of their plutonium facilities, Pu-239 and Pu-238 facilities, for

the Cassini, so I've got -- been in the facilities a lot.

One of the things that I did, and I'm sure the Steelworkers will admit it, at every one of the facilities I went to, I dressed out every day. Okay? I put my masks on and I went out with the people to see what they were doing. One of the things I don't agree with right here is how many of you people dressed out over the time period and went through the facilities to see what the workers actually did instead of doing a paper analysis of what they did. That would give you a lot of your answers, to see what issues many of these people are talking about. I've -- I was out there a few times. The Steelworkers did a great job of helping people, but there were a lot of cases where you took off your -- yes, protective equipment and put it out where somebody could see it, but you never had an analysis of it. There were a lot of times where you didn't have your badges in the correct place where you could get it.

We found out -- I had my office in there, and they found out after we were there, I don't know, five years, six years, there was

radiation exposure in that facility and in the office areas. I never had my TLDs on when I was in those areas. I was in the office. My TLDs were on when I walked through the facility with the -- with the work force.

They -- at least as likely as not was what they put on my record in donation -- in -- what do you call it, dosimetry and stuff. Okay? Well, geez, I got a big hole in my head and I don't see it as likely as not -- okay? -- from that standpoint. And I sent several things back to NIOSH, DOE and everybody else that it wasn't just radiation that was put in there, but there was uptakes of plutonium and toxicity of that radiation is different. Plutonium has a different radionucleide (sic) than just looking at radiation. Okay? And people don't take that into account, as well.

One of the things that the gentleman that was speaking earlier said, well, yes, he was talking -- said that radiation is one of the reasons that people get cancer. Okay. I've talked to a lot of doctors. It doesn't take much. It doesn't take much. And you know, that's one of the problems that I have.

They talk about NIOSH or -- records. One of the records -- it took me over three months to get this fixed because they had trouble finding my job requirements for Rogers Iron Company. I don't even know who Rogers Iron Company is. Okay? And that's one of the records that they kept sending back to me over and over again for that company. I had no idea. So I don't know how I can even trust, you know, some of the other evaluations because of that.

I received -- I have at home, I couldn't carry it. I got documents that are this high. They sent information on where you were, what radionucleide (sic) were you associated with -- I mean it must have been 15 pages long. Like I said, I'm a chemical engineer, but I was a little bit -- had a hard time deciphering that because of my injury. My wife is a chemical engineer. Trying to go through that and find out the information they were asking, it was almost impossible for us to do it, so I don't know what other people had to do in terms of the Steelworkers and everything to do it.

My picture is up at the top there. The reason is, like I said, I went through the facility

every day with my steelworkers. I went through the facility when I was at Savannah River every day. I know what they did. I know where they were at. I know the issues that they had to -- to fight. And it's not fair. I mean the paperwork is incorrect on terms of where some of these people got their exposure, what types of exposure, there are different areas in the facility when you walk through that you can get a higher level exposure.

When you got an inhalant -- I was in several rooms that the alarms go off. Okay? So you're inhaling something, potentially. And you get outside of the room, if they find something you take your anti-Cs off. But you don't go right to the -- what do they call the -- the medical to check to see if there's anything that you inhaled or anything that could infect the top of your head.

And I don't understand, you know, just sitting there looking at pieces of paper and -- you know, I know they're very intelligent people. I have no problem with that. But understanding what these guys went through, what people did, what they were exposed to is unavailable if you

haven't walked through the facilities.
And I -- and I'll ask one -- one last question because I can't remember half of what I wanted to say, sorry. But the one thing is how many of you in here -- it's -- it's too late now, Rocky Flats is gone -- not just taken a tour -- okay? -- you know, there's the tours where they dress you up and everybody feels real cool, you know, walking through, but it's an area that has been inspected, checked out and make sure there -- there's absolutely no problems through there. But how many of you put a mask on and watched -- sat in the room and watched the workers in terms of taking care of pulling down the facilities and what they had to do and what was in those areas? You know, unless you've done that, you don't understand it. And I don't think there's a lot of you that would feel very comfortable, from this point on, if you went and had to put a mask on and go in and watch that.
That's about all I had to say. I think I had -- I can't write very straight anymore. I think that's about -- most of the items.
Can you look real quick, Jennifer, and make

sure I covered everything?

(Pause)

Thank you very much for -- for listening to us. I appreciate the time that you've spent. One of the things I'm going to pass around 'cause I don't -- I'm not technically able to put it here, but I got plenty of them at home. But this is what my brain tumor looked like. Okay? And that's how much of my brain they had to take out. All right? So I'm here because I've seen these guys do a great job, and I think they need to be compensated for the problems that they have now because these guys, like the movie, they are heroes. They fought the wars that we didn't, just in a different way. And I would like to applaud those guys for what they did on the work, and I think you guys -- I hope you guys will continue to look at this and support these guys because they deserve it. They did the work. They saved you guys from not having to deal with things like this. And thank you.

DR. ZIEMER: Thank you, Charlie.

MR. DEMAIORI: Thank you, Charlie. As -- our next speaker will be Jerry Hardin. Jerry.

Jerry's past president of the United Steelworkers three times, as Jerry'll take us back, radiologically, into the Stone Age.

DR. ZIEMER: I get a lot of that, too, Jerry, so --

MR. HARDIN: It matches the appearance.

DR. ZIEMER: -- don't feel bad.

MR. DEMAIORI: Before I turn the mike over, Jennifer has reminded me that, for a point of record, Charlie has been denied on his third claim.

DR. ZIEMER: Thank you.

MR. HARDIN: Good morning. My name is Jerry Hardin, as Tony's already mentioned, and I hope you won't hold the other information against me. I worked at Rocky Flats for over 37 years. Part of the time was as union president, majority was as a radiation protection technologist.

The thing that I'd like to do today is to poke a few holes in some of the things that I've overheard, you know, through the course of this presentation this morning.

First off, I think you need to partition time periods off in -- in regard to talking about

anything with Rocky Flats. Some things -- you know, as this thing evolved -- got better, but not everything.

Back when I first hired on, for instance, there was virtually no gamma shielding on most of the dry boxes. That came about in 1968.

Ironically, some of that same shielding contributed to the cataclysm of 1969, which we're about to celebrate the 37th anniversary of, the worst industrial fire in U.S. history, dollar-wise, to that point.

Now the reason I'm going to make some of these statements is to merely emphasize that I don't understand why Rocky Flats would be a problem to you people at all.

The other thing that I wanted you to know, and I don't know how familiar you are with the floor plan of building 771, but I heard stories about dose reconstruction today. But I want to tell you, in room 114, in a distance of about 100 feet, you could go from extreme neutron field to an extreme gamma field, the gamma field being Line 1, which was the americium box where the product was eventually bagged out and sold. The neutron field was the labyrinth

shield for the hydrofluorination and the pink cake. And I don't know how familiar you are with pink cake, but according to the instruments that I carried, neutrons flew all over the place. So what I'm telling you is in a distance of 100 feet or so you could have a totally different picture of radiation dosage, and I don't know how you could ever extrapolate a worker's possible exposure based on -- on that difficulty alone.

The other thing I would tell you is I carry a 36-rem body burden that I suspect is a product of high-fired oxide. The reason that I have that suspicion is because it didn't show on my -- on urinalysis results for quite a while. Those of you that are familiar with Langham's Curve know that the excretion usually is very significant at first and then it tapers off to near nothing. The point that I'm trying to make is that they never attributed my exposure to anything particular, and all of a sudden I showed up in 1988 and I lit up the clock. And the reason that that's of concern to me is because the evolution of the technology as well as, you know, the way that they defend it.

The other thing I would tell you is that this has been a -- a ongoing series of deceit and -- and denial dating way back to my first employment. We had a thing after the fire in 1969 where they denied the presence of tritium anywhere on site. Then all of a sudden some fine fella decided that he would run a test and they discovered tritium in Great Western Reservoir that sits west of -- of Broomfield. The irony of that is, management denied the presence of tritium anywhere on the plant site until finally someone said hey, it was a site return. We were -- we were ambushed.

The reason that that's important to you is because this is going to be a sequence of denial and betrayal, in my opinion, of good science as well as some of the information.

The thing that I would also try to point out to you is dosimetry was sorely lacking. As it's already been mentioned, neutron dosimetry was virtually non-existent and there were occurrences of black badges, certainly back in the film days. June Malsik* was their -- was their sole technician to count the tracks, and I think she's probably on to the big dry box in

the sky by now, but the point being is it was primitive and everyone knew it.

The emphasis at that time was on KG of fissile material out the door. It wasn't on good health and good housekeeping practices. As a rad tech, we tried to keep the walkways less than about 1,500 counts per minute alpha. You go any distance either side in building 71 and you could find most any number that you chose to -- to recognize.

Technology has improved over years and some of it I think has been very useful to the workers. Other things I think have been more useful to the lawyers.

And the problem that I've got is access to the records. The thing that you need to know is that this management and this government agency has not been very cooperative to anyone. And I would wave this headline to everyone's attention. This is a result of the infamous Cook case, and these were landowners adjacent to Rocky Flats. And initially the workers were attempting to file a case that was somewhat similar at the same time and our case was ruled invalid due to the Workmen's Comp law that

exists in this state.
The federal judge came, had to threaten to cite the contractor and DOE for contempt because they didn't provide the records in a meaningful and time-- timely manner. And the reason that I bring this to your attention is how do you think that a worker, especially now that the plant is closed, is going to have access to things that he thinks is necessary to support his claim? And I suspect that it's going to be extremely difficult.
In fact, just yesterday I talked to an attorney named Bruce Duboski*. This name may not mean anything to you, but Bruce was the successful attorney on the four provable radiation death cases that I'm aware of, that being Cromback*, Gable, Shamper* and Downing. And Bruce told me yesterday by telephone that he would be willing to submit a statement to you people about the difficulties he had in getting data to prove these cases.
My purpose today is not to do anything other than stimulate a little cross-talk and maybe a cross-pollination of ideas. You've heard the intellects, and I don't pretend to be one. But

I've certainly been involved in this process for -- for the many years.

And now I'm going to have to throw a few stones. This is -- you know, onions and orchids. I have been through I don't know how many of these hearings over the years. We had the Ahern Committee, we had the Defense Board, the tiger teams, and it goes on and on and on, and yet the conclusions always seem to be about the same from the workers' perspective, and that's nowhere. And the thing I would ask you to do is to -- to look at some of these findings from these other groups. Most all of them have detected problems. The GAO report back many years ago on 371 building said hey, that building's got big problems, and no one did anything about it. And so the workers continued to be assigned to those jobs. And some of the problems were corrected, but not all of them.

So you need to know that these things are a matter of record. Seems like every time a new group of you come to town we start with a clean sheet of paper where we're forced to field our complaints and whatever information we might

have, you know, to try to persuade you.
If you read today's newspaper, you people have already pretty much made up your minds that you're going to deny Rocky Flats the cohort status. And that may not be your assessment of it, but I'm telling you -- just being on the outside looking in -- that was mine after reading that article. I hope that that doesn't prove to be the case.
Now in regard to some of the other health issues, I don't know if you're familiar with the brain cancer report from about 20 years ago by Greg Wilkinson* who worked on George Boltz*'s staff out of Los Alamos. And the state health department also conducted a study at the same time, and they concluded that there was a higher incidence of brain tumors and brain cancers in Rocky Flats workers, but nothing ever came out of it that I was aware of as far as a remedy. The problem that we have are all these loose ends.
In regard to the documentation, I don't know if you people remember Hazel O'Leary, but she was the Secretary of Energy. And when she made the public disclosure of how much plutonium the

U.S. had, she said there was approximately 100 tons. And she also made a comment that there could have been three tons in residence at Rocky Flats that didn't show on the inventory or on any floor plan. Now think about that. That's a strategic material of unknown value that no one knew the whereabouts of. Now we're talking potentially, for health effects -- oh, I don't know what magnitude down from that, but a very small amount, so if you've got three tons that you don't know about, it isn't unreasonable to say some of these workers probably got some of that, too. And as I already confessed to you, I carry some of it in my body, and it isn't for sale -- at least at the moment, but -- subject to negotiation, though.

So you know, my purpose is not necessarily to amuse you, but to -- to again stimulate a thought process that seems to be sorely lacking.

I was a local union president back in 1985, and that was where the first case of berylliosis was detected. And prior to that we had nothing but denials and -- and, you know,

incriminations about beryllium. The records were very poor. All of a sudden beryllium turned into be an emotional thing, you know, worthy of the National Enquirer, which it still is -- and I'm not trying to belittle it, I'm merely trying to put perspective to it. We were a plutonium laundering facility. Beryllium was merely a sideline.

The other thing that I was disturbed about in the course of this thing is virtually no mention of the solvents and other chemicals. We were the biggest users of carbon tetrachloride in the entire country. We had over 20,000 gallons of it in residence in tankage. And I don't know your recollection of carbon tet exposures, but it isn't a good thing. Private industry got out of that business years ago. We had it at Rocky Flats until the day they finally said hey, the W-88's dead; we're not going to do these things anymore. So you need to be aware that the list of potential contaminants and exposures is long.

The other thing I wanted you aware of, and I don't know the records because I was a worker.

I wasn't up in the Mahogany Row. I don't know the records. Building 771 was closed down in the springtime of 1968 due to a project that we were involved in with the United Kingdom called Zipper. Zipper burned all of us out. They closed the building down.

Ironically, they moved me to area 903, the barrel pad. Again, management and DOE didn't answer to anyone because we were under the Atomic Energy Act of 19-- whatever it was, '42 or whatever, and so they had barrels of plutonium-contaminated lathe coolant there, and this was out in the open. The barrels were stacked, you know, all over that parcel of land.

And the reason that that's important is because it reinforces what I've asked you to do earlier, and that is partition time -- time off in -- in the 50-some-year history of Rocky Flats. We didn't always do the same things over that period of time. Some things improved, but not everything. The only thing that has been consistent is the denial and the ordeal, especially as individuals trying to prove a claim. And that's why I would again

make the offer -- in fact, I would virtually insist that you allow me to get Duboski to give you this statement about his difficulties in gathering information to pursue these cases through the compensation process.

The important thing is not necessarily listen to my war stories, but to try to flesh out some of the things that you may have already heard. I'm very concerned about the workers. I've seen the contractor get an alleged bonus of $450 million net. I have yet to see a group of workers come anywhere close. These landowners possibly, if they go into the year 3000, might get some part of that. If you remember -- like for now, their settlement was $75 million and the attorneys took a third of it, so the reason I'm telling you this is because it seems like we're more inclined to litigate things until the complainants die than we are in trying to satisfy legitimate claims.

I would ask your indulgence, and I don't know your time line, but the stories go on and on. But the thing that I would tell you is the record-keeping has been very poor, very spotty. I would use my personal example of my lung

burden that I've already confessed to you. And it depended on which body -- or lung burden -- hello -- lung count cell that they counted me in as to what the numbers were. I made an offer one day that they would just count me back to back in different cells and see how those results correlated. They refused. It was always a puzzle to me how my numbers were quite a bit different from one to the other, and I realize the randomness of radiation decay. But I also understand that it's very important for a worker to have reasonably accurate records. There were times in my career when they gave me credit for -- like a ring dosimeter or something that I didn't even have access to, much less any need for. I was not a hands-on worker most of the time. I carried the radiation instruments.

So the point being is some of the data is erroneous. I don't know how you would ever extrapolate a person's dose. As I've already mentioned, just a matter of a few feet could make a world of difference as to -- to the nuclides as well as the forms of emission that were generated.

Again, always keep in mind that the contractor got a bonus for KGs of material out the door -- or units or pits or whatever you choose to -- to use today. The emphasis was moving the merchandise. The workers were merely an implement to do that.

So I think I've probably bored you to death at this point, and I hope you don't wait till our deaths before you satisfy some of our concerns. So thank you, and I appreciate the opportunity to vent my -- my anger. Yes, thank you.

DR. ZIEMER: Yes, thank you, Jerry. We'll go back to Tony now.

MR. DEMAIORI: Great. Thank you, Jerry. For my final speaker I'd like Don Sabec. Don.

To give you a little history, Don Sabec was a Steelworker that's very fond to us all as when Don retired he was number one on the seniority list at Rocky Flats. Don has over 42 years out of the 50 years of Rocky Flats. Don.

MR. SABEC: Hi. Is this thing working? Okay. I've just got about three things I'd like to discuss. I'm not going to try and outdo Jerry Hardin 'cause he's got a very good memory for a lot of this stuff. Him and I worked together

for quite a few years.
I'd like to emphasize on Charlie's statement of entering the area. I personally walked with him several times taking visitors through the 771 complex, and he did every day come back in the area, not unless he was required to be in a meeting -- and I don't remember too many of those -- but he did come back in the area. And if we were in there working, doing break-outs, whatever we were doing, he'd be back there asking us, you know, is there anything I can do to help, do you need anything. And most of the time we -- you know, just say no, thanks, appreciate it.
But anyway, one of my concerns is the -- the record-keeping. I worked in progression committee for about a year, and we were in a trailer up by the union office. And one day we come to work Monday morning and our trailer had -- had -- our -- our equipment had been moved to one half of the trailer, our computers and desks and what-have-you. And the other half of the trailer, which there was a door between the two, it was a two-room trailer, had boxes and boxes and boxes piled up in it. And of course

being as the curious nature that RCTs are supposed to be, we started looking into these boxes. They weren't sealed or anything. And they were original records from the buildings that they -- they kept in the buildings, and they were put in these boxes. And we got to looking through them, some of them were personal records of exposures, others were surveys of radiation for areas, contamination. Mainly that's what they were was -- was records, but they had never made it up to the hist-- program part where they would put it into the computer. And this was during a GAO audit that these records were put in there. Those auditors had never come into our -- our trailer to look at these -- these surveys and documents. They were there for approximately three to four weeks.

