U.S. Department of Labor

Occupational Safety and Health Administration

Advisory Committee on

Construction Safety and Health (ACCSH)

December 5-6, 2013

Transcript of Day Two of Two

1:03 to 4 p.m.

Wednesday, December 6, 2013

U.S. Department of Labor

Francis Perkins Building, Room C-5515

200 Constitution Avenue, N.W.

Washington, D.C. 20210

OLENDER REPORTING, INC.
1100 Connecticut Avenue NW, #810, Washington, DC 20036
Washington: 202-898-1108 • Baltimore: 410-752-3376
Toll Free: 888-445-3376

C O N T E N T S

P R O C E E D I N G S

Opening Remarks/Agenda Overview

MR. STAFFORD: Good afternoon, everyone. Damon? Where is Damon?

[No audible response.]

MR. STAFFORD: Veneta, do you know if we have everybody on the phone?

MR. BONNEAU: The others are coming. He only had two at this point in time.

MR. STAFFORD: Okay. Are we good? Have them on the phone? Four of them? Okay. Well, that's enough for a quorum then, so we'll go ahead and get started. I appreciate it.

Welcome, everyone, to the Advisory Committee on Construction Safety and Health, Day Number Two. We are going to do the same routine as we did yesterday in terms of going around and introducing ourselves and then getting right into our agenda, but we'll come back to that in a minute.

The printed agenda is, typically, we start our meetings by hearing from the Director

of the Directorate of Construction to summarize what we've been doing, and the DOC since the last meeting, we kind of changed that agenda a little bit this time around, but off the gate early, we'll have Jim Maddux step up.

But first, it's my pleasure to introduce David Michaels, who we all know David has a very busy schedule, so we just wanted to take a minute to welcome and acknowledge David and thank him very much for coming down.

DR. MICHAELS: Well, thank you so much, Pete.

I really just came up to greet you. I know you talked to Jordan Barab yesterday, and Jim Maddux, Dean McKenzie, and our whole staff who work with you have been here, and I know it's been a very productive meeting so far.

This is a particularly productive advisory committee, and we're grateful for that, so I really just came up to acknowledge that, to thank all of you, but in particular, I want to thank Matt Gillen.

[Applause.]

DR. MICHAELS: I am told while he is not his -- leaving NIOSH is not imminent, this will be his last meeting of ACCSH, and so I want to come up here, and I'm sure everyone is going to join me. But I have had the great honor and pleasure of knowing Matt for well over 30 years now, when he was in New York and one time working for OSHA when we first met, and I followed his career and the great work he's done moving through a couple of federal agencies and working at the EPA and at NIOSH. And his work in construction really is fabulous.

The impact he has had on this committee on how we think about health issues in construction, in the private sector, but also in the public sector have been very significant. You may not know this, but he's also made a significant contribution to the Federal Advisory Council on Occupational Safety and Health. So I've gotten to see him in two different committees where he's really done great work.

I know that NIOSH's activities around construction, health issues, have been greatly -- have benefitted from you.

In fact, the first thing I did upon -- when I arrived at OSHA was an activity that you helped put together on green jobs in construction. It was I think 2 days after I was sworn in, and it was my first public appearance. I have really enjoyed working with you and benefited greatly from your work, your research, your advice, your wisdom, and I think we will miss you tremendously. We hope you will continue to work in this field and help us.

MR. GILLEN: Thanks a lot, Dave. That's very nice. I really appreciate that, and thanks a lot for all the wonderful leadership you've had in OSHA. There's just so many great activities that OSHA is doing, and you really have been really a wonderful leader, and there's just been a lot of fantastic things done.

DR. MICHAELS: Well, thanks, and of course, we can't give much, but we do have a

Certificate of our Appreciation.

MR. GILLEN: Well, thank you.

DR. MICHAELS: This is for Matt.

MR. GILLEN: Thanks a lot.

[Applause.]

DR. MICHAELS: So I'm going to leave you now to much less interesting things that you're doing, so again thank you all so much.

[Laughter.]

MR. STAFFORD: Thank you, Dr. Michaels.

Well, let's go around quickly and do introductions real quick, mostly for the benefit of our reporter here today. Again, what we'll do is we'll go around the table and introduce the ACCSH members that are here. Then we'll introduce the ACCSH members that are on the phone, will introduce themselves, and then we'll go around the room.

I will ask Lisa to remind me again, but right now, out of the gate, I would like to remind everyone if you want to make public comment, we set aside time at the end of the

meeting for that. So please, if you would like to address the committee, sign the sign-in sheet in the back.

So, with that, my name is Pete Stafford. I'm an Employee Representative and Chairman of ACCSH, and we'll start with my right and go around the table.

MR. CANNON: Kevin Cannon, Employer Rep, the Associated General Contractors of America.

MR. MARRERO: Tom Marrero, Employer Rep with Tradesmen International.

MS. SADRICK: Hi. Laurie Shadrick, Employee Rep, with United Association of Plumbers and Pipefitters.

MR. RIVERA: Jerry Rivera, Employee Rep, Power Design.

MR. STRIBLING: Good afternoon. Chuck Stribling, State Plan Representative, Kentucky Labor Cabinet.

MR. GILLEN: Matt Gillen, NIOSH rep.

MR. JONES: Walter Jones, Employee Rep, Laborers' Health and Safety Fund.

MR. PRATT: Don Pratt, Employer Rep, representing NAHB.

MS. COYNE: Sarah Coyne, Employee Rep, International Union of Painters and Allied Trades.

MR. McKENZIE: Dean McKenzie, OSHA Designated Federal Official.

MS. WILSON: Lisa Wilson, ACCSH Counsel.

MR. STAFFORD: Okay, thank you.

And for those of you on the phone, please introduce yourself.

MR. BETHANCOURT: Jeremy Bethancourt, Public Representative.

MS. BARBER: Kristi Barber, Employer Representative.

MR. HAWKINS: Steve Hawkins, State Plan Representative, Tennessee OSHA.

MR. STAFFORD: Thanks, Steve.

Is Tish on?

[No audible response.]

MR. STAFFORD: How about Roger Erickson?

ATTENDEE: I don't think he's going to

make it.

MR. STAFFORD: Roger is not going to make it. Okay. Well, it sounds like -- again, we have a quorum, but it sounds like that's the committee members on the telephone.

Okay. Rod, again, second day, we'll start with you.

MR. WEBER: Rod Weber, PDNA Building Group, Las Vegas, Nevada.

MR. MADDUX: Jim Maddux with the OSHA Directorate of Construction.

MR. TRUJILLO: Frank Trujillo, Miller and Long Concrete and Construction.

MR. KENNEDY: George Kennedy, National Utility Contractors.

MR. CREASAP: Wayne Creasap, the Association of Union Constructors.

MR. MASARICK: John Masarick, Independent Electrical Contractors.

MR. BOLON: Paul Bolan, OSHA Directorate of Construction.

MR. MENON: Gopal Menon, OSHA Directorate

of Construction.

MR. ECKSTINE: Matthew Eckstine, NCCCO, National Commission for the Certification of Crane Operators.

MS. REYNOLDS: Mary Reynolds, Directorate of Enforcement Programs, OSHA.

MR. LEONARD: Kenneth Leonard, Directorate of Enforcement Programs, Office of Health Enforcement.

MR. MATUGA: Rob Matuga, National Association of Home Builders.

MR. HARVEY: Chuck Harvey, Directorate of Construction.

MR. BOOM: Jim Boom, Directorate of Construction.

MR. WILLIAMS: Chris Williams, Associated Builders and Contractors.

MR. BEIRSNER: Bob Biersner, Solicitor's Office, Department of Labor.

MR. COLE: Chris Cole, Inside OSHA.

MR. O'CONNOR: Tom O'Connor, representing the AWCI.

MS. BRIEFEL: Ashley Briefel, Directorate of Construction.

MR. MELLON: Paul Mellon, Novetas Solutions. We manufacture New Age Blast Media, crushed glass abrasives.

MR. WRIGHTSON: Keith Wrightson, Public Citizen. That's an organization.

[Laughter.]

MR. STAFFORD: Thank you for that clarification, Keith.

MR. MAURER: Roy Maurer, HR News.

MR. PAYNE: Michael Payne, OSHA Directorate of Construction.

MR. SHAPIRO: Michael Shapiro, Newport News Daily Press.

MR. SCHUMACHER: Randy Schumacher, Materion Corporation.

MR. ROLFSEN: I'm Bruce Rolfsen, Bloomberg, BNA Occupational Safety and Health reporter.

MS. BERKOWITZ: Debbie Berkowitz, Senior Policy Advisor, OSHA.

MS. CHATMAN: Veneta Chatman, Directorate of Construction.

MR. BONNEAU: Damon Bonneau, Directorate of Construction.

MR. STAFFORD: Thank you, everyone.

Dean or Lisa, any remarks or announcements before we move on?

MR. BONNEAU: That's good.

MR. STAFFORD: We're good to go?

Okay. Jim, let's start with you.

MR. MADDUX: Okay.

MR. STAFFORD: Everyone knows Jim Maddux. I'm sorry. For a formal introduction, Jim is the Director of the Directorate of Construction here at OSHA.

Thank you, Jim.

Directorate of Construction Update on Rulemaking Projects

MR. MADDUX: So thanks again, everybody. I feel a little bit flat following Dr. Michael's rousing thank-you to Matt, but I'll try and follow it as well as I can.

So I did want to start today talking a little bit about the work that the committee did yesterday on the 2-hour Intro to OSHA section, and I really wanted to congratulate the committee for really engaging with this issue. I think everybody really did their homework. Everybody contributed. It really was a great team effort.

And I just wanted to kind of reiterate how important this is. There are so many workers across this country, construction and otherwise, who are not even aware that they have OSHA rights, and so every opportunity that we have to work on that is a good one.

Of course, we have the requirement for the OSHA poster that tells people about their rights, and we have a lot of information on our website. We put information into each and every one of our publications to try and inform workers, but this program, the 10- and 30-hour courses last year reached 700,000 workers. So this really is an amazing opportunity to give people valuable information that they probably

would never get in that kind of detail in any other place. So thank you for what you've done there. I know that was really a difficult job, and thank you for staying with it.

So I'm going to talk just a little bit about some committee business, a few stats. Of course, you know I always have to have a few numbers, or I'm not alive. A little standards work, cranes, outreach, and finish up with the Fall Prevention Campaign.

So at the request of the committee, we have been -- of course, we do a lot of work on the Internet, and one of the requests of the committee was that we start putting work group minutes on the Internet, on our ACCSH website, and we have begun to do that. So we have posted the work group minutes for a couple of meetings on the Internet now, and we will continue to kind of work our way back and continue to add those minutes and flesh that out as time goes on.

We are also now -- I'm sure people are very aware we have six positions on the committee

that will be expiring next year, and so we have asked the public for nominees to fill those positions. We do have a few nomination letters that have been coming in, but I think that that goes until the end of the month or more, so there's still plenty of time.

Of course, I wanted to welcome Lisa as our new counsel. Apparently, we weren't too rough yesterday. She came back for a second round, so thank you, Lisa.

And of course, to thank Sarah Shortall for all of the work that she did on this committee for many, many years. She really has been a stalwart and has helped a lot of people on this committee, past and present.

So a little bit of stats. The fatality statistics for construction, we saw this huge decline in fatalities during the recession, and now we're seeing an increase as construction work comes back. So this has been something that I've been sort of not looking forward to, and that I've been trying to really talk up that we really

need to make safety improvements now because, as construction increases in volume and there are more new workers coming into the industry and more new employers, new businesses that are being formed to do construction work, there is a lot going on.

Kind of the distressing part about this is not only did the number of fatalities go up -- and these are preliminary numbers from BLS, so that number will go up even more when the final numbers come in, but that the rate went up, and so that means that compared to 2011, workers were being killed at a much higher pace. Now, if you look at the entire 6-year span, it's probably in the midrange, but I think we still have a lot to do here, and this is the time to do it.

Thanks, Damon.

Focus Four. Falls are still the big issue. So we had an additional -- what is it? -- about 14 fall fatalities last year, and I believe actually that the rate of fall fatalities also went up.

Next slide, please.

This is a little bit of an eye chart. I apologize for that, but we were just taking a look. We've been talking a look. The BLS data on injury and illness rates came out just, I think, 2 weeks ago, so we haven't had a chance to do a whole lot with it, but we did this one sort of simple analysis.

The thing that is very interesting here -- and I'd be really interested in maybe a year from now to see if it sticks -- is these framing contractors, almost dropped in half in a 1-year period, and this is a pretty good size sample that BLS does within these industry classifications. I have no reason to believe it's a bad number, so we'll see. That could be a huge, huge improvement. The rest of them seem to be fairly stable, a little bit of a drop in roofing contractors. As we have seen over the years, the injury data don't always track the fatality data, which has been a little bit of a mystery, I think.

Next slide, please.

So a little bit on the standards front. Confined spaces, we're continuing to make good progress on that. We are still trying to work through a couple of issues on the economic analysis, especially on benefits, and that should be ready to go into clearance in the next month or so.

Next slide, please.

Backovers, we are also continuing to make progress. We have got a little bit of work going on to try and get kind of the industry profile going to get started on the economic analysis. I think I've showed you before we have this webpage that we put up on backovers that I think actually may be the best webpage out there in terms of talking about all of the technologies and rules, everything that deals with these horrible problems of backovers. And interestingly enough, even though the construction numbers went up in total, the backover fatalities last year actually went down. We only have 2 years' worth of data

on backovers. It's the first couple of years that BLS has tracked this particular stat, so that's about all we know.

Next slide, please.

A little bit of an update on cranes. Obviously, this is a photograph of the crane tip-over at the National Cathedral 2 years ago. We do continue to see a number of crane incidents, both tip-overs -- we still see a few electrical line incidents with cranes, so we seem to be making progress, but there is still work to be done.

We just issued citations to an employer who was operating a crane on a barge without the proper safety equipment, who tipped over the entire crane and took out a couple of very expensive boats, pleasure craft, with it. So the incidents with cranes are dramatic, to say the least.

Next slide, please Damon.

So a little bit about Final Rule update. We got this year the Final Rule for underground

and demolition, which allowed us to do away with the Subpart District standard, which was the old crane standard, which was being reserved just for those two industries, so that's nice cleanup.

