U.S. DEPARTMENT OF LABOR

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ADVISORY BOARD ON TOXIC SUBSTANCES
AND WORKER HEALTH

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MEETING

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FRIDAY
NOVEMBER 6, 2020

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The Board met telephonically at 11:00 a.m. Eastern Standard Time, Steven Markowitz, Chair, presiding.

MEMBERS

SCIENTIFIC COMMUNITY

AARON BOWMAN
MARK CATLIN
KENNETH Z. SILVER
MIKE VAN DYKE

MEDICAL COMMUNITY

GEORGE FRIEDMAN-JIMENEZ
ROSE GOLDMAN
STEVEN MARKOWITZ
MAREK MIKULSKI

CLAIMANT COMMUNITY

JIM KEY
DURONDA M. POPE
CALIN TEBAY
DIANNE WHITTEN

DESIGNATED FEDERAL OFFICIAL

MICHAEL CHANCE

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

11:07 a.m.

MR. CHANCE: Good morning. Can you hear me okay? I just want to make sure I can confirm.

MR. BIRD: Yes, we can.

MR. CHANCE: All right. Thank you so much.

Good morning, everyone. Today is November 6th, 2020. And welcome to day two of the teleconference meeting of the Department of Labor's Advisory Board on Toxic Substances and Worker Health. Once again, my name is Michael Chance. And I am the Board's designated federal official or DFO.

As I mentioned yesterday, we appreciate the Board members participation in this meeting today, and continue to welcome those of you who are newly empaneled to serve on the Board. And we appreciate your time and attention to the materials that were presented yesterday and the materials that will be presented today.

So we had good meeting yesterday and hope to wrap up with further fruitful discussion. We're scheduled to meet today from 11:00 a.m. to 3:00 Eastern Time p.m. Today there will not be a public comment period.

Today, as you are aware, like our recent April and June meetings, this meeting will be completely virtual as a precaution against the COVID-19 pandemic. As always, I hope everyone is staying safe out there, taking the proper precautions.

And using this format is designed to ensure everybody on my team, as the DFO, I am joined virtually by Ms. Carrie Rhoads from the Department of Labor and Mr. Kevin Bird from SIDEM which is the contractor that assists us in managing Board activities.

Much of what I am about to say was said yesterday. But please bear with me as I must make sure that all of this information is entered into the official record of today's transcript.

Regarding meeting operations, planning, there is an agenda to the meeting which is posted. There are scheduled breaks. Yesterday we did really well, kept on time. So generally Dr. Markowitz, as the Chair, decides when those breaks are appropriate. So just bear in mind that we will be breaking a couple of times through the day to give everybody an opportunity to get a little break.

Copies of all meeting materials and any written public comments are or will be available on the Board's website under the heading meetings, and a listing there for the subcommittees.

The documents will also be up on the WebEx screen so everyone can follow along with the discussion. You can visit the Board webpage for additional information. After today's meeting, you'll see a page dedicated entirely to the day's meeting.

The webpage contains publicly available materials submitted to us in advance of

the meeting. And we appreciate that materials are submitted in advance, well in advance so that we have an opportunity to be able to post them properly and timely.

We will publish any materials that are provided to the subcommittee. There you should also find today's agenda, as I mentioned, as well as instructions for remote participation. If anyone is having a problem, please email us at energyadvisoryboard, that's all one word, @dol.gov.

If you're joining us by WebEx, please note that the session is for viewing only, unless you're a panel participant, and will not be interactive. Phones will also be muted for non-Advisory Board members.

Please note that this continues to be a new way of conducting these meetings. We ask that you be patient as we work through any technological issues that we may encounter. Fortunately, we didn't encounter any yesterday. And you may contact Ms. Rhoads or Mr. Bird for

any technical assistance throughout the meeting as needed.

A few notes on the transcripts and the minutes to the meetings. Transcripts and minutes will be prepared from the meeting today, and our discussions that evolve out of that. During Board discussions today, as we are on a teleconference line, please speak clearly enough for the transcriber to understand. There is a court reporter transcribing all of our statements, so please make sure that you are enunciating and speaking clearly.

When you begin speaking, especially at the start of the meeting, please state your name so we can get an accurate record of the discussions and who said what. Also I'd like to ask our transcriber to please let us know if you're having an issue with hearing anyone or with recording.

Yesterday we had a couple of problems with people. Primarily one of the big downsides to this mode of communication is cell phones

sometimes do cut out. So I ask the court reporter to please let us know if there are any problems with that.

As the DFO, I see that the minutes are prepared and ensure they are certified by the Chair. The minutes of today's meeting will be available on the Board's website no later than 90, I'm sorry, 90 calendar days from today per FACA regulations. And if available sooner, they will be published before the 90th day.

Also, although formal minutes will be prepared, we'll also be publishing verbatim transcripts which are obviously more detailed in nature. Those transcripts should be available on the Board's website within 30 days.

I would like to remind Advisory Board members that there are some materials, and I made this statement yesterday, there are some materials that have been provided to you, in your capacity as special government employees and members of the Board, which are not for public disclosure and cannot be shared or discussed

publicly, including in this meeting. Please be aware of this.

As we continue with the meeting today, these materials can be discussed in a very general way, which does not include using any personal identifiable information such as names, addresses, specific facilities, this case that is being discussed, or also doctors' names.

Important reminder regarding non-disclosure agreements. Recently Board members have been granted access to redacted information, such as contract information. Please be mindful that Board members sign non-disclosure agreements to get access to this information and vital contract information. So the terms of the contract cannot be disclosed or discussed. So these are better discussed in a working group. Please keep that in mind as we proceed with the meeting today.

One final note on question and answer. Again, like I stated, Dr. Markowitz has agreed to control the Q&A period. I do believe that we

have enabled a hand-raise mechanism. People can raise their hands. But I think it was helpful yesterday to have people hold their questions until the end of the presentation, so where that is possible.

And with that, I appreciate your patience, because I had to kind of plow through all that. And at this moment, I formally convene this meeting of the Advisory Board on Toxic Substances and Workers Health.

I will now turn it over to the capable hands of Mr. John Vance, who will provide very valuable Site Exposure Matrices demonstration for you all. So I hope you find that very informative. Mr. Vance?

MR. VANCE: Dr. Markowitz, I didn't know if you wanted to do any introductory comments today before I begin.

CHAIR MARKOWITZ: No, that's fine. We can just begin. Thank you.

MR. VANCE: All right. I'm going to go right into it then. So give me a second here

while we share the screen. All right, Kevin, can everyone see this?

MR. BIRD: Yes, we can.

MR. VANCE: All right. So again, this is John Vance. I'm the Policy Branch Chief for the program. I'm going to be running through a very quick presentation on our site exposure matrices, which is a really important research tool that our staff utilizes in case adjudication activities.

And it's something that, as Board members, you definitely want to be familiar with. I know that the existing numbers have a pretty good comfort level with this. But for you folks, this is definitely something that you want to pay attention and know that this is a very important resource to understand and also use in our process of evaluating cases.

So like I was explaining yesterday, you know, our process is really hindered by the lack of information in these cases when it comes to establishing exposure information, like what

are the toxic substances that employees encounter during the course of their employment.

And so we very rarely have any kind of specific industrial hygiene monitoring data. Very rarely do we have any information at all. So the program, when it first initiated under Part E, we knew that there needed to be resources and efforts put to trying to collect information to assist claimants in their claims.

Because in the absence of any kind of factual information on exposures to toxins, it's left to the claimant to try to produce that information. And that was just going to be untenable. So the Department of Labor initiated the development of the site exposure matrices to assist claimants in processing cases through the legislative mandated criteria.

And so what is the site exposure matrices? It's a database. At the end of the day, that's what it is. It's a searchable database that's got millions of lines of information about the different facilities that

are connected with work that was done in conjunction with the production atomic weapons.

It is a huge, immense database. It is something that has evolved since 2004 when we first started collecting information with regard to these sites. We have a contractor that manages this resource, Paragon. It is a contract which has actually been renewed as of April of this year.

So Paragon continues to be the contractor that oversees not only the collection of information, but also the maintenance of the database and the maintenance of the documentation that supports the information that's reported in the database.

The data that you will identify when you do your research in the site exposure matrices is derived from historical documentation describing operations that occurred at the different facilities around the country.

So the contractor that runs this in cooperation with the Department of Labor, when

the site exposure matrices was being built out, we initially did a canvassing of different sites, meeting with workers, trying to collect information about the site.

We have tried to collect information and documentation regarding those activities so that we can begin populating this database with information identifying the toxic substances that were utilized at these sites and also being able to identify certain connections to those toxins based on different filtering criteria.

So what we have in this database now is a lot of information that is relational. It is something that we can go in and say okay, what do we know about this type of work activity, this type of health effect, and the type of activities that were occurring at different locations, and try to create a filtered list of toxins that we can associate with a particular case, okay.

So in our discussion yesterday, when we were talking about the occupational history

questionnaire, and the ability of claimants to submit information in support of their case, that is what is critical in starting to build out the factual framework for the toxins that that person likely had encountered during their work.

So when we first get a claim, we're going to ask that claimant, tell us all about what you did, what is it that you know about the different materials that you worked with.

And then what we will do is also look at other information that we collect through that document acquisition request that Rachel mentioned yesterday, that's all the employment data that we would get from the Department of Energy about the work activities of the employee.

With that information, the claims examiner is then going to start trying to identify and build out information that we can then relay to a physician, or apply in some sort of presumptive standard in determining whether or not we can have information about the toxins that that person encountered, linked to their

condition, that are essentially creating that causal relationship, that your exposure to these toxins had some resulting health effect or disease.

In other words, if you're presenting a case for COPD and have worked at a particular facility, we need to be able to identify, okay, what were the toxins that you likely came into contact with that are linked to, that's linked to COPD. And we go about using these filtering criteria to do that. And you can see the filtering criteria that we have available.

And I'll run through a quick demo at the end of this in a particular situation. So it really is a terrific resource. And again, this is a Department of Labor sponsored resource tool. It is something that, you know, we not only finance but it's also something that we work with, with regard to continually evolving the information.

Every day, every week, the contractor is adding information as they collect new data.

We also have a portal, I'll show you that in a moment, where people can submit additional information for our contractor to evaluate for change and sending the information profiled in the site exposure matrices.

Just a word of complexity here. There are actually two separate variants of the site exposure matrices. There is a variant that is available to employees that is updated on a real time basis. And about every six months, that system is frozen in place. And then a version of that is evaluated by the Department of Energy for a public release of that data.

And so then what happens is that frozen picture of the site exposure matrices is vetted for security purposes and then is published publicly on our site exposure matrices public website, which is what I'll show you today.

So just to understand, there are two variants of them, but they are reporting the same exact information. It's just that you might have

a six-month lag or shorter periods of time between the employee variant and then the public variant.

Like I mentioned, you know, in any kind of worker compensation situation, you're always trying to build out an accurate understanding of the factual circumstances of the case. That's the purpose of the site exposure matrices. It's to try to identify the specific toxic substances that the employee encountered that's linked to their disease, their claimed illness.

And so that information is basically what the claims examiner is trying to build out as far as what are the toxins we need to focus on. Once we have that profile or that characterization, then it's up to the industrial hygienist to look at that data, to look at any monitoring information that we might have, or apply their own professional subject matter expertise to try to characterize the extent, nature, and duration of that exposure.

So you can sort of see what the function here is, as we go along, is to try to build out a good understanding, in the lack of any specific monitoring data, what the employee encountered in their work as far a toxic substance.

And I'll just mention, I say toxic substance. A lot of people may not understand that for the purposes of our statute and our regulatory definition, toxic substance just means any material that has a radiological, or chemical, or biological component that's linked to the development of an illness.

And that's actually covered in our Procedure Manual at Chapter 15, so I'll keep coming back to Chapter 15. That's the one that really is the focal point of our discussion or causal relationship under Part E.

The really important thing here that folks need to understand is that this is a resource that is used as a comparative analysis tool.

So what we're looking for is information that's supplied in the case file. We're trying to compare that information to what we have available in the site exposure matrices to sort of build out an accurate understanding of the person's exposure history.

And so it's really important overall, simply because this is going to give us the ability to go to a physician, whether that's the claimant's physician or a contracted medical specialist, and ask them that question. Given this factual framework that we've been able to construct, do you believe that this exposure that the employee encountered was a significant factor in contributing to, or aggravating, or causing an illness?

So that's sort of the real important feature of the site exposure matrices, is that factual information that would allow a physician to present a rationalized opinion as far as causal relationship.

The site exposure matrices is a very

great, it's a great tool. I use it weekly in my reviews of case files. But it has some very distinct dos and don'ts.

What I would encourage you to do, and I'll show you the link when we get to it, the site exposure matrices, we do have training available on our website. There's also a lot of information, again in Chapter 15, speaking to the use of the site exposure matrices in sort of a broad manner by our claims staff.

Some of the things that are really important is making sure that you apply good data filtering, and I'll sort of show you that when we get to the demonstration, and making sure that the information that you're utilizing in your site exposure matrices' search criteria actually corresponds specifically to information relevant to the claimant. So we need to make those connections as we do our examination of the case file.

One of the big, important things that we try to train on, and that I do quite

frequently, is this database has no specific formulation for how you go about doing a search. Because you want to try to use lots of different criteria to try to make those connections.

So oftentimes, when I'm doing searches, I use lots of different filtering techniques to try to identify information in the case file to identify toxins that I can then say okay, there's probably a high likelihood that this employee had some contact with this material. And I then will let an IH sort of look at it and give me some sort of profile on it.

So some of the important things, and I'll touch on these when we go to the demo, site exposure matrices is full of information. I mean you're talking about, you know, hundreds of sites that have lots of different information about the work activities unique to that site.

While there might be some sites that did very similar types of work activities in conjunction with the production of atomic weapons, oftentimes those sites had very specific

activities that were relating to what they were specifically doing.

So it's really important for folks to understand the site exposure matrices maintain very unique, customized data relating to the facilities. So when you're going in and looking for information, you can do all kinds of important, you know, filtering concepts and other kinds of things when it comes to your work.

You can look at information in a case file and say okay, here's this site. Do we have any information about common nomenclature that employees use? So we would maybe do some alias searches for different kinds of toxins and their names, how they're used, and we might search by aliases, by disease type.

That's a really important function, because you're looking at information in a case file trying to correspond that to information maintained in the site exposure matrices.

We generally recommend that when we are doing these searches, the more reasonable and

more filtered your search results, the more probative the information is, the more value it has in establishing that factual framework.

When you do very global kinds of search results in the system, that's not necessarily going to help you in this process where the Department of Labor is trying to process through hundreds of cases.

We're an administrative agency trying to issue decisions in a case. You know, each one of these claims could turn into a very long research project. But we need to figure out how to balance the need for accurate information and detailed analysis versus the need to get compensation into the hands of folks that have work-related illnesses.

So you have to sort of balance that administrative reality versus the informational side of things. Because we could really spend a lot of time digging through these cases.

The other part of this is that the site exposure matrices, one of the big drawbacks

is it really doesn't have temporal data. This is a research tool that just has basically a global inventory of every kind of toxic material that may have been utilized at a facility throughout the history of that particular site.

So you have to understand that what might have been occurring at Oak Ridge in the 1940s and '50s may not involve the same toxins that were there in later years. But when you go into the site exposure matrices, what you're going to see is the list of any toxins that were worked with at Oak Ridge for the duration of that facility, with SK25 or one of the, you know, other sites in Oak Ridge.

So like I said, it's important for us to always be thinking about filters. What can we see from the case evidence that we can apply reasonably to our search filtering? And that is a very delicate and very involved process. Because you've really got to look at all the information that you have in the case file. And that's why that occupational history

questionnaire is so critically important, along with any other kind of information that may come in, into the case file.

The example I'm going to show you in a second talks a little bit about where we will sometimes find information that you wouldn't normally think, oh, that's not going to give me anything, when in fact that type of documentation is actually critically important.

The other thing that the site exposure matrices does not do, it doesn't give you much information at all, or it doesn't give you any information about the extent of exposure, the level of a particular amount of exposure that the employee had in a particular job.

All it's going to do is say hey, this person working in this job has the potential to be in contact with this material that we know has some linkage to this disease, has this health effect. It's up to an industrial hygienist to look at that information and try to profile or characterize the level and extent of exposure.

And that's oftentimes left to the judgment of the subject matter expert looking at that.

So I'm going to go through a very basic SEM search. I'm going to use the public site, but I want to sort of talk through this example. And this is, again, a very simplistic kind of example, but I thought it'd be better to start with something simple rather than go into something brutally complicated.

So we would get a case from an employee. And that employee would give us certain kinds of information. And hopefully, this information would be provided in the initiating claim forms, either in their employment history form, it could be provided during an occupational history questionnaire, or it could be something that is provided to us in the information that we get from the Department of Energy in that data acquisition request.

You know, this information that we can get can be voluminous. We can get submissions of records from the Department of Energy that can be

hundreds, in some cases thousands of pages of documentation that we've got to go looking for information that is going to be something that we can build off of with regard to the site exposure matrices factual framing that we're going to try to do.

