	Page 1
1	DEPARTMENT OF LABOR
2	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
3	
4	
5	
б	ACCSH MEETING
7	Monday, September 9, 2019
8	10:25 a.m.
9	
10	
11	
12	
13	
14	
15	Department of Labor
16	200 Constitution Avenue, NW
17	Room N-03437 A & B
18	Washington, D.C. 20210
19	
20	REPORTED BY: Nathanael Riveness, Notary Public
21	JOB No.: 3503196
22	
23	

Γ

	Page 2
1	APPEARANCES
2	KEVIN R. CANNON, ACCSH CHAIR, EMPLOYER REPRESENTATIVE
3	SCOTT KETCHAM, DFO
4	JOEY GILLILAND, ACCSH COUNSEL
5	CHRISTINA TRAHAN CAIN, EMPLOYEE REPRESENTATIVE
б	RANDALL A. KROCKA, EMPLOYEE REPRESENTATIVE
7	GREG SIZEMORE, EMPLOYER REPRESENTATIVE
8	PALMER L. HICKMAN, EMPLOYEE REPRESENTATIVE
9	RICHARD TESSIER, EMPLOYEE REPRESENTATIVE
10	CHRISTOPHER A. FOUGHT, EMPLOYEE REPRESENTATIVE
11	G. SCOTT EARNEST, NIOSH, FEDERAL REPRESENTATIVE
12	LOREN SWEATT, PRINCIPAL DEPUTY ASSISTANT SECRETARY
13	MAUREEN RUSKIN, DEPUTY DIRECTOR DIRECTORATE OF S&G
14	CHARLES N. STRIBLING
15	CHRISTOPHER SCOTT MABRY
16	FRAVEL E. COMBS, EMPLOYEE REPRESENTATIVE
17	WESLEY L. WHEELER, EMPLOYEE REPRESENTATIVE
18	R. RON SOKOL, PUBLIC REPRESENTATIVE
19	
20	
21	
22	
	www.CapitalReportingCompany.com

		Page 3
1	ACCSH AGENDA	
2		PAGE
3	Opening Remarks	4
4	Kevin Cannon, ACCSH Chair	
5	OSHA Update	6
6	Loren Sweatt, Principal Deputy	
7	Assistant Secretary	
8	ACCSH's Consideration of and Recommendation	10
9	of, the Update on OSHA's Beryllium	
10	Standard for Construction (This includes	
11	Public Comments.)	
12	Maureen Ruskin, Deputy Director,	
13	Directorate of Standards and Guidance	
14	Meeting Adjournment	67
15		
16		
17		
18		
19		
20		
21		
22		
	www.ConitalDonartingCompany.com	
	www.CapitalReportingCompany.com 202-857-3376	

Opening Remarks 1 2 CHAIR CANNON: Hi. I call the meeting to Welcome to today's meeting. Today we have a 3 order. 4 pretty short agenda. We're going to be focusing on one issue, but before we get into the agenda items, 5 I'd like to do a roll call for those of us who are 6 7 here at the DOL. So I'll start. Kevin Cannon, ACCSH 8 Chair, Employer Representative. MR. KETCHAM: Scott Ketcham, Designated 9 10 Federal Official. 11 MR. SIZEMORE: Greq Sizemore, Employer 12 Representative. 13 MR. KROCKA: Randy Krocka, Employee Representative. 14 15 MS. CAIN: Chris Cain, Employee Representative. 16 17 MR. GILLILAND: Joey Gilliland, ACCSH 18 Counsel. 19 CHAIR CANNON: And for our members that are participating via WebEx or teleconference, if we could 20 -- I'll start. Chuck, can you introduce yourself? 21 22 Excuse me. Identify, you know, the category which you

Page 5 1 represent? 2 MR. BONNEAU: He may not have had access yet. CHAIR CANNON: How about Scott Mabry? 3 4 Christopher Fought? 5 MR. FOUGHT: Yeah, this is Chris Fought, б Public Representative. 7 CHAIR CANNON: All right. Fravel Combs? 8 Scott Earnest? 9 MR. EARNEST: Scott Earnest with NIOSH, 10 Federal Rep. 11 CHAIR CANNON: Palmar Hickman? 12 MR. HICKMAN: Palmer Hickman here, Employee 13 Representative. 14 CHAIR CANNON: Ron Sokol? Wes Wheeler? And 15 Richard Tessier? MR. TESSIER: Richard Tessier, Employee 16 17 Representative. 18 CHAIR CANNON: All right. Joey, I have a 19 question. Do we have to go back through since we didn't get an affirmative from --20 21 MR. GILLILAND: We have a quorum. 22 CHAIR CANNON: We do, yes. All right. Well,

1 we have enough for a guorum. I'd also like to announce that we will have two members that are not 2 3 joining us for today's meeting: Cindy DePrater, who's 4 an Employer Representative, and Mark Mullins, who's an 5 Employee Rep; however, he has given his proxy vote to Chris Trahan Cain. All right. So we've gone through 6 7 that. We'll get started and our first item of 8 business will be an OSHA Update by Ms. Loren Sweatt, 9 Principal Deputy Assistant Secretary. 10 OSHA Update

11 MS. SWEATT: Is this mic working? Good 12 morning, everybody. I appreciate your patience as we 13 work through the IT challenges that are this building and apparently this room. So I want to start by 14 15 noting that the draft proposal we're here to discuss 16 today is at OMB and this meeting can impact the 17 document.

To date a lot of work has been done to address litigation challenging OSHA's January 2017 beryllium regulation. You should consider the actions taken today as another step forward towards resolution of these challenges. Take the opportunity provided by

1 this advisory committee process to private
2 construction criticism, constructive criticism to OSHA
3 and their subject matter experts.

For the construction industry, OSHA has evidence that the only operations within the scope of the beryllium construction standards are abrasive blasting operations with certain abrasive blasting media. To date, OSHA has not received any additional data demonstrating there are beryllium exposures outside of this operation and construction activities.

11 Considering the comments received in the 12 record on both OSHA's proposal to rescind the 13 ancillary provisions for the beryllium construction standard and the Agency's rulemaking activities for 14 15 the general industry standard, OSHA is now proposing 16 to update certain ancillary provisions of the beryllium construction standard rather than revoking 17 18 them entirely.

19 This update is geared to better tailor the 20 requirements to the construction industry, considering 21 the limited exposure to beryllium, and to align with 22 changes to general industry standard where

	Page o
1	appropriate. This will provide stakeholders another
2	opportunity to comment on the beryllium rule.
3	Please be mindful that there are a lot of
4	moving parts. OSHA is coordinating the timing of this
5	proposal with the publication of the rule that
6	declines to revoke the ancillary provisions, as well
7	as the general industry proposal published in December
8	2018. This proposal was sent to OMB on August 27.
9	I want to stress to you three things this
10	morning. As agency head, I am asking ACCSH to make a
11	recommendation today. This is a notice of proposed
12	rulemaking, not a final rule. By virtue of the
13	advisory committee structure, you're being given two
14	opportunities to comment on this rule today and during
15	the comment period.
16	While the regulatory texts may not be
17	available today, OSHA's designated federal officer,
18	Scott Ketcham, and subject matter expert, Maureen
19	Ruskin, will walk you through the finer points of what
20	we are able to disclose so that you can understand
21	where we are in the process and that you can help us
22	by providing the most informed feedback possible.

1	Again, I thank you for offering to serve on
2	this committee and for your input today, and I look
3	forwards to hearing a conclusion at the end of this
4	meeting. Unfortunately this one went a little further
5	than I thought was, so I'm running off to my next one.
6	Good luck. Thank you.
7	CHAIR CANNON: All right. So next on the
8	agenda, as Loren mentioned, the update on the
9	beryllium standard for construction. That will be
10	conducted or presented by Maureen Ruskin, who's the
11	Deputy Director of the Directorate of Standards and
12	Guidance.
13	One thing I think we're going to announce as
14	far as the public comments are concerned correct,
15	Scott after Maureen delivers her presentation
16	before the ACCSH members kind of debate and discuss
17	the proposal, we're going to allow for public comment.
18	And I think we have four who are signed up at this -
19	mia i emini we nave roar who are bighta ap at emp
	no, we have three I'm sorry that are signed up
20	
20 21	no, we have three I'm sorry that are signed up

ACCSH Meeting

	Page 10
1	and Jeff Tanenbaum on behalf of the Abrasive Blasting
2	Manufacturers Alliance and Harsco Cooperation. So
3	after Maureen gives her presentation, we'll allow for
4	the public comment and then, and then ACCSH will
5	debate and discuss the proposal. Chris?
6	MS. CAIN: Chris Cain. I noticed there was a
7	message popped up here from Chuck Stribling, asked if
8	he was heard when he introduced himself.
9	CHAIR CANNON: Okay. No, he was not.
10	MS. CAIN: Okay. So, Chuck, we can't hear
11	you.
12	CHAIR CANNON: No. Is there a way to confirm
13	with the operator that all the ACCSH folks have been
14	given access? And there were quite a few that, you
15	know, Fravel, Ron Sokol, Scott Mabry, and Wes were
16	also
17	UNIDENTIFIED MALE SPEAKER: We have four more
18	members.
19	CHAIR CANNON: Yeah, that we did not hear
20	from. All right. While they work through that,
21	Maureen, if you will?
22	ACCSH's Consideration of and Recommendation of, the

Page	1	1
Eage		-

1	Update on OSHA's Beryllium Standard for Construction
2	(This includes Public Comments.)

3 MS. RUSKIN: Thank you very much. Good 4 morning, everyone. And I want to thank ACCSH for convening this meeting here today to discuss this very 5 important standard and for giving me an opportunity to 6 7 present. I am just one person who has been working on 8 beryllium. We do have a team of experts, both who are in the room here with me today, Tiffany Defoe, 9 10 Director of the Office of Metals, as well as Bill 11 Perry, the Director of Standards and Guidance. And T 12 have Brian Broecker from our solicitor's office 13 sitting next to me.

I'm going to spend some time reviewing where we are now and the path that we took to get here, detailing, and then detailing the changes we are seeking to propose for construction from the 2017 final rule. Now we were going to see whether I can actually change my slide. Oh, very good.

20 So back in January 2017, OSHA published a 21 final rule on the occupational exposure for beryllium 22 and beryllium content compounds in the federal

	Page	12
--	------	----

1	register. We proposed three separate standards, one
2	for general industry, construction, and shipyards, and
3	in this proposal we lowered the permissible exposure
4	limit from 2 micrograms to .2 micrograms and
5	established a new short term limit of 2 micrograms per
б	cubic meter. The standard also contained ancillary
7	provisions similar to those found in other OSHA
8	comprehensive health standards.
9	Back in May 8th, on May 8th, 2014, OSHA
10	presented several options to ACCSH. Counting back, I
11	was surprised to hear that that was five-and-a-half
12	years ago that we did that. There at that meeting
13	some of you may recall we presented three options to
14	ACCSH. We, we were considering a PEL only option, a,
15	a PEL and medical surveillance option, as well as
16	Option 3, which was to include construction in the
17	scope of general industry and have a full standard
18	with complete ancillary provisions.
19	Some of the ACCSH members brought up the fact
20	that they were concerned that OSHA did not provide
21	regulatory text and some other information such as the
22	impacts on construction and employers. I'm here to,

1 today to go through and detail the changes that we are 2 going to make from the 2017 rule. The conclusion from 3 the ACCSH meeting back in 2014 on a 10 to 4 vote was 4 to proceed with Option 3, which was a full beryllium 5 standard with ancillary provisions.

In the 2015 proposal, while construction was not included in the main standard, it was discussed as alternatives and outlined very similar options that we had outlined to ACCSH.

10 So just to recap, just some high level 11 messages for the construction industry. While we 12 brought construction into the, under the scope of the 13 beryllium rule, we did have some exemptions for this One was that we exempted articles as defined 14 rule. 15 under the HazCom standard, and two, as you see up on 16 this slide, we also exempted materials that contain less that .1% beryllium by weight and the employer had 17 18 objective data demonstrating that employee exposures 19 would remain below the action level.

20 OSHA had evidence that the primary operation 21 that would produce exposures of concern in the 22 construction industry was abrasive blasting with

1 media, you know, certain media that contained trace 2 amounts of beryllium in the media. And this is mainly 3 due to the fact that even though these were very small 4 amounts, the exposures were extremely high under these 5 operations, and not only would there be exposures 6 above the new PEL, we had evidence of exposures over 7 the old PEL of 2 micrograms.

8 Subsequent to the 2017 final rule, OSHA proposed in June 27 to revoke the ancillary provisions 9 10 for both construction and the shipyards industries and 11 to retain the new lower PEL of 2 micrograms and the 12 STEL, the new lower PEL of 2 micrograms and the STEL 13 of 2 micrograms. OSHA sought additional information on whether existing OSHA standards provided similar or 14 15 equivalent protections for workers exposed in these 16 industries. We provided a 60 day comment period and 17 we received over 70 unique comments in response to 18 this proposal. During this time OSHA enforced the 19 PELs while the rulemaking was underway.

