U.S. DEPARTMENT OF LABOR

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ADVISORY BOARD ON TOXIC SUBSTANCES
AND WORKER HEALTH

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THURSDAY
MAY 9, 2024

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The Advisory Board met at the Comfort Inn Oak Ridge-Knoxville, 433 South Rutgers Avenue, Oak Ridge, Tennessee, at 8:30 a.m., Dr. Steven Markowitz, Chair, presiding.

SCIENTIFIC COMMUNITY

AARON BOWMAN
MARK CATLIN
GEORGE FRIEDMAN-JIMENEZ

MEDICAL COMMUNITY

MARIANNE CLOEREN*
STEVEN MARKOWITZ, Chair
MAREK MIKULSKI
KEVIN VLAHOVICH

CLAIMANT COMMUNITY

JIM H. KEY
GAIL SPLETT
DIANNE WHITTEN
KIRK DOMINA

DESIGNATED FEDERAL OFFICIAL

RYAN JANSEN

ALSO PRESENT
KEVIN BIRD, SIDEM
JOSH NOVACK, DOL
CARRIE RHOADS, DOL
JOHN VANCE, DOL

*Present via videoconference

C-O-N-T-E-N-T-S

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

(8:31 a.m.)

MR. JANSEN: All right, we'll get started. Good morning, everyone. My name is Ryan Jansen and I am the Designated Federal Officer for the Department of Labor's Advisory Board on Toxic Substances and Worker Health.

I would like to welcome you to Day 2 of this meeting of the Advisory Board here in Oakridge, Tennessee. Today is Thursday, May 9th, 2024 and we are scheduled to meet from 8:30 a.m. to 11:30 a.m. Eastern time.

I am, again, joined by Carrie Rhoads from the Department of Labor and Kevin Bird, our Logistics contractor. There will be no public comment period today.

The Board's website which can be found at DOL.gov/owcp/energy/regs/compliance/advisoryboard.htm has a page dedicated to this meeting. The page contains all materials submitted to us in advance of the meeting.

And will include any materials that are provided by our presenters today. There you can also find today's agenda as well as instruction for participating remotely.

If any of the virtual participants have technical difficulties during the meeting, please email us at energyadvisoryboard@dol.gov. If you are joining by Webex, this session is for viewing only and the microphones will be muted for non-Advisory Board members.

So the public may listen in, but not participate in the Board's discussion during the meeting. A transcript and minutes will be prepared from today's meeting.

As the Designated Federal Officer, I see that the minutes are prepared and ensure that they are certified by the Chair. The minutes of today's meeting will be available on the Board's website no later than 90 calendar days from today.

But if they are available sooner, they'll be posted sooner. Although formal

minutes will be prepared according to the regulations, we also prepare verbatim transcripts and they should be available on the Board's website within 30 days.

During the discussions today, please speak clearly enough for the transcriber to understand. When you begin speaking, especially at the start of the meeting, make sure that you state your name so it's clear who is saying what.

Also, I would like to ask that our transcriber please let us know if you have trouble hearing anyone or any of the information that is being provided.

I'd also like to mention that the terms of the 12 current Board members expire in July, 2024. As such we have invited interested parties to submit nominations for individuals to serve on the Board.

Membership is balanced between the scientific, medical and claimant communities and current members may be renominated and

reappointed.

Nominations for individuals to serve on the Board must be submitted by May 17, 2024. For further information, including details about how to submit nominations and what materials are needed, please visit the Board's website.

As always, I would like to remind the Advisory Board Members that 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 suitable for public disclosure and cannot be shared or discussed publicly including during this meeting.

Please be aware of this throughout the discussions today. The materials can be discussed in a general way which does not include any personally identifiable information or PII such as names, addresses or a doctor's name if we are discussing a case.

With that, I convene this meeting of

the Advisory Board on toxic substances and worker health. I will now turn it over to Dr. Markowitz for introductions.

CHAIR MARKOWITZ: Good morning. Let's do a quick round of introductions and then begin the meeting. Steven Markowitz, Board Chair, a professor at City University of New York and Occupational Medicine physician. Yes, Mr. Domina.

MEMBER DOMINA: Kirk Domina, I'm a retired Hanford worker of 38 years in reactor operations, nuclear chemical operator and 14 years as employee health advocate for the Hanford Atomic Metal Trades Council.

MEMBER WHITTEN: Dianne Whitten. I am the current Hanford Atomic Metal Trades Counsel Health Advocate. I am RADCON tech by trade, 36 years at the Hanford Nuclear Reservation.

MEMBER CATLIN: Hi, I'm Mark Catlin, Industrial Hygienist retired.

MEMBER VLAHOVICH: Good morning. I'm

Kevin Vlahovich, I'm an Occupational Medicine physician and Director of Employee Occupational Health at University of New Mexico.

MEMBER KEY: Good morning. Jim Key, 49 year plus Cold War veteran employed 35 years Paducah Gaseous Diffusion Plant, the remaining time at the depleted uranium hexafluoride facility, President of the United Steelworkers International Union, Atomic Energy Workers Council which encompasses eight DOE/EM locations across the nation including Idaho; Hanford; Carlsbad, New Mexico; Oak Ridge; Paducah, Kentucky; Portsmouth, Ohio; Erwin, Tennessee and Bettis Labs in Pittsburgh.

MEMBER SPLETT: Gail Splett, retired from the Department of Energy at Handford after 45 years.

MEMBER BOWMAN: My name is Aaron Bowman. I am a professor and interim Dean of the College of Health and Human Sciences at Purdue University. I am a toxicologist.

MEMBER FRIEDMAN-JIMENEZ: Good

morning. I'm George Friedman-Jimenez. I'm an Occupational Medicine physician and epidemiologist. I've been running the Bellevue/NYU Occupational Medicine Clinic for 33 years, seen a lot of patients, taught a lot of medical students.

I lead the course for 20 years that taught medical students the principles of diagnosis so I've been always interested in diagnostic theory and practice and applying it.

And this morning I'm going to talk about part of that which is causation. But I'll leave that for a minute when we start.

MEMBER MIKULSKI: Good morning, Marek Mikulski, occupational epidemiologist, University of Iowa, Occupational and Environmental Health. I direct Iowa Former Worker Program.

CHAIR MARKOWITZ: Thank you. So today's agenda, we're going to start off with a kind of a report from the hearing loss working group and then launch into some proposed

recommendations.

And then we'll take it from there picking up whatever threads, other threads from yesterday and then kind of establishing what the future work of the Board will be during the remainder of this term and going into the next term.

The hearing loss working group didn't, hasn't quite completed a review, an update of relevant scientific literature. But instead we thought it would be a good thing to actually talk about the different kind of weight, talk about how we think about causation.

And in relation to hearing loss which in the program relates to two causes really, noise and solvents. It's especially interesting conversation so welcome Dr. Friedman-Jimenez to discuss this.

MEMBER FRIEDMAN-JIMENEZ: Thank you, Dr. Markowitz. Our working group consists of Dr. Aaron Bowman, and Dr. Marianne Cloeren and

myself and we're focused on hearing loss which in this program is largely related to solvents.

But is also related to other factors including noise and that's what I'm going to talk about today. We have started a literature review.

Dr. Cloeren is leading that, but there's a lot of literature out there and in my own reviewing of some of the articles that we've identified, there's some good and some bad literature.

And it really requires sorting through the studies carefully and reading them carefully and so this is taking a fair bit of time so we're not ready to give a report on all of the literature review.

But there is a very important issue involved in interpreting the information that we find which is how do you interpret when there two different causes of a disease and one is occupational and one is not?

How do you interpret that? How do

you deal with it? How do you apply it? So that's what I'm going to talk about today. And this is often called interaction.

And we'll go through that fairly deeply what that means when you have causes either competing causes or causes that combine and both participate in the causation process. Next slide please.

I have no conflict of interest. As I said, I'm an occupational medicine physician and an internist and for many years have been interested in the diagnosis of medical disease.

And in occupational medicine, this includes both the medical diagnosis and the causal diagnosis which is something that most doctors don't spend a lot of time studying or thinking about.

But we do in occupational medicine so I've been working on this as a theoretical problem. Next slide please. So in today's talk I'm going to go through an example in some depth.

The challenge of two interacting causes. I'm going to use lung cancer asbestos and smoking as the example. This is not hearing loss, obviously, but it's the best understood disease that has two known prominent causes.

And with the best data that I could find which not by coincidence was published by Dr. Steven Markowitz of a study of asbestos insulation workers and lung cancer and smoking.

And then I'm going to illustrate how we interpret these data for lung cancer and asbestos and smoking and propose an analogous approach to the hearing loss cases.

And present some examples of studies of hearing loss solvents and noise exposure and then conclusions and next steps. So next slide please.

We'll start off with a patient, an 80-year old man with an extensive smoking history and a very intense asbestos exposure history many years ago with plenty of latency

period.

And this case illustrates two potential causes of the lung cancer that he now has and multiple possible causal mechanisms. Next slide please.

What does work-related mean? Well this is sort of the crux of the issue. Is the disease work-related? Is it related to his exposures in the work place? OSHA defines this in the Standard 1904.5 which is actually an excellent standard and I'll just read it verbatim.

You must consider an injury or illness to be work related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness.

So the three terms here that we focus on are caused, contributed to and aggravated. Next slide please. So cause, cause has been studied for millennia.

And, you know, everyone understands intuitively and by experience how to determine whether something is causal or not. You know, you flip the light switch and the light goes on.

Was that just by magic or was there some causal pathway and, you know, as babies we figure this out. But it's never been really defined to perfection.

And there are always difficulties so one of the main concepts that for several hundred years have been used as necessary and sufficient causes.

And I'm sure you've heard those terms and not just in legal arena, but in everyday life. A necessary cause is a condition under which if it's absent, the disease cannot occur.

It's also called sine qua non or "but for" cause by the lawyers. A sufficient cause is a condition which if it's present, the outcome will inevitably occur.

In other words, everything has been

met and the event happened. These are deterministic definitions. They're not probabilistic, they're not statistical.

But they're easier to think about than the probabilistic definition and these have been studied for hundreds of years, but in the last say 30 years, there's been a huge increase in the amount of publications.

Next slide please. This is a graph of the number of publications on causal inference in epidemiology over the last 30 years. You can see it's rising probably exponentially.

It ended here in 2016 and there's been even more since 2016. Next slide please. So our concepts of causation are really stuck back in the 20th century in terms of how it's applied.

But the theory and now research methods are really much more advanced than this and I think there's some room for fine tuning and bringing our conception into the 21st

century.

And hopefully improving things and making the determination of causation more accurate. So necessary and sufficient causes as a stand-alone concept don't work well.

And I'll show you some examples of how they don't when you just use them alone. Next slide please. But they can be useful in a setting that I'll discuss in detail.

First example, asbestos exposure can cause mesothelioma. But it's not a necessary cause because in the absence of asbestos exposure, people can get mesothelioma.

So it's not necessary for mesothelioma causation. It's not sufficient either because among all the individuals that are exposed to asbestos, the great majority don't get mesothelioma so asbestos is not sufficient to cause mesothelioma by itself.

So next example is hepatitis B and hepatitis B carrier state can cause hepatocellular carcinoma, liver cancer. And in

the absence of hepatitis B, people still get liver cancer from other causes.

Many hepatitis B carriers don't get liver cancer so it's not sufficient either. The most common example is probably smoking and lung cancer. Smoking can cause lung cancer.

That's pretty well accepted. Ten to 15 percent of people with lung cancer never smoked. So it's not necessary. There are other causes of lung cancer.

Eighty to 90 percent of people who don't get lung cancer who smoke so smoking is not sufficient to cause lung cancer. So these are examples, next slide please, of how necessary and sufficient on their own are not adequate for our purposes.

In 1976, Kenneth Rothman, an epidemiologist now at Boston University was at Harvard at the time proposed using these necessary and sufficient concepts as sufficient component causes in epidemiologies which is what he called them.

This was first described in 1965 by Mackie and called INUS, I-N-U-S. A is the cause of B. If A is an insufficient, but necessary part of a condition that is itself unnecessary, but sufficient for B.

You got that? Too early in the morning. So 20 years later, a lawyer named Wright, Richard Wright, simplified it somewhat and called it NESS.

NESS is A is the cause of B if A is a necessary element of a sufficient set of component causes of B. It's a little bit easier to think about.

It still, it takes a few months of working with it before it's intent and it's second nature. The sufficient component cause model fits really well with the OSHA definition of work relatedness.

I want to mention that and I think it's really important that the definition of work relatedness really matches the current scientific understanding of causation.

And it's a really good definition and I think it's very useful for our purposes. It accommodates mutually exclusive causes, single causes, contributing causes and aggravating causes. Next slide please.

So this is the Rothman model. It's often called the pie model for obvious reasons. And here, this is the simplest possible model where you have four sufficient causes. I call SC 1 Sufficient Cause 1, SC 2, SC 3 and SC 4.

And in this model, Mr. A.S. who is our patient could have gotten lung cancer by any of those four different and mutually exclusive sufficient causes.

He either got it by SC 1 or SC 2 or SC 3 or SC 4. So each sufficient cause is a sufficient set of component causes. So we call these "U". One of the components is the unmeasured factors that cause lung cancer.

Say U1 and I'll go through them in the next few slides. So each sufficient cause includes all of its necessary component causes.

Everything that's needed to cause lung cancer is in the model under the Us except for the exposure that we're talking about that's separated out so that we can see what it's doing.

If any one of these component causes is absent, then that particular sufficient cause mechanism cannot happen. So this follows a deterministic model and sufficient causes one, two, three and four compete with each other.

Only one of them actually happens first. And once that happens, then the person has cancer and the other causes may be part way along the pathway, but haven't yet completed it and caused the cancer by that mechanism.

So only one actually causes the lung cancer before the others are completed. Next slide please. So U1s, sufficient cause 1 doesn't involve either asbestos or smoking.