So in this particular situation, what do we know about this particular employee from the information that we've gotten during our initial development stage?

So we have an employee that worked at Savannah River in -- should be South Carolina. He also worked as a welder from 1972 to 1992. He's been diagnosed with chronic obstructive pulmonary disease. Once we know that that is established in the medical evidence, that allows us to move on to this exposure analysis part.

We know from his occupational history questionnaire that the employee is saying that he worked at lots of different sites, but he keeps referencing he spent a lot of time in a laboratory. And here's where it gets kind of

interesting.

So when we get these reports of information from the employer, we get all kinds of records. We get employment records, we get pay and wage data, we'll get all kinds of performance review information. We'll also get records that are maintained by the medical, you know, division at some of these sites. And that will include a lot of incident reports.

And so here, this is where we start making these logical, factual findings. So here you see we have a medical incident report identifying injury that occurred. And a lot of these incident reports will identify where the injury occurred.

So in this particular situation for this employee, it identifies as injury occurring at 773 Lab, all right. So now we know sort of like the framework of what we could maybe do in the site exposure matrices, which is we know the site, we know what illness is involved, we know the type of labor that he was doing, and we also

know sort of a good idea about the location. Because it's confirmed in his own statement about where was working. And it's also supported by other information from the Department of Energy.

So let me go ahead and switch over. I'm going to switch from this presentation to the site exposure matrices website. So give me a second here.

Here we go. All right, Kevin, can you guys see this, the website?

MR. BIRD: Yes, we can.

MR. VANCE: All right. So here is the site exposure matrices. This is the public variant, this is not the DOL employee variant. But I wanted to sort of show you this.

So on our website, we have this introductory web page. And you can see right here, for the folks that are unfamiliar, I've never really gotten an opportunity to mess around with the site exposure matrices, we do have training that is available that you can go through.

We have a lot of background information about the site exposure matrices that's here. And here is our link right here to the site exposure matrices. So we're going to click through to that.

Here, again, you're getting additional information about the site exposure matrices. And I'll just talk about a few features here. You can see this right here, DOL wants your input. We do have this portal that allows claimants to submit information about not only toxins that they might have information or documentation about, about one of the facilities.

We also are looking for any kind of disease-specific information that is something that needs to be evaluated. So this is where we get a lot of information from toxicologists and epidemiologists that are submitting information.

We also get information from claimants that are petitioning the Department of Labor to look at adding certain types of health effect data in the site exposure matrices.

And I'll just make a comment that, you know, we do get information that does alter the site exposure matrices. We've gotten, over the years, lots of information from some very interesting sources.

But we do encourage folks to give us information about the site exposure matrices, and we do review that. Every submission gets reviewed by our contractor, and a decision is made as to whether or not the information is probative enough for us to make an update to the site exposure matrices.

And I'll just say that the information that we do try to use, whenever we're updating the site exposure matrices, has to generally be contemporaneous information that's directly from the site. We would be looking for any kind of record that speaks to work activities that engage with certain types of materials at the site that can help build out this information for the site exposure matrices.

Just some other things, there is a

help guide here that can help provide a little bit more in depth kind of information about the site exposure matrices. It's not exactly the most, you know, compelling read, but it is a very technical discussion about the site exposure matrices. And so those are some of the big features that I think I want to point out.

So right here is the entrance into the actual database itself. And what you're brought up with is a screen. Again, this is the primary search screen for the site exposure matrices. And you can see that there's all kinds of different information that you can start searching on.

The primary one that we're going to be focusing on, because this is the major resource for our claims adjudicators, are the DOE sites. These uranium mines, mills, and ore mining stations, these are all relating to RECA cases and the coverage that's under the RECA program under Part E. So these are generally not used as frequently as the DOE site links.

So here what we're going to do is we're going to talk a little bit about this particular employee. And this is what a claims examiner would do with regard to the case. Once they have all the information from the preliminary development in the case, they'll start screening though it to try to identify the toxins that we can link to this employee based on the information that's been supplied.

So we know that Savannah River is the site. And you can just take a look. These are all the sites that we have information on with regard to toxic substance inventories at each one of these sites. So you can just see, this is a huge volume of facilities.

And the important thing to understand is that each one of these sites has its own individual inventory of toxic materials based on the site exposure matrices. Some are tremendously voluminous.

You know, for Hanford I know that there are just tens of thousands of pieces of

information in the spreadsheet for that particular site. And you can see some of these other larger ones that we have in here, Hanford, Oak Ridge, the gaseous diffusion plants.

There's just a huge volume of information available. Some of the other sites are a little bit smaller, might not have as much information. But we're going stick with Savannah River, because that's where the employee was working.

So once you've clicked there, you're going to get this other search criteria. And so what you're going to be thinking about here, as a claims examiner looking at evidence, you're going to be trying to tie information that you have available in the case file to different things in the site exposure matrices.

So the first thing we know about this person is the type of work that they do. We know that they were a welder. So here's all the different things that are available about labor categories at Savannah River. So you can just

see, it can be a voluminous amount of information.

And what the claims examiner is trying to do is trying to identify in the evidence, okay, which one of these types of jobs is best linked back to that employee? And that information can come from any of the records that we get at the initiation of the case with the occupational history questionnaire and the records from the employer. But in this case, we're pretty clear that this person was a welder.

So once we actually start building our case, we can already start seeing that the system is already starting to say, hey, we know that these are the toxins that this welding labor category were exposed to at the site.

But we also know that this is a lot of information that might not be specific to this particular employee. So we start trying to build on the information that we know about this particular employee.

So we know that the employee had a

health effect which is chronic obstructive pulmonary disease. So here's the list of things that we have in the site exposure matrices which are known humanistic health effects.

These are things that Haz-Map is sort of our informative site for populating health effect data. This is the list of the conditions which we are confident have some sort of link to a particular toxic substance exposure. So this is all derived from human-based epidemiological data, this list of conditions.

So here we see chronic obstructive pulmonary disease. So again, you can see every time we had a filtering function it's going to continue to reduce down to a particular toxin. You know, so a welder with pulmonary disease, we already have asbestos and welding fumes.

But we also want to take a look at, okay, what else do we know about that employee? Based on their information, they were working in the 773 Laboratory. We can also click on that and see if there's any kind of change to this.

And so here is your profile based on just that information that we had from the employee. In the absence of any other monitoring data, we are pretty confident that that employee working at Savannah River as a welder would have had exposure to asbestos and welding fumes.

We would also look at any kind of other information about what we know about this particular employee, based on information that the employee may have provided or information in their case, to try to say did he engage in any of these very technically specific types of activities. Because we know that this type of work activity is directly associated with COPD.

This information is what then is going to populate into the profile or the characterization of the employee's exposure that would be then presented to either a physician, or it could even be something that the claims examiner would look at to determine whether or not, you know, a presumptive standard is met because of this exposure to asbestos. Because we

have a COPD presumptive standard.

So again, you know, the important feature here, because I'm running up against 15 minutes over a little bit, the important feature here is to get in here and really experiment with the site exposure matrices and be thinking about how would a claims examiner utilize information in a case file to build these kinds of profiles.

And there's lots of different ways that you can go about doing that. But we have to connect these search results from information specific to the employee.

And then once we get to the point where it goes to a physician, you know, what we would have done in this particular case, if it doesn't need a presumptive standard, we'd probably have an industrial hygienist go in and try to profile this asbestos and welding fume exposure or maybe talk a little bit about the extent of this kind of work activity that's linked back to that COPD condition.

So this is basically the function of

the site exposure matrices, just trying to get to these toxins that we can link to an employee. And I'm not going to go into a lot of the other details, but you know, it's just something that you have to sort of get a comfort level with in playing around.

But you can just see the sheer extent of information in here about asbestos and the different kinds of aliases that are available, same with welding fumes. And this exists for all of these sites.

So that's a very basic presentation. Hopefully, that's given you some sense of it. But I would definitely encourage folks to take a look at the training that's out there, also just get in here and start playing around with it. I think it's a terrific tool. It can help in a lot of cases.

And I will say that this tool is not a decision making tool. A lot of people get confused on this. This is merely an information resource that can be utilized to help inform the

factual framework on a case.

If we don't have information that's presented in the site exposure matrices, we can rely on data that we might have from the employee themselves, or information that corresponds with data specific to that employee in their employment records.

So if you don't have any history or information that the SEM can support in a case, we may turn to other information to support that. Oftentimes that occurs where you have a physician that might be identifying specific toxins that are, in that physician's opinion, linked to the condition but they don't correspond with the information in the site exposure matrices.

Under that circumstance, we would generally bypass the site exposure matrices, have an industrial hygienist, you know, characterize the exposures that the physician seemed to be focused on, and then ask that doctor, once they have an accurate understanding of the exposure level as far as their continuing belief, whether

the condition is work-related or not.

So I'm going to switch back over to the main page, Kevin. I see a question from Dr. Goldman.

MEMBER GOLDMAN: Hi, thanks for taking my question. Wow, this is a huge effort, obviously.

I have a question. On your welding case, for example, and this came up a little bit last year, suppose the person isn't a welder, but they happen to be a construction worker who is working in the area where the welder is. So you've got --

MR. VANCE: Right.

MEMBER GOLDMAN: -- a construction worker, and you get other exposures. But actually, the person is in that area and would have exposure to welding fumes. So what happens in that situation?

MR. VANCE: Well when I would apply that kind of scenario, what I would be looking for is information about what is that employee

saying they were doing, and what was their engagement in activities that brought them into proximity with welding fumes?

So in other words, if I'm looking at it and saying oh hey, this person in this job category, I don't see that coming up in their profile, well then like I said, there's lots of different filtering techniques.

So what I might do is, depending on the information in the case file, I might not search by labor category. I might search by work process. So in other words, hey, this person is in this labor category. But I'm not seeing that specific work function in that profile. But their information is convincing me that they were definitely engaged in some sort of activity that brought them into welding processing.

Well then I would search on the welding processing, not that labor category. And maybe I would search on, you know, the work process and the location. That might give me a sense of, you know, welding fume exposure. That

information then could be built into the factual framework I'm creating as a claims examiner.

And then an industrial hygienist would look at it and say okay, based on what their professional judgment is here, welding fume exposure is really dependent on your actual proximity to the actual worker, or however it's being evaluated by the industrial hygienist.

And they could look at it and say, well you weren't directly welding, so maybe your exposure level is moderate or, you know, whatever they want to do to characterize it.

But that's generally how it would work. We would first try to identify the toxin based on some sort of reasonable connection in the site exposure matrices to the data that we have from the employee. And then the industrial hygienist further refines that exposure, the extent and nature of exposure. Does that make sense?

MEMBER GOLDMAN: It does, but it sounds like it's a lot of work, and you have to

have a good occupational health questionnaire and different pieces coming in to call attention to the fact that the person might have been in an area where there were welders. So it's complicated.

MR. VANCE: Yes, it is a lot of work, and it is a lot of -- in the cases that I review, they're generally very complicated. You also have to consider the fact that you have to do this for every single location where an employee may have worked.

So you have a lot of employees like in areas where there are multiple sites where they might have been going to different locations. You have to actually do this based on lots of different factual information in the case file.

So yes, when you start looking at these cases and start getting a sense of what's involved, yes, you have to be very sequential in your evaluation of the case. And you have to be as thorough as you can in trying to figure out what's the most reasonable, factual presentation

of information that links back to these toxins. So it is a very laborious process.

CHAIR MARKOWITZ: Ms. Pope?

MEMBER POPE: Yes. So my question was similar to Dr. Goldman's. I was thinking about guards, radiological technicians that oftentimes, many, many, many times, would require them to go into areas, all the areas, guards went to all the areas.

And most times, the radiological technicians went to all the areas too. And they were in different proximities of the work that was being done. So I was just curious how the SEM would be applied to build that case.

MR. VANCE: Yes. I mean the number one thing is understanding. And this is why it's so critical. And this is why I think we've worked with the Board quite a bit to try to improve those occupational history questionnaires.

You know, we would depend on the specificity of the information that we're getting

with regard to what locations are you talking about having gone into. If you have a global statement, just saying I was everywhere, well that's not going to be very helpful for us to be able to build out a factual framework.

You've got to be to say okay, give me a sense of where it was you were, what you were doing, you know, give me any information about how long of a timeframe you might have been engaged in whatever activities.

Because we do need to have some sort of understanding of that in order to start saying okay, it seems to be that this person definitely was doing this activity that had this sort of connection to a site that we then can start building out information or relational connections on the site exposure matrices.

And that can be very difficult when we don't have any kind of very specific information. This oftentimes happens in survivor cases where we have a survivor that knew that their spouse did something that involved something at the

site. Well that's not going to give us much to go on.

And unfortunately in this situation, if we have no way to sort of do anything with the information provided, that might not result in anything that we can do with a particular case. So it is really critical to really get good information on any kind of work activities at the site in order for us to start building out that kind of information.

CHAIR MARKOWITZ: Ms. Whitten?

MEMBER WHITTEN: Hi. It seems to me that every time there's an update for the SEM that chemicals like drop off of certain facilities. Like you go to N Reactor now, there's less chemicals listed now as there were, you know, two years ago on the SEM. And --

MR. VANCE: Mm-hmm.

MEMBER WHITTEN: -- would it be beneficial in some way to put a date range filter on there as well, say somebody worked there in the '80s, or the '90s? And then those chemicals

that were present at that time would be populated? I don't know.

MR. VANCE: Well okay. So let me respond to that in a way that -- I'm just going to say this as delicately as I can. The more information that you have in the site exposure matrices, the more work you're going to have to do to try to figure out did this employee meet that particular component. So adding more date information and temporal data could actually work to the detriment of certain claimants, okay.

Right now, when we do this, we're not really looking at temporal data. We're just saying, well it's certainly possible this person would have had this exposure based on the profile information we have in the site exposure matrices.

If we start putting temporal data in there, first of all, that is exponentially more complicated and adds an element of complexity that would be very difficult, simply because you're talking about having to do that for every

one of these sites.

The second thing is that could also work in the detriment of some claimants, because then you're just going to say, oh okay, well this material only was used there through 1952. Well you worked in the '80s, so therefore we're not even going to consider that type of exposure.

You just have to be kind of careful with how much information that you want to work with in these cases. It certainly is a possibility that the Board could consider making that kind of a recommendation. But you need to just think about what effect that might have in the actual administrative process or reviewing the cases. Does that respond to your question?

MEMBER WHITTEN: Yes, that's something to consider. Thank you.

CHAIR MARKOWITZ: Mr. Catlin?

MEMBER CATLIN: Thank you. So fascinating database and work. What do you do to assure consistency between claims managers who are using this system that, given a lot of the

variety and the complexity of the searching, how do you try to ensure that, you know, there's consistency between what claims managers are finding? Or do you do some way of auditing that, or how do you ensure it?

MR. VANCE: Yes. Well that's a great question. I appreciate you asking it. There's a lot of responses I can give to that.

So first of all, you know, these cases are presented with a lot of unique features. So we're looking at consistent application of the process, not necessarily consistent outcomes, okay. So what we're looking at here is looking at the unique features of this employee. And every employee is going to present with a lot of unique variables that we've got to evaluate, all right.

It's up to the claims examiner who is reviewing this to build out the best factual framework for the case, then have an industrial hygienist review that and build out an even more carefully constructed characterization of the

exposure, then have a physician evaluate that and provide an opinion, all right, and then for us to make a judgment. Does the criteria under the law, is it satisfied for us to pay compensation to a particular employee?

Now Rachel, in her presentation yesterday, was talking about our decision process. The initial step that we take in advising someone whether we're going to accept a case or not is a recommendation that hey, this is our assessment of the evidence. Here is what we think is the best outcome based on the information that we have in your particular case.

The claimant then has an opportunity to look at that and say, you know, I agree. This is as good as it's going to get, and I'm not going to contest this. Or they can provide additional information, or they can do whatever they want with regard to contesting that decision.

It then moves to another stage which is the review by our appeals board. They're

going to look at any new information that the claimant has submitted. They're going to look at the rationale for the decision, that recommendation by the District office.

And they're going to independently evaluate whether or not they feel that that decision represents the best outcome given the program's policies and procedures. So that independent review process is one mechanism we use to try to get to the best, most consistent outcome of the process, all right.

The claimant then has other additional features that they can exercise in challenging that outcome. They can request an appeal of that decision, and then they have an infinite number of times to come back to the program asking for a reopening of that decision.

And so we do have claimants that are bringing forth new information intermittently where we have to then go back and look at that decision. And that could lead to a reopening of the decision. So that's one way that we go about

ensuring the consistency of the process.

The other thing that we do is we do engage in quality assurance. We have a quality assurance team looking at the decisions to make sure they conform with our policies and procedures.

And also speaking to just qualitative features, do we communicate information clearly, are we issuing decisions of a compelling basis that are persuasive in what it is that we've done to try to get through this complicated process?