20 Concurrently during this time, as Loren 21 indicated, OSHA was in negotiation with others for 22 general industry. Several of these litigants while

1	were stakeholders of more traditional beryllium
2	industries, also included industries that handle
3	materials of only trace amounts of beryllium. We
4	decided through these negotiations that we would
5	clarify portions of the standards and we did this
б	under two rulemakings.
7	The first rulemaking was a direct final rule.
8	This was in the spring of 2018 and here OSHA indicated
9	its intent that it never intended for provisions aimed
10	at protecting workers from the effects of dermal
11	contact to apply in the case of materials containing
12	only trace amounts of beryllium absent of significant
13	airborne exposures.
14	And so this came in a few forms in this
15	direct final rule. There were clarifications of
16	provisions related to dermal contact and beryllium
17	contamination, and additionally there were
18	clarifications of OSHA's intent with respect to
19	provisions for disposal and recycling.
20	The DFR came in effect on July 16, 2018 since
21	OSHA did not receive any substantive adverse comments.
22	While not all of these changes in the DFR apply to

	Page 16
1	construction, several of them overlapped with
2	provisions in the 2017 final rule. And I will talk
3	later on on how we incorporated some of these.
4	The other rulemaking activity that, that OSHA
5	proceeded with for general industry is that in
б	December 2018, OSHA published a substantive NPRM to
7	modify several of the general industry beryllium
8	provisions. These included definitions, methods of
9	compliance, personal protective clothing, equipment
10	and equipment, hygiene areas and practices,
11	housekeeping, medical surveillance, communication of
12	hazards, and recordkeeping. The proposed
13	modifications provided clarifications and were meant
14	to simplify or improve compliance. And OSHA is
15	currently completing this rulemaking.
16	While many of these changes were specific for
17	general industry, such as the approach for beryllium
18	work areas, several of them did overlap with the 2017
19	final rule for beryllium in construction and
20	shipyards. In particular would be the medical
21	definitions and medical surveillance changes, as well
22	as the change in recordkeeping.

1	So where are we now in the construction
2	rulemaking process? OSHA has thoroughly reviewed the
3	comments that we received in the record and then,
4	however, while OSHA standards contain some
5	requirements that overlap with the requirements of the
6	beryllium standards for construction, most of the
7	ancillary provisions, there's only partial overlap and
8	in some cases there's no overlap at all. For example,
9	in construction we have the requirement for the
10	competent person to ensure that it manages the area
11	where there are high exposures in beryllium to keep
12	other employes outside of this area. There are no
13	other provisions in OSHA standards that would provide
14	this type of protections.
15	Additionally, medical surveillance is
16	specific to beryllium. There are no other standards
17	even though some abrasive blasters may be in a medical
18	surveillance program. There are no provisions that
19	would be specific to beryllium.
20	Therefore, at this point OSHA is moving on

Therefore, at this point OSHA is moving on with construction and shipyards. It is doing this under two actions, one a final rule declining to

1	revoke the ancillary provisions, and addressing
2	compliance dates. And here as I mentioned before,
3	while there is no complete overlap and in many cases
4	no overlap at all, OSHA has a statutory reasonability
5	to protect works who face significant risk of material
6	impairment of health from beryllium exposure, and
7	therefore the Agency cannot issue a final rule
8	revoking all the ancillary provisions in the standard.
9	We are also now intending to propose updates
10	to the 2017 rule that are tailored to the construction
11	industry. So at this point I'm going to go over these
12	changes, many of which, I'm going to start with a high
13	level and then start drilling down to the specific
14	changes that we are making.
15	So overall when we were considering making
16	these changes to the standard one, we wanted to take
17	into account the unique issues of airborne exposures
18	in the beryllium, to beryllium in the construction
19	industry. Two, we wanted to clarify OSHA's original
20	intent in how to handle the provisions when you're
21	handling materials containing less than .1% beryllium
22	by weight. And finally, align the medical definitions

Page	<u>19</u>
Faye	ニエノ

and the corresponding provisions that, that we propose
 to change in the general industry.

3 So this is just a high level overview on 4 where we are making the changes and what drove our 5 decisions on these changes. If you notice, I did not 6 list every single provision here, and in that case you 7 can make the assumption that those provisions are not 8 changing.

9 So broadly speaking, OSHA is proposing to 10 make the following revisions. We are planning to make 11 updates to the definitions. These are primarily 12 updates in provisions that relate to medical 13 surveillance and medical testing. These are the same, 14 exactly the same as we proposed in the 2018 NPRM for general industry; however, we wanted to provide the 15 stakeholders in this industry a chance to comment on 16 17 them as well.

One additional change that we are making here is that we are removing the definition of emergency and all the subsequent references in the standard. This is from OSHA's understanding on how materials are used in abrasive blasting and that in the case of

emergency where you would increase beryllium exposure, 1 2 that this would be under normal operations in use. 3 Continuing on with our proposed changes, we 4 are proposing to simplify the written exposure control Here we would only require one list of 5 plan. operations or job titles expected to be involved in 6 7 exposure to beryllium. We are removing the 8 requirements to list procedures related to dermal contact, and this would include procedures for cross 9 10 contamination, migration of beryllium, and handling of 11 PPE. 12 And we have added one additional provision 13 here, and this is to ensure the integrity of each containment used to minimize exposures to employees 14 15 outside the containment. This is not a requirement to use a containment. This is only requirement that if 16 you use a containment, containment system, that you 17 18 ensure that it is intact. 19 Secondly under method of compliance, we are removing the list of specific controls for exposures 20 21 above the action level. This was a provision that is 2.2 specific to general industry. However, we are

Page 2	21
--------	----

1	maintaining the requirement to apply the hierarchy of	f
2	controls for exposures above the PELs.	

We are removing the specific requirements for hygiene and hygiene practices; however, these provisions are already accounted for under existing requirements in the sanitation standard and would still apply.

8 Finally, we are making changes that are related to dermal contact and this is seen in several 9 10 forms throughout the standard. First, we are removing 11 the dermal trigger for PPE; however, there will still be a trigger for exposures above the PEL. We are 12 13 removing the PPE handling requirements except those 14 intended to maintain PPE effectiveness or minimize 15 airborne exposure.

We are removing the requirements for warning labels for disposal and recycling of materials, and we are tying housekeeping requirements to the presence of operations causing or likely to cause airborne exposures above the TWA or STEL. We are revising the requirements for the referral to the CBD Diagnostic Center to align with general industry proposal. And

1 finally, also to align with both the general industry 2 proposal. And our more general standards improvement 3 process, and we are removing the requirements to 4 report Social Security numbers.

5 So our next steps, as both Loren and I have 6 indicated, OSHA has sent the proposal to OMB. That 7 was done on August 27th. When we publish this 8 proposal, we will provide time for stakeholders to 9 comment. We will also hold a public hearing. The 10 date will be announced in the proposed notice. And 11 OSHA welcomes all commenters to comment on the 12 proposed changes and we look forward to everyone's 13 participation.

As we indicated, we look forward to ACCSH's comments. We will put the meeting minutes into the docket, as well as any other comments from ACCSH. So it will be fully considered while going through the rulemaking process. And of course any individuals both on ACCSH or any other interested party, we welcome comments as well.

So finally here today as Loren indicate,indicated, we are now seeking a recommendation from

1	ACCSH about publishing the planned notice of proposal
2	rulemaking and this is to revise the beryllium
3	standard for construction to ensure that the ancillary
4	provisions are tailored to construction industry and
5	align with the general industry standards where
6	appropriate. Thank you.
7	CHAIR CANNON: Thank you, Maureen. As I
8	mentioned, we're going to do the public comments
9	before we ask any questions of you. So with that, I'd
10	like to start with Shanna Devine, Public Citizens.
11	MR. BONNEAU: She's on the phone.
12	CHAIR CANNON: Are you on the phone?
13	MS. DEVINE: I am here. Are we ready for
14	questions?
15	CHAIR CANNON: Yes. We're going to do it
16	targeted, right with
17	MR. BONNEAU: Yeah, we're talking to the
18	first person that signed on, is a Ms
19	CHAIR CANNON: Shanna Devine.
20	MR. BONNEAU: Shanna Devine.
21	OPERATOR: Shanna Devine, if you would press
22	star one. Once again, Shanna Devine, please press

1	star one to	ask your	question.	Shanna	Devine,	your
2	line is now	open.				

3 MS. DEVINE: Okay. Thank you. Can I begin? 4 CHAIR CANNON: Yes, thank you, Shanna. 5 MS. DEVINE: Okay. Thank you. Thank you so much for holding this meeting and for the opportunity 6 to comment. Public Citizen is a consumer advocacy 7 organization with more than 500,000 members and 8 9 We do oppose the proposal to rescind for supporters. 10 construction and shipyard workers the ancillary 11 provisions from OSHA's final 2017 beryllium rule. 12

I'm very pleased to hear that OSHA is 13 reconsidering the ancillary provisions which are absolutely necessary to protect workers and to prevent 14 15 diseases. In its 2017 final rule, OSHA's primary 16 argument for eliminating these provisions is that some 17 workers in these industries who are exposed to 18 beryllium are already protected through other 19 regulations. This argument falls short for several reasons, which I'll briefly summarize. 20

First, it's untrue that all of the ancillary
provisions overlap with existing OSHA regulations as

Page 2	25
--------	----

1	acknowledged in the earlier presentation. For
2	instance, should OSHA rescind the ancillary
3	provisions, employers would not be required by any
4	regulation to do the following: Adhere to a
5	prescribed schedule for the measurement of airborne
6	beryllium; notify employees and maintain written
7	records for the level of such measurements; establish
8	regulated work areas for tasks that release toxic
9	levels of beryllium; maintain a written plan to
10	control beryllium exposures; institute engineering and
11	work practice controls, medical surveillance, and
12	medical removal when airborne beryllium levels exceed
13	the action level; maintaining clean work areas free
14	from beryllium; and communicate with and train
15	employees on the hazardous beryllium and mitigation
16	strategies.
17	Second, any overlap in regulations should not
18	impose new costs or other burdens on employers because
19	they'll already be in compliance.
20	Third, the cited existing regulations, some
21	which are decade old, were not drafted specifically to
22	protect workers from the unique hazards of beryllium;

Page 2	6
--------	---

1	whereas, the ancillary provisions were drafted over
2	nearly 15 years of exhaustive input from both
3	occupational health and safety experts, as well as
4	industry who relied on the latest science regarding
5	particular hazards of beryllium exposure. This is
6	critical because airborne beryllium causes harm
7	through a mechanism that's atypical of occupational
8	chemical exposures. It exerts its life long and fatal
9	harm through the immunological sensitization process
10	that triggers at extremely low concentrations in short
11	term exposures.
12	Forth, relying solely on engineering controls
13	to protect workers from beryllium exposure will not
14	provide adequate protection for workers. OSHA's
15	inability to adequately enforce its regulations
16	through workplace inspections is well known. Many
17	employers will undoubtedly fail to comply with OSHA's
18	exposure limits and workers will likely be unaware of
19	such noncompliance.
20	Yet workers will know whether their employers
21	follow the ancillary provisions such as regular
22	airborne monitoring and periodic medical surveillance,

1	and therefore, they can act to pressure their
2	employers to either file, pressure their employers to
3	comply with the standard or file with subsequent
4	complaints to ensure compliance.
5	Fifth, the fact that some general industry
6	workers may also be protected from some beryllium
7	exposures did not prevent OSHA from retaining the
8	ancillary provisions for general industry employers.
9	It recognized the important specific protections
10	against the unique hazards of beryllium and should
11	apply that same logic for construction and shipyard
12	workers.
13	We're very glad to hear and may consider
14	doing so through the latest proposal. And for these
15	reasons, Public Citizen opposes the original proposal
16	to rescind for construction and shipyard workers the
17	ancillary provisions from OSHA's final 2017 beryllium
18	rule. Thank you very much.
19	CHAIR CANNON: Thank you, Shanna. That was a
20	lot said in a short period of time. If, and I'm just
21	going to ask this question. Do you have a written
22	statement that you'd be interested in submitting to

	Page 28
1	the, the record for the meeting?
2	OPERATOR: Shanna, will you press star one
3	again?
4	CHAIR CANNON: Yeah, Shanna, again, you, you
5	provided us with a very lengthy statement and I don't
6	think everyone was able to catch it. So if you could
7	submit a written
8	MS. DEVINE: Yes. Yes, I'd be happy to do
9	so. Sorry. I read fast due to the short time, but
10	I'd be happy provide a short statement as well.
11	CHAIR CANNON: Okay. Thank you. Appreciate
12	it. All right. We'll move on to our next public
13	speaker, Jeff Tanenbaum, with the Abrasive Blasting
14	Manufacturers Alliance.
15	MR. BONNEAU: Operator?
16	OPERATOR: I am here. Jeff, please press
17	star one. Jeff, your line is now open.
18	MR. TANENBAUM: Good morning, Mr. Chairman
19	and members of the committee. Can you hear me now?
20	CHAIR CANNON: Yes, we can hear you.
21	MR. TANENBAUM: Very good. Thank you. I'm
22	Jeff Tanenbaum with Nixon Peabody representing the

1	Abrasive Blasting Manufacturers Alliance, ABMA, and
2	Harsco Corporation, a member of the ABMA, and also
3	individual. The ABMA members including Harsco
4	manufacture various types of abrasive blasting media
5	used in construction and we have a particularly strong
6	interest in OSHA's regulation of beryllium in
7	construction, especially because OSHA has now focused
8	its attention on abrasive blasting as producing
9	beryllium exposures of concern in the industry.
10	Let me start preliminarily by noting that
11	we're concerned that OSHA provided a limited number of
12	days prior to this meeting, and only on September 4th,
13	the day after Labor Day, and the days these written
14	comments were due, that OSHA published any description
15	of, of what it's now proposing to do. And OSHA still
16	hasn't provided ACCSH with an actual list of its
17	proposed standard.
18	OSHA didn't need to proceed in this, in this
19	way, and unfortunately we believe that OSHA has
20	precluded stakeholders from being able to provide
21	thorough information to ACCSH so that ACCSH can
22	thoroughly fulfill its statutory duty of advice and

	Page 30
1	counsel to, to OSHA. And we urge ACCSH to now take
2	the time to thoroughly review these issues.
3	Second preliminary comment, it's important to
4	recognize that although the previous comments from the
5	Agency suggests it's some abrasive blasting media that
6	may be at issue here. As a practical matter, all
7	abrasive blasting operations involve exposure to a
8	range of hazardous substances, not just from abrasive
9	blasting media, but also the surfaces, coatings, and
10	substrates that are subject to abusive blasting. And
11	for that reason, abrasive basting is already highly
12	regulated, including, but not limited, to requirements
13	for extension respiratory protection and other PPE.
14	The ABMA and its members fully support this
15	preexisting regulatory framework. And we're concerned
16	in the way in which OSHA describes the issue because
17	it's caused confusion in the industry. To be clear,
18	the proposed rule applies to abrasive blasting using
19	any type of media. Beryllium is a widely present,
20	naturally-occurring mineral and will be found in trace
21	amounts in virtually all abrasive blasting media, as
22	well as the coatings, surfaces, and substrates to be

1 blasted.

