

U.S. Chemical Safety and Hazard Investigations Board

Business Meeting

October 20, 2016

CSB Headquarters Office - Washington, DC

U.S. CHEMICAL SAFETY BOARD MEMBERS PRESENT:

VANESSA ALLEN SUTHERLAND, CHAIR

MANNY EHRLICH, MEMBER

RICK ENGLER, MEMBER

KRISTEN KULINOWSKI, MEMBER

STAFF PRESENT:

KARA WENZEL, ACTING GENERAL COUNSEL

OPERATOR: Welcome to the CSB public business meeting. My name is Tina[?] and I will be your operator for today's call. At this time, all participants are in a listen only mode. Please note that this conference is being recorded. I will now turn the call over to Vanessa Allen Sutherland, Chairperson. Vanessa, you may begin.

VANESSA ALLEN SUTHERLAND: Thank you. Good afternoon and welcome to this business meeting of the U.S. Chemical Safety Board or the CSB. Today, we meet in open session, as required by the Government's Sunshine Act, to discuss the operations and agency activities of the CSB.

I am Vanessa Allen Sutherland, Chairperson of the Chemical Safety Board and joining me today are Members Rich Engler, Manny Ehrlich, and Kristen Kulinowski. Also joining is our Acting General Counsel, Kara Wenzel, and members of the CSB staff.

The CSB is an independent, non-regulatory federal agency that investigates major chemical accidents at fixed facilities. The investigations examine all aspects of chemical accidents, including physical causes related to equipment design as well as inadequacies in regulations, industry standards, and safety management systems. Ultimately, we issue safety recommendations and those are designed to prevent similar incidents in the future.

I will now share today's agenda. First, the Board will give an update on our current investigations, recommendations, or deployments. Next we will discuss our ongoing IT audit activity and I will provide a financial update.

For the portion of the meeting that is designated new business, we will be releasing the agency's 2017-2021 strategic plan. For those in the room, you would have seen it right as you walked in with the blue and red cover. Blue and white cover, apologies. Completion of the plan has truly been a team effort, and I am extremely proud of the final document and the collaboration that led to that final product, which actually started last summer with a stakeholders meeting held at the CSB and culminated in our own internal team synthesizing feedback both internally and externally.

If you are in the room and wish to make a public comment, whether it's about the strategic plan or something you hear today, please sign up using the yellow sheet that you would have seen on the table as you entered the meeting space. For those who are on the phone, you may submit a public comment or question by email at meeting@csb.gov to be included in the official record.

I'd also like to point out very quickly some safety information for those who are in the room. Please take a moment to

note the locations of the exits at the side and the back of the room. We just closed this door but if you walk immediately out and go through the door through which you entered, there are stairwells both to your left and right, right behind the elevators.

I also ask that you please mute your phones so that the proceedings are not disturbed or disrupted. Thank you for that, if you will take a moment or so to change your phone.

So I'd like to first thank everyone for attending today and I'd like to welcome everyone who is on the phone. This is our first public business meeting of FY17 and our first full-year meeting. I and investigators from the CSB Western Region Office held a news conference, actually just yesterday in Baton Rouge, Louisiana, to release the board's final product of the Williams Olefins Plant fire and explosion that occurred in June of 2013. That fire and explosion killed two employees and injured 167 other employees and contract workers.

The final report concluded that process safety management program deficiencies at the Williams Geismar facility during the 12 years leading to the incident allowed a type of heat exchanger called a reboiler to be unprotected from overpressure, and ultimately rupture, causing the explosion and ultimately the injuries.

With the completion of this investigation, we will have closed all the investigations of incidents that occurred prior to 2014. That is truly an amazing accomplishment for staff and for the Board. I'm going to pause, not in our remarks. But that's a herculean effort for those who are familiar with the CSB and I want to give a very special thanks to Johnnie Banks [inaudible] for leading the team who helped us close those investigations. And I further want to thank my Board members for their diligence in asking really great questions and helping us get a lot of the older investigations out and to the people who need them.

So thank you for that. It was not [inaudible] noted and I understand the amount of work. I'm proud of that work and I look forward to issuing additional reports in the near future.

I would like to turn to my fellow board members and see if they have any opening statements related to anything I said or any of the open investigations we're about to discuss. I'll start with Member Engler.

MEMBER ENGLER: No.

VANESSA ALLEN SUTHERLAND: Member Ehrlich?

MEMBER EHRLICH: Just that I'm glad you could come and thank you for taking the time to participate in this meeting.

VANESSA ALLEN SUTHERLAND: Dr. Kulinowski?