But the program also has annual accountability review processes where we go through systematically and do an independent evaluation of the quality of the work. Those are available on our website, where we're looking at qualitative measures to make sure, hey, do we -- as an independent auditing function looking at this, do we agree that that outcome was appropriate and based on a good evaluation of the available evidence? That includes looking at how the site exposure matrices were utilized in

supporting a decisional outcome. So does that answer your question?

MEMBER CATLIN: Yes. I think you went much further than I was thinking about.

(Laughter.)

MEMBER CATLIN: So I appreciate that -

MR. VANCE: Well I want to make sure that, you know, I think there's a lot of confusion where people think, hey, well you made this decision in this case. Why, and this is a very similar situation, did it come to a different outcome? They are two distinctly different cases. And they can come to very different outcomes based on whatever variables are involved.

MEMBER CATLIN: Right. I'm thinking more of the same case and claims managers coming to different information out of the SEM. But let me just -- if I can just ask one more short question.

So when this information and other information you gathered goes back to the

physician for their determination, is that also shared with the claimant, with the worker? Or is it encouraged that the physician talk with the worker?

Because I could see this information would generate lots of very good questions if you were doing a follow-up occupational health history from the initial history. And this could be very useful in clarifying a lot of things.

MR. VANCE: Yes. I mean I agree. It would be very helpful if there could be definitely more opportunity to talk though a lot of these cases. And I would just say, like I said before, each one of these cases could be an endless opportunity to do all kinds of research.

But we've got to get through a process to get to that decision. So what we would do is give that factual framework that we've built to that physician. They are then on the hook to look at that information and render a decision.

So we need to have the best outcome that we can given the information that we have.

And we have to rely on the subject matter expertise of that qualified physician who is looking at the information and giving us sort of a compelling and convincing argument that, yes, this person's exposure, as you characterized it for the duration of time that they were working at the site, was definitely a significant factor in developing a disease. So it's a transactional kind of process.

MEMBER CATLIN: Okay. Thank you so much.

CHAIR MARKOWITZ: This is Steven Markowitz. We're going to take one more question from Dr. Bowman. But I just want to make a comment, mostly for the new Board members. Not every claim goes to an industrial hygienist or to a contract medical physician.

But you know, a claims examiner gathers all the information to make a decision and may not ask for an evaluation by the industrial hygienist or the physician. So just so you know, it's not automatic that the SEM

acquired information that is passed along to a different kind of professional beyond the claims examiner.

But Dr. Bowman, you have a question?

MEMBER BOWMAN: Yes, thank you. Actually there's two. One is, it's hopefully actually rather short, and it's a follow-up to the question that Ms. Whitten asked when she was asking about sort of whether or not there would be a temporal history in the SEM.

And then you explained that sort of there were certainly downsides to having complexities in the search process. But she made a, in essence, I think she said that over time the number of chemicals at some sites have been going down.

But as I understood your answer, that this is a -- there is no temporal, it's just a cumulative list of any chemical that's been at a site in history, can you -- I don't understand how a number of chemicals could go down then at a site.

MR. VANCE: Well, I mean, it's going to depend on the information that we have available about particular materials. So, I mean, you can have information from a particular document that is talking about something that is clarified in a later document.

So it could be that, you know, hey, the toxins that are associated with this job is very expansive based on this information. But then when we have new data come in that is more reliable and provides clarification of that situation, it could very well be that these connections are uncoupled, that we're going to basically say, hey, what we had before is not really accurate anymore because of this new, more detailed information. So the toxic substance will always be there. It's just what are the connections that it has with particular filtering of --

MEMBER BOWMAN: Oh, I see. So it's not the chemical that's going away, it's the connection. And that actually does ---

MR. VANCE: Yes.

MEMBER BOWMAN: -- lead me to my next question. You had showed us at the beginning of your presentation on the webpage that DOL is constantly seeking additional information and including information that would link toxic substances to disease. And there's certainly a good value of having those links on that site you showed us. Like, there was a great example being able to link those.

I was just wondering if you could talk about how, sort of how the merit of scientific information is deemed relevant. Is there a different type of data that is given more weight by the DOL and its contractors making those decisions, like a human epidemiological study versus an animal study, or in vitro studies? How is that weight of evidence looked at in the context of making that link on the SEM?

MR. VANCE: Yes. I mean, the data that is provided as the health effect data in the site exposure matrices is human epidemiological

data, all right. And so if you go into the site exposure matrices, you can go in and click on any one of those health effects. That'll take you back to the Haz-Map information available, and it'll give you that sort of background information from where that human epidemiological data is originating from.

And that's what we sort of utilized in reporting information in the site exposure matrices. But what really is important to understand is that that is just one mechanism for getting causal relationship data, all right.

We do allow physicians to provide individualized data that may not have any connection to epidemiological health effect data. So we are looking at a physician who can come in on a case and look at something and say, hey, you know what, I can just use one that I've seen before where it's, like, prostate cancer.

You know, human epidemiology is not going to establish a clear agreement that particular toxins are associated with prostate

cancer, okay. And so we don't have that kind of information available in the site exposure matrices.

But that does not stop a physician from looking at the particular exposures that an employee had and rendering a professional opinion saying, you know what, this material that this person has is a carcinogenic material in my opinion. This exposure that this person had could certainly have aggravated or contributed to the development of prostate cancer, and speak to health, you know, medical health science data that supports that position.

Because our standard is not pure causation, it's causation, contribute, or aggravate. So this contribution and aggravation component is a much more flexible standard. So what the site exposure matrices is doing is telling you, hey, this is the data that we are confident in with regard to a relationship between disease and toxin.

But that does not prevent a physician

looking at other medical health science data, applying a very unique analysis of a particular employee, to come to that aggravation and contribution relationship.

MEMBER BOWMAN: Got it. Thank you.

MR. VANCE: Does that make sense?

MEMBER BOWMAN: Yes, it does.

MR. VANCE: And what I would encourage you to do, there is a section in our procedure manual in Chapter 15 talking a little bit about that toxicological analysis that we go through. So I think that would be something you might want to check out.

MEMBER BOWMAN: Thank you.

CHAIR MARKOWITZ: All right. This is Steve Markowitz. Thank you very much, Mr. Vance. That was an excellent presentation of a complicated topic in a relatively short period of time. I'm sure there will be additional questions in the future.

So we're going to move on to Board discussion. And the agenda shows a preliminary

list of the topics that we'll discuss.

I just want to preface our discussion of particular topics with a couple of things. One is, moving forward after this meeting, the Board has used in the past a couple of mechanisms to continue to work between full Board meetings.

One mechanism has been, the first Board, a couple of years ago, used subcommittees. Those subcommittees actually matched the four major tasks of the Board. Those subcommittees took on several different, multiple topics. They were sort of broader in scope than what the last Board used, which was working groups.

And those subcommittees explored various issues and would formulate options for the full Board to discuss. Those subcommittees were subject to FACA rules as described to us yesterday. Those were open meetings, the public could participate, meaning, in addition, that they were scheduled at least six weeks ahead of time, because those meetings have to be published in the Federal Register.

And the second mechanism, which is the working group, took on more specific, and there were various working groups, they took on more specific issues, usually limited to a single issue. It didn't necessarily come up with options for the Board. But they did background research and explored particular issues.

And those working group meetings were not subject to FACA, they were not published in the Federal Register, meaning that there needn't be a six-week or more planning phase, providing additional flexibility, although they were not open to the public.

The other aspect of the working group is that, mind you, these are all subsets of the full Board. Whenever the full Board has a discussion, that's a full Board meeting. The aspect of the working group is that they could review documents and openly discuss them even if those documents would otherwise not be available to the public.

For those documents, that obviously

couldn't be, those couldn't be discussed in any particular way at an open meeting. So those are the two, our two options or any other options we might imagine.

The other thing I just want to let you know is that typically the Board produces two kinds of products. One is recommendations to the Department. And that constitutes our advice to the Department regarding the program.

We formulate that language together. We vote on that specific language. And that's accompanied by a rationale which we usually discuss, although the particular wording of that rationale is not agreed upon by the full committee. It's drafted or then finalized by myself, or by another Board member.

Secondly, we submit data requests, or requests for claims to review, to the Department. And that is that there's a formal mechanism for that where we describe what we want, the rationale, and how it falls within the purview of the Board. So those are two mechanisms that we

use for communication with the Department.

Ms. Rhoads, typically during these meetings, she keeps track of our action items which mean recommendations, mean these data requests, or claims review requests, or the like.

So that said, let's move on to the topic. I have a PowerPoint. Now, some of these topics, actually all of them pretty much are left over from the past Board. We couldn't quite finish them out --- so Kevin, if you want to -- couldn't quite finish the matter, but we got very close.

And I appreciate that it's a little awkward for five new Board members to be seeing some of these issues or the first time. On the other hand, we would like to come to closure on some of these issues today. Let's not say that they're in your future.

If you could show the first slide.

So there was one recommendation that we made to the Department --- Kevin, can you move that ahead, okay --- on site-wide job titles. So

if you could go to the next slide.

So a year ago we recommended that the Department, as part of the SEM, identify certain job titles as DOE sites that were likely to work throughout the site and would have potential exposure to many or all toxic substances at those facilities. And this topic came up just briefly in the last discussion with Mr. Vance.

So we're talking about firefighters, we're talking about health physics technicians, we're talking about security guards who typically would, over time, go to different parts of their particular site.

So our response from the Department in March of this year was that actually the SEM is based on, and this is the highlighted area, specific data establishing that that particular job category at that particular site is related to specific toxic substances at that site, and that the Department relies on objective data that supports each and every piece of information that's entered into the SEM database.

So the problem was, the problem became that thinking about these site-wide job titles, it was a question of really what was the level of documentation for those job titles at various sites.

And if you go to the next slide.

So what we did as the Board was to look at some of these job titles at some of the sites, figure just a few sites, several of the larger sites, actually. And previous Board members have seen this before, because we showed it before.

But we looked at three sites in particular, Portsmouth, Paducah, and Oak Ridge K-25. Those were all gaseous diffusion plants. So they pretty much did the same thing.

At Oak Ridge there was also this pilot centrifuge operation. This is about separation of isotopes of uranium. But Portsmouth and Paducah were quite similar, and most of K-25 was quite similar to Portsmouth and Paducah. And together, they're called the gaseous diffusion

plants, the GDPs.

So if you look at the security guards, in Portsmouth in the SEM there is 61 agents that are listed as representing potential exposures. If you look at Paducah, it's 29. And if you looked at Oak Ridge, it's ten. So you have a six-fold difference in the same job title, job category at these very similar locations.

Similarly, if you look at health physics technicians or health physicists, they're usually often combined at the sites. At Portsmouth, there are four agents listed as representing potential exposures, Paducah, 18, and Oak Ridge, 36. So it was about a nine-fold difference, again, among these three very similar work sites.

And then actually I just, we included Savannah River and Hanford just to give you a sense of the variation. Those are very different operations from the GDPs. But you can see, for instance, Savannah River, the health physics technicians, 152 agents, and at Hanford, which

appears to be quite well documented, or at least there's a lot of documentation, that there were over 2,000 agents that were, that are listed in the SEM.

You can go to the next slide.

So let's just drill a little bit more into this issue of security guards with the three GDPs. And these are the agents that are listed for the GDPs, for the guards. Actually, in K-25, if you look at it, those make sense for a guard. Those actually seem to be, hopefully, very guard-specific kind of exposures.

In Paducah, and in red are indicated the overlap among the three GDPs in terms of the exposures. So the red text just indicates pretty much the same agents that are rotated at all three sites.

In Paducah, there's acknowledgment that there's potential exposure to asbestos, and a number of uranium, and a number of transuranic, and some metals. And in Portsmouth, it gets even broader. And you can see the

diversity of agents that are referred, that are there.

Now, this presumably is due to different levels of documentation that are available to the SEM. Although, frankly, it's hard to understand why a security guard at very similar work sites would have this kind of diversity of exposures in reality, not in the level of documentation but in reality.

Next slide.

So we then requested this documentation in the SEM so we could understand this better. And we requested it just for, I think, security guards and health physics technicians. This was in April of this year.

And next slide.

And we received a response in November, this month actually, that the DOL provided us a list, 258 sources of information on toxins for guards and health physics technicians at the GDPs.

So my first reaction to this is -- and

they gave us the list. We're not sharing it publicly, but they gave us the list. The Board obviously doesn't have the resources to examine 258 sources to identify the information that's relevant to the questions, very targeted questions, but we don't have the resources, nonetheless.

And then it occurs to me that actually what we're likely to find is exactly what the experts in the SEM say, which is that the SEM depends on objective data, objective information provided to them. And the level of documentation varies among the sites. Some sites are a lot better documented than others.

And therefore, what we're likely to find, if we were to look at the 258 sources, that we would find that there are tremendous variations.

And so the next slide.

So I think, personally I think it's not worth our while, actually, to examine that documentation or, rather, we would have to

request the Department's contractor to identify, within those 258 sources, where exactly security guards and health physics tech appear. And then we would review the work that they've done. That would take months, probably.

And so my thinking now is that the problem is that the SEM is constructed on available documentation. And the issue with these site-wide job titles is that there just isn't all that much documentation or that to the extent that it exists it's quite variable between DOE sites.

And so the issue really is not the level of documentation. But the issue is can we make an exposure presumption about those site-wide job titles. Can we presume that security guards, that firefighters, that health physics tech, presume that they, over a period time working there, visit many, many locations at the facility, at their particular facility, and that therefore they had potential exposure to many or all of the listed toxic substances at those

facilities.

Now, this would mean that, in effect, the claims examiner would likely bypass the SEM, or look at the SEM in conjunction with the exposure presumption, and then pass along the claim to an industrial hygienist whose job would be to figure out was there a sufficient dose, right, was there intensity, frequency, duration that would permit the causation opinion?

But that determination of dose is separate. This is a question of recommending that there be a presumption as if they have exposure, a broad set of exposures at those facilities. So I would open it up for discussion.

And actually, I'm sorry, the people who have their hands raised from before, if you could lower your hands and then raise them again. That would be good.

Ms. Whitten, I see your hand up. Do you have a question or comment?

MEMBER WHITTEN: No, sorry, just

forgot to take it down.

CHAIR MARKOWITZ: Yes, yes. So what do people think? And by the way, this is a recommendation that if possible, if we're comfortable, then I think we should vote on today. If not, then we can do it next time. But we've spent a fair amount of time on this issue, I have to say.

Dr. Van Dyke?

MEMBER VAN DYKE: So I just want clarification. When you say potential exposure, it's just they had the potential for exposure, and then it goes out to further discussion on matrix and infrequency? Or where does it go from there?

CHAIR MARKOWITZ: Well, I mean, I'm going to, I think, I'm going to make a comment, and then ask Mr. Vance to amplify if necessary.

The SEM is about potential exposures. That's not my characterization. I think that's their characterization. And the issue of, so there's a categorical identification, this person

in this job title had that exposure, or had that potential exposure that, you know, is linked to a particular disease.

The question is, was there sufficient exposure, is not answered in the SEM. And if the claims examiner has that question, they then pass it along to an industrial hygienist or a contract physician to make that determination. I think that's the way it works.

MEMBER VAN DYKE: Okay.

CHAIR MARKOWITZ: Mr. Key?

MEMBER KEY: Yes, Dr. Markowitz, I agree with your approach on the exposure presumptions. For those at Paducah, I would also list the fire department at Paducah.

We also, in the SEM at Paducah, have an operator technician classification. I don't know what that means. I've been there for 46 years. I've negotiated several contracts. We had an operator B classification, but we have never negotiated an operator technician position or classification at Paducah. So why it's listed

in the SEM as that is unclear.

And also, contained within the SEM at Paducah for the laborer category, which is a down and dirty, hired in as a laborer under a lot of the jobs that those workers had to do, and then 1,1,1-Trichloroethylene is not listed in the laborers matrix in the SEM, though it is in the janitorial. And that is not accurate.

But I do agree with your approach for the different sites and the worker classification and categories. Having six-fold differences, it needs to be corrected.

CHAIR MARKOWITZ: Thanks. So, Dr. Bowman, go ahead.

MEMBER BOWMAN: Yes, I just, one little bit of extra data, and then I was going to comment on this idea. If you could go back to Slide 5, that lists the three sites, and it has the overlapping color between the toxic agent. This one here, yes, thanks.

If I understand the proposal that you put forward just now, is that you would say that

someone with a job classification, for example a security guard, could be exposed to any chemical at that site, because they move throughout that site in the course of their job.

But what I was wondering in the context of this list, where you show the chemicals that are environmental factors that are shared between these three, is the ones in black, I just, is the absence of the ones in black, the ones that are unique because those chemicals aren't even listed as chemicals present at the site at all to anyone?

Or are there other chemicals like that, meaning there might be missing chemical data at the sites? Or is it only that it's not listed as a potential exposure for that job category at those sites?