After the audit was over with we come back to work again one Monday morning and the -- and the boxes were gone. Three or four days later, as the truck driver was delivering water -- 'cause we had bottled water in the trailer -- I was talking to him about all these records. I said do you -- do you guys know what happened

to these records? He says oh, yeah, we were called in Sunday to put them in trucks and we took them up and they were deemed no longer necessary and we dumped them in the landfill. That was one of the reasons at the Broomfield meetings I asked that they go back to those landfills and look for records and contamination 'cause I'm sure -- I know there was in all probability some contamination put in our landfill.

Enough said about that. The second issue is -- is that -- is the lead aprons. When we first started this lead apron for mainly bag-outs at the radiation areas where you're going to have the frontal assault, we had to wear our badges on the insides. Some period down the road they decided that wasn't right, we needed to put them on the outside for the lens of the eye, and they would calculate the body exposure by a formula they'd come up with. And I went to my rad engineer and I asked him, I says why aren't we using the -- we had the TLDs then -- or the TLD on the inside to confirm that your -- your methods are right and the badge on the outside -- I know there's other facilities that have

done this. I've talked to the facilities that wore badges inside and out.

I'm trying to think of what my third issue was. Again, giving you an -- can't remember.

(Pause)

Anyway, my -- well, my dose records -- that was it, the -- I -- I have personally got a dose of 113 rem for my lifetime exposure. Nothing is wrong with me yet that I know of -- I mean other than the fact that I'm not the overly-intelligent individual, but I -- I myself -- I talked to the individual that talked up here about the dose reconstruction and I -- I cannot believe that you people can accurately get a dose reconstruction done, as what Jerry Hardin was talking about. I worked in Building 771 the majority of the time I was out there, and you can go from one job to the next to the next job and in three days you could have ten different jobs from high -- high photons to neutrons. I was there before they even had the gamma or the neutron shielding and they -- my dose reconstruction, after I'd been out there about 30 years or so, they did a dose reconstruction. They added 35 rem to my

exposure at the time and I'd already received a 50 rem lung exposure, and they don't know -- I assume it was the high-fired oxide because we have no idea where I got it from. They asked me where I'd been and I told them look, I -- and then we're only doing the yearly body counts, and that's when they found my lung exposure and it -- it -- it's there, there's no doubt about that.

But about eight years before I retired I requested a copy of all my radiation exposure records, and I ended up getting my medical records. There's no radiation records in-- whatsoever involved. When I retired in 2004, June -- end of June, I did a formal request of my radiation records to be sent to me. And by the end of this coming June it'll be two years and I haven't received anything yet on my radiation records, and I'm just wondering if I'm going to have to start doing out-of-pocket money to pay $40 an hour and ten cents a copy for something that I requested two different times that legally is -- should be mine for no charge whatsoever, and I should have them now but I don't.

What I don't understand is how you people can get to my records 'cause the individual talked about it remembers doing my dose recalculations. Obviously he has all of my -- my radiation records, but I can't get them. Now why is that? Can -- can you tell me why you people, when I signed the petition that you could get to my records but Rocky -- Rocky Flats cannot give me my own records. There's something wrong with this picture.

So with that, I appreciate your indulgence, and I hope you can really see the true picture that's happening out at Rocky Flats and help these people that really need it. Thank you.

DR. ZIEMER: Thank you.

MR. DEMAIORI: Thank you, Don. Thank you, Dr. Wade, Dr. Ziemer, members of the Board. As to wrap this up for the United Steelworkers Local 8031, the petitioners, I'd like to say a couple of things. As one, due to the delays from NIOSH, United Steelworkers no longer have the ability to defend this petition as we don't have the right to represent, the workers are gone. They're no longer dues-paying members. We don't have the ability to pull records.

Under our collective bargaining agreement, we have 14 days guaranteed by our employer to get any records -- dosimetry, medical, whatever. Now it's a minimum of six months per person, if you can get the records at all. What we're experiencing from the Department of Energy pulling records is please be more specific. We get that from NIOSH, please be more specific. As we've been severely handicapped in our ability due to the timeliness of this partition; as we no longer have the financial funding, we don't have the ability to pull the records -- in fact, we can't even find half of our people as we've been dispersed all across the country; as three people are on this petition, two of them are not present here today, one's working in New York, the other one's working in Denver trying to feed his family. I almost wasn't here myself. I almost got a job last week, so -- so you know, seriously, what I'm telling you is I'm happy to hear that NIOSH and DOE doesn't have any post-closure problems. But the United Steelworkers, we do, as we have a lot of post-closure problems, and we can't adequately do this. So

we have to rely on Sanford Cohen & Associates to pick up the ball for us. We -- we don't have any other choice as -- and so at this point in time I would please ask the Board to consider delaying this petition until SCA has the opportunity to make a complete evaluation on our behalf because we no longer have the ability to do that as -- I have reduced that to writing and I will provide it to all the Board members. Thank you very much.

DR. ZIEMER: Thank you very much. Now let me sketch out a little bit here, we -- we have yet to hear from our own workgroup that's been working with NIOSH and working with our own contractor, SC&A. And we also need some additional time for Board discussion. It now is past the noon hour. And Mark, I think -- Mark headed up the workgroup. I think probably it would be -- well, let me ask it this way 'cause I know many of the Rocky -- Rocky Fork -- Rocky -- I say Rocky Fork because my wife and I vacation in a place called Rocky Fork -- but Rocky Flats -- Rocky Flats people here may not wish to hang around too long. So Mark, how long would the workgroup report require?

MR. GRIFFON: I mean I -- I can probably summarize in 15 minutes or so. I think we do want to make --

DR. ZIEMER: But then we still need some --

MR. GRIFFON: -- to continue work.

DR. ZIEMER: We also need time for discussion, too. Right. Maybe you can give us a quick bottom line of what the workgroup's -- what you think the recommendation is going to be and then we'll hear the full report. That might be helpful.

WORK GROUP REPORT, MR. MARK GRIFFON, CHAIR

MR. GRIFFON: Yeah, I -- I think the recommendation for -- for Rocky Flats -- SC&A hasn't even completed, as they said in their presentation, a review of the petition, so at this point we're recommending to continue the workgroup process and work on these issues. I think the understanding is that the data integrity and reliability is -- is the most outstanding issue that we have to try to investigate further. I think Brant also acknowledged that. So I think everybody's sort of in agreement on that, but I think that's our -- our recommendation from the workgroup.

DR. ZIEMER: So this is at this point given as a report rather than a formal motion, but what it would say is that the Board would anticipate receiving from the workgroup a formal motion to postpone action on the petition until the work of our contractor can be completed. And that -- that recommendation probably is -- seems to me is in alignment with the request of the petitioner, also. So -- and -- and let me suggest then that we take our lunch break. We will reconvene as close as we can to 1:00 o'clock, receive the full workgroup report, have an opportunity for the formal motion at that time and opportunity for additional Board discussion.

So without objection, let us recess for lunch for --

MR. PRESLEY: Hey, Paul --

DR. ZIEMER: -- about an hour and see if we can conclude. Hang on just a moment. Bob Presley on the phone.

MR. PRESLEY: Hey, Paul?

DR. ZIEMER: Yes, Bob.

MR. PRESLEY: Can you call me here at home?

DR. ZIEMER: Okay. You mean before the

session?

MR. PRESLEY: Yes, if you don't mind. I need to talk to you before this next session --

DR. ZIEMER: Okay.

MR. PRESLEY: -- and I'll be here until 3:00 o'clock my time, which will be 1:00 o'clock your all's time.

DR. ZIEMER: Okay. Thank you very much. He's probably going to tell us a vote.

Okay. Thank you. We're in recess till 1:00 o'clock.

(Whereupon, a recess was taken from 12:05 p.m. to 1:15 p.m.)

DR. ZIEMER: We're ready to resume our afternoon session now, continuing the agenda item on the Special Exposure Cohort petition for the Rocky Flats site. And we now will hear officially from the leader of our workgroup, Mark Griffon.

MR. GRIFFON: And I'm -- I'm going to keep this fairly brief 'cause I think a lot of the points have -- have been touched on in the earlier presentations, but I do want to kind of say where the workgroup is and -- and what our next steps are. As you remember, before lunch we

already sort of gave our recommendation that we're planning on continuing our workgroup work, that we're not prepared to make a recommendation today on -- on voting on the SEC evaluation report, so we would put off any vote on the -- we will recommend putting off any vote on the SEC evaluation report before us, but that we're going to continue to work on the -- on the outstanding issues that we've been working on on the workgroup. And I just wanted to summarize, from the workgroup's perspective, sort of where we are.

I did want to point out the time line, and it's much the same as I said yesterday in the Y-12 report, for those of you who were here. The time line on this thing -- we -- we -- to condense down the time line, it started much earlier, but from April 7th on is kind of where we -- we first received the SEC evaluation report, and given the timing here, SC&A working with the Board, we made a decision on the workgroup to prioritize Y-12 at the time and -- and have SC&A complete their review report, given that -- that we had about a week, we said focus your efforts on Y-12; there's no way you

can do two of these reports in one week or so. Focus on Y-12 and -- and we'll hold off on Rocky Flats. And part of the reason we did that, part of the rationale, was we felt there were more outstanding items for Rocky anyway and we didn't think we were going to be able to come to -- to close on those. So we -- you know, as -- as Joe Fitzgerald from SC&A acknowledged earlier, SC&A has not yet done a review report of NIOSH's proposed SEC evaluation report --

MR. PRESLEY: Paul --

MR. GRIFFON: -- so we're -- that -- that will be the next step for SC&A is to take on that review of that evaluation report and -- and move forward that way.

In the workgroup discussions we did -- you know, the -- the priority things that were -- that were remaining on our list -- we started as a site profile review. We narrowed our focus to what we thought were SEC, Special Exposure Cohort, issues. And we ended up with sort of -- some internal is-- dose issues, some external dose issues and a lot of discussion on data validation and data integrity. And I'll

just summarize some of those points.
For the internal dose issues, you heard earlier some discussion on this super S issues. I think where we're at on that is we have a Technical Information Bulletin from NIOSH. SC&A has certainly done preliminary review on that. I think it -- it's -- it -- from -- from the current analysis, it looks as though the model is claimant-favorable. I think there's a few things to further button up on that analysis. I think both NIOSH and SC&A agree with that. The systemic organ mod-- approach still needs to be reviewed further.
The second thing -- the other thing I will add on that is that I think that we just received some of the specific case data to support the TIB, and I think that SC&A's analysis thus far has focused on the data in the TIB going forward. And I would ask that -- that they consider the specific case data used in the TIB and just do -- at least do a review of that data to -- to make sure that it has been independently looked at. And part of the rationale for this is that much of this analysis was done by the contractor coming

forward, and that -- that came up pretty clearly in the Board meetings, so I think to the extent we can take an independent look at that, it -- it is worthwhile.

But super S I -- I believe is -- is -- we're -- we're fairly far along on that question.

The americium -- I think the remaining -- the -- the primary remaining issue on the americium is in -- during our discussions americium separation was identified as a separate operation, and although I think we've heard responses from NIOSH and it sounds like they have, at least from what we've heard on the workgroup calls, a claimant-favorable approach which basically would be during certain years of operation they would only have gross alpha counting data and they've indicated that in those cases they would just basically assume the worst case radionuclide, whether it be americium or plutonium, and assume the worst case in either scenario and move the claim that way, so -- but we haven't specifically seen that sort of protocol laid out, so that -- but again, I think that's close to resolved, but we want to cross the Ts, so to speak.

For the internal dose coworker model -- and this is OTIB-38, if you're following all these Technical Information Bulletins -- again, on -- on this I think NIOSH indicated that very few individuals within the number of claimants will -- will be -- will require coworker type analysis. I think we still wanted to just take one final look at the way that TIB is used. One question in -- in the TIB they talk about monitored -- they talk about unmonitored, and if -- and if they determine that individual's unmonitored, they may assign environmental air sam-- may assign their dose based on environmental air sampling, depending on the job title. And then they have another category where -- where they determine unmonitored but should have been monitored, based on job assignments. And I guess that -- that needs maybe a little more investigation on SC&A and -- and the workgroup's part. It just -- just as -- as to how they determine -- how they're going to make those determinations. But again, I -- I think -- you know, and part of -- part of my sort of wanting to take that a little further is just to make -- make clear in my

mind that the coworker model is going to be of very limited use, as well. So I think we want to explore both factors further. I think Brant's pretty confident with the -- the minimal use on the coworker model. Brant from -- Brant Ulsh from NIOSH is. So if that's the case, it -- it may be a smaller issue, but I think we want to take it to the end.

On the external dose side, as NIOSH mentioned earlier and -- and addressed some of my questions, but the neutron dose assignment has been a -- a lot of the dialogue on the workgroup, and I guess part of the -- in -- in preparing for this meeting, I had to step back for a second 'cause on the workgroup we ended up getting into very specific time-specific issues, and the responses by NIOSH were related to that particular issue. And when I stepped back, it was clear that in -- and this is in OTIB-50 -- it's clear that they -- for different periods of time, there's -- there's different sort of approaches that are being used, and I -- I -- it was in-- instructive, for me at least, to step back and see how this worked. One -- so there's still some remaining

questions on the coworker model and exactly how -- or -- or whether -- I don't think NIOSH would characterize it necessarily as a coworker model, but it's clear that on certain time periods -- for instance, '70 to '76 appears to be a time period where the data available to NIOSH have penetrating data rolled all into one field and -- and for purposes of doing -- doing their assessment, NIOSH needs to separate out neutron and gamma. And to separate that out they've -- they've -- they've calculated neutron to photon ratios from the period of '77 to '88 and -- and sort of back-calculated or deconvoluted the numbers to get the neutron dose and the photon dose separated. So you can see there's -- there's different time periods where they're doing different things, and I think we would -- we just want to make sure that we've looked -- looked one final time at this coworker model and make sure it makes sense and -- and make -- and -- and -- you know, they -- I guess there's only one other issue that I should bring on the table with the -- the earlier period data relies on the NDRP report data, and this is the Neutron Dose

Reconstruction Project data, and that project was done by the contractor at DOE at the time. And so -- so that's the other reason we want to make sure we explore this neutron data thoroughly and make sure it's valid and verify it. And that's why we're going through this process is because an independent review is essential here, we think. But also the NDRP data -- and the petitioner brought this up in their petition and we've -- we've looked into this a little bit, but the -- the data was -- was -- or that report acknowledged that during the NTA film period when they were monitoring neutrons with NTA film, they were -- the protocol indicated that they were monitoring the most highly exposed workers. The NDA -- NDRP report acknowledged that in fact they -- they didn't monitor many of the workers in 771, which had one of the highest potentials for neutron exposures. So I think that's another issue we want to look into is that those 771 workers I think were assigned neutron dose data, and yet in another way I think they were assigned based on their photon dose reading, corrected with a neutron to photon ratio

specific to 771 building. So I know that it's after lunch and this is probably making a lot of people gloss over, but these -- these details and the different time periods we want to really understand and make sure that it all fits together and it's a correct and fair way to do this. So we need to spend a little more time on OTIB-50 is the bottom line on -- on the neutron dose data.

And the -- the only other -- there's one other external coworker model, which we haven't discussed a great deal on -- on the workgroup, but OTIB-58 now, I think it's a draft OTIB-58, and -- and I guess the same question arises there on the -- I think there's three categories again, and the -- for the unmonitored they make a distinction of -- of assigning environmental doses to certain workers based on job assignments, and then assigning sort of a mean of the -- or a median of the distribution for workers that were unmonitored but should have been monitored based on their job titles. And again, I think we -- we just want to understand exactly how are you going to -- how is this defined, how is

this determined. And part of the rea-- I -- I think -- you know, part of the reason for exploring that a little further is, quite frankly, some of the comments made last night that, you know, some of the administrative people even were indicating that they were on and off badges, at least from -- from what I gathered in -- in public comment last night, that they were taken off the badge program and then they realized that from changes in storage situations of drums, all of a sudden a couple of cycles later they were asked to wear a badge and -- you know, so some of these questions come up that normally you'd probably say, you know, well, the person worked as a secretary for the ten years in the '90s, you know, we would consider just applying environmental dose, but may-- you know, maybe there's a qualifier there. Maybe there's a -- you know, a further consideration there that needs to be given, so we want to at least walk that -- walk that through and make sure that's a -- a fair way to model it.