2	So it, it can't be completely avoided. Now					
3	only trace amounts of naturally-occurring beryllium					
4	are found in abrasive blasting media with the OSHA					
5	definition of trace amounts here as being below 0.1%					
6	by weight, and actually the abrasive blasting media					
7	contains amounts far lower than that. So as an					
8	example, coal slag, it's typically .0002% or lower.					
9	And by contrast, that's approximately three times					
10	lower than you'll find beryllium by weight in typical					
11	soil.					
12	And of great importance, it's many thousands					
13	of times lower than the amount of beryllium found in					
14	some of the alloyed products in general used in					
15	general industry. And unfortunately, what we have					
16	discovered over the last five plus years of the					
17	rulemaking process, that OSHA has been erroneously					
18	conflating exposure to naturally-occurring beryllium					
19	in trace amounts and exposure to much higher levels of					
20	beryllium alloys in this effort to extend the general					
21	industry regulations to construction and shipyards,					
22	excuse me, shipyards as well.					

1 The simple point is the type of beryllium 2 matters and the amount of beryllium matters. And we 3 urge ACCSH to, to very carefully study that issue and 4 advise OSHA on it. It's an important distinction for 5 the construction industry.

Further, OSHA's detailed preexisting 6 7 regulations governing abrasive blasting have proven 8 very effective in preventing exposure to beryllium in abrasive blasting operations. And indeed, all these 9 10 years of rulemaking activity have encouraged, have 11 uncovered no documented evidence of adverse health 12 effects from beryllium exposure from abrasive 13 blasting.

And despite that absence, or maybe as a 14 15 result of it, OSHA has spent years now going back and 16 forth and some of that was described in the earlier 17 presentation by the Agency, but let me summarize that 18 for you. There's been this whipsawing back and forth 19 over the years. OSHA initially and directly 20 determined it shouldn't regulate trace amounts of 21 beryllium and that the construction and shipyard 22 sectors shouldn't be included in the new proposed

Pad	яe	33

1	beryllium	regulations,	but	asked	for	input	on	whatever
2	it should	be so.						

Despite receiving no credible evidence to support it, OSHA then suddenly reversed itself and published the rule mentioned earlier, extending the new beryllium rule to construction and shipyards, but did so without publishing those significant late amendments and providing an opportunity for stakeholders to fully comment.

And then OSHA reversed itself again and published the new proposed beryllium rule eliminating all requirements for construction and shipyards, except for the (inaudible). In other words, eliminating those ancillary provisions discussed earlier.

To briefly summarize, there is no legal, scientific, or medical basis for OSHA to be imposing new beryllium regulations in construction. Abrasive blasting is already highly regulated under more than 20 preexisting standards which have been effective, and further regulation is going to impose unnecessary burdens, not just on employers, but employees and

1	incur substantial expenses that are just not
2	justified.
3	CHAIR CANNON: Mr. Tanenbaum? Jeff?
4	MR. TANNENBAUM: Yes.
5	CHAIR CANNON: If you could just wrap it up
6	in next exactly 30 seconds or so. We have other
7	public speakers behind you.
8	MR. TANENBAUM: I will do my very best with
9	the limited time. So as ACCSH members know, the
10	Secretary's required to propose a standard that's
11	reasonably necessary and appropriate to remedy a
12	significant risk of material health impairment before
13	issuing that standard, and, and provide a threshold
14	finding that there are significant risks present and
15	can be eliminated or lessened by a change in practice.
16	The rulemaking record is devoid of that evidence.
17	OSHA had noted that the information is
18	limited. OSHA has found the hazards inherent in
19	abrasive blasting are already effectively controlled
20	through numerous other standards. And employees are
21	already required by preexisting standards to use the
22	same effective respiratory protection.

Deere	ЭΓ
Page	30

	Page 35
1	We are asking in summary that ACCSH please
2	take the time now to review these issues, not just
3	look at the revised or proposed revised ancillary
4	provisions, but now take the time to look at the
5	standards as a whole. Thank you.
6	CHAIR CANNON: Thank you. All right. Our
7	next public speaker is Peggy Mroz with the National
8	Jewish Health.
9	OPERATOR: Peggy, please press star one so I
10	can open up your line, please.
11	MR. MROZ: Hello. This is Peggy Mroz. Am I
12	can you hear me?
13	CHAIR CANNON: Yes, we can hear you. Can you
14	hold for a second, please? We want to upload your
15	PowerPoint presentation.
16	MS. MROZ: Oh, that would be great.
17	CHAIR CANNON: Peggy, we have your
18	presentation uploaded, and if you could, as you
19	right now we have the opening slide. As you want us
20	to advance a slide, just please indicate, so.
21	MS. MROZ: Great. Thank you so much. Good
22	morning, everyone, and thank you for the

1 CHAIR CANNON: Before you get started so
2 that, you know, I'm not having to interpret you, I
3 just wanted to make you aware that you asked for 15
4 minutes.

5 MS. MROZ: Okay. I should be able to finish before then. So good morning, everyone, and thank you 6 7 very much for the opportunity to offer comments on the 8 beryllium exposures in the construction industry. Ι represent National Jewish Health and we are the 9 10 division of environmental and occupational health 11 sciences. And we represent occupational worker safety 12 and health. We see patients clinically and we have 13 been involved in beryllium health and safety for over 30 years. Next slide, please. Is there a way to get 14 15 to the next slide? Okay. Thank you.

We support the lower exposure limits and the retention of the ancillary provisions. We really think that it's important to retain those ancillary provisions in order to protect workers from the health effects of beryllium exposure. The lower PEL of .2 micrograms per cubic meter and a STEL of 2.0 micrograms per cubic meter will protect workers.

1	However,	they	can't	protect	workers	unless	the
2	ancillary	v prov	visions	are re	tained.		

3 Exposure monitoring and medical surveillance 4 for beryllium sensitization and chronic beryllium disease are key in preventing beryllium sensitization 5 and chronic beryllium disease. If we don't monitor б 7 exposures and if we don't look for heath effects with 8 medical surveillance, those lowered exposure limits aren't going to help. Many of the engineering and 9 10 personal protective equipment provisions are already 11 in place in the construction industry as we heard in 12 the previous talk. Many of those are ready there. So 13 there's not going to be a lot of changes that are 14 needed there.

15 But the exclusion of the ancillary provisions will lead to unrecognized cases of chronic beryllium 16 17 disease even in light of this reduced standard. And 18 we heard earlier that there hasn't been any recognized health effects related to abrasive blasting. 19 However, no one has yet looked with medical surveillance and 20 21 the beryllium lymphocyte proliferation test which 22 looks for beryllium sensitization. So lowering the

ACCSH Meeting

Page 38

standard without providing guidance for beryllium specific monitoring and medical surveillance will not
 protect workers. Next slide, please.

4 So National Jewish Health encourages the retention of these ancillary provisions. 5 The ancillary provisions are the core of a comprehensive 6 7 beryllium rule. We need exposure monitoring. We need 8 to look and see if these abrasive blasting or other exposure-generating events are causing exposure that 9 10 is of concern. We need regulated areas as they're 11 needed to be provided, a written exposure control 12 plan, protective equipment and work clothing, hygiene 13 areas and practices, housekeeping, medical surveillance, medical remover (sic), and worker 14 15 training that does mention beryllium exposures. 16 Information gathered through the 17 implementation of these provisions provide health and 18 safety personnel with the data that they need to 19 ensure that workers are or are not being adequately protected from over exposure to beryllium. 20 Next slide. 21

22

And one thing that hasn't been mentioned yet

1	and I wanted to bring into this is that trade workers
2	and construction workers in beryllium areas and in D&D $$
3	(ph) should be included under the rule. Any workers
4	that are involved in alteration, charges, demolition,
5	or construction in a beryllium area, past or present,
6	even though beryllium is no longer being worked in
7	that area, they are at risk of exposure due to dust
8	disturbing activities and that has been shown in a
9	number of studies that are looking at workers who have
10	worked in construction or in demolition and
11	decontamination work, especially, mostly in Department
12	of Energy Facilities.

13 But if we look into the general beryllium industry, we can see that happening too. 14 Many 15 construction industries use beryllium-containing non-16 sparking tools. Grinding and cleaning of these tools 17 can lead to significant exposures and that has been 18 shown in studies that have looked specifically at tool 19 grinders and people who are working in, in, in tool cribs who are exposed to the cleaning and grinding of 20 those tools. 21

2.2

Construction workers who provide contract

1	services to beryllium industries may not be covered by
2	the general industry standards. In 2000, Ohio
3	construction workers filed a class action suit against
4	then Brush Wellman for medical testing of up to 7,000
5	union workers who were exposed to beryllium while
6	doing contract work. And there's a reference there if
7	you wanted to go take a look at that.
8	And we have diagnosed chronic beryllium
9	disease in contract construction workers in the
10	primary beryllium industry and manufacturing
11	industries who have only worked for short periods of
12	time, from weeks to months. So as contact
13	construction workers, they are not employees of that
14	general industry and thus are not covered by their
15	medical surveillance provisions.
16	And just of note, we've also seen beryllium
17	sensitization in OSHA inspectors who have entered
18	beryllium-using facilities for brief periods. I know
19	this isn't related to construction, but again,
20	contract workers or ancillary workers who are coming
21	in to a general beryllium industry aren't covered by
22	the general industry, medical surveillance, and

1 exposure standards. Next one, please. 2 And then getting back to exposures from abrasive blasting, blasting, the Center to Protect 3 4 Worker's Rights, Center for Construction Research and 5 Training, published research regarding the exposures during abrasive blasting, and there's a reference for 6 you, they measure airborne beryllium concentration of 7 8 up to 9.5 micrograms per cubic meter during abrasive blasting with coal slag. So even though there are 9 10 very low levels of exposure in that coal slag, once the abrasive blasting procedure is going on, it's 11 12 generating higher exposures. 13 They reported average exposures that were almost 50 times the new PEL of .2 micrograms per cubic 14 15 With any abrasive blasting using a berylliummeter. containing material, beryllium exposure monitoring is 16 17 absolutely necessary. So even if we have these lower 18 standards, we need to monitor to make sure that the 19 industry is keeping those exposures below that. And any workers exposed at or about the action level for 20 21 at least 30 days should be eligible for medical

22 surveillance with the BeLPT. Next slide, please.

Page 42

1	So as I've been trying to emphasize, exposure
2	monitoring and medical surveillance are necessary.
3	Compliance with this new exposure level will still
4	require beryllium specific exposure measurements when
5	a construction, abrasive blasting, and welding are
6	taking place. Medical surveillance will ensure that
7	workers who develop beryllium sensitization and
8	chronic beryllium disease are caught early, preventing
9	more severe disease. Beryllium medical surveillance
10	using the BeLPT should be mandatory if workers are
11	exposed. Comprehensive medical surveillance protects
12	not only the individual worker, but the entire
13	workforce.
14	Identification of a single beryllium
15	sensitized worker can indicate an unrecognized source
16	of exposure. And research by Mike Van Dyke and our
17	group here at National Jewish showed that the most
18	susceptible individuals are still at risk even with
19	the current PEL of .2 micrograms per cubic meter. We
20	know that there is a genetic risk that is associated
21	with susceptibility to beryllium sensitization and
22	chronic beryllium disease. And our data have shown

ACCSH Meeting

Page 43

1 that even with exposures less than .02, those who are 2 most susceptible genetically can still go on to 3 develop sensitization and disease.

And exposure monitoring and medical surveillance allows management to proactively provide protection for workers who may perform the same or similar tasks or work in the same building or area. So again, medical surveillance allows us to protect not only the individual, but the entire work force. Next slide, please.