We completed the digger derrick exemption, which completed the obligations under our settlement agreement with EEI, who had sued us. We do still have settlement talks that are going on with the railways, and so that may result in a future rulemaking. And we have these cranes and derricks amendments that the committee has been working on. So now that the committee has consulted with us on all of those provisions, Paul and his staff are working through the write-up and the analysis, so that we can start moving forward on that, which would be a very nice rulemaking because it will help clean up especially these issues with forklift coverage, with insulating links, and with the proximity alarms. And of course, we've got the operator certification, which I've got a slide on, a couple of slides down.

Next slide, please. Maybe one slide down.

So this has been a fairly big issue, the biggest issue certainly following up on the crane rulemaking, and we held early this year some public meetings to discuss the issue of whether or not operator certification was sufficient in the OSHA standards to ensure that crane operators are trained and qualified to operate the crane safely.

We are working on a proposal that would extend our current situation for 3 years. So it would move out the date for operator certification by 3 years. It would also move out the existing requirement for 3 years, which is, of course, this last bullet point, and so employers are right now required to ensure that crane operators are competent to operate the crane safely, and then if they're not competent, the employer must provide training to make sure that they are. So that 3-year extension, I think will come out in the next 2 or 3 weeks. It's

getting very close to getting through the clearance process, and we're looking forward to taking comment on that certainly before the next ACCSH meeting.

Next slide, please.

Our crane director, we are making some great progress on that. It's actually just been passed off last week from the staff, people that are working on it, the staff attorney and our staffer, Garvin, in the Directorate of Construction, to me, and to supervisory attorney. When we're through with it, then we will be ready to move that into kind of the clearance process with Dr. Michaels and forward. So it's actually, I think, possible before the next ACCSH meeting or not too long after that, that we'll have the crane directive out, which would be wonderful.

Next slide, please.

Communication towers, talked a little bit about this last time. We had a couple more fatalities since then, so we're up to 14 fatalities on communication towers this year.

Last year was one, so this is a very serious kind of a spike. This is more than the last 2 or 3 years combined, and we are very, very concerned about this. We have been talking to the tower erection community as much as we can. Most of these fatalities are simply people at elevation who are not tied off. We've had a couple other incidents, one of them where we actually had a gen pole that collapsed and fell that was on a communication tower, an aerial life tip-over, and a motor vehicle incident.

So we have sent out a memo to our regional administrators a couple of weeks ago. It's out now on the Internet asking our field folks to really keep an eye out for this kind of work, and trying to improve some of our documentation in our inspection computer system, to make sure that we're doing a good job of keeping track of these incidents and that we know what's going on, but it's a real concern. We believe that a lot of this is due to this whole 4G cell phone upgrade that's going on with the

telephone companies, and that is requiring both new towers and for new antenna to be placed on existing towers. So there's been a big influx in work, big influx of new workers, a lot of new companies that are coming into being to do this kind of work, so we're continuing to go on that, and you will hear more about that as we issue more products and so forth.

Next slide, please.

This is our new webpage on construction incidents that I announced to you at the last meeting. I just wanted to let you knows that we have continued to populate this website, and we now have 40 engineering reports that are up and on there. I think that as part of our communication towers effort, we are going to kind of prioritize our various reports that we've had on communication tower collapses and make sure that we've got those on there as another resource for that industry to use, but it's coming along very nicely. We're probably about halfway through getting the entire library of reports up,

so good progress.

Next slide, please.

Demolition. Demolition, of course, has been a big safety problem in the construction industry for probably forever. It's dangerous, and this was just really highlighted so much by the collapse earlier this year in Philadelphia that resulted in a wall falling over on top of the Salvation Army store that happened to be next door, killing 6 people and injuring 11, one woman who lost both of her legs, who was a customer in the store.

So we're going to try and do a little bit more I think on demolition and kind of a little bit of a mini outreach program to -- number one, we'll be sort of refreshing our website, bringing that up to date, making sure that it's solid, maybe some guidance products, maybe try to do something with the organizations that represent cities and counties to try and get the word out, especially to city building inspectors and so forth, about demolition and the OSHA

requirements, and that if they see some demolition that's not being done properly, that they can give us a call.

In this particular case, this building was being brought down with absolutely terrible procedure. They were not working from the top down. They had removed a lot of the interior bracing in the building, apparently so that they could resell some of the lumber that was inside of this building that was fairly valuable. 100-year-old 2-by-8s have become a commodity, apparently, when they were still actually 2-by-8, I think. So the practices here violated not only OSHA standards, but just any sort of a reasonable way of demolishing a four-story building. So this, you're going to be hearing more about this. We are definitely concerned and trying to do something to improve safety in the demolition industry.

Next slide, please.

So the Fall Prevention Campaign, of course, I think everybody has been pretty

involved with that. Over the last year or two, we feel like we've been very successful at getting a lot of eyeballs on this a lot of Web traffic and so forth. I think that we've handed out our various publications and so forth in hardcopy, somewhere around 300,000 pieces of literature. We've had over a half-a-million page views on our webpages for the campaign and climbing. So it has been an enormously popular campaign.

Next slide, please.

So aside from the publication and Internet activity, we've actually had actual live activities, our regional and area offices, almost 3,000 outreach activities, and the consultation programs, almost 6,000 activities. So it's really been a huge, huge effort that has had a coordinated approach from a lot of different groups in the occupational safety and health area. Trade associations. I know AGC, ABC, the Home Builders have all put out things in their newsletters and so forth and tried to really do a

lot to talk about fall protection and the campaign, which we really appreciate.

So we have decided that we are going to do the campaign for another year next year. So it's kind of been going one year at a time, deciding each year, depending on how the funding is going, which is very exciting right now, of course, and the priorities of the agency, but we have decided that we are going to do Fall Prevention for another year in 2014.

Next slide, please, Damon. Did you freeze on me?

MR. BONNEAU: It froze. It froze.

[Laughter.]

MR. MADDUX: I love technology.

SO one of the things that our field offices did last year, several regions did, that many of you may have heard about is that they did what they called "safety stand-downs" for fall protection. So I think that we had five different regions that did these stand-downs, and so the idea is that they would get for a 2- or

3-day period or something like that, get an employer or a group to stop work for a few hours and just talk about fall protection, about whatever program they have, about their technology. They could make sure that all of their gear was good and that sort of thing.

Those regional stand-downs received participation by more than 2,000 employers, reaching 50,000 workers. So that sort of got our attention that this was apparently a very popular activity in a way that could get the word out.

So we are in the planning stages right now of doing a national fall prevention stand-down next year. So we'll probably be reaching out to individual groups and stuff to try and coordinate up, because I think this is something that will require a tremendous amount of coordination with all of the people that have been participating in this, but I think that it could be a real way to make a really big splash kind of event for the Fall Prevention Campaign.

So those are my remarks for today. I'd

be happy to answer any questions.

Yes, Don.

MR. PRATT: Jim, I'd like to first of all -- and for anybody else in the room, I'd like to offer you an invitation again to our International Builders Show from the National Association of Home Builders. One of the things that we are going to concentrate on this year is the Focus Four.

As you have seen with your own two eyes, there's several thousands of people.

MR. MADDUX: Yes, there are.

MR. PRATT: Hopefully, we are going to be reaching 100,000 this year. I don't know if we're going to reach that much.

MR. MADDUX: Wow!

MR. PRATT: But things are better in our industry, so we're hoping to be able to reach that.

But we are going to go out into the Exhibit Hall where all of the exhibitors are participating and have -- concentrating on the

Focus Four. There will be some kind of contrast where our members can go around the floor and get points, and then there will be some kind of prize at the end of the show or maybe even every day. We haven't worked out all those details yet, but this was something that was thought about, actually by my wife Lynne, whom you've met.

MR. MADDUX: Yes.

MR. PRATT: And we have followed up on it. We did some of it last year, and we're going to do it in a bigger way this year. So I encourage anybody from ACCSH or from OSHA if they could come out, and especially you, Jim. We would like to have you out again, and we will take you around the Exhibit Hall ourselves. We personally invite you to attend that show.

So you don't have to tell me now, but look at your calendar and see if it's available.

MR. MADDUX: I appreciate the invitation, and I'll certainly try to --

MR. PRATT: It's going to be the 1st of February.

MR. MADDUX: I will try to take a look at my calendar and see if I can go.

MR. PRATT: As you know, we have been doing a lot in our industry to try to bring awareness to the forefront, and as we all know, residential construction is lacking across the country and especially in certain areas like my area in Michigan, and we need to do more for awareness. So this is what -- we're trying to reach out and touch these folks and at least bring it to their attention that they need to protect their workers and also protect their wallets, because as we all know, when we protect the workers, we are protecting our profit margin. And this is what I try to explain in my teachings to the owners of a lot of the small and moderate-size builders. So again, the invitation stands.

MR. MADDUX: You make a good point. My understanding is that 2013, that homebuilding is up almost 25 percent?

MR. PRATT: Yeah, I would say it's pretty

close to that.

MR. MADDUX: And I've seen several predictions calling for an increase to similar to that next year.

MR. PRATT: Right. And as that happens, as you mention, Jim --

MR. MADDUX: That's a huge growth.

MR. PRATT: -- there is going to be more and more injuries out in the field, and we need to address it.

MR. MADDUX: Well, thank you, Don.

MR. PRATT: You're welcome.

MR. STAFFORD: Any other questions or comments?

MR. JONES: I just have one.

MR. STAFFORD: Yeah, go ahead, Walter.

MR. MADDUX: Yes, Walter

MR. JONES: You mentioned earlier that the fatality is driving -- fall fatalities are driving the numbers of increase fatalities that we've seen over last year.

MR. MADDUX: No. I think that actually

the fall fatalities are probably about the same proportion.

MR. JONES: Oh, okay. All right. I wasn't clear.

MR. MADDUX: Yeah. I think that they're somewhere around 33, 34 percent for the last 2 years.

MR. STAFFORD: Any other questions or comments?

[No audible response.]

MR. STAFFORD: Well, let me -- before we let Jim go, first, I want to reiterate what Jim said about the work on the Intro to OSHA module. I mean, from my perspective, we've done a yeoman's job of our duty as ACCSH. A year ago, we made a recommendation on a policy change for OSHA and for the last year or so with the work group, and I want to thank Jerry and Kevin and Roger specifically, but all of the committee and a lot of you in this room that went through this exercise with us yesterday and have commented in previous public meetings, that we've now made the

policy recommendation and given OSHA some suggestions on what they may do with that. And now it's in OSHA's hands. I think we've turned it over to the staff to work on, and we hope that's helpful to you, Jim, and Hank Payne's office and the second floor and moving it forward, so we really do appreciate you listening to us on that, because I think I can look around this room and around this table, I certainly think it's something we all believe was needed and something important for our industry.

MR. MADDUX: Yeah. Well, I think as part of the exercise -- I didn't sit down on the whole session yesterday, but where I was here, it seems that not only were there some suggestions that probably can tighten up the material and make it more concise, but also some things that simply improve it, where there were some good catches about some things.

I think Matt's recommendation, for example, on the fatality reporting, that it should include illnesses, which are probably

acute illnesses, of course, and not long-term stuff, but, you know, those are things that will improve the training as well as hopefully result in a slightly more concise package.

MR. STAFFORD: Okay. So then we're going to wrap that up. I think Kevin has sent a copy of the document that was revised last night after our meeting yesterday and our business with ACCSH with respect to the Intro to OSHA has concluded. Again, I am going to thank you for your responsiveness to that.

You know, Jim, later on we're going to have one last thing. We're going to have a discussion of our work groups. You and I have talked about this individually, but we have to realign our work groups I think based on where we're at. Of course, we all know that this is the committee that really was designed by Congress to advise the agency on regulation and policy, and we have over the last couple of years taken on activity short of regulations, like development of websites, guidance documents,

because of the -- I don't want to say the shortage of regulation, but we have more work that we could do beyond the regulations that are coming out of the other end of the pipe.

I spoke to Chuck, who is the co-lead of the backing operations work group, and I know Chuck talked to Steve Hawkins. Your mention of the backing operations and the data, I'm assuming that as we get into this discussion about work groups, I'm struggling with whether OSHA wants to move forward in the kind of regulatory capacity on this issue, or is this maybe a work group, when we get into that discussion, that we should think about, setting aside for the time being.

MR. MADDUX: Yeah. No, I'm actually really looking forward to that conversation. I think that we have reached sort of a little bit of a crossroads.

The committee has worked really hard for the last, I would say, four, five meetings. We've been going really hard on some regulatory issues through each of the SIPs items, through

each of the items that we have in the crane amendment, you know, making sure that we're doing a good job of consulting through all of those issues, and so we find ourselves -- for example, at this meeting, we spent a lot of time on this Intro to OSHA, which was valuable, but a lot of our work, we've kind of worn out, which is a good thing.

At the same time, it is time to think about maybe some of the work things that we set aside earlier that we want to revive and whatever new topics are that OSHA would like to ask this committee to work on, and we would welcome that kind of a discussion to kind of at least get your views of what the topics are that the committee could and should take up next.

MR. STAFFORD: Okay. Well, I appreciate that. We'll just have to figure out in juggling the schedule here when we can get in this discussion. I think we're a little bit ahead.

I don't know if Ms. Carter is here in the room or not.

MS. CARTER: Yes.

MR. STAFFORD: You are. Are you ready to go?

[No audible response.]

MR. STAFFORD: Well, we'll do that then, and we'll be ahead. I think maybe we'll get through this and maybe start that discussion then sooner than later.

MR. MADDUX: Yeah. I think we've got Janet and then some folks coming in from DSG to talk about beryllium.

MR. STAFFORD: About beryllium.

MR. MADDUX: Then we can talk after that.

MR. STAFFORD: Okay, sounds good. Thanks.

MR. MADDUX: Thank you, everybody.

MS. WILSON: And thank you. This is Lisa Wilson.

I will designate the slides for the DOC update as Exhibit 4.

Directorate of Standards and Guidance Update on the Globally Harmonized System of Classification

and Labeling of Chemicals(GHS) Program

MS. CARTER: Well, good afternoon, everyone, and thank you so much for inviting us to talk about GHS, nanotechnology, and construction.

We are going to divide this presentation into two. Deana Holmes is our experts on GHS or HazCom, or hazard communication standard, and I will be discussing nanotechnology and construction and how the hazard communication standard applies to that. My name is Janet Carter. I'm in the Directorate of Standards and Guidance, a health scientist with OSHA.

So I'm going to hand it over to Deana, and thank you again very much for this opportunity.

MR. STAFFORD: Okay. And, Deana, please introduce yourself too.

Before we proceed, can everyone on the phone hear okay? Is it loud enough?

MS. BARBER: Yeah, it's good.