And then the last and -- and primary issue, I guess, is the data validation and -- and data

integrity. We -- we did -- NIOSH did look into the reliability of the database question on both sides, the internal dose and the external dose data. And NIOSH presented some of their statistics earlier. I -- I do -- and we did get these reports and -- and I think they're included in the evaluation report, but this has all come to SC&A and the workgroup at a -- at a -- you know, and I know it's no fault of NIOSH's 'cause everybody's on the -- the crunch here to get these things produced, but we got this very -- very recently, so I don't think SC&A has fully considered this, and neither has the workgroup.

The -- the one thing that I would say on the -- on the external side is that -- or -- or actually -- actually for both. I'm -- I'm not even sure on the -- how these databases separate out, but when -- part of the reason we want to look into this further is that it -- it's unclear to me -- it's probably much more -- clearer to NIOSH. It's unclear to me when they compared raw data out of the claim files with the database versus when they had database printout data within a claimant's file and

compared that. And I know Brant did break that down, but we really haven't -- as a workgroup or SC&A hasn't really teased that apart and looked into that. I think we're much more interested in how the raw data compares with the electronic database than -- you know, printout data from the database we would expect has a pretty good match to the database itself. It's -- or else there's a -- there's some real problems. Now I know there were different databases so that -- you know, still might want to look into that, but the main concern here I think is comparing raw data, as best we can find it and locate it, with the electronic data records. And it's -- in this case, I think it's -- in some of the workgroup discussions I think the -- this -- this issue has been a little bit sidelined, in my opinion, because of the fact -- at least the stated fact by NIOSH that there's limited reliance on a coworker model. But I've -- I've stated in the workgroup and I'll state here that, you know, I think it's important, for those other reasons I've stated is that in the claimant's files oftentimes you see database data, not raw data.

So when they say they're relying on the claimant's file and they have data in the claimant's files, I don't think it's always the raw -- like the card data or the -- the original record. It's actually a printout from a database, so we still want to validate that database that's, you know -- so I think there's -- there's -- you know, the reason for doing that is not only to validate the coworker models but also to validate that the data in the claimant's files matches any raw -- any -- the original raw records.

And then the last part of the data valid-- is actually the data integrity, and I think NIOSH in their presentation acknowledged -- and I didn't do a count on this, but it's some 17 or so issues in our matrix that we have developed that -- that are around that issue of data integrity. And we think that we -- we need to track them back to ground, to the -- and as I said, I think yesterday -- to the extent we can, and we on the workgroup understand that -- that sometimes this may lead to inconclusive sort of finding and my examp-- I don't if everybody was here yesterday, but the example I

used is that some people indicated -- or at least one of the cases indicated that they had certain quarters where they knew they were in a high area and their dose of record was zero or -- or said no data available. And -- and they gave specific dates and everything, so we said well, let's -- let's track this back and see what we get. Well, when you track back, the individual did have dose records, but they had zeroes for those quarters of concern. Now you could -- you know, so you wonder well, can we track back anything else to that, and that's where SC&A has indicated there might be -- and I think interviewing some of the petitioners, they've indicated there may be some logbooks and other things that have some more data, possibly including secondary dosimetry like photo-ionization detectors that they would wear, but not turn in -- it's not your badge, it's a -- it's a direct reading of what you were exposed that day or -- or -- and you often turn it in daily, and those logs might have that information. Or they might have survey data or, you know, other information.

In the case where it -- they track back and

they find survey data, it may still be a little inconclusive, so what we're saying, to the extent we can, we want to take this to ground, but we're going to try to find some of these logbooks and other things and -- and resolve this. And I think that's two -- for two concerns. One is the specific allegation at hand, and then the other issue on data integrity is the broader question of -- of are there systemic problems here. And I think NIOSH has offered some preliminary analysis, and they've also pointed out the limitations of that analysis. I think we want to -- we need to further check that and -- and possibly -- there might be different ways and we can work with SC&A and NIOSH on maybe different ways of looking at this question of systemic problems with data integrity, possibly not looking at the overall population, but a lot of these allegations are made with higher areas and the workers that were in the higher areas, so there may be some ways to look at a subset of the -- of the dosimetry data to do some sort of analysis on that and see if there's any systemic problems.

The other thing that comes out on the question of sort of systemic problems is, as we've heard from -- from petitioners on the workgroup calls and we've also heard last night, a lot of the specific testimony that we're hearing is from the D and D portion of Rocky Flats operations. And I think that that's one thing -- I think this is a -- maybe -- maybe force of habit, but you know, we tend to look at the oldest parts of the operations, especially with regard to highest exposures and potential concerns about records not being available or et cetera. But I think we -- we might want to als-- we -- we have to make sure, I think, that we address this D and D portion of the operations and the D and D workers, and especially where the -- the petition goes through the current time period, so it would cover all those D and D workers. And you know, one concern there I guess that -- that we've heard from last night was that a lot of the urinalysis programs were -- were modified significantly and they went -- they've relied more on -- on -- on breathing zone air sampling, DAC -- sort of DAC hour analysis rather than relying on urinalysis

programs, so it might be a -- you know, we might want to consider how exactly they're being treated. And -- and their data integrity questions that arise under that separate sort of population of workers, the D and D workers, so --

Finally I think -- I -- I might get the number wrong, Brant, if I'm wrong -- I think there were six example DRs provided.

DR. ULSH: Yeah, that's right.

MR. GRIFFON: Is that right? So we have six -- six examples that were provided, and -- and I think on one of our last workgroup calls Brant briefly introduced them, but certainly the workgroup and SC&A has not really gotten into those examples. And as I said with Y-12, I think that's -- part of the reason we asked for these example DRs is to look at proof of principle. How -- you know, if NIOSH has the data there, show us how you're actually going to use that data to do an individual case. And -- and we need to thoroughly review those and -- and discuss those on the workgroup, and we haven't -- just haven't had a chance to do that at this point so we need to proceed with that,

as well.
And I think that's sort of a summary.
DR. ZIEMER: Let me ask, Board members, do you have questions for Mark before I call on him to propose a motion?
(No responses)
Other -- other workgroup members wish to add anything?
(No responses)
Apparently not. Mark, then I'll entertain a motion from you on behalf of the workgroup.
MR. GRIFFON: Well, I -- I guess I would make a motion on behalf of the workgroup that we continue our work with the workgroup, including NIOSH and SC&A and the petitioners -- continue our work and to not -- at this point we're not prepared to make any motion regarding the petition in front of us, the evaluation report in front of us.
DR. ZIEMER: That motion doesn't require a second since it comes from our workgroup. It is on the floor for discussion, and recognize that if you vote in favor of the motion -- this motion has the effect of postponing action on the petition until -- I'm assuming, Mark,

although you didn't say it explicitly -- I'm assuming it would be the intention of the workgroup to bring this to closure by our next meeting.

MS. MUNN: Yes.

DR. ZIEMER: Is that correct?

MS. MUNN: Yes.

DR. ZIEMER: Is that inherent in the...

MR. GRIFFON: Well, I was going to say as soon as possible, but -- but -- I -- I mean I would love to say the next meeting. I know that we have the same time line for Y-12, so -- but that -- that certainly is our intent, as soon as possible.

DR. ZIEMER: Thank you. Discussion?

(No responses)

There appears to be none. Is the Board ready to vote on this motion? Again, the effect of the motion will be to continue the work on resolving those issues that have been identified, and has the practical effect as well of -- of postponing action on -- in terms of making a recommendation to the Secretary on the petition.

Okay, all those who favor the motion, say aye.

(Affirmative responses)

Any opposed?

(No responses)

Any abstaining?

(No responses)

The motion carries. Thank you very much.

MS. MUNN: On the phone.

DR. ZIEMER: Jim Lockey, are you on the phone?

(No responses)

Robert Presley informed me during the lunch hour that he did have to leave for his doctor's appointment. He also -- he also informed me that he favored the motion that he knew the workgroup was making 'cause Mark had identified it before this session.

It is so ordered. Thank you very much.

BOARD DISCUSSION

DR. MELIUS: Just a couple of brief comments.

DR. ZIEMER: Dr. Melius.

DR. MELIUS: Yeah, just -- these remarks aren't relevant to the vote we just took, but two comments. One is I do think we need to examine some of the issues related to representation of petitioners and so forth. I've been personally disturbed by some of the requirements put on

the petitioners. I think the petitioners here, Tony and others, really made a good case of how difficult it can be for petitioners, particularly some of the practices that NIOSH has of expanding out the petitions -- which have good points in that we're trying to get as many people included in decisions as possible or it's feasible. But I think we also have to recognize that puts an increased burden on the petitioners and we sort of have -- in some ways have a different situation with Y-12 where we have petitioners who are not -- don't -- aren't very involved in the meetings and the representational part. So I think we need to rethink how we're doing that to make sure we're getting good representation and that the petitioners have the means to -- to adequately represent the -- the class that's being -- being discussed.

Also, how do we deal with a situation like this where, because of the closures, the petitioners -- in this case the union -- have lost the -- the -- some of the rights to access records in a timely fashion and so forth. And I -- I think we need to -- to talk about that and sort

of figure out how we can better -- better handle that situation.

Secondly, partially because of that and I think also because some of the time it's going to take to obtain records to address some of the concerns raised by the petitioners, I would hope we wouldn't rush into trying to meet an artificial deadline of next meeting or something to try to close out this petition. I think as soon as possible, yes. But let's make sure we have complete information. Some of the information requests have really just gone in and -- and I think we need to make sure that we do address all of the concerns and have adequate information to be able to do that.

And if that means, you know -- which can often happen -- making more information requests after further review, that I think we need -- we need to do that. It's very important. This is a big site. It's a complicated site. As Mark has pointed out, there's sort of different operations at different time periods, and I think we need to make sure we've covered the whole time period adequately and different operations within the facility adequately

before we make a decision.

DR. ZIEMER: Thank you very much, and it looks like Larry may have some related comments. Is that correct?

MR. ELLIOTT: Yes, it is, Dr. Ziemer. Thank you.

I want to congratulate Tony and the other petitioners, a very well-delivered and reasoned set of presentations. And I took special note and took to heart the predicament that they, as petitioners, are in with the closure of the site and the D and D being finished, and their not having the ability to access records. And I want to assure you that we stand at the ready. If there are any records that the petitioners want us to pursue for them on their behalf, we will. Any records that we collect, SC&A collects, we will make sure that they are delivered in copy in full to the petitioners. I've talked to Tony about this and just want to stand there to support them as best we can and use the MOU that we have with DOE to make sure that there is adequate and a timely response to their request for information. And that's my commitment to you. I understand that the

dilemma that has been presented by our expansion of this definition of the -- of the class, so I would include that -- that that goes to anybody that stands outside the Steelworkers, the hourly folks who also want to get copies of records, just let us know at NIOSH. Talk to me or you can call Brant Ulsh or get ahold of us in any way you can and we'll work with you to get the record that you want.

BOARD WORKING TIME

DR. ZIEMER: Thank you very much. Okay. Then the Chair would recognize Dr. Melius for the purpose of presenting a motion that we -- now -- yes, we'll bring Mr. Clawson back to the table.

DR. WADE: This time behave.

MR. CLAWSON: You know me.

DR. MELIUS: I have two motions here related to -- I guess we'll start with Pacific Proving Grounds and then there's a -- quite a -- a similar motion related to the Nevada Test Site. I think LaShawn has extra copies, Larry, that can be distributed for -- or someone can let her know -- of this -- I think all the Board members should have, and actually I e-mailed

these to Jim Lockey and Bob Presley a couple of hours ago.

Let me read into the record the first motion. Much --

DR. ZIEMER: Okay.

DR. MELIUS: Much of this is very familiar.

DR. ZIEMER: Just for purposes of record, this was -- this was a motion that was introduced by Bob Presley at our meeting on Tuesday -- I believe it was Tuesday.

MS. MUNN: The first one was.

DR. MELIUS: No, no, not the first one was. The first one -- his was the Nevada Test site.

DR. ZIEMER: Oh, we're on the Pacific Proving Ground, okay. I'll hold those remarks. Go ahead.

DR. MELIUS: Okay. The -- and I -- as I'm reading, if the Board members want to make -- pay particular attention to the second and third paragraphs from the bottom 'cause those I think are a little bit different than what we've put in some of our letters before. (Reading) The Board recommends that the following letter be transmitted to the Secretary of Health and Human Services within

21 days. Should the Chair become aware of any issue that in his judgment would preclude the transmittal of this letter within that time period, the Board requests that he promptly informs the Board of the delay, the reasons for this delay, and that he immediately works with NIOSH to schedule an emergency meeting of the Board to discuss this issue.

The Advisory Board on Radiation and Worker Health (the Board) has evaluated SEC Petition 00020 concerning workers at the Pacific Proving Grounds under the statutory requirements established by EEOICPA and incorporated into 42 CFR Section 83.13(c)(1) and 42 CFR Section 83.13(c)(3). The Board respectfully recommends a Special Exposure Cohort be accorded to all Department of Energy employees or its contractor or subcontractor employees who worked at the Pacific Proving Grounds (PPG) from 1946 through 1962 who were monitored or should have been monitored for exposure to ionizing radiation as a result of nuclear weapons testing at the PPG and whom were employed for a number of work days aggregating t least 250 work days, occurring under this

employment or in combination with work days of employment occurring within the parameters (excluding aggregate work day requirements) established for other classes of employees included in the SEC. This recommendation is based on the following factors:

One, these workers were employed during the above-ground testing of atomic weapons.

Number two, there are significant limitations to the available monitoring data collected at the Pacific Proving Grounds, particularly data needed for the accurate reconstruction of internal doses associated with the inhalation of radionuclides at the site. NIOSH concluded that the available information is not sufficient to document or estimate the potential maximum internal exposures to workers at the Pacific Proving Grounds under plausible circumstances during the period of AEC operations from 1946 to 1962. The Board concurs with this conclusion.

Three, the Board has reviewed information which confirms that radiation exposures at the Pacific Proving Grounds during the time period in question could have endangered the health of

members of this class.

The Board notes that many of the people who were employed at the Pacific Proving Ground during the time period in question lived on site during their work periods. This should be considered during the evaluation of their work duration.

The Board is still evaluating issues related to people who may have been exposed to radiation during discrete incidents that could have involved exceptionally high exposures to radiation while working at the Pacific Proving Grounds (example, those who were present during the actual atomic bomb testing) and who may not meet the 250 work day requirement described above. The Board will continue to review this matter and may make additional recommendations regarding this group at some point in the near future.

Enclosed is supporting documentation from the recent Advisory Board meetings held in Oak Ridge, Tennessee and Denver, Colorado where this Special Exposure Cohort petition was discussed. Documentation includes transcripts of public comments on the petition, copies of

the petition, the NIOSH review thereof, and related documents distributed by NIOSH and the petitioners. If any of these items are unavailable at this time, they will follow shortly.

DR. ZIEMER: Thank you very much. You've heard the motion. Is there a second?

MR. GIBSON: Second.

DR. ZIEMER: Discussion? Wanda.

MS. MUNN: A suggestion with respect to the last sentence in the second of those new paragraphs, the next to the last paragraph.

DR. MELIUS: Uh-huh.

MS. MUNN: There's maybe some reluctance to speaking to the near future, wouldn't want to raise the assumption that that data might not be developed at some considerably future date, would suggest the possibility of simply having that sentence read "The Board will continue to review this matter and may make future additional recommendations regarding this group," if that's acceptable.

DR. MELIUS: That's acceptable.

DR. ZIEMER: I'll interpret that as a friendly amendment as it appears the mover has agreed to

it -- and who was the seconder?

DR. MELIUS: Mike.

DR. ZIEMER: Is that agreeable?

MR. GIBSON: (inaudible)

DR. ZIEMER: So the wording in that sentence would now say "The Board will continue to review this matter and may make future additional recommendations regarding this group."

MS. MUNN: Uh-huh.

DR. ZIEMER: Which doesn't pin you down to a time line.

DR. MELIUS: Uh-huh.

DR. ZIEMER: Yes, it's -- thank you. Any other discussion?

(No responses)

Are you ready to vote on this motion?

MS. MUNN: Yes.

DR. ZIEMER: It appears that we're ready to vote.

All in favor of the motion, say aye.

(Affirmative responses)

Those opposed, no?

(No responses)

Any abstentions?

(No responses)

The motion carries. Thank you very much.

Then the Chair again recognizes Dr. Melius for purposes of providing the wording to Robert Presley's motion which came from the workgroup, and that motion was essentially to recommend approval of the Pacif-- of the Nevada Test Site petition.

Mark has to recuse himself, and I did want to double-check. I think we indicated to Sandi Schubert that if she wanted to be on the line --

MS. SCHUBERT: I'm here.

DR. ZIEMER: Okay, Sandi, you are there. Thank you very much.

MS. SCHUBERT: Thank you.

DR. ZIEMER: So we now have the wording of the motion, which we will simply identify as a friendly amendment to the Presley motion of yesterday. We simply deferred action on the Presley motion so that we could put the wording into our sort of standard wording form. So here is now the wording of the proposed -- or of the NTS motion. Dr. Melius.