And there are people who get lung cancer who have never smoked and who were never

exposed to asbestos. And you can argue that, you know, maybe they're, you know, exposed to second hand smoke or second-hand asbestos, low levels.

But the numbers are well beyond what those very low doses would cause so U1 is an unmeasured set of genetic, epigenetic, temporal and environmental component causes that are sufficient to cause lung cancer in Mr. A.S.

So this is a pathway that could happen if he had not been exposed to either asbestos or had smoked. Next slide please. Sufficient Cause 2 is a different sufficient cause for which both the Component Cause Asbestos, I abbreviate ASB and Component Causes U2 are necessary.

And unmeasured Cause 2, U2, is different from U1, but it also doesn't include either smoking or asbestos. It's all the other factors that are involved that combine with asbestos to cause cancer.

So asbestos and U2 are each a

necessary element of the sufficient set SC 2. Next slide please. Sufficient Case 3 has the necessary elements U3 and smoking.

This is the smoking pathway as opposed to the asbestos pathway and U3 can include just as an example and this is way over simplified, factors like the RAS oncogene or other genetic factors and virtually all cancers have some genetic component.

Down regulation of tumor suppressor, mRNA, let-7 that targets the RAS oncogene or other epigenetic factors which are more recent branch of science that involves not the gene itself, but modifications to the gene that turn it on and off and allow or block its expression.

And adequate latency period for the clinical manifestation of the lung cancer. Latency period is also part of this U3, the unmeasured causes.

It has to, you have to have plenty of time for the cancer to develop, but then once

it does, bang. On a certain day, nobody knows when because it's only one cell that transforms, you get a cancer and then that cell grows out of control to become a tumor.

Next slide please. So Sufficient Cause 4, SC 4 requires both asbestos and smoking. And it has another set of unmeasured causes U4. So for example, we know a little bit about how this works.

The mechanism might involve the asbestos in the lung damages the pulmonary macrophages, the cells in the lung whose job it is to clean out the lung.

And they grab up the tar particles from the cigarette smoking and they move it up and you cough it out and so that helps to prevent the tar exposure inside your lung.

And that mechanism can be blocked if the macrophages are damaged so the asbestos can damage the macrophage and leave more tar in the lungs so the cigarette smoking causes the cancer more easily.

So this is a combined mechanism that requires both the asbestos and smoking and this is sometimes called synergism and sometimes it's called super additive mechanism. Next slide please.

So in Mr. A.S.'s case, his lung cancer could have been caused by any one of these four sufficient causes. And likewise, his cancer could have been prevented by preventing just one of a component cause.

For example, if he got his cancer by SC3 which involves smoking and the other factors, if he had quit smoking or had never smoked, he may not have gotten that lung cancer. It could have been prevented.

When I say prevented, it's not absolute. It could be, you know, statistically a partial prevention reducing his risk of lung cancer. Likewise, if he hadn't ever been exposed to asbestos, SC2 and SC4 could not happen because they require asbestos.

So the problem is that we don’t know

which of these mechanisms is going on in any individual. We can only see it in a group. So it's not quite as simple as the model would have you think because we can't identify it yet.

Maybe someday we'll have a biomarker that can identify what mechanism occurred, but we don't yet. Next slide please. Okay, these are the data from Dr. Markowitz's study.

And you obviously can't read them, but I'm going to pull them out for you. Next slide please. So taking the data here which you can't read, I'll just blow it up.

And next slide please, there are four groups in these, in this cohort which was put together by Dr. Markowitz as a group from the American Cancer Society who were non-smokers who did not, I'm sorry, who were smokers and non-smokers.

But who never had exposure to asbestos. So that's the non-asbestos cohort. The asbestos cohort is a group of insulating

workers that Dr. Selikoff had collected.

Dr. Markowitz, please correct me if I misrepresent anything. But so these are two cohorts that are merged together and the numbers here are the N so 18,843 people from the Cancer Society cohort that did not smoke and had no asbestos exposure.

The 468 from the insulators who had only asbestos exposure, but did not smoke. Thirty-five thousand four hundred who smoked, but did not have asbestos exposure from the cancer, American Cancer Society cohort and 1,909 who both smoked and had asbestos exposure from the insulators.

So this is a combination of these two cohorts. And among those numbers of people that were followed for around 20 years on average, there were 151 cases of lung cancer in the non-smoking, non-asbestos group.

Eighteen in the asbestos only group, 2,540 in the smoking group and 321 in the both asbestos and smoking exposed group. These are

exposure groups that you can observe that you can tabulate and analyze.

And so these numbers are all over the place because there are thousands in one group and hundreds in another group. So we have to adjust, we have to make the numbers so they're comparable.

So what we do is we divide the number of cases by the number of person years, how long the person was followed times the number of people that were followed that length.

So there were 377,000 person years in the non-smoking, non-asbestos group. And those 18,000 people were followed for about 20 years so 20 years times 18,000 people gives you something like 377,000.

So this is how we do it in epidemiology so these are called, next slide please, incidents rates. So the lung cancer incidents rate in the first group, nonsmoking, no asbestos is four per 10,000, .0004 and to simplify it I just pulled out the factor of

10,000 so there are four.

So that's a rate and that is comparable relatively so to the 21 per 10,000 that occurred in the asbestos group. Thirty-nine in the smoking group and 107 in the both asbestos and smoking groups. Next slide please.

So we can actually deduce how many occur by each mechanism in this group, not for the individual, but for the groups. And these are approximate numbers because these groups were adjusted differently for age and gender.

And well I guess they were all men, but for age and so they're not strictly comparable, but they're approximately comparable and I'll ignore that minor detail.

And it is a minor detail because the numbers are pretty big. So four cases that occurred in the non-smoking, non-asbestos group, none of them could have involved either asbestos or smoking because those people were not exposed to asbestos or smoking so those are

all SC1 sufficient causes.

So we can deduce first that there are four SC1s. In the second group, asbestos only in the insulators, there were 21 cases. But out of those 21, some of the people might have gotten the cancer, or did get the cancer without the asbestos that they were exposed to.

The asbestos doesn't make you immune to the other mechanism that you could have gotten lung cancer. So you had those four, there would be about four SC1s that would occur in that group.

But in addition there were SC2s that occur with asbestos that require asbestos for the mechanism. So you can subtract off the four from the 21 and get 17 and so this process of deduction, you continue it the next group out of the 39 cases among smokers, 35 subtracting off the four SC1s were by a mechanism SC3.

And in the last group which is the most interesting group for us, there are 107

cases, but four were SC1s, 17 were SC2s and 35 were SC3s. So there were 51 left that would have required both asbestos and smoking.

So this is how we can get an idea how important smoking and asbestos combined mechanism is for this particular disease and exposure. Next slide please. Next slide please.

So if you eliminated asbestos exposure, how many cases would you have prevented? Well you couldn't prevent the smoking cases. Right? Because they weren't dependent on asbestos.

You couldn't prevent the cases that didn't depend on either asbestos or smoking so those four SC1s and 35 SC3s could not be eliminated by eliminating asbestos.

On the other hand, all 17 of the SC2s and all 51 of the SC4s would have been eliminated if you prevented smoking. Next slide please.

So applying this to compensation,

this is a pretty well-developed area of compensation for lung cancer among people with asbestos exposure and many of whom are smokers.

So generally these cases are compensable in both smokers and non-smokers. And the lung cancer relative risk for asbestos among smokers or among non-smokers is what you use to make that causal judgment to support the claim.

And for smokers, the relative risk is 2.75 for asbestos. Okay? For nonsmokers, the relative risk for asbestos is five, 5.2. So you know, they're somewhat different relative risks, but they're both largely elevated, 2.75 means there's 2 almost three-fold increase in the risk of lung cancer due to asbestos among smokers.

So the causation standard that we use, it's more likely than not that the lung cancer was causally related to the asbestos exposure is what we apply and we use the relative risk that's appropriate for that

person whether a smoker or not, you use the corresponding relative risk.

And so this is how people think about it for the lung cancer in asbestos and smoking patients, claimants, but you can apply the similar logic to people with other risk factors who didn't smoke who have a genetic risk factor.

Virtually every lung cancer case involves some genetic mechanisms as well which we are starting to understand. There are other epigenetic mechanisms most of which we don't yet understand.

Age is a major factor, gender is a major factor. All of these are non-occupational contributing causes that combine with the asbestos and, you know, they essentially are ignored in the logic of causation decision making and compensation.

Next slide please. So this precedent, this experience that we have with lung cancer and asbestos and smoking, I want to

apply this as an analogy to the hearing loss case that we're in now that we're trying to develop some better understanding.

The presumption of work-related hearing loss is presented in the Procedure Manual and there are two criteria that the person has to meet.

First they have to have potential exposure to one or more of a list of ten qualifying toxic substances for at least ten consecutive years of verified employment.

And there's a list of 20 or 30 qualifying jobs or equivalents as determined by a contract IH opinion. And they have to have the IH opinion that the claimant also had concurrent daily exposure to noise above 85 decibels for those same ten years.

If one and two are not both met, then that means the person doesn't meet the presumption criteria and so they get then relegated to the next category where they have to be evaluated by the CMC by the contract IHs

on a case-by-case basis to determine if their cancer was related to -- I'm sorry, if their hearing loss was related to the toxic substance.

And this is defined in the Procedure Manual. Next slide please. So the question is, should we use a similar approach for hearing loss that we could, that could be caused by solvents or noise or both similar to the procedure, the way we think about lung cancer and smoking and asbestos.

Next slide please. And so, first question is, are there data to support this? And so I did a little quick and dirty literature search and found a few articles that publish the actual relative risks for hearing loss by solvents broken down into noise exposed group and a non-noise exposed group.

And not all the studies published stratified it on noise exposure. But the few that I found actually there were two others that I found that were just terrible studies

and I couldn't even include them. I just threw them out. And we find these.

We find studies that are well done studies that are not well done and you actually have to read the study. And this is quite time consuming and this is a problem.

And, you know, we ourselves are trying to find the time to read through all these studies and evaluate their quality. There have been many attempts to automate the quality determination of studies.

And none of them have really worked in a way that save us a whole lot of time that we don't have to read the whole study. So I read a few studies here, but as I say later, we'll have to do a proper literature search.

So pulling out the, I don't know if you can read it from here, but this is a study by Sliwinska-Kowalska 2005 and she has done many studies of hearing loss and chemicals.

And this was in JOEM, the Journal of Occupational and Environmental Medicine quite a

well-done study. The first data point is non-exposed, neither noise nor solvent exposure.

And she looked at styrene and she looked at combined styrene and toluene so that second odds ratio, these are odds ratios and odds ratios are very similar to relative risks.

If it's one, that means the rate is not elevated in the exposed group. If it's above one, that means the rate is higher in the exposed group.

If it's less than one, that means it's lower or may be prevented by the exposure. We didn't find that, but these are statistics so they have statistical variation.

And so the error bars there are the 95 percent confidence interval for that odds ratio. So the second column is only noise exposure.

And the odds ratio is 3.3 so there's a three-fold elevation among these workers in hearing loss among those who were exposed to noise.

And they define noise as greater than 85 decibels and, you know, every day, every second, the noise level in the work place changes so they actually used very sophisticated individual measurement of noise for every single person in the study.

And they did individual measurements of the solvent exposures as well. So the 3.3 fold elevation is for only noise. And then for the styrene exposed, only styrene exposure, no noise exposure.

In other words, the noise level was below 85 decibels for everyone. The odds ratio was 5.2. That's just for styrene and then the fourth data point is styrene and noise exposure and the odds ratio was 10.9.

But you can see the confidence interval is quite wide. And you know, these are quite labor intensive studies to do so the numbers are not always very big. So the confidence intervals can be wide.

So we have to review the literature

and look at a number of studies and hopefully find the best ones. The fifth data point is styrene and toluene.

And so these are both solvents and no noise exposure in the fifth and the odds ratio was 13.1 and for styrene toluene and noise exposure, the odds ratio was 21.5. Next slide please.

And so it turns out you can calculate the odds ratio for the noise exposed group, the odds ratio for styrene in the noise-exposed group and in the noise-unexposed group by simply dividing out the odds ratios and I did it here.

I won't go through the details, but if you want to see the proof, I can easily show that to you later. And it's in epidemiology text books.

So the odds ratio for just styrene among non-noise exposed, they've calculated it was 5.2. The odds ratio for styrene plus toluene exposure was 13.1 for the non-noise

exposed.

And for the noise exposed, the odds ratio for the styrene was 3.3. So even among those that have noise exposure, the styrene increases the risk of hearing loss by about threefold.

And for those exposed to styrene and toluene, it was 21.5 divided by 3.3, 6.5 so it's sixfold elevation due to the styrene and toluene among the noise exposed people.

Next slide please. So this shows that there's a very substantial elevation in the risk of hearing loss among people that are exposed to solvents.

And that's true in the noise exposed group as well as in the noise non-exposed group from that study. The second study here is by Kim, et al., 2005, yes.

And their odds ratios, I'll just cut to the chase here, mixed solvents was what they studied. It was a long list of mixed solvents, not just styrene or toluene.

And their odds ratio was 2.6 in the non-noise exposed group and 1.9 in the noise-exposed group. Next slide please. The next study was by Saraei among tire factory workers.

And they looked at organic solvents and among the non-noise exposure the odds ratio was 1.86. It was not statistically significant. All the rest of them were statistically significant.

I just didn't have time to make that notation. In the noise exposed group, the odds ratio was 2.6. So among people exposed to noise, the styrene has the effect of increasing their risk of hearing loss twofold, threefold, and more in these three studies.

As I said, there's a great deal of variation. There's a huge variation in workplace exposures by occupation, by industry, over time with, you know, enforcement of OSHA standards that come into effect more in the '90s and 2000s and then earlier.

So all these factors have to be

considered when you put it together. But there is some good evidence and at least the first study which I read in great detail is very well done and I would believe its conclusions.