CHAIR MARKOWITZ: Well, so the GDPs were very similar. If you look at Portsmouth, you see a bunch of metals, including nickel, chromium, which were central to the GDPs process, certainly at K-25 and the other GDPs. And then

you see a bunch of solvents, and those were uranium, yes, those were used at K-25, to be sure.

And, you know, we could go to the SEM and look at it, but I'm sure we're going to find that those very common agents would be listed in the SEM, not for guards, because that's the issue. But they would be at that site.

So it's not the case that most of the agents that appear in black for Portsmouth did not exist, were not used at Paducah and K-25.

(Simultaneous speaking.)

MEMBER BOWMAN: Yes, thank you. Yes, that answered that question. So then what I was going to suggest, so the proposal you have forward would be just for any chemicals listed for a site, that an individual in a job category that would be in many locations at that site would potentially be exposed to all chemicals at that site. Is that a correct summary of your proposal?

CHAIR MARKOWITZ: Yes. If we could,

Kevin, if you just move ahead to the recommendations, we can look at the language. But, yes, that's the gist of it, which is that there are a limited number of job categories, by the way, that would fall into this.

MEMBER BOWMAN: Right, right, right.

CHAIR MARKOWITZ: But, yes, ones that are part of -- the nature of what they do involves likely transit throughout much of facility.

MEMBER BOWMAN: Right.

CHAIR MARKOWITZ: Those are the people.

And let me just add one other aspect. You know, this idea of exposure presumption, which we'll keep coming back to, is very important. Because it gets over some of the limitations of the SEM.

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: And in fact, it's in the original Act. For the GDPs there was the presumption, because of lack of radiologic data,

the presumption that if they'd worked there for 250 days or more prior to 1992, that they had significant exposure to radiation and that they would therefore receive compensation for one of 22 cancers.

So the idea of exposure presumption was built into the Act. And in Chapter 15 of the procedure manual, there are any number of exposure and causation presumptions. So this is a familiar route, I think, for the program, to look at the situation.

So other comments or questions?

MEMBER BOWMAN: Right. So what I was wondering is on the sites that apparently have, that very likely then have better quality data, right, the site in which the security guards were listed as having more chemicals, it is likely just that quality of that data was better, to better represent the actual potential exposures.

But is there not a way to say these three sites are the same? And so therefore, security guards at any of those sites could be

deemed as potentially having exposure to whatever the most exhaustive list is, like basically the overlap of all the chemicals for all security guards across all three sites, any security guard at any of those sites might have been exposed to any of those chemicals. Therefore, yes, do you understand what I'm asking?

CHAIR MARKOWITZ: Yes. Let me just comment and then move on. Yes, that's very clever actually. The problem is that approach isn't entirely generalizable, because most sites are pretty unique. I mean, Rocky Flats is not like Savannah River, is not like Hanford, is not like Los Alamos. The GDPs are the only ones that are fairly comparable. So we just couldn't generalize that approach elsewhere.

MEMBER BOWMAN: Got it.

CHAIR MARKOWITZ: Dr. Silver?

MEMBER SILVER: Yes, on the audio here. I think it's a brilliant approach. Because going way back we know that the Manhattan Project and then the AEC complex was designed

with redundancy in mind. So that if we got into a hot war with our adversaries, and missiles landed on one of the gaseous diffusion plants, there would be two more still working.

And if we can get this idea adopted here for the strongest case, there may be other unit processes that represent the redundancy of the DOE complex. I agree with you not as clear cut as this, but it may be an approach that holds promise for other things like plutonium metallurgy which was done at two or three sites.

And one other comment, if we go back to the slide with the red and black ink for a moment, please.

CHAIR MARKOWITZ: No, but--

MEMBER SILVER: Yes, back --

CHAIR MARKOWITZ: No ink used, but go ahead.

MEMBER SILVER: Okay. Going back to almost exactly a year ago on the morning before our tour of the Paducah plant, it was pretty well established in our conversation that massive

amounts of centered nickel were used at the Paducah gaseous diffusion plant. So it really strains credulity that someone who went through that plant on a regular basis would not have had nickel exposure.

It shows up at Portsmouth, so I think it really is a function of who submitted what at the SEM website and what DOL got when they went out and did the round tables. It doesn't really look like reality.

CHAIR MARKOWITZ: And what existed varied among the sites. Mr. Catlin?

MEMBER CATLIN: Thank you. Yes, interesting idea. Did I miss it, is there an agreed-upon list of site-wide job categories, or at least a list that's generally agreed on?

CHAIR MARKOWITZ: Yeah, that's an excellent question.

If you could just move the slides ahead to the recommendation.

So no, there is not an agreed-upon list. And this recommendation doesn't specify

that.

MEMBER CATLIN: Okay.

CHAIR MARKOWITZ: There are some obvious ones like firefighters, like guards, like health physics tech, and some others that Mr. Key, and Ms. Pope, et cetera, could probably name better than I.

If the Department accepts this, then they would presumably identify those job categories. And then we would get to weigh in on that or they would invite our opinion upon acceptance of the recommendation. And we could do so at that time. To identify those now would prolong the process.

MEMBER CATLIN: No, I agree. Thank you. And let me just be clear. So the result of this recommendation really is that the case would then be kicked to the industrial hygienist to do a more in depth review without using the sort of filter of the SEM, where the case might not get kicked to an IH. Is that right?

CHAIR MARKOWITZ: Well, I can't answer

that exactly. Mr. Vance maybe could a stab at that. But I'm going to put him on the spot because this would have --

MR. VANCE: No, I can answer that one. So the claims examiners in the case are the ones responsible for building out the framework. So they're basically going to identify, hey, here are the toxins that we think are the primary things that we need to be worrying about here with regard to the likelihood of there being a connection between the potential exposure to that toxin and the disease.

What the industrial hygienist is going to do is going to take those identifying toxins that the claims examiner has sort of done that due diligence in looking at, and then take that and provide additional details that the physician then can consider and weigh in an opinion on causal relationship.

So the claims examiner is the responsible party for evaluating the evidence and trying to identify and encapsulate the things

that are going to have the best likelihood of producing a positive outcome. They're going to have an industrial hygienist profile those and then have the physician evaluate that for that causal relationship opinion.

CHAIR MARKOWITZ: Thank you. Dr. Friedman-Jimenez? Dr. Friedman-Jimenez, did you have your hand up?

MEMBER FRIEDMAN-JIMENEZ: I did, but Mr. Vance actually answered the question. I was just concerned about the process after identifying a potential exposure. What then happens next? Does it go straight to the claims examiner? Or would it preempt the referral to the industrial hygienist, because now the exposure has been identified? Or would it actually cause referral to an industrial hygienist?

So I think this is an important series of steps. And Mr. Vance explained it so --

CHAIR MARKOWITZ: Great. Dr. Bowman?

MEMBER BOWMAN: Yes. So just, I think

there's a very strong rationale behind this recommendation. The one thing I wanted to note at the end, it says to many or all, which is a little, which is not very precise.

And I was wondering if we could instead think about changing it to all toxic substances at the facilities except substances that are at only very specific locations where this job category would never have been allowed to enter.

If there's something like that, you know, those would not need to be there. But literally say all unless, for those chemicals that are, you know, at only specific spots, that this entire job category would never have been able to access. So it's very precise.

CHAIR MARKOWITZ: Right, right. So this is a friendly amendment. And I understand the intent. And it makes sense to me.

My concern and question really is, in practice, thinking about firefighters, are there locations really where they're not permitted to

go? I'm sure there probably are some in those which, in certain radioactive substances.

And the question is who identifies, I mean, how much information do we really have to be able to identify those locations? So it's really the implementation which I think it might raise some problems. But let's hold on to that for a moment with further comments. And then we can look at it and fine tune the language.

Ms. Whitten?

MEMBER WHITTEN: I just had a comment about whether the Board would be able to review the recommendations before they're implemented?

CHAIR MARKOWITZ: So which recommendation? I mean, the one we're looking at now? Or are you talking about the ---

MEMBER WHITTEN: I mean the presumptions, before they implement them.

CHAIR MARKOWITZ: So in other words, if we move ahead with this recommendation and it's accepted, and then the Department goes and identifies those job categories, are you asking

whether we would get a chance to look at their proposed job categories?

MEMBER WHITTEN: Yeah, to get a chance to look at the presumptions that they put together.

CHAIR MARKOWITZ: Right, the language of the presumption. That's a question for Mr. Vance.

MR. VANCE: You know, I think that in the interaction with the Board, you know, the recommendation is made, and then the Department of Labor would assess what they think or, you know, what we would think would be the appropriate response to that recommendation.

If it would be a recommendation that would be made that we agreed to, and then have a caveat about, like, additional effort in understanding the specific labor categories, that might be something that we would follow-up with the Board.

But if the Board makes a recommendation that is actionable by the

Department of Labor, and we agree to it, it could very well be that we would proceed with a procedural change. And then the Board could come back and take a look at that and say, well, okay, you didn't get exactly what we wanted, or yes, that's exactly what we intended.

So my one comment is specificity is very helpful in any of these recommendations. And, you know, I think it's a collaborative process. So I would say we will take whatever recommendations and try to act on them as efficiently as possible if we feel that they are agreeable to, if that makes any kind of sense.

CHAIR MARKOWITZ: Sure. So we're heading towards a vote on this. But I want to get back to Dr. Bowman's proposed modification.

So Kevin, can you get into this file and actually type in changes?

MR. BIRD: I will pull up a word document right now. And we can --

CHAIR MARKOWITZ: Well, yes, it's a PowerPoint.

MR. BIRD: Yes. I'm just going to, I just typed it out separately. So hold on one second.

CHAIR MARKOWITZ: Yes, okay. Okay, great. So if you could just make it a little larger. Perfect.

So, Dr. Bowman, let's entertain the language that you want to alter.

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: So it would be, yes, why don't you go ahead and play with it.

MEMBER BOWMAN: So I thought you made a good point, because it does relate on the quality of the data available to make that statement. And so I just thought that many or all was vague. And so if we could change it to, how about exposure to all listed toxic substances at those facilities, and then maybe except substances for which clear evidence is available to suggest exposure could not have occurred.

MR. BIRD: Sorry, can you run that back for me one more time?

MEMBER BOWMAN: Yes, except substances for which clear evidence is available to suggest exposure could not have occurred for that job category. So therefore it limits it to only things in which there is positive evidence to say it should come off.

MR. BIRD: Okay, I'm sorry, just one more time. You're ---

MEMBER BOWMAN: Yes, sorry, except substances for which clear evidence is available to suggest exposure could not have occurred for that job category. Sorry, the word suggest is there twice or something. It could probably be wordsmithed a little bit more. That's just sort of the idea.

CHAIR MARKOWITZ: So, Steve, Markowitz, I get the logic of that. Where I get stuck is thinking about the availability of evidence. And so you'd have to have affirmative evidence that the guard could not have ever had exposure to a particular toxin. And I don't know what that evidence would look like.

MEMBER MIKULSKI: I agree. This is Marek Mikulski. I don't think, from my knowledge and experience with the historic documentation and exposure information in any of these sites, I don't think that there is truly anything that would indicate that the exposure was not present in that particular job category. In other words, to me all listed toxic substances at those facilities suffices.

MEMBER BOWMAN: Yes. If that's the case, that there would not be such evidence, I would agree. I was thinking just broadly there may be categories where that individual in the job category could never have entered a particular room, and that room was the only place that chemical was found, it would then give that possibility for such examples.

But otherwise, because the language I'm suggesting would require positive evidence, for the most part that last phrase would not be used. It would just ---

CHAIR MARKOWITZ: Yes. Steve

Markowitz again. You know, what happens at most of these sites it that there's partial information about use and exposure. And so there's a lot that's not known.

But I think this issue you're raising would actually be addressed by the industrial hygienist in the evaluation. Because even if we moved it to all, and so we moved the most to all, and just used all ---

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: -- so that would make it more clear.

MEMBER BOWMAN: It would.

CHAIR MARKOWITZ: What's going to happen is the industrial hygienist is going to say, well, the --potentially all, but was it the sufficient dose?

And then they're going to say, well, probably not, because this particular radioactive material was only used in one location. And the firefighter never would have gone there. You know, that kind of judgment.

So I think that, I don't think we need to specify that here. Because I think it's going to be taken care of in the claims evaluation process.

MEMBER BOWMAN: Yes, okay.

CHAIR MARKOWITZ: So further comments?

Well, actually, if you can remove the second paragraph, Kevin.

And so I need someone to propose that the Board accept this recommendation. So we're going to move to further discussion. We're not closing out discussion. I just need to have this, as a matter of procedure I need to have it proposed that we accept and propose this.

MEMBER BOWMAN: All right, this is Aaron Bowman. I propose it.

MEMBER FRIEDMAN-JIMENEZ: This is George Friedman-Jimenez. I move that we accept this proposal.

CHAIR MARKOWITZ: Okay. Is there a second?

MEMBER BOWMAN: This is Aaron Bowman,

I second.

CHAIR MARKOWITZ: Okay, thank you. Okay, further and final discussion? Ms. Whitten?

MEMBER WHITTEN: So are we just talking about certain job categories still?

CHAIR MARKOWITZ: Well, yeah. The way it reads now it would be limited to job categories where the occupants of that category likely work throughout the individual sites, yes. We're not specifying what those are at this point, but yes. Go ahead.

MEMBER WHITTEN: Painters, janitors, all of those different classifications?

CHAIR MARKOWITZ: I'm sorry, could you, you're not coming through all that clearly. If you could --

MEMBER WHITTEN: Do you want to put certain job categories at certain DOE sites, or is that too vague?

CHAIR MARKOWITZ: Well, personally, I think it should be at all the sites where these kind of site-wide job categories exist. So I

don't want to limit it to certain DOE sites, not in the Department's thinking about it.

And as a recommendation, we've now limited to the job categories those workers who likely worked throughout the individual sites. So that clause limits the job categories we're talking about.

MEMBER WHITTEN: Okay.

CHAIR MARKOWITZ: Does that answer --

MEMBER WHITTEN: Yes. Thanks, thanks for that.

CHAIR MARKOWITZ: Other comments, questions?

Okay, so if not, then let's take a vote on the recommendation as we see it. For those perhaps members of the public who can't see what we're talking about, the recommendation is that the Board recommends that the Department develop and implement exposure presumption indicating the job categories at DOE sites whose workers likely worked throughout their individual sites, had potential exposure to all listed toxic

substances at those facilities.

So I think, Ms. Rhoads, if you do a roll call --

MS. RHOADS: Sure. Okay, we're voting on this recommendation now. Dr. Bowman?

MEMBER BOWMAN: Yes.

MS. RHOADS: Mr. Catlin?

MEMBER CATLIN: Yes.

MS. RHOADS: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MS. RHOADS: Dr. Goldman?

MEMBER GOLDMAN: Yes.

MS. RHOADS: Mr. Key?

MEMBER KEY: Yes.

MS. RHOADS: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MS. RHOADS: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MS. RHOADS: Ms. Pope?

MEMBER POPE: Yes.

MS. RHOADS: Dr. Silver?

MEMBER SILVER: Yes.

MS. RHOADS: Mr. Tebay?

MEMBER TEBAY: Yes.

MS. RHOADS: Dr. Van Dyke?

MEMBER VAN DYKE: Yes.

MS. RHOADS: Ms. Whitten?

MEMBER WHITTEN: Yes.

MS. RHOADS: Okay, that's everyone. It's unanimous.

CHAIR MARKOWITZ: Okay. Thank you. So I'll write up a rationale for this.

If you could go back, Kevin, if you could go back to the PowerPoint, next slide. So the others, this is just a variation. We can go to that next slide. The second issue is, if could you go to the next slide, just so I can see what's next. Yes.

So the Board requested resources. The Board, at present, doesn't have any funding to secure any assistance under our direction to do background research with the claims and the like. And a year and a half ago, actually, the Board requested resources.

This was our recommendation. We're not going to revisit this recommendation. What we're going to discuss really is the follow-up to this. But it's resources that would allow us to do our job, basically.

Next slide. And maybe, okay, so we're going to move to a Word file, Kevin, the one that says ABTSWH draft rec and, oh, I'm sorry, not that one, resource request, we asked resource request. So let me ---

(Simultaneous speaking.)

MR. BIRD: Actually, I'm pulling it up now.

CHAIR MARKOWITZ: -- while you're doing that. Yes, fine.

So where this stands is that the Department has invited us -- I'm not sure whether this recommendation has ever been officially accepted or not. Mr. Vance may know. But they did invite us to, well, sort of advise us about the process, which is prolonged in terms of getting into the budget.

But they asked us to produce a statement of work. And this is a page-plus of kind of the work that we envision, at least as it reflects prior Board activity.

And I don't think we need to walk through all this. The previous Board did look at this in April and commented on some aspects. And those comments were included in this description. But there are several functions that we envision.

One is to organize and review claims, abstract information for claims. It's very time consuming. The previous Boards looked at many claims of various categories, COPD, lung cancer, beryllium disease, sarcoidosis, silicosis. And while it's not on our meeting agenda, it may well come back to our agenda to review claims for whatever reason.