DR. MELIUS: And I will indicate ahead of time,

by reading Wanda's mind I am going to make a amendment on the fly to this -- slight modification to make it read somewhat similar to the previous motion.

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

The Advisory Board on Radiation and Worker Health (the Board) has evaluated SEC Petition 00055 concerning workers at the Nevada Test Site under the statutory requirements established by EEOICPA and incorporated into 42 CFR Section 83.13(c)(1) and 42 CFR Section 83.13(c)(3). The Board respectfully recommends a Special Exposure Cohort be accorded to all Department of Energy (DOE) employees or its contractor or subcontractor employees who

worked at the Nevada Test Site from January 27th, 1951 through December 3rd, 1962 who were monitored or should have been monitored for exposure to ionizing radiation as a result of nuclear weapons testing at the Nevada Test Site and who were employed for a number of work days aggregating at least 250 work days, occurring under this employment or in combination with work days of employment occurring within the parameters (excluding aggregate work day requirements) established for other classes of employees included in the SEC. This recommendation is based on the following factors:

Number one, these workers were employed during the above-ground testing of atomic weapons. Two, they were -- there are significant limitations to the available monitoring data collected at the Nevada Test Site during this time period, particularly data needed for the accurate reconstruction of internal doses associated with the inhalation of radionuclides at the site. NIOSH concluded that the available monitoring data and source term information is not sufficient to document or

estimate the potential maximum internal exposures to workers at the Nevada Test Site under plausible circumstances during the time period from January 27th, 1951 to December 3rd, 1952. The Board concurs with this conclusion. The Board has received information which confirms that radiation exposures at the Nevada Test Site during the time period in question could have endangered the health of members of this class.

The Board notes that some people who were employed at the Nevada Test Site during the time period in question lived on site during their work periods. This should be considered during the evaluation of their work duration. The Board is still evaluating issues related to people who may have been exposed to radiation during discrete incidents that could have involved exceptionally high exposures to radiation while working at the Nevada Test Site (example, those who were present during the actual atomic bomb testing) and who may not meet the 250-day work requirement described above. The Board will continue to review this matter and may make additional future

recommendations regarding this group.
Enclosed is supporting documentation from the recent Advisory Board meeting held in Denver, Colorado where this Special Exposure Cohort petition was discussed. This documentation includes transcripts of the public comments on the petition, copies of the petition and the NIOSH review thereof, and related documents distributed by NIOSH and the petitioners. If any of these items are unavailable at this time they will follow shortly.

DR. ZIEMER: Thank you. That motion basically came from the workgroup. It does not require a second at this time. I'm going to ask for discussion or comments on this motion.
I actually have a question that perhaps might lead to a slight change. We refer in bullet one to workers were employed in above-ground testing. Actually were not some of the shots in Nevada underground?

MS. MUNN: Some were, yes.

DR. MELIUS: But during this time period?

DR. ZIEMER: Are we exclud--

MR. ELLIOTT: But during this period it was above-ground.

DR. ZIEMER: Only -- only -- that's what I wanted to clarify.
MR. ELLIOTT: And could I make a friendly --
DR. ZIEMER: Yes.
MR. ELLIOTT: -- a correction as a friendly correction?
DR. MELIUS: Uh-huh.
MR. ELLIOTT: It's an 83.14 case --
DR. MELIUS: Oh, okay.
MR. ELLIOTT: -- not 13. This is a -- this is a situation where, under 82.12, we've identified we can't do dose reconstruction. We worked with a claimant to file an 83.14.
DR. ZIEMER: So that correction should be in line three of paragraph two, I believe.
DR. MELIUS: Uh-huh.
DR. ZIEMER: Both of those items -- are they both changed to 83 --
MS. MUNN: I think so, but I don't know --
DR. ZIEMER: Larry, are both of those -- it mentions 83.13 twice. To be correct, do we need to have both of those --
MR. ELLIOTT: Yes, for -- for Nevada Test Site for this class, it's an 83.14, so where you have 83.13 it should say 83.14, yes.

DR. MELIUS: But does it paral-- do (c)(1) and (c)(3) parallel in 13 and 14? We have --

DR. ZIEMER: One of -- one of the problems will be that Jim is using the -- the other subparagraphs --

DR. MELIUS: Yeah.

DR. ZIEMER: -- and let us -- let us simply indicate we will get the correct reference here --

DR. MELIUS: Yeah.

DR. ZIEMER: -- if we don't have it right at the moment.

MR. ELLIOTT: I'd have to see the reg, and I'm not --

DR. MELIUS: Yeah, Lew has the --

MR. ELLIOTT: Okay.

DR. MELIUS: -- the regs, we'll work on it.

DR. ZIEMER: The understanding is that we will insert the correct paragraph references there. These are in there simply to tie the statement back to the --

DR. MELIUS: Yeah.

DR. ZIEMER: -- to the language of the regulation.

MS. MUNN: It's 14(b).

DR. MELIUS: Yeah.
DR. ZIEMER: Any other discussions?
MR. GIBSON: Yes.
DR. ZIEMER: Yes, Mike.
MR. GIBSON: If I could beat Wanda to the wordsmithing this time for a friendly amendment, the second paragraph, about four to five sentences up, it refers to testing at the PPG.
DR. MELIUS: Yeah, that --
DR. ZIEMER: He changed that as he read it --
DR. MELIUS: Read it, yeah.
DR. ZIEMER: -- on the fly. That should read Nevada Test Station (sic), yes. Our copies refer to the Pacific Proving Grounds, but he did correct that in his -- in his audible version.
DR. MELIUS: Dr. Ziemer, you were listening. I'm impressed.
DR. ZIEMER: I was listening. I do listen to you now and then.
Now before we vote, I'm going to ask a question because it relates in a -- it's the same kind of question, but I just realized on our previous motion, in terms of the Pacific

Proving Grounds, some of those shots were underwater. Do -- are we still restricting that one to above-ground?

Okay, in that case, I'm going to come back to that.

DR. MELIUS: Okay, yeah, let's --

DR. ZIEMER: I'm going to ask if there's a -- if we may have to amend that, but let's go ahead on this.

DR. MELIUS: I actually lifted it from your document so we need to...

DR. ZIEMER: Okay.

DR. MELIUS: I think.

DR. ZIEMER: Are there any other changes, amendments, discussion on the motion on the Nevada Test Site?

(No responses)

If not, all in favor will say aye.

(Affirmative responses)

Any opposed?

(No responses)

Any abstentions?

(No responses)

And just for the record, we've lost Dr. Roessler.

DR. WADE: But we have a fine quorum.
DR. ZIEMER: We still have a quorum and we have no nay votes, so the motion does carry. Thank you very much.
If I might return for a moment to the previous motion for Pacific Proving Grounds, we indicate that -- we -- we've not changed the description of the -- of the cohort. Our first bullet simply says that this recommendation is based on the fact that these workers were employed in above-the-ground test-- above-ground testing. And my point was, I know in the presentation we got from Dr. Neton there were at least some underwater shots.
UNIDENTIFIED: Surface and underwater.
DR. MELIUS: So yeah.
DR. WADE: Thank you. Surface and underwater.
MS. MUNN: Can't we simply remove "above-ground" --
DR. MELIUS: During the testing, yeah.
MS. MUNN: -- and just say during the -- during testing of atomic weapons?
DR. ZIEMER: I think that's a simple solution and --
DR. MELIUS: Yeah.

DR. ZIEMER: -- and can we take it by consent -- this is basically an editorial correction. The bullet would then say these workers were employed during the testing of atomic weapons.

MS. SCHUBERT: Can I -- this is Sandi, and I apologize, I don't have any of the paper in front of me so it's hard to sort of keep track of some of this.

DR. ZIEMER: Sandi, do we have a e-mail number or a FAX number where we can get --

MS. SCHUBERT: Jason's been e-mailing me, but I don't have any of the documents from the -- any of the motions, but I just want to clarify -- sort of just make sure I understand. It sounds like it's the same discussion for the Proving Grounds and the NTS. What you guys are recommending that -- is that during the time period from like 1951 to 1962 and the respective time period for Pacific Proving Ground, people who worked there for -- and were or should have been monitored for 250 days get coverage. They don't have to be present during the tests for 250 days, and I don't know if I'm making myself clear --

DR. ZIEMER: They have to be present during

that time period.

MS. SCHUBERT: Okay. Okay, that's -- that was my understanding.

DR. ZIEMER: Yeah. Yeah.

MS. SCHUBERT: I just --

DR. ZIEMER: Any period during that opening and closing date.

MS. SCHUBERT: Okay, so it's irrelevant whether it was above-ground test or --

DR. ZIEMER: Right, we simply wanted the --

MS. SCHUBERT: -- research or --

DR. ZIEMER: We simply wanted the verbiage in the document to be correct, but it's not -- we're not limiting this to individuals who were involved in the above-ground tests that --

MS. SCHUBERT: That was my understanding. Thank you. It's just hard when you guys are --

DR. ZIEMER: Actually I think Larry is telling us, though, that all those tests in that period were above ground.

MS. SCHUBERT: Yeah. I appreciate the clarification. Thank you.

MR. ELLIOTT: Yes, and I would add that you need -- just for the sake of clarity, you can aggregate days. This -- this class definition

will allow the aggregation of days from other classes. For an example, if a person spent time at both sites, Pacific Proving Ground and days at Nevada Test Site, and you could total those up to 250 days.

MS. SCHUBERT: Wonderful. Thank you so much.

DR. ZIEMER: Okay, thank you very much.

(Pause)

DR. WADE: Just want to as a mining engineer, I'll tell you that underwater is above ground.

DR. ZIEMER: I -- I think I understand that. That's -- that's quite right.

MS. MUNN: Sometimes.

DR. ZIEMER: It's not in here, though.

MS. MUNN: Others.

DR. ZIEMER: It's not atmospheric testing.

DR. MELIUS: So it's above ground, I -- thank you, Lew, I appreciate the... And Larry picking up 83.14, we've got sharp eyes here, that's...

DR. ZIEMER: We actually had scheduled for after lunch our program updates. I'm looking to see if there were any other items we needed to vote on.

Yeah, actually before we lose a quorum, we do

want to vote on the next 20 cases, so that will -- well, at least the next 20.

Board members, we have the report from the subcommittee, and it has the form of a list of proposed cases. On that list are 39 numbers, and what we agreed to was that we would have -- you would have the opportunity to go back and check your list against the master list, which is under the tab -- it's basically the first tab after the agenda, the individual dose reconstruction tab -- and see if you wanted to add or delete any items from this list. This list comes --

MR. GRIFFON: Stu has.

DR. ZIEMER: Hang on just a minute and -- Stu -- and this list basically comes as a recommendation from the subcommittee so it has the -- has the status of being before us as a motion.

Okay. Stu, please.

MR. HINNEFELD: During Tuesday's discussion, as you'll recall, there was -- when we were going through the random -- randomized list and the selections from the randomized list, the question was raised are these really site-

specific dose reconstructions or were these done with generic, complex-wide approaches, and I have that information that I can share, you know, verbally with you if you'd like.

DR. ZIEMER: Yeah, you want to just go down the list then?

MR. HINNEFELD: Yes, yes. Selection number -- selection number one was the first one selected. That is a Y-12-specific dose reconstruction for the external dose. The internal is the TIB-2 hypothetical intake, but you'll see a lot of those. In the early dose reconstructions it will be pretty uncommon to see a detailed internal dose reconstruction. So this is a -- I would -- I would consider it probably as a Y-12-specific dose reconstruction.

DR. ZIEMER: Okay.

MR. HINNEFELD: Okay? So selection number three, which is a Rocky Flats Plant, that is a site-specific dose reconstruction -- seems to be on both sides.

DR. ZIEMER: And that was Rocky?

MR. HINNEFELD: Yes.

DR. ZIEMER: Thank you.

MR. HINNEFELD: Selection number 28 uses a -- a TIB-2 hypothetical intake, but it also seems to use the site profile for the external dose, so that would be a relatively site-specific approach.

Selection number 41 uses all complex-wide approaches. It uses the TIB-2 hypothetical intake, uses the TIB-10 overestimating approach for film badges, and uses the TIB-6 complex-wide medical.

DR. ZIEMER: Okay.

DR. WADE: I would ask the Board to note that that's a Nevada Test Site case, and we'll make note of that and we'll discuss that as it relates to the discussion we had with SC&A in their report.

DR. ZIEMER: Okay. Thank you.

MR. HINNEFELD: Selection number 45 is not Sandia site-specific. It uses the TIB-2 hypothetical intake. It looks like it used an ambient external approach because it was not -- apparently this was not a monitored person and was judged to be properly not monitored.

Selection 48 appears to be site-specific. It's a underestimate so it's in all likelihood a

partial dose reconstruction, but it does seem to be specific to the X-10 site.
Selection number 52 uses all complex-wide approaches, generic approaches.
Selection number 64 also uses all generic approaches.
Selection number 95 uses -- I believe that will be a relati-- I believe that will be a site-specific. It's a little hard for me to interpret based on the notes I got, but I believe that will be a relatively site-specific approach. Again, it's an underestimate. It will probably be a partial.
And selection 96, as well, appears it will be relatively site-specific, uses the TIB for interpreting shallow dose, so presumably these two cases have shallow-dose exposures in the individual's exposure record, and selection number 96 also uses the Paducah coworker approach. So there might -- there would be -- might be some interest in that.
The next selection I see is selection number 144. That uses all -- that uses the generic AWE complex-wide approach.
Selection 154, again, is an underestimate.

It's probably a partial. It uses the site-speci-- site-specific information I believe for more than one of the listed sites, actually, and how to interpret shallow dose TIB.
Selection number 169 seems to use all generic approaches, uses the TIB-10 ext-- overestimating approach for using film, TIB-2 hypothetical intake and the TIB-6 complex-wide medical approach.
Selection number 188 seems to use the site profile, site-specific information.
DR. WADE: It's also Nevada Test Site.
MR. HINNEFELD: I believe that's all the selected cases, isn't it?
DR. WADE: I've got 25 total.
DR. ZIEMER: Now in -- particularly on these complex-wide -- now let's see, we have -- I'm -- I think we show six complex-wide ones here. To the extent that any of these were chosen because of the site, you may wish to change some of them. In some cases you may have selected them for other reasons. Anyone -- anyone -- well, let's hear if you want to pull certain ones from the list. Let's start out with 41, is that the first complex-wide?

MS. MUNN: (inaudible)
DR. ZIEMER: Yeah, Mark.
MR. GRIFFON: I mean I -- I think that out of all -- all that we saw at the subcommittee level, I -- when we went through this one by one I -- I felt like maybe a round of 20 or 25, if we really -- you know, I don't think we have to stick to batches of 20, but I don't -- I would -- I -- my overall sense is I don't think we need to try to get 40 out of here, and this is even more reason -- that Stu just gave, maybe not to do 40, but you know, I was thinking maybe to proportion it with more of the full estimates and less of the overestimates, so I just would hope people keep that in mind, you know.
DR. ZIEMER: Uh-huh, sure. The minimum probably that we want to have on deck is 20, and if we come up with 25 or 30 -- at some point we'll have to fill in additional because I -- I assume that, as a practical matter, working with our teams we would take a batch of 20 for the next group for the contractor to work with. That works out well with our teams. And then at some later point, if you did not

wish to do it today, we can -- and there will be additional closed cases that will come on line, so --

DR. WADE: One -- if I might suggest, one construct is you have 25 full dose reconstructions that you've identified. That -- if you identified that as the target for the possible next 20 -- you know, we always worry about wanting to have a couple of extra in the hopper in case some are returned -- we could instruct the contractor to begin down that list of the first 25, selecting 20 from that.

DR. ZIEMER: Of the fulls, and just leave the random ones on the back burner?

DR. WADE: Well, then when -- in June we would select the next 20.

DR. ZIEMER: Yeah. That's --

MR. GRIFFON: Yeah. I mean I think we need to give a little more -- closer consideration to that full list 'cause I think when we were going through it, if you recall, we -- we -- like at one point I crossed off 117, then I kind of put it back on, then 119 and 20 I remember some discussion of well, I want one of these steel mills, but probably not too many

steel mills. They might be very similar.
DR. WADE: Well, let's discuss it.
MR. GRIFFON: So I don't know if we want to, you know, take all -- yeah.
DR. WADE: Let's discuss the 25 and if --
MR. GRIFFON: Yeah.
DR. WADE: -- see where we get to, and if we need a couple then extra, we can pull from the random ones.
DR. ZIEMER: Is that agreeable?
MR. GRIFFON: That's fine.
DR. ZIEMER: Well, then move to the table -- well, actually it's the first -- first table --
DR. WADE: Right.
DR. ZIEMER: -- which is the list of fulls, and we can -- let's just quickly go down the list. We can either reconfirm or -- or drop, and if there's others we can pick up -- 02? Or just -- I'll just call it 2. I'm going to just kind of move through these. If I don't hear any comments pro or con, I'm going to assume we're agreed to keep and we'll just go from there. Six?
DR. DEHART: We've got at least four, possibly more, Savannah Rivers, first 25.