You know, that doesn't mean that that's true for every workforce because of the variation among workforces, but there is some good evidence that solvents alone can cause hearing loss.

And that solvents, in combination with noise can cause even more hearing loss. So next slide please. So I think we can conclude from this that at least these three studies in this preliminary literature review suggests that solvents cause hearing loss, can cause hearing loss among noise exposed and non-noise exposed workers.

And when there may be a non-occupational and second causal exposure that interacts with the occupational exposure, there is a precedent for how we think about this.

And the lung cancer precedent is that

you use the relative risk for the appropriate group, the smoking group, you use the relative risk for asbestos among smokers.

In the non-smoking group, you use the relative risk for asbestos in non-smokers. So likewise, in the hearing loss, you can use the relative risk for the occupational exposure with, due to solvents even in, if the noise is occupational or non-occupation.

You know, the occupational aspect of it is brought in by the solvents and not necessarily by the noise. And a lot of people have other noise exposures.

You know, among this group of workers, many were in the military, you know, firearm noises quite loud and impulse noise has a particularly damaging effect on hearing.

So many have been exposed to firearm impulse noise. People go hunting, people listen to loud music, people mow their lawn and the muffler's not working very well, they listen to music with headphones which can be

even much louder than speakers because you don't have to worry about the neighbors and turn it up and you can really harm your ears and hearing with that.

So there are a lot of noise exposures that may or may not be occupational, but either way, the hearing loss is exacerbated. You get cases that require both solvent and noise exposure that would be eliminated if you eliminated the solvent exposure.

So the OSHA standard I think addresses this very well. And it does fit our current understanding of these interactions. Next slide please. So I think where do we go from here?

I think the first step is to do our literature search and review and read the articles which is quite a task. And the question that I would focus on is among workers exposed to the loud noise, does solvent exposure cause hearing loss?

And then other relevant questions to

investigate is there a threshold for duration of exposure needed for causation? You know, does it have to be ten years? Does it have to be ten consecutive years?

And does the loud noise need to be concurrent with the solvent exposure or could it be, you know, another day or could it be another year?

And I didn't find really anything on that in the studies that I read. So I'd like to, we'll do our literature review, but it would be good if we could see the studies that the Procedure Manual was based on if we don't find them in our literature search.

Hopefully we will. And really, see, this is something that is not easy to study and it's rarely studied. The duration of exposure and it varies a lot among people.

And it's not well characterized in most articles so it may be difficult information to get. But again, the presumption approach doesn't, it's not the last

determination.

It's just sort of taking the most obvious cases off the top and compensating them without really further evaluation based on easy to get information. And then the rest need to be evaluated case by case by a CMC, by an IH and it's much more labor intensive.

So we're trying to make it a little more efficient by taking these obvious cases out of that and not making doctors and IHs go through the obvious if it's just such a slam dunk case.

But there needs to be a real effort to find the answers to these questions. I'm not convinced that it's out there, but let's see what we can find. And then, depending on what we find, I think we should consider a Board recommendation to update the Procedure Manual if it's warranted.

You know, and we're not there yet so we have to find out what we see in the literature and how we interpret it. So I

wanted to present this.

I know it was a little technical and, but this is not how most doctors think about causation and it's very well discussed in the epidemiology literature and most clinicians who make diagnoses don't even have a clue about how all of this stuff works.

And so, you know, we have toxicologists, we have industrial hygienists, exposure measurement and clinical occupational medicine here.

And I think that we can put this together and if we find the evidence that we need in the literature, we can probably update the Procedure Manual in a way that meets whatever Government constraints hereunder and that would more accurately classify people.

I can, I could give another talk on accuracy of determinations, but that's something that we really are trying to improve on and it's not easy.

And this is a problem that even most

epidemiologists have not accepted as something that they want to work on. So there's not a lot out there, but I think we, there's been a lot of progress in the last 50 years and we can apply some of that to our thinking on this.

So thank you and I'm looking forward to discussion questions, criticisms, thank you.

CHAIR MARKOWITZ: Thank you, Dr. Friedman-Jimenez.

MEMBER FRIEDMAN-JIMENEZ: Next slide please.

CHAIR MARKOWITZ: I thought that was terrific. Oh, good, you're done. Okay. I thought that was terrific. And highly relevant actually to the issue of hearing loss and solvent exposure.

I have a couple of, well actually just one very brief observation. You mentioned the OSHA standard for causation. Sounds very similar, cause, aggravate or contribute, to the standard that's in the Energy Compensation Program.

So I just want to make that connection. Just a couple of questions for Mr. Vance because I can't remember in the hearing loss presumption, the Procedure Manual, it's only the occupational noise that counts. Is that right?

MR. VANCE: Yes, okay. So let me back everybody up and just explain it. Because if you can go back to that slide right before the end here.

CHAIR MARKOWITZ: By the way, purple is the color of NYU Langone Health so George had to use purple for this slide, just saying.

MR. VANCE: What I want -- let me just explain.

CHAIR MARKOWITZ: Yes.

MR. VANCE: So let's think of this as a line. Okay? And what our current procedure basically stipulates is we accept that hearing loss right now has an association with noise and toxic solvents. Okay?

The Board has looked at that in the

past and has given us recommendations for added solvents and we have included those into the standard, but that line exists in our procedure that says, if you cross this line and the standard basically stipulates that if you worked in a job or had an exposure to a solvent and ten consecutive years of that exposure or that work.

And also works best to consistent levels of noise above 85 decibels, you cross that line, we're going to pay you so that the causality threshold has been satisfied.

We don't argue about aggravation or contribution. We just say you've crossed that epidemiological threshold for causality for the standard applied to our program which is very similar to the OSHA standard. All right?

So that first bullet point we are accepting that the reality exists. What would be particularly useful to the program and has been a point of contention are your second two bullet points.

Very similar to what we were talking with Marek about on the Parkinsonism, the standard that we have and we shared this with the Board, but I will resend it, we have a white paper that was done that explained the literature and epidemiological research that was the source of the ten-year consecutive standard.

And so what our epidemiologist was looking at was the series of science that she thought was sufficiently probative, sufficiently weighted to say, yes, this is an established causal relationship.

But the studies were based on different analysis of duration of exposure. So you had some studies that would have looked at, you know, eight years of exposure to noise and solvent.

Other studies looking at ten years, 12 years, what have you and so she was looking at all of the studies to come to a reason interpretation of like what would be the best

temporal duration of exposure to establish that causal line? Ten years.

That's what it was so she said ten years. So on the second bullet, that's what we really need to focus on is that still representing a good standard of epidemiology that it requires for the confidence to meet that line, that threshold for compensability?

Is it ten years of consecutive exposure to noise and solvents or should it be something less because that would be more advantageous to our client population if you say, okay, we've looked at it.

And there's now available science or existing science that says it really should be eight years, five years or what have you. But as you know, I think and I've talked with our toxicologist about this, the science is pretty clear that there is a connection between solvent and noise exposure and hearing loss.

We know that. The debate for the program would be where to shift that line to.

Is ten years of consecutive exposure appropriate or should it be less? Right?

CHAIR MARKOWITZ: Right.

MR. VANCE: Then the second point is very relevant as well because right now we're saying concurrent exposure to solvents and noises is the requirement and that's what our examiners would be looking for and establishing a viable hearing loss case.

So if you change that standard and say well it doesn't need to be concurrent, it can be five, eight years of solvent exposure and it can just be some period of high level decibel noise exposure.

So just keep in mind, you know, the program accepts that the causal connection exists. It's playing with the details that allows that line for compensability to shift.

So the focus should really be on that. I'll resend to Dr. Markowitz the analysis that we did that is sort of the basis for the ten-year standard that we applied, but

from my understanding and my discussions with a toxicologist, it was.

She had identified different epidemiological literature and science, purity of science that basically was identifying different cohorts of people that they had studied for different periods of time.

And she felt that the ten year, you know, threshold was the most reasonable one based on the body of the epidemiology so if that is something the Board would look at and say well we think that's reasonable, but you could have also gone with this and it's a lower duration of exposure, I think the program would benefit from that.

And it would be an advantage for our claimants to take that from a ten year to something less. And that's what a lot of representatives and others are arguing that the standard's too conservative and it should be, should be lowered.

CHAIR MARKOWITZ: Thank you. So Ms.

Rhoads, if you could just take note that either if it's been provided to us already, the references that were used to develop the original idea.

So just a couple of comments or questions. So one issue is according to the way you're presenting it, Dr. Friedman-Jimenez, it wouldn't have to be occupational noise exposure combined with occupational solvent exposure for it to be considered occupational because it would meet the aggravation or contribution standard. Right?

So the current presumption I think addresses only occupational noise exposure, but if people had which is very common, non-occupational noise exposure plus solvents then that should be considered occupational.

And that's, I'm sorry, that will be a question for the working group to address. The second question is there was some suggestion that if a person had exposure to multiple solvents that would increase the risk further

above and beyond just a single solvent.

I'm talking about the solvents that are currently on the list. And so the question is whether the person had multiple solvent exposures toluene plus -- I can't remember the example that you had there.

Could that shorten the ten-year period? Could that increase in dose reduce the duration. And again, the question is, you know, is that addressed in the literature at all?

And then finally, I think you were suggesting that in the absence of noise exposure solvents alone could produce hearing loss.

And that's not addressed in the current program at least according to the presumption. And that would be a really interesting issue also for the working group to look at. All highly relevant.

One last comment, the issue of concurrent, you had to have the noise exposure

at the same time as you had the solvent exposure. I'm very skeptical that they're going to be studies that shed light on that.

And so the concurrent becomes some sort of default assumption, not that it's been proven that it's necessary, but that in the program has become the default assumption.

And actually bringing studies or data to disprove that would be difficult, but at the same time I'm doubtful that they are actually studies that prove that you need that concurrent exposure.

So other members of the Board have comments or questions? I see the mic in the back, but just speaking to the Board members for the moment. Anybody else want to say anything? Dr. Bowman?

MEMBER BOWMAN: Yes, George, thank you for that presentation. I very much enjoyed that. And you had mentioned applying the "at least as likely as not" standard within this presentation you have ratios of odds, ratios in

that.

Can you just, for the Board, clarify how that standard would be applied? Is it as simple as an odds ratio less than two is not "as least as likely as not" and the above is or can you talk to that?

MEMBER FRIEDMAN-JIMENEZ: This is a well-studied and still controversial topic that's been battered around in the epidemiology literature for half a century or more.

At least as likely or not is a legal tool to help us deal with the uncertainty that's inherent in we don't have the data. These things haven't been studied.

I agree with Dr. Markowitz that it's unlikely that we're going to find studies that shed a lot of light on these questions of duration of exposure, dose of exposure.

We don't have dose of exposure either for solvents or noise for each individual even at the level of the epidemiologic studies. I mean they were getting urine hippuric acid for

toluene on every worker before and after shift for the epidemiology study.

They don't do that for your average worker. They just go to work and they work and they go home and so the exposures is not as well measured in real life as they are in the epidemiologic studies.

And the noise exposures, I mean they had a grueling care measurement microphone at a specified distance. This doesn't happen in real life in real work places.

So we're always going to have this level of uncertainty so you need a statistical way of dealing with that. So the more likely than not is the time tested legal approach to this.

And it's been much better developed in the B program of the radiation exposure program. They actually calculate what they call probability of causation.

But that's been criticized for mathematical reasons to the point that they

backed off and some people call it assigned share because there's so many assumptions that you need to make and satisfy for the relative risk greater than two to translate into probability of causation greater than 50 percent that it just, you can't meet those assumptions in real life studies and real life working populations.

So it comes down to and I think for the foreseeable future, even some of the Godparents of AI have predicted that we will always need an element of human judgment in making causation decisions that it cannot be done purely by the data.

That you have to assume things about confounders being uncorrelated and all kinds of mathematical assumptions. So bottom line is this is something that we trained physicians in. The CMCs have received training.

You know, whether they need to receive more training, we can't speak to that now because we haven't evaluated that, but most

occupational physicians get some training in this.

Few are at a high statistical level that they really understand it. And, you know, this is just something that we need to have an evaluation and make some judgments. There's no gold standard.

It's not like a diagnostic test where you do a, you know, a chest x-ray and compare it with a CT and autopsy and see if you're right or wrong.

There's no objective right or wrong here that you can say in an individual. You know, maybe you guys in toxicology can find fingerprints of specific exposures, map out the pathway and then we'll know did the solvent cause this hearing loss or was it noise induced?

You know, was it the hair cells or some other cochlear location that's, that happens from solvents and not from noise? So this is a fundamental question.

And it's one that is not going to be answered in my lifetime, but that we have the approach to and that approach, I think involves this kind of understanding of causation and then a judgment by a well-trained physician.

And the industrial hygienist are great, better than physicians at evaluating the exposure, but ultimately it comes down to the physician having to put together the exposure information, the family history, the medical history, the other diagnostic tests and everything to make a judgment.

What is the diagnosis and part of that diagnosis is what was the cause of this disease? And, you know, NIOSH has an approach, the six steps to doing a causation analysis and, you know, a lot of these concepts are fairly old and have been, there's been progress on this in the last fifty years that we're trying to put into the process.

So that's a long answer to your question. I'm sorry I couldn't give you a

complete answer, but that's --

CHAIR MARKOWITZ: Yes.

MR. VANCE: -- about where we are.

CHAIR MARKOWITZ: But we, nonetheless, we are confident that the working group on hearing loss can find some answers. But we need to wrap this up so first I want to see if any other Board -- Dr. Cloeren? I see you there.

MEMBER CLOEREN: Yes, hi. Yes, I'm here. Good morning. I thought that was a great presentation, Dr. Friedman-Jimenez. I agree, Dr. Markowitz, with your comments about the solvents alone really needs to be explored.

There's not, it doesn't seem like there's a good reason for a requirement of noise exposure whether occupational or non-occupational.