And it's extremely time consuming. And we would need some help to do that, not just that it's time consuming, but we could actually do, I think, a better, more systematic analysis

if we had the time and assistance. And we describe the tasks involved and the expertise required.

So if you go, scroll down a little bit.

The second major activity would be, I think, Dr. Goldman's, her presentation which is coming next year, see evidence of sort of this area which is that we're asked by the Department, and sometimes on our own, think that certain scientific, technical, medical aspects of the program need to be evaluated.

And for instance, the Department has a new request to us about impairment evaluation. Although I don't think we necessarily need support for that. But it's just an example of requests made of us that it'll be helpful if we had access to people who could help us look at that information. And then again, we list what kind of skills are required.

And then thirdly is a catch-all, which is other tasks as deemed necessary by the Board.

Because our work may evolve over time, and maybe that some additional assistance would be needed to do that work. So I guess we could spend a few minutes today, if necessary, if people have any questions about this, or any suggested language.

Our goal is to move this on to the Department. This is the statement of work as we perceive it for which we would need resources, and then get into a iterative process with them about whether any changes in this description are necessary, or what additional information is needed.

So if you could scroll up, and people could look at this.

I also think that if it's a question of fine tuning this language at all that, you know, I could receive, by way of email, some suggestions prior to finalizing this. But if there are any major omissions or questions, it would be useful to discuss now.

MEMBER BOWMAN: This is Aaron Bowman.

CHAIR MARKOWITZ: Yes.

MEMBER BOWMAN: I had a question. This seems very reasonable, and the rationale as well, in terms of assistance to the Board in this matter and the review of data and such.

I was just wondering, in terms of our request, who would manage if, let's say, the request was fulfilled, who would manage the time of individuals working for it? Would that be the Board? And should there be some statement in here about the management of those staff that we might get to work in these matters?

CHAIR MARKOWITZ: Yeah, no, that's an excellent question. And we really haven't explored the options for that. This is a statement of what we would actually do. I think what you're raising is an important issue of how it would happen.

I think our implied conception of this is that we would, the Board would control the agenda of these resources. And how exactly that happens administratively, I don't know.

So I think that is a very important

issue that we need to get to. And I think once we submit this and engage in some more back and forth with the Department, you know, let's figure out what the options are.

MEMBER BOWMAN: Okay.

CHAIR MARKOWITZ: Any other comments, questions?

So again, we don't need to vote on this. But I plan on submitting it, I would say, within a week. So if you have any word changes or additions that don't substantially change this, please email them to me, and I'll incorporate those changes, and then send this to the Department.

MEMBER GOLDMAN: Is this going to be sent to us to look at, or do we already have it?

MS. RHOADS: I think you already have it. But I can send it again in its own email if that's easier.

CHAIR MARKOWITZ: Yes. I think also, I think this is on our website. But there are so many sources of information coming to us in

different ways, so yes, Ms. Rhoads, if you could send it out, that would be great.

And in particular, look at the tasks and the expertise. If there's anything that's missing, then that would be useful.

Okay, so if we go back to the PowerPoint, I don't think we'll -- the next topic is going to be the issue of the IARC Group 2A carcinogens. But it's five of 1:00. So I propose actually that we take a break.

And since we did run over on the SEM presentation, for good reason, I wondering whether we can shorten our break a little bit. It's five of 1:00. Do the people feel that coming back by 1:15 --

MEMBER BOWMAN: That sounds good. That's good for me.

CHAIR MARKOWITZ: Is there any major objection?

Okay, so we'll do that. We'll reassemble at 1:15. Thank you.

(Whereupon, the above-entitled matter

went off the record at 12:55 p.m. and resumed at 1:15 p.m.)

CHAIR MARKOWITZ: So, our next topic is going to be, the Boards looked at certain carcinogens, cancer-causing chemicals, or agents, identified in an authoritative source in the International Agency for Research on Cancer, IARC.

And just a very brief background. Some time ago the Board raised the issue of whether we SEM database in the underlining Haz-Map database, which ties together exposures with diseases, was fully inclusive of recognized relationships between carcinogens and human cancer.

And referred back to a 2013 report by the Institute of Medicine, which had looked at the SEM and recommended that certain recognized authoritative sources be included in the SEM. Including IARC, including the National Toxicology Program, documents including others from EPA, from the California Health Department and the

like.

So, the Department of Labor asked us for assistance in wading through some of these sources. And the first was take a look at the IARC carcinogens. So now I will turn it over to Dr. Goldman.

MEMBER GOLDMAN: Thanks very much. Do I have, should I show my own slides or is Kevin or somebody going to --

MR. BIRD: Yes. Dr. Goldman, this is Kevin. This is completely up to you. I'm happy to show the presentation and then you can just say next slide when you'd like to advance, or I can give you control. Whatever you prefer.

MEMBER GOLDMAN: Okay. If you've loaded them, if I just hit the arrow key, can I now control it?

MR. BIRD: Give it a try. I don't know if you can right now. But --

MEMBER GOLDMAN: No. That's okay. All right.

MR. BIRD: I can make you --

MEMBER GOLDMAN: Yes?

MR. BIRD: Here, let me, I can go ahead and make you a presenter. So let's see. Go ahead and try it now.

But you can also use, on the left-hand side of your screen, there is a little popup window that has the slide number when you move your mouse to the left.

MEMBER GOLDMAN: Right, okay. Great, I've got it.

Okay. So, thank you very much, Dr. Markowitz. I just want to say that the question that was presented when we had the subgroup, which was, and I'm going to discuss it a little bit more, what is meant, because some people may not be as familiar as others.

But the question particularly that we were addressing is, should the IARC Group 2A carcinogens be added to the SEM, making them two specific cancers?

And I want to acknowledge that this began last year. And I sort of came in on the

group about midway.

And the leader on the group was Mani, Dr. Mani Berenji, who was phenomenal. And a lot of the work you're going to see she did.

And also, we had two other people on the group, Duronda Pope and Dr. George Friedman-Jimenez, who brought other points of expertise to this process.

And, Dr. Berenji decided not to continue with the Committee this year, but I do want to thank her, because I think she did a tremendous job. And you'll see how much work there is to all this.

So, basically I just want to introduce this. Even though the SEM is using the Haz-Map, we were looking at the International Agency for Research on Cancer.

And this is a very well-established international group that brings quite an intense and comprehensive review of literature to answer questions about the level of risk from certain agents.

And this agency groups things, and actually, EPA and others tend to also at least use this grouping. Which is Group 1, is felt to be a carcinogenic to humans. Felt to be enough data, both from humans and/or animals, to make that a causal connection.

Group 2A, which is what we're speaking about today, is considered, quote, probably carcinogenic to humans. And from their whole course of doing this there is 88 agents in that category, currently, as of October. Group 2B is possibly carcinogenic. Group 3, not classifiable.

So, just to look a little bit more at this Group 2A, what do we mean by probably carcinogenic. And it means, limited evidence of carcinogenicity in humans. And that means there may be some good studies, but they may not be totally great because of bias or other limitations.

But, if there is really very good evidence, sufficient evidence of carcinogenicity

in experimental animals. There may be inadequate evidence in carcinogenicity in humans, sufficient to animals, but strong evidence when you look at a mechanism of how it would induce carcinogenicity.

And then it could be considered limited of carcinogenicity in humans but be long spaced on both mechanistic considerations and similar agents. And I'm going to give an example of those, that were classified as Group 1, to put this other agent in Group 2A.

So, the tasks that we faced was, one, to look at this other database. The IARC 2A. And what Mani wisely decided to do, was not to try to tackle 88, but to look at the most recent ones, which came out to be 22.

And then to also look briefly at other sources, national toxicology program, Haz-Map. And then to look at the current exposure links that we had in SEM.

And we had some in-person meetings when we were together, but we really were trying

to work on this in our little subcommittee, February 18th, and April 7th.

And what Mani did, and I really have to again commend her, is she downloaded the monographs for about 22 of these agents that were pertinent, to look at them, to be able to summarize them and present them to us.

And then what she did, and I actually was playing around with last night, and I'm not an expert on searching the SEM, but maybe that's actually a good thing because maybe I would be looking at it, perhaps, somewhat like an employee, a worker.

And then we also are trying to id the relationship between the toxic substances and the illness. Again, right now, SEM is using the Haz-Map database. And noting that everything that is approved for an SEM must be pre-approved by the Department of Energy.

So, what first started, and then it created this spreadsheet for us to look at, was to make a list of what these 22 agents were. And

we're eliminating certain of them. For example, one that's medication, and also one that involved drinking a hot beverage. So you can see this is not totally a perfect system.

We highlighted certain agents that appeared that they were more likely to be used here among this, these workers. But I also want to note that we ran into a situation where you'll see some pesticides.

There are malathion and diazinon. And I think there was another one in here.

Where perhaps we're not always noting the pesticide exposure on the Department of Energy workers, but you might have other workers who come to work to, for the grounds or who are spraying when there is a pest found. And perhaps that doesn't even get noted or not. But that some pesticides are coming up now on this database.

So, what we wanted to do is to take a couple of these. What I wanted to do is take a couple of these to just illustrate how the

process would proceed looking at the agents. What do we know about it and then what would we found out about it in the SEM?

And so, let's start with something, maybe people have heard about this polybrominated biphenyls, PBBs. They're very lipophilic, which means they get stored in the fat and they stay around for quite a long time.

They bio-concentrate, they bio-accumulate. And these are contaminates worldwide.

Some people may have heard of FireMaster FF-1. It's a flame retardant. And that's the one that basically contaminated quite a bit of materials in the State of Michigan.

These fire retardants are used in textiles, they're used in various plastics. So they're very widely used.

And if you looked at the data that was summarized here from the IARC, that it constantly induced benign and malignant hepatocellular, which are liver tumors in rats and mice.

And another kind, cholangiocarcinomas, in rats. Which is near the liver, sort of where the gallbladder is.

But there was very limited epidemiological studies. But here's where this comparison comes in.

There is another chemical, polychlorinated biphenyls. And these are also very widespread. They're oily substances that are good for keeping the heat down in their own transformers, and many other agents.

And those have been looked at. And those have been found, more convincingly, to be carcinogens. And have been rated as a one from IARC, as well as EPA. And U.S. Health and Human Services has rated them as a Group 1 carcinogen.

And so, if you've looked at the PBB and their type of evidence, and you combine that with the fact that they have sort of a similar structure to the PCBs, but what happened was, the polybrominated biphenyls got upgraded to Group 2A, as a probably carcinogenic in humans.

So, if you do a search, now we're turning a little bit to SEM. And this is one that Mani did. And I sort of did it in a different way.

She started out by saying, okay, what other names would you find for these. And this is a clip that you can see.

There's many different names for these chemicals. And whether or not, if you put in polybrominated biphenyls, you might come up with all of these. But if you put in one of these other chemicals, might you come up to this screen or not.

Here I just put in, not being an expert, I just went to the field that said toxic substance, and I put in polybrominated biphenyls. And was very gratified to see that right away this came up.

It gave me some of the aliases here. Some of the properties.

But if you notice, for specific health effects, the one that it noted was a clinical

health effect called chloracne. But, it did not mention carcinogenicity.

Another chemical, I'm just going to give a couple of examples here, tetrafluoroethylene. Again, these are exposures that occurred primarily in the manufacturer of tetrafluoroethylene. But also in polymerization processes.

There was one human cohort study from cancer and selected non-malignant diseases that did show an increased risk in liver at 1.27, means it's increased about 27 percent. But with the range of just barely .55 to 2.51. Possible, also increased risk for kidney cancers and leukemia.

So, going to the SEM. Again, Mani went through and looked at the alias search to see all the different names that would come up. And then I just put this chemical in to see what would happen if I put it in the toxic substance field.

And something did pop up with all of

the other alias names. Something about the properties but really didn't talk about cancer. Just noted that it was a simple asphyxiant.

I want to show one other example. This is a chemical, I usually think about it as methylene chloride. Another common name is dichloromethane.

This is a solvent. It's used in many areas. Polycarbonate plastics, manufacturing of photoresist coatings, a solvent carrier for insecticides.

But frankly, it's a common solvent that's even found in paint thinners. And even ink. So I wouldn't be surprised if this was used among the Department of Energy workers.

And there have been a couple of cohort studies of workers exposed to dichloromethane, as well as other chemicals in the U.S., reports cancers of the liver and biliary track. But based on very small numbers. And so, that's why it probably does not have a Level 1 rating with the 2A.

Now here, Mani put in methylene chloride and came up with all these aliases. I have to say, I tried putting in methylene chloride in that toxic chemical field and I was not successful in coming up with much. Or anything.

But when I put in the others name, which is dichloromethane, yes, I did come up with quite a bit of information. Which I actually want to compliment the SEM, that it's good that we're getting this much information.

I think that's very helpful. Both in terms of identifying other agents that could be similarly named. And at least some of the basic properties.

If we come down to the specific health effects, and I'm sorry if this was a bit hard for people to read, if we come down to the specific health effects, certainly the one about chronic solvent exposure and having dementia and chronic encephalopathy is there.

If there is an acute toxic effects.

Headaches. I'm not sure what fumigants, but even a large exposure could lead to quite a serious reaction.

And also, typical reactions for overdose for solvents. But again, in this situation here, no specific mention of cancer.

So, going back to the past. One was to explore IARC and how we might use that. The second was to review other sources in National Toxicology Program and Haz-Map, which we did to a small degree.

The National Toxicology Program has a website. They also rate agents in terms of their level of carcinogenicity. They've put out a report. The 14th Report on Carcinogens, which was released in 2016.

They updated 248 substances. They classified 62 as known carcinogens. And then reasonable anticipated as a human carcinogen, 186.

So, the question is, do we enfold and bring this in, is it going to add anything more

than actually using IARC?

There is the Haz-Map, which is currently the underpinnings, as I understand it, for SEM. And there you will find this exploration of the website, they note hazardous agents and symptoms and findings. And they're updating their website all of the time as well. I'm not an expert on this either.

But when the Committee spoke to each other, and I have to say George has a lot of experience with IARC, that we felt that looking at all of these, it's sort of overwhelming to try to be looking at all of the databases, and you'll see how much work there is just working with IARC, we felt that it would be more effective to just focus on the IARC ratings and the information provided by IARC because it's so well vetted in great detail with the committees.

And people can comment further maybe. George could comment further on that. But we were thinking that it would be the way to go to basically use IARC.

And so, the third thing we were looking at is, well, how about looking at current exposures and what that might link to in SEM. And also going the other way. If somebody has liver cancer, would you come up with any of these agents that are listed here, for example.

So, there was another try at that. And just, again, to show people another way. And we heard about this earlier this morning. And, again, I'm not an expert on SEM, but this is what I understood.

You could look at healthy SECs and try to find out if you have a health effect, like you had liver cancer or lung cancer, what might come up. And where might I get exposed.

So here I just, since we had two agents, methylene chloride and the PBBs that cause liver cancer, I put liver cancer and thought, well, what did we come up with.

And so, what we came up with were known agents that increase the risk for liver cancer. I suspect they're all number one.

Aflatoxins, Hepatitis B and vinyl chloride. Which is an industrial agent.

Having come up with those, we don't see PBBS and we don't see methylene chloride. And we also don't see a link to any book process, where one might expect this health effect. And maybe I'm misinterpreting this playing field, but maybe we don't have the use of vinyl chloride here. And Aflatoxin is something from ingesting moldy food, like peanuts.

Then I thought, okay, let's do bladder cancer. That is a very well documented occupational cancer. With, particularly the benzidine dyes and other things.

And you can see there is a lot of agents. You probably can't read it here.

And what I learned is that if you look at this field, about what process you might link it to, you probably don't get to the process this way. Probably what you have to do is say, oh, I'm exposed to this agent, and then put that agent in. And then see if that brings you to

where the work process is.

I tried it on lung cancer. That's way too long to be able to printout. And what I found when I just put in lung cancer is there were many agents that were listed.

Most of them, a lot of them were metal. Like chromium, cobalt, nickel, beryllium, cadmium, arsenic. And other known carcinogens, asbestos.

Some lead compounds. Usually the ones that were blended with arsenic or chromate.

And then I went to that field, work processes linked to this health effect, and it was left blank. So my assumption, and we could discuss that, is that if you go to this field, that what a person would have to do is see if they had lung cancer, if anything they thought they were exposed to, any of those agents was on that list, and then perhaps put that agent in and see what were their work processes.

So, it's a little bit harder going from the health effect back.

And let me see. And so, having gone through this very preliminary process of using, trying to use SEM and seeing how it would work, we came up with a bunch of questions.

What about searching on health effects and going back, which ones are flawed, which ones are being used and not used. Are they being properly attributed. Which exposures are currently not in, that should be, which raises the whole issue of should we be adding some or all of these that are in the Group 2A.

The other thing we found is that the SEM is not totally user friendly. I think it's a really powerful user, I mean, a powerful database.

I'm trying to imagine if employees are supposed to be using this or other people who don't have a lot of experience with it. I know that it's being continually being improved.