MR. STAFFORD: Okay. All right, thanks.

Deana.

MS. HOLMES: Thank you.

Could we proceed to the next slide, the next one as well, please.

Okay. Good afternoon, everyone. Again, I am Deana Holmes in the Directorate of Standards and Guidance, and today, we are going to cover HazCom 2012, 1 year of implementation. Then we are going to discuss a little bit about the training requirements for the December 1st, 2013 -- then we're going to give a brief, very brief overview of the HazCom 2012 requirements. Then we are going to talk a little bit about the guidance and outreach products that we have currently on our webpage, and then we are finally going to discuss the work that's being done on nanotechnology and construction.

Next slide, please.

Now, as you know, the Final Rule was -- Final hazard Communication Rule was published March 26th of 2012, which is almost 2 years now, not quite, but almost 2 years now, and our main

activity since that time, since we published the rule, we have been focusing on public awareness. So our main goal has been to just get the word out about the standard and to provide the regulator community with some assistance in understanding the different provisions of the standard.

We have conducted several webinars and speeches. We have provided training to our hazard communication coordinators, so they can also help get the word out about the standard. We have provided -- participated in a hazard communication roundtable. We spent a considerable amount of time responding to questions from the public, either through the formal interpretation process or through electronic correspondence. We are still in the process of developing the HazCom directive. We have also developed several guidance and compliance assistance products. We continue to work on international GHS-related activities, and also we have been working to resolve the

litigation issues.

Next slide, please.

Now, regarding the litigation issues, the American Petroleum Institute, we are currently still in discussions with them; however, we are, I believe, close to settlement with them. So hopefully, that will take place soon.

For the American Tort Reform Association, the opening arguments were presented on October 21st in the D.C. Circuit Court.

CropLife America, they withdrew their challenge some time ago due to untimely filing, and then finally, we have the Coalition of five different industry groups, which included the American Chemistry Council. We were able to settle with the American Chemistry Council, but the remaining litigants have decided to discontinue discussions with OSHA and to proceed with the litigation process.

Next slide, please.

Okay. These are the effective dates for the revised standard.

Now, the first effective date, which just passed just a few days ago, is for employee training, and all employees had to be trained on a new label and safety data sheet formats by December 1st, 2013.

Now, the next effective date is June 1st, 2015, and all provisions of the standard have to be complied with by that particular date. So that means that all the labels and safety data sheets shipped after June 1st, 2015, have to be in the new format.

Now, there are a few exceptions to this June 1st, 2015, deadline, and the first is for distributors who are passing on manufacturer labels to customers. They are being given an additional 6 months, so they have until December 1st, 2015, to be in compliance with the standard. However, if these distributors are creating their own labels, that makes them now manufacturers, and they have to then comply with the June 1st, 2015, date.

The second exception is for employers.

They are given another year, so by June 1st, 2016, to update their hazard communication programs and any other workplace signs, if applicable.

And of course, during the transition period, we are allowing you to comply with either standards, the 1994 standard or the 2012 standard or both.

Next slide, please.

Now I am going to discuss the required training, and as I previously stated, the first implementation date of concern is the 2013 training implementation date. And again, employers were supposed to train their employees on the new labels and safety data sheet formats by December 1st, 2013.

And we did this because during the rulemaking process, we did recognize that the new approach to labels and safety data sheets is quite different than what's currently being used. So we felt that adding this one-time training would ensure that employers train their employees

on the new safety data sheets and labels, before they actually start coming into the workplaces.

Now, this training will ensure that the workers understand and can access and use the information effectively, and also they will understand that regardless who supplies the chemical, all the hazards will be communicated in the same exact way.

Thank you.

The training provisions of the standard have remained essentially the same from the 1994 standard. Employers are already required to provide effective training to their employees on the hazardous chemical sin the work areas, and this training, of course, has to be done at the initial time of assignment to work with the chemical and also when a new hazard is introduced into the work area.

Now, we do offer some flexibility when it comes to this training. We allow them to be able to conduct the training by chemical or by hazard, but regardless of how they choose to conduct the

training, that training still has to be effective, which means that it has to make sense to the employees, and it has to be conducted in a manner and also in a language they all can understand.

Next slide, please.

Now, when conducting this one-time training, there are several topics that we expect to be addressed. Employers should talk about the role of labels and communicate that labels are an immediate source of information on the chemical, and that the new labels will now have more information on them than what's currently on labels.

We also expect them to discuss the label elements. Each label element should be explained. There should also be a discussion about the hazard classes and how they interact with the different label elements, and also they should provide examples of a new label compliant with HazCom 2012.

Next slide, please.

Regarding the safety data sheet, employers are required to train their employees on the new 16 section format, and this should also include the information that should be found in each individual section of the safety data sheet.

And also, while it's not part of the training requirement, we feel that it may be a good time for employers to review where they house their safety data sheets at their particular facilities and how the employees can gain access to them.

Next slide, please.

And now I am going to briefly go over some of the key changes to the hazard communication standard as they relate to labels and safety data sheets.

Now, regarding labels, the label again functions as an immediate source of information on the chemical. The new labels will now have more information on them than are currently present on current labels, and now the labels on

shipped containers of hazardous chemicals will now be changing by June 1st, 2015.

Now, here are the elements that are required to be on shipped containers. They have to include a product identifier, signal word, pictogram, hazard statements, precautionary statements, and the name, address, and telephone number of the manufacturer, importer, other responsible party.

Can you go back one more?

The highlighted elements in blue are the ones that are new, and I am going to talk about them a little bit more momentarily.

Next slide, please.

First, you have the signal word, which is a word used to indicate the relative severity of hazard and alert the reader to a potential hazard on a label.

Now, in HazCom 2012, there are two signal words, "danger" and "warning," where "danger" is used for the more severe hazards and "warning" is used for the less severe.

Next slide, please.

A pictogram is a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical, and we have eight pictograms that are designated under this standard for application to a hazard category.

And these are the eight pictograms that we are requiring. In addition, we have also included here the non-mandatory pictogram of the environment pictogram, which since we don't regulate environmental hazards, we have just included this since employees still may be seeing this on labels in the workplace.

Next slide, please.

A hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazards of a chemical, including, where appropriate, the degree of hazards. And to give you an example of a hazard statement, "fatal if swallowed" is the

hazard statement for acute oral toxicity category one.

Next slide, please.

"Precautionary statement" is a phrase that describes the recommended measures that can be taken to minimize or prevent adverse effects, resulting from exposure to a hazardous chemical or improper storage or handling. And examples of precautionary statements are "Do not eat, drink, or smoke when using this product" and also "Keep the container tightly closed."

Now, we do offer manufacturers a little bit of leeway when it comes to providing these precautionary statements on a label. They are allowed to combine them to enhance readability or omit them if they are proven to be inappropriate. So it's also important that employees understand that they may be seeing some differences in how the manufacturers put the precautionary statements on a label, but the core precautionary statements will be the same.

Next slide, please.

And this is an example of a HazCom 2012 label. As you can see at the very top, you see "Xyz...Chemical" which is your product identifier. Then you have following that three pictograms. After that, you have warning, which is your signal word, followed by several hazard statements, and then finally at the very bottom, you have several precautionary statements. And at the very end, you have the name, address, and telephone number of your manufacturer.

Next slide.

Now, we have also had several implementation issues that came up over the past 2 or so years, and one of them was with small packages. We are not providing an exemption for small packages. OSHA has always provided practical accommodations on a case-by-case basis for small packages, and we will continue to do so. However, we have provided on the webpage now an interpretation on what information is required on the inner package as well as the outer package of small packages.

For pictograms, blank pictograms are not permitted on a label, but we are allowing manufacturers to black them out, so it's important for employees to also understand that that blacked-out pictogram doesn't mean that the label has been defaced. It just means that that was an extra pictogram there, so it's important for employers to also train their employees on that as well.

And then there are no size requirements for labels. We only require that they be large enough so that they're visible.

Next.

With regards to workplace labeling, we are maintaining the flexible approach to workplace labeling, so employers can choose to label the workplace containers with either the same label that's on the shipped container, or they can use other label alternatives, such as the HMIS or the NFPA labeling systems.

And again, all chemicals shipped on or after June 1st, 2015, must have a new label and

safety data sheet.

Regarding safety data sheets, OSHA is requiring a standardized order of information on the safety data sheet. In the next slide, you will see the specified order.

Next slide, please.

This is a specified order for the 16 section safety data sheet.

And next slide.

Here is an example of what your employees may see in the first sections of a safety data sheet, and this is basically here just to provide an example that the NFPA label or the NFPA sign can still be used on the safety data sheet, because people were quite concerned about still being able to have the rating system up there.

Regarding safety data sheet distribution, an updated safety data sheet has to be provided with products shipped after June 1st, 2015. I also want to point out that manufacturers are not required to send a new safety data sheet for products that you still have in your inventory

after the June 1st, 2015, date -- excuse me -- prior to the June 1st, 2015, date. And also they are not required to send new safety data sheets for chemicals that are no longer being produced.

Now I am going to talk to you a little bit about our guidance and outreach products. If you are not already familiar with the Hazard Communication website, this is what the first page looks like, and on our site, you can find the Hazard Communication 2012 standard as well as the 1994 standard.

We also have some comparison documents comparing the requirements of both standards. We have on our page as well some frequently asked questions and answers.

And some of the newer additions to the website include a fact sheet on December 1st, 2013, trainer requirements. We also have an OSHA brief on labels and pictograms, a hazard communication wallet card.

Next slide, please.

We also have several quick cards on

labels, one on safety data sheets, and pictograms.

And then we have -- finally have documents in various stages of development. The guidance product that I myself am excited about is the Small Entity Compliance Guide for employers who use chemicals, and that is actually in the final stages of preparation for publication. So hopefully, it will be available on our site within the next couple of weeks or so, and I can only be hopeful. It actually provides a guide to help small entity employers comply with the standard, and it also has a companion fact sheet that provides steps to developing an effective hazard communication program.

Now, we are also in the process of developing a model training program, and that also includes some PowerPoint slides to aid employers in conducting training. We have a safety data sheet preparation guide that we're working on and also a hazard classification

guidance document.

Then we also have, finally, several Web applications that we're working on. We have an electronic safety data sheets form, a label elements application, and then an acute toxicity calculator.

Now, for your reference, I have provided here these web links to our updated webpages. The first is the HazCom 20102 webpage. The next one is the safety -- our safety and health topics page, which includes information about HazCom 1994, and then finally, we have the UN GHS subcommittee home page.

Next slide.

Now, regarding the UN subcommittee of experts on the GHS, the subcommittee meets twice a year to discuss several issues, and some of the issues include implementation issues, practical classification issues, and also other harmonization issues.

Now, the subcommittee revises the GHS on a biennium basis and is currently on its fifth

revision, and OSHA currently leads the U.S. delegation to the subcommittee and also chairs the subcommittee as a whole.

And now I am going to turn it over to Janet to talk about nanotechnology and construction.

MS. CARTER: Well, hello. This is Janet Carter, and good afternoon, and thank you very much for the opportunity to talk about nanotechnology. It's one of my favorite subjects.

I do apologize. I don't have any big fancy slides on nanotech. I didn't want to get into talking about nanotechnology. I wanted to talk about the application of nanotechnology and construction and then how some of the issues that have come about with hazard communication, but I will give you a brief background just for informational purposes.

I'm sure most people are aware that nanotechnology is the manipulation of matter on the atomic or molecular scale, and it's generally

framed within the size range of 1 to about 100 nanometers at one dimension.

And of course, there are very many interesting applications for nanotechnology. If you think about carbon nanotubes, you just take that, because that's a really good example of something that's going to happen in construction. Carbon nanotubes, they usually occur between 1 to 10 nanometers within their width. They can be meters long. That's approximately like 1/50000ths of a hair, the 50,000 size of the width of a hair. So they are very thin. They can be very long. They are very lightweight, but when you think about a carbon nanotube, they are probably the strongest material ever invented by humans.

And just to give you an example, there is a tensile strength of a particular carbon nanotube of 63 gigapascals. So for all your engineering geeks, that's pretty strong. These materials are quite impressive, and so they are being used as reinforcement for construction.

They are being used in cables. They are being used in electrical conductivity, all kinds of applications. There is biomedical applications, but I am trying to restrict it to just construction.

So while there's a lot of really interesting applications for these, there is still not a lot known about some nano materials, but what we do know about some nano materials is that at least for some, there's some hazard information, and so there is evidence that there are health effects.

Now, we still don't know enough to generalize about all nano materials, so we have to still take it by a case-by-case basis. I just want to point out, before moving to the next slide, that NIOSH has produced two RELs for nano materials, one for carbon nanotubes, which is .1 microgram per cubic meter, and then for -- I'm sorry. It's 1 microgram per -- no, it is .1 microgram per cubic meter. I absolutely apologize, because it just changed.

The other one is titanium dioxide, which is 0.3 milligram per cubic meter. So ultra-fine titanium dioxide is different from titanium dioxide, even though ultra-fine titanium dioxide has been in production since the 1940s. So some of these materials have been around for a long time, but something like carbon nanotubes is still relatively new, so there's not a whole lot we know about some of the health effects.

So if we can go to the next slide.

These are just some of the applications that can be used in construction, and I start out with carbon nanotubes, because that seems to be the most popular one right now. I mean, it's in roofing materials. It's in concrete reinforcement. We actually see it in textiles, and they add a lot of strength to textiles. They are being looked at for bulletproof materials, because they are so lightweight and they're flexible, yet they're so strong they can stop bullets. They are being used in children's backpacks as bulletproof.

Nanosilica.

I know it's kind of sad you need that, but yes.

For coatings, nanosilica is being used. It is used as a whitening agent. It's also being used for other properties that nanosilica has.

Nano titanium dioxide. Again, it's been around for a long time. For window coatings, it's really cool, and you can see this in the construction. This is also in the construction industry. They will actually coat window panes with these nano titanium dioxide, because while titanium dioxide is generally a white pigment, nano titanium dioxide is invisible. If you apply it correctly, it can create an invisible film, so it takes on a very different characteristic.

And what it is, is it produces this self-cleaning -- these self-cleaning windows, so they can be used on skyscrapers. It can be used in paint. It can be used as insulating materials, so it has a really neat property in insulating materials. It's kind of like spray

polyurethane foam where it has a really good R value, and it can seal cracks. So you get a really good vapor barrier, but it's generally applied in either a spray or roller. So again, there can be exposures. We don't know a lot about these materials. With titanium dioxide, we do have some pretty good measurement capabilities. For some of the others, we simply do not.