So I think that's one of the things that we need to take a close look at. Regarding "at least as likely as not," I think we could try to compare with other presumptions

that have been used.

And what the relative risk was for the other presumptive standards just to get an idea of precedent within the program.

CHAIR MARKOWITZ: Okay, thanks. I'm not going to comment on, I'm going to refrain from commenting on levels of relative risk. But I think, Mr. Vance, you maybe wanted to make a comment and then we need to close this out and move on.

MR. VANCE: Yes, let me be really quick. So just for the Board, be aware noise in and of itself is not considered an occupational toxic substance under our legislation.

So what Dr. Cloeren was just talking about is critically important. What you're looking at is the existing standard and you're trying to figure out if the science supports the liberalization of that standard.

So reducing the temporal duration of consecutive exposure looking at separating

noise, the synergistic effect that's already established in this standard and saying as Dr. Cloeren suggests that could an occupational exposure to just the solvent have its own mechanistic effect on hearing loss?

So just keep in mind that what we're looking for is the focus on the existing standard of what could be done, if anything, to liberalize that standard and expand what the claims examiner would be looking for to establish that causal threshold.

And unlike other presumptive standards, this one is unique in the fact that either you meet the standard or you don't. There is no physician involvement in establishing the causative threshold.

The standard that exists in procedure is the standard for accepting that some occupational toxic substance combined with noise contributed aggravated or caused the hearing loss.

We would not go to a CMC to ask that

question. The standard is basically a stand-alone causative threshold so.

CHAIR MARKOWITZ: All right, yes. Steve Markowitz. So I take that to mean that either you meet the presumptive standard and get compensated or if you don't meet that standard, there is no alternative route for analysis which I think is what was being suggested. Anyway, Dr. Friedman-Jimenez --

MEMBER FRIEDMAN-JIMENEZ: There is an alterative --

CHAIR MARKOWITZ: -- we normally give Mr. Vance the last word, but we'll yield it to you this time.

MEMBER FRIEDMAN-JIMENEZ: You basically have to challenge the standard and bring epidemiologic evidence. Each claimant that doesn't meet the presumption it says in the Procedure Manual has to bring a challenge to the procedure by bringing epidemiologic evidence supporting their case.

So it could be stated in a more user

friendly way that they need to be evaluated by their own physician and by a CMC in a case-by-case evaluation looking at all of the evidence.

But how much of the tip of the iceberg the presumption cuts off isn't really important as long as you have a fall back that each person can be evaluated if they don't make the presumption in a way that it has a pretty good chance of finding causation if it's there and not finding if it's not there.

So we can talk more in the future about causation judgments made by physicians and how that works and what is each claimant's access to that because it sounds to me like there's some obstacles in how people get evaluated when they don't meet the presumption.

And that's really important because, you know, how many angels are dancing on the head of a pin? That's what we need to discuss if we don't have the data.

And we don't, we're not going to find the data I don't think that answered these key

questions on precisely enough so I think it all will depend on the CMCs availability and accessibility for people that don't meet the presumptions.

CHAIR MARKOWITZ: Okay. Thank you. And we're going to use the user friendly term to segway into Site Exposure Matrices. And there's a, I think a recommendation or information request draft that's been penned overnight.

If we could bring that up on the screen and present it and discuss it. Kevin, you have that. Right? George, thank you very much. Okay, so you're going to have to make that, I think, Kevin, you're going to have to make it bigger.

We'll have to see only parts of it at a time is the best way and someone want --. Yes, that is that big enough for people to see? Okay. I think someone should verbally read it actually.

(Off-microphone comment.)

CHAIR MARKOWITZ: We can alternate sentences if you want.

MEMBER SPLETT: The first recommendation is that the Board recommends that the Department of Labor inform and submit to the Board, in writing, a summary of any and all changes -- sorry, getting ahead.

When they receive those changes from the Department of Energy or any other source prior to and with each change to the public SEM, i.e., the internet-accessible SEM. Any Board members want to discuss?

CHAIR MARKOWITZ: So this envisions, this describes that, Steve Markowitz, that DOL is receiving information. Right? From DOE. And when DOL receives that information, that the Board is requests -- I'm just paraphrasing in order to understand it.

That the Board is requesting a summary of any of that information that would be used to alter the SEM.

MEMBER SPLETT: And it's not only

from the Department of Energy, but from PTS. So any changes the Board would like to see it before it goes into the public SEM.

CHAIR MARKOWITZ: Okay, so for any other source, it would include PTS then? Right?

MEMBER SPLETT: Yes.

CHAIR MARKOWITZ: So we know that the PTS receives the data and developed and make the changes in the private SEM, you know, the in-house SEM. Right?

MEMBER SPLETT: Right.

CHAIR MARKOWITZ: And then it goes to a classification review and goes to the public SEM. So is this request asking it before it goes into the internal SEM or between the time of the internal SEM and the public SEM?

MEMBER SPLETT: Before the public SEM because I think the Board wants to make sure it's been classification reviewed before it's released to us.

CHAIR MARKOWITZ: Okay, so you know,

I mean in order for the Board to take a look at it, we would have post --

MEMBER SPLETT: Right.

CHAIR MARKOWITZ: -- classification review. Okay, I get that. Thanks. All right, you know, we might just on the third line add "after classification review" just to be specific about that.

MEMBER SPLETT: Kevin, could you do that?

MEMBER VLAHOVICH: Yes, where are you looking at?

(Off-microphone comment.)

CHAIR MARKOWITZ: Yes, before the "prior" to say prior to, I mean after classification review before the word "prior."

MEMBER CLOEREN: I would do it by submit to the Board after classification. Maybe that would make it more clear. In the very first line.

CHAIR MARKOWITZ: Yes.

MEMBER CLOEREN: Maybe submit to the

Board and maybe prefaces after classification review.

MEMBER SPLETT: Okay.

MEMBER BOWMAN: Yes.

MEMBER SPLETT: That's good.

CHAIR MARKOWITZ: And so this is a request of the summary of the changes or a listing of the changes? That's a question to the, to the, to whoever will listen actually I guess.

MEMBER KEY: Yes, Jim Key. Not a summary, but a complete listing, in order for us to understand what those changes are being made and not after the fact.

CHAIR MARKOWITZ: Does that mean you want to change the word summary to listing? Is that what that means? I don't have a view. I'm just raising the question to clarify.

(Off-microphone comment.)

MEMBER WHITTEN: Yes, I agree. We should change that word to list.

CHAIR MARKOWITZ: So you know when we

endorse, we vote on recommendations. We don't really change the language of the recommendations.

We then write up a rationale where we can describe it so it's kind of important we get the language that we want in the recommendation that we vote upon.

MEMBER CLOEREN: So to make it read better, I wonder if we should say something, instead of when they receive a list of changes, maybe when they receive such information from the Department of Energy or other source.

Does that make sense? I wonder how this can actually be done. Like I wonder if this is too broad of and I don't know what all may be coming in.

And I think what we're really asking for here is if Paragon receives information that's going to result in changes to the SEM that, you know, that we take a look that, you know, we'll be able to take a look at it before it does public. That's the intent of this?

MEMBER SPLETT: Yes, that is the intent.

MEMBER CLOEREN: So as written, I don't know that this conveys that.

CHAIR MARKOWITZ: So, Steve Markowitz, just the request is not to access the underlying documents that are, that underly the changes. Right? It's --

MEMBER CLOEREN: Yes. I think that's the --

CHAIR MARKOWITZ: -- it's the result and changes in the SEM. That's what the target is here. Right?

MEMBER BOWMAN: Correct.

MEMBER CLOEREN: So I think maybe what we're really asking for is documentation of changes that are made in the internal SEM so that they could be reviewed, you know, along with kind of the reason or those changes so that those can be reviewed before they get incorporated in the public zone.

CHAIR MARKOWITZ: Steve Markowitz. I

don't think they've undergone classification review.

MEMBER CLOEREN: Well let's say --

(Simultaneous speaking.)

CHAIR MARKOWITZ: For the internal --

MEMBER CLOEREN: -- classification, yes. Because I worry that the way this is written, it might be that it looks like we're asking for all these sort of documents of maps and documents of this building to begin that and, you know, that kind of thing.

I don't know that that's practical for us, you know, a) to need it, and b) to review it.

CHAIR MARKOWITZ: Question for Mr. Vance. The classification review occurs after, between the internal SEM and the public SEM in terms of time.

MR. VANCE: Correct. So on May 16th, what they're going to do is they're going to freeze the internal Site Exposure Matrices. That will go and they'll report that to the

Department of Energy at which time they'll do the classification review for the release of that information that will encompass existing information or any changes that have occurred since the last freeze.

MEMBER SPLETT: I think part of the intent was that the Board would be looking at what has changed whether it's every six months so that we can see the volume and the types of things that are being changed because as of now, that is invisible to the Board. Mr. Key, would you agree with that?

MEMBER KEY: Yes.

MEMBER BOWMAN: On the wording too, accomplish that goal. We say list of any and all changes. I think we mean changes, of course, to the SEM. Right? And --

MEMBER KEY: Yes.

MEMBER BOWMAN: So it's any changes to the SEM. It doesn't matter the source in some sense so could we drop "when they receive such information from the DOE or the other

source?"

Change it to the ten prior to and with each change in the public SEM.

MEMBER SPLETT: We just didn't want to limit it just from things from the Department of Energy. It was also the things that Paragon was putting in as well as the things that they received --

MEMBER BOWMAN: Right.

MEMBER SPLETT: -- from DOE or public sources or PTS. But I'm --

CHAIR MARKOWITZ: So to the SEM, maybe -- sorry, maybe then changes to the SEM --

MEMBER SPLETT: Yes, we could take that whole section out.

CHAIR MARKOWITZ: Yes, the "any other source" includes Paragon includes the public SEM mailbox. Right? So --

MEMBER SPLETT: Correct.

MEMBER BOWMAN: It says all changes so that would be, if it's all changes it has to

be all sources.

MEMBER SPLETT: All sources, yes.

MEMBER BOWMAN: So I'd propose that the highlighted region that Kevin highlighted be deleted, but before it gets delete, because we lose it? That picture.

MEMBER SPLETT: I think as long as we all recognize that any changes are from DOE outside and Paragon. I don't have any issue with deleting that, make it less wordy.

MEMBER BOWMAN: And that would go into the justification anyway.

MEMBER WHITTEN: Do we want to say changes slash updates?

CHAIR MARKOWITZ: Changes would encompass updates.

MEMBER WHITTEN: Okay.

CHAIR MARKOWITZ: So changes is broader, so.

MEMBER BOWMAN: We might want to describe what we mean by list. Do we want to a justified list? Do we want a -- what is a

list?

CHAIR MARKOWITZ: Steve Markowitz. I mean, I would interpret that as a description, you know, of it was this and we're changing it to that.

MEMBER BOWMAN: And --

CHAIR MARKOWITZ: Without a rationale. Just description of what they're doing.

MEMBER SPLETT: Right. And if anybody on the Board had a specific question that could be addressed to the Department of Labor if there was a particular item that was in question.

CHAIR MARKOWITZ: All right so do you want to move on? Unless there are other comments or suggestions here, should we move on to the next paragraph?

MEMBER SPLETT: We can. I didn't know if you wanted to vote on each one separately, but we can do them all at the same time if that's what you prefer.

CHAIR MARKOWITZ: Well can't see the bottom here. Are they, are all of them recommendations? Are some of them information requests?

MEMBER SPLETT: The second one is another information request and the third one is a request for the meetings between Paragon and members of the Board to continue.

CHAIR MARKOWITZ: Yes, oh I guess it's simpler if we just vote on each one separately.

MEMBER SPLETT: Okay.

CHAIR MARKOWITZ: So that we feel more accomplished.

MEMBER CLOEREN: Can we fix the typo?

CHAIR MARKOWITZ: Yes.

MEMBER CLOEREN: In the second paragraph. Please.

PARTICIPANT: Yes.

CHAIR MARKOWITZ: So we're going to just looking at the first one then we're going to -- any additional comments or questions

about that before we take a vote on that? Okay.

MR. JANSEN: I'll record the vote. Dr. Bowman?

MEMBER BOWMAN: Yes.

MR. JANSEN: Mr. Catlin?

MEMBER CATLIN: Yes.

MR. JANSEN: Dr. Cloeren?

MEMBER CLOEREN: Yes.

MR. JANSEN: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MR. JANSEN: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MR. JANSEN: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MR. JANSEN: Dr. Vlahovich?

MEMBER VLAHOVICH: Yes.

MR. JANSEN: Mr. Key?

MEMBER KEY: Yes.

MR. JANSEN: Ms. Splett?

MEMBER SPLETT: Yes.

MR. JANSEN: Ms. Whitten?

MEMBER WHITTEN: Yes.

MR. JANSEN: Mr. Domina?

MEMBER DOMINA: Yes.

MR. JANSEN: There are 11 yes votes and zero no votes.

CHAIR MARKOWITZ: Okay, so the next one, you know, the Board requests the Department of Labor direct their contractor currently PTS to prospectively.

And retrospectively restore traceability of any chemicals and L-A-B labor -- you could add O-R to that word, labor categories that are slash were removed from the SEM with documentation for the rationale for their removal. The floor is open for comments, questions.

MEMBER CLOEREN: Marianne Cloeren here. I think what we mean with documentation for rationale would be at the SEM that there be some kind of statement and public SEM explaining the rationale, not just providing the rationale to the Board.

CHAIR MARKOWITZ: I'm sorry could you repeat that? You didn't come through entirely.

MEMBER CLOEREN: I think the very last line with documentation for the rationale for the removal. I think the intent there is that the SEM would have a statement providing such document, explaining the rationale.

It's not really clear what documentation for the rationale is where that documentation would go? Is that coming to the Board? I think the intent is that the SEM would include a statement explaining rationale.