So, sometimes they have to obtain further clarification from a climate regarding the circumstances of their work, to see if

they're really getting in contact with that toxic substance, which are some of the things we've already talked about.

So, I'm sorry this got a little cut off. I'm trying to make it a more beautiful presentation, but, what we recommended, and I want to show also, if we could, the draft report that we sent out.

We recommended, after our Subcommittee spoke, and we presented this in the spring meeting, that we do list the IARC 2A agents being incorporated in the SEM and include their respective associations with the cancers, based primarily on the IARC monographs. And then as a supplement, to put in something else you could find from NTP.

And this is, just to show people what we submitted last spring, and this was our secondary recommendation, that the process, why we justified this, that IARC has this very in-depth process for evaluation and presumption of causality and causation.

And then this is just saying what the end of us doing with the Committee, this was the recommendation. And then there is a rationale, I don't know if you can go through this, we went substance, let me see, substance-by-substance.

You can see a little summary here of each of the substances. The one glyphosate has been very controversial.

There's been a lot of legal suits about this. And this is the one that causes Hodgkin's lymphoma. And that's a herbicide that's being used. Whether it's used here, I'm not sure.

And then these other insecticides, which raises the whole point about who would be using it here and the job titles of those workers. And they're very commonly used.

And then these are other agents that may come up. So we incorporated a quick summary from the IARC monograph to sort of support looking at, at least looking and considering, including these agents.

So, I'm going to stop there. I'm just wondering if the other two people who were on the Committee, Duronda or George Friedman, might want to add comment, or correct something, that I said. So, I'll go to you right now.

MEMBER FRIEDMAN-JIMENEZ: Hi. This is George Friedman-Jimenez. Can you hear me?

MEMBER GOLDMAN: Yes.

MR. BIRD: Yes, we can.

MEMBER FRIEDMAN-JIMENEZ: Okay, good. A couple of comments.

Rose, you asked me to comment on IARC and NTP. They largely overlap and do similar level evaluations.

The important point here is not so much IARC versus NTP, or both, it's that both agencies are multi-disciplinary and there are expert review panels that include epidemiologists, toxicologists, experts in carcinogenic mechanisms and exposure assessments, statisticians, occupational environmental medicine physicians and other experts in

determining general causation. In other words, causal inference at the population level. So, can a certain agent cause cancer.

I've served twice on the NTP review of carcinogens subcommittee of the Board of Scientific Counselors, but I have not served on IARC. And the determination of reasonably anticipated to be a human carcinogen, which is used by NTP, it's roughly, but not directly equivalent, to the IARC Group 2A.

The categories of agents include, not just substances, which is the purview of our Board, but also types of radiation, processes, activities, like night shift work, and other types of exposures. And they're not directly comparable for some of the exposures.

My feeling is, when you introduce a probable carcinogen into this process of determining causation as opposed to a known carcinogen, I know there is some level of arbitrariness in that determination, but you're introducing a little bit more uncertainty.

Of course, there are a lot of other sources of uncertainty in making these determinations. Mostly how much the individual person was exposed. But the uncertainty in whether a substance can cause cancer or not is significant.

So, there is a lower level of knowledge, of certainty, for the 2A carcinogens than the one, the Group 1 IARC.

And so, the physician or the claims examiner or the process determining causation in the individual, has to factor in this degree of uncertainty in the 2A versus the Group 1 category as well.

So, I think it's reasonable to include the 2A carcinogens. And I think we're all in agreement on that.

It may require further review by the physician to determine whether they thing, say, if someone is exposed to a 2A carcinogen they may want to be a little bit more sure about exposure or about level of exposure, latency, duration,

and have less uncertainty in that before they call it work related.

So, it's not all together straightforward. But I would agree, that the 2A carcinogens, IARC Group 2A, would be good to include.

Whether we should include NTP reasonably anticipated, as I said, there is a lot of overlap. Some of the Group 1 from IARC are in the reasonably anticipated and vice versa.

But I think it's reasonable to start with Group 2A and then we can, maybe in the future, look at the reasonably anticipated and see if there are some additional ones that we may want to add.

One last comment. Not all of these carcinogens, in fact, only the minority of them, are actually occupational exposures. Many are viruses or they're things that are not typically found in the workplace, not related to work. Dietary, that sort of thing.

So, when you get down to which are the

actual occupational carcinogens, it's a much smaller number so there is less number that we're adding to the list. So that's my only comments on Rose's presentation which is, I think, really makes a good argument in favor of including the IARC Group 2A.

MEMBER GOLDMAN: Thanks for the clarification on that. I'm sorry if I misstated about the NTP, but I'm sort of thinking of, I agree though, to start with IARC and then maybe use NTP to further supplement. But it's a lot to try to do both at the same time.

MEMBER FRIEDMAN-JIMENEZ: I think the IARC 2A includes a lot of the occupational NTP reasonably anticipated, so I don't think we're missing much by not including them.

But in the future, let's look at it and we'll see if there are any additional ones we want to suggest.

But I think starting with 2A is well circumscribed and it's a good next move.

CHAIR MARKOWITZ: Ms. Pope, you have

any, I think your hand is up.

MEMBER POPE: Yes, it is. Thank you, Dr. Markowitz.

I just want to thank Rose, Dr. Goldman, and Dr. Friedman-Jimenez and Dr. Mani, for all their work down on this Subcommittee. And Dr. Goldman for continuing the work and summarizing that report.

I'm in agreement with her in terms of the SEM being user friendly for the worker going in there and trying to do navigate that system. It has its pros and cons and has evolved over the years. But I agree that sometimes it's literally difficult in terms of trying to extract some of that information out of that system.

But thank you, Dr. Goldman. Excellent job on your summary. Your presentation.

MEMBER GOLDMAN: Thank you. And I don't think you guys are off the hook yet, if we have to do more work. So we may still all be in it together.

MEMBER POPE: Absolutely.

MEMBER FRIEDMAN-JIMENEZ: I hope so.

CHAIR MARKOWITZ: Dr. Bowman.

MEMBER BOWMAN: Yes, thank you. Just a question of clarification. Dr. Friedman-Jimenez, from what I understand, your recommendation was to include the IARC 2A agents.

And in looking at the draft, I was uncertain, is the recommendation that we're considering here, that we're talking about, to include all the IARC 2A agents or just those few listed that are a subset of the ones that were added between 2016 and 2019?

MEMBER FRIEDMAN-JIMENEZ: Actually, neither.

MEMBER BOWMAN: Okay.

MEMBER FRIEDMAN-JIMENEZ: I think the subset that we're talking about is the subset that is likely to be occupational. And Dana Loomis et al reviewed that several years ago.

So, I think we came up with 22, is that right, Rose, that were likely to be occupational, that are --

MEMBER GOLDMAN: Right.

MEMBER FRIEDMAN-JIMENEZ: -- in the IARC 2A, is that right?

MEMBER GOLDMAN: Yes, that's correct. I thought we picked them from the Loomis article, which we can send out, which was very good.

But then when I was looking over Mani's notes she said it was from the most recently reviewed. But there is a very god article that we can send out by Loomis where that author does list, looks at the 2A agents and then extracts out the ones that are most occupational.

And I agree with George, I think that we should use that, perhaps a lens like that, as the starting point for saying, which of the 2A agents. And perhaps then we need to make our recommendations a bit clearer.

Although the recommendation, I think doesn't just say the 22 but perhaps we should add that.

MEMBER BOWMAN: Okay, thank you. I think I understand. So, it is agents, all of the

agents from IARC 2A, not just those from 26 or 22, that are deemed to be relevant to an occupational exposure?

MEMBER FRIEDMAN-JIMENEZ: Yes, I think that's summarizing it right.

MEMBER BOWMAN: Okay. Yes, because in terms of the text here on the screen, I'm not certain that that's clear from that text, so we might consider a slight edit to that, to make it more clear.

MEMBER GOLDMAN: That's a good idea.

CHAIR MARKOWITZ: This is Steve Markowitz, I have a question.

So, now the energy of employee's occupational illness, X, sets out a standard that the toxic substance needs to be, at least as likely, if not, a significant factor in aggravating, distributing or causing. So I think probable carcinogens or reasonably anticipated carcinogens should be construed as surpassing that threshold.

But here's my question about the 2As.

You know, the SEM lists particular agents with particular cancer sites. So, if we want to add PBBs or PCBs, it's only really useful if we name what cancer site is related to that exposure.

Now, that's straightforward with the group, pretty straightforward with the Group 1 carcinogens. Especially since IARC actually specifies the organ sites.

But Group 2A is a bit of a mystery because you're extrapolating from animal studies and the like. So, we can recommend that they include 2As, but the next question is, which cancers are related to which agents.

So, what's your thinking about that?

MEMBER GOLDMAN: It looked to me, I mean, George has done more with this, but for a lot of the agents, whether it was animal data or the few human studies, they did name some of the cancers, like the PBBs. They named liver cancer and gallbladder or cholangiocarcinoma.

And then I'm just looking quickly through here on some of the others. You know,

glyphosates, for example, Hodgkin's lymphoma.

So, I mean, I think what we could do is, it may not be all inclusive, but again, to look at it as a starting point, to take what seems to be the more obvious from which the basis of the 1A rating was done and put those down noting that in the future as more research studies come out, there may be more information that comes out.

I mean, it looked to me that for most of these agents they did name some of them. I'd have to look more carefully. I see that for diazinon they did it based upon chromosomal damage. So that would be tough.

But then they did, here is the limited evidence in humans for non-Hodgkin's lymphoma and lung cancer. So what I think we could do then is just base it upon what the limited evidence is to the best that we could and name those cancers.

CHAIR MARKOWITZ: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes. This

is a difficult point. When you're dealing with toxicology and epidemiology, there is a problem of interspecies extrapolation.

In other words, what you find in an animal doesn't necessarily extrapolate to humans, and vice versa.

There are examples of organs that don't exist in humans but that exist in laboratory animals or enzyme systems that are not the same. The doses are frequently very different.

Actually, Dr. Bowman, I'd be interested in hearing what your perspective as a toxicologist is on this. But it's problematic sometimes to extrapolate from animals to humans. And so, we have to use the information that we have. And I think this needs to be done on a case-by-case basis.

Frequently they'll find, say liver tumors in rats and mice and it's barely suggestive that we would be looking for liver tumors in humans, even if it's not sufficient

evidence in the epidemiology.

But that may not be the case for a different agent. So, I think it has to be done, to some extent, on a case-by-case basis.

MEMBER GOLDMAN: Well, I agree, I think it's a case-by-case basis. Some are human studies that are not, that have some flaws with them.

But I think we would turn to the IARC, or NTP approach, about what they think are the highest probability cancers that the chemical is causing the increased risk. And then start with those.

And so, I think when I look it over just briefly, it looks like there are certain cancers that are highlighted for many of these agents.

And frankly, that's why there is so much work, just to follow up on this, to pursue this further, Dr. Markowitz, which is a really good point.

If you really wanted to go that next

step, what it really requires is you have to do a more in-depth study and summary of these different chemicals. And what's the basis for the data. And when there is human data, to try to go with that as the one to bring up.

And again, we're saying it's an issue of being a contributing factor, more probable than not, for increasing the risk of these cancers. And so, I think it would have to be put in that context. But there would be more work to be done.

CHAIR MARKOWITZ: Yes, Steve Markowitz. Well, as it stands right now, I'm not sure the recommendation is actionable by the Department.

Unless cancer sites are identified. Because obviously, that's what the claims evaluation process does, is link up specific exposures with the specific diseases. Specific cancer sites.

The question is, whether the Board has the time to devote to identifying within those 22

agents what the candidate cancers would be or whether that's something that we leave for the Department?

I don't think really the Department has currently the resources to do this identification of specific sites. And it's part of the reason why I think they asked us to help them out.

So I'm not sure how we get out of this puzzle. But I guess the question is, whether we, on the Board, think we have the time, expertise, to attach specific sites with caveats obviously, because it's a probable standard, or do we have the time and expertise to identify these cancer studies? That's my question.

MEMBER GOLDMAN: Well, I guess another thing, and I haven't read her article, this article in a while, is whether one could look at something like the Loomis article and say here, where there is a Table 3 in it, where there is a list of different cancers and then a list of agents that would be associated with that.

So, we could pass this out. And maybe it's something we need to discuss further. So, whether one could, in addition to doing the detailed, reading of all the IARC, here is somebody who listed the various different cancers, and then put forth the agent associated with, the occupation agent associated with that cancer. Whether that becomes a starting point.

And we could, I can send that article to be distributed to other people, to see if that type of a review article, again, could be a starting point.

CHAIR MARKOWITZ: Okay, Dr. Bowman.

MEMBER BOWMAN: Yes, just a comment. I agree with Dr. Friedman-Jimenez about the complexities that are extrapolating between animal data and humans. And the differences in metabolism, the toxicokinetics to be very different.

I would be worried we would not have a solid scientific basis for us to assign a specific cancer if all the data we're using to

assign to that is animal based. And it's likely the reason why these are in 2A, in part, I'm not cancer toxicologist, but just from a general toxicology point of view, there may be, and it seems like from this list there is a subset which there is at least some evidence of some specific cancers.

I'm worried that in terms of being able to say there is strong scientific evidence, we might be limited to cutting this list down to a small list for which there is a, you know, a small sample size evidence of a specific human cancer. Otherwise, we could be linking just cancers that really aren't relevant.

MEMBER GOLDMAN: Well, I mean, my understanding of 2A, and George can correct me, is that there is limited evidence of carcinogenicity in humans, I guess for most, for almost all of them.

And in the situation where there isn't, and we could look for if there is a subset of those, there is strong animal evidence. Plus,

there is strong evidence for carcinogens, from some mechanism that operates in humans.

So it's not totally left just to, oh, as it occurs in animals. So, there is some thinking that that same mechanism is in humans.

Or, like with the case of PBBs and PCBs, that there is some limited evidence in one realm, but very strong evidence in a closely related chemical substance.

So, true, it's not foolproof, but it looks to me that the choice would be, we either don't include any 2As, which would seem a pity not to acknowledge that there is some that would be useful to put in, or that we try some approach that might be, again, to go through in some manner and pick out at least some of the higher priority ones where there is some data from human and some information about the particular organ.

MEMBER BOWMAN: Yes, I would agree. In fact, I think that's sort of what I was saying, that the subset in which there is at least some human evidence might be that subset

that we could do that for. If there is in fact, so, sorry, being so new, if in fact it is a requirement that we link it to a specific cancer as opposed to saying an agent is a probable causing cancer in humans unspecified.

If that is not viable, then I would agree with you. There will be a subset for which we could do that.

CHAIR MARKOWITZ: So, this is Steve Markowitz, we kind of need to move on. So can I suggest that the working group reconvene with additional members if desired to exam this issue of whether it can come up with some specific cancer sites. In relation to the 20 or so 2A carcinogens?

That would really complete, I think, complete the task in an actionable way for the Department. Is that okay?

MEMBER FRIEDMAN-JIMENEZ: This is George.

MEMBER GOLDMAN: I'm willing.

MEMBER FRIEDMAN-JIMENEZ: I think

that's exactly what we need.

MEMBER GOLDMAN: Would Dr. Bowman like to join the group, because I think part of it would be, also sort of dividing up some of these different agents and tackling it, perhaps, agent-by-agent?

MEMBER BOWMAN: Yes, that's fine. I'd be happy to.

MEMBER GOLDMAN: Great. The other thing I want to --

CHAIR MARKOWITZ: Okay. So let me, I'm sorry, if we can bring this to closure, but go ahead, Dr. Goldman.

MEMBER GOLDMAN: To lower the list a bit, is there a way that we could, if we went back to the whole list and try to lower it, is there a way to pre-screen what are ones that may never have been used among these workers or should we just take all of them and let the SEM tell us whether there is a potential for any exposure?

CHAIR MARKOWITZ: My impression, I

think that, Steve Markotwitz, I think the most efficient approach in talking about 22 agents, all of which are described by IARC and the relevant literature summarized that any subset of them are going to have some limited epidemiology.

I think the most efficient way, frankly, is just to look at the IARC list and go through that rather than trying to figure out from the SEM, or otherwise, to the extent to which they're used.

MEMBER GOLDMAN: Okay. Okay, so we'll try to work on that.

CHAIR MARKOWITZ: Okay. So the working group, Ms. Pope, will you continue to serve?

MEMBER POPE: Sure. Absolutely.

CHAIR MARKOWITZ: Okay. And if anybody else wants to join, you're welcome to. Either now or sometime in the future.

So, thank you very much. We made some progress there.

Kevin, could you put up my PowerPoint?

So we're going to talk about the recommendation and issue.

Next slide. This is a core task from our charter.

Next slide. So the issue is assessing these qualities, objectivity, and consistency of the physicians input into the process.

And the charter is not specific on what physician, so we interpret that to being all physician input. Likewise for industrial hygienist.