11 And as was mentioned earlier, many of the 12 ancillary provisions are already in place. Compliance 13 with the existing standards and construction already provide many of the protections required in the 14 15 beryllium rule for general industry, engineering controls, personal protective equipment. Beryllium 16 ancillary provisions will require minimal additional 17 18 financial or administrative burden. Beryllium 19 exposure monitoring and documentation is key to maintaining the lowered exposure limits. 20

21 Some of the medical surveillance provisions 22 for general industry could also be excluded, such as

1	the medical exam and the breathing, breathing test
2	which would also be part of the comprehensive
3	Respirator Fit program, which is mandatory for the
4	construction industry, and establish construction
5	safety education and training needs to include a
6	specific section of the risk of beryllium exposure and
7	the associated health effects.
8	The unique exposure response and the genetic
9	risk factors of beryllium disease should be included
10	in the work education and safety training. And the
11	next slide, please.
12	Just in summary, the new exposure limits will
13	protect workers, but ancillary provisions are the core
14	of a comprehensive beryllium rule. Trade workers,
15	construction workers, and contract workers in
16	beryllium areas and/or D&D should be included under
17	the rule. Abrasive blasting with coal slag can
18	produce high beryllium exposures that need to be
19	monitored and documented in order to protect workers.
20	Exposure monitoring and medical surveillance
21	for beryllium disease should be included. This
22	ensures that exposed individuals have access to

1	medical surveillance and it will identify individuals
2	with beryllium sensitization if they exist, providing
3	continuous feedback to ensure safe exposure levels.
4	And as I said before, many of the ancillary provisions
5	are already in place in the construction industry and
6	they will be effective in preventing exposure to
7	beryllium. Thank you.
8	CHAIR CANNON: Thank you, Peggy. Appreciate
9	your presentation. Excuse me. At this point I think
10	we're going to open it up for the ACCSH members to ask
11	questions of Maureen. And then yes. But before we
12	do that, there were a few that I did not hear from
13	when we did the initial roll call. Chuck Stribling?
14	MR. STRIBLING: Good morning, Mr. Chairman.
15	CHAIR CANNON: Morning, Chuck. All right.
16	Scott Mabry?
17	MR. MABRY: Yeah, Scott Mabry's here. Good
18	to hear from you.
19	CHAIR CANNON: Thank you, Scott. Fravel
20	Combs?
21	MR. COMBS: Good morning. Favel Combs is
22	here.

Γ

	Page 46
1	CHAIR CANNON: Morning, Fravel. Ron Sokol?
2	MR. SOKOL: Ron Sokol's here, Mr. Chairman.
3	CHAIR CANNON: And Wes Wheeler?
4	MR. WHEELER: Wes Wheeler's here, Mr.
5	Chairman.
6	CHAIR CANNON: All right. We're all here.
7	Now as I mentioned, you know, going back to Maureen's
8	presentation on what OSHA's proposing, I'd like to
9	open it up to, I guess I could start here in the room
10	to see if anyone had any questions of Maureen.
11	MR. SIZEMORE: Mr. Chair, Greg Sizemore,
12	Employee Representative. Maureen, thank you for your
13	time this morning. Based on the PowerPoints, it's my
14	understanding that OSHA's putting certain ancillary
15	provisions back in the standards and modifying them to
16	suit the construction environment. Can you explain
17	for me why OSHA decided to reverse its course? I may
18	have missed that reasoning from their June 27th
19	decision.
20	MS. RUSKIN: So on June 27, 2017, we proposed
21	to rescind the ancillary provisions. We were seeking
22	information on the protections of the ancillary

1	provisions versus OSHA's current standards. As I
2	said, we received over 20 unique comments addressing
3	these issues, and through the review of these
4	comments, OSHA's decision was that there was not
5	complete overlap, that there was only partial overlap,
6	and in some cases no overlap at all.
7	And therefore, OSHA is moving forward with
8	this proposal to tailer the construction provisions
9	for the construction industry and to seek comments on
10	that. So.
11	MR. SIZEMORE: Mr. Chair, one more question.
12	Is there any evidence I've heard a lot of
13	conversation with respects to chronic beryllium
14	disease in the general construction industry specific
15	to abrasive blasting. Is there any evidence of any
16	other tasks where that occurs in the construction
17	industry to your knowledge?
18	MS. RUSKIN: Are you talking about exposure
19	to beryllium?
20	MR. SIZEMORE: Yes.
21	MS. RUSKIN: The evidence that we have
22	through the information that is in our docket, that

1	the primary place of exposure is abrasive blasting and
2	we have evidence or exposure data from CPWR, from the
3	Navy, as well as our own exposure database that the
4	exposures that are seen in construction is through the
5	abrasive blasting operation.
б	MR. SIZEMORE: (Inaudible - off mic) guidance
7	to the contractor community or the employer community
8	as to what things they need to monitor, or are they
9	just going to have to monitor entire projects?
10	MS. RUSKIN: So usually when we publish a
11	rule, we do provide significant guidance and we will
12	continue to do that with this rule as well.
13	MR. SIZEMORE: Thank you.
14	MR. KROCKA: Randy Krocka, Employee
15	Representative. Maureen, thank you for that
16	presentation. On page 7 under the dermal contact area
17	you mentioned the removal of all warning label
18	requirements. Can you tell me why that, why that's in
19	there?
20	MS. RUSKIN: That was the requirements for
21	labeling materials for disposal or recycling. And we
22	were modeling those requirements similar to what we

1	had in the DFR where we were exempting the labeling of
2	those materials that only contained trace amounts of
3	beryllium. The thought behind that is that the
4	downstream users would not have significant exposures
5	as they would in the abrasive blasting operation.
6	MR. KROCKA: Okay. Thank you.
7	MR. SOKOL: Ron Sokol, Pubic Representative.
8	I have a question for you. I'm concerned about OSHA's
9	limitation of really the standard just abrasive
10	blasting when the last presentation that we heard
11	talked about construction workers that enter into
12	facilities that were involved in the utilization of
13	beryllium within the manufacturing process, and these
14	construction workers would be going into these
15	facilities doing, doing construction work, renovation,
16	remodeling, painting, all the things that OSHA defines
17	as, as construction work by the standard. Who would
18	this standard look to protect those particular
19	individuals?
20	MS. RUSKIN: So this standard would also
21	protect those individuals. We, you know, if there are
22	exposures above the action level, regardless of the

1	amount of, you know, if it's just trace amounts or if
2	they're greater than trace amounts, the standard would
3	still protect those individuals.
4	MR. SOKOL: Thank you.
5	MS. CAIN: Christine, Employee Rep. Loren
6	said that the proposed rule was at OMB right now. She
7	didn't say that the direct, or that the final rule was
8	there. Is that the case?
9	MS. RUSKIN: Well, both, both rules are
10	currently at OMB. They were sent at the same time.
11	MS. CAIN: And you're not thank you. And
12	you're not requesting input from ACCSH on the final
13	rule, are you?
14	MS. RUSKIN: No, our directive under OSHA is
15	that we're requesting input on the proposed rule.
16	MS. CAIN: What about maritime?
17	MS. RUSKIN: The reason I'm only talking
18	about construction today is that I'm before ACCSH. If
19	you notice that the, the title of the proposal that
20	went to OMB includes both construction and maritime.
21	MS. CAIN: No other questions. Thank you.
22	CHAIR CANNON: I have a question along the

	Page 51
1	lines of Chris's questions about the submission to
2	OMB, the final rule. I get the proposed rule, you
3	know. That's going to, something that you're
4	considering. Now this final rule, can you explain to
5	me, you know Loren mentioned the timing of
6	effective dates for, I'm assuming the 2017 rule. So
7	help me and others understand what exactly that means
8	as far as a final rule.
9	MS. RUSKIN: In that final rule we are
10	finalizing effective dates. So to give the
11	construction industry appropriate time to both comment
12	on this rule and then implement any changes.
13	CHAIR CANNON: Okay. So now what will
14	contractors be required to do?
15	MS. RUSKIN: I'm not sure quite sure I, I
16	understand.
17	CHAIR CANNON: Okay. We have, you know, you
18	have the, the lower PEL and the STEL.
19	MS. RUSKIN: And would be required to follow
20	the same standards as the abrasive blasting. They
21	would have to, under this rule.
22	CHAIR CANNON: And also along the lines of

1	Ron's question about, you know, other workers that,
2	you know I'm assuming he was mentioning the
3	beryllium manufacturers and producers as contracts go
4	in, but we also heard from some of our public
5	commenters about the grinding of non-sparking tools
б	and welding, and so
7	MS. RUSKIN: So we would really request
8	through this rulemaking that people submit us
9	information on that. To date we don't have any
10	exposure information on these types of activities. So
11	we would during this rulemaking putting out the call
12	for data. Please submit data to us.
13	CHAIR CANNON: And I think even Mr. Tanenbaum
14	mentioned like naturally occurring in soil. So those
15	are the types
16	MS. RUSKIN: Again, we do not have any
17	exposure information that shows that there are
18	exposures above the action level there. So, again, we
19	would request information on this. Our, our exposure
20	data shows that that's well below the action level.
21	CHAIR CANNON: And then depending upon the
22	data that's submitted, then the scope of the rule I'm

Page 53

1	assuming could be expanded beyond just abrasive
2	blasting?

MS. RUSKIN: When we finalize the rule, we finalize the rule on the entire record.

5 CHAIR CANNON: Thank you. We've heard from 6 Ron on the phone. Anyone else on the line as far as 7 the ACCSH members are concerned who have questions or 8 comments for Maureen?

MR. COMBS: Yeah, yes. This is Favel Combs, 9 10 Employee Representative. The question I have is 11 related to employer assistance in complying with the 12 regulation, assuming it goes into effect and is 13 passed. Is there any thought or information that OSHA has developed similar to the exposures of silica in 14 15 the construction industry where you provide table one to show very specific ways for the employer to comply 16 with the regulation? Thank you. 17

MS. RUSKIN: Thank you. At this point we do not have any plans to develop a table one similar to that of silica. Under silica there were many different operations versus here we anticipate that there's just this one operation. However, as I **ACCSH** Meeting

Page 54

indicated before, OSHA always provides guidance. We
 already have a website that has frequently asked
 questions and we would update that to include any
 unique issues for construction.

5 CHAIR CANNON: Anyone else on the line that6 has a question or comment for Maureen?

7 MR. WHEELER: Kevin, this is Wes Wheeler, 8 Employer Representative. One quick question was, I 9 think one of the presentations talked about the 10 exposures that occur as far as dust where a 11 construction worker may come into an areas after the 12 Now it'd be my understanding that the general fact. 13 industry rule was far as monitoring that area and determining the dust or determining the PELs in the 14 15 short term exposure limits in those area should be 16 documented according to the general industry rule. 17 Now would that not offer protection to everybody that 18 would be coming into that area post work or post 19 production in those situations? And has that been 20 considered?

A second comment that I would question wasone of the presentations also discussed genetic

1	exposures from individuals that may be susceptible
2	related to that. And has OSHA considered that as one
3	of the factors in the people that come down with this
4	particular disease?
5	MS. RUSKIN: In, for the 2017 final rule,
6	I'll answer the second question first. OSHA did a
7	risk assessment and did a final determination on
8	material impairment of health. And OSHA is
9	maintaining those determinations throughout all of
10	these rulemaking activities. So therefore, we took
11	into account all the available information that was
12	out there.
13	Secondly, we would hope that contractors
14	coming into a facility, that the host company would
15	share that information with the contractor so that the
16	contractor could be appropriately protected.
17	MS. WHEELER: Thank you.
18	CHAIR CANNON: Anyone else on the line?
19	Okay. No one else on the line. Anyone else here?
20	Greg?
21	MR. SIZEMORE: I just have one other
22	clarification that I need to fully understand. Under

ACCSH Meeting

1

2

3

4

5

б

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

Page 56 OSHA's current requirements or, they're basically required to consult with ACCSH in the formulation of any construction standard; is that correct? MR. GILLILAND: That is correct. MR. SIZEMORE: So my question becomes if it's already at OMB, is this outside of protocol or a standard? Joe, I quess I'm looking for clarification there if it's already there. MR. GILLILAND: This is Joe Gilliland again. So the regulation, which is at 29 CFR 1911.10, requires that the Secretary confer with ACCSH before publishing the rule and the rule is not, the proposal has not yet been published. And as Loren said at the beginning of the meeting, OSHA still has the capacity to edit the rule while it's at, at OMB. So. MR. SIZEMORE: Thank you. All right. It seems like CHAIR CANNON: we've, you know, made our comments and asked the questions of Maureen that we had. So now it comes to, you know, the point that Loren made and, you know, the purpose of Maureen being here is the recommendation from ACCSH, you know, allowing OSHA to move forward

Page 57 1 with revising the beryllium standard. So I guess it's 2 time for a vote. MS. CAIN: I make a motion. This is Chris 3 4 Cain, Employee Rep. I make a motion that ACCSH recommend OSHA revise the beryllium standards for 5 construction to ensure that the ancillary provisions б 7 are tailored to the construction industry and align 8 with the general industry standards where appropriate. 9 This is Randy Krocka. MR. KROCKA: I second. 10 Any further discussion? CHAIR CANNON: 11 MR. SIZEMORE: Will we be able to offer comment (inaudible - off mic) comments, all comments 12 13 In other words, confirm (inaudible - off mic) now?

14 offer comments with those, with that (inaudible - off
15 mic)?

MR. GILLILAND: You could have committee members discuss if you want to make a motion, their thoughts and then, or you could delay the motion. MR. SIZEMORE: Yeah, that's what --MR. GILLILAND: Offered. CHAIR CANNON: So we now have a motion on the table. So I'd like to open up for any discussion.