Graphene is really cool. It's a nano-thin sheeting of carbon, and it's flexible, but it has many applications like in coatings, and then of course, carbon black has been around for years, but there are nano carbon black, and they are used in coatings and other applications.

Nano silver is another one that I don't have up here, which is also used in textiles and materials. It can be used to impregnate materials, giving it strength, giving it antimicrobial capabilities, so you may see them in applications for PPE. I know that's one of the things that's being investigated for some of

these materials.

So for the next slide, I just want to go over briefly some of the OSHA activities in nanotechnology. Because we know there are some health implications, we have been heavily involved in the National Nanotechnology Initiative with NIOSH, and we are involved in the Nanotechnology Environmental Health Implications work group. Two of these activities, I'll talk about very briefly.

The Sustainable Nanomanufacturing Initiative, which is really interesting, what we're trying to do is develop a sustainable model for manufacturing these materials, so that they're not only benign by design, but that when they are manufactured, we don't have to worry about waste. We don't have to worry about recycling. We don't have to worry about worker exposures.

And then the NanoInformatics Initiative, which is something that I'm -- I think this is really going to have a really good impact.

The next bullet you will see is a Hazard Characterization/Hazard Determination Database. This is going into that NanoInformatics Initiative. What OSHA's part in this NanoInformatics Initiative is, we're taking all the published information that's been available on the health effects for nanomaterials. We are putting them in this database. It is a sortable, searchable database. We are extracting from each publication all the hazard information, so that people can actually go in and take a look, and they can start sorting. If you are interested in carbon nanotubes, here is all the information on carbon nanotubes, here is all the information on titanium dioxide. Do we see consistencies across the health effects? Can we start to develop some hazard characterizations for these materials that's consistent in groupings of material, so that we don't have to take them on a case-by-case basis?

This is going to be linked to other databases like the Nano Registry, which has been

-- it's a really cool registry of all the nanomaterials that have been developed. It sits within the National Institute for Environmental Health and Safety. So what we're going to do is join our data with the data that they have on all the physical characteristics of these materials, so that you can just pull this up. If we know that this one nanomaterial has this really cool application, it's got these characteristics, oh, and by the way, it's got these health effects here. We know this. So all of that information is going to be available in one place, and that's really going to help people, because there's thousands of pieces of information out there, and it's just so difficult to get all of it in one place.

MR. STAFFORD: So, Janet, can I interrupt you?

MS. CARTER: Sure. Oh, I'm sorry.

MR. STAFFORD: So this database ultimately will link to products, so that we can see, for example, what the common construction

products have carbon nanotubes in them?

MS. CARTER: We are hoping so, because there are several consumer databases out there, and so we are trying to link them all together. That's one of the things that the NanoInformatics Initiative is supposed to do. So there's Nano Hub. There's the Woodrow Wilson Consumer Products Database. There's going to be ours. There's others. These will all be linked together, and so if there's consumer information on those, that will be there too, and you will be able to pull it up. So I think that will be really helpful for people.

But the one that I really want to focus on today is the NanoRelease Project, which is not part of the NNI, but some of the NNI members are actually part of it. And we're leading up one of the projects for that.

So if I can show the next slide, please.

So one of the problems with nanomaterials right now is we really don't have a lot of exposure information. One of the reasons why we

don't have a lot of exposure information is because we don't have a lot of exposure techniques. We just don't have the monitoring techniques for these. Because they have some really interesting chemistries, because they are really small, it creates some issues with measuring these.

So what we are doing -- and this is a project that was started by the International Life Science Institute. It is a multi-stakeholder project to develop robust, consistent field methods. So these are going to be something that can be used out in the field and in construction. That's what we're hoping. Right now, that's really lacking. The only thing we really have right now is the titanium dioxide, one that's really field ready.

So this is an international collaboration, and all kinds of departments, governments, Health Canada, U.S. Government. We have EPA, OSHA, NIOSH, NIST working in this. We have academic labs. We have NGOs. We have

industry. We have the leading manufacturers of carbon nanotubes, BASF and Arkema that are helping us with this. So it's a really good collaborative project.

So if I can take the next slide, please.

So what we've done so far is develop some background information. It kind of tells where are these nanomaterials -- are in consumer products, and I say consumer products because construction is part of that. That is kind of how it was broken up. That was how we were looking at it. Concrete is considered a consumer product in this particular database.

We're also pulled together all the various types of methods that exist for measuring these. Many of these are very sophisticated, and we're talking about TEM, SEM, mass spec, the MALDI-TOF mass spec. I mean, so these aren't pieces of equipment that are going to go out in the field, so we have to really kind of -- we have to develop these.

We've also developed the state of the

science papers, and right now in what I am co-chairing is the Interlaboratory Testing Group, which is trying to evaluate the robustness and field readiness for some of the methods that we have.

And the two scenarios that we're looking at, which I think are very applicable to construction, are weatherization and abrasion. So like sanding, sawing, those type of applications. So what we want to do is see what's coming off and what are the exposures.

Now, we are focusing right now on carbon nanotubes, and we are focusing on carbon nanotubes and epoxy, but BASF has done some preliminary work on carbon nanotubes in concrete, and what they have seen is that these materials are coming off in chunks. The carbon nanotubes are coming off, but they're coming off in big chunks, and they're associated with large chunks of concrete.

But they haven't done the real weatherization part. So what they have been

doing is the abrading part, and they have seen they're coming off -- if there are new materials and they are being abraded, they are coming off in these big chunks. What we are interested in is we are going to look at weathering these materials and then abrading them and see what happened, if there's a difference, and that will tell us a little more about what the potential for exposure will be.

So if we can look at the next slide, please.

So we kind of want to shift from that to HazCom and nanomaterials, because there's been a lot of discussion about nanomaterials and being labeled. There are advocates for anything nano should be labeled. Well, if you look at the hazard communication standard, this is about hazard communication.

Now, while I said earlier that certainly there are some materials like carbon nanotubes that have some very specific hazard information -- as a matter of fact, NIOSH has published some

information on carbon nanotubes. We see where they are fibrotic. They can translocate if they are inhaled in the lung. At least in an animal model, they can translocate, and while only a small amount translocate, there is still some translocation into the brain. They are actually able to transverse the blood brain barrier, and we see that with several different nanomaterials. So that's where you are really seeing the concern. Not only are they very fibrotic in the lung, but then they translocate to other organs, and while it's still a small percentage, we don't know how that translates to human health.

So for something like a carbon nanotube, we fully expect that if you have a hazard safety data sheet, it will have hazard information on there. It is required that it have hazard information on there, because we have hazard information, so they need to be doing that. But for other materials, we don't have sufficient data, but I also want to make clear that the absence of data does not equate to the absence of

hazard, and that's where I think we need industry to provide more hazard information. We also need more funding for nanomaterial research.

We certainly are hoping that the projects that we are looking at and certainly the database formation and the NanoRelease Project will help create these large databases, will also help move the science forward, so that we're getting sufficient information.

The other thing that I wanted -- I did want to touch on once, I had mentioned this. There has been the discussion about nanomaterials, and people are saying that everything that is nano should be labeled.

We are kind of looking at size this way. This is still a discussion. We don't argue that size shouldn't be labeled, but it shouldn't just be nano. You shouldn't just infer that because it's hazardous, because we don't have sufficient information for that.

But if you're talking about an exposure parameter, then it would be appropriate to put

size on a safety data sheet, if we were looking at inhalable versus respirable materials, because that goes to exposure. So I did kind of want to make that point clear, and that's something that I think the expert panel is still looking at. That's not something that we have made a determination about. That's something that's still being discussed, but I don't want people to go away thinking, oh, my God, if it's nano, it's got to be hazardous, so you have to have it on hazard communication safety data sheets. That's not what we're saying. These are very specific for hazard information, and when you have hazard information, as with any chemical, they need to be labeled.

So with that, I thank you all very much, and if you have any questions, please --

MR. STAFFORD: All right. Thank you, Janet, and thank you, Deana.

Any questions or comments?

Matt.

MR. GILLEN: I've got a question for

Deana. Thanks a lot for the great discussion about the GHS.

You showed on page 13, you showed an example of an SDS, and I've noticed, too, that folks love to put the NFPA symbols up at the top, same way you did on this slide. It's this one here. It's the one showing the SDS. Yeah, there you go.

People probably mentioned this before, but it's a little confusing, because with GHS, first of all, if you know, for health, they really just look at acute effects and not chronic, and then their numbering system is opposite. So for them, NFPA-1 is good; whereas, GHS-1 is bad. It is just a little confusing.

What are your thoughts on that as far as people -- NFPA confusing people as far as the health diamond there and what to do about that? I don't know. Have you heard that before from people?

MS. HOLMES: Yes, we have definitely heard that before, and that's where training

comes in.

But as far as the GHS is concerned or the HazCom is concerned, the only place where you are going to see the actual numbering or the classifications are in -- right here in Section 2 of the safety data sheet. So it is going to have the classification number along with the hazard. You will not see the number on the label. So to us, it's not a conflict at all, but definitely, some training is going to be needed to be done.

But OSHA has worked with NFPA on this, because they know that it is an issue for some, because some people are definitely concerned about it, and they have jointly come up with a quick card to explain the differences between the two systems, so people can understand that there really is not a conflict here and that you can still be able to use both systems.

MR. GILLEN: Okay, great. Thanks.

MR. STAFFORD: Yeah. Go ahead, Walter.

MR. JONES: I just have a -- I don't know if you are going to have an answer, because no

one really does, but you had mentioned the respirable -- Janet, rather -- I'm sorry -- the respirable effect of nano, and I was wondering, you know, because when we're looking at respirable effect, we are looking at 1 to 10 microns.

MS. CARTER: Mm-hmm.

MR. JONES: Nano is like a million times smaller than even that, and I am under the impression that most of the time anything smaller than one micron, it becomes subject to the brawny effects of in and out, in and out, and doesn't really deposit.

So I was wondering, Is there any thought on the hazard associated with these really smaller particles? Because they are not subject to embedding in the lung because of the brawny and effects of -- associated with the size of the particle.

MS. CARTER: That's a really interesting question, and from a purely physics standpoint, you're absolutely correct, but if you think about

the lung, you think about the chambers, it's lined with fluid. It is a moist chamber. You have the mucous membrane. We have seen from animal studies, and we actually do from human studies that they are actually deposited all along the respiratory tract, but mainly in the alveolar region, as with respirable particles. But they are actually deposited along the entire respiratory tract, including in the nasal region where you will see translocation through the trigeminal nerve.

MR. JONES: Okay.

MS. CARTER: Yeah. So there are actually multiple mechanisms for a translocate --

MR. JONES: So there are other routes of entry and hazard?

MS. CARTER: Yeah.

MR. JONES: All right. Second question is you talked a lot about carbon nanotubes. Silver is like -- I see silver all the time.

MS. CARTER: Oh, definitely.

MR. JONES: It's in clothing. Well, a

lot of my clothing is in silver, but the reverse concern -- not a lot, but just running gear.

MS. CARTER: Yeah, you're right. No, you're absolutely right.

MR. JONES: The sweating and smell issue.

[Laughter.]

MR. JONES: But the reverse thing is you got workers actually developing these clothes.

MS. CARTER: Yeah.

MR. JONES: That's where the exposure is, and that seems to be bigger than what we'd see in -- because most of the time, you're looking at -- and these other carbon nanotubes is breaking off in chunks or it's applied, but in the clothing manufacturing, I would imagine exposures are a lot different in a dusty environment working like that, and you say we still haven't seen health effects or we're just not looking, or is it we're not --

MS. CARTER: Well, so it's interesting, and I really support NIOSH's position on the need for medical surveillance in the nanotechnology

industry.

There's a lot of argument about what health endpoints we should be looking at. Should we be looking at cardiovascular endpoints? Should we be looking at pulmonary function? Should we be looking at biomarkers? What specific biomarkers? So there's --

MR. JONES: Skin discoloration.

MS. CARTER: Well, yeah. You would think so if there's a lot of silver uptake.

MR. JONES: I mean, at nano levels, most of the time, these properties change, but --

MS. CARTER: Yeah.

MR. JONES: It may not be the same as in regular.

MS. CARTER: Well, the interesting thing about -- so nano silver is a little different than some of the others because nano silver tends -- silver tends to be very soluble. So silver, there's an interesting phenomena. What happens is silver can solubilize, but it can actually reform nano particles.

MR. JONES: Oh, okay.

MS. CARTER: So you will see if it's -- once it enters the body, it generally solubilizes, but when it enters the environment, it can solubilize and re-precipitate, solubilize and re-precipitate.

So when you're talking about health hazards, you're generally looking at the ionic effect of silver, because most studies have indicated that nano silver -- and I'm talking about pure nano silver. There are other applications for nano silver where they may be treated with a coating to make them less soluble, so those are going to be a little more -- those are going to have a little different property.

But from some of the evidence we've seen, nano silver tends to -- at least it's thought right now, it tends to be solubilized, but you're absolutely right. I mean, I didn't even touch on any of the other industries. I focused on construction, but -- and construction right now, there's the other thing.

These materials are still really expensive. Carbon nanotubes are incredibly expensive. So while we know that there are a lot of applications, we know there's applications in textiles. We know there's a lot of application for nano silver and for nano titanium dioxide and for carbon black. Some of these materials are still very expensive, so they are looking for -- they're kind of a technology looking for a home, but I think we need to be proactive in how we look at these things as well, so --

MR. STAFFORD: So these like strengthening nanoparticles to strengthen concrete, for example, is not a wide application in the U.S. construction industry? Is that what you're saying?

MS. CARTER: We believe that it's not at this time, just because they are so expensive.

So they are used. I mean, they are used heavily in the aeronautics industry. They are also being investigated for use in tires, because instead of radial tires, you would have carbon

nanotubes in there. There's all kinds of applications being looked at.

There's not a lot of evidence that there's been heavy penetration into the construction industry yet, but we do know that there are some applications.

MR. STAFFORD: And then one last question for you, on the need for more dollars for research, is this in the divide? Is those more dollars for NIOSH, for OSHA, for EPA, for all of the above? I mean, who is the hub of research in nano in the United States?

MS. CARTER: Well, most of the research is being conducted through NSF, through NSF grants, or -- depending on the application. Actually, the USDA has an incredible and dynamic program in nanotechnology where they are actually looking at forestry, where they're looking at nanocellulose, but they are also looking at applications for like nanosensors. They are also looking at the implications in the environment.