MEMBER KULINOWSKI: Nothing additional for me.

VANESSA ALLEN SUTHERLAND: So then at this time, the Board will provide an update on ongoing investigations and I guess we could just go down the row this way. I will now ask Member Engler to discuss two of the investigations.

MEMBER ENGLER: I'm going to report on two open oil refinery investigations on either side of the country, one in Delaware, one in southern California. Both are now owned by PBF Energy, although the first investigation at ExxonMobil was prior to the sale of the refinery in Torrance, California, to PBF. And if you've been at recent meetings, this report may sound somewhat familiar because our work is proceeding, as much as it takes a lot of time and it requires enormous attention to detail, getting facts right. So when the Board reports are ready, you will have a chance, of course, to see them.

On February 18, 2015 an explosion occurred in the electrostatic precipitator at the ExxonMobil refinery in Torrance, California. The explosion injured four workers, caused significant damage to multiple refinery units, and resulted in offsite accidental release of catalyst dust. During this explosion, there was also a near miss release of hydrofluoric acid when debris fell

very near a storage vessel storing thousands of gallons of HF in a nearby alkylation unit.

The Denver-based investigation team is editing the investigation report and beginning to work with recommendation recipients concerning potential recommendations. The team also continues to work with the Department of Justice to enforce subpoenas to Exxon so that a full all-cause investigation can be conducted. As I noted at the prior meeting, the information concerning the HF tank area that our preliminary investigation has deemed to be a near miss is an area where we're still seeking additional cooperation from ExxonMobil.

In terms of the Delaware City Refining investigation, in December 2015 a four-person team from our Washington, DC office was deployed to the Delaware City Refining Company after a flash fire on the refinery's sulfuric acid alkylation unit injured one employee. The event occurred after a series of incidents at DCRC over a four-month period. While on site, the Chemical Safety Board investigators met with managers, supervisors, hourly workers, and union representatives.

The team is currently developing a safety bulletin that includes key lessons for preventing incidents when preparing equipment for maintenance. This bulletin is going through final

staff review and is being prepared for subsequent Board review and is planned for release later this calendar year.

VANESSA ALLEN SUTHERLAND: Thank you, Member Engler. Member Ehrlich will now provide an update on the DuPont LaPorte and Sunoco investigations.

MEMBER ENGLER: Thank you, Madam Chairperson.

On November 15, 2014, nearly 24,000 pounds of methyl mercaptan was released at the DuPont Chemical manufacturing facility in LaPorte, Texas. The release resulted in the deaths of three operators and a shift supervisor inside an enclosed manufacturing building. Additionally, three other workers were injured from their exposure to methyl mercaptan and at least three more workers experienced methyl mercaptan exposure symptoms.

The investigation team has completed responding to Board Member comments on the investigation scope and is continuing to gather investigative data, conduct interviews, and develop a robust causal analysis guide to complete the investigation. The team has followed up on a number of outstanding records requests with DuPont. With the announced closure of the LaPorte facility, the final investigation report will focus on broader lessons learned and identify corporate process safety management issues.

With regards to Sunoco, on August 12, 2016, seven workers were injured, including three critically at the Sunoco Logistics Partners terminal facility in Nederland, Texas. The incident involved a flash fire during welding, also referred to as hot work. Investigators from both the CSB's Western Regional Office and the DC office deployed to the site of the incident. Moving forward, the investigation will be handled by supervisory investigator Johnnie Banks' team. The DC team will be requesting additional documents and conducting interviews.

Thank you.

VANESSA ALLEN SUTHERLAND: Thank you, Member Ehrlich. Member Kulinowski?

MEMBER KULINOWSKI: I will report on the Enterprise Products explosion and fire and the Airgas incident in Florida.

With regards to the Enterprise Products explosion and fire, June 27, 2016, an explosion and fire occurred at the Enterprise Pascagoula Gas Plant in Moss Point, Mississippi. The incident occurred in one of three process lines or trains within the Enterprise facility. Two of the trains are identical cryogenic processes; the third is a dew point process. One of the cryogenic process trains was involved in the event. What these basically do is take Deep Water natural gas received via pipeline from offshore

and separates it into natural gas liquids and residual natural gas for further commercial distribution throughout the region.

Enterprise assumed full ownership of the site just four weeks prior to the incident and prior to that the site was majority-owned by BP.

This investigation is still very much in its early stage but there has been some significant progress. The team is onsite to do leak and pressure testing of several vessels that are similar in design and use to those within the cryogenic process involved in the incident. Efforts are ongoing to finalize several protocols for the testing and laboratory examination of vessels and piping, including metallurgical failure analysis which the team thinks is a particularly fruitful line of investigation at this point.