1	MR. SIZEMORE: I guess I'll start. This is
2	Greg Sizemore, Employee Representative. And I want to
3	be very, very clear on what I'm saying here, that
4	keeping our workers safe by meeting and exceeding
5	compliance targets should be this committee's and our
6	industry's priority. But given that OSHA has failed
7	to identify any cases in the general construction
8	industry where chronic beryllium disease or any other
9	construction task that would lead to chronic beryllium
10	disease outside of abrasive blasting, and the fact
11	that beryllium rule is already at OMB, I'm struggling.
12	That's just my comment.
13	CHAIR CANNON: Anymore discussion?
14	MS. CAIN: This is Chris Cain, Employee I
15	think
16	MR. SOKOL: This is Ron Sokol, Employer
17	Representative. One of the things that, that I have a
18	concern is that as Fravel had said, Combs, about
19	referring to like a table one type document, we know
20	that from the silica standard construction contractors
21	have, have utilized that table one in a, in a means to
22	be able to not have to get into the, the provisions of

1	monitoring and, and having industrial hygiene
2	services.
3	So I, I'd like to see OSHA be able to provide
4	some, some type a similar table where contractors
5	would know that they're doing certain activities like
6	table one would have in controlling beryllium or
7	beryllium exposure, that they wouldn't have to get
8	into a full blown monitoring system each one and every
9	operation that is abrasive blasting, or in vicinity
10	where abrasive blasting has, abrasive blasting occurs.
11	CHAIR CANNON: Thanks, Ron. Chris?
12	MS. CAIN: Chris Cain, Employee Rep. I think
13	that there was some good information provided by the
14	speaker from National Jewish that did, in fact,
15	demonstrate that construction workers do get sick from
16	beryllium, as well as in the record of the rulemaking
17	that occurred prior to the January 2017 final rule.
18	So I respectfully disagree that OSHA lacks evidence
19	that this is a problem in construction.
20	CHAIR CANNON: Any other discussion by those
21	who have dialed in? Hearing none
22	MR. SOKOL: Mr. Chairman, this is Ron Sokol,

Page	60
ruge	00

-	
1	Public Representative, and in the, the last comment
2	I'd like to make is regarding the provisions on
3	education and training, when those provisions would
4	come into effect and how OSHA plans to, to write those
5	in the final rule that would require construction
6	workers to address these particular issues, and what
7	would happen with the training provisions if the
8	exposures were documented after the fact if the worker
9	leaves the site.
10	So, so would that be something from a
11	training and education that would have to be done just
12	in, in the possibility that beryllium exposure exists
13	in order to ensure workers are, are trained and
14	advanced, particularly if, if the exposure is not
15	documented or a sensitive individual as we've heard
16	can happen, and even a very limited exposure? So I
17	would be interested to knew how the, the training and
18	education provisions that OSHA places in many of their
19	standards would be written into this rule.
20	MS. RUSKIN: Well, I did want to mention that
21	we are not changing the majority of the training
22	provisions. So it is what is in the current 2017

1	January rule. However, we, the very limited changes,
2	and that has really to do with both dermal contact and
3	emergency exposures. However, as I indicated before
4	in the final rule, we are updating the compliance
5	timing to ensure that construction employers have
6	adequate time to implement the updated standard.
7	MR. SOKOL: Thank you, Ms. Maureen.
8	MR. FOUGHT: Mr. Chairman, this is Chris
9	Fought, Public Representative. I do have one
10	question. And it's more of a process-related
11	question. As you guys know, I'm still relatively new
12	to ACCSH. But will there be a workgroup assigned to
13	this particular topic once it advances to the next
14	stage?
15	CHAIR CANNON: No.
16	MR. FOUGHT: Okay. Thank you.
17	CHAIR CANNON: All right. Well, I have one
18	question and it was submitted to OMB, and I know you
19	don't have a crystal ball, but anticipating when
20	something might be released to the public for review
21	and comment, and what kind of timeframe are we looking
22	at for the comment period?

1	MS. RUSKIN: Well, first part, it's difficult
2	to predict when this'll be released from OMB and when
3	it will be published in the federal register. OMB
4	does have 90 days to complete their review; however,
5	we have requested that they expedite this review if
6	they can.
7	For the second one, we will be providing a
8	sufficient time for comments. We will also be
9	convening a public hearing. So that people could then
10	come and also provide comments, and there will be a
11	comment period after the public hearing as well. So
12	over the next several months there will be ample time
13	for people to comment on this rule.
14	CHAIR CANNON: Thank you. Thank you,
15	Maureen. All right. What we're going to do is have
16	Chris restate the motion that she made previously.
17	MS. CAIN: Chris Cain, Employee Rep. ACCSH
18	recommends that OSHA revise the beryllium standard for
19	construction to ensure that the ancillary provisions
20	are tailored to the construction industry and aligned
21	with the general industry standard where appropriate.
22	CHAIR CANNON: Second again?

	Page 63
1	MR. KROCKA: Randy Krocka, second.
2	CHAIR CANNON: All right. We have a motion
3	on the table and we'll move to vote. All in favor say
4	aye?
5	(Ayes.)
6	CHAIR CANNON: All right. Let's stop for a
7	second on the phone. We have Chris and Randy.
8	MS. CAIN: And Mark.
9	CHAIR CANNON: And Mark.
10	MR. COMBS: Employer representative vote aye.
11	CHAIR CANNON: All right. Chuck?
12	MR. STRIBLING: Chuck Stribling, State Safety
13	(inaudible) Representative, I vote in favor.
14	CHAIR CANNON: Scott?
15	MR. MABRY: Scott Mabry, State
16	Representative. I vote in favor.
17	CHAIR CANNON: All right. Second Scott.
18	Scott Earnest?
19	MR. EARNEST: Scott Earnest, Federal Rep.
20	I'm in favor.
21	CHAIR CANNON: Christopher Fought?
22	MR. FOUGHT: I'm going to abstain on this

	Page 64
1	vote.
2	CHAIR CANNON: Palmer Hickman?
3	MR. HICKMAN: Palmer Hickman, Employee
4	Representative, vote aye.
5	CHAIR CANNON: Ron Sokol?
6	MR. SOKOL? Ron Sokol, Public Representative,
7	vote aye.
8	CHAIR CANNON: Wes Sheeler?
9	MR. WHEELER: Wes Wheeler, Employee
10	Representative, vote aye.
11	CHAIR CANNON: And Richard Tessier?
12	MR. TESSIER: Richard Tessier, Employee
13	Representative. I vote aye.
14	CHAIR CANNON: All right. And any
15	abstentions?
16	MR. SIZEMORE: Greg Sizemore, Employee Rep.
17	CHAIR CANNON: All right. Motion carries.
18	And one other thing I'd like to, you know, just put
19	out there to those who are on the phone and as well as
20	in here, in the building with us right now, you know,
21	we had some, you know, debate and discussions on, you
22	know, the proposal, but, and we had a recommendation

Page 65 1 that we just voted on. But if there are any other recommendations that you hear or on the phone would 2 like to put forward for vote, speak up now. Chris? 3 4 MS. CAIN: Chris Cain, Employee Rep. I think 5 that just, this isn't a motion right now, but would it б be helpful if we'd made a motion that the rulemaking 7 commence soon? 8 MS. RUSKIN: Any recommendations from ACCSH? 9 MR. KETCHAM: The government welcomes recommendations, yes. This is Scott Ketcham. 10 11 MS. CAIN: Okay. Somebody has to help me So ACCSH recommends that OSHA 12 frame a motion, then. 13 issues the final rule and the proposed rule as soon as 14 possible. 15 MR. KROCKA: And I would second that. Randy Krocka. 16 17 CHAIR CANNON: Any discussion on the motion 18 that was just made? On the phone? 19 MS. STRIBLING: This is Chuck Stribling, 20 State Safety and Health, Agency Representative. So if 21 I heard that motion correctly, that was ACCSH recommending OSHA publish the final rule and the 22

	Page 66
1	proposed rule as soon as possible?
2	CHAIR CANNON: That's correct.
3	MR. STRIBLING: Okay. When we state proposed
4	rule, are we talking about the, what we've heard in
5	today's presentation?
б	CHAIR CANNON: Yes. And the final rule is
7	the rule to, to not rescind all the ancillary
8	provisions.
9	MR. STRIBLING: Okay. Well, okay. So
10	today, today's discussion wasn't about a proposed rule
11	technically; it was about a notice of the proposed
12	rulemaking; am I correct?
13	CHAIR CANNON: You are yes. But they're
14	essentially one in the same. Because what they're
15	talking about as far as being the proposed rule is
16	what's going to be included or a part of the Notice of
17	Proposed Rulemaking.
18	MR. STRIBLING: Okay. Thank you.
19	CHAIR CANNON: You're welcome. All right.
20	We had a motion and a second to recommend that OSHA
21	finalize or publish both the final ruling and proposed
22	rule as soon as possible. So we'll vote. All

1	interview favor say aye.
2	(Ayes.)
3	CHAIR CANNON: All opposed? Any abstentions?
4	All right. The motion carries with a unanimous vote.
5	And for the record, you know, for those who are
6	participating in today's meeting, all voted in favor
7	except for the two who abstained.
8	MR. GILLILAND: For the primary?
9	CHAIR CANNON: For the primary motion, yes.
10	All right. Any, I guess we've gone through the public
11	comments, discussed and debated the issue. Thank you,
12	Maureen, for joining us today. Okay. And with that,
13	I'll turn it over to Joey before
14	MR. GILLILAND: This is Joey Gilliland, ACCSH
15	counsel. I'm just going to note the exhibits in the
16	record. So the presentation presented by Maureen, the
17	updated on OSHA's Beryllium Standards for Construction
18	presentation, is going to be Exhibit 1 and the
19	presentation from National Jewish Health titled OSHA
20	Occupational Exposure to Beryllium and Beryllium
21	Compounds in the Construction Industry is going to be
22	Exhibit 2.

	Page 68
1	Adjournment:
2	CHAIR CANNON: Thank you, Joey. Motion to
3	adjourn?
4	MR. SIZEMORE: Greg Sizemore, Employee Rep.
5	CHAIR CANNON: Motion to adjourn.
6	MR. KROCKA: I second.
7	CHAIR CANNON: All right. The meeting's
8	adjourned.
9	(WHEREUPON, THE ACCSH MEETING OF 9/9/10 ADJOURNED.)
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
	www.CapitalPapartingCompany.com

1	CERTIFICATE OF NOTARY PUBLIC
2	I, Nate Riveness, the officer before whom the
3	foregoing proceedings were taken, do hereby certify
4	that any witness in the foregoing proceedings, prior
5	to testifying, were duly sworn; that the proceedings
6	were recorded by me and thereafter reduced to
7	typewriting by a qualified transcriptionist; that said
8	digital audio recording of said proceedings are a true
9	and accurate record to the best of my knowledge,
10	skills, and ability; that I am neither counsel for,
11	related to, nor employed by any of the parties to the
12	action in which this was taken; and, further, that I
13	am not a relative or employee of any counsel or
14	attorney employed by the parties hereto, nor
15	financially or otherwise interested in the outcome of
16	this action. Nathiveness
17	1 autoral or all of
18	Nate Riveness
19	Notary Public in and for the
20	District of Columbia
21	
22	
23	

1	CERTIFICATE OF TRANSCRIBER
2	I, Penny Knight, do hereby certify that this
3	transcript was prepared from the digital audio
4	recording of the foregoing proceeding, that said
5	transcript is a true and accurate record of the
6	proceedings to the best of my knowledge, skills, and
7	ability; that I am neither counsel for, related to,
8	nor employed by any of the parties to the action in
9	which this was taken; and, further, that I am not a
10	relative or employee of any counsel or attorney
11	employed by the parties hereto, nor financially or
12	otherwise interested in the outcome of this action.
13	O N At
14	Pienny Knight
15	Penny Knight
16	
17	
18	
19	
20	
21	
22	
	l

[& - ago]