But really, NSF, the National Science

Foundation, is like the hub, and they fund academic labs, and they have set up these nano centers. These nano centers, they are kind of centers of excellence, and there are several of them, and they have very dynamic programs in human and environmental health. They are working side by side with government and industry.

So that's really where I think a lot of the funding needs to be placed, not necessarily with the government, but funding these independent academic programs, because that's where a lot of the health effects information comes from.

MR. STAFFORD: Okay. Any other questions or comments?

[No audible response.]

MR. STAFFORD: Well, Janet and Deana, thank you very much.

MS. CARTER: Well, thank you very much.

MR. STAFFORD: It was very informative. We appreciate that.

Well, we're about 5 minutes ahead of

schedule, which is not a bad thing, so we will go ahead and take our break now and reconvene at 2:45.

[Break taken from 2:24 to 2:46 p.m.]

MR. STAFFORD: All right. We will go ahead and take our seats, please. We will reconvene the meeting.

[Pause.]

MR. STAFFORD: Let's go ahead and reconvene, please.

Let's get started. The last formal presentation we have on the agenda for this ACCSH meeting is a presentation on the draft proposed beryllium standard, and Tiffany, you are on the agenda, and I see that you have some colleagues with you. So I will let you introduce them, and then we will get started.

Presentation on the Draft Proposed Standard on Occupational Exposure to Beryllium

MR. PERRY: Okay. Actually, I was going to introduce her.

MR. STAFFORD: Oh, okay. I'm sorry about

that. I'm behind the times here.

MR. PERRY: Just for the record, because I wasn't sure who was exactly identified on the agendas appearing today, but for OSHA, I am Bill Perry. I am Acting Director for the Directorate of Standards and Guidance at OSHA, and with me is Tiffany DeFoe. She is a health scientist in our Office of Chemical Hazards (Metals) and is the project officer for the Beryllium Project and will walk this committee through some background information on beryllium and some ideas that we are considering for the proposal as they would apply to the construction industry.

And then we have --

MS. BETZ: Louise Betz. I'm with the Office of the Solicitor, and I've been in an advising role on the Beryllium Project.

MR. STAFFORD: Okay. Thanks.

Well, just one last request to make sure the folks on the phone can hear okay.

MS. BARBER: Yes, Mr. Chair. We can hear fine. Thank you.

MR. STAFFORD: All right. Thank you.

MS. DeFOE: Next slide, please.

So thanks for having us. As we reported at the last ACCSH meeting, the proposal for the new beryllium standard is moving along pretty quickly now, and we're in the final stages of preparing a Notice of Proposed Rulemaking to send to OMB for review, prior to publication in the Federal Register.

Our new agenda just came out last Friday, and the date in there for the beryllium proposal is April 2014.

Next slide.

So we believe that the main operation in construction where beryllium is an issue for workers is abrasive blasting, since beryllium isn't generally used in other construction materials. It is a contaminant in some blasting media, primarily coal slags, like Black Beauty and copper slags, both of which are most often used in open-air blasting.

Even though beryllium is just a minor

contaminant in these slags, because the blasting is so dusty, it can get to levels that are above the current PEL.

From what we've seen in the IMIS data, about 70 percent of abrasive blasting workers have detectable beryllium levels, and these levels have a mean of 3.7 micrograms per cubic meter and a median of .6. About 35 percent are over the current PEL.

We have pretty limited data on helpers and clean-up workers. What we do have suggests that their exposures are much lower, with medians around .1 and below. The means can get a little higher.

Short-term exposures from blasting with coal and copper slags can be very high, with about 4.4 micrograms per cubic meter, estimated by NIOSH in a 1999 study for coal slag over a 24-minute period, and in copper slag, the number would be 1.24 micrograms per cubic meter. Other media with very low beryllium content, like garnet, staurolite, and nickel slag have lower

but still detectible levels.

And our preliminary estimate is that about 23,000 workers in the construction industry might perform open-air blasting or other helping positions. These are mostly painting contractors or special trade contractors.

The ventilation standard for construction does require blasting operators to use abrasive blasting respirators when they are working in side cleaning rooms and when concentrations exceed the applicable PELs.

Given how generally dusting blasting is, we think that most operators should be already supplied respirators and wearing PPE to be in compliance with the ventilation standard.

Next slide.

So in revising the current beryllium standard, our main concern has been to reduce worker's risk of chronic beryllium disease and lung cancer -- or chronic beryllium disease or CBD. CBD is a disease of the respiratory system where the immune system reacts to beryllium in

the lung, developing scar tissue and granulomas that inhibit the exchange of oxygen.

Sensitization is the first step to disease, and if you can present someone from getting sensitized, then they can't get CBD. It can happen either through airborne exposure or skin exposure.

Once a person is sensitized to beryllium, they have a high risk of CBD. Studies show that 30 percent or more of people who become sensitized to beryllium go on to develop disease.

The symptoms of CBD, like shortness of breath, persistent dry cough, chest and joint pain, can be eased or suppressed with treatment, such anti-inflammatory steroidal drugs, but the underlying disease can't be reversed. Once the granulomas and the scar tissue is there, it's there to stay.

Sensitization can happen very quickly, often within a person's first months of employment; whereas, CBD is much slower to develop over the course of years. Studies of

workers exposed to beryllium show very clearly that people can get sensitized from exposures to .1 micrograms and above, and they also very clearly show that CBD develops among workers with .2 micrograms and above of exposure.

The best and most recent studies of lung cancer risk show a significant excess lifetime risk of lung cancer among workers with exposures of .1 over a long period of time.

So although we think that most people doing blasting should be in respiratory protection, we're also aware it only takes a little bit of beryllium to cause some very serious disease, and blasters who get exposed because their equipment isn't working correctly or isn't being used consistently or helpers or people in the vicinity who might not be using equipment may still develop a serious health condition since levels as low as .1 can trigger sensitization in CBD.

Next slide.

The draft Proposed Rule that we showed to

the SBREFA Panel included all the provisions that are common in 6(b) standards, and it's this type of suggested standard that you heard about yesterday from the Steelworkers and Materion.

To quickly follow up on a question that was raised in the last meeting about the SBREFA panel, we did have a representative from abrasive blasting. That was Mid-Atlantic Coatings.

Now, we feel that many of the provisions in the draft standard that was presented at SBREFA might not be very feasible or effective in a construction setting, and also the construction setting, we think that mainly it's just the one group that's really exposed.

Next slide.

So some options that we're considering for the construction industry include doing just a revision of the PEL. The options that we have been looking at from the SBREFA draft were .1, .2, .5, and 1. We are also thinking about introducing a short-term exposure limit to get some of those very high exposures under control,

and we are thinking about extending medical surveillance to people in the construction industry, including physical exams and testing for beryllium sensitization, with screening for CBT for people who are found to be sensitized.

Based on a suggestion from some stakeholders, we are also thinking about whether it makes sense to include a CT scan or similar diagnosis for early detection of lung cancer.

Next slide.

Well, so these are our considerations for the construction industry and beryllium. We ask for your recommendation, and we're happy to take questions.

MR. STAFFORD: Thank you, Tiffany.

Any questions or comments?

[No audible response.]

MR. STAFFORD: So I missed the data you had. The 23,000 is essentially blasters in construction as opposed to other trades working around that operation?

MS. DeFOE: Unfortunately, we don't have

a lot of detailed information on job categories, so that's mostly painting contractors and specialty trade contractors, anyone who might be working in blasting.

MR. STAFFORD: Yeah, Matt.

MR. GILLEN: Matt Gillen, NIOSH.

I missed it. Were you saying that the PEL was only one of several options, or was that the only option you were considering for construction? I must not have been paying attention at that point.

MS. DeFOE: So the range of PELs that we're considering at .1, .2, .5. I think those are our strongest focus, and then 1 was also in the SBREFA.

MR. GILLEN: But I thought I heard something about a PEL of only 1 for construction, so you wouldn't have the 6(b) parts.

MS. DeFOE: That's right.

MR. GILLEN: That's where I get all mixed up. So is that just one of several options, or that's your proposal is to do PEL only? That's

what I'm trying to understand.

MR. PERRY: I think I can help with this. Because anything we might do regarding beryllium in the construction industry we think would be confined to abrasive blasting operations, there are already standards on the books, as you know, regarding PPE, respiratory protection. Some of the other provisions that we were thinking about for general industry, we think just aren't reasonably necessary or appropriate for abrasive blasting operations, so they won't add to worker protection, but might cause employers to have to do some additional thing.

So we think what's important here is to adjust the exposure limit in part so that it's aligned with whatever action we take on the general industry side.

And then we're also thinking about adding medical surveillance requirement that would be comparable to what we proposed for general industry, which would include the elements that Tiffany mentioned.

So you think about a reduction of the PEL augmented with some medical, and that's really what we're thinking of that would be effective here, considering the limited scope of application.

MR. STAFFORD: Thanks.

Any other questions or comments? Anybody on the phone?

[No audible response.]

MR. STAFFORD: Okay. Thank you.

MR. PERRY: Is that it?

MR. STAFFORD: That was pretty easy. Yeah. Thank you.

Chairman Remarks/Public Comments

MR. STAFFORD: While Jim is with us, I think, Jim, maybe now is a good time to have our open discussion here about the future of ACCSH work groups, and then after that, we will go to public comment, so please one last reminder that if you'd like to make comment, please sign up on the sign-up sheet in the back of the room.

All right. So this is not a formal

agenda item, but this is I think a discussion that's important as we proceed with ACCSH in the next year here or so in terms of our direction and our work groups. As Jim Maddux said earlier as a part of his report, we have had several work groups and produced a lot of good work; most recently, our training and outreach work group. And there are some that I think that we've gone, as I mentioned yesterday, about as far as we can go. Like I think the I2P2 program standard work group is a good example of that. Maybe backing operations is another example of that, but at any rate, I just want now -- and I'll regroup with Jim and staff after this meeting after we have this discussion in terms of direction, but I think at this point -- and particularly with our situation of having to have workgroup meetings by teleconference or telephone, it's an added complicated matter, and I think as a committee, we have to figure that out.

In the last year, we've gone from a committee that has essentially gotten the brunt

of the work done through the work group process, which I think is incredibly important to a committee that's done primarily most of our work in full committee settings, and that's one of the reasons why in I don't know how many years, but I'm going to speculate it's been at least a decade or longer since ACCSH has met four times in a 1-year period, so I think it's all these factors coming together that's leading to the way that we've adapted. And now we have to figure out how far we proceed and adapting as we move forward.

So I'd like to start this discussion with our friend Matt Gillen. As you folks know now, if you've been here for the last day or two, Matt will be leaving this committee and be retiring from NIOSH. I just want to say as the chair of this committee that it's been great working with Matt in this capacity. Unlike David Michaels, I can't quite go back 30 years with Matt, but it's probably been at least 25 or so, mid '80s or so, since I started to work with Matt in various

capacities that we've both had over the years, and it's been a great ride, Matt. You've been a terrific friend and a colleague and certainly someone that I've had the pleasure to work with.

And so Matt in his departure -- and I don't know how many years you've been on this committee now, Matt? Six? Five?

MR. GILLEN: I was going to mention that.

MR. STAFFORD: Okay. Well, I'll let you mention that, so --

MR. GILLEN: I was going to pontificate a little.

MR. STAFFORD: As Matt leaves us, he has an opportunity to share his wisdom, and I think starting this discussion about where we go with work groups on his thoughts, now that he's been a long-standing member and is getting ready to leave the committee, on what he thinks may be some areas that this committee take a look at in the future.

So, with that, Matt, thanks you.

MR. GILLEN: Well, thanks. Thanks for

the opportunity to say a few words, and thanks to Jim Maddux and the crew at the Directorate of Construction for all the great work you do. It is hard work, and you do a great job, so thanks.

And thanks, Pete, for being such a great chair.

So just a few things, I joined the committee back in the summer of 2006, and Bob Krul of the Roofers Union was the chair at the time. I looked up my records, and I noticed that Steve Hawkins was on the committee when I joined, so he'll carry on to compete for any ACCSH longevity records. It's going to be Steve to do that.

MR. HAWKINS: I don't know about that, Matt. I think you're always going to be the winner there.

[Laughter.]

MR. GILLEN: Anyway, I don't think so.

But you know what, one of the things I like about working in construction is just there's really a sense of community, and ACCSH is

really an important part of that community. We don't always agree on everything, but we always -- we keep things civil, and we learn from each other, and we have really good discussions. We work together when it makes a difference, so that's a really good thing.

You know, I think being on ACCSH is really an important responsibility for leadership. So I just want to challenge you and encourage you to think that way. It ranges from looking at details and things like that to sort of looking at bigger issues, and so I encourage you to keep doing that.

What I wanted to do in leaving ACCSH, I wanted to mention two issues that I kind of regret I wasn't able to work on to make a little bit more progress, and so I guess I want to kind of pass the torch on those issues to others to maybe move those issues forward.

So the first one is this idea of federal leadership on construction safety and health, and it's really interesting because ACCSH predates

OSHA, and it was actually created in 1969. It was created -- you can look it up, and it says it was to improve safety and health on federally financed or federally assisted construction projects, was one of the original missions of ACCSH. I guess to me, when we're here like 45 years later and the federal General Services Administration does not yet prequalify contractors for safety and health on construction, there is still more to do there.

I guess I look at the fact that the federal government is a leader on green buildings, and it's really pushing and doing a lot. And there's executive orders across multiple administrations on that issue to push buildings, to adopt a number of best practices.

An example, for example, one of the executive orders requires that in the next decade or so that buildings are net zero, that they actually produce energy, so they don't overall use energy. It's a net -- you know, they create the amount of energy they need to use, so it's

net zero. I guess to me, that always bothers me, because it's like what about net zero injury buildings or something like that, what would federal excellence in construction be like, and how that's an important way to influence adoption of best practices.

And this procurement, it's an important tool that we don't use. We use enforcement. We use consultation. We use training, but we don't really use procurement maybe as much as we could. I know ACCSH has been working on some guidance for GSA. I know this is an issue that Pete is interested in. So I want to encourage you to keep working on that. I think it's important.

So the second one is the construction worker health, and I am an industrial hygienist. Working in construction, you learn how important safety is. I have learned a lot about safety. I am still learning, and I thank everybody who shared knowledge about it.

I tried to roll up my sleeves and help on some safety issues, like nail guns and falls, but

I kind of regret not making a little bit more progress on some of the health issues.