Key pieces of the equipment have been secured and some initial in-field testing has been completed. The team continues to analyze process data from the site and review documents from the 22[?] productions provided to CSB by Enterprise and interviews with company personnel continue as well.

With regard to the Airgas incident, on Sunday, August 28th of this year, an explosion occurred at the Nitrous Oxide Corporation, a subsidiary of Airgas Nitrous Oxide manufacturing facility in Cantonment, Florida. The one Nitrous Oxide Corporation employee

that was present at the time was fatally injured. The explosion also heavily damaged the facility and halted all manufacturing operations at the facility. At the time of the incident [inaudible] affiliates owned and operated all five nitrous oxide manufacturing plants in North America. Air Liquide acquired Airgas in May of this year.

Of the five nitrous oxide manufacturing facilities in North America, only the Cantonment facility uses byproduct gas from a nylon manufacturing process to produce the nitrous oxide. The other four all use ammonia nitrate decomposition technology. So having a unique nitrous oxygen technology at this site does not limit the potential for this incident, however, to result in meaningful safety lessons.

The preliminary investigation information suggests that the incident occurred in the tank truck loading area. But this incident could have broader applicability as all five nitrous oxide manufacturing plants likely have truck loading facilities.

So we look forward to continuing to track the results of this investigation. And I hand it back to you, Chair Sutherland.

VANESSA ALLEN SUTHERLAND: Thank you, Member Kulinowski.

We will now discuss recommendations which, as you all know, are an outgrowth of the investigations that we do. The CSB has

issued 788 recommendations and our current ratio is about 76% of those closed, which would be 599, and 20% in an open status, which is about 189. That's open in varying degrees of completion—open that are new, open that are acceptable, open unacceptable.

But the status of all our recommendations in more detail can be found at our website at www.csb.gov/recommendations and you can see which ones have been closed and what status and which ones remain open.

Recommendations that have been recently voted on can also be found on the recommendations page. They are under the heading, "recent recommendations status update" and each recommendation has a status change summary so that you can understand the rationale for the Board's vote on that particular status.

In Fiscal Year 2017, which we are roughly 20 days into, the CSB has already closed seven recommendations. Four were closed no longer applicable, two were closed unacceptable, and one was closed acceptable.

In Fiscal Year 2016, as you may recall, the CSB closed 30 recommendations. 26 of those were closed acceptable, two were closed unacceptable, and two others were closed reconsidered or superseded and the details of those are on our website as well.

For our Inspector General updates, as of October 11, 2016, the CSB is currently working with the Office of the Inspector General at the Environmental Protection Agency on three audits. The status of those audits are as follows.

The first is the FISMA audit for FY2015. The OIG report made seven recommendations to the CSB. Requirements have been met to close all seven of those recommendations. Full closure is pending Board approval of the revised Board Order 34, which relates to information technology security. And that is currently being reviewed internally. When the final draft is complete, the Board will vote on that last remaining document.

The second audit is the FY2016 Financial Statement audit. The audit was initiated on July 5, 2016. A new firm that contracted with the Office of Inspector General is conducting the audit and hope to have it completed before November 15th, but it will definitely be completed no later than November 15, 2016.

And lastly, the final audit is a review to identify unimplemented recommendations as a close of September 30, 2016. That's a semiannual report that the IG sends to Congress. The CSB provided the OIG with an updated listing of unimplemented recommendations. There are currently nine summaries that we are reviewing. We will have final comments back to the Inspector

General by close of business tomorrow for them to complete that report.

In the finance update, CSB has received \$2,099,000 as the continuing resolution budget of FY17. We have carefully reviewed and allocated our funds for different budget line items and have assured that the CSB will operate effectively and efficiently at the CR budget level. We are certainly taking into account... I've had several questions as I've been out at recent events. Will this affect our day-to-day operations? And, no, it will not. We, obviously, like other federal agencies, are looking forward to a full budget.

In our new business section, the new business section will discuss the formal release of the CSB's 2017-2021 Strategic Plan. Obviously, I think many of you who listened to the last public meeting know we've been working on this for a while and we're very excited that we were going to be presenting a new mission, vision statement, and goals for the CSB's strategic plan.

For those who are in the room, if you didn't get one, this is what it looks like. I'm holding it up for those who are on the phone. And for those who are on the phone, it will be placed on our website and we will be distributing hard copies at events. You

can certainly call us, email us, in order to get a hard copy or download it from the website.