MS. MUNN: Against --
DR. ZIEMER: From the first 25 that we've... Oh, in the -- in this 25.
MR. GRIFFON: Yeah.
DR. ZIEMER: Okay. But are you simply pointing that out or are you objecting --
DR. DEHART: In case somebody feels -- I think that's too many from Savannah River.
MS. MUNN: We're going to need --
MR. CLAWSON: These are ones that just came into 50 percent.
MR. GRIFFON: Maybe keep that in mind as we go through that, you're --
MS. MUNN: You're looking at a total of 35 needed from Savannah River and we only have 14 so far of those completed.
DR. ZIEMER: Yeah, we're still okay. Roy -- Roy's just pointing that out.
Okay, I'm going to proceed here -- 6? Eight?
DR. DEHART: Go back and select 6 out because it's a lung case. We've got already a lot of lung.
MS. MUNN: Yeah.
DR. ZIEMER: How about the rest of you?
MS. MUNN: I agree.

MR. GRIFFON: That's fine.
DR. ZIEMER: Okay, we're going to drop 6 -- 9? 10? 20?
MR. GRIFFON: I think 10's a borderline one for me, but I guess we can keep it in there for now. We haven't done Portsmouth, so I can see the argument to -- you know.
DR. ZIEMER: Okay, 20? 43? 44? 49? I feel like I'm calling a bingo game here.
MS. MUNN: I'm ready to say we need --
DR. WADE: I need one more.
MR. GRIFFON: I need one more.
DR. ZIEMER: Is 50 on the list? I can't tell from my marks here.
MR. GRIFFON: No.
DR. ZIEMER: No? Okay.
MS. MUNN: We talked about 49, but not 50.
DR. ZIEMER: Yeah -- 68? 73? Mark, did you have a comment on 68?
MR. GRIFFON: No, I just was -- Keep in mind that's Superior Steel, though. I think we've got another one of those coming up, so...
DR. ZIEMER: Okay. Which one is that -- 73, Superior Steel. 78? 85? 101?
DR. DEHART: I would simply point out that

we're suddenly doing a lot of GIs. Here we have colon and this is like the third colon we've run through.

MR. GRIFFON: 101's esophagus.

DR. ZIEMER: 101's esophagus.

DR. DEHART: Yes.

DR. ZIEMER: Oh, G-- okay, GI, yeah, we're -- we're thinking too low.

DR. MELIUS: But still above ground.

DR. ZIEMER: Thank you for that. When does your plane leave?

Okay, number 110? Number 115? Okay, 117 was on and off, I -- it's currently on the list. Are we -- I had marked it back off, but is --

MR. GRIFFON: I thought at one point we saw a better Pantex one or something, didn't it --

DR. WADE: I thought it was further down the line.

MS. MUNN: Thought there was better.

MR. GRIFFON: Oh, yeah, maybe that was it.

DR. ZIEMER: Well, shall we leave it in for the moment?

MR. GRIFFON: I just think it's five years worked and I would vote for it going off, actually.

DR. ZIEMER: For 117?
MR. GRIFFON: Yeah.
DR. ZIEMER: Okay. 119? That's the other Superior Steel.
MR. GRIFFON: Right. And this is a bladder cancer and longer work period I think than the previous one is why we -- 73.
DR. ZIEMER: 73 is a 25-year.
MR. GRIFFON: Oh, they're both long periods of --
DR. ZIEMER: Both pretty long.
MS. MUNN: We were interested in the work decade in that one, I think. Wouldn't that have been one of the folks who would have worked prior to an older worker at the time of exposure.
MR. GRIFFON: I guess -- I guess my -- I would say either one, but probably not both is what my -- I would think.
DR. ZIEMER: 73 and 119, they're both very similar, I think. The -- why don't we just go with 119, if that's agreeable.
MR. GRIFFON: Yeah, that's fine with --
DR. ZIEMER: Drop 73, they're both quite similar. Now 120?

MR. GRIFFON: I vote to drop that one -- another steel company. I'm not even sure -- these are all full estimates, but Stu, if the -- some of these ones that are full estimates like for these steel companies, I'm not sure you're going to have -- it's not going to be specific bioassay. It likely is a model, right? To internal dose.

MR. HINNEFELD: Yeah, it's -- it's likely a model. Now there are a number of AWEs where we have external dosimetry records --

MR. GRIFFON: Right, but it's likely not --

MR. HINNEFELD: -- and I don't remember --

MR. GRIFFON: -- it's likely not a Superior Steel-specific model, is it, or could it be?

MR. HINNEFELD: I don't think it would be. It may be a -- the AWE complex-wide --

MR. GRIFFON: Model, right, right.

MR. HINNEFELD: And it may actually have -- I don't know -- I can't remember now if we had dosimetry data for Superior Steel or not. There were a number of the AWEs where we --

DR. ZIEMER: What about U.S. Steel? This one is --

MR. HINNEFELD: It'd be the same.

DR. ZIEMER: -- U.S. Steel.
MR. HINNEFELD: U.S. Steel is -- I don't -- I don't know. I don't know.
MR. GRIFFON: Steel companies we might -- we want to look at some of them, but I think --
DR. ZIEMER: We have Superior, so let's -- we can drop 120. 154? 157? 181? 88 -- 188? 199? And 211?
DR. WADE: That's 21.
DR. ZIEMER: Well, 21 gives us at least an extra. Let me just pause a minute and see if anyone has spotted other ones on the list in the meantime that they would like to add.
MR. GRIFFON: Well, I saw one from the partial list that might be -- or from the random list that might be interesting, but I don't know if you're looking at that --
DR. ZIEMER: We can do that.
MR. GRIFFON: And I got --
DR. ZIEMER: There's nothing --
MR. GRIFFON: Number three -- out of all those, I think the only one that was sort of compelling to me was number three, and that -- it's Rocky Flats.
DR. ZIEMER: Number three is a Rocky Flats

site-specific --

MR. GRIFFON: Right.

DR. ZIEMER: Okay, let's add that one back in.

MR. GRIFFON: Then we're 22 --

DR. ZIEMER: That gives us --

MR. GRIFFON: -- right?

DR. ZIEMER: That gives us 20 plus two spares. Okay, let me ask, is there any discussion on this? We'll vote officially to accept these as the next group from which our next cases will be audited. Ready to vote?

(No responses)

Okay, all in favor, aye?

(Affirmative responses)

Any opposed?

(No responses)

Abstentions?

(No responses)

So ordered.

DR. WADE: John Mauro, could you come to the microphone just briefly for a question? John? John, if now you get these 22, you wouldn't need the assignment to Board -- specific Board members before June, would you -- or would you?

DR. MAURO: No, but it's -- it's -- we'll

proceed with the -- our work. At some point the --

DR. ZIEMER: You can do the early stages of -- of these --

DR. MAURO: Yeah, we -- yeah, we -- we don't -- we don't need the assignments I would say for another month.

DR. WADE: Another month?

DR. MAURO: Yeah, in other --

DR. ZIEMER: You will be ready that soon for these?

DR. MAURO: If we -- we -- we're going to start work soon as we -- soon as we receive the set of disks. I would say we'll -- we're going to get started on them soon as we receive that. When we're through, we will send the drafts out. You know, it's going to take I would say at least six weeks to two months to get through the first set of drafts, and sometime in that time period, if we had the assignments, you -- we --

DR. ZIEMER: If you guys are ready, actually the Chair can assign these. That's my -- that's my prerogative and I can take the -- I can take the existing groups and, making sure

there's no conflict of interest, just make the assignments.

DR. MAURO: Sure, okay.

DR. ZIEMER: If you're at that point before our next meeting.

DR. MAURO: Oh -- then that's fine, yeah, we -- now or -- yeah, next meeting would be certainly soon enough.

DR. ZIEMER: Okay, part of the Board working session, we have the minutes from the January meeting. Dr. DeHart has a correction to offer.

DR. DEHART: Page 45.

DR. ZIEMER: Page 45.

DR. DEHART: Line 3, there's a incorrect date. It should read April 5, 2005.

DR. ZIEMER: That date is -- refers to the NIOSH Rev. 3 of the Savannah River site profile that -- the correct date is April 5th, 2005, not 2006, so that -- that's a -- even though it's a single digit, it's a substantive change in the minutes.

Were there any other corrections or additions to the minutes that anyone wishes to offer?

(No responses)

Then I'd call for a motion to approve the

minutes, as corrected.

MS. MUNN: So moved.

DR. ZIEMER: Seconded?

MR. CLAWSON: Second.

DR. ZIEMER: All in favor of approval of the minutes, say aye.

(Affirmative responses)

Any opposed?

(No responses)

Motion carries. Thank you.

I'll now call on Dr. Melius to report for the workgroup on the Iowa SEC.

DR. MELIUS: Yeah, this is on the Ames --

DR. ZIEMER: Ames, Iowa.

DR. MELIUS: -- Ames, Iowa SEC, and -- had some internal discussions and in follow-up to the SC&A presentation from yesterday, I believe it was, and I think what we have decided -- be recommending is that we ask SC&A to -- to -- three tasks. One is complete a short report basically following the outline of their -- their presentation that was given today on sort of the work to date on reviewing the evaluation report and the background information that they had reviewed, discussions with the petitioners

and -- and so forth.
Number two, to -- I think there's like -- essentially two issues that we'd like them to delve into a little bit further. One is the issue of the so-called explosions and other acute incidents like that at the -- at the facility. I think -- I think we're just looking for additional information. There's -- the petitioners had raised some question as to whether those didn't qualify as discrete incidents.
And then this -- the other issue we'd like some input -- the petitioners in their original petition had extended the -- their request for coverage by one year I believe past what NIOSH had, and that -- that was based on their concern about any residual contamination or continued exposures, even though the facility was no longer operational as an AC facility, and I think we're just looking for a little bit more guidance on -- on that particular issue. And I think if you could complete a report and present that back to us, I think we -- that should suffice for us to be able to, you know, come to a conclusion on the Ames petition.

DR. ZIEMER: And this comes as a recommendation from the workgroup and therefore a motion before the Board. If we approve this, this would give direction to the contractor for preparing us for a final decision on this. I might add, on the third point it's my understanding that that extra year was intended to cover clean-up operations after the cessation of work. I'm wondering if either NIOSH or SC&A knows actually if there are -- do we know anything about the clean-up dates for Ames, and do we even know if that was done by Ames workers? I would guess it was more likely done by an outside contractor if it was done.

MR. HINNEFELD: I'm speaking second-hand here because I wasn't doing the research, but we -- we do know -- we do have some information about -- like demolition dates of the buildings where some of this work was done, so --

DR. ZIEMER: And I think that's the information we're wanting to know whether the cohort should really include the clean-up period.

MR. HINNEFELD: I think that -- I believe our position is that there's -- there's really no material difference between cleaning up the

work and doing the work, in terms of the exposure conditions, and so the clean-up work would -- would be included. It's when -- how late did the clean-up work go on.

DR. ZIEMER: Well, the point I'm making is do we know that the clean-up was done by -- by Ames workers --

MR. HINNEFELD: I guess --

DR. ZIEMER: -- versus something like a FUSRAP --

MR. HINNEFELD: Yeah, standing here today --

DR. ZIEMER: -- where a complete outside group comes in.

MR. HINNEFELD: Right here today, I don't know.

DR. MELIUS: I don't think that's -- that's -- that was clear and in the conference call we had we'd just received the evaluation report, and frankly we didn't talk about it very much. I -- I think was you, Larry, or who had explained how you came up with the date, but then we nev-- really sort of didn't spend much time talking about it --

DR. ZIEMER: Well, we need -- we need to just clarify --

DR. MELIUS: -- and just -- so we're just

looking for clarification on that -- that issue.

DR. ZIEMER: So Board members, you've heard this recommendation. Any discussion on it?

(No responses)

If not, I'll call for a -- call the question. All who favor proceeding on this basis on the Ames, Iowa petition, say aye.

(Affirmative responses)

Any opposed?

(No responses)

No? Abstentions?

(No responses)

It is so ordered.

DR. WADE: One other small piece of business before we move on. That is just making sure we have the workgroups -- that the work assigned to the appropriate workgroups. I think on Ames it's Dr. Melius's SEC workgroup. Yeah, I think on Y-12 and Rocky it's clearly Mark's workgroup. But we do have the task of Nevada Test Site and Pacific Proving Grounds, and which workgroup would take that on, just so I can schedule meetings?

MS. MUNN: The Nevada Test Site has been Bob

Presley's.

DR. MELIUS: I think what we had -- Paul and I had discussed this briefly --

DR. ZIEMER: Discrete event issue --

DR. MELIUS: Yeah, yeah.

DR. ZIEMER: -- be raising, I think.

DR. MELIUS: Yeah, and -- and I think what might be the -- you know, at least since we want to approach that originally sort of generically, so forth, is that if our workgroup -- I guess my -- workgroup headed by me, I hate to call it my workgroup 'cause we all do the work, but --

DR. ZIEMER: In this case it's the SEC kind of generic workgroup.

DR. MELIUS: Yeah, what do you call it, Paul -- or --

DR. WADE: I call it the S-- SC&A/SEC workgroup.

DR. MELIUS: Oh, but -- okay -- that we do that. But we will coordinate with the Nevada Test Site group as -- as we get into specific issues related to the Nevada Test Site. Does that sound reasonable?

MS. MUNN: That's nice.

DR. MELIUS: Yeah. Well, it's more than nice. It makes -- it makes sense.

DR. ZIEMER: So that -- that group is addressing sort of the generic issue of discrete events --

DR. MELIUS: Yeah.

DR. ZIEMER: -- which includes those both at Nevada Test Site and Ames and perhaps other places.

DR. MELIUS: Yeah. And to -- to initiate that workgroup, I'd like to schedule a short conference call with NIOSH just to talk about some data issues and sort of figure out how we can work together to -- some sort of information needs related to that, so we'll -- we'll work on that and...

FUTURE SCHEDULES/BOARD CORRESPONDENCE

DR. WADE: Then very briefly, our next face to face meeting is scheduled for June 14, 15, 16 in Washington, D.C. Based upon dates available, we're scheduling -- we would like to schedule a call of the Board on August 8th. We might not need it but we'd like to schedule it. And then again, based upon your calendars' availability, a face to face meeting of the

Board September 19, 20 and 21. Now LaShawn tells me it's clear on all calendars.

DR. DEHART: Except mine. I'll be in India.

DR. WADE: Okay. That's right, we did have that.

DR. MELIUS: Well, now we have a location.

DR. ZIEMER: Okay. Everybody make sure you have those dates on your calendars then. That takes us through September and we'll want to get later dates reserved fairly soon.

DR. WADE: Yeah, I'll ask LaShawn to start Monday to -- to schedule the rest of the year.

DR. MELIUS: What were the September dates again?

DR. WADE: 19, 20, 21.

DR. ZIEMER: Okay. Mark, you have a comment?

MR. GRIFFON: I just -- just have some other -- other potential date here. I wanted to try, if the principal players are still here, to get a workgroup date -- we're going to need a workgroup date, and I was hoping to do Y-12 and Rocky all in one day, as we've been doing. And I -- in talking with SC&A, I think -- I tried to time this so that it would be -- well, first so that our workgroup could all attend, and

secondly so that SC&A would have a complete evaluation report for the Rocky, and they said probably mid-May. And the dates we found so far are narrowed down to like May 17th, possibly May 18th -- I don't know if Jim Neton is -- yeah, Jim's still here, or Brant -- if there's any major conflicts or if you think that's too soon, too late. I don't know if you have any --

DR. NETON: I'm sorry, you caught me thinking about something else.

MR. GRIFFON: May 17th, it would be Y-12 and Rocky working group.

DR. NETON: Okay. It's clear for me. I can't speak for Brant, but --

MR. GRIFFON: Okay, I didn't know.

DR. NETON: We could arrange it to be clear -- since he's not here.

MR. GRIFFON: So we'll -- at least tentatively we'll say May 17th --

DR. NETON: Yes.

MR. GRIFFON: -- workgroup, location probably Cincinnati -- although I like Boston -- no. Probably Cincinnati.

DR. ZIEMER: And John Mauro --

MR. GRIFFON: May 17th, and we'll probably start at 8:30, 9:00 a.m. or something, you know, as early as we can -- full day.

DR. MAURO: Paul, with regard to that date -- certainly that's fine with SC&A. I'd just like to point out we will be in position to deliver and have well in hand Y-12 revised report. With regard to having a complete draft in the hands of the working group for that date for Rocky, you picked a day when -- where we're probably going to be in the midst of writing it at that time. That doesn't meant we would not be in a position to discuss it with you, but we probably will not have a clean draft for you folks to review prior to that meeting. I mean that -- that would be -- 'cause you -- you happened to turn out to pick the date when we -- we -- we will be receiving our drafts internally and integrating it into a draft report, so -- but if -- so but we'll certainly be in a position to air out the issues very -- you know, I would say very thoroughly, but you won't have the luxury of -- of -- of reading our draft regarding Rocky prior to that meeting.