You might recall that in NIOSH's August presentation that Christine Branch reported on a National Health Interview Survey. They found out that 50 percent of construction workers reported regular exposures to vapors, gas, dust, or fumes twice a week or more, an that's pretty high. More needs to be done on health, and so I thought about this and had a couple of suggestions. In typical NIOSH fashion, they did a small amount of research on it and prepared a few slides. You can't do anything without slides in NIOSH. So that's what I have here, and it's just the health hazard challenges in construction and two suggestions.

So you can go to the next slide.

So, you know, it's this whole idea that safety in construction, it's really just visible. you can really see it, and health, it's just less visible, and so that's a problem. For injury, it happens right at the job site, and when it does

happen, injuries are a lagging indicator, but they drive action. When somebody gets hurt on the site, it drives action; whereas, with health, disease, it happens later on. It doesn't happen at the site, and it usually gets unreported because of that. So we don't have the lagging indicators to drive action.

With OSHA inspections, they clearly have safety targets, but it's really harder to target for health, and so it's got a bit of a lower profile. I wonder sometimes does the lower enforcement profile for health send a message sometimes to contractors and workers and health is less important. I kind of wonder what we can do to make that better, and that ACCSH might have a lot to offer there, because, again, when people do estimates, the health burdens are really -- they claim that they estimate that they exceed the injury burdens.

So I had a couple of ideas. Next slide.

One was to really work with OSHA to sort of think about how we can optimize health

enforcement, and so if you look at OSHA's compliance directive for inspection scheduling, the section on health says that no separate scheduling method is applied for program construction health. Rather, the area director determines which inspections are to be conducted as a joint inspection. So again, the site selection is driven by the safety programming. There's not sort of as much separate thinking about health programming, although they do have local emphasis plans. Those are grayed, and you can actually see them all. They are all listed in OSHA's enforcement webpages. I'm sure there's some really good things going on at that local level, and it might be something worthwhile to learn more about and to disseminate good practices.

Next slide.

I was wondering how much health enforcement is done for construction health standards. At first, I tried looking at the citations and percentages, and it got pretty

complicated. So I just said, well, a very simple thing is let's just look at the top 10 and see what that might tell us, and it's simple, but it gives us some insights. And you always have to be careful.

So if you go to OSHA's website, this is the numbers for the last year, October 12th to September 13, 2013, and for NAICS Code 23, which is all construction, you see there's 35,000 inspections. You have to have the handout, because it's hard to see there, but there's 35,000 inspections, 14,000 -- I mean 35,000 citations, 14,000 inspections, et cetera, and in the top 10 there, there is one. Hazard communication is in the top 10.

I mean, there's more safety standards than health, so you wouldn't necessarily expect to see a huge amount, but we should see some in there.

But if you go to the next slide, the whole idea is that there are a few health hazards that cut across the entire industry, like noise

or hazard communication, but many are specific to subsectors and types of work are not easy to find, and you really have to drill down.

So if you look at lead as an example, there are sources of data that we can use to guide us, and here is an example if they are ABLES or just Adult Blood Lead Epidemiology and Surveillance program that NIOSH has participated in. Basically, when people have blood leads done and if the level is high, the lab that does the analysis automatically reports that to the state health department. They don't report the name, but they report that there was an excess level in about 41 states.

When you look at that, you can see these are the construction subsectors that rate high, and highest of all is painting and wall covering contractors, and over this period 2002 to 2011, they had 1,075 cases. This group had the most cases that are really, really high blood leads, above 60, more than mining, more than battery manufacturing. This is the group that has the

highest blood leads there, followed by street and construction, site prep contractors, remediation services, and others.

So next slide.

If you look at that NAICS code for painting and wall covering contractors, it's very reassuring that you see that lead is the number-one citation, so OSHA does do inspections there and does find these groups. And you can see there's actually three health items in the top 10 for this.

You can also look at the states, and 7 of the 26 states did do some inspections, but you can have a discussion. Given this is the group that has the most lead exposures, is 32 inspections nationwide the right amount? Are there some discussions that could be had to focus on this group a little bit more, for example? It might be a useful discussion to have.

Next slide.

Same way you can look at the highway construction subsector there. Again, lead was in

the top 10. In this case, there were only about four inspections involved there, and how to find these bridge demolition jobs, it's not going to be the new construction that's the issue. It's the bridge demolition jobs, but again, this might lead to some discussions about maybe raising the profile for some of these subsectors of concern.

Next slide.

So this is a really interesting one, because this is the folks that do remediation work. When they did the NAICS code changes, they took this group out of construction and put it in services, and these are the people that do lead and asbestos abatement. In some respects, they are construction companies really, and when McGraw-Hill, ENR does this report on the top specialty contractors, they have a section on asbestos and lead contractors, and they talk about them. When they get cited, they get cited with construction standards, and you can see here, this group had 4 of the top 10 were health, including asbestos and lead. And this is the

kind of group that could easily fall through the cracks, because, again, they're technically in services when you're just driven by NAICS codes, but yet they do a lot of construction work. And this would be a group that you would expect to have a lot of health concerns, because they're doing lead abatement, asbestos abatement, hazardous waste-type work.

You can see here there were 59 inspections. This is a case where the states did quite a few more, 169, but it was only 3 of the states that did most of them. So again, maybe there should be more talking among people about what works, how to find these contractors. It's not easy to do, so maybe there are some issues there that are worth having discussions to kind of just raise the profile a little bit of health and maybe to target, and that those might be interesting issues and issues that ACCSH might help advise the agency on how to do and might hear from the agency some of the people at the local level doing LEPDs and all that, what's

worked for them, and have them share some information. So that was the idea there.

So the next slide would be -- just a couple more slides. You know, whenever I think about how to improve things for health, I ask myself what do they do for safety, and one of the things that safety has done that seems to be so successful is that it is Focus Four. I mean, we already heard it mentioned several times today, and maybe we should do a Focus Four for health. What would be some ideas for health hazards to do? Because the Focus Four development really led to development of training materials, outreach, skills development among contractors, attention at the job site. Maybe health could benefit from a similar attention if you had a health -- Focus Four for health.

And the last slide would be to say that you need to think through some distinctions doing this, because if you were going to say focus on asbestos or lead, you are not going to find it in new construction because it's very rare to use

that. You'd want to be able to say, well, the Focus Four for renovation or remodeling or repaid might include lead and asbestos, but it's not worth anybody's time to put that on the list for new construction. So you might think about it a little bit more and break it down a little more than you do for injury.

But something like this might actually be useful. It might be useful to have those kind of dialogues about what would be the best Focus Four. It might be silica. It might be noise. It might be HazCom, et cetera, et cetera.

So anyway, I just wanted to throw those ideas out there to give you something to think about for how we might work on health in the years ahead and to encourage you to carry on and keep doing the important work that you do.

So thanks. Thanks a lot for letting me to that.

MR. STAFFORD: Yeah. Thanks, Matt.

This will lead into the discussion, Jim. I think this is a good idea. We do have a very

broad work group that you and Walter have been co-chairing, and who else was on that work group? Well, it used to be -- was it Don Pratt who took over for Michael? Yeah. But it was such a huge work group. We were dealing with health hazards and emerging issues like nano and prevention through design, and maybe your suggestion is something that we think about keeping up the health work group and kind of working with OSHA on this issue.

Jim, I don't know what you think about that.

MR. MADDUX: Well, I think that Matt raises a really good point. We certainly have done a lot more on safety than we have on health issues. That's just apparent, and, yeah, there might be some useful discussions there.

MR. STAFFORD: I think, Matt, you said it in your first slide, although I don't have it in front of me. I think for the work that we've done at CPWR, at the beginning of our work, we were looking mostly at health hazards, because we

could see a gap there. Around the table, a lot of safety folks that were very interested in the acute injuries, and we weren't doing a lot in health, but we've seen the trend over the last 25 years of doing more research in safety, probably what's happening to OSHA, because there's what the contractors care about, right? And there's a lot of latency periods after exposure. You're not working for the same contractor, getting the workers' comp.

So there's drivers that are driving why it is that we look at safety before we do health. That doesn't mean we shouldn't continue to try to get back to that and take a look at that, and I think it's something that is important.

MR. MADDUX: I think that would be a really good -- these are a couple of good topics for the health work group to talk about.

MR. STAFFORD: Okay. So we will continue that. If we are all in agreement, we will just get started in that right now. For edification for those of you folks who don't know, we

realigned our work groups last year, and we have kind of trimmed them down from seven to five. So it sounds like one of the five is health hazards, and we'll narrow that down to health and maybe look at this issue of a Focus Four, because the Focus Four on the safety side, as Matt said -- I don't remember how long ago the Focus Four started, but there has been a lot of work done in the area over the last -- what? Fifteen? Whatever it's bee now. It's been a long time.

MR. JONES: Anchor of the OSHA 10.

MR. STAFFORD: Yeah, it really is and on your enforcement side in construction. That's really the driver of it. So I think that's important.

Outreach and training is another one of our work groups. We have done a lot of work with this committee in the last year or so, and it's kind of culminated with the Intro. There was one thing that we had recommended, I guess, back in November as a part of this activity, not an addition to looking at the Intro, was an overall

evaluation of the program. We have kind of been focusing on the Intro part, but I think an overall evaluation is something that I am particularly interested in revisiting. I think that there's a lot of folks in this industry that have talked. We certainly hear it both from union contractors and non-union contractors and our union groups about, for example, the reasons why, and I think we've raised this with Dr. Payne last year, why do we continue to do the 502 the way we do, as an example. So I think it would behoove us to go back and kind of take a look at why we're doing the things that we do.

I think that Dr. Payne's response when we asked that question was that we do it that way because we've always done it that way, and I can appreciate that, but I think sometimes things change, and we should think about taking a look at that, and I think it will be very important.

If you don't remember the discussion, that was why we have to do -- send our instructors to 4 days to do a 502, which is

essentially designed to update instructors on new standards, to keep them abreast, so that they can continue on to teach to those new standards. When you think about that there is not a lot of new standards coming out, that we really need to spend our resources, our contractor's resources, our union resources, instead of sending instructors away for 4 days to take this course, when it be adequate to do it in 2 days or whatever that is. But that's the kind of thing that we had talked about looking at.

MR. MADDUX: Or is the rationale for kind of a recurring update training really appropriate? Is it really to update people on new standards, or are there other things --

MR. STAFFORD: That we should be -- right.

MR. MADDUX: -- that it should be accomplishing?

MR. STAFFORD: Right. There's a lot of it, particularly in the building trade side. There is a lot of effort among folks that brings

their instructors together for whatever they call them, training upgrades, training enhancements, those kinds of things that help instructors be better instructors, not just talking about standards. So that's kind of the idea.

I think that if we wanted to continue this work group, it would be the next charge for that, is kind of looking at that. I know, Jim, at one point, I know that there's a different evaluation group within the Department of Labor --

MR. MADDUX: Yes.

MR. STAFFORD: -- that may come in and help us. I don't know if that's something that we may need to --

MR. MADDUX: Yeah. We're still hoping that we can do that. I think that we had had a discussion with the work group kind of on, you know, maybe getting some recommendations on kind of the formulations of study questions, what are the kind of things that you would really be trying to find out about the programs as an

evaluation, sort of is it effective, is it reaching the right audiences.

There are probably a large number of things that you would want to try to learn about it.

MR. STAFFORD: Right. No, I think it's very important.

I hear of these ERCs, and I understand that they're pushing more and more, that you can't teach safety and health in this industry unless you have a lot of letters behind your name. And I think that's wrong, personally. I would challenge anybody to take a look at the peer-led training that is done in this industry by experienced apprenticeship training instructors that have come out of the crafts that do apprenticeship training skills, training, and have become excellent safety and health trainers. To say that because they are not a Ph.D., they can't deliver a class, those are the kinds of discussions that really -- I don't want to say scare me, but they offend me in some ways, and

I've said this to Hank Payne before. Before anything is done like that, these kinds of discussions amongst that group, that I think that those things need to come through this committee and our industry stakeholders, because I think that's very important and a really dangerous path that they're going down if that's what they're doing.

MR. JONES: On the subject of OTI, we have talked about it. I know when I was chair a few years ago, and you have mentioned it at some of our internal meetings. Supervisor training for construction workers, getting an OSHA 10 style, either making OSHA 30 supervisor or another class. That is something maybe the committee might want to look at as well.

MR. STAFFORD: All right. Okay. I think that's important.

Yeah, Jerry.

MR. RIVERA: Mr. Chairman, I want to support the motion to continue with the --

MR. STAFFORD: Say who you are just for

the recorder.

MR. RIVERA: Jerry Rivera, Employer Rep.

I want to support that motion, because the training and outreach group has a lot of work. There's a lot of modifications that occurred, can occur to the 10-hour, to the 30-hour, like was mentioned here today. We can make something more supervisory.

As far as the 502, I'm a big proponent, and I believe that maybe we should offer things that are not regulatory content, but to enhance the instructor's ability to give a class. And I think when we get into that role and we give some classes out there in the field, there is kind of a learning curve, and it's always good to come back and learn some new teaching techniques, not necessarily regulatory content. So there's definitely a lot of work for this group to carry on. We can dissect it into different spots, but I definitely support the continuation of this subgroup.

MR. STAFFORD: Okay. You know, on the

supervisory training thing, CPWR hooked up with McGraw-Hill, and some of you may have seen that report. The findings came out in July on best practices, contractor best practices in safety and health. I was -- "amazed" is a little strong. I was surprised to see that contractors in our industry, I think it was 85 percent of the contractors in our industry, the respondents to that survey, identified that OSHA 30 is their primary supervisory safety and health training program. And there's nothing wrong with the OSHA 30, but I think one project that we're working on and hope that we can proceed -- and, Walter, I think that's what you're getting at -- is the development of a module or module for new foreman or front-line supervisors that would teach them about safety and health and the responsibility.

You come out of the hall one day, and you become a foreman that day. And you have now a responsibility for safety and health, and you have really no training to help you identify, for example, how you put on good toolbox talks or

communications or those kinds of things.

So I think if employers are relying on the OSHA 30 for the supervisory training program, I think that we have a gap there, and we could do a lot of good on enhancing that program for these new frontline folks.

MR. RIVERA: May I say this? The OSHA transportation distribution partnership has generated a supervisory level, like a 10-hour course, which is obviously not approved by OTI, because it's leadership focused. That might be a great resource to take a look at as a beginning if we want to go down that route. They have been very successful with it. They have a history and a pattern behind it of the successes, but they have been unsuccessful in trying to get OTI to adopt it.