September 9, 2019

Page 1

	1	1	
&	3	41:3,6,8,11,15	activities 7:10,14
& 1:17	3 12:16 13:4	42:5 44:17 47:15	39:8 52:10 55:10
0	30 34:6 36:14	48:1,5 49:5,9	59:5
	41:21	51:20 53:1 58:10	activity 16:4 32:10
0.1 31:5	3503196 1:21	59:9,10,10	actual 29:16
0002 31:8	4	absence 32:14	added 20:12
02 43:1		absent 15:12	additional 7:8
03437 1:17	4 3:3 13:3	absolutely 24:14	14:13 19:18 20:12
1	4th 29:12	41:17	43:17
1 13:17 18:21	5	abstain 63:22	additionally 15:17
67:18	50 41:14	abstained 67:7	17:15
10 3:8 13:3	500,000 24:8	abstentions 64:15	address 6:19 60:6
10:25 1:8	6	67:3	addressing 18:1
14795 70:14	6 3:5	abusive 30:10	47:2
14843 69:17	60 14:16	access 5:2 10:14	adequate 26:14
15 26:2 36:3	67 3:14	44:22	61:6
16 15:20	7	account 18:17	adequately 26:15
1911.10 56:10		55:11	38:19
2	7 48:16	accounted 21:5	adhere 25:4
2 12:4,4,5 14:7,11	7,000 40:4	accsh 1:6 2:2,4 3:1	adjourn 68:3,5
14:12,13 36:20	70 14:17	3:4 4:7,17 8:10	adjourned 68:8,9
41:14 42:19 67:22	8	9:16 10:4,13 11:4	adjournment 3:14
2.0 36:21	8th 12:9,9	12:10,14,19 13:3	68:1 administration
20 33:20 47:2	9	13:9 22:16,19 23:1 29:16,21,21	1:2
200 1:16	9 1:7	30:1 32:3 34:9	administrative
2000 40:2	9.5 41:8	35:1 45:10 50:12	43:18
2014 12:9 13:3	9/9/10 68:9	50:18 53:7 56:2	advance 35:20
2015 13:6	90 62:4	56:11,22 57:4	advanced 60:14
2017 6:19 11:17		61:12 62:17 65:8	advances 61:13
11:20 13:2 14:8	a	65:12,21 67:14	advances 01.15 adverse 15:21
16:2,18 18:10	a.m. 1:8	68:9	32:11
24:11,15 27:17	ability 69:10 70:7	accsh's 3:8 10:22	advice 29:22
46:20 51:6 55:5	able 8:20 28:6	22:14	advise 32:4
59:17 60:22	29:20 36:5 57:11	accurate 69:9 70:5	advisory 7:1 8:13
2018 8:8 15:8,20	58:22 59:3	acknowledged	advocacy 24:7
16:6 19:14	abma 29:1,2,3	25:1	affirmative 5:20
2019 1:7	30:14	act 27:1	agency 8:10 18:7
20210 1:18	abrasive 7:6,7	action 13:19 20:21	30:5 32:17 65:20
27 8:8 14:9 46:20	10:1 13:22 17:17	25:13 40:3 41:20	agency's 7:14
27th 22:7 46:18	19:22 28:13 29:1	49:22 52:18,20	agenda 3:1 4:4,5
29 56:10	29:4,8 30:5,7,8,11	69:12,16 70:8,12	9:8
	30:18,21 31:4,6	actions 6:20 17:22	ago 12:12
	32:7,9,12 33:18		
	34:19 37:19 38:8		

www.CapitalReportingCompany.com 202-857-3376

ACCSH Meeting

[aimed - building]

September 9, 2019

aimed 15:9	apparently 6:14	avenue 1:16	40:8,10,16,18,21
airborne 15:13	applies 30:18	average 41:13	41:7,15,16 42:4,7
18:17 21:15,19	apply 15:11,22	avoided 31:2	42:8,9,14,21,22
25:5,12 26:6,22	21:1,7 27:11	aware 36:3	43:15,16,18 44:6
41:7	appreciate 6:12	aye 63:4,10 64:4,7	44:9,14,16,18,21
align 7:21 18:22	28:11 45:8	64:10,13 67:1	45:2,7 47:13,19
21:22 22:1 23:5	approach 16:17	ayes 63:5 67:2	49:3,13 52:3 57:1
57:7	appropriate 8:1	b	57:5 58:8,9,11
aligned 62:20	23:6 34:11 51:11	b 1:17	59:6,7,16 60:12
alliance 10:2	57:8 62:21	b 1.17 back 5:19 11:20	62:18 67:17,20,20
28:14 29:1	appropriately	12:9,10 13:3	best 34:8 69:9
allow 9:17 10:3	55:16	32:15,18 41:2	70:6
allowing 56:22	approximately	46:7,15	better 7:19
allows 43:5,8	31:9	ball 61:19	beyond 53:1
alloyed 31:14	area 17:10,12 39:5	based 46:13	bill 11:10
alloys 31:20	39:7 43:7 48:16		blasted 31:1
alteration 39:4	54:13,15,18	basically 56:1 basis 33:17	blasters 17:17
alternatives 13:8	areas 16:10,18		blasting 7:7,7 10:1
amendments 33:8	25:8,13 38:10,13	basting 30:11	13:22 19:22 28:13
amount 31:13	39:2 44:16 54:11	beginning 56:14	29:1,4,8 30:5,7,9
32:2 50:1	argument 24:16	behalf 9:21,22 10:1	30:10,18,21 31:4
amounts 14:2,4	24:19		31:6 32:7,9,13
15:3,12 30:21	articles 13:14	believe 29:19	33:19 34:19 37:19
31:3,5,7,19 32:20	asked 10:7 33:1	belpt 41:22 42:10	38:8 41:3,3,6,9,11
49:2 50:1,2	36:3 54:2 56:18	beryllium 3:9 6:20	41:15 42:5 44:17
ample 62:12	asking 8:10 35:1	7:6,9,13,17,21 8:2	47:15 48:1,5 49:5
ancillary 7:13,16	assessment 55:7	9:9 11:1,8,21,22	49:10 51:20 53:2
8:6 12:6,18 13:5	assigned 61:12	13:4,13,17 14:2	58:10 59:9,10,10
14:9 17:7 18:1,8	assistance 53:11	15:1,3,12,16 16:7	blown 59:8
23:3 24:10,13,21	assistant 2:12 3:7	16:17,19 17:6,11	bonneau 5:2 23:11
25:2 26:1,21 27:8	6:9	17:16,19 18:6,18	23:17,20 28:15
27:17 33:14 35:3	associated 42:20	18:18,21 20:1,7 20:10 23:2 24:11	breathing 44:1,1
36:17,18 37:2,15	44:7		brian 11:12
38:5,6 40:20	assuming 51:6	24:18 25:6,9,10	brief 40:18
43:12,17 44:13	52:2 53:1,12	25:12,14,15,22	briefly 24:20
45:4 46:14,21,22	assumption 19:7	26:5,6,13 27:6,10	33:16
57:6 62:19 66:7	attention 29:8	27:17 29:6,9	bring 39:1
announce 6:2 9:13	attorney 69:14	30:19 31:3,10,13	broadly 19:9
announced 22:10	70:10	31:18,20 32:1,2,8	broecker 11:12
answer 55:6	atypical 26:7	32:12,21 33:1,6	brought 12:19
anticipate 53:21	audio 69:8 70:3	33:11,18 36:8,13	13:12
anticipating 61:19	august 8:8 22:7	36:20 37:4,4,5,6	brush 40:4
anymore 58:13	available 8:17	37:16,21,22 38:1	building 6:13 43:7
	55:11	38:7,15,20 39:2,5	64:20
		39:6,13,15 40:1,5	

September 9, 2019

[burden - complaints]

	• • • • •		
burden 43:18	caught 42:8	changes 7:22	coal 31:8 41:9,10
burdens 25:18	cause 21:19	11:16 13:1 15:22	44:17
33:22	caused 30:17	16:16,21 18:12,14	coatings 30:9,22
business 6:8	causes 26:6	18:16 19:4,5 20:3	columbia 69:20
С	causing 21:19	21:8 22:12 37:13	combs 2:16 5:7
c 2:1	38:9	51:12 61:1	45:20,21,21 53:9
cain 2:5 4:15,15	cbd 21:21	changing 19:8	53:9 58:18 63:10
6:6 10:6,6,10 50:5	center 21:22 41:3	60:21	come 54:11 55:3
50:11,16,21 57:3	41:4	charges 39:4	60:4 62:10
57:4 58:14,14	certain 7:7,16	charles 2:14	comes 56:19
59:12,12 62:17,17	14:1 46:14 59:5	chemical 26:8	coming 40:20
63:8 65:4,4,11	certificate 69:1	chris 4:15 5:5 6:6	54:18 55:14
call 4:2,6 45:13	70:1	10:5,6 57:3 58:14	commence 65:7
52:11	certify 69:3 70:2	59:11,12 61:8	comment 8:2,14
cannon 2:2 3:4 4:2	cfr 56:10	62:16,17 63:7	8:15 9:17 10:4
4:7,19 5:3,7,11,14	chair 2:2 3:4 4:2,8	65:3,4	14:16 19:16 22:9
5:18,22 9:7 10:9	4:19 5:3,7,11,14	chris's 51:1	22:11 24:7 30:3
10:12,19 23:7,12	5:18,22 9:7 10:9	christina 2:5	33:9 51:11 54:6
23:15,19 24:4	10:12,19 23:7,12	christine 50:5	54:21 57:12 58:12
27:19 28:4,11,20	23:15,19 24:4	christopher 2:10	60:1 61:21,22
34:3,5 35:6,13,17	27:19 28:4,11,20	2:15 5:4 63:21	62:11,13
36:1 45:8,15,19	34:3,5 35:6,13,17	chronic 37:4,6,16	commenters 22:11
46:1,3,6 50:22	36:1 45:8,15,19	40:8 42:8,22	52:5
51:13,17,22 52:13	46:1,3,6,11 47:11	47:13 58:8,9	comments 3:11
52:21 53:5 54:5	50:22 51:13,17,22	chuck 4:21 10:7	7:11 9:14,20 11:2
55:18 56:17 57:10	52:13,21 53:5	10:10 45:13,15	14:17 15:21 17:3
57:21 58:13 59:11	54:5 55:18 56:17	63:11,12 65:19	22:15,16,20 23:8
59:20 61:15,17	57:10,21 58:13	cindy 6:3	29:14 30:4 36:7
62:14,22 63:2,6,9	59:11,20 61:15,17	cited 25:20	47:2,4,9 53:8
63:11,14,17,21	62:14,22 63:2,6,9	citizen 9:22 24:7	56:18 57:12,12,14
64:2,5,8,11,14,17	63:11,14,17,21	27:15	62:8,10 67:11
65:17 66:2,6,13	64:2,5,8,11,14,17	citizens 23:10	committee 7:1
66:19 67:3,9 68:2	65:17 66:2,6,13	clarification 55:22	8:13 9:2 28:19
68:5,7	66:19 67:3,9 68:2	56:7	57:16
capacity 56:14	68:5,7	clarifications	committee's 58:5
carefully 32:3	chairman 28:18	15:15,18 16:13	communicate
carries 64:17 67:4	45:14 46:2,5	clarify 15:5 18:19	25:14
case 15:11 19:6,22	59:22 61:8	class 40:3	communication
50:8	challenges 6:13,22	clean 25:13	16:11
cases 17:8 18:3	challenging 6:19	cleaning 39:16,20	community 48:7,7
37:16 47:6 58:7	chance 19:16	clear 30:17 58:3	company 55:14
catch 28:6	change 11:19	clinically 36:12	competent 17:10
	16:22 19:2,18	clothing 16:9	complaints 27:4
category 4:22	34:15	38:12	

[complete - definitions]

September 9, 2019

10 10			
complete 12:18	constitution 1:16	continuing 20:3	criticism 7:2,2
18:3 47:5 62:4	construction 3:10	continuous 45:3	cross 20:9
completely 31:2	7:2,4,6,10,13,17	contract 39:22	crystal 61:19
completing 16:15	7:20 9:9 11:1,17	40:6,9,20 44:15	cubic 12:6 36:21
compliance 16:9	12:2,16,22 13:6	contractor 48:7	36:22 41:8,14
16:14 18:2 20:19	13:11,12,22 14:10	55:15,16	42:19
25:19 27:4 42:3	16:1,19 17:1,6,9	contractors 51:14	current 42:19
43:12 58:5 61:4	17:21 18:10,18	55:13 58:20 59:4	47:1 56:1 60:22
comply 26:17 27:3	23:3,4 24:10	contracts 52:3	currently 16:15
53:16	27:11,16 29:5,7	contrast 31:9	50:10
complying 53:11	31:21 32:5,21	control 20:4 25:10	d
compounds 11:22	33:6,12,18 36:8	38:11	d&d 39:2 44:16
67:21	37:11 39:2,5,10	controlled 34:19	d.c. 1:18
comprehensive	39:15,22 40:3,9	controlling 59:6	data 7:9 13:18
12:8 38:6 42:11	40:13,19 41:4	controls 20:20	38:18 42:22 48:2
44:2,14	42:5 43:13 44:4,4	21:2 25:11 26:12	52:12,12,20,22
concentration	44:15 45:5 46:16	43:16	database 48:3
41:7	47:8,9,14,16 48:4	convening 11:5	date 6:18 7:8
concentrations	49:11,14,15,17	62:9	22:10 52:9
26:10	50:18,20 51:11	conversation	dates 18:2 51:6,10
concern 13:21	53:15 54:4,11	47:13	day 14:16 29:13
29:9 38:10 58:18	56:3 57:6,7 58:7,9	cooperation 10:2	29:13
concerned 9:14	58:20 59:15,19	coordinating 8:4	days 29:12,13
12:20 29:11 30:15	60:5 61:5 62:19	core 38:6 44:13	41:21 62:4
49:8 53:7	62:20 67:17,21	corporation 29:2	debate 9:16 10:5
conclusion 9:3	constructive 7:2	correct 9:14 56:3	64:21
13:2	consult 56:2	56:4 66:2,12	debated 67:11
concurrently	consumer 24:7	correctly 65:21	decade 25:21
14:20	contact 15:11,16	corresponding	december 8:7 16:6
conducted 9:10	20:9 21:9 40:12	19:1	decided 15:4
confer 56:11	48:16 61:2	costs 25:18	46:17
confirm 10:12	contain 13:16 17:4	counsel 2:4 4:18	decision 46:19
57:13	contained 12:6	30:1 67:15 69:10	47:4
conflating 31:18	14:1 49:2	69:13 70:7,10	decisions 19:5
confusion 30:17	containing 15:11	counting 12:10	declines 8:6
consider 6:20	18:21 39:15 41:16	course 22:18	declining 17:22
27:13	containment	46:17	decontamination
consideration 3:8	20:14,15,16,17,17	covered 40:1,14	39:11
10:22	contains 31:7	40:21	defined 13:14
considered 22:17	contamination	cpwr 48:2	defines 49:16
54:20 55:2	15:17 20:10	credible 33:3	definition 19:19
considering 7:11	content 11:22	cribs 39:20	31:5
7:20 12:14 18:15	continue 48:12	critical 26:6	definitions 16:8
51:4			16:21 18:22 19:11
			10.21 10.22 17.11