But I want to again emphasize that our efforts to build trust internally and externally and increase productivity within the organization will serve as a foundation for our successful execution of the strategic plan. We really have been focused on how can we better accomplish the core mission work. The plan will provide guidance as the CSB strives to complete timely investigations of chemical incidents and influence the chemical safety for the better on a broad scale.

With our new strategic plan, we have as an agency decided to refine our mission and vision statements. I will once again go over those updates and provide information on the objectives which accompany our goals. And I'm certainly not going to, in the interest of time, read everything in detail. But I think understanding how the Board ultimately voted on the mission, vision, and the three goals will help provide context for how we are prioritizing our work.

The mission is to drive chemical safety change through independent investigations to protect people and the environment, which supports our vision of having a nation safe from chemical disasters. We will have three goals upon which we will focus.

The first goal is to prevent recurrence of significant chemical incidents through independent investigations. And there are sub-goals within that goal. We will select our investigations...select for investigation those incidents and hazards most likely to generate recommendations or findings with broad preventive impact. We will complete timely, high-quality investigations that determine the causes of incidents. And we will develop and issue recommendations with broad preventive impact.

Our second goal is to advocate safety and achieve change through those recommendations, outreach and education activities that we identify annually. We will do that by pursuing the implementation of recommendations, with focused effort on those designated as high-impact. We will identify and strategically promote key chemical safety issues that are key, that are critical. And we will disseminate chemical safety information using a variety of high-visibility tools and products. I know many people know about our CSB videos and our goal is to provide a variety of different tools and products to disseminate our findings.

The third goal is to create and maintain an engaged, high-performing workforce. And there are four elements to that goal. They are to implement effective recruiting, targeted retention, and skill-based training and mentorship. Encourage management

development and leadership at all levels. Strategically allocate resources across the organization. And finally, to strengthen operational performance and project management efforts.

With the successful execution of our mission and the goals that I just outlined, the CSB will continue to share critical safety lessons with industry, workers, academic institutions, and the public to help us reach our shared responsibility and goal of creating a nation safe from chemical disasters. Additionally, in an effort to meet the goals outlined in the Strategic Plan on an annual basis, the agency will be further defining and implementing its detailed action plan each year.

The CSB's strategic plan can be found at www.csb.gov.

And I would like to, because this was a group effort, invite any of my Board Members to share their thoughts, comments, or other suggestions about the strategic plan. Dr. Kulinowski, anything to add?

MEMBER KULINOWSKI: I would just like to commend the team for the process that it went through and the outcome. I think the strategic plan is focused, speaks to... I love our new mission. It's very crisp. I can remember it without looking at my slide when I'm out giving a talk, which is always helpful. And it really epitomizes for me why we're all there. The vision statement is

compelling. The mission is compelling. And the three strategic goals will drive us to achieve that.

So kudos to the team. I really enjoyed weighing in on this one when I had the opportunity to do so and I'm very proud of the results.

VANESSA ALLEN SUTHERLAND: Thank you for those comments.

Member Ehrlich?

MEMBER EHRLICH: Thank you, Chair Sutherland. I would like to thank the team, too. I think they did an outstanding job. And I guess, in addition to what Dr. Kulinowski said, I think that this plan has established really solid foundational underpinning for the period for which it's going to be in effect. And I think it's a great move in the right direction. Thank you, Chair Sutherland.

VANESSA ALLEN SUTHERLAND: Thank you, Member Ehrlich. And Member...

MEMBER ENGLER: I would just [inaudible] his comments.

VANESSA ALLEN SUTHERLAND: Thank you. So at this time, I would like to open the floor for any public comment related to the CSB's operational activities, its strategic plan. I know some of you are looking through it for the first time now. But we will look at the list and see if anyone has signed up. If you did not, you can just as easily raise your hand in the room. And please try

to keep your comments or questions to three minutes or under. We will be asking if there's a list of anyone on the list. Otherwise, I will ask if there are any questions in the room. And then we will open the phone lines.

For those of you who are listening on the phone line, we will be opening that in a moment but if you prefer to email your comments and you just joined, the email address is meeting@csb.gov.

So are there any public comments in the room? And, operator, if you could open the line to see if there are any questions in the queue.

OPERATOR: If you have a question please press * then 1 on your touchtone phone. If you wish to be removed from the queue please just press the # key.

We do have our first question. Our first question comes from Philip Price.

PHILIP PRICE: Yes, I was wondering if you could give some idea of the timeline for the addendum to the NCHN investigation? Thanks.