DR. ZIEMER: Well, you'll have to decide if that's a critical point or not then.
MR. GRIFFON: Yeah.
DR. ZIEMER: If it is, then you may have to wait a week or two.
MR. GRIFFON: And the --
DR. ZIEMER: When would you issue the report, if that's the -- that's the day you start --
DR. MAURO: Right --
DR. ZIEMER: -- putting it together?
DR. MAURO: -- right now our plan is we will probably be assembling the report about that time, and deliver the draft to the working group and the Board within a week from then. So you're about a week early.
MR. GRIFFON: Yeah.
DR. ZIEMER: Well, I'm going to suggest, workgroup, you may need to cogitate on this on your own and --
MR. GRIFFON: We'll tentatively say May 17th --
DR. MAURO: That's fine.
MR. GRIFFON: -- then we'll -- we'll --
DR. ZIEMER: You may have to move it.
MR. GRIFFON: We may have to move it, right.
DR. ZIEMER: Thank you.

DR. MELIUS: Do we have a location for the September meeting?

DR. WADE: No.

DR. MELIUS: Can we come up with one? It makes some difference in terms of what we schedule our travel plans around. Especially if it's in India since it takes us so long to get there.

DR. WADE: I mean we don't have a location. You know, I don't know what the timing will be in terms of the issues that you're working on now, so --

DR. ZIEMER: Well, we may need to see what's coming on the horizon.

DR. MELIUS: Okay.

DR. WADE: But if you want to pick one today...

MS. MUNN: Always Pantex.

DR. ZIEMER: Well, yeah, the Pantex area is very hard to get to.

DR. MELIUS: How about -- maybe -- it's too early for Fernald.

DR. WADE: Why don't you let me propose a couple of locations next week by e-mail and then --

DR. MELIUS: Okay.

DR. WADE: -- we'll pick them and then we'll

decide by the end of next week.

DR. MELIUS: Anybody -- other -- since this is back before Lew's time, any locations that we had talked about and have gotten bumped because of --

DR. ZIEMER: Yeah, we met one time in South Carolina, but we were quite a ways from the plant, so it wasn't a very good venue for getting input from the workers at Savannah River. I wonder if we would do better to get closer to the plant. What's the closest -- is Aiken the closest town of size?

MR. PRESLEY: Aiken is the closest -- Bob Presley, I'm back.

MS. MUNN: Bob is back.

DR. ZIEMER: Bob, you're back.

MS. MUNN: Missed the vote.

DR. ZIEMER: Yeah, Bob, we have completed the voting. I -- all three of the motions that you were aware of have been approved. We are discussing a -- some possible future locations, and I was asking what -- what's the closest decent-sized city to the Savannah River site, is it Aiken or is it Augusta? Maybe Augusta's a little --

MR. PRESLEY: Augusta's -- Augusta's closer than Aiken.

DR. ZIEMER: And Augusta's a little bigger. I think could probably accommodate --

MS. MUNN: That's where we were.

DR. ZIEMER: Well, we were in Charleston.

DR. MELIUS: We were both.

MS. MUNN: We were in Augusta, too.

DR. ZIEMER: How soon we forget. That's been a while.

MR. PRESLEY: Didn't we meet in Augusta?

DR. ZIEMER: No, I'm just getting information from you. I've been out-voted already. Well, I'm trying to think of other sites. We've been to Oak Ridge. Pinellas is a possibility.

MR. PRESLEY: We've -- we have talked about going to Pinellas.

DR. ZIEMER: Yes, this would be basically Pantex -- well, Pantex is Texas, but -- or Pinellas is --

MR. PRESLEY: Florida.

DR. ZIEMER: -- Florida. What, St. Petersburg?

UNIDENTIFIED: Tampa.

DR. ZIEMER: Those are possibilities, not --

Fort Myers is way far from Pinel-- from Pinellas.

DR. WADE: Let me put something together. I'll look at Augus-- I'll look at Savannah River and Pinellas as two, and if anybody else wants to suggest.

MR. PRESLEY: Did we talk about Pinellas?

DR. ZIEMER: We haven't decided on one, just gathering information. Albuquerque is another possibility. That -- there's -- Sandia is there. You have of course Los Alamos National Lab is close by. We have been to Santa Fe. Actually there's some other facilities at Albuquerque, the -- the Inhalation Tox group is there, as well, they -- part of the DOE complex.

DR. WADE: Dr. DeHart has his thing up.

DR. DEHART: It's a different topic, but I was wondering if it would be possible to have as an agenda item at one of our forthcoming meetings -- and this comes out from the presentation that Dr. Ringen had the other day -- the other evening. The topic then was construction workers, and it was mentioned that NIOSH is in the process of coming up with a work plan or a

method of analyzing dose reconstruction for that work group, and I was wondering if we could get a status report.

DR. ZIEMER: Well, Larry is shaking his head in the affirmative, so perhaps that could go on the agenda at -- we saw some things that were presented in the public comment period about the working group, but we -- and -- and NIOSH has told us before about what the plans are, so maybe just an update on that -- be timely. Thank you, Roy.

We have a couple of items that we skipped over in order to get through the voting portions of the meeting. First there's a program update from NIOSH, and Larry, you have the current status of issues for us?

DR. MELIUS: Break, Paul?

(Pause)

DR. ZIEMER: When they're done we'll hear from Department of Labor --

DR. WADE: Dr. Melius asked for a break.

DR. ZIEMER: Oh, well, I was just going to plow right through there. Okay. I'm usually the one most uncomfortable, but we'll take a ten-minute break while they get set up.

(Whereupon, a recess was taken from 2:50 p.m. to 3:05 p.m.)

PROGRAM UPDATES, NIOSH, MR. LARRY ELLIOTT

DR. ZIEMER: Larry, welcome back for the latest status report. And I actually looked at it already and I was astounded. It seemed to be a big jump from January on -- on closeouts, almost 2,000. Was -- is that right?

MR. ELLIOTT: Yes, we're just -- we're doing fine. Production is -- is moving along and quite pleased with the ORAU team support in that regard. They are working hard in many areas, as the OCAS staff are, in responding to the Board's interests and concern with the evaluation of SEC petitions, of course, site profile reviews. And at the same time we're maintaining and improving and increasing our production level efforts, so -- and I think that's primarily due to the number of Technical Basis Documents and site profile tools that have been developed and finalized. The more we bring on line of those tools, the more claims we can complete.

DR. ZIEMER: And before you get under way and -- I just got a phone call from Bob Presley and

he's back on the line again. His staple removal went well. But Bob reminded me to be sure to tell the NIOSH folks how pleased he was with the support you gave to the workgroup that he was involved in and really thanks you for all that support.

MR. ELLIOTT: That's -- that's what we're here for. We're public servants and we're trying to do the best we can in a very difficult situation, so -- and with the full intent of doing the best we can for the claimant population. I'm sorry that we seem to have lost most of those folks today, but I appreciate those of you who are in the audience.

Before I start walking through these slides, I do want to give you a brief update in response to Dr. DeHart's request and with regard to what you heard last night from Knut Ringen. Unfortunately I wish he had vetted his presentation with NIOSH before he decided to present it because -- well, you'll see here that many -- many points of clarification and inaccuracies that I need -- I feel compelled to speak to.

First of all, yes, we did work with CPWR, asked them to help -- help us with the development of a Technical Information Bulletin that would be used to treat dose reconstructions for construction workers. That document was completed -- I don't have the date of when we initiated that effort and when it was completed, but the current status of that document is that it's -- it's undergoing some final revisions within NIOSH, in OCAS, getting also some technical support from ORAU to put some finishing touches on that document, addressing some concerns that CPWR and their -- the esteemed colleagues that they brought to bear on the issue raised with us about the document and the draft of that document. I think that document is about -- perhaps six weeks away from seeing completion and being put to use. So in the six weeks time frame I hope to be able to tell you at the next meeting that it's in use and it's underway and we're working with it.

Now points of clarification. There are -- the numbers in Knut's presentation were not accurate, and let me give you some accurate

numbers. There -- and these are raw numbers, and they're raw because not only did I get them through many people looking through case files today back in the office and trying to understand the various job titles that a construction worker can hold and how can -- you know, as many of you know, these people that work at these sites hold the different jobs, different job titles, as they move through their careers. So there are a number of job titles that we have to examine to determine how many claims do we have that are relevant to construction trades.

In raw number, 4,387 claims have had some mention of some -- in their work history, development of some construction trade-related job. We have -- pardon me?

UNIDENTIFIED: What was that number again?

MR. ELLIOTT: 4,387 total claims that we can identify, just -- you know, without -- job titles and in the work history file are not a searchable -- by electronic means not searchable. We have to go through a screening process. So that's why this is a raw number. I believe it's in the right ballpark, though.

2,548 of those claims have been completed, using generic tools and dose of record. 168 of those claims have been pulled by the Department of Labor for a variety of reasons and -- or they have been administratively closed by us or DOL. And administratively closed means, for us, they didn't -- the claim was dose reconstructed and the OCAS-1 wasn't signed, and we give 60 days and then we give another 14 days grace period upon that, and if we still don't have the OCAS-1, we administratively close the claim. And if the claimant decides to come back to us with either additional information or a completed OCAS-1, then we'll -- we'll complete the -- the claim for them. 137 claims that have had construction trades job title in it have been closed out under the SEC classes that have been added, leaving 1,534 active claims, out of which right now 545 are pended, awaiting this Technical Information Bulletin. So I would offer that construction trades has been a priority for us. It has not been a forgotten group of workers by any stretch of the imagination. So I just leave you with that and I'll have a better report for

you with more details at your next meeting. Yes, production has been going quite well for us in completing dose reconstructions. We've completed 13,590 draft dose reconstruction reports that have been provided to the claimants. This is as of March 31st, 2006. 12,715 of those dose reconstruction reports have been sent to DOL, so the remainder, the difference between the two numbers are those claim reports that are in the hands of claimants that we're awaiting an OCAS-1 on. As you see here, 940 claims have been sent back to Department of Labor for their determination of eligibility within a specified class, and the breakdown is -- is provided there for you in that slide, and I will let you walk through that yourself.

4,090 dose reconstruction reports have been sent back to DOL out of our first 5,000 claims. We -- we have a concerted effort to complete the oldest claims first, and this gives you a statistic on how well we're proceeding in that regard. Of that -- in the earliest claims, those first 5,000, there's 305 claims where the draft dose reconstruction is laying with the --

sitting with the -- the claimants and we're awaiting that OCAS-1, so you can add that number to the 4,090. We're -- we're close. 395 of the claims have been pulled for a variety of reasons. Again, it's either -- in the early days DOL sent us some claims that were wrongly submitted to us. They weren't cancer, or they were CLL; they pulled them back. And again, you've heard me speak about this, the worst situation where we have a pulled claim is where there's a -- there's no survivor and the Energy employee has died or the last survivor has died and we've not completed the case. I would continue to make the same remark I've made in the past. That's -- that's a very small number. It's not a large proportion of these 395 claims. Forty-six claims below 5,000 have been administratively closed -- again, where we have not received an OCAS-1. Those could be reopened if we get an OCAS-1 back or if the claimant comes back to us with additional information that we need to consider in the dose reconstruction.

108 claims are active at this point in time,

and we have put -- assigned 56 of those cases for Battelle, another contractor, to do work on. And these are primarily cases where there are one or two per site in the AWE sites, primarily. We've tasked Battelle, as I've reported to you at last meeting, with pursuing with all due diligence the completion of about 1,400 claims that represent over about 180 sites.

With regard to where we stand on the Special Exposure Cohort classes, as you know, six classes have been added to the Special Exposure Cohort and they're listed here -- two at Mallinckrodt for those two different time frames; the Iowa Army Ammunition Plant also two classes with two different, distinct time frames; Y-12 in the early years, '43 to -- through December of '47; and Linde Ceramics Plant. One petition was -- was recommended to be added to the SEC, but then the National Bureau of Standards was deemed not a covered facility at the conclusion of that and it was -- a designation was not sent to add it as a class.

Five petitions have been evaluated and provided

for your review. They are listed here and you've taken action on -- on two of those at this meeting, Nevada Test Site and Pacific Proving Ground. And of course you've discussed and deliberated on Rocky Flats and Y-12, as well, and have touched on the starting point of your evaluation of -- of Ames.

Four petition evaluation reports are currently in development. Those are Blockson Chemical, Chapman Valve; the Fernald site, Feed Materials Production Center; and the Oak Ridge Institute for Science and Education.

We have 12 current requests to add a class to the SEC that are going through the qualification process, and in that regard we have a Bethlehem Steel request, two from Hanford, one from -- excuse me, two from Los Alamos, one from Nuclear Metals, one from NUMEC, one from Monsanto Chemical; and one that covers multiple facilities, which I will note for you is problematic because we are working with the petitioner to narrow it down to one facility, that's required by our rule; then we have three new Y-12 petitions that we're working with the petitioners on.

We have had 26 requests for classes to be added to the SEC which we have administratively closed. They were found not to have met the basis for a petition. They were administratively closed, that's one reason. Or they were withdrawn by the petitioners, or the facility and the class for which they were petitioning for was already in the SEC. So those are the reasons why those 26 have been administratively closed.

Now we'll move on to -- as part of the program update from your last meeting, you met with Bethlehem Steel and you asked that we provide you an update on six outstanding issues that were -- we had committed to develop further for you, and that's what I'm going to present here, the status of those six.

The first issue was whether or not the model used for 1951 and 1952 exposures were -- was appropriate, was it fully appropriate in its -- in its use of all information. We have modified the site profile. That modification is now complete. 1951 and 1952 will be treated separately in the site profile and we have incorporated the adjustment factor for 1951 air

samples that are used as the highest data point for that year. This is all that was -- this particular issue, as you know, as the others were, were vetted in discussions with SC&A and -- and with the Board.

The second issue was the -- was the 95th percentile does not take into account short-term episodic exposures. From your -- you can go back into the discussion in the transcript and you'll find this is what I took from that. The Board agreed in principle, but wanted additional information about the time that was required to cut out the cobbles. And we agreed to work with Mr. Walker and stakeholders to determine if there was more information that could be uncovered about were cobbles actually cut with a cutting torch or how were they, the cobbles, dismantled and what kind of exposure would that have resulted in. And we're still working on that. We're still working with Mr. Walker to identify individuals that we can interview and gain information from about this particular work practice.

The third issue is -- addresses ingestion, and the site profile has been modified to

incorporate handling and -- ingestion intakes based upon handling of other material. It's based on an air concentration to surface contamination and surface to ingestion transfer factor, and so that's incorporated now into the site profile.

The fourth issue was resuspension and whether or not we had appropriately accounted for resuspension of dust from various surfaces in the floor and also the overhead structure in the plant. We have incorporated guidelines using the median value for -- of exposure for '49 through '50 and also then the median value separately for '51 and '52 to address this particular resuspension issue.

The fifth issue that was under study was an issue raised by workers about the extended contact with uranium, and they didn't feel that our site profile addressed this adequately. The site profile has now been modified and assumes a 1.5 millirem per hour contact from clothing contamination and a -- that is adjusted on a two-week behavioral practice of washing the clothing and results in a 1.8 millirem -- or 1.8 rem per year from clothing

contamination alone.

MS. MUNN: That's very generous.

MR. ELLIOTT: The last issue was the effect of oronasal breathing, and this is a generic -- a general concern across several of our site profiles, and we're working on that still, and we'll be bringing forward generic guidance on this issue in the future.

So Bethlehem Steel site profile has been modified. We still have two of the six issues that we're still working on, the cobble issue -- we're still working with the stakeholders -- and this final issue of oronasal breathing. And we'll be -- bring the guidance to the Board for its deliberation at a future meeting.

Let's move on to science issues, and as you know, we have proposed some scientific modifications to our approaches, specifically with regard to how we treat lymphoma cases. In February of this year we put out a *Federal Register* notice announcing that we were going to make this change, seeking public comment. Specifically this change responds to our evaluation of the current scientific data and understanding of what tissues should be dose

reconstructed against with regard to lymphomas. The injury of the radiation exposure can occur at different tissue sites, and we want to make sure that we're -- we're giving benefit of the doubt as appropriate to the claimants. And if we don't have that specific information, we do select the tissue or the target organ that would give them the most benefit of the doubt. We -- it's noted here that this change may result in DOL calculating higher POC determinations, so we are re-evaluating all completed claims. And I can tell you that there are around -- I believe five -- 536 completed claims that are being re-evaluated right now, so these would be previously dose reconstructed claims that have been found to be non-compensable and now they're being re-evaluated against this new methodological approach.

MS. MUNN: Are you getting lots of responses?

MR. ELLIOTT: Comments? Not on this one, not that much. I think -- you can go to our web site and we have a docket open for this, and I think we've had like -- I want to say about a dozen, and they're all in favor of the change,

of course. And you know, questions like how will this affect my dose reconstruction, but I'm in favor of it if it helps me. That's kind of -- no real scientific --

MS. MUNN: That was my --

MR. ELLIOTT: -- debate going on about this change.

MS. MUNN: That was my real question.