[defoe - ensure]

September 9, 2019

	T	1	T
defoe 11:9	dfr 15:20,22 49:1	documented 32:11	either 27:2
delay 57:18	diagnosed 40:8	44:19 54:16 60:8	eligible 41:21
deliver 9:20	diagnostic 21:21	60:15	eliminated 34:15
delivers 9:15	dialed 59:21	doing 17:21 27:14	eliminating 24:16
demolition 39:4	different 53:21	40:6 49:15,15	33:11,14
39:10	difficult 62:1	59:5	emergency 19:19
demonstrate	digital 69:8 70:3	dol 4:7	20:1 61:3
59:15	direct 15:7,15	don't 28:5 52:9	emphasize 42:1
demonstrating 7:9	50:7	61:19	employed 69:11
13:18	directive 50:14	downstream 49:4	69:14 70:8,11
department 1:1	directly 32:19	draft 6:15	employee 2:5,6,8
1:15 39:11	director 2:13 3:12	drafted 25:21 26:1	2:9,10,16,17 4:13
depending 52:21	9:11 11:10,11	drilling 18:13	4:15 5:12,16 6:5
deprater 6:3	directorate 2:13	drove 19:4	13:18 46:12 48:14
deputy 2:12,13	3:13 9:11	due 14:3 28:9	50:5 53:10 57:4
3:6,12 6:9 9:11	disagree 59:18	29:14 39:7	58:2,14 59:12
dermal 15:10,16	disclose 8:20	duly 69:5	62:17 64:3,9,12
20:8 21:9,11	discovered 31:16	dust 39:7 54:10,14	64:16 65:4 68:4
48:16 61:2	discuss 6:15 9:16	duty 29:22	69:13 70:10
described 32:16	10:5 11:5 57:17	dyke 42:16	employees 20:14
describes 30:16	discussed 13:7	e	25:6,15 33:22
description 29:14	33:14 54:22 67:11	e 2:1,1,16	34:20 40:13
designated 4:9	discussion 57:10	earlier 25:1 32:16	employer 2:2,7
8:17	57:22 58:13 59:20	33:5,15 37:18	4:8,11 6:4 13:17
despite 32:14 33:3	65:17 66:10	43:11	48:7 53:11,16
detail 13:1	discussions 64:21	early 42:8	54:8 58:16 63:10
detailed 32:6	disease 37:5,6,17	earnest 2:11 5:8,9	employers 12:22
detailing 11:16,16	40:9 42:8,9,22	5:9 63:18,19,19	25:3,18 26:17,20
determination	43:3 44:9,21	edit 56:15	27:2,2,8 33:22
55:7	47:14 55:4 58:8	education 44:5,10	61:5
determinations	58:10	60:3,11,18	employes 17:12
55:9	diseases 24:15	effect 15:20 53:12	encouraged 32:10
determined 32:20	disposal 15:19	60:4	encourages 38:4
determining 54:14	21:17 48:21	effective 32:8	energy 39:12
54:14	distinction 32:4	33:20 34:22 45:6	enforce 26:15
develop 42:7 43:3	district 69:20	51:6,10	enforced 14:18
53:19	disturbing 39:8	effectively 34:19	engineering 25:10
developed 53:14	division 36:10	effectiveness	26:12 37:9 43:15
devine 9:22 23:10	docket 22:16	21:14	ensure 17:10
23:13,19,20,21,22	47:22	effects 15:10	20:13,18 23:3
24:1,3,5 28:8	document 6:17	32:12 36:20 37:7	27:4 38:19 42:6
devoid 34:16	58:19	37:19 44:7	45:3 57:6 60:13
dfo 2:3	documentation	effort 31:20	61:5 62:19
	43:19		

[ensures - frame]

September 9, 2019

Page 6

		1	1
ensures 44:22	exerts 26:8	44:18 48:4 49:4	61:4 65:13,22
enter 49:11	exhaustive 26:2	49:22 52:18 53:14	66:6,21
entered 40:17	exhibit 67:18,22	54:10 55:1 60:8	finalize 53:3,4
entire 42:12 43:9	exhibits 67:15	61:3	66:21
48:9 53:4	exist 45:2	extend 31:20	finalizing 51:10
entirely 7:18	existing 14:14	extending 33:5	finally 18:22 21:8
environment	21:5 24:22 25:20	extension 30:13	22:1,21
46:16	43:13	extremely 14:4	financial 43:18
environmental	exists 60:12	26:10	financially 69:15
36:10	expanded 53:1	f	70:11
equipment 16:9	expected 20:6	face 18:5	find 31:10
16:10 37:10 38:12	expedite 62:5	facilities 39:12	finding 34:14
43:16	expenses 34:1		finer 8:19
equivalent 14:15	expert 8:18	40:18 49:12,15	finish 36:5
erroneously 31:17	experts 7:3 11:8	facility 55:14	first 6:7 15:7
especially 29:7	26:3	fact 12:19 14:3	21:10 23:18 24:21
39:11	explain 46:16 51:4	27:5 54:12 58:10	55:6 62:1
essentially 66:14	exposed 14:15	59:14 60:8	fit 44:3
establish 25:7	24:17 39:20 40:5	factors 44:9 55:3	five 12:11 31:16
44:4	41:20 42:11 44:22	fail 26:17	focused 29:7
established 12:5	exposure 7:21	failed 58:6	focusing 4:4
events 38:9	11:21 12:3 18:6	falls 24:19	folks 10:13
everybody 6:12	20:1,4,7 21:15	far 9:14 31:7 51:8	follow 26:21 51:19
54:17	26:5,13,18 30:7	53:6 54:10,13	following 19:10
everyone's 22:12	31:18,19 32:8,12	66:15	25:4
evidence 7:5 13:20	36:16,20 37:3,8	fast 28:9	force 43:9
14:6 32:11 33:3	38:7,9,9,11,20	fatal 26:8	foregoing 69:3,4
34:16 47:12,15,21	39:7 41:1,10,16	favel 45:21 53:9	70:4
48:2 59:18	42:1,3,4,16 43:4	favor 63:3,13,16	forms 15:14 21:10
exactly 19:14 34:6	43:19,20 44:6,8	63:20 67:1,6	formulation 56:2
51:7	44:12,20 45:3,6	federal 2:11 4:10	forth 26:12 32:16
exam 44:1	47:18 48:1,2,3	5:10 8:17 11:22	32:18
example 17:8 31:8	52:10,17,19 54:15	62:3 63:19	forward 6:21
exceed 25:12	59:7 60:12,14,16	feedback 8:22	22:12,14 47:7
exceeding 58:4	67:20	45:3	56:22 65:3
excluded 43:22	exposures 7:9	fifth 27:5	forwards 9:3
exclusion 37:15	13:18,21 14:4,5,6	file 27:2,3	fought 2:10 5:4,5
excuse 4:22 31:22	15:13 17:11 18:17	filed 40:3	5:5 61:8,9,16
45:9	20:14,20 21:2,12	final 8:12 11:18	63:21,22
exempted 13:14	21:20 25:10 26:8	11:21 14:8 15:7	found 12:7 30:20
13:16	26:11 27:7 29:9	15:15 16:2,19	31:4,13 34:18
exempting 49:1	36:8 37:7 38:15	17:22 18:7 24:11	four 9:18 10:17
exemptions 13:13	39:17 41:2,5,12	24:15 27:17 50:7	frame 65:12
chemptions 15.15	41:13,19 43:1	50:12 51:2,4,8,9	
	11.13,17 13.1	55:5,7 59:17 60:5	

www.CapitalReportingCompany.com 202-857-3376

[framework - includes]

from or work 20.15	alad 07.12	harm 26.60	hold 22.0 25.14
framework 30:15	glad 27:13	harm 26:6,9	hold 22:9 35:14
fravel 2:16 5:7	go 5:19 13:1 18:11	harsco 10:2 29:2,3	holding 24:6
10:15 45:19 46:1	40:7 43:2 52:3	hazardous 25:15	hope 55:13 host 55:14
58:18	goes 53:12	30:8	
free 25:13	going 4:4 9:13,17	hazards 16:12	housekeeping
frequently 54:2	11:14,18 13:2	25:22 26:5 27:10	16:11 21:18 38:13
fulfill 29:22	18:11,12 22:17	34:18	hygiene 16:10
full 12:17 13:4	23:8,15 27:21	hazcom 13:15	21:4,4 38:12 59:1
59:8	32:15 33:21 37:9	head 8:10	i
fully 22:17 30:14	37:13 41:11 45:10	health 1:2 9:21	identification
33:9 55:22	46:7 48:9 49:14	12:8 18:6 26:3	42:14
further 9:4 32:6	51:3 62:15 63:22	32:11 34:12 35:8	identify 4:22 45:1
33:21 57:10 69:12	66:16 67:15,18,21	36:9,10,12,13,19	58:7
70:9	good 6:11 9:6 11:3	37:19 38:4,17	immunological
g	11:19 28:18,21	44:7 55:8 65:20	26:9
g 2:11	35:21 36:6 45:14	67:19	impact 6:16
gathered 38:16	45:17,21 59:13	hear 10:10,19	impacts 12:22
geared 7:19	governing 32:7	12:11 24:12 27:13	impairment 18:6
general 7:15,22	government 65:9	28:19,20 35:12,13	34:12 55:8
8:7 12:2,17 14:22	great 31:12 35:16	45:12,18 65:2	implement 51:12
16:5,7,17 19:2,15	35:21	heard 10:8 37:11	61:6
20:22 21:22 22:1	greater 50:2	37:18 47:12 49:10	implementation
22:2 23:5 27:5,8	greg 2:7 4:11	52:4 53:5 60:15	38:17
31:14,15,20 39:13	46:11 55:20 58:2	65:21 66:4	importance 31:12
40:2,14,21,22	64:16 68:4	hearing 9:3 22:9	important 11:6
43:15,22 47:14	grinders 39:19	59:21 62:9,11	27:9 30:3 32:4
54:12,16 57:8	grinding 39:16,20	heath 37:7	36:18
58:7 62:21	52:5	hello 35:11	impose 25:18
generating 38:9	group 42:17	help 8:21 37:9	33:21
41:12	guess 46:9 56:7	51:7 65:11	imposing 33:17
genetic 42:20 44:8	57:1 58:1 67:10	helpful 65:6	improve 16:14
54:22	guidance 3:13	hereto 69:14	improvement 22:2
genetically 43:2	9:12 11:11 38:1	70:11	inability 26:15
getting 41:2	48:6,11 54:1	hi 4:2	inaudible 33:13
gilliland 2:4 4:17	guys 61:11	hickman 2:8 5:11	48:6 57:12,13,14
4:17 5:21 56:4,9,9	h	5:12,12 64:2,3,3	63:13
57:16,20 67:8,14	half 12:11	hierarchy 21:1	include 12:16 20:9
67:14	handle 15:2 18:20	high 13:10 14:4	44:5 54:3
give 51:10	handling 18:21	17:11 18:12 19:3	included 13:7 15:2
given 6:5 8:13	20:10 21:13	44:18	16:8 32:22 39:3
10:14 58:6	happen 60:7,16	higher 31:19	44:9,16,21 66:16
gives 10:3	happening 39:14	41:12	includes 3:10 11:2
giving 11:6	happy 28:8,10	highly 30:11 33:19	50:20
L	1	1	I

[including - look]