VANESSA ALLEN SUTHERLAND: Oh, that's a great question. We received additional documents, both electronically and by hard copy, meaning by mail, in the window following the Freedom meeting. Our investigative team has been reviewing those comments and, as

necessary, contacting the submitters and is very close to resolving some of those comments.

So, as far as a timeline, we will next internally share the team's assessment and addressing of those comments with the Board, the four Board Members. And at that point, we'll be reporting back out to the public after the Board has a chance to do that. But I would suspect that that's going to be relatively soon, meaning in the next couple of weeks.

PHILIP PRICE: Thanks.

VANESSA ALLEN SUTHERLAND: You're welcome. Thank you for that question.

OPERATOR: And our next question comes from Jeff Johnson. Go ahead, Jeff.

JEFF JOHNSON: Thank you. I'm sorry I'm not there and I can't see the strategic plan. But I just had a question. I'll look at it in more detail and follow-up, but I'm curious. It sounds like you further delineated what will be...what qualifies as an accident to investigate. I don't know but it sounds that way to me. Have you looked at how many accidents would qualify on an annual basis with the criteria that you developed for you to investigate?

VANESSA ALLEN SUTHERLAND: Thanks, Jeff, for that question. If you mean a historical look at how many, no, we did not...

JEFF JOHNSON: No, I know historical would be a killer. I'm just curious about whether, on an average year, how many would you [inaudible] as to how many accidents you'll investigate. I'm just curious.

VANESSA ALLEN SUTHERLAND: That's a challenging question because it really depends on what accidents happen in a given year. When we... I think we talked about, maybe a couple meetings ago, that yes, the team and the Board made a distinction and we wanted to make sure that we were clear and open with the public that we will be investigating significant chemical incidents. Significant meaning injuries, deaths, significant environmental damage. And I think in that meeting we explained that, depending on how you look at the data, some have said there are any number between five to ten, five to fifteen, incidents of varying levels of severity and scope on a daily basis. You know, that's sort of a very broad range. And it changes, obviously, based on what happens in a given year. We investigate roughly two to four of those incidents, significant incidents, in a given year, based on our size and budget.

So that, I think, is a good conversation to refresh people that we had a couple meetings ago. That when they come in, we go through a deployment analysis. We look at the severity of the

incident. We have a discussion about what our ongoing workload is. We understand...try to understand what the impact of deploying would be. We look at a whole host of factors. What other agencies may be deploying? Etc. And I think that deployment process, which is done at the Board level with staff input, broad staff input, helps us determine to which incidents we will deploy. And hopefully we'll get the broadest, most preventive safety recommendations as a result.

JEFF JOHNSON: Okay, thank you.

OPERATOR: Once again, if you do have a question, please press * then 1. I'm showing no further audio questions at this time.

VANESSA ALLEN SUTHERLAND: Okay, we do have one email submission. Could the Board provide an update on the status of its continuing work on the Freedom Industries investigation and whether a supplement to the report or some other work, I guess, will be provided and what the timetable is for that?

So I think that answer is the same as the one I gave to Phil Price, which is the team collected the feedback electronically and by hard copy from comments submitters following...immediately following the Freedom meeting. The team has been going through and reviewing all of those submissions. Will present their assessment to the Board, at which point the Board will then determine what the

next steps are, whether that is an actual supplement, whether it's simply a communication of some other kind. But we will be doing that in a very short period of time, probably in the next couple of weeks or so.

So while callers are queuing up, I will read...looks like there might be three separate ones. Does the Board.. Could the Board clarify does it definitely plan to issue a supplement or addendum to the Freedom report or will a decision be made later based on the review of comments from the public about whether a supplement will be released? Same.

Will the Board make public at least sort of response to the comment on the Freedom report? Highly likely that there will be some response, a summary of what we have received.

And will you care to comment on the call from Dr. Andy Wilson, a key scientist who has studied from... I think there's a typo here. A key scientist who has studied the Freedom fill that the Board needs to withdraw its report on Freedom?

So the first question I think I addressed through Dr. Price and Ken Ward's question about the timing and what may result from the comments.

The second question, which is would we at least provide some sort of response? Yes, we will provide some response, even if it's not a full-blown supplement or addendum.

And I don't know that I'm familiar with the call reference from Andy Wilson that the Board needs to withdraw its report on Freedom. Did you guys receive a call? Anyone...

MEMBER KULINOWSKI: I think call meaning call in a colloquial sense. A call to...