MEMBER SPLETT: You are correct. That is what the intent was that these chemicals were removed because they were rolled up into this other chemical or this labor category was separated into these three other labor categories that the traceability would be in the SEM, easy for folks to claimants and claims examiners and authorized representatives to understand not for that to be provided to the Board.

But for it to be clearly understood and located in the SEM. You're absolutely right.

MEMBER CLOEREN: So I think we need to wordsmith that with documentation for the rationale for the removal allowing a public statement in this SEM or provided --

MEMBER BOWMAN: The third word from the end, what about with documentation for the rationale of their removal in the SEM?

MEMBER SPLETT: And I think it’s not just the removal, it's sometimes it's their segregation. And we go back to the example that we used yesterday about the labor and the groundskeeper.

There weren’t removed. They were separated, but it appeared that they were removed from the labor, the toxics, but they were actually separated. Which is that documentation so there's --

MEMBER BOWMAN: With rationale for the documentation of the change?

MEMBER SPLETT: Yes, that's probably better.

MEMBER BOWMAN: Of the change in the SEM.

MEMBER SPLETT: That's good, Aaron.

MEMBER WHITTEN So do we want to change the word removed from the SEM then because they weren't removed, they're still in there. They're just --

(Off-microphone comment.)

MEMBER WHITTEN: -- modified. Yes, that's a good word. Reclassified, re-segregated. I don't know, what do you think?

MEMBER CLOEREN: Removed or moved? Removed from or moved within?

MEMBER BOWMAN: Could we just say altered?

MEMBER WHITTEN: Yes, I like that.

MEMBER CLOEREN: And then it would be "in." I'm going to have some fun with prepositions. So I don't want to disagree with you. I think the last line should say with

documentation of the rationale for the change. So I would switch those prepositions.

MEMBER BOWMAN: I concur.

CHAIR MARKOWITZ: This is Steve Markowitz. To me this sounds like an enormous task that we're asking because if you apply this retrospectively, we're talking about I think this SEM went operational in 2006.

So you're talking about, I'm sorry when was -- you want to correct me? Sure.

MEMBER DOMINA: Well the public SEM, we didn't get that until what, '12, '13? You know, it was way later. We didn't even know it existed.

CHAIR MARKOWITZ: Okay. The, so maybe, I don't know when the original, you know, internal SEM was so even if it's back to 2012, it still strikes me as an enormous task to go back 12 or more years.

And describe for individual toxins and for labor categories, what changes were made and the basis for those changes. I mean,

if it exists, and you know, if it was routinely done and it merely needs to be compiled, you know, and shared with us, then that doesn't sound like such a big deal.

But if it hasn't been done, then I'm skeptical that it could be done, but you know, it -- I guess there's no harm in asking. I do wonder whether, you know, the PTS is a contractor, the contract says certain things.

You know, it sets out the tasks thinking that this might not be a task in the contract is whether, you know, we're just going to get a response from DOL that well, you know, it's not in the contract, we can't do that.

MEMBER SPLETT: One of the things we looked at as the ownership of records clause and the requirement to fall all national archives and records administration requirements which includes documenting any changes to the SEM.

So they should have it somewhere. If they don't that would be very disturbing that

they're making changes without documenting as required by federal law.

CHAIR MARKOWITZ: Okay. So let's just focus for a moment on the term restore traceability. What exactly are we asking them to do, restore into the public SEM?

MEMBER SPLETT: I think that was our intent.

CHAIR MARKOWITZ: Okay, then I think we might need to be more explicit.

MEMBER SPLETT: And I do think this is one of the reasons that there is a lot of unfortunately distrust to the SEM in the claimant community because they see things moving.

And changing the numbers changing, the job titles changing with no documentation even if it's just a footnote. And I do think that's one of the root causes.

I'm looking at the other members, Mr. Key and Mr. Whitten, Ms. Whitten, excuse me. If that is not, do you not agree that that's

one of the issues with the perception?

MEMBER WHITTEN: Yes, definitely.

MEMBER KEY: Yes, so it is one of the issues and also when we became aware of the information being moved from the SEM, no Board Member was apprised of prior and we questioned that.

The subcontractor says well we have that information, it's in another database, but you don't have access to it. So that's the reason why this needs to be performed.

MEMBER CLOEREN: I recommend we consider dissecting this into two requests because I agree with Dr. Markowitz that the first one may not be, may not be feasible.

But the second part is really important and I think that, you know, providing not just documentation of the rationale for the change, but kind of instructions on how to find what the heck you're looking for.

You know, if this changed, if you're looking for this, this is where it is now and

this is the reason or it. You know, some kind of simple instructions and explanation in the SEM.

MEMBER SPLETT: So are you suggesting separating the chemicals from the labor categories or just --

MEMBER CLOEREN: No, I'm suggesting separating the perspective and retrospective traceability restoration request from the request to provide some instructions and documentation of changes so that people can find what they're looking for.

MEMBER SPLETT: So one looking ahead and one looking --

MEMBER CLOEREN: Yes.

MEMBER SPLETT: -- retrospectively at --. I got you.

MEMBER CLOEREN: I don't know if I disagree, but I think that it should be easy enough to provide some instructions and documentation like you may see some changes and this is where to go look for it.

These are reasons for it and this is how to look for what you'll conform. I'm not sure, maybe that isn't easy. You know, maybe there's so many changes that I think --

MEMBER CLOEREN: I do think Dr. Markowitz's point is well taken that going backwards, it may be much more difficult than it is saying as it is as of, you know, October 1st to whatever, we're going to follow this process. So maybe those should be separated for a DOL --

MEMBER SPLETT: So the point --

MEMBER CLOEREN: -- for DOL to provide two separate answers. One is, you know, looking forward, we'll do this or if whatever they're going to say, but retroactively that's much more difficult.

CHAIR MARKOWITZ: Yes. Dr. Bowman?

MEMBER BOWMAN: If we within the same paragraph, you could add a second sentence to address the retrospective part so we could see in a two respectively enable traceability of

any chemical blah, blah, blah that are altered in the SEM.

And then the Board could also request an analysis of the feasibility of taking this action to past changes. And we can get a report on that feasibility and make a decision.

We might want to, if there's a -- if it is in fact an onerous task, the Board may decide that certain types of changes would take priority and would maybe recommend those changes get priority.

But until we have a feasibility, a sense of that feasibility, we might not know the scope to which we could reasonably recommend.

CHAIR MARKOWITZ: That, Steve Markowitz, that could go in the rationale if need be. Well, I'm, or it could be the language could be altered here. I'm not taking a position.

But I'm still stuck on the restore traceability. I'm not sure what -- I think

there needs to be more specificity in what's being, you know, requested here or advised. Because I'm not sure it was traceable.

MEMBER SPLETT: You know, and --

CHAIR MARKOWITZ: I'm not sure what's being restored, but --

MEMBER SPLETT: I think one of the things that we had talked is if one and again, going back to the labor and grounds keeper, if in the labor category there was an asterisk that said grounds keeper with this 43 toxins were moved to a standalone category, that's enough.

I mean, that's enough for somebody looking at that labor category to know that something has changed.

CHAIR MARKOWITZ: So do you mean instead of restore traceability, identify changes? If you would substitute identify changes.

MEMBER BOWMAN: Yes, I think that could work, but the phrasing of traceability is

intended to refer back to the sense that someone knows and remembers this was there, now it's gone.

So provide some trace to what happened.

CHAIR MARKOWITZ: I see.

MEMBER BOWMAN: That's the intent of that word choice, but for clarity, I think for this statement, we could say that we could use the word traceability perhaps in the justification to talk about the intent and the purpose of this.

So I would think potentially the suggestion, Steven, that you just made would be okay.

PARTICIPANT: I agree.

PARTICIPANT: And maybe take restore and just put provide traceability so make it more proactive instead of just --

MEMBER BOWMAN: Yes.

MEMBER SPLETT: Because there never was traceability for what members of the public

want the Board could see. Clearly within Paragon and I assume the Department of Labor, they had some of that traceability.

But for those of us on the IAS side that wasn't there. Ms. Whitten, do you --

MEMBER WHITTEN: Correct. Meeting with them in person when they -- this is Dianne Whitten. When they explained that a lot of the chemicals that we noticed were missing were missing because of that report, Institute of Medicine Report that came out.

So if that's the reason why most of the chemicals have been moved, I think it would be easy enough for them to denote that on the SEM somewhere. But that's the reason.

CHAIR MARKOWITZ: Steve Markowitz, what we don't really know whether, you know, that conversion from constituents to mixtures occurred 2013, 2014, whether that was, you know, the only time or even the major time when what's being described here occurred so.

I'm sorry, there was a suggestion

with to substitute something for the word restore.

MEMBER BOWMAN: Yes, the suggestion was --

MEMBER WHITTEN: Identify changes, is that what you said?

MEMBER BOWMAN: To prove --

PARTICIPANT: To provide instead of restore, to provide.

CHAIR MARKOWITZ: Oh, provide. Okay, so is that friendly amendment accepted by the -- okay, so Kevin if you could just change the word "restore" to "provide."

MEMBER BOWMAN: Instead of traceability, Steven, would to provide notation of any chemical or labor categories because I mean what you're asking for is a note.

MEMBER SPLETT: I mean clearly that's the intent is that somebody looking at the IAS could find out why something changed without having to, there's no other way for them to know it if it's not noted.

I go back to labor or grounds keeper. All it would take is a note, groundskeeper moved to a separate labor category with 43 toxic materials going with it.

MEMBER BOWMAN: So then I'm to, so provide notation of any chemical labor category would, in fact, encompass what's --

MEMBER SPLETT: Yes. Explanation?

MEMBER BOWMAN: Explanation works too.

CHAIR MARKOWITZ: I don't know, explanation is the rationale. I think what your, the traceability issue is the description. This was there, now it's no longer there. Something else appears.

This was moved, that kind of information. So provide notation of any changes. Right? That's what is being requested.

MEMBER WHITTEN: Correct.

CHAIR MARKOWITZ: So after "notation" I would then add "of any changes" in. Yes.

Actually it should be, I think it should say toxic substances not chemicals. But that's the term that's used.

MEMBER WHITTEN: Yes, true. Should it say the Board recommends Department of Labor direct or are we good with the word request? I think we should put recommend there. You guys --

CHAIR MARKOWITZ: You know we're purely advisory so --

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: -- everything we do is a recommendation.

MEMBER WHITTEN: Right.

(Off-microphone comment.)

CHAIR MARKOWITZ: So you probably should change the request to recommend so it's --

PARTICIPANT: Yes.

MEMBER CATLIN: Okay. And are we asking for only the changes to toxic substances and labor categories or are we actually looking

for the --

MEMBER BOWMAN: In the discussion of the --

MEMBER CATLIN: -- at all to --

MEMBER BOWMAN: -- in discussion of the working group, those two examples, the toxic substances and labor categories were the most important.

MEMBER CATLIN: Okay.

MEMBER BOWMAN: That came out and so this is already a very scoping request.

MEMBER CATLIN: Okay.

MEMBER BOWMAN: Right. Yes.

MEMBER CATLIN: Well, yes.

MEMBER BOWMAN: I'm not sure the second any is needed of any changes to, you can drop that any of the toxic because it's already any changes.

CHAIR MARKOWITZ: Okay, last comments or suggested changes.

MEMBER WHITTEN: Well, that was a good --

MEMBER VLAHOVICH: Should Board be capitalized?

MEMBER WHITTEN: Oh, sorry. That was a good point about the other filters to really take that into consideration when we were looking at this.

But the facilities, work processes, those have been issues too.

CHAIR MARKOWITZ: So the creators of this recommendation that the suggestion is that you add to the toxic which is labor category's work processes. So do you want to do that?

MEMBER SPLETT: I agree. These were the two big ones where the toxic substance and labor categories, but while we're getting recommendations, we might as well add all the things that we were concerned about.

CHAIR MARKOWITZ: Mr. Domina?

MEMBER DOMINA: Kirk Domina. When we met with Paragon, they bought up work processes and so they're the ones that brought it up. I think it should be put in there.

CHAIR MARKOWITZ: Okay.

MEMBER SPLETT: Yes, I agree.

MEMBER BOWMAN: So you put a comma after substances and put work product.

MEMBER WHITTEN: So do we want to add facilities too?

MEMBER KEY: Yes. Do it all.

MEMBER WHITTEN: I mean, that's the majority of the filters that we use, claims examiners use I believe.

CHAIR MARKOWITZ: Yes. Okay, additional comments, suggestions? Okay, then let's take a vote. I'm going to quickly read this just so in case anybody's on the phone and can't see it.

The Board recommends that Department of Labor direct their contractor currently PTS to prospectively and retrospectively provide notation of any changes to toxic substances labor categories, facilities and work processes that are slash were altered in the SEM with documentation of the rationale for the change

in the SEM. Okay? All right. Take a vote.

MR. JANSEN: I'll record the vote. Dr. Bowman?

MEMBER BOWMAN: Yes.

MR. JANSEN: Mr. Catlin?

MEMBER CATLIN: Yes.

MR. JANSEN: Dr. Cloeren?

MEMBER CLOEREN: Yes.

MR. JANSEN: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MR. JANSEN: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MR. JANSEN: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MR. JANSEN: Dr. Vlahovich?

MEMBER VLAHOVICH: Yes.

MR. JANSEN: Mr. Key?

MEMBER KEY: Yes.

MR. JANSEN: Ms. Splett?

MEMBER SPLETT: Yes.

MR. JANSEN: Ms. Whitten?

MEMBER WHITTEN: Yes.

MR. JANSEN: Mr. Domina?

MEMBER DOMINA: Yes.

MR. JANSEN: There are 11 yes votes and zero no votes.

CHAIR MARKOWITZ: Okay, we're going to take a seven-minute break because we're a half hour late for our break. So well, it's 10:15 a.m. Let's come back here a little bit after 10:20 a.m.

(Whereupon, the above-entitled matter went off the record at 10:15 a.m. and resumed at 10:24 a.m.)