MR. ELLIOTT: Thank you. We've also proposed a change to the NIOSH IREP lung cancer risk model. We published a *Federal Register* notice on March 24th, 2006, and that will be open for comment from the public until May 23rd of this year. We changed the guideline for determining the probability of causation for Energy employees with cancers of the lung, trachea or bronchus. The new guideline bec-- we made it effective on February 28, 2006 with the introduction of our new IREP version of NIOSH IREP and we did so because we wanted to start treating cases at that time. We're -- we're still involved in public comment and we recognize that, and we'll address those comments as they come in. And here again, I don't know that I see a lot of public -- or

scientific concern or interest with this change. This change is -- I remind you is in concert with what the NCI IREP had provided, and we find it to be claimant-favorable.

Now I give you some of the typical graphics that we talk about when we give you our program update. The blue line in this graph are cases received from the Department of Labor. The green line shows those draft dose reconstruction reports that we have provided back to claimants. And the red line shows those final dose reconstruction reports that have been sent on to DOL. And you can see that -- I think very clearly that we're working off our backlog. Not as quickly as I want, but we're -- we're picking up the pace.

With regard to how we're standing with our support from the Department of Energy on exposure record requests, these -- each claim has -- as soon as we get a claim from the Department of Labor, we send a request for any dose-related information, whether it's badge-related, TLD or bioassay, breath analysis, lung count data, whatever they have acquired on an individual for that claim, we ask them for

provision of that to us. I remind you that we don't use annual summaries. We want the raw data, the raw information, the raw count numbers.

Right now we have a number of 274 outstanding requests, and of that number 81 are greater than 60 days. And I'll just jump in here and -- maybe for the sake of timeliness 'cause I know I'm going to get this question. Of those 81 claims that are over 61 days, the Boeing Company out in Santa Susana are our worst offender there. We have 40 of the 81 that we are persistently watching and monitoring progress -- or lack of progress on those claims. And these numbers do change. It's not the same claim numbers in some instances. In some it is. And so we're monitoring that very closely. I have staff who provide OCAS and ORAU and Battelle and DOE and the site contacts at DOE a report every 30 days on where these things stand. And she also tics off those that seem to be problematic in some way and we fire letters off to DOE, and we're working with DOE to make sure that we have the information we're requesting.

The biggest -- next biggest problem child would be the Ohio Field Office, which covers specifically Fernald, Mound and Battelle, the King site, and West Jefferson Street site. And so there's 23 cases there where they are over 60 days in response. And then the rest of the remainder are distributed across a variety of sites.

Right now we have 4,734 cases in what we call pre-dose reconstruct or assignments -- development, screening. These are where we're gaining information, we're trying to triage the case load and determine how best they can -- they can be reconstructed, what tools should be used.

We have 1,273 cases currently assigned with a dose reconstructor. This was as of March 31st. These numbers have changed, I'm sure, but the -- there are 749 draft reports sent to the claimants. We have, as I told you earlier, completed 12,715 that have been sent to DOL for decision.

Give you another graphic here. As you know, we assign a tracking number to our claims.

Whereas the Department of Labor uses a Social

Security number, we use a tracking number and we use this number in various ways, but here's one way that we use it. We try to look at, by 1,000 increment cases, where we stand in the completion of those cases. And of course we are looking at the oldest cases and trying to work those off our books before we deal with those that are down in the 21,000 range. And you can see what's going on there.

The blue cases are those that are completed. The red cases are those that have been pulled or administratively closed. And the green cases are those that have been pended. Again, I'll remind you pended -- the construction workers is an example. There are a variety of reasons why a case might be pended. For technical reasons, it could be pended because we're -- we're hearing from DOL that they're developing further information on the claim and we don't need to be expending our resources doing dose reconstruction until they provide us that additional development, whether it's another cancer or additional employment. And I think I've explained cases pulled and cases administratively closed, so I won't -- unless

there's questions, I won't belabor that point. This is just to show you how many cases and by -- by month from the start of our dose reconstruction experience how many cases we have administratively closed. I think perhaps at the next meeting I'm going to add something to this slide that will show you how many we have re-opened and then re-closed with a -- with a final decision, 'cause there are some of those that are happening now. They're coming back to us and saying well, I do want a decision, or I've got additional information and we complete the dose reconstruction and move the claim on. And so -- but this gives you a sense that it's -- it's not a lot. Reworks, I think this is my last slide. Reworks -- here again, you -- you may have heard me mention this -- I don't know which day it is now or which day I said this earlier in the week, but the reworks that are returned to us from DOL based upon a need to redo the dose reconstruction for a variety of reasons -- it can be additional cancers, it can be additional employment that's been developed, or it can be a technical issue with how we did the dose

reconstruction, a complaint or appeal point on -- we didn't factor something in. And as you see here, we're running about a 9.8 percent rework return rate, and I said earlier in the week that less than two percent of those are really technical reworks where we have to rework the case because we didn't account for something in a dose reconstruction we should have. So the seven percent -- almost seven percent is due to additional employment or additional cancer.

And I think that concludes my presentation. I'd --

DR. ZIEMER: Yeah, very good, Larry.

MR. ELLIOTT: -- questions.

DR. ZIEMER: Let's see if there's additional questions now. Jim?

DR. MELIUS: I did cross off the DOE question.

MR. ELLIOTT: I didn't anticipate the other one, though.

DR. MELIUS: Yeah. Well, first there's a comment and it was a slide you put up reminded me of -- we're talking about possible sites. One that might come to mind that we might be ready and -- in terms of a -- these are the

ones that -- where we've had SEC petitions that are currently under evaluation. Chapman Valve I think is in Springfield, Massachusetts area, and I believe there's a fair number of cases -- not a huge -- it's a huge facility. It's -- this -- the AEC part of it was small, so atomic weapons part of it was small, so -- but I think there's been some public meetings there, some -- some interest. Richard Miller will invite you to his -- all of us to his house for dinner -- lives up there, he lives near there, but that might be someone -- Springfield area we may want to think about. Hartford airport's not that far away -- Hartford/Springfield airport -- doing that. And then -- and I don't know, at some point Cincinnati -- I think Fernald under-- at least my guess from the size of the infor-- amount of information and so forth, it's going to take some time before you're ready to -- I'm not sure that'll be ready by September, but we -- we may want to think -- put Cincinnati on the list of a place to visit. And then the final place -- a little bit of a question -- this, but came up during the Congressional hearing, it's Rocketdyne.

MR. ELLIOTT: Rockedyne --
DR. MELIUS: Yeah.
MR. ELLIOTT: -- out in California?
DR. MELIUS: Yeah, out in California and so forth. Certainly the Congressman out there was interested and I understand there's been some delays related to issues of -- of which parts of the facility were -- were covered and so forth, which I -- I think's delayed, but again might be a possibility for --
DR. ZIEMER: Have we had claims from Rockedyne?
MR. ELLIOTT: Yes, we have.
DR. MELIUS: Yeah.
MR. ELLIOTT: And if I can help you out there a little bit in this regard, the Chapman Valve evaluation report, it's our full intention to meet the 180-day mark there, and that will be due May 8th --
DR. MELIUS: Okay.
MR. ELLIOTT: -- to you. We hope to get that in your hands May 8th and meet our deadline there. The Fernald -- Fernald petition didn't qualify till April 6th of this year, so 180 days or six months, you've got a -- we've got a while for that. Let me see, we've got the Oak

Ridge National Institute for Nuclear Studies, ORINS, and that is -- that's due -- that's imminent, I think we're -- probably next week, due for that one. It qualified on October 6th of '05, so maybe we're over -- a little bit overdue on that.

DR. WADE: Just -- when you mention Chapman Valve, then you said May. It's quite possible that the workgroup on SEC petitions might want to consider that evaluation report when it comes out and decide what it might want to do in terms of having SC&A look at it.

DR. MELIUS: Okay. Yeah, that's a good...

MR. ELLIOTT: We also have Blockson Chemical.

DR. MELIUS: Yeah.

MR. ELLIOTT: Blockson Chemical was qualified in March of this year, so --

DR. MELIUS: Where -- is that Joliet or where's -- where's --

MR. ELLIOTT: It's around there somewhere.

DR. MELIUS: Yeah, that -- so that'd be the Chicago area, so be another -- it's like -- it'd be helpful -- Chapman -- well, depends on the report and our evaluation whether we'd --

DR. ZIEMER: We could pick up a couple in the

Chicago area 'cause Argonne National Lab of course is a big site, and I don't know if Batavia has any eligible people. They're probably too new, the accelerator.

DR. MELIUS: Anyway, just so I have some questions. One is just back to -- not to get into a debate or -- or whatever but just to point out, in Dr. Ringen's defense, I do believe the 5,000 pending case -- construction case figure came -- at least was based on some information from another source within ORAU or NIOSH, and I think the best way to resolve this is a full report so -- at the next meeting, so let's move -- move forward on that -- that basis and so forth. And do that.

The -- and I appreciate the update on Bethlehem and making progress, so I'm not sure Mr. Walker will be as pleased, as always, but I'm glad you're making progress and following through on that.

One of the issues that's come up in public meetings, and I'm not saying it's a huge problem and so forth but it's certainly a difficult one, embarrassing one in some ways, and that's cases where there are errors in

terms of the organ -- communication errors with the -- with the claimants or years worked that don't -- you know, where your records don't match what the records that the claimant has and so forth. And I would view these more as sort of QA/QC problems that -- that go along. And we really -- at one point several years ago we had a -- a working group that looked at that issue, and met with you and so forth 'cause Tony Andrade, myself, I forget who else was part of that, but reviewed. And maybe some thought that that would be a topic for presentations --

MR. ELLIOTT: We certainly would -- I would welcome the opportunity to present to you on our quality control program. But I'd offer this. What you heard last night, what you heard in Oak Ridge about the discrepancies in communication were not ours. These are DOL letters.

DR. MELIUS: No, no, I -- I --

MR. ELLIOTT: Pete and I talked about this.

DR. MELIUS: No, I understand, but there have been --

MR. ELLIOTT: I have no control over what they

cut and paste.

DR. MELIUS: Yeah, I -- I think we understand that, it's just that there -- there have been other instances where it's been NIOSH issues and so forth, and I'm not speaking to the particular instances, but I'm just thinking in terms of timeliness of us --

MR. ELLIOTT: Sure.

DR. MELIUS: -- addressing that issue again 'cause I think it's good --

MR. ELLIOTT: We would be happy to present on quality control/quality assurance.

DR. MELIUS: Yeah, be good, 'cause I -- I suspect it's changed and improved since we looked at it, and that -- that would be good. My --

DR. ZIEMER: Well, let me interrupt there for just a minute, too, because in thinking about that yesterday I wondered -- and I don't know the answer to this, but I wondered to what extent our own contractor is focusing so much on the technical issues that perhaps is not looking at did they record -- do they have the right starting information and so on, which is part of an audit, as well. And per-- I think

most of the -- well, maybe -- Hans, you're still here. Do you guys look at that at all? You know, do they have the right dates and so on? Are you still looking at that? I couldn't remember whether you were or not 'cause we -- we tend to focus on all the more technical issues.

DR. MELIUS: Yeah, that -- that --

MS. MUNN: They have a task.

DR. MELIUS: They -- they -- they do that, and I think they pointed out some small discrepancies that -- that are questions about -- certainly have arisen about that. To me, it's the type -- I don't think we necessarily would want them to focus on that, which might require a different kind of sampling and evaluation --

DR. ZIEMER: No, but if they're already doing it --

DR. MELIUS: Yeah, they -- they certainly should include it, I agree, and I think it's more how sort of NIOSH does its QA and QC in this issue.

DR. ZIEMER: Roy, any comment on that?

DR. DEHART: Yes, just a question. When there

is DOL error, is there feedback to them? Are they aware that we may be picking up something or a claimant is?

MR. ELLIOTT: Well, I -- I know Jeff was here in the audience last night. I'm sure he took notes of that. I know that Pete's been made aware of what we heard in Oak Ridge. In fact, I pulled a lady in Oak Ridge aside to -- 'cause I was very concerned. If you recall her remarks, she was given a dose reconstruction report with the wrong cancer and the wrong SSN, so when I looked at the report, it was not our dose reconstruction report. It was Pete's letter or his District Office letter informing them of the decision. So you know, I recog--

DR. WADE: Just for the record, I forget the young lady's name from DOL who was at the meeting, but she went right up to that lady and made contact --

MR. ELLIOTT: Yeah.

DR. WADE: -- immediately.

MR. ELLIOTT: Yeah.

DR. WADE: Uh-huh.

MR. ELLIOTT: Yeah, we're -- we're -- we share these things, and I'm sure Jeff took notes last

night. We're trying to be coordinated on this.

DR. ZIEMER: Thanks. Go ahead, Jim, you were --

DR. MELIUS: Yeah, and my --

DR. ZIEMER: -- one other.

DR. MELIUS: -- my final questions, I believe at the tail end of our last meeting there was some -- some work that SC&A reported on some doses where there appeared to have been some overestimates on their doses, and you were going to do some follow-up, Larry, and I'm just trying to get an update on where that stands.

MR. ELLIOTT: And I was expecting that to be a point of discussion in the review of the fourth round, and I'm sure it will be, but yes, we have looked at that very carefully. This was an instance in a point in time where we were working very hard to complete cases as fast as we could and we were trying to be as timely as we could. We chose to use a methodology that would -- was intended to be an overestimating methodology to show non-compensability, and it got used in the wrong way and we found some quality control issues and how we reported that in some of the -- some of the dose

reconstruction reports, and it was not clear that our methodology was being appropriately used. And we're very cognizant of that. We know exactly how many of those cases were done that way. We're looking carefully at the report language and we'll be going back and making any changes as we need to for those individual reports. I'll have better -- better statistics and details on where we stand with that when we take that up in the fourth round review.

DR. MELIUS: Okay. Thanks, Larry.

DR. ZIEMER: Wanda?

MS. MUNN: You know, sometimes I think we may see these reports as -- as of primary interest to us, and certainly the kind of report that Larry just gives us in -- can be easily segregated into two things. One of them is where are we with cases and how is the daily work progressing that the public sees. And the other is where are we with SECs and -- and site profiles, things that I think of as internal Board activities. We're more interested in that than anything else. But it strikes me -- didn't we earlier in our program sort of as a

matter of course have both NIOSH and Labor do some -- some graphs and here's where the whole program is, up front, earlier, so that -- that the public and the petitioners who were there had an opportunity to see where we were --

DR. ZIEMER: Yeah, actually it used to be at the front end of the program. I think what has happened here was taking into consideration I believe the concern about having quorums for the vote. Is that not the case, Lew, sort of --

DR. WADE: Right, although -- I mean I think Wanda's point is well made.

DR. ZIEMER: Yeah, it certainly would be useful for the general public to hear some of these figures.

MS. MUNN: I really think it's just crucial for them to see this. We -- we have -- we have public meetings where we do everything we can to get as many people here and to tell us what their concerns are. But one of the overriding concerns appears to always be you're not moving fast enough and you're not doing things we feel that you ought to be doing. But if they don't see the progress numbers, if -- if we hold this

closely into -- to a little group --

DR. ZIEMER: I think that's an excellent point.

MS. MUNN: I really -- I can see how Larry's report -- that -- that type of report can easily be divided into two things. But the -- the overall program report seems to me, both from NIOSH and Labor, would do very well to go up front.

DR. ZIEMER: Thank you.

DR. WADE: If I either remember or find my note that I just made, that's what I'll do.

DR. ZIEMER: We'll remind him.

DR. WADE: And if you remember to remind me.

DR. ZIEMER: It's been -- it's interesting, because we used to have two-day meetings, also.

MS. MUNN: Yes, yes.

DR. ZIEMER: And we are packing more and more into our meetings, and in the press for time I think this has occurred. I think the point is a good one in terms of the fact that the general public is more likely to be around at that point and have the opportunity to sort of get an overview of what's happening.

MS. MUNN: And there's a great -- an enormous impact in the enormity of the final numbers, as

well. The perception that claims are not being paid cannot continue to be made in the light of -- of the millions of dollars that have already gone out.

DR. MELIUS: Yeah.

DR. ZIEMER: Jim.

DR. MELIUS: Yeah, only my recollection -- and it may be wrong -- is that we used to provide some of that information as a handout sheet or something for the public meeting portion, the evening meeting, and I frankly haven't been paying attention recently as to whether that's been done, but -- but that may be another way of getting the information out 'cause a lot of the people that are at the evening meeting are not the people at the -- during the daytime.

DR. ZIEMER: Well, that's certainly true, and of course the information is available on the tables, but I don't believe we ever had the presentation at the evening meetings.

MR. ELLIOTT: We didn't do the presentation, but I can assure you that my slides have always been on the table at the start of the meeting, so --

DR. MELIUS: But I would say -- you know, we

may want to format it a little bit more -- friendlier to the public rather than as slides, and have some sort of a handout available and -- and actually hand it out, draw attention to it. How much time we spend on it may be a separate issue, and it's not separate from what gets presented, but -- we don't want to change how we present it or anything, but I think some more active outreach at -- at those meetings would be -- in that way would be -- in an educational sense would be helpful. I know Larry has staff here. DOL at times has had staff at these meetings that help people with claims issues and -- and so forth, so I think that's another important part of a -- of that.