VANESSA ALLEN SUTHERLAND: Call to action. Thank you, okay. So I think that I will certainly speak and given that our four Board Members are here, they can absolutely speak for themselves. I don't want to miss anybody's additional thoughts or opinions. But I do not think that the staff or the CSB, meaning the Board, need to withdraw its report on Freedom. I think we are very open and receptive to taking a look at comments and submissions to determine what those say. But the team spent a very diligent amount of time in a three-year period, meeting with a variety of stakeholders, undertaking CBR[?] review, internal review, and working on the final report which we approved in West Virginia.

So I don't think we're going to be withdrawing a report, even if we do share a summary or overview of the comments that we have received following the Freedom meeting.

So I'll ask the operator before I go back to those in the room. Are there any other calls in the queue?

OPERATOR: I'm showing no audio questions at this time.

VANESSA ALLEN SUTHERLAND: Okay. Then I will, before moving on to our closing, ask if there are... I know we've had a few new people join. Ask if there are any questions or comments in the room.

PAUL OREM[?]: Yes, my name is Paul Orem[?]. My question regards the refinery, the ExxonMobil refinery incident in California. It's my understanding from previous meetings that there's been a request for documents on the HF near release by the CSB and that the company has not been responsive. It's been referred to the Department of Justice.

Where does that stand? If you're not receiving the documents as requested, what are you and the Department of Justice doing about that?

VANESSA ALLEN SUTHERLAND: I will ask our general counsel, who works directly with the Department of Justice on legal matters, to provide an answer to that.

KARA WENZEL: Sure, yeah, certainly we need to urge the company to respond voluntarily. [inaudible] agency a little under a year ago, had [inaudible] when we weren't receiving them

voluntarily. And at this point, yeah, we're working with the U.S. Attorney's office to enforce our subpoena. And that's what we're doing right now.

VANESSA ALLEN SUTHERLAND: Any other questions in the room?

And then, operator, last call... Oh, yes.

GABRIEL DUNSMITH: Hi, my name is Gabriel Dunsmith. I'm a reporter with E&E News here in D.C. I'm wondering if the Board could comment on the possible IG investigation into emails between Board Members of the CSB and the United Steelworkers Union?

VANESSA ALLEN SUTHERLAND: Well, no, because that's really for the Inspector General, the EPA Inspector General, to comment on their investigation. We certainly cooperate and to the extent they want to engage us on that. But I cannot, on their behalf, tell you the status of anything that they're reviewing.

I will say that, as a general matter, we separately are concurrently reviewed or have been looking at that issue post the story that I think you're referring to. And, you know, without stepping on any sensitive or review process, I think I could certainly speak for the agency or the Board that we take all compliance very seriously but did not feel that at this point there was something to be overly concerned about. But, you know, I obviously can't speak for the Inspector General.

MEMBER: I would just like to say that as a focal point of some of these stories that I am not aware of any actual investigation by the Inspector General.

VANESSA ALLEN SUTHERLAND: I think it was a [inaudible] point.

GABRIEL DUNSMITH: Thank you.

VANESSA ALLEN SUTHERLAND: So, operator, are there any final questions on the phone?

OPERATOR: If anybody would like to ask a question, please press * then 1. I'm seeing no further audio questions at this time.

VANESSA ALLEN SUTHERLAND: Okay. Looks like no one's hands are up. So thank you to everyone who provided a comment or a question here today. I want to thank the staff for their continued dedication for the important work of the agency.

Is that a hand up?

FRED MILLAR: I'm Fred Millar and I had talked with your staff about making a public comment at the end. Is this..

VANESSA ALLEN SUTHERLAND: Oh, well, that's now.

FRED MILLAR: Oh, that's now? Okay, good. Well, I would just like to say I'm a long-time expert on chemical disasters and HAZMAT transportation issues. And there's a new issue I'd like you to consider.

The Chlorine Institute has led, over the last eight to ten years, a concerted but quiet effort to try to lower the perceived risk of onsite worker and adjacent community impacts from potential large container releases of chlorine gas.

But recently, in June 2015, the Institute abruptly published, and most people [inaudible] this, the latest edition six of their Pamphlet 74. And Pamphlet...it's an authoritative industry guidance and what it does is dramatically downsize the industry's own long-standing previous dispersion model based calculations of downwind travel of small and large chlorine gas containers. For a 90-ton container, for example, previous versions predicted releases to travel 15 miles downwind. But the latest 2015 version claims that releases [inaudible] .2 miles, 1184 feet.

As one gas scientist explained to me, it looks like politics has overcome science.