CHAIR MARKOWITZ: Okay, so let's go back to where we were looking at. We're missing Mr. Key. He knows we're and who else? I think that's it. And Dr. Cloeren, you're there?

MEMBER CLOEREN: I am.

CHAIR MARKOWITZ: Okay, great. Okay. So let's go back because I think there was a third recommendation in that set and by the way, by way of warning, we'll move on to the

industrial hygiene recommendation is next.

Okay, so the third, let me read it. The Board requests that DOL continue the in-person meetings with PTS or the current contractor for the SEM with members of the Board's SEM subcommittee on our routine basis and in person up to three times a year to discuss ongoing improvements of the SEM. The floor is open for discussion.

MEMBER WHITTEN: This is Dianne Whitten. Can we change it from request to recommend please, Kevin? Thank you.

(Off-microphone comment.)

CHAIR MARKOWITZ: Oh, I'm sorry.

MEMBER DOMINA: Kirk Domina. When we met with Paragon at the end of March there in Columbus, it was very, it was a very good meeting.

It was very helpful for both sides and I think that we can quicker take care of some of these problems that the claimant community sees because this is one of the,

about the major tool that they have to work with when they get something back requesting more information or whatever.

But some of these problems have been fundamentally wrong for a long time, and you know, like some of the two prior ones, part of the reason is, I mean, and if you go back and look at some of the meeting minutes from '17 and '18, when I talked about Ms. Whitten's job category, not even being listed where anybody knows that Radcon is first in, last out for 75 plus years at that point in time.

And then all of a sudden the job category shows up in there with over 2,100 chemicals. I mean there's some fundamental stuff that and then the reactor stuff for Hanford is not the experimental ones.

It was all the production reactors and anybody knows anything about history and so that stuff not getting changed until late in the ballgame for lack of a better term, is the reason that we want to meet with them up to

three times a year because it's helpful for both sides.

They see issues that they want us to help them with and we see issues that we need their help with.

CHAIR MARKOWITZ: Yes, Ms. Splett?

MEMBER SPLETT: First, kudos to Paragon and DOL. It was a very positive meeting. A lot of things that we had issues with at least we then understood the basis of those.

I think it was a really meaningful exchange and hopefully can be continued.

CHAIR MARKOWITZ: Steve Markowitz. You know, I having been on the Board for eight years, this -- my view is this has been the most productive period of discussion about the SEM that we've ever had.

And I think in part is the, the visit you all made to PTS in Ohio and I'd point out that, you know, in the charter or the described tasks set out for the Board, the number one is

the SEM.

It is looking at helping in the SEM because that's always been a focus of interest by the public and a source of questions and sometimes even dissatisfaction so I think there's momentum here.

And I think it's good and we should continue it. Now three times a year visiting Hilliard, Ohio --

MEMBER SPLETT: And I do think the mix of the people who went was I think Dr. Cloeren's input was really, really valuable. I think having a mix of members of the Board was really valuable as well.

CHAIR MARKOWITZ: Are you suggesting that we amend the language to include a requirement that Dr. Cloeren attend all meetings?

MEMBER SPLETT: I am totally there.

CHAIR MARKOWITZ: Only kidding, only kidding, Dr. Cloeren. Okay.

MEMBER CLOEREN: I vote no.

CHAIR MARKOWITZ: Any further discussion, comments specifically on the language here? Which is pretty clear I would say. Okay, then I think we're ready for a vote.

MR. JANSEN: I'll record the vote. Dr. Bowman?

MEMBER BOWMAN: Yes.

MR. JANSEN: Mr. Catlin?

MEMBER CATLIN: Yes.

MR. JANSEN: Dr. Cloeren?

MEMBER CLOEREN: Yes.

MR. JANSEN: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MR. JANSEN: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MR. JANSEN: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MR. JANSEN: Dr. Vlahovich?

MEMBER VLAHOVICH: Yes.

MR. JANSEN: Mr. Key?

MEMBER KEY: Yes.

MR. JANSEN: Ms. Splett?

MEMBER SPLETT: Yes.

MR. JANSEN: Ms. Whitten?

MEMBER WHITTEN: Yes.

MR. JANSEN: Mr. Domina?

MEMBER DOMINA: Yes.

MR. JANSEN: There are 11 yes votes and zero no votes.

CHAIR MARKOWITZ: You know, it's shocking how little conflict there is among the Board members. And I think actually when we resolve the differences in discussion sometimes offline, but in any case, let's move on to the industrial hygiene subcommittee.

I think there's some, oh, yes, so no, we don't review the rationale here. That takes way too long. That rationale is drafted usually by the people who write up the recommendation and it could be sent, it's sent around to Board members to amend.

But we do that after the meeting. Okay, so Kevin, you have that, you have those.

MEMBER VLAHOVICH: Right.

CHAIR MARKOWITZ: Right? Yes.

MEMBER CLOEREN: Do you want me to take this?

CHAIR MARKOWITZ: I'm sorry, what's that Dr. Cloeren?

MEMBER CLOEREN: Do you want me to take this?

CHAIR MARKOWITZ: Sure.

MEMBER CLOEREN: So our first recommendation is in reference to previous ones directly related to the April 5th response to the Board.

We request that the program facilitate a conversation between a subset of the next Board and program industrial hygienists to gain more insight into IH processes.

And the Board would come to an agreement on the framework for this conversation ahead of time. The framework would include follow up on the responses in

between, you know, from the Department of Labor on April 5th and March 21st.

And then so basically the recommendation is that we meet with the Department of Industrial Hygienists to help frame a subsequent conversation that would include at least two of the contract IHs.

So the proposal is for collaborative conversation to map out the framework for a subsequent conversation with the contract industrial hygienist.

I'm not sure that we need to go through the rationale or the details right now do we Dr. Markowitz or --

CHAIR MARKOWITZ: No, Steve Markowitz, no we don't need to. A question for Mr. Jansen. Is this something that a recommendation that the Board has to vote on or is this, because this is in follow up of a prior recommendation. Right?

And does this kind of fall into the information request or is it, would it be

better that we actually consider it as a recommendation?

MR. JANSEN: It seems it might work best as a follow-up recommendation to the response to the original recommendation if that makes sense.

CHAIR MARKOWITZ: Okay. Sure, sure, okay. Thanks. Okay, the floor is open for discussion.

MEMBER SPLETT: The only comment I have is on the first line. Instead of we request again, we recommend.

CHAIR MARKOWITZ: I'm wondering, Steve Markowitz, in the third line what it means the Board would come to agreement on our framework. It's the Board agreeing with itself? Is that what --

MEMBER CLOEREN: I'm not sure that line belongs in there. I mean, the point of the first meeting is to collaborate on developing the framework for the subsequent conversation.

So I think that maybe we could say that at this meeting the, yes, I don't think that we need to come to the Board. I think it should be the subset of the Board along with the Department Industrial Hygienist would come to an agreement on the framework.

So I think this one doesn't make sense. It's really the framework, the first meeting is to develop a framework. The subsequent conversation that would include the contract IHs.

MEMBER BOWMAN: Sorry, just to clarify, in the memo the Board received dated April 5th, 2024, the Department said that the program would facilitate a conversation between the Board and Department IH's, program IHs to seek information regarding certain aspects of the work.

And that the Department is willing to consider such a request if implying only if a clear framework for such assessment could be agreed upon ahead of time.

My reading of that from the memo was that they wanted a framework even for the initial meeting --

MEMBER CLOEREN: That's a good point.

MEMBER BOWMAN: -- program IHs. On top of that, we would like to meet right with contract IHs which was not part of the initial statement that we got from the memo.

Nonetheless, we thought if after we had that conversation with the Department IHs, that perhaps we could arrange for an actual meeting with some contract IHs.

PARTICIPANT: Right.

MEMBER BOWMAN: And so I thought potentially that it is --

PARTICIPANT: Yes, that is --

MEMBER BOWMAN: -- I thought, I understood that the Department would like us to have a framework even for that conversation with the Department IHs.

MEMBER CLOEREN: Do we need to have that -- okay. So what would be the mechanism

actually for developing a framework for the request for meeting to develop a framework for a request.

MEMBER BOWMAN: So I guess the Board would come to agreement with DOL on a framework for this conversation ahead of time is the implied --

MEMBER CLOEREN: The whole court, like us now?

MEMBER BOWMAN: I don't know.

MEMBER CLOEREN: Because the next meeting of the Board is not until November and we want this to happen before then. Right?

MEMBER BOWMAN: I don't know if it needs the whole Board. The May, sorry, the April 5th memo --

CHAIR MARKOWITZ: No, I -- Steve Markowitz. It can't be that the entire Board would need to agree on the framework.

MEMBER BOWMAN: Right.

CHAIR MARKOWITZ: Because this is really a --

MEMBER BOWMAN: A subcommittee.

CHAIR MARKOWITZ: -- work in progress. Information exchange so --

MEMBER BOWMAN: Members of the Board.

CHAIR MARKOWITZ: Yes, the and the third line where it says the Board we could say, you know, prior to this conversation, a subset of the Board would develop and submit a framework for this conversation. Does that --

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: -- does that get the sequence right?

MEMBER BOWMAN: I think so. I wrote down what you were saying.

CHAIR MARKOWITZ: So where the cursor prior to this conversation, a subset --

MEMBER BOWMAN: Subset of the Board.

CHAIR MARKOWITZ: -- of the Board would develop.

MEMBER BOWMAN: Yes.

CHAIR MARKOWITZ: And submit to DOL a framework for this conversation.

MEMBER BOWMAN: Yes.

(Off-microphone comment.)

(Simultaneous speaking.)

MEMBER CLOEREN: Correct, that works.

CHAIR MARKOWITZ: Right. I don't think in this recommendation, you have to state the next thing that the framework would include follow up on the responses. That's --

MEMBER BOWMAN: Yes, I agree. I think that could be taken out, be included in the justification.

CHAIR MARKOWITZ: Yes.

MEMBER CLOEREN: Since this is a formal recommendation, is the next line a second one, a second recommendation or is it part of this?

CHAIR MARKOWITZ: No, I think -- Steve Markowitz. You can take out what you just restored, the framework sentence, but and there, Dr. Cloeren, you're recommending that instead of saying we anticipate, we recommend that the next step is that what you --

MEMBER CLOEREN: I'm wondering if, let's do this one. I'm wondering if we can wrap it into the sentence before and say, you know, part of this conversation is a subset would develop and submit and a framework for this conversation to include granting a subsequent meeting that includes at least two contract IHs.

Would that work? I mean, that way we're kind of making clear we really want to talk with the contract IHs. But you know, we would not with the Department.

CHAIR MARKOWITZ: Okay other comments, suggestions on that language?

MEMBER CLOEREN: That work?

CHAIR MARKOWITZ: I would add planning and conducting a subsequent meeting because --

MEMBER CLOEREN: Okay.

CHAIR MARKOWITZ: Okay.

MEMBER CLOEREN: In the line above where it says framework for this conversation,

could you just put a comma after "conversation?"

CHAIR MARKOWITZ: Okay, additional comments, questions? Okay, someone want to read this since we've changed it so much?

MEMBER BOWMAN: I can read it.

CHAIR MARKOWITZ: Great.

MEMBER BOWMAN: I've made notations here which would allow Kevin to confirm and then I can send this to the Board after. Directly related to the April 5, 2024 DOL response to ABTSWH we recommend that the program facilitate a conversation between a subset of the next Board and DEEOIC industrial hygienists, IH, to gain insight into IH processes.

Prior to this conversation, a subset of the Board would develop and submit to DOL a framework for this conversation to include planning and conducting a subsequent meeting that includes at least two contract IHs.

CHAIR MARKOWITZ: Okay, a vote?

MR. JANSEN: I'll record the vote. Dr. Bowman?

MEMBER BOWMAN: Yes.

MR. JANSEN: Mr. Catlin?

MEMBER CATLIN: Yes.

MR. JANSEN: Dr. Cloeren?

MEMBER CLOEREN: Yes.

MR. JANSEN: Was that a yes, Dr. Cloeren?

MEMBER CLOEREN: Yes, it was. Yes, it was a yes.

MR. JANSEN: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MR. JANSEN: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MR. JANSEN: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MR. JANSEN: Dr. Vlahovich?

MEMBER VLAHOVICH: Yes.

MR. JANSEN: Mr. Key?

MEMBER KEY: Yes.

MR. JANSEN: Ms. Splett?

MEMBER SPLETT: Yes.

MR. JANSEN: Ms. Whitten?

MEMBER WHITTEN: Yes.

MR. JANSEN: Mr. Domina?

MEMBER DOMINA: Yes.

MR. JANSEN: There are 11 yes votes and zero no votes.

CHAIR MARKOWITZ: Just for my information, how many recommendations do we, how many more recommendations do we have from IH? Just --

(Off-microphone comment.)

CHAIR MARKOWITZ: Five?

MEMBER BOWMAN: This is, there are five total, we've just voted on the first.

CHAIR MARKOWITZ: Okay, good. Okay, let's go to the next.

MEMBER CLOEREN: So this second one is in follow up to the March 21st, '24 response memo about agreeing with modifying the IH reports to really communicate what was found in the different sources of case disclosure data.

So the request is that the program provide an update on the status and timeline of their efforts to work with the contractor to develop feasible changes that has basically reported from the response memo. This is pretty straight forward.

CHAIR MARKOWITZ: Steve Markowitz. Is, does this constitute an information request or do we, is it better that we consider this as a recommendation?

MR. JANSEN: I'm reading it. This seems more like an information request to me, Dr. Markowitz.

CHAIR MARKOWITZ: Yes. So that means that if it's coming from the working group that we can, you know, write it up and pass it on. I mean, are there any comments or objections from the Board?

Okay. Okay, so let's move on to Recommendation No. 3.

MEMBER CLOEREN: The third is that the Board seeks reconsideration of its previous

recommendation to provide the Occupational History Questionnaire along with IH report commentary related to the content of the OHQ to any physician asked to address causation in a case along with the accompanying IH reports that would address the validity.