So it might be a foundation to build upon. I mean, I'm pretty sure there's other resources out there that we can use, but if we want to go down that route, that is definitely once place that I would start.

MR. STAFFORD: Okay.

MR. MADDUX: I think that's really an interesting area. Everybody that knows me knows that I have a real interest in leadership issues anyway, and I think that Dr. Payne, who unfortunately was not able to join us today, really talks about one of the things with the 10 and 30 are a course. The courses seem to mean a lot of different things to a lot of different people.

And I'm not sure that we really know what all those different angles are, but one of the things that we do know I think pretty clearly is that there are people who believe that the 10-hour is a worker course, and the 30-hour is a supervisor course. So the McGraw-Hill study that you're talking about kind of reinforces --

MR. STAFFORD: Reinforces that.

MR. MADDUX: -- that notion that at least we know that much, that there's that perception.

MR. STAFFORD: Well, you know, even by law. In Rod's state, the state law requires

workers to have the 10 and supervisors to have the 30, so there's a reason.

MR. MADDUX: That's right. Really, the 30 is just 20 more hours of awareness content.

MR. STAFFORD: That's right.

MR. GILLEN: Perception is reality.

MR. MADDUX: Yes, exactly. It is perception versus reality.

MR. STAFFORD: Then the other work group -- and I talked to Chuck a little bit about this, and Steve Hawkins is the backing operations work group. You had mentioned that in your presentation, and Chuck and Steve have done a great job over the years. You have a nice website up and running, so the question becomes for that work group and for you, Jim, what can ACCSH continue to do to advise or to assist on backing operations at this point?

MR. MADDUX: I think that's one that we need to take a close look at, and I want to have -- Paul and I have -- Paul Bolon and I have talked a little bit about this issue and kind of

see where we're at.

We think that this is probably a viable candidate for OSHA rulemaking. We kept it on the regulatory agenda, because we believe that, and it is probably -- we need to think about kind of what the next step is for the committee.

We are doing kind of background work right now, so that we know enough about the problem, so that we can at least get enough of an economic analysis to think about a small business panel as maybe the next step in the process.

But we do need to think about, okay, what is the next activity that it makes sense for ACCSH to do, and it may be that that is a work group that we will decide to sunset maybe for a while.

MR. STAFFORD: Okay.

Yeah. Please, Don.

MR. PRATT: Mr. Chairman, I do apologize. I am going to have to leave to catch an airplane, but I do want to get my 2 cents in on the work groups.

I think the work groups are a very important part of ACCSH, and I'm probably one of the newest members on this committee, but I will tell you that in my opinion, they have a great deal of value.

It doesn't have to be these particular five. It might be another five or another six or three. My point is, though, that we need to figure out a way -- and I understand the budget is tight. I get that, okay? For someone that's been in the construction industry for most of my life, I understand budgets very well. We really need -- if they are going to be a viable part of ACCSH, we need to figure out a way to have face-to-face meetings on those work groups.

Coming in the morning of works very nicely and then have the ACCSH meeting like we used to in the afternoon. Maybe having one day for work groups and one day for the ACCSH meeting, have everything in one day might work. These are all things that we need to think about, Jim, and try to develop something that is going

to work, because face-to-face is really a very beneficial way to run the work groups. You need to be here, talk to each other, and communicate, and I think that's going to be very important.

With that, I will leave all of you and wish you all a very Happy Holiday and a Merry Christmas, Happy Chanukah, whatever, but I do appreciate the time that you all have spent on the different issues that I have witnessed.

And, Jim, I respect your position. I think you do a great job, and we need to even make that closer, and I think we will through the years.

So I look forward to next year, next term, and with that, I will leave you. Thank you very much.

MR. STAFFORD: Thank you, Don.

MR. MADDUX: I think Done actually raises a very important issue. We have been doing these WebEx meetings. Is this our third that we've done through the WebEx? We have sort of been making it work, and I think that we are learning

as we go along and getting a little bit better at it, but especially, you know, when we get to a point next year, when we've got new members coming in, I think it's going to be very important to try and put together a live meeting, so that people at least know each other and can kind of establish that background that will enable some of this remote stuff to go on.

So it's a big issue for us.

MR. STAFFORD: Is there any changes in funding or thinking about how --

MR. MADDUX: I've heard that there's some kind of an important date on January the 16th when our current Continuing Resolution expires, and I think that that's kind of right now all we know. It is really just all dependent on what happens on the Hill.

MR. STAFFORD: Okay. We're thinking of the next meeting of ACCSH in like the March-April time frame. Is that --

MR. MADDUX: Yeah. Yeah. That would be our regular normal schedule, you know, but we

continue to be on the sort of rocky budget waters, and we just have to kind of see how it goes and roll with the punches and adapt and do what we can.

MR. STAFFORD: Okay. I appreciate that.

Before we -- Chuck or Steve, do you have anything to add about your thoughts on continuing backing operations one way or the other?

MR. HAWKINS: Mr. Chairman, I think we could probably do some meaningful work if Paul and Meghan and Jim there will kind of say this is an area where we need some help and could you all explore this area, because I think as Jim kind of said and you said as well, that it looks like a lot of the work has been done. So if we could narrow our focus, I guess is what I'm trying to say, if the agency would help the work group narrow the focus to something that they need -- and it may be that we go and suspend the group for a little while until they determine what that is and then give us a charge and say we would really like to explore this specific area, and if

we are able, of course, to get our budget back and have face-to-face meetings, I'd certainly be willing to do that. So that's kind of my thoughts on it.

MR. STAFFORD: All right. Thanks, Steve.

Chuck, do you have anything to add?

[No audible response.]

MR. STAFFORD: No? Okay.

Then I2P2, I think we've already generally agreed that we're going to -- and I think Jordan kind of reiterated that that was probably a pretty good idea at this point to set program standard work group aside.

MR. MADDUX: I think we really had a nice discussion with Jordan yesterday.

MR. STAFFORD: Yeah, I did too, and I think that work group has done a lot of excellent work over the last couple of years in terms of taking a look at the issue. I mean, we're kind of ready. This is something that's important, but we'll come back to it, if we ever get to that point, and I think that point is that it's still

at the SBREFA process, right?

MR. MADDUX: Yes. That would be the next step in the process.

MR. STAFFORD: Okay.

How about the women in construction, diversity? We have got the website up. We are moving along. Again, is there things that OSHA wants guidance or advice on with respect to that issue?

MR. MADDUX: You know, I'm not sure. I mean, well, it's certainly a hugely important issue, and it never ends, of course. I think kind of the specific work that we had on the table has kind of wound up. It seems like the webpage we did for the Women in Construction has been very popular and that it's met a need that was there. So I don't know.

What do you think, Laurie?

MS. SHADRICK: Laurie Shadrick.

I know we had put down like six different topics for the page, and only two are published. If there are some other topics or another avenue

to go through and including some of those topics, I think we could add to that webpage.

MR. MADDUX: Yeah. No, I think there are probably --

MR. GILLEN: Many.

MR. MADDUX: Yeah. And I think we've had that page up now for what? About 6 months or so?

MR. STAFFORD: Yeah, that's about right.

MR. MADDUX: So there's probably a point at some point in the future where it's worth saying, okay, how did it go, what's popular, what's not, what needs to be fixed. Yeah, let's think about that. That might be a good project for the future.

MR. STAFFORD: All right. So we can just hold onto that and see how it goes then. Is that --

MS. SHADRICK: Yes. I'd like to, Mr. Chairman, add some more topics to that page, if possible.

MR. STAFFORD: Okay. We will have a look at that.

Okay. Then the last one that I was thinking about and then we had this discussion a bit with Jordan yesterday is this whole issue of the staffing agencies, temporary employment, and that we started developing that work group. I know Tom -- that's an area that seems important. It is obviously a very important issue for OSHA. It seems like to me that that's an area that we should probably continue to work on for the construction industry.

MR. MADDUX: Yes. I think that does make sense. We are just seeing continued growth in temporary workers throughout all industries, but in construction, and I'm not sure that people really even recognize the issue that much.

At a minimum, I think there is probably some good work to be done on kind of awareness issues.

MR. STAFFORD: Yeah. Okay. So we ended up -- we started with five, and it looks like we have maybe three, three and a half to four now, right, pending on what we do with backing

operations.

MR. MADDUX: Well, and I think with the remote meetings that we're doing, I'm sure that we'll have to do at least some remotely over the next year. I think that there's an interesting question of, okay, how many work groups is right, should we think about.

I'd like to hear a conversation about, okay, what kind of new work groups people think we need to get into, but maybe four or three is enough for now.

MR. STAFFORD: Mm-hmm, right.

Yeah. Chuck, please.

MR. STRIBLING: A thought strikes me on -- Chuck Stribling. A thought strikes me on some information that you provided to us earlier in communication towers.

Once upon a time, that was at the forefront. There were some states working on state plan standards, and it sort of waned, but apparently, now it's peaked again or it's up again.

Communication towers are not going away. It's always going to be there, you know. These are always going to need maintenance. It's 4G now. It will be 5G when? And then 6G, 7G. This is always going to continue, so just food for thought.

MR. STAFFORD: Okay. I think it is, and I think your data was pretty grabbing there, Jim, on that, the fatalities.

MR. MADDUX: Yeah. And I think you raise a good point. Is it just sort of a cyclical event that the next time that there's some new gigantic change of generations and technology, we'll just see it -- you know, that we'll get through this way. Even maybe it will go back down, and the next time there's a new technology, we will have the same problem again.

MR. JONES: Walter Jones.

Don't you have those same issues like in windmill construction?

MR. MADDUX: Some of them. Some of them, certainly. They don't -- there's different

maintenance requirements, I think, between the two, but certainly, the working-at-height issues are very similar.

MR. STAFFORD: Jerry?

MR. RIVERA: Jerry Rivera, Employer Rep.

I'd like to echo Chuck's remarks on that. Maybe instead of just looking at it from the angle of the telecommunications, maybe transportation distribution towers. I mean, these are similar, and that industry has adopted a lot of best practices on fall protection, on those towers, and I can tell you that one of the challenging aspects of that and was that a lot of these towers are not designed to be climbed on, at least on the transmission distribution, yet they are used in fall protection. So there might be something there that we can unite either telecommunications, transportation distribution, and start out with fall protection.

I hate to say this again, or maybe not, the OSHA transportation distribution partnership also has a lot of great resources on that, that

can serve as some best practices as a start.

MR. STAFFORD: Right.

MR. MADDUX: That sounds like that might be a good topic. We should think about that one for sure.

MR. STAFFORD: And my favorite, as you know, Jim, the surveillance issue. I keep coming back to enforcement and how OSHA targets construction inspections. It's not necessarily that we need a new work group on that, but I'm not going to give up on that issue.

MR. MADDUX: I think it's a very important issue too, and quite honestly, if we continue to go through these sort of tighter and tighter resources, the way that we deploy them becomes more and more important all the time.

MR. STAFFORD: Well, that's something for us to think about.

MR. MADDUX: Yeah.

MR. STAFFORD: Walter?

MR. JONES: I didn't want to interrupt.

MR. STAFFORD: No, go ahead.

MR. JONES: In terms of process between the work groups, I would like to throw an idea out here. That when work groups meet, that the entire committee be informed, or even if chairs are meeting, maybe open that up. Like if OTI guys are meeting, you know, that maybe we can -- if you open it up to all of us, maybe if it's impossible for all of us to make it, it seems like we all have conflicts with other real jobs, I guess, but if we can participate or offer the option of participating so that like a lot of what we did today, we probably could have done during some of those calls as some of us or a part of it -- and I think -- because I -- Matt and I have had meetings as well, and I think -- so I'm not pointing out anyone. I'm just saying I think that's something that we as this committee body here needs to think about.

If we're having a meeting, Matt and I will have a meeting, and all we're thinking about, oh, yeah, we got to get down on this. And maybe Matt and I need to think -- or used to need

to think more broadly, and I throw that out to everyone else, that when we're meeting, even if you're going to meet, just to guide more ideals.

MR. STAFFORD: I appreciate that, Walter, and I will take the hit on that as the chair to try to do a better job to keep that coordinated in this. Work always gets a little bit fuzzy with me when we start talking about this and getting the lawyers involved and what's a meeting that we can have with not having the public involved and what can we do without notifying public.

MR. MADDUX: That's right.

Do you want to handle that, Lisa, or would you like me to?

MS. WILSON: Briefly, if you have a working group meeting and it is just a working group meeting, you do not necessarily have to involve the public. The working group can only make recommendations to the full committee. The full committee must really deliberate what the working group did. You can't really make the

recommendation to the working group and then rubber-stamp it in the full committee. The discussion must be here.

MR. MADDUX: And if --

MR. STAFFORD: Cramp my style.

[Laughter.]

MR. MADDUX: And if everybody on the committee is on a work group, then it really does become a full committee meeting, in a way, and at that point, we really do need to have it announced in the Federal Register with some advanced notice --

MR. JONES: Oh, really?

MR. MADDUX: -- and the ability for the public --

MR. STAFFORD: So this kind of -- Walter's recommendation then becomes --

MR. MADDUX: So when we've been doing these -- so there are kind of two types of work group meetings.

The work groups that we were holding when we were having live meetings where any and every

member that wanted to show up could, those actually met all of the requirements of FACA. We announced them in the Federal Register when we announced the full meeting. They were open to the public. That was actually one of the big nice things about those kinds of work group meetings is that we had lots of public participation.

MR. STAFFORD: Right.

MR. MADDUX: And there was not a FACA problem.

When it's a telephone meeting, it's kind of a little different issue.

So one of the things that we're looking at is, okay, well, maybe we should at our next meeting where we're using the WebEx technology to hold a remote meeting, maybe we should try and have a work group meeting or two just before that. Maybe we could do -- like now at this meeting, we've been doing this one-to-four schedule, which seems to be working pretty nicely for us, and I think that it helps to avoid some

fatigue for the folks on the telephone, where it's hard to stay engaged for a long period of time.

Maybe we could set up a work group meeting, eleven or twelve or something, using a room just like this, and have it by WebEx and go ahead and have a work group meeting where all of the members could come, and then in other situations, have work group meetings where it's just a small number of members who are going to work on something and bring something to the full committee. So we could do both kinds of work groups and still do them properly.

MR. STAFFORD: Okay. Well, I think that's a good suggestion.

If we get back to that, I mean, as Don said before he left, I think having the work group before the full meetings -- we're all here, and we can announce that, and the public can engage.