Several years ago, a talented and long-time Chlorine Institute official landed in the federal Department of Homeland Security, Transportation Security Administration, and in their HAZMAT office. This [inaudible] operative carefully handpicked and funded and set of desk modeling researchers explicitly chosen as willing to be skeptical of the existing gas dispersion science. And this gas modeling improvements gang, as I might call them, with federal

funding, patiently coordinated over several years a written set of communications [inaudible] George Mason University publications and publications of the gas model.

The effort's explicit aims include several interlocking stages. One, test out on the existing [inaudible] and relatively consistent gas dispersion science. Consistently shared by practitioners of several well-known dispersion models used nationwide.

Secondly, to replace that with an allegedly more accurate model including several new assumptions that predict chlorine gas to be much less dangerous than previously estimated. Then to validate the new model with carefully [inaudible] tests and then, most concerning, to reeducate the entire U.S. Emergency Responder community and to rewrite all the national guidance documents, especially those with community evacuation guidance for gas emergencies.

This group is now working top down with handpicked National [inaudible] Service officials and urgently and significantly to adjust downward all of our national risk assessment based emergency response guidance documents for onsite and offsite releases from large chlorine containers. And ultimately for maybe many other similarly dangerous [inaudible] poison gas containers, including...

The documents include the US EPA's risk management program guidelines and the [inaudible] model that many fire people have for emergency response.

The chlorine industry DHS team over several years could not rest any interim consensus of dramatically lowered chlorine risk from its handpicked researchers, who often, in the GMU conferences, heatedly contended that this would cost them credibility.

The Chlorine Institute [inaudible] also consistently rejected, moreover, the gas [inaudible] appeal for an industry-funded full-scale 90-ton seal test for leaks at a special federal test site in Nevada. Previous tests there had provided vitally important information yet sobering bad news for other industry field testing [inaudible] disaster risk chemicals.

So in June 2015, just last year, without waiting any longer for a new formal consensus of their gas researchers, nor for the results of the most recent large-scale, 20-ton chlorine release—this was called [inaudible] field test, just happened a couple of weeks ago in September—the Chlorine Industry [industry] and quietly published its new Pamphlet 74, which I presume none of you have seen. It's on their website for free download, though. It's not a [inaudible] but it's on their website.

With the basic modeling data for that unavailable and apparently no independent peer reviews, this stunning chlorine industry attempt at disaster risk reduction on paper has in fact [inaudible] serious credibility problems anticipated by its own team of gas researchers.

CSB's accident investigations over the years have often highlighted the alarming defects in U.S. communities' emergency response planning and capability. So the CSB should be extremely aware of any dramatic risk reduction claims that could reduce even further community risk assessment and preparedness.

I urge CSB to undertake an inquiry into the likely safety impacts of this industry effort to dramatically minimize the toxic gas disaster risk perceptions of public and emergency responders and on a certain corporate legal liability impacts. Corporate liability concerns, as [inaudible] Board Member Herb Rosenthal was fond of telling us, is the single largest incentive for improvements in industrial chemical safety culture and operation.

I hope the Board will do two things. One is convene a stakeholder workshop broadly conceived to eliminate the issues and bring to light the underlying technical assumptions of the new gas modeling effort that is being relied upon.

And secondly, intervene in any and all proceedings to prevent misperceptions about the risk of chlorine releases from chlorine rail cars and other large containers onsite, for example [inaudible] storage.

Thank you very much.

VANESSA ALLEN SUTHERLAND: Thank you. Did you have anything that you...

FRED MILLAR: I have a statement that I can hand you, yeah. I'll give you a statement and some backup [inaudible].

MEMBER ENGLER: Chair, can I ask a question?

VANESSA ALLEN SUTHERLAND: Oh, yeah.

MEMBER ENGLER: In doing that, Mr. Millar, it would be helpful if you could, in any written submission indicate...not to say an overview of the scientific community view on this. That's not your responsibility. But I suppose there are issues here about to what extent that chemists, chemical engineers, toxicologists, and others have weighted overall. And if there are in fact conflicting points of view, I think it would be helpful for the Board to understand the sources of different viewpoints on that. If that is feasible.

FRED MILLAR: The group of scientists that undertook the task set out very explicitly what they aimed for. This is not hard to discern in their own slides and presentations in various places and

in some of their publications. They handpicked a set of scientists who were willing to cast doubt on the preceding science. Now, the preceding science was a gas modeling research set of models [inaudible] and all kinds of things. Has been used for years by federal agencies in terms of guidance to local communities for...and to local facilities for estimating offsite consequences, impacts. For example, in the EPA's RNT[?] program. I mean [inaudible] containers are often the largest containers on the site of any fixed facility. The most dangerous containers, and therefore they have to be reported under the EPA's RNT program. So whether they're being loaded for transport or whether they're being unloaded or whether they just simply be parked and used like at the [inaudible] facility here in Washington to actually see the process on water treatment, a chlorine container, a large container is often the most dangerous thing.