So the medical director of the program does quarterly audits on the contract medical consultant, CMC, reports. So the CMC is asked by claims examiner sometimes to evaluate the case. And usually issue a causation. Sometimes to issue disease confirmation or issues of impairment.

And what the medical director does is every three months is take a little more or less 50, a randomly selected claims and look at the CMC report. And then for the categorizes, I used

categories that the CMC, that the medical directors used in the summary of 2018 and 2019.

I mean to say I assembled this from the quarterly reports for each of the past two years. I think these are the most recently available ones.

And you can see that the type of review is causation impairment and then there is some other review. Other, there are a number of different things that are, consist of other reviews. But the majority, certainly, majority meaning about two-thirds, are from either causation or impairment.

And you can see from 2018 that they were equally divided. And in one percent of the 67 charge reviews for causation, or CMC report reviews for causation, the medical director found it needed improvement. In 2019, about 79 CMC reports done were deemed as requiring improvement or had some sort of error that required attention.

On the impairment reviews in 2018,

over a third of them, of CMC reports, had issues that needed attention and led down, somewhat, 2019, 27 percent. But if you look at the two years together, you see virtually no causation reports that were deemed to be questionable.

And a third of the impairment reports. So, it appears to be feast or famine, in terms of the review here.

And then the other category, which are a mix, and so it's a little hard to say much about this.

So, Kevin, if you could go to the word file on this issue. And I, let me see what the name of that file is. ABTSWH draft rec and rationale findings.

Now, let me say that the Board looked at a fair number of claims. I don't recall the number, but in the last two terms.

And so we had an opportunity to develop our own opinion about the objectivity, consistency and quality of the CMC reports. If you can scroll down some.

MR. BIRD: Dr. Markowitz, do you want me to open this in an editable format?

Also, I just want to give everyone a heads up that they should be able to scroll on this program.

CHAIR MARKOWITZ: Oh, yes.

MR. BIRD: They can scroll, they can zoom out, they can change pages, if I share it like this. But in this version it's not editable. So I don't know if you have a preference for how it gets shared right now.

CHAIR MARKOWITZ: Well, we don't need to edit it at the moment. But let me actually, Kevin, hold on one sec.

What I have here is a recommendation about this topic, then I'll continue with the rationale. I should have discussed this recommendation first.

And the board, the previous board, looked at this recommendation. And really, at out last in-person meeting had simply decided that additional thought was required.

But this recommendation says, the board recommends the Department develop an ongoing, independent, third-party based system of periodic evaluation of the objectivity, quality, consistency of both industrial hygiene reports, I'm sorry, of both the individual claim reports and the aggregate audits of program and industrial hygienist and physicians.

The board also recommends the Department implement a periodic audit of the industrial hygiene reports and the industrial hygiene review process.

So, what we just talked about was the medical director's audit of the medical reports. They close out sort of the discussion about the audit, the assessment of the medical reports. And then I'll get into the industrial hygiene.

Our sense of board members in the past is that one out of a 150, or whatever the number was exactly, claims with faulty causation analyses is a significant underestimate of the number of claims, or the proportion of claims,

that have a questionable causation judgments.

That there are many claims we looked at in which the CMC report was excellent, well documented, came to the appropriate conclusion regarding causation.

And there were a significant minority of reports in which frankly we disagreed with the causation judgment. And the methodology used was inadequate.

I would say the, in my own review, and I think in some of the conversation, was that the majority of the reports were okay with reference to causation. But a significant proportion, a significant minority, were problematic.

So our own look, be it non-random, about multiple physicians, and a significant number of claims, is that some, there is an inadequate look at the quality of the causation judgments. And that that needs attention.

And that is part of the rationale for suggesting that an intended third-party based system be developed by the Department to look at

the same aspects of the individual claim report. Speaking about the CMCs for a moment. The physician reports.

So that this question, or suspicion frankly, about not a fully adequate review of causation could be addressed.

On the issue of impairment, a somewhat different issue. A third of the reports in the last couple of years, there have been the impairment reports, there have been the needs improvement.

Some of that maybe major, some of that's minor. Look at that.

But that's excessive on the face of it. And it is, I know that the contractor has given feedback about that. About the particular cases.

But it raises two questions. One is, why should there be a persistent high level of false in impairment ratings, and the second question, and why isn't that corrected by the contractor.

The other problem with that is that, well, if a third of the 50 per quarter that the medical director looks at are inadequate, what about all the other claims that the medical director hasn't looked at, is there an equal level of needs improvement assessment of those claims, in which case there may be a significant proportion of claims in which the impairment rating is not judged to be known adequate done.

We can't settle those issues. And I my say that the Board did not look at claims to date for the issue of impairment.

Sorry, these observations are not based on our personal review of claims but just on the data that we're looking at.

So, this, again, I think is a rationale to attend to this puzzle. To characterize it and then come up with some solutions that would support an independent third-party based system for periodic evaluation.

If you could go to the next page. Just moving on to the industrial hygiene reports.

So, this is a somewhat different situation because the Department does not do a comparable audit. A periodic audit of industrial hygiene reports.

And I think that it does, for the medical reports, is an excellent mechanism. And we said in the Board previously was that a similar kind of periodic audit should be done of the industrial hygiene reports as well.

The current way of looking at the quality of industrial hygiene reports is that the contractor produces the report they're provided to the federal office. It's then reviewed by one our federal industrial hygienist to make sure that its reasonably consistent and makes sense at the like before it's passed on to the claim's examiner to look at it.

But that's done on an individual basis claim basis, or rather, industrial report hygiene report basis. And there is no time in which anyone sits down and gathers 50, or whatever number of random reports, and then looks at

what's going on in that group, what's the quality, et cetera.

So, we think that should be done because that would provide another layer of, I think, of understanding in quality assessments to the industrial hygiene report process.

If you could scroll back up to the recommendation. And so, the other, the last part of this recommendation is that the periodic audit, assessed hygiene report, which would be new, would also look at the industrial hygiene review process.

And this is a question of looking at how much information is available to the industrial hygiene. What kind of sources they're using to make their determinations, what kind of language is used in their reports. And how helpful their report is in the overall process. We think that should be looked at as well.

So, I'm going to stop there. I'm sure board members from previous board remember this issue, so if you have any comments or amendments

to what I said, feel free to jump in. Or any board member, if you have comments or questions.

Dr. Bowman, your hand is raised. I don't know whether that's from the previous topic or you're done with it.

MEMBER BOWMAN: Yes, it was. I cleared it.

CHAIR MARKOWITZ: So, for Board Members who recall reviewing some claims, do you think the way I've described some of the issues and the rationale behind this recommendation makes sense? Dr. Silver?

MEMBER SILVER: I certainly do. For the new Board Members who haven't had a chance to review files, some of the low hanging fruit of an audit of the industrial hygiene reports would be the references and sources of information that the industrial hygienist used.

This wasn't always true, but more than a few times I saw a standard reference list of books that you could find in any public health school library. And some of them were decades

old, but the reference list seemed to be a cut and paste job.

And they didn't really seem to go deep in finding government contractor reports or NIOSH HHEs for analogous processes to render their judgments about low, medium or high exposures.

And there was a little bit of that too in some of the CMC reports I'm sad to say. So, an audit of both sets of reports is in order.

CHAIR MARKOWITZ: Dr. Mikulski, I'm wondering whether you recall the pleasure of reviewing previous claims and have any insight or opinion or comment?

MEMBER MIKULSKI: I thought that this was a general understanding about both the industrial hygiene sections review of the claims as well as the medical. As Dr. Silver mentioned, for the most part where a simple job of a copy and paste of the standard, that type of assessments of the exposures, as well as degree and the level.

As for the medical assessment, as far

the CMCs, we have not looked at that many impairment ratings. At least that's my recollection of the claims that I have been reviewed, to be able to say how many of them would have needed improvement.

But in terms of historical access to historical records and review of the previous best exams, those were also the issues that were raised in quite a few of the reviews. Simple the CMCs did not review the totality of the medical evidence on file. And some of those reviews lacked this part of the review of the claim.

CHAIR MARKOWITZ: Dr. Silver, your hand is still up, I don't know whether you took it down, lift it back up or --

Ideally, okay. So, ideally, for the new Board Members, this recommendation would make more sense if you had had the opportunity to review claims.

The problem there is that that would probably be a six month process. Getting the claims, reviewing the claims and then discussing

the findings on the claims.

Which would delay this recommendation that much, that much longer. Which is the discomfort, frankly, of turnover in board members, but we balance by the advantage of having new board members as well.

So, Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes. I'm wondering, is there an official way of compiling the results of the reviews?

In other words, is there a report of the reviews that we can follow periodically over time?

I think this is a process that is going to be ongoing for the next few years. This audit process. And we're hopeful that changes in the procedural manual, et cetera, will impact positively and improve both the causation, evaluations and the impairment evaluations.

And we'd like to see, over time, how the assessments change. So, it seems to me that it would be good to have a formal mechanism for

recording and compiling and summarizing the reviews, the audits, as they're done.

That we could follow, that would make it easier for the whole board to look at it at one point in time, one snapshot, and then longitudinally to see if we're having an impact. It the change in procedural manual language, for example, has an impact. Or training, that sort of thing.

CHAIR MARKOWITZ: Steve Markowitz. That would be a great idea.

And we attempted to do that, to some extent in our claims review by using a standard form, but the truth is, the Board didn't really have the resources to be able to do that properly. I mean, not properly, but to do it systematically. To compile the responses and then to describe them.

So, we had definite opinions, impressions. A number of Board Members, I think, reviewing a sizable number of claims, but we weren't able to do it systematically. We should,

and we'd like to, and when we get resources we will do that.

So, then if we can take a vote on this recommendation. Let me read, particularly if any members of the public who aren't looking at the screen, I want to read the recommendation. And then if there are any suggested changes in language.

Actually, I need a proposal to accept the recommendation. But the recommendation is that the Board recommends the Department develop an ongoing independent third-party based system of periodic evaluation of the objectivity, quality, consistency, of both the individual claim reports and the aggregate audits of program industrial hygienists and physicians.

It would also recommend the Department implement a periodic audit of the industrial hygiene reports and the industrial hygiene review process.

Is there a proposal to accept this recommendation?

MEMBER FRIEDMAN-JIMENEZ: Should we discuss now or after --

CHAIR MARKOWITZ: No. It's just a formal process. Is there anybody to propose that we accept this recommendation?

MEMBER GOLDMAN: I'll propose it. Rose Goldman.

CHAIR MARKOWITZ: Okay. Thank you. I need a second.

MEMBER CATLIN: Mark Catlin. I will second.

CHAIR MARKOWITZ: Okay. Thank you. Okay. Discussion? Go ahead, Dr. Friedman-Jimenez.

MEMBER FRIEDMAN-JIMENEZ: I think this would be a good place for us to recommend that the Department of Labor formally compile these third party audits.

I mean they are going to be putting resources into the audits so it would make sense to have a formal way of not just compiling and recording and summarizing them but following them

up over time so that we can see how they change hopefully over the period of the Board.

Maybe we could add a sentence or so in the recommendation that would be a recommendation for a formal record keeping process and reporting process of the audits that we can access as the Board.

CHAIR MARKOWITZ: What if we added the sentence at the end that said that the results of these periodic evaluations and audits should be made available for review?

MEMBER FRIEDMAN-JIMENEZ: Yes, but we'd like to have it designed in a way that they would be comparable over time so that we can make some judgment of whether changes that are implemented are having an impact.

CHAIR MARKOWITZ: I mean your concern is that the method of evaluating say the medical reports would evolve, change over time?

MEMBER FRIEDMAN-JIMENEZ: Like, for example, the table that you presented would be a good way of following over time.

We have a such a table at, you know, Audit Time 1, Audit Time 2, Audit Time 3. I mean it's not a big thing, I'm just saying that it should be a comparable method and designed with that in mind, not just to give us access to the --

(Simultaneous speaking.)

CHAIR MARKOWITZ: Okay. I can add that to the rationale. That makes sense.

MEMBER MIKULSKI: This is Marek Mikulski. I am also thinking --

(Simultaneous speaking.)

MEMBER MIKULSKI: -- implementing that what Dr. Friedman said maybe as a timeframe to conduct the other, to not to leave it up to the interpretation, a periodic, to some maybe and something different to others.

CHAIR MARKOWITZ: What would you recommend as far as language?

MEMBER MIKULSKI: Biannually.

CHAIR MARKOWITZ: This is Steve Markowitz. I'd prefer to handle that in that

rationale and saying that the reasonable frequent -- Right now the audits on the medical side are quarterly.

That's very useful. It's a lot of work, but it's very useful. So I'm not sure what the right interval is for this third party based system, but I think if we put in the rationale, you know, reasonably frequent that might address the issue. Would that satisfy, Dr. Mikulski?

MEMBER MIKULSKI: Sure.

CHAIR MARKOWITZ: Other comments?

(No audible response.)

CHAIR MARKOWITZ: Okay. So then we should take a vote.

MS. RHOADS: Could we quiet down?

CHAIR MARKOWITZ: Yes, especially since we are going to take a vote. Do I need to read this again or does everybody have access to looking at it or can we just vote on it?

(No audible response.)

CHAIR MARKOWITZ: Anybody unclear on what the recommendation says?

(No audible response.)

CHAIR MARKOWITZ: Okay. So the language stands as it was proposed. Ms. Rhoads, do you want to take a vote?

MS. RHOADS: Sure.

MEMBER FRIEDMAN-JIMENEZ: Do we want to add the new language for the reasonable period before we vote?

CHAIR MARKOWITZ: You mean reasonable frequency?

MEMBER FRIEDMAN-JIMENEZ: Yes.

CHAIR MARKOWITZ: So we could say third party based system of reasonably frequent periodic evaluations. Would that address it?

(Off microphone comment.)

CHAIR MARKOWITZ: I'm sorry, did someone make a comment? It wasn't quite coming through clearly.

(No audible response.)

CHAIR MARKOWITZ: Oh, Dr. Van Dyke, do you have a comment?

MEMBER VAN DYKE: Don't we need to add

the language at the bottom in terms of required to report to the Board or make the information available to the Board?

CHAIR MARKOWITZ: Sure, we can add that. Let's -- So you've converted this to a Word, we can now write on this, Kevin?

MR. BIRD: Yes, that's correct.

CHAIR MARKOWITZ: Okay, fine. So in the second line what if we added after system of to say reasonably frequent periodic evaluations, does that capture the proposal?

MEMBER FRIEDMAN-JIMENEZ: This is George. I think it would be good to have a report a month or two prior to each Board meeting that way we'd be able to discuss it, look at it, think about it, discuss it at the Board meeting, and it's probably a semi-annual, twice a year, frequency that we are talking about.

Because if it's biannual that might be considered reasonably frequent, but that would only give each Board one opportunity and I don't think that's frequent enough.

So I think before each semi-annual Board meeting would be a good timing that way we'd be able to use it and it would be effective.

CHAIR MARKOWITZ: Steve Markowitz. Yes, you might -- This evaluation is really for the program. It's really for the Department. It's not really for our benefit, although, obviously, we would use it to do what we are assigned to do.

And so I don't really know whether the system can be configured such that, you know, the evaluation would be available, you know, a month or so before.

If it's reasonably frequent and the Board meets reasonably frequently then we'll have relatively up-to-date evaluations I would say.

MEMBER FRIEDMAN-JIMENEZ: Okay.

CHAIR MARKOWITZ: I just don't want to be unrealistically specific, that's all. But let's get back to the other language towards the end, which is that after process on the fifth line, and I'm trying to remember, the results of

these evaluations and analyses should be made available in a timely fashion to the Board. Was that what was proposed?

(No audible response.)

CHAIR MARKOWITZ: And if you could type in the results of these evaluations and analyses. So what was the thought here? Dr. Van Dyke, do you remember what you said five minutes ago? I can't.

MEMBER VAN DYKE: All right. This is Mike Van Dyke again.

CHAIR MARKOWITZ: Yes. Yes.

MEMBER VAN DYKE: No, I think it was just that they are required to report these to the Board.

CHAIR MARKOWITZ: I see, okay.

(Simultaneous speaking.)

MEMBER VAN DYKE: -- just specific.

CHAIR MARKOWITZ: Yes, I know. Should be reported to the Board in a timely fashion, does that capture it?

MEMBER VAN DYKE: Yes.

CHAIR MARKOWITZ: Now is that --

(Simultaneous speaking.)

MEMBER FRIEDMAN-JIMENEZ: Timely and systematic fashion.

CHAIR MARKOWITZ: Okay. Timely and systematic. Was there any other thought that we wanted to capture in this sentence?

MEMBER FRIEDMAN-JIMENEZ: I think that captures it.

CHAIR MARKOWITZ: Okay. Okay. So then let's proceed to a vote.

MS. RHOADS: Okay. Dr. Bowman?

MEMBER BOWMAN: Yes.

MS. RHOADS: Mr. Catlin?

MEMBER CATLIN: Yes.

MS. RHOADS: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ

MS. RHOADS: Dr. Goldman?