Actually, we probably don't need that parenthetical up above since we state that along with accompanying IH report that would address the validity of the information thereby mitigating the concerns noted by the, actually the program for providing OHQ expressed in the March 21st response memo.

I think you can remove that parenthesis because we've had pause about that later.

MEMBER BOWMAN: I would agree.

CHAIR MARKOWITZ: Steve Markowitz. Could you just very briefly, you say mitigating the concerns noted by the program. Just recount what those concerns are very briefly.

MEMBER BOWMAN: Yes, in the Board's

memo, sorry, in the Department's memo they -- I'll pull it up right here. There was concerns about providing unvalidated OHQ information to a physician would invite the physician to rely on unproven or inaccurate exposure data to inform their opinion.

We discussed this as a Board yesterday. This recommendation reflects that discussion.

CHAIR MARKOWITZ: I see. Okay. Comments, questions, recommended changes in language here?

Okay, so let's take a vote. Can we have one last reading out loud of the recommendation?

MEMBER BOWMAN: I could do that. This is what I have. The ABTSWH seeks reconsideration of its previous recommendation to provide the Occupational History Questionnaire, OHQ, to any physician asked to address causation in a case along with the accompanying IH reports that would address the

validity of OHQ information thereby mitigating the concerns noted by program for providing the OHQ expressed in the March 21, 2024 response memo.

MEMBER CLOEREN: Could we add the word "the" before "program" in the fourth line? Thank you.

CHAIR MARKOWITZ: Okay. Then let's take a vote.

MR. JANSEN: I'll record the vote. Dr. Bowman?

MEMBER BOWMAN: Yes.

MR. JANSEN: Mr. Catlin?

MEMBER CATLIN: Yes.

MR. JANSEN: Dr. Cloeren?

MEMBER CLOEREN: Yes.

MR. JANSEN: Dr. Friedman-Jimenez?

MEMBER FRIEDMAN-JIMENEZ: Yes.

MR. JANSEN: Dr. Markowitz?

CHAIR MARKOWITZ: Yes.

MR. JANSEN: Dr. Mikulski?

MEMBER MIKULSKI: Yes.

MR. JANSEN: Dr. Vlahovich?

MEMBER VLAHOVICH: Yes.

MR. JANSEN: Mr. Key?

MEMBER KEY: Yes.

MR. JANSEN: Ms. Splett?

MEMBER SPLETT: Yes.

MR. JANSEN: Ms. Whitten?

MEMBER WHITTEN: Yes.

MR. JANSEN: Mr. Domina?

MEMBER DOMINA: Yes.

MR. JANSEN: There are 11 yes votes and zero no votes.

CHAIR MARKOWITZ: Okay, next recommendation.

MEMBER CLOEREN: The next one is more of an information requested I think. I don't know if we need to vote on this one. What do you think?

CHAIR MARKOWITZ: Well let's clarify what it is first and then we'll ask that question.

MEMBER CLOEREN: Okay.

CHAIR MARKOWITZ: So what does it mean to ask for the Board, the Advisory Board on Toxic Substances and Worker's Health requests a report detailing claims decisions accepted or denied in the last two years in cases that were sent for referee opinion. So I just want to know what the --

MEMBER CLOEREN: What the --

CHAIR MARKOWITZ: What that report might consist of.

MEMBER CLOEREN: I think it would be I don't know how many, a couple of hundred cases and that might have been more than, that might have been over more than two years so it might 130 cases or something along those lines.

Of the cases that were sent to the internal QTC referee doctor when there was a difference in opinion, there was enough of a difference of opinion between the treating doctor, or the personal doctor, and the CMC, that the claims examiner needed a tiebreaker.

And then they send it to the referee

that's also a QTC doctor and I had some concerns that there might be bias toward other docs within your own organization because this is a different way to do referees than other OWCP approaches.

So I thought it was worth looking at how often the referee doctor, you know, what one way or the other. I think that the claims decision, we're making an assumption here.

I'm making an assumption that the claims decision was, would have been based on the referee recommendations. So if we see that near 95 percent of them are agreeing with the CMC, then it might be worth actually looking at some of those cases that were referred.

Because I wouldn't expect 95 percent agreement, you know, when the claims examiner was having a hard time deciding which one had the, you know, the best rationale.

CHAIR MARKOWITZ: Steve Markowitz. You mentioned some numbers about a number of referee cases in the last couple of years.

What were those numbers?

MEMBER CLOEREN: There was a slide showing that yesterday and I think it was maybe a four- or five-year period. And I thought, there was just recall, but I thought it was about 200 and some went for a referee during the time period that we were looking at in the report yesterday.

MEMBER BOWMAN: Yes, I have it here. That table was 268 file for referee, review referee of causation.

MEMBER CLOEREN: And that was in what time period? I think that the years were more --

MEMBER BOWMAN: 2020 to 2023 it appears.

CHAIR MARKOWITZ: So yes, a four-year time period. So is the request here for a sample of cases? I mean, how many?

(Simultaneous speaking.)

MEMBER CLOEREN: I have to look --

CHAIR MARKOWITZ: I mean, it seems

like a lot of work that's being, that would be involved so.

MEMBER CLOEREN: I don't think it would be. I mean I think that, if they could produce the table showing how many cases went for referee, I imagine it's easy enough to show from those cases that went to referee what was the eventual decision accept or deny?

CHAIR MARKOWITZ: But I guess it, Steve Markowitz, it depends on what kind of detail that we want them to look at.

MEMBER CLEOREN: I'm just looking for the eventual decision. I just, could I just get a sense of whether there's a concern for the program, you know, organizational bias.

CHAIR MARKOWITZ: Oh, I see. So you, so the request is simply for what percentage were accepted and what percentage were denied?

MEMBER CLOEREN: After referee. Correct.

CHAIR MARKOWITZ: I see. Okay, thanks. Mr. Vance?

MR. VANCE: And just a point of clarification for consideration by the Board, remember the referee opinions as Dr. Bowman indicated.

You can have referee opinions on disputes on medical diagnoses, causation, impairment and medical need for care so just keep in mind you're going to capture referees on a lot of different subjects.

MEMBER CLOEREN: Okay. I think --

MEMBER BOWMAN: Thank you. That's important.

MEMBER CLOEREN: -- for that clarification I think that's fine because they're all, all referees reflect a difference in opinion between the, you know, the personal doctor and the CMC that the claims examiner needed some help resolving.

CHAIR MARKOWITZ: But should we amend the statement though to have these broken down by the type?

MEMBER CLOEREN: That might be

helpful.

(Simultaneous speaking.)

MEMBER BOWMAN: For the review.

MEMBER CLOEREN: Yes, that might be helpful to --

MEMBER BOWMAN: Yes.

MEMBER CLOEREN: -- yes, to include the reason for the --

MEMBER BOWMAN: So maybe after, at the end of the sentence say broken down by type of --

MEMBER CLOEREN: Or categorized. Categorized by type.

MEMBER BOWMAN: Or categorized, thank you. Yes.

MEMBER CLOEREN: What type of case.

MEMBER BOWMAN: Categorized.

MEMBER CLOEREN: What type of questions --

MEMBER BOWMAN: Categorized by type of review.

MEMBER CLOEREN: Yes.

CHAIR MARKOWITZ: So this getting back to, Steve Markowitz, getting back to your original question, this strikes me as more of an information request than a recommendation. Does that conform with --

MEMBER CLOEREN: I agree. I agree.

MR. JANSEN: Yes, I agree. This is an information request.

CHAIR MARKOWITZ: Okay. So, you know, so we do need some rationale to go along with it. You know, there's a form, it's easy enough whoever ends up writing this up, but you know, you and I we can communicate about that so.

MEMBER CLOEREN: I can do that.

CHAIR MARKOWITZ: Yes. Okay, thanks. Okay, let's move on. The Advisory Board talks exceptions to the workers' health requests documentation in support of the assertion that Environmental Health and Safety programs implemented in the mid-1990s greatly reduced the potential for workers to have had

significant exposures to toxic substances at DOE facilities.

And that any such work processes events or circumstances leading to significant exposure would likely have been identified and documented in employment records. So the floor is open for discussion.

MEMBER CLOEREN: I would like to include contractors somehow in this because programs that were aimed at employees may not have reached contractors and it might be worth sort of looking separately at documentation.

It may be captured in the idea of workers, you know, both the DOE employees and contractors. I don't know whether it's worth -

-

MEMBER BOWMAN: We could, we could add a parenthetical after workers to say either DOE or contractors.

MEMBER CLOEREN: I think that would be helpful.

CHAIR MARKOWITZ: Steve Markowitz.

Is your, Dr. Cloeren, was your concern about subcontractors? Or was it --

MEMBER CLOEREN: Well I guess my, my stance is with construction workers. Right?

CHAIR MARKOWITZ: Right.

MEMBER CLOEREN: And so they're for the most part contractors. Some of them are subcontractors

CHAIR MARKOWITZ: Right. Okay.

MEMBER CLOEREN: In any event, a lot of times I think safety plans that are in Government institutions and this is based on past work for federal agencies doesn't really reach to contractors on site.

CHAIR MARKOWITZ: Right. So we're going to assume that contractors include subcontractors.

MEMBER CLOEREN: I would, yes.

CHAIR MARKOWITZ: Yes. Okay.

MEMBER BOWMAN: Dr Markowitz, are you suggesting that it would be better to explicitly state subcontractors?

CHAIR MARKOWITZ: No, no. I think well I mean if there's any confusion, we could include them, yes, that's good. We might as well include them. Comments, questions? Yes, Ms. Splett?

MEMBER SPLETT: When I'm reading the bottom that word process events or circumstances leading to exposures would be identified in employment records.

Not an expert here, but I've seen a lot of Hanford employment records and there's none of that stuff in the employment records. If you're using the word employment records as in an HR type record.

If you're talking about a health and safety record, that's totally different. But using the term employment records causes me some discomfort. Mr. Domina, I see you nodding your head. Do you agree?

CHAIR MARKOWITZ: Yes, so what's the broader term that we was appropriate?

MEMBER CLOEREN: I think facility

records. Would that work?

MEMBER SPLETT: What was the term?

MEMBER CATLIN: Facility. I don't think that would work either.

MEMBER SPLETT: No.

MEMBER CATLIN: I think if we just remove that last three words and just, we're just looking to that this has been documented and we're looking for that information.

MEMBER SPLETT: It really was the term "employment" it was kind of like we don't, none of those things would be in an employment record at the Hanford site.

MEMBER CATLIN: So we don't really care where it's at. We just want to see the documentation?

MEMBER SPLETT: Got it.

MEMBER WHITTEN: This is Dianne Whitten. What exactly are you looking for because I can just see them sending you back a copy of 851, 850, saying this is our documentation that we improved safety and

health by issuing this document.

Are you looking for sampling data? Monitoring data? Work plans that significantly changed the safety and health itself? Is that what you're looking for?

CHAIR MARKOWITZ: I think it's an open question for the Board.

MEMBER BOWMAN: I think there --

(Simultaneous speaking.)

MEMBER CLOEREN: I think this is like evidence that there was documentation showing compliance with the policy. Right?

MEMBER WHITTEN: Right. I like that wording a lot better.

MEMBER SPLETT: I guess my question is if the Board is asking the Department of Labor to show the Department of Energy is compliant, does that make sense?

Or maybe it does. I don't know, Mr. Vance. Is Department of Labor monitoring Department of Energy's compliance in health and safety overall?

MR. VANCE: I'm looking at Steve because I'm going to say, you know, this is a question that the Board needs to resolve. You're making a request for the Department of Labor to provide rationale in support of findings that are industrial hygienists are making in industrial hygiene reports.

That would be your question. But, you know, in developing a response the Department of Labor is going to go to whatever sources or information that they think is going to be best suited to answer the question which could be the Department of Energy.

CHAIR MARKOWITZ: Steve Markowitz. So I think in the rationale, there could be some further description of what the documentation, what documentation is of interest or what documentation is not of interest.

I don't think, for instance, the Board would want reams of industrial hygiene monitoring reports demonstrating that the toxic

substance X was well controlled in 2002.

So that could be dealt with in the rationale. But it should be, there should be some attempt I think to, if possible, to delineate what kind of documentation this is about.

MEMBER BOWMAN: Do we need to specify whose assertion we're talking about or is this talking about DOL assertion or DOE assertion?

CHAIR MARKOWITZ: No, my own view, Steve Markowitz, is that no, we don't, I don't think we need to document who owns that assertion.

So other comments, questions, recommended word changes? Too many the's, and's or but's.

MEMBER WHITTEN: This is Dianne Whitten again. I understand what you're looking for because this term ends up in the IH reports all the time.

After the mid-'90s everything was, you know, hunky-dory out there, but you know,

we know as a fact working at the Tank Farms, that we were still having people exposed up until 2017 until we, you know, called a stop work and put people in SCBAs and had a lawsuit.

So I just don't know how to go about asking for the right information.

CHAIR MARKOWITZ: So is this an information request or a recommendation?

MR. JANSEN: I believe this is also an information request.

CHAIR MARKOWITZ: Okay. Okay, yes. Meaning it doesn't require a vote.

MR. JANSEN: Yes.

CHAIR MARKOWITZ: But someone is going to complete this information request along with the rationale.

MR. JANSEN: Yes.

CHAIR MARKOWITZ: And who is that?

MEMBER CATLIN: Yes, I mean, we're really asking for the praise that's often in the IH report that discusses this timeframe as a shift in safety and health.

So we really want to know what is the Industrial Hygienist relying on when they make that statement in a rationale?

CHAIR MARKOWITZ: Right.

MEMBER CATLIN: So we don't really need to, we don't really need probably all the detail here about it. We need, we want to understand the rationale for that statement.

Are they referring to some, you know, Departmental summary that was provided or just something else or are they simply referring to the fact that, you know, there was a change in policy at that point?