The gas modeling community, half of them...a lot of them have been left out of this deal. I mean the group that put this together got \$1 million worth of Congressional funding which was probably, I'm told, the largest bunch of gas modeling research money available in the world. And so a lot...some gas modelers joined this effort and they were put to work designing all the

various ways that you could predict that a chlorine cloud would not go as far as it was earlier predicted.

And what do you know? They came up with an astonishing result. Now, I'm not sure...I'm not sure the chlorine industry was willing to wait for the final field test that might give them a little bad news. So basically they went ahead and [inaudible] threw the dice a year early before we got the full...not the full-scale but a large-scale 20-ton release.

One example about this was very vivid to me that when they did do some field testing, they took a tank of chlorine gas, which is pressurized, of course. It all gets out in two minutes. And they directed the jet straight downward into a hole in the ground. This is designed not to give you a long downwind dispersion of chlorine gas. This is designed for the exact opposite, to produce a sort of pancake, round shaped cloud on the site that doesn't move very far.

In other words, if you had wanted to do a worst case scenario that might occur in an American community, you would not choose to shoot the jet into a hole in the ground or even straight down onto a concrete pad. You would choose, as their own documents say, you would choose to shoot the jet sideways and with the wind and maybe even a downslope. Chlorine gas is a heavy, dense cloud. If it's

going to move, it's going to move because of downslope and downwind.

And this industry research has basically been focused on showing how not to...now not to make a cloud move downwind. You know? And sure enough, they've come up with a guidance now. This is very useful for the chlorine industry's liability concern.

I mean as an expert witness, I've been testifying in legal proceedings about how dangerous chlorine containers can be. And I get grilled on the opposition lawyers saying, well, you're relying on Pamphlet 74 from the Chlorine Institute but, I mean, are you aware that there's other science being developed about all this kind of stuff. In other words, they really don't like it. For many, many years they had a document out there that said a chlorine cloud could go 15 miles downwind.

So the gas community is divided, I would say. And unfortunately we don't have any independent peer reviews of this work. It's brand new work. It's still ongoing. And, I mean, that test from two weeks ago hasn't even been analyzed, you know, in terms of what they're going to say about that. So really we have... We don't have a vigorous set of opponents saying that this is not this. But I have to tell you that when I did talk to some gas scientists, they usually were...well, they usually laughed. And when

I talk to fire chiefs, they use very colorful language to describe this idea that chlorine gas will only go .2 miles.

VANESSA ALLEN SUTHERLAND: Member Engler, does that answer your question?

MEMBER ENGLER: I look forward to seeing the written information.

VANESSA ALLEN SUTHERLAND: Thank you and we will [inaudible]. Operator, I didn't see the hand in the audience. I don't suppose there's a question in the queue. This is, I guess, the last call before I close the meeting.

OPERATOR: I do not see any further questions at this time.

VANESSA ALLEN SUTHERLAND: Okay, thank you. So I wanted to thank the staff and my fellow Board Members for their contributions today. And obviously [inaudible] these meetings for all the work that goes into it. Everyone certainly welcomes participation and we really appreciate those who come physically to the meetings to hear what we're doing because it's nice to have the exchange with people and to have an opportunity to be able to answer those questions. In the Sunshine Act, with all four of us here, to hear some of the concerns and comments and questions about the ongoing work. I really appreciate you taking the time on a perfectly good Thursday afternoon to come listen to our operational updates.

I also want to thank everyone who participated over the phone. Please feel free, if we ever have any technical difficulty with your ability to hear or get into the question line, to let us know. We're always looking to make the meetings better, more accessible, and easier to follow when you are participating remotely.

So thank you. I appreciate your comments about ongoing initiatives and will welcome the submissions that we have today.

The meeting... The next meeting will be hosted in January. That's our next regularly-scheduled public business meeting. And the details for that meeting will be on www.csb.gov when we actually have a specific date. But it's almost always 1:00 eastern time so that we can have people have a predictable time.

So thank you for your attendance and with that I have no gavel, but the meeting is adjourned.

OPERATOR: Thank you, ladies and gentlemen. This concludes today's conference. Thank you for participating. You may now disconnect.