DR. ZIEMER: Let me suggest something you might think about and that is to have a truncated version of these reports that we might include in public comment period as -- at the beginning, kind of an overview of -- so people can see, you know, where does Rocky Flats fit into the scheme of things, what else is going on.

MR. ELLIOTT: Two or three slides.

MS. MUNN: Uh-huh.

DR. ZIEMER: And I think it may also help people understand perhaps that not all of this can be done at one time.

MR. ELLIOTT: Yeah, if that's what you want, I'm sure I can --

DR. ZIEMER: Well, let's give it some thought as to how -- obviously the people have not come to hear us give lengthy papers. But a five or ten-minute capsule at the beginning, overview of --

MR. ELLIOTT: Two or three slides I think would --

DR. ZIEMER: -- might be a good way to kick off -- we might think about that as formatting the meeting next time, and then go from there.

MR. ELLIOTT: Very good suggestions, I appreciate hearing this. And I would be remiss if I didn't comment on the -- on the staff that are here that you probably didn't see this time. I know in Oak Ridge you saw them 'cause they were -- we were all cramped together in the entryway aisle and that presented us some problems with Privacy Act concerns. But staff were here. We had two health physi-- or two public health advisors here who had scheduled

appointments. They worked a 10-hour day, plus the meeting yesterday. I believe they saw on order of about 85 claimants this time.

We were also doing -- we -- we have -- at the next meeting I'll give you a little bit more on my program report about our communication efforts. Right now we have some increased efforts on communications. We're revising the dose reconstruction report, hopefully to make it more reader-friendly and understandable. I want to be able to just tell you where we're at on that.

We're upgrading our web site. I want to be able to tell you what's going on with that. There is so much information on our web site right now it's hard to navigate, it's hard to find, and I want to take an opportunity to point folks to some tools that exist or will exist on the web site that will enable people to find things that they want to see.

DR. ZIEMER: Good.

MR. ELLIOTT: Also I want to -- I want to make note of what goes on in these interviews with claimants. Yes, they are talking about individual claims, but they're equipped to

answer questions like how many cases have you done, so they have my presentation, they're able to point to it. They're -- they're equipped to bring a technical question out here and bring it in front and get a health physicist, bring -- you know, Stu or LaVon or whoever's here, Jim -- and take them back and answer their technical questions if they don't feel comfortable and confident in responding on that regard.

So I'll -- I'll factor that into my presentation for you next meeting to tell you what all we're doing in communications.

DR. ZIEMER: Good. Another comment, Jim?

DR. MELIUS: No, actually a question 'cause Larry reminded me of it -- that's on the web site. Are the Battelle conflict of interest information posted for the dose reconstructions that they're doing? 'Cause I actually looked for it a while ago and it was -- I had trouble finding it.

MR. ELLIOTT: It wasn't there probably a month ago.

DR. MELIUS: Okay.

MR. ELLIOTT: I think around two weeks ago we

got their link. The way we have to operate in this regard is that the contracting entity has to have on their web site the disclosure statements --

DR. MELIUS: Right.

MR. ELLIOTT: -- and they were putting that in. We have to have a link then that takes you there. We do have and did have the Battelle conflict of interest policy, which is essentially the same as SC&A's. And we have been working with Battelle and ORAU and EG&G, which is another contractor you haven't heard much about, but EG&G provides Jim's staff or the science staff technical support in the science arena. So they're -- they're back crunching numbers and doing various things, but we want to make sure that they address their staff with full disclosure and abide by the conflict of interest policy, as well. And so EG&G will have a link on our site, too, very shortly. They're not up there right now, I don't believe.

DR. MELIUS: Okay, good.

DR. ZIEMER: Thanks. Other question -- comments?

PROGRAM UPDATES, DOL, MR. PETER TURCIC

Okay, then we're ready to hear the Department of Labor report. Pete, welcome back.

MR. ELLIOTT: You've got a slide show?

MR. TURCIC: Yeah.

(Pause)

DR. ZIEMER: Pete, we do have the handouts if you want to --

MR. TURCIC: Okay, why don't I just go --

DR. ZIEMER: Maybe you can just --

DR. WADE: Does everybody have the handouts?

MR. TURCIC: Yeah.

DR. ZIEMER: There are copies on the table. It's just a two-pager with --

MR. TURCIC: Yeah, and rather than just repeating it all, maybe I'll just hit some -- some issues that, you know, just -- has come up and try to address -- you know, I think that was a very good point that Wanda raised. And in the -- in the slides I think what gets to the heart of it is the back -- the back page, I think. And if you look at that, it's the total compensation issued. And this is, you know, in Part B. And you know, to date -- well, as of April 13th -- Part B payments --

there was 18,526 payments, in excess of $1.46 billion dollars. Now in addition -- and then -- you know, in addition, nearly $100 million in medical benefits. And then if you go over and, you know, look at the Part E statistics -- which Part E has only been in existence now for a little bit over a year -- you know, we've paid over $300 million in Part E already.

One of the -- on the -- under the section on compensation of the NIOSH cases, you know, it's showing $373 million have been paid to 3,521 individuals. But something that needs added on there, you know, that only includes cases for which a dose reconstruction was done. So we have about 1,000 new SEC cases that are being paid, so really you need to add about another $150 million onto that. So in round numbers, it's about a half a billion dollars now has been paid directly from the work that, you know, NIOSH has accomplished.

And just -- just some of the other points, in Part B, you know, we had 73,000 cases, which is about -- or 73,000 claims. It's about 52,000 cases involved. And in our District Office over 40,000 -- nearly 41,000 have recommended

decisions and another 11,300-some are what we call pending. So that would include cases that are at NIOSH, plus our normal work flow. And we normally have about a two-month to three-month backlog -- or working inventory of -- of cases, you know, that -- that fall into that category.

And we show pending at NIOSH 7,900. Now that's a little bit different because in our pending at NIOSH, if it goes -- because of the way our -- you know, the system works and we get the counts, if a case goes back for a rework, then that gets counted back in, you know, as a case that's -- that's at NIOSH.

And under final decisions in our claims, I think it's an interesting point and it's something that will be going away now. If you notice that under final decisions denied, over 29,000 denied, almost 11,000 of those were non-covered conditions. We had an awful lot of cases that were asbestosis, COPD, that was filed under Part B. Now that'll go away now because we no longer have people file under B or E. They merely file a claim now. Yeah, so if it's a DOE facility, you know, and it's a

cancer, then it gets -- a cancer or beryllium disease or silicosis, it gets a B -- we just write the decision, and the decision will say, you know, whether it's denied -- approved or denied, and then benefits. You know, you're entitled to certain benefits under B and certain benefits under E. So that's -- the only way -- a claimant can still insist, and we do have claimants that insist, no, I want it evaluated under B, also. Then we would have to take that case and, you know, issue a denial for non-covered condition. So that -- that number will -- you know, for all intents and purposes, under the B statistics, should disappear in the future.

The NIOSH referrals, our count is near 21,000 with 12,000 -- over 12,300 returned with dose reconstructions. Another 1,101 returned where dose reconstruction not required, so that would include the -- the ones that are pulled for, you know, an SEC.

And then there's the breakdown, the cases with recommended decisions -- you know, 3,000 to approve, 8,200 to deny. And then those that -- those gone all the way to a final decision,

2,567 to approve, 7,000 to deny.
One of the other points that I wanted to make, the issue that when -- that came up about Boeing, to give you a little update on that, there was a delay, and I think -- you know, the cases were pended with NIOSH and it's probably why DOE, you know, was slow on responding. The issue was that DOE -- and Boeing was -- was basically interpreting -- the Santa Susana Field Laboratory is kind of a inter-- a mixed campus, and DOE had a portion in what's called Area Four. Well, after the amendment and after our regs came out, the -- it's now DOL's determination of what is a DOE facility.
Now Boeing was interpreting that only people were covered were those that were in that area that were actually working on DOE projects. Well, but that's not -- that doesn't fit with the real definition of a DOE facility. And so now we've come out and all of Area Four is a DOE facility, so there were a lot of people that Boeing and -- and DOE were saying were not covered that now are covered, and that probably amounts to some of the delay. And in fact, on May 9th I'll be meeting -- I'm going to a

meeting out there with some of the groups, and one of them is Boeing, in order to, you know, let them understand better about the program and what our definition was and so, you know, their response hopefully will, you know, start to improve after -- after they have some of that understanding.

On -- on the issue -- you were talking about looking at the dates -- you know, the dates don't match.

DR. MELIUS: Uh-huh.

MR. TURCIC: One caution there, the dates have to match what is accepted employment. Oftentimes what's on the claim form will not match what is in the dose reconstruction or the decision because sometimes, you know, some of that employment may not be covered. I mean we had a lot of people that were -- they might have had time as a subcontractor, for example, at an AWE. That doesn't count. So even though their employment, you know, may be longer, really what needs to match is what is in the dose reconstruction and what is in what we send as the NIOSH referral document, which means that here is the employment that is actually

covered. And -- and again, those often are quite different.

And with that, I think if -- if there are any questions --

DR. ZIEMER: Thank you, Pete, and actually I think the Rocky slides -- Rocky Flats slide that you didn't mention --

MR. TURCIC: Oh --

DR. ZIEMER: -- would have been very interesting to the folks here tonight (sic) and is interesting to me. I certainly didn't realize that basically $22 million in claims has already been awarded to Rocky Flats workers. That probably would have come as a surprise to many of the folks here last night.

Other comments or questions? Yes, Michael?

MR. GIBSON: Pete, you mentioned about the -- the Boeing facility and that you've made a determination that everyone at the site's covered, you know, if the -- not --

MR. TURCIC: The entire Area Four at the Santa Susana Field is the DOE facility.

MR. GIBSON: But didn't -- if -- did I hear you right to say that they thought just the people working on DOE projects were covered, but in

fact everyone there --

MR. TURCIC: Yes. See, there was intermixed -- at Area Four there could have been people -- Rockedyne and -- it was kind of an intermix, and a lot of people used the word Rockedyne for the facility. But to explain what that really was, the -- and to make the determination of what the DOE facility was, you have to go back to the contractor. And see, the contract was with North American Aviation and not Rockedyne. Really there's no such thing as Rockedyne. It's merely a division of North American Aviation. So what we were getting back on employment when we would -- when we would send for employment, basically we would get back yes and no from DOE -- really from Boeing through DOE, and so then when these issues came up we started asking for -- you know, and looking behind that, and basically what was behind that was anybody who was listed as Rockedyne was automatically kind of excluded like they -- but they were actually doing the work, because the contract also allowed, you know, them to use anybody at the facility to do the work. So now that's all been resolved.

MR. GIBSON: Okay. I -- I don't know if you're aware and I just wonder how you guys have or would interpret this. Of the accelerated clean-up sites -- I mean I know Rocky's turned into a wildlife refuge, but Mound is going to be an industrial park. We've demolished some buildings. Some buildings we've decontami-- they've decontaminated now and are co-inhabited by private businesses, but it's still a DOE facility until the clean-up is finished and the work is done, and there's a -- and it's deeded over to the city. So would these private employers be covered under this --

MR. TURCIC: On-- only if -- that -- that's a good point. They would be if there was a contract with DOE for them to do operation or maintenance.

DR. ZIEMER: Interesting. Pete, in the case we heard last night where the woman pointed out that her husband's claim record showed that he started two years earlier than he actually did, was she misunderstanding or misinterpreting that, or --

MR. TURCIC: I would have to look at the specific case, but -- but -- oh, we've had

that. We have had -- that is not uncommon. Probably the biggest one that I've heard of was -- ended up being like an addition of 17 years. But here it was -- the wife knew nothing about that 17 years, and when we went and started doing the employment verification, we found that there was significant employment prior to the -- the -- you know, the spouse even knowing.

DR. NETON: I -- I could speak briefly to that. There are situations that we find where the Department of Labor will send us the start of covered employment and we will go back and get the records and we'll find bioassay samples from maybe two years prior to the start. And usually what happens there is the person may have started as a subcontractor for those two previous years and then hired on at the facility and -- and those subcontractor -- is not covered, so it would appear to be a difference in the employment history that is explained.

DR. ZIEMER: Uh-huh.

DR. MELIUS: It just -- my point was not to make any accusations of who was responsible or

anything, it was more -- more of the QA/QC thing. There ought to be something in the system that would, you know, notate that or explain that and just -- to make sure that gets -- that gets carried through. We're -- we're -- and some of that's the communication between NIOSH and -- and DOL on -- on these issues and that's --

MR. TURCIC: Well -- well, a lot of it. I'll tell you what a lot of it is, and a lot of it is that, you know, in the last six months we hired 200 new claims examiners. And you know, when -- when we're -- at the rate we're making decisions now -- you know, for the last few months, we've been issuing in the neighborhood of anywhere from 1,000 to 1,300 recommended decisions a week. And there is a lot of cut and pasting going on and we -- we -- we're always working on that. And it's useful to hear, you know, issues. Like some of the issues that I heard of was the issue on when some claimants are getting letters under Part E asking for their doctor to make a determination. Well, really what that is, and maybe it's not clear in the letter and we need

to, you know, take a better look at that. All they're doing is giving the claimant the opportunity for their physician to make some link. And a lot of times it's some illness that there is no known, you know, occupational exposure and -- but to give the due process, we're giving the opportunity, you know -- if your physician can -- we can't find anything that's -- you were exposed to that explains this illness. If your physician wants to give a rationale, then that's needed.

The other -- the other issue on the 30 days that -- that seems to be -- and these are really starting to take off now -- are -- claimants have an option to get their impairment ratings done. We give them an option. One, they can -- they can choose to go to anybody they want and have an impairment rating done and submit it. And if it meets the criteria, we would use that and issue a decision. Or they can choose to have certain tests done that they can go get done anywhere, and then we would have the impairment rating done for them. One of the letters that go out -- when that letter goes out, it -- it tells

them -- see, we have no idea, especially on the 25,000 claims that we got from DOE, we have no idea -- are they really claiming impairment. We've made a causation decision. We said okay, this illness is caused, but we don't know whether they're claiming wage loss or claiming impairment. So a letter goes out that says we need to know if you're claiming impairment. Now if you want to get your -- and we need that -- we're asking for that in 30 days. If you want to get your -- your own tests done, here are the tests -- you know, asbestosis, here are the pulmonary function tests that you need to get and all that. And -- I mean we realize that that's not -- you can't make an appointment with a doctor and get in to see them that quickly, so there's some -- and we need to polish our -- our letters to -- to do a better job.

There's a lot of confusion, for example, when people get the OCAS-1 and -- about -- well, if they disagree with it, where can they appeal it. So we have a draft that we're about ready to send to Larry of -- coming up with a flyer that we're -- you know, that could be included

and then the same thing on a recommended decision. You know, the flyer would say you're not agreeing with this. If you have issues when you get your recommended decision, that's where you appeal those issues. So we're -- we're trying to -- to -- but it is a complex program.

DR. MELIUS: Just one -- one request for Pete rela-- related to sites for public meetings, since we've made the rounds of a lot of places. Certainly if you or your fie-- you know, District Office or whate-- have a site where you're hearing a lot of questions about the SEC or this program and so forth and you think it'd be worthwhile for us to have a meeting out there, I think we'd appreciate the --

MR. TURCIC: The Simi Valley area would be a good -- good area because people have been waiting. You know, it was a -- a legal question that took a long time, so that -- and there are quite a few claims out there.

DR. MELIUS: I think you have a site report you're working on, Larry, or -- is that -- no, no, it's not, just the -- okay.

MR. ELLIOTT: Don't have enough claims to

warrant that.

DR. MELIUS: Okay.

DR. ZIEMER: Stu, did you have a comment?

MR. HINNEFELD: (inaudible)

THE COURT REPORTER: I'm not getting that.

MS. MUNN: He's not getting anything.

DR. ZIEMER: Say that again, Stu.

MR. HINNEFELD: Is that not on?

DR. MELIUS: Yeah, that's what -- I think that was the issue that came up at the hearing, and that issue was related back to the decision -- you know, how can you do a site profile unless you know what the site is kind of thing and --

DR. ZIEMER: We want to get Stu's comment on the record here again.

DR. WADE: Stu's been amazingly silent at this meeting so we can get him on the record.

MR. HINNEFELD: Probably everybody's benefit that I don't say much at these meetings. Yeah, we have just recently finished a site profile for the Santa Susana Area Four facility, and there's some related facilities in the neighborhood that are -- that these people also did this same related work at, and they're all covered in this at -- it was known at ETEC for

a while and what, AI, Atomics International, was that their term-- or is that somebody else?

DR. MELIUS: Yeah, I -- it's --

MR. HINNEFELD: It's any number but we're -- but we're pretty clear on the -- on the names of the facilities now and so -- and they're -- they are all called out in that site profile.

DR. MELIUS: Yeah, and it is names. That's the problem.

DR. ZIEMER: Thank you. Let me ask if there's anything else to come before the Board this afternoon?

(No responses)

If not, we thank everyone. We stand adjourned.

(Whereupon, the meeting adjourned at 4:15 p.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of April 27, 2006; 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, 2006.

_____

STEVEN RAY GREEN, CCR

CERTIFIED MERIT COURT REPORTER

CERTIFICATE NUMBER: A-2102