MR. MADDUX: Yeah. Well, I think that one of the things that we kind of lost with the

remote meetings and with the smaller work group meetings is that we had a lot of work group meetings when we were having them with the full group or everybody who is interested, where we would bring in a guest speaker, and we were able to have I think a really nice sort of give-and-take with some sort of an expert in a certain field, where the committee members and the public really were able to become much more educated and much more informed on a specific safety and health issue, and we haven't had a chance to do that for a while.

We actually have two or three people that we think would be good to bring in, but it just hasn't really --

MR. STAFFORD: Worked out.

MR. MADDUX: -- worked in this format very well. So I'd like to sort of maybe experiment with that as well.

MR. STAFFORD: Okay. Well, I think that's good.

Okay. Well, it sounds like we have a

good list of things to consider, Jim, and I will follow up with you.

MR. MADDUX: Yeah. I think that's great, and if people have any other ideas, just feel free to give me a call or e-mail them in, and we can get them into the mix, certainly.

MR. STAFFORD: Okay. Any other suggestions or comments?

[No audible response.]

MR. STAFFORD: Okay. All right. Thanks, Jim, and I will follow up with you.

MR. MADDUX: Sure.

MR. STAFFORD: Okay. It's time for public comment. Damon, I don't know if you have the list, if there is such a list.

MR. BONNEAU: There is a list, yes.

MS. WILSON: Mr. Chairman, if I may just take this moment to clean out the exhibits?

MR. STAFFORD: Sure. Please. Thanks, Lisa.

MS. WILSON: Thank you.

I'd like to designated the slides, the

Update on Hazard Communication, as Exhibit Number 5; the Slides on the Beryllium issue as Exhibit 6; the sheet of beryllium hazard alert at Exhibit 7; and Matt Gillen's presentation on Health Hazard Challenges as Exhibit Number 8.

Thank you.

MR. STAFFORD: All right. Who has signed up first? Keith and who? Oh, and Paul.

Paul? Where's Paul? There is Paul. Come on up, Paul.

MR. MELLON: Mr. Chairman, my name is Paul Mellon with Novetas Solutions. We make a product called "New Age Blast Media," made from crushed bottle glass. Appreciate the opportunity to come here today to talk to you as well as the committee. I appreciate you taking the time to listen to me.

I came here today with some written comments which I will be submitting for the record. They were primarily initially directed at the comments that were made to this committee by David Valiante of OSHA at your last meeting.

I wanted to obviously here today what OSHA had to say about the current rule.

So what I'm going to do is modulate some of what I am going to say based on what I heard today, what I think may have been said, because I think it looks like there may be some good news here and some changes that were made based on what I heard.

One comment I would have on the information that was submitted today to the committee is that -- one thing I did not hear was the number-one engineering control, which OSHA has consistently in almost all of their abrasive blasting guidelines discussed was substitution. A lot of the issues that were brought forth today in terms of the issues with Black Beauty coal slag and copper slag concerning workers that become sensitized to beryllium, that leads to chronic beryllium disease, lung cancer -- a lot of these issues could be solved very easily if you were to substitute products, quite frankly, that don't contain beryllium. And there are

plenty of abrasives that are used in the abrasive blast industry that do not.

That will tie into some of my comments, but that would be my biggest comment that I would have on what was said today.

The other, it does in directly what I'm going to say, which is there was no mention today of a special exemption for coal slag, which I'm taking as a very positive step that's been taken off the table by OSHA for any type of consideration. And a lot of my comments, frankly, were dedicated to that comment that was made back in May.

As we've heard today, beryllium is a major issue with coal and cooper slag in the abrasive blast industry, and it's good to see that it's finally getting its focus.

I know, Mr. Chairman, you are well aware of this issue, perhaps more so than others. Your organization, the CPWR, of which you're Executive Director, just last month in fact issued a new beryllium alert. Hopefully, you guys have

copies. I have plenty of copies for everybody in the room as well.

This is a groundbreaking hazard alert, which I think very quickly educates a worker on the true dangers of using coal and copper slag abrasives, and in fact, if you were to look at one of the top things it says, it kind of ties into what Matt Gillen had to say today about the whole health issue and how important that is, because one of the big problems with beryllium is when you're sensitized, you can walk around 10 to 15 years and have no symptoms whatsoever. So a worker could be sensitized on the job, leave the job, and a lot of abrasive blast workers don't usually last that long in that type of job. It's one of those jobs very intense, 5, 6 years, you could be on the job and doing something else, and you develop chronic beryllium disease, which as Dr. Michaels, who is a beryllium expert, has said repeatedly, mimics almost every other respiratory disease in the United States. In fact, he calls it the most undiagnosed disease in America.

Number two on the beryllium alert, which I think is extremely important, is it talks about what I just said. Easiest way to prevent beryllium exposure in abrasive blasting is to substitute products that do not contain beryllium.

So again, I want to thank your organization for putting that alert out. I know Pam Susi did a lot of work on that, and it's just good to see that happen.

I'm just going to kind of -- I know we're a little short on time.

MR. STAFFORD: I was going to say, Paul, you got 5 minutes.

MR. MELLON: Okay.

Two things I want --

MR. STAFFORD: Probably shorter than you thought, I would imagine.

[Laughter.]

MR. MELLON: I'll blow it down pretty quick.

Two things I want to drive home. This .1

percent trace amount we keep hearing about, that should be just thrown out the window. The reality is the MSDS's were changed 2 years ago at the instigation of Dr. Michaels. Tom Galassi, Director of Enforcement, sent a letter out to all the coal and copper slag companies saying that they need to put beryllium on the MSDS, and here is his rationale. If in fact the amount of toxin released into the air exceeds an OSHA PEL, it is to be treated exactly as if it is over .1 percent.

So I would just hope that if anybody hears the industry line of it's only got .1 percent and it's trace amount in coal and copper slag, ignore that. That's just simply -- it's immaterial.

The second is all blast workers are protected head to toe. Obviously, that's a false statement, and anybody who makes it should know that, because if it was true, we'd still be using sand for sand blasting.

The Public Citizen made a great comment I

think last year, which is really the point I want to make today. They acknowledged the fact the MSDSs were changed, which is great, but if there's no enforcement, then it's really a meaningless exercise. And frankly, it's been 2 years since the MSBS's have been changed, and there's been no record of any public enforcement of employers exposing their workers to coal and copper slag abrasive dust and beryllium.

In fact, the U.S. Navy turned down Tom Galassi when he asked them to test the workers at the shipyards for workers exposed to the beryllium dust.

Seventy-five percent of all the estimated beryllium cases in the United States, according to OSHA, are in the construction -- well, the construction and maritime industry using coal and copper slag abrasives, 75 percent. This committee, I think should really look at this issue and help influence OSHA to do the right thing and start not only -- if they want to lower the PEL, that's great. We're all for that, but

if you don't have enforcement in the field, it's useless.

Mike Shapiro from the Daily Press wrote a great article about 2 months ago at Newport News Shipbuilding, and Newport News Shipbuilding is the largest -- they have the largest shipyard in the United States. In fact, Mid-Atlantic Coatings, which was just mentioned here today by OSHA, happens to be the blaster for Newport News. They are the largest users of coal slag in the United States.

By the way, guess who was asking for the exemption for coal slag in the SBREFA report? Mid-Atlantic Coatings.

The bottom line is it's great to have a lower PEL, but at the end of the day, you do need to have enforcement. I would encourage that if you really want to protect workers that you've got to have some sort of enforcement out in the field.

Two years ago, OSHA went to Coronado, California, and issued a citation to the U.S.

Navy. There was a beryllium site where they actually machined beryllium. They went in, and they did not have a beryllium prevention program, and they were cited for it, not a monetary fine, but they were cited you have to have one. This isn't about citing employers and issuing fines. It's about educating employers that they need to protect their workers, and that begins frankly with enforcement, because right now, it's great that they changed the MSDS. It's great you are talking about a lower PEL, but unless there's enforcement in the field, the message is not going to get out, and workers are not going to be protected.

Thank you for your time today.

MR. STAFFORD: Thank you.

Any questions or comments? Paul? Anybody? Walter?

MR. JONES: This is Walter.

You said there was a substitution. I'm not -- I know you don't really want to get into plugging your product, but the problem a lot of

times with abrasive blasting is that, you know, the owner wants a certain consistency on what's left of the substrate that they actually --

MR. MELLON: Right.

MR. JONES: -- are removing the paint, and a lot of times, there --

MS. COYNE: More specific profile.

MR. JONES: Yeah. That's the word I am looking for. They are looking for a specific profile, and are there many different substitutes to coal slag that's hazardous as beryllium that you can probably give OSHA information on?

MR. MELLON: That's an excellent point, and actually, you're exactly right. There are plenty of substitutes. Garnet is one, and I'll be up front and honest. I sell crushed glass, which is frankly the exact same chemistry as coal slag. They are almost identical. In fact, the word "slag" is a substitute for the word "glass." "Glass" is used because -- you could call it "coal glass," because it's made the exact same way. You are taking a coal or you're taking

sand, taking it to its melting point, and you are creating a vitrified product.

So to answer your question, yes. In fact, there are shipyards right now in Norfolk that have switched over from using coal slag to using glass because it's a safer product.

Now, the issue is obviously -- there's a couple issues there you could look at, but one of the reasons I'm selling crushed glass and we got involved in this was because the same OSHA studies, the same NIOSH studies, same EPA studies that said coal slag contains hazardous airborne pollutants also said that crushed glass would be a suitable alternative, but nobody was making it. And this was back in 1997.

So one of the things that created my company, frankly, was the idea that, well, if OSHA and NIOSH and EPA are saying that coal slag and copper slag are toxic, but there's nothing else out there like crushed glass because no one is making it, I thought from a capital standpoint it would be a good idea maybe we should try to

sell crushed glass. So that's the reason that we're looking at crushed glass right now.

But yes, to answer your question, there's absolutely other substitutes. Like I said, garnet is a great substitute. Staurolite is another substitute. So there's plenty of products out there, but again, the industry has been sold a bill of goods, I think, by the slag industry that there's no other suitable alternatives.

They have made it seem as if you can only use these products. To answer your question, years ago, I mean, it used to be sand blasting, right?

MR. JONES: Right. And we got a rulemaking.

MR. MELLON: And what happened is everybody pushed back and said, "Well, coal slag will never work. It will never be as good as sand." That was the pushback until finally the government said, "You know what, crystalline silica is a toxin. We are not going to allow it

to be used on federal jobs." It was taken off the military QPL. The military frankly is the largest consumer of abrasive blasting, particularly in their shipyards, and once it was removed, people had to use coal slagging, and guess what? They worked.

So a lot of this is in the eye of the beholder in terms of whether or not you get the proper profile, whether it works, or whether it doesn't work.

MR. STAFFORD: Sarah?

MS. COYNE: Sarah Coyne, Employee Rep.

Just two quick questions. You said that in Norfolk, they had replaced the medium that they were currently using on the shipyards with glass?

MR. MELLON: One of the shipyards, yes.

MS. COYNE: What shipyard?

MR. MELLON: Davis Boat.

MS. COYNE: And is that just a trial basis, or has that been permanent, and how long have they been using the glass and on what

substrate, if you don't mind?

MR. MELLON: Yes. It's been 2 years. I think they average anywhere from 1,000, 1,500 tons a year. It was a complete switchover from using glass.

In fact, this was actually detailed, and I'll give you a copy of it in an article that I was telling you about in Newport News. The owner of the -- Frank Wagner is the owner of the shipyard, and he spoke about the fact that he primarily switched because the product was safer.

MS. COYNE: On what substrate?

MR. MELLON: It's used on mostly U.S> Coast Guard ships.

MS. COYNE: External? Internal?

MR. MELLON: Both.

MS. COYNE: Thank you.

MR. STAFFORD: Any other questions? Comments?

[No audible response.]

MR. STAFFORD: Paul, thank you again. Appreciate it.

One last but not least comment is from Keith Wrightson from Public Citizen.

What did you say earlier? You are an individual? No.

[Laughter.]

MR. WRIGHTSON: Five minutes to go, folks. I promise.

Jim Stafford, member of the board, good afternoon. My name is Keith Wrightson. I am the Worker Safety and Health Advocate at Public Citizen. We are located here in Washington, D.C.

I just wanted to take a moment to provide a brief comment on the beryllium rule. As you heard the presentation from OSHA, Public Citizen has been involved with the beryllium standard or the proposed standard for many, many years.

In 2001, we petitioned OSHA to lower the PEL to .2. Our petition was denied. However, in 2002, OSHA sent out a Request for Information on the standard, and following that request in 2003, Public Citizen again filed comments stating that the PEL should be lowered to .2.

Public Citizen has been involved in beryllium exposures for many years, starting back then in the turn of the century there. Just last year, more like 2 years ago, we discovered that beryllium was not being listed on coal slag manufacturer's MSDS sheets. We wrote to Thomas Galassi on that, and we're happy to say that every major manufacturer now lists beryllium on their MSDS sheet. So it's good to have that. That was not only affecting directly workers, but it was also affecting consumers. These products are out on the shelf in Home Depot and other hardware stores, et cetera, products like Black Beauty, things that are manufactured by a corporation called Harsco, Patriot, NCO, et cetera. These are the major manufacturers of coal slag.

I think you all are going to be deliberating the recommended PEL and take that back to OSHA. I understand that's your process. Right now, in the regulatory agenda, it says that OSHA thinks that the PEL should be a .5. Public

Citizen highly encourages you to consider a PEL of .2.

If you would like, we are willing to work with you all. We have research scientists and physicians on staff we can bring and bring evidence as to why this would be good. It would seriously affect worker safety and health, particularly in the construction industry. That's where this product is used the most. 23,000 blasters was one number that we heard today. We can't forget about the people that are also working around this product. So lowering the PEL is definitely going to have an impact on worker safety and health, particularly in the construction industry.

That's all

MR. STAFFORD: Thanks, Keith.

Any questions or comments for Keith, anyone?

[No audible response.]

MR. STAFFORD: Thanks, Keith. Good seeing you.

MR. WRIGHTSON: Very good. All right.

MR. STAFFORD: All right. Right on time. That's excellent.

Any other questions or comments from anyone on the committee?

Jim, anything in closing?

MR. MADDUX: No.

MR. STAFFORD: Good.

Well, first, I'd like to thank you and Damon and Dean and Lisa and the rest of the OSHA staff for doing your great work. We appreciate it, and I wish the committee and all of you here happy holidays, and hopefully, we'll see you in March 2014.

Meeting adjourned. Thank you.

[Whereupon, at 4 p.m., the ACCSH meeting was adjourned.]