And we're assuming that everything happens so.

CHAIR MARKOWITZ: All right. Or there, you know, at some point, the Idaho National Lab could have had an evaluation. Right? Of their health and safety program and their record, their performance and what, you know, the actual conditions of their health and safety in 2010.

If that exists and as part of the thinking and finally that would be nice to look at. Okay.

MEMBER BOWMAN: In terms of who writes it, I think the IH subcommittee makes sense. I think it would be really helpful to have the initial come from someone who isn't IH.

So I would nominate Mark if he was so willing. And I'd be happy to take a look. But, you know, --

MEMBER CATLIN: Yes, certainly willing to do that and it might be this might be as an information request maybe it follows up after we have the conversation about the industrial hygiene staff.

So that might, it might be more clear after that conversation what this should look like.

MEMBER BOWMAN: Absolutely.

CHAIR MARKOWITZ: Mr. Vance?

MR. VANCE: And, Mark, if you're

going to be one of the folks leading that effort, what I would encourage you to also do is revisit our prior Board meetings where we had discussions about this topic.

Because there's been a lot of interaction between the Board and recommendations that have been made by the Board that the Department had accepted regarding this entire discussion.

So there is a history of this discussion in prior Board meeting notes and transcripts and all that sort of thing.

MEMBER CATLIN: That would have been prior to 2020?

MR. VANCE: Yes, I'm not sure exactly when, but I do know that there was recommendations about this issue and I know that there was a lot of dialogue going back and forth between the Department and the Board in the past so just for information sake.

MEMBER CATLIN: Thank you.

MEMBER MARKOWITZ: Mr. Domina?

MEMBER DOMINA: Just to clarify I guess a little bit with what Mr. Vance said too because before that 1995, they were saying 1980s because they were trying to late 1980s use the Tiger Team Reports.

And we show that year after year when they came out to visit the site, nothing was done to validate that so it moved to '90s and then they used 851 which came out in '95 which doesn't arbitrarily get implemented on that day and date.

And one of the issues that we had at Hanford, we had contract changes going on then so the one leaving isn't going to implement anything and the one coming in, excuse me, takes a couple of years to come up to speed.

And they also look back at the SEC for Savannah River which also shows that they were fined in the late '90s by DOE for not implementing certain safety requirements and stuff so I mean there's a lot of history there.

CHAIR MARKOWITZ: Okay. I think

we're done on that. Is that right? Okay, so we have --

PARTICIPANT: About 25 minutes or so.

CHAIR MARKOWITZ: I'm sorry, 25 minutes or so left. I think we need to, you know, plan the future work over the next couple of months and transition to a new Board term.

We have three working groups by way of structure and I think we don't need to do this right now, but I think we need to do this soon is re-identify who's in what working group. So that there's some clarity there.

Those three groups are the SEM working group, the IH -- and we're going to combine for the moment a CMC with the IH working group so that CMC issues can be not forgotten about or at least part there even if there's nothing pending.

And then we're going to have a, for the lack of a better term, a science working group although we could entertain new titles for that working group, but that's where the

hearing loss analysis would come out of.

That's where any future reviews of IARC 2A carcinogens would be handled. And then follow up on the Parkinson's disease/disorders discussion.

So are there any other working groups that we've had that we need to just include in the structure? I don't think so at the moment.

Okay. You know, we're going to submit these information requests and recommendations, some of this information, some of the decision by the Department of Labor may be available during this Board term and will, you know, just continue that work during this term as we receive them.

I would, I want to propose an idea for the beginning of the next term, next Board term, which is that the Board request, consider requesting a number of claims to review.

I think that, I can't remember, has this Board term the last two years, have we reviewed claims?

Yes. So it's extremely useful to review claims, a limited number because it really acquaints us with the process. We just relearn what the process is.

You know, one of those public comments focused on the performance of I think claims examiners, the performance of the industrial hygienists, there were various observations made.

And, you know, frankly, it's hard for us to kind of understand those observations unless we at least look at a limited number of claims and see what those observations might be about.

So I would propose that we request a limited number because it's laborious preferably at next, but you know, whatever. Claims, it takes a while to prepare those claims for our department.

And that they be ready for the new Board when the new Board becomes official. We should, first let me open the floor to that

idea, but then I don't know whether you have time today to discuss what kind of claims we want to look at because we either, a lot of possible claims, but Mr. Domina?

MEMBER DOMINA: I guess I'd ask for Mr. Vance. And the reason behind on what type of claims because talking to the folks here at Oak Ridge on what they're seeing going forward is kind of the same thing we see at Hanford.

I was and over the last two meetings that Mr. Vance has commented on the claim number going up I was just wondering if you knew what type of claims they were.

And then if so, pursue that as asking for those type of claims because we see some in a couple of different categories as the uptick in the claimant population.

MR. VANCE: Yes, this is John. What I would say is your, the sky is the limit when it comes to what the Board might want to ask about.

We do know that we have seen an

uptick in the number of consequential illness claims being associated with previously accepted cases.

We continue to see a pretty strong amount of cases coming from the south, you know, southwest involving pulmonary disease. We're seeing an increased clip of what I would characterize as novel arguments involving generally not non-occupational illnesses, conditions like diabetes, arthritis, degenerative disc disease, spinal stenosis, Alzheimer's disease that are being associated with other types of things.

So I mean, really it's a matter of specificity and what it is that you're looking for. Are you looking for cases that are limited to treating physician opinions that are driving an approval or cases that are denied based on a CMC referee assessment or other types of characteristics?

So I mean it really is a matter of the Board agreeing to what it is that they

might be interested in seeing and being very specific in the request about what it is that you want to look at.

I know that the Board has looked at, if I recall correctly, a lot of pulmonary disease claims. I think that we've facilitated those types of claims in the past.

So I just want to be thinking about other types of categorizations of disease that might be out there. It really is a matter of just what does the Board agree that they want to look at really more than anything else.

MEMBER BOWMAN: In terms of types of cases, I thought it was --

CHAIR MARKOWITZ: This is Dr. Bowman speaking.

MEMBER BOWMAN: Sorry, this is Dr. Bowman. I thought cases that are now utilizing the new IH template would be helpful to include and then the conversation with the IHs and when we hear back on the information request about the updates on the communication, but that

would take some time. I think the new template has been in force for, what maybe nine months or something now?

CHAIR MARKOWITZ: Steve Markowitz. I think it would be most profitable to see cases that included IH and CMC reports, although there could be some cases that just have IH reports without the CMC, but one or both would be most interesting.

I think denials, cases that are denied kind of are of most interest to us. I'm not all that keen about impairment cases I have to say. It's a very specialized -- Dr. Cloeren, you're agreeing?

MEMBER CLOEREN: Yeah, and I think there's sort of standard protocol that you follow for impairment ratings and I think a lot of time difference of opinion is just based on how you do the exam. I don't really get much out of that.

CHAIR MARKOWITZ: Yeah.

MEMBER CLOEREN: I was wondering though, what do you think about looking at hearing loss denials, where they fell outside the really strict statute? Would that be worthwhile to see what sort of claims people are, you know, what kind of exposure claims people are presenting when they submit claims for hearing loss?

CHAIR MARKOWITZ: I'm sorry, I was writing something. Were you asking a question or making a comment?

MEMBER CLOEREN: I was changing the topic --

(Laughter.)

MEMBER CLOEREN: -- to a suggestion. I don't know if it would make sense to look at denied claims for hearing loss to see what the exposure circumstances are that are being described. Right now, the criteria for accepting it are very, very narrow and very strict. Would it be worthwhile to see a range of cases where people are making claims for

hearing loss and what they're reporting for exposure.

CHAIR MARKOWITZ: So, we're not so interested in impairment cases. The diagnosis clarification CMC reports, I think, are probably of less interest to the Board. How about consequential condition cases? It involves a ton of different -- I mean presumably the underlying condition has already been accepted and so the question is, are the new symptoms or condition, do they relate to the prior accepted condition? Do we want to look at those cases? There's a silent negative on the left.

(Laughter.)

CHAIR MARKOWITZ: Dr. Bowman?

MEMBER BOWMAN: I think the last time we had a set of cases to review, I think there were some of those in there and I don't think -- I'm not sure that anything came out from that, anything informative that changed the direction of the Board.

I would, since we're getting data, very simple data, on the review referees, maybe some cases that are the review referee on causation --

MEMBER CLOEREN: That's a good idea.

MEMBER BOWMAN: Could be helpful. There's 268 from the prior four years. There might be some going forward if they could also be the ones using the new IH template that could sort of be two birds, one stone situation.

CHAIR MARKOWITZ: Steve Markowitz. I'll write up some of these things and send it around to the Board and people can weigh in, try to narrow it down as much as possible. We would need, we're talking relatively recent cases for which there have been decisions, denied cases. Causation including referee causation cases. Ones have used the new IH template which is synonymous with recent cases and including hearing loss, so far. Any other aspect of interest to people? How many cases

do you want to look at? How many claims do you want to look at, board members, individually, because that helps. We usually have claims looked at by two people in our discussion. While you're thinking about that, let me ask, Mr. Vance, is it possible these days to receive claims in which there's some sort of index in which we can find the FAB report, it's on page 76 or something comparable to that?

MR. VANCE: Yeah, unfortunately, the way that we have processed those in the past would be the way that we would process them in the future, so there's no indexing for the material. The way we have to go through the process is basically I have administrative staff who will go into the electronic imaging system and download the material. It'll come out in whatever order it's presented in that system and it does not reflect any kind of indexing. As part of the specificity of your request, you would want to be thinking about more recent cases or cases that don't have a

20-year history or whatever. I mean the more specificity and flags or identifiers that you want us to apply, those are all things that you'll need to consider.

CHAIR MARKOWITZ: Dr. Friedman-Jimenez.

MEMBER FRIEDMAN-JIMENEZ: Yeah, I've reviewed a number of claims that have been over 1,000 pages and most of those pages are typed. Some of them are handwritten, but most of them are typed. I've made this proposal before and I'll make it again, could the typed pages be run through an optical character recognition program, so that it makes into a character-based text that can then be searched so that the reviewer can search for specific terms and find what they're looking for instead of having to browse through 100 or 200 pages to find something. It's very time consuming, not only for us, but for the CMCs and everyone else.

I think that would work and it was never clear to me why exactly there's a

resistance to using optical character recognition for these medical records.

CHAIR MARKOWITZ: Any other comments on claims review? Okay. You'll be hearing from me soon with a draft of what we would request. I'm sorry, I actually never got an answer to how many claims you want to look at. There's one proposal, anonymous proposal, for five claims. That's per person, per board member? There some anonymous quiet discussion going on among the Board. Dr. Cloeren.

MEMBER CLOEREN: I think that's a reasonable number.

CHAIR MARKOWITZ: Whatever we did last time, yeah.

MEMBER CATLIN: I second that.

CHAIR MARKOWITZ: What's that? You second that?

(Laughter.)

CHAIR MARKOWITZ: Okay. I probably have that somewhere.

MEMBER CATLIN: You've destroyed the CDs, so you'll have to look at the --

(Simultaneous speaking.)

CHAIR MARKOWITZ: No, no, but I have a tracking system for assigning the cases. Thinking through the time table, the next board meeting would be in the fall, usually late October/early November, so those claims would be needed by early September. If we get the request in soon, does that seem reasonable, Ms. Rhoads, Mr. Vance? Okay. Great, thank you.

We're approaching the end of the meeting. Any other issues that we haven't picked up on? Ms. Splett.

MEMBER SPLETT: Just a quick one, I think it would be beneficial for the next board meeting, depending on where it is, if the DOE folks who are preparing that tour understand more that this is a Part E board and not a Part B board, and find out the number of claims under Part E and what facilities and what kind of illnesses. It doesn't have to be absolutely

accurate, but we know that X, Y, Z Building is where the majority of the Part E claims are coming from. Maybe even, I think it would have been useful before this meeting, before the tour, some explanation of the Oak Ridge structure, which was something I didn't understand at all, how each one were stand alone facilities from the Department of Energy. I just think make the tour a little bit more meaningful.

CHAIR MARKOWITZ: Yeah, so if we could put that on the to-do list. Just by way of history, Greg Lewis usually arranges these tours or he requests them and then he loses control over what the site actually provides. I think he probably communicates what the Board's about and then the site does whatever the site is going to do, but I think we can remind and emphasize this.

MEMBER SPLETT: I was asked to put the tour for this Board for Hanford and I did so without any knowledge of what you all were

looking for, we just showed you all the really cool stuff.

CHAIR MARKOWITZ: Yeah, well that was a great tour. So, thank you.

MEMBER SPLETT: Thank you.

CHAIR MARKOWITZ: Okay, no other comments. Let me reiterate thank yous to Kevin and his crew for supporting this meeting; Mr. Vance, Mr. Novack for appearing and being on the hot seat to give us answers and to clarify certain things; Ms. Jerison, for hanging in there as our faithful public; Dr. Cloeren, for attending remotely; and, also I want to thank the Board members for this work over the last couple of years and for some board members before that.

This is an excellent program, EEOICPA, the program related to EEOICPA, and it helps a lot of people in many, many ways. It's the most comprehensive worker compensation program that exists in the US. Any set of workers across an industry and our mission and

our goal in the Advisory Board is to help improve that system. We've provided advise, which hopefully targets that, whether our recommendations are always accepted or not, we do our best to improve that system. I want to express my gratitude in working with the Board members over the last couple of years. Thank you. I think I can close the meeting.

MEMBER CATLIN: Steven?

CHAIR MARKOWITZ: Yes.

MEMBER CATLIN: I think on behalf of our Board, I think we want to thank you for your work as Chair in the past two years and before that, so I think you've done just an excellent job and thank you.

CHAIR MARKOWITZ: Thanks. I think we're done.

(Whereupon, the above-entitled matter went off the record at 11:22 a.m.)