MR. BIRD: Carrie, I believe she had to just take off but she did just send an email that she does vote in the affirmative to the resolution.

MS. RHOADS: Okay. Mr. Key?

MEMBER KEY: Yes.

MS. RHOADS: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MS. RHOADS: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MS. RHOADS: Ms. Pope?

MEMBER POPE: Yes.

MS. RHOADS: Dr. Silver?

MEMBER SILVER: Yes.

MS. RHOADS: Mr. Tebay?

MEMBER TEBAY: Yes.

MS. RHOADS: Dr. Van Dyke?

MEMBER VAN DYKE: Yes.

MS. RHOADS: Ms. Whitten?

MEMBER WHITTEN: Yes.

MS. RHOADS: Okay. All votes for in the affirmative.

CHAIR MARKOWITZ: Okay. Thank you. A question for Mr. Chance and Ms. Rhoads. It's almost 20 to 3:00. We are scheduled to close at 3:00. If we went, I'm not sure we need to, but

if we went 15 minutes later does that violate any FACA rules?

MR. CHANCE: No. No, that's fine

CHAIR MARKOWITZ: Okay.

MR. CHANCE: Maybe enough to wrap up, you know, on time, but if we need a little bit more that shouldn't be a problem.

CHAIR MARKOWITZ: Okay, great. Thank you. And I don't think we -- I am not aware of any other recommendations we need to vote on so if for some reason any Board Member needs to leave then at least you don't have to worry about that.

I want to just briefly -- And then rest of what we are going to do today is going to be concentrated, but if you could go back to my PowerPoint, Kevin. We have a -- next slide. Next slide. Okay, stop there.

I have a question for Mr. Chance or Mr. Vance if you are on the phone and maybe for Ms. Pond, I'm not sure. Yesterday we received a report from the contractor, the industrial

hygiene contractor, or, I'm sorry, the SEM contractor, about asbestos.

I wanted to show one paragraph from the executive summary just by way of summarizing what they found in that report. Is there any objection to me showing that?

MS. POND: No. This is Rachel. That shouldn't be a problem.

CHAIR MARKOWITZ: Okay, great. Thanks. So very briefly the background is, you know, the Board has been talking about asbestos for several years and made numerous recommendations, most of which have been accepted by the Department.

Our latest recommendation or, rather, conversation centered around the procedure manual has a list of about 19 job titles that they recognize as presumed to have significant exposure to asbestos.

These are, you know, the ones you would expect to find, mostly skilled trades, construction, and maintenance. The Board felt

that this was a good list but it wasn't complete.

So we recommended that additional job titles be added and then the Department asked us for our literature, our rationale. We provided a nice write-up I think of a review of relevant studies.

We have looked at actually the U.S. National Database on Occupational Mortality and identified a long list of job titles which from about 1999 to 2014 had shown excess mesothelioma.

So we used this as an indicator of significant exposure to asbestos in the past. We made the recommendation and the Department has gone through that and I haven't had a chance to really assimilate this, but I looked at it briefly yesterday.

If you go to the next slide it shows that for some of the job categories that we recommended they have endorsed them, that they be included as job titles with presumed exposure to asbestos.

These are important job titles because

they are fairly numerous at the sites and you can see them here. I don't necessarily need to read them.

There are others that they regarded as totally irrelevant, which was correct, meaning, for instance, marine engineers. That wouldn't be relevant to DOE, but there are other job categories that the consultant did not endorse.

And so what I propose is that a few of us read that and see what sense it makes and then if necessary prepare a response or a set of comments with respect to that report.

So I don't know how much discussion we can have at this point about this, but I would continue to work on this and if there are a couple of others who would help that would be useful.

I think the last Board we had Dr. Dement, Mr. Mahs, and Ms. Pope, and so we've lost half of our committee. This is not really a committee, but just an issue-based working group.

So if anybody wants to volunteer now

to review this, otherwise you are free to volunteer. Dr. Van Dyke, your hand is up.

MEMBER VAN DYKE: I will volunteer.

CHAIR MARKOWITZ: Okay. Thank you. And Mr. Catlin, okay, perfect. And at some point if we have a -- I am going to call for more volunteers for something else soon, so you might want to take your hands down.

But we also need a member of the claimant community, but, again, you can think about it and decide to volunteer later. Ms. Whitten, do you want to volunteer?

MEMBER WHITTEN: Yes, please.

CHAIR MARKOWITZ: Okay, great. Okay, so we have four. If more want to join that's fine, that's fine, but we have enough. Thank you very much.

So I want to raise the issue of the occupational health questionnaire, which we have heard about yesterday and to some extent today. It was revised. It has been applied, used, in a large number of claimants, which is excellent.

And so, I don't know if Mr. Vance is still on the call or not, but whether he has any, or, Ms. Pond, do you have anything else to add to what you said yesterday about the experience with the new OHQ?

MR. VANCE: Well, this is John Vance again. I mean I had talks with the contracting officer that runs the Resource Center contract and that's where I got the information on the 600 and whatever, 620 plus reviews.

The feedback I have gotten from the work that's being done by the Resource Centers is that they think it's a much better information collection process, because we've not only changed the occupational issue questionnaire but we've also changed the process.

We changed it in light of some input from the Board with regard to trying to get folks thinking about what they can give us prior to the actual interview itself and then also making sure that we are trying to draw out information during the actual interview itself.

So I think just from an ancillary standpoint, or anecdotal standpoint, we've gotten positive feedback.

CHAIR MARKOWITZ: Great. And I know the previous Board there was some discussion about using this questionnaire for a period of time and then trying to make some assessment, not really necessarily a formal evaluation, but some assessment of its utility.

I gather maybe there is no plan in place, but we might give some consideration, and other Board Members may have some additional ideas, but this questionnaire is going to be used by the claims examiner, it's going to be used by the industrial hygienist, it would be really interesting to get some feedback from them in terms of what's value-added or not there is from this new questionnaire or whether there are aspects that need to be further improved or clarified.

Any other Board Members want to make a comment about this?

(No audible response.)

CHAIR MARKOWITZ: This is Steve Markowitz. So this is not sort of I think an official recommendation or a request for data, but, Ms. Rhoads, if you could note this is an action item, that the Board would like some feedback about the utility of this new version of the OHQ from people who are administering it but also the users in the claims evaluation process.

MS. POND: Dr. Markowitz, this is Rachel. I agree and I would like to develop some sort of mechanism to evaluate that.

So, you know, once this gets going, I mean right now the Resource Centers can give us initial feedback, but we're probably not at a point we're going to have enough information from the IH's to provide that but we will put insights and mechanisms to evaluate it.

CHAIR MARKOWITZ: Okay, great. Thank you. So let me move on to another item. The Department has made a request of the Board to look into a certain issue or set of issues with

respect to impairment.

This was in a letter dated November three which, I'm not sure when Board Members received this, it might have been Wednesday, it might have been yesterday, but just to very briefly summarize it. The issue has to do with the kind of medical data that are used in making an impairment evaluation with respect to pulmonary impairment and use of a particular test, the VO2 max calculation versus I think use of pulmonary function tests.

The Department wants some guidance from us on the relative value of these, the tests, and specifically let me just read the questions from the letter.

The first question is What are the permissible testing, I think the next word is methodologies, that a physician may use in assigning a VO2 max for application in Table 5.12 of the guides?

The second question is If the 6MWT is a valid methodology for assigning a VO2 max for

application should the evidence document that the test conforms within a particular medical standard in validating the test outcome and what are the simple methods for calculating the VO2 max from evaluated 6MWT results? End of quote.

So you can see it is very specific detailed advice that's being sought on this issue. And so I need some members of the Board who are willing to help in assembling a response.

Now if the Board does not have the expertise to do that then, fine, we will say so, but if we do after looking at it more closely then I think that we should be able to offer up a response to those questions.

So my question to the Board really is does anybody want to take a look at this and decide whether we can and what kind of help we can provide? And let me just volunteer --

(Simultaneous speaking.)

MEMBER MIKULSKI: This is Marek Mikulski. I think this is an issue worth looking into and I would be more than willing to work on

that within the working group if we do have any other volunteers to.

CHAIR MARKOWITZ: This is Steve Markowitz. Yes, I would volunteer to work on you with this. Again, if anybody decides they want to join --

(Simultaneous speaking.)

MEMBER FRIEDMAN-JIMENEZ: Is this just about the VO2 max or is this a more general request?

CHAIR MARKOWITZ: Okay. So, yes, I want to move on. Well, right now it's just about this request of us from the Department, but I do want to discuss the public comment from yesterday made by Ms. Vlieger, and the written comments she provided very briefly to figure out whether the board has any role in addressing the issues that are raised and if we have some role how we would proceed.

And so my view is that the issues raised, some of it is very particular to a claims review process and may be particular to one or a

couple of providers, and that the particularity of that is not necessarily something that the Board, is within the Board's purview to weigh in on.

On the other hand, it's clearly a part of our charter that we are supposed to assess the consistency, which was one of the issues raised in that written comment, and quality of the medical input, and that the fifth task of the Board is to look at the claims adjudication process and I think an issue was raised about that.

So I would like to hear what other people think, although, admittedly, we have not had a chance really to look at all of the material that is relevant to this question, but, you know, this is -- Okay, this is -- No, this is a separate matter.

I think this is a comment that came in today. I'm not sure this relates to -- Okay. So my view is that a few people on the Board should take a look at the relevant documents and decide

what our role, if any, should be in weighing in on this, on these issues.

This would be somewhat separate, but, you know, maybe related, depending on what the issues are. I am not even quite certain to the Department's request of us regarding, you know, impairment readings and methodologies used for that.

So I think if a few us would volunteer to review the material that has been provided with regard to the issue raised by Ms. Vlieger, and I think Ms. Barrie may have raised it, too, I don't quite remember, then we can figure out what, if any, role we can play in this.

So I see Mr. Tebay's hand is up. Does that mean you are volunteering?

MEMBER TEBAY: Yes, sir. You know, some of the -- I have reviewed some of the documentation already and the specific impairment physician is pretty known in our area so I think I would be interested in being in that conversation.

CHAIR MARKOWITZ: Okay. Ms. Pope?

MEMBER POPE: Yes, I would be interested in being a part of that conversation as well.

CHAIR MARKOWITZ: Okay. And I would also volunteer to try to help sort things out. I mean if there is anybody on the Board who decides in looking at the material that there is any sort of conflict of interest then, obviously, that person would raise that.

Dr. Friedman-Jimenez, your hand is up, are you volunteering?

MEMBER FRIEDMAN-JIMENEZ: Yes, I'll do this. I have some expertise in diagnostic testing and interpretation and I think I could contribute here.

CHAIR MARKOWITZ: Okay. Okay, so we have the two separate, the somewhat connected, but two separate groups, one consisting of Dr. Mikulski and myself to address the DOL request, and the other issue which four people have now volunteered to review and advise on any Board

input if called for.

MEMBER FRIEDMAN-JIMENEZ: I am volunteering for the first group to look at the six-minute walk and the VO2 max.

CHAIR MARKOWITZ: Okay. Okay. Okay, great. I think Ms. Rhoads probably has that. So we have on the schedule that we would review public comments, but, in fact, this issue of impairment rating was a principle public comment that was raised.

Actually, Kevin, if you could bring up that other one that I think was posted today on our website. I just want to see if there are any issues there that we need to --

MR. BIRD: And that was not the one that I showed before, it was a different one?

CHAIR MARKOWITZ: Yes. It was the one you just had up, yes.

MR. BIRD: Okay, perfect.

CHAIR MARKOWITZ: I read it briefly today but I don't recall exactly. If you could scroll up. Oh, okay, yes, I remember. Oh, yes,

there you go. Okay.

So this I think was sent by the Alliance of Nuclear Worker Advocacy Groups. I think Ms. Barrie's name is on this if I recall correctly. This is information sharing that in a recent, in at least one recent report, there was some language, which I think Board Members should go over at your leisure.

I think the issue being raised here is that the industrial hygiene expert refers to significant exposures, but it's at a minimum vague what constitutes a significant exposure.

I think the other point was that bystander exposure seems to be minimized, the importance of bystander exposure seems to be minimized in this evaluation.

This is just one claim and so I'm not going to generalize. I think the point of this comment was just to make us aware of this language in an industrial hygiene report.

And for the new Board Members I think the background here is that we have looked at and

commented on as a Board some of the industrial hygiene language that has been used in some of the claims.

In fact, we had a recommendation about certain stereotypic language that was used. So I think that's where this sort of fits in, but just sort of keeping, I guess keeping us apprised of something.

I am going to check my notes for a moment, but does anybody else have any issues that are lingering or that we said we were going to take up but -- Yes, I don't see anything further from my notes about issues.

So just to summarize then for the next period of time, we've got several working groups, one I think is going to work on asbestos, one is going to continue to work on IARC 2A carcinogens.

We are going to look at the DOL's request for input into the impairment process. We have a group looking at the public comment issue regarding impairment. I think that's the four groups we have at the moment.

As a Board at a minimum we would meet in six months, meaning the first half of April. The question whether we would have a three month meeting -- We used to have the face-to-face meetings every six months and the telephone meetings every three months, but now it's all telephone I guess.

But it would be a short -- If we do one in three months it's to maintain some momentum on some of these issues and it's a much shorter meeting because we just focus in on really the ongoing issues unless something new arises.

So I am a little bit unclear at the moment whether we need a three month meeting. I think it depends on progress that we would make in the four working groups.

Anybody have any comments on this or requests?

(No audible response.)

CHAIR MARKOWITZ: So my request is that the working groups, which will not be

subject to publication in the Federal Register, and, um, that they meet within the next four weeks, meet within the next four weeks to make further progress on their issues, and if you could communicate that progress then we can together decide whether we need a telephone meeting in three months or not.

Okay, so you can expect some communication over the next week really just confirming the working groups. If there are any materials that have not been sent out yet then they will be shared, although they come from the Department of Labor, not from us, but I assume that we will make sure that everything is shared within the next week or so.

Any Board Members have any closing comments, questions?

(No audible response.)

CHAIR MARKOWITZ: So then let me just thank the Board Members, thank the Department, thank Mr. Chance and Ms. Rhoads and, of course, SIDEM, Mr. Bird, and whoever is working with Mr.

Bird, for this meeting, and, of course, the members of the public who made public comments and were listening in on this.

I think it's been a good meeting. I hope that the new members feel well apprised of the program and well oriented as to the work that the Board has been recently working on and how we will make progress in the future.

Mr. Chance, is there any -- Or, let me ask the Board Members whether there is any closing comments they want to make. Otherwise, I'll turn it over to Mr. Chance. Dr. Silver?

MEMBER SILVER: Thank you. People heard Teri Barrie announce that Malcolm Nelson, the ombudsman, is retiring. Every time he spoke to the Board we learned things we didn't know about the program.

In my opinion he was an exemplary public servant over his long career and I can point to a particular Los Alamos claimant who had a miserable experience until he met Malcolm Nelson.

If it's okay with the Chair and Ms. Rhoads I would like to send out to the Board the accumulated annual reports of the Ombudsman's Office.

If you just skim them you will get a sense of what this program is like from the standpoint of claimants. The link on the website is all I am talking about.

CHAIR MARKOWITZ: Yes, interesting. Steve Markowitz. I wonder, Ken, whether if it's within our right to issue a statement recognizing his contributions and congratulating him on retirement, but also, you know, praising him for his long-time dedication to nuclear weapons workers and assisting them in the compensation process. Is there something that you would like --

(Simultaneous speaking.)

MEMBER SILVER: Conditionally I would be delighted to work on it and if anyone else wants to, but I think I heard in your statement that you would need to check out whether it's

within our purview, but I am more than happy to get it started.

CHAIR MARKOWITZ: Well, okay. Now so, Mr. Chance, is there anything off limits about the Board issuing a statement to honor Mr. Nelson?

MR. CHANCE: Yes, let me see if that is okay to do.

CHAIR MARKOWITZ: Okay.

MR. CHANCE: I would have to check. I would have to look into that but I can get back with you.

CHAIR MARKOWITZ: That's fine. So is that -- If it's permissible is that something that we could draft up and send around to the Board and get their sign off on or is this somehow subject to a telephone vote?

MR. CHANCE: Let me do some research on that and see if you can do it and I will get back to you as soon as I find out, okay?

CHAIR MARKOWITZ: Yes, sure, okay. Excellent, excellent suggestion, Dr. Silver.

Okay, Mr. Chance, do you have any closing comments you want to make or need to make?

MR. CHANCE: No. I just wanted to thank everybody from the Board, the returning members, the new members, welcome once again, and I wanted to especially thank the folks from the program who I think provide some really valuable information and members of the public who took the time to sit in on our discussion, so I wanted to thank everybody.

We actually finished pretty much on time and didn't have any major technical difficulties, which is always good. So thanks so much, everybody. Stay safe out there. This meeting is adjourned. Thank you.

CHAIR MARKOWITZ: All right. Thank you.

(Whereupon, the above-entitled matter went off the record at 3:06 p.m.)