September 9, 2019

	Γ		
including 29:3	59:13	jewish 9:21 35:8	labeling 48:21
30:12	informed 8:22	36:9 38:4 42:17	49:1
incorporated 16:3	inherent 34:18	59:14 67:19	labels 21:17
increase 20:1	initial 45:13	job 1:21 20:6	labor 1:1,15 29:13
incur 34:1	initially 32:19	joe 56:7,9	lacks 59:18
indicate 22:21	input 9:2 26:2	joey 2:4 4:17 5:18	late 33:7
35:20 42:15	33:1 50:12,15	67:13,14 68:2	latest 26:4 27:14
indicated 14:21	inspections 26:16	joining 6:3 67:12	lead 37:16 39:17
15:8 22:6,14,22	inspectors 40:17	july 15:20	58:9
54:1 61:3	instance 25:2	june 14:9 46:18,20	leaves 60:9
individual 29:3	institute 25:10	justified 34:2	legal 33:16
42:12 43:9 60:15	intact 20:18	k	lengthy 28:5
individuals 22:18	integrity 20:13		lessened 34:15
42:18 44:22 45:1	intended 15:9	keep 17:11	level 13:10,19
49:19,21 50:3	21:14	keeping 41:19 58:4	18:13 19:3 20:21
55:1	intending 18:9		25:7,13 41:20
industrial 59:1	intent 15:9,18	ketcham 2:3 4:9,9	42:3 49:22 52:18
industries 14:10	18:20	8:18 65:9,10	52:20
14:16 15:2,2	interest 29:6	kevin 2:2 3:4 4:7	levels 25:9,12
24:17 39:15 40:1	interested 22:19	54:7	31:19 41:10 45:3
40:11	27:22 60:17 69:15	key 37:5 43:19	life 26:8
industry 7:4,15,20	70:12	kind 9:16 61:21	light 37:17
7:22 8:7 12:2,17	interpret 36:2	knew 60:17	limit 12:4,5
13:11,22 14:22	interview 67:1	knight 70:2,15	limitation 49:9
16:5,7,17 18:11	introduce 4:21	know 4:22 10:15	limited 7:21 29:11
18:19 19:2,15,16	introduced 10:8	14:1 26:20 34:9	30:12 34:9,18
20:22 21:22 22:1	involve 30:7	36:2 40:18 42:20	60:16 61:1
23:4,5 26:4 27:5,8	involved 20:6	46:7 49:21 50:1	limits 26:18 36:16
29:9 30:17 31:15	36:13 39:4 49:12	51:3,5,17 52:1,2	37:8 43:20 44:12
31:21 32:5 36:8	issue 4:5 18:7 30:6	56:18,20,20,22	54:15
37:11 39:14 40:2	30:16 32:3 67:11	58:19 59:5 61:11	line 24:2 28:17
40:10,14,21,22	issues 18:17 30:2	61:18 64:18,20,21	35:10 53:6 54:5
41:19 43:15,22	35:2 47:3 54:4	64:22 67:5	55:18,19
44:4 45:5 47:9,14	60:6 65:13	knowledge 47:17 69:9 70:6	lines 51:1,22
47:17 51:11 53:15	issuing 34:13		list 19:6 20:5,8,20
54:13,16 57:7,8	it'd 54:12	known 26:16	29:16
58:8 62:20,21	item 6:7	krocka 2:6 4:13 4:13 48:14,14	litigants 14:22
67:21	items 4:5	49:6 57:9,9 63:1,1	litigation 6:19
industry's 58:6	j	65:15,16 68:6	little 9:4
information 12:21	january 6:19	· · · · · · · · · · · · · · · · · · ·	logic 27:11
14:13 29:21 34:17	11:20 59:17 61:1	<u>l</u>	long 26:8
38:16 46:22 47:22	jeff 10:1 28:13,16	l 2:8,17	longer 39:6
52:9,10,17,19	28:17,22 34:3	label 48:17	look 9:2 22:12,14
53:13 55:11,15	20.17,22 34.3		35:3,4 37:7 38:8

[look - nearly]

September 9, 2019

20 12 40 7 40 10	6	11.5 10.10 12.2	
39:13 40:7 49:18	manufacturing	11:5 12:12 13:3	modeling 48:22
looked 37:20	40:10 49:13	22:15 24:6 28:1	modifications
39:18	maritime 50:16,20	29:12 56:14 58:4	16:13
looking 39:9 56:7	mark 6:4 63:8,9	67:6 68:9	modify 16:7
61:21	material 18:5	meeting's 68:7	modifying 46:15
looks 37:22	34:12 41:16 55:8	member 29:2	monday 1:7
loren 2:12 3:6 6:8	materials 13:16	members 4:19 6:2	monitor 37:6
9:8 14:20 22:5,21	15:3,11 18:21	9:16 10:18 12:19	41:18 48:8,9
50:5 51:5 56:13	19:21 21:17 48:21	24:8 28:19 29:3	monitored 44:19
56:20	49:2	30:14 34:9 45:10	monitoring 26:22
lot 6:18 8:3 27:20	matter 7:3 8:18	53:7 57:17	37:3 38:2,7 41:16
37:13 47:12	30:6	mention 38:15	42:2 43:4,19
low 26:10 41:10	matters 32:2,2	60:20	44:20 54:13 59:1
lower 14:11,12	maureen 2:13	mentioned 9:8	59:8
31:7,8,10,13	3:12 8:18 9:10,15	18:2 23:8 33:5	months 40:12
36:16,20 41:17	10:3,21 23:7	38:22 43:11 46:7	62:12
51:18	45:11 46:10,12	48:17 51:5 52:14	morning 6:12 8:10
lowered 12:3 37:8	48:15 53:8 54:6	mentioning 52:2	11:4 28:18 35:22
43:20	56:19,21 61:7	message 10:7	36:6 45:14,15,21
lowering 37:22	62:15 67:12,16	messages 13:11	46:1,13
luck 9:6	maureen's 46:7	metals 11:10	motion 57:3,4,17
lymphocyte 37:21	means 51:7 58:21	meter 12:6 36:21	57:18,21 62:16
m	meant 16:13	36:22 41:8,15	63:2 64:17 65:5,6
mabry 2:15 5:3	measure 41:7	42:19	65:12,17,21 66:20
10:15 45:16,17	measurement	method 20:19	67:4,9 68:2,5
63:15,15	25:5	methods 16:8	move 28:12 56:22
mabry's 45:17	measurements	mic 6:11 48:6	63:3
main 13:7	25:7 42:4	57.10.12.15	
mann 10.7		57:12,13,15	moving 8:4 17:20
maintain 21:14	mechanism 26:7	micrograms 12:4	47:7
	mechanism 26:7 media 7:8 14:1,1,2	micrograms 12:4 12:4,5 14:7,11,12	47:7 mroz 9:21 35:7,11
maintain 21:14 25:6,9	mechanism26:7media7:814:1,1,229:430:5,9,19,21	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5
maintain 21:14	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19	47:7 mroz 9:21 35:7,11
maintain 21:14 25:6,9 21:1 25:13 43:20	mechanism26:7media7:814:1,1,229:430:5,9,19,2131:4,6medical12:15	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5
maintain21:1425:6,9maintaining21:125:1343:2055:9majority60:21	<pre>mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15</pre>	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n
maintain 21:14 25:6,9 maintaining 21:1 25:13 43:20 55:9 majority 60:21 60:21 making 18:14,15 18:14,15	<pre>mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12</pre>	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4
maintain21:1425:6,9maintaining21:125:1343:2055:9majority60:21	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n n 1:17 2:1,14
 maintain 21:14 25:6,9 maintaining 21:1 25:13 43:20 55:9 majority 60:21 making 18:14,15 19:4,18 21:8 male 10:17 	<pre>mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3</pre>	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n n 1:17 2:1,14 nate 69:2,18 nathanael 1:20
maintain21:1425:6,9maintaining21:125:1343:2055:9majority60:21making18:14,1519:4,1821:8male10:17management43:5	<pre>mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13</pre>	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n n 1:17 2:1,14 nate 69:2,18 nathanael 1:20 national 9:21 35:7
 maintain 21:14 25:6,9 maintaining 21:1 25:13 43:20 55:9 majority 60:21 making 18:14,15 19:4,18 21:8 male 10:17 management 43:5 manages 17:10 	<pre>mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13 38:14 40:4,15,22</pre>	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14 21:14	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n 1:17 2:1,14 nate 69:2,18 nathanael 1:20
maintain21:1425:6,9maintaining21:125:1343:2055:9majority60:21making18:14,1519:4,1821:8male10:17management43:5	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13 38:14 40:4,15,22 41:21 42:2,6,9,11	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14 21:14 minutes 22:15	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n 1:17 2:1,14 nate 69:2,18 nathanael 1:20 national 9:21 35:7 36:9 38:4 42:17 59:14 67:19
 maintain 21:14 25:6,9 maintaining 21:1 25:13 43:20 55:9 majority 60:21 making 18:14,15 19:4,18 21:8 male 10:17 management 43:5 manages 17:10 mandatory 42:10 	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13 38:14 40:4,15,22 41:21 42:2,6,9,11 43:4,8,21 44:1,20	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14 21:14 minutes 22:15 36:4	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n 1:17 2:1,14 nate 69:2,18 nathanael 1:20 national 9:21 35:7 36:9 38:4 42:17 59:14 67:19 naturally 30:20
maintain21:1425:6,9maintaining21:125:1343:2055:9majority60:21making18:14,1519:4,1821:8male10:17management43:5manages17:10mandatory42:1044:329:4	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13 38:14 40:4,15,22 41:21 42:2,6,9,11 43:4,8,21 44:1,20 45:1	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14 21:14 minutes 22:15 36:4 missed 46:18	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n n 1:17 2:1,14 nate 69:2,18 nathanael 1:20 national 9:21 35:7 36:9 38:4 42:17 59:14 67:19 naturally 30:20 31:3,18 52:14
maintain 21:14 25:6,9 maintaining 21:1 25:13 43:20 55:9 majority 60:21 60:21 making 18:14,15 19:4,18 21:8 male 10:17 management 43:5 manages 17:10 manages 17:10 44:3 10:17 10 10	mechanism 26:7 media 7:8 14:1,1,2 29:4 30:5,9,19,21 31:4,6 medical 12:15 16:11,20,21 17:15 17:17 18:22 19:12 19:13 25:11,12 26:22 33:17 37:3 37:8,20 38:2,13 38:14 40:4,15,22 41:21 42:2,6,9,11 43:4,8,21 44:1,20	micrograms 12:4 12:4,5 14:7,11,12 14:13 36:21,22 41:8,14 42:19 migration 20:10 mike 42:16 mindful 8:3 mineral 30:20 minimal 43:17 minimize 20:14 21:14 minutes 22:15 36:4	47:7 mroz 9:21 35:7,11 35:11,16,21 36:5 mullins 6:4 n 1:17 2:1,14 nate 69:2,18 nathanael 1:20 national 9:21 35:7 36:9 38:4 42:17 59:14 67:19 naturally 30:20

[necessary - pel]

September 9, 2019

necessary 24:14	occur 54:10	opportunity 6:22	outcome 69:15
34:11 41:17 42:2	occurred 59:17	8:2 11:6 24:6 33:8	70:12
need 29:18 38:7,7	occurring 30:20	36:7	outlined 13:8,9
38:10,18 41:18	31:3,18 52:14	oppose 24:9	outside 7:10 17:12
44:18 48:8 55:22	occurs 47:16	opposed 67:3	20:15 56:6 58:10
needed 37:14	59:10	opposes 27:15	overall 18:15
38:11	offer 36:7 54:17	option 12:14,15	overlap 16:18
needs 44:5	57:11,14	12:16 13:4	17:5,7,8 18:3,4
negotiation 14:21	offered 57:20	options 12:10,13	24:22 25:17 47:5
negotiations 15:4	offering 9:1	13:8	47:5,6
neither 69:10 70:7	office 11:10,12	order 4:3 36:19	overlapped 16:1
never 15:9	officer 8:17 69:2	44:19 60:13	overview 19:3
new 12:5 14:6,11	official 4:10	organization 24:8	р
14:12 25:18 32:22	oh 11:19 35:16	original 18:19	p 2:1,1
33:6,11,18 41:14	ohio 40:2	27:15	p 2.1,1 page 3:2 48:16
42:3 44:12 61:11	okay 10:9,10 24:3	osha 1:2 3:5 6:8	painting 49:16
niosh 2:11 5:9	24:5 28:11 36:5	6:10 7:2,4,8,15	palmar 5:11
nixon 28:22	36:15 49:6 51:13	8:4 11:20 12:7,9	palmer 2:8 5:12
non 39:15 52:5	51:17 55:19 61:16	12:20 13:20 14:8	64:2,3
noncompliance	65:11 66:3,9,9,18	14:13,14,18,21	part 44:2 62:1
26:19	67:12	15:8,21 16:4,6,14	66:16
normal 20:2	old 14:7 25:21	17:2,4,13,20 18:4	partial 17:7 47:5
notary 1:20 69:1	omb 6:16 8:8 22:6	19:9 22:6,11	participating 4:20
69:19	50:6,10,20 51:2	24:12,22 25:2	67:6
note 40:16 67:15	56:6,15 58:11	27:7 29:7,11,14	participation
noted 34:17	61:18 62:2,3	29:15,18,19 30:1	22:13
notice 8:11 19:5	once 23:22 41:10	30:16 31:4,17	particular 16:20
22:10 23:1 50:19	61:13	32:4,15,19 33:4	26:5 49:18 55:4
66:11,16	open 24:2 28:17	33:10,17 34:17,18	60:6 61:13
noticed 10:6	35:10 45:10 46:9	40:17 46:17 47:7	particularly 29:5
notify 25:6	57:22	49:16 50:14 53:13	60:14
noting 6:15 29:10	opening 3:3 4:1	54:1 55:2,6,8	parties 69:11,14
nprm 16:6 19:14	35:19	56:14,22 57:5	70:8,11
number 29:11	operation 7:10	58:6 59:3,18 60:4	parts 8:4
39:9	13:20 48:5 49:5	60:18 62:18 65:12	party 22:19
numbers 22:4	53:22 59:9	65:22 66:20 67:19	party 22.19 passed 53:13
numerous 34:20	operations 7:5,7	osha's 3:9 6:19	passed 55.15 path 11:15
nw 1:16	14:5 20:2,6 21:19	7:12 8:17 11:1	patience 6:12
0	30:7 32:9 53:21	15:18 18:19 19:21	patients 36:12
objective 13:18	operator 10:13	24:11,15 26:14,17	peabody 28:22
occupational 1:2	23:21 28:2,15,16	27:17 29:6 32:6	peggy 9:21 35:7,9
11:21 26:3,7	35:9	46:8,14 47:1,4	35:11,17 45:8
36:10,11 67:20	opportunities	49:8 56:1 67:17	pel 12:14,15 14:6
50.10,11 07.20	8:14		14:7,11,12 21:12
			14.7,11,1221.12

[pel - provided]

September 9, 2019

36:20 41:14 42:19	portions 15:5	previous 30:4	propose 11:17
51:18	possibility 60:12	37:12	18:9 19:1 34:10
pels 14:19 21:2	possible 8:22	previously 62:16	proposed 8:11
54:14	65:14 66:1,22	primarily 19:11	12:1 14:9 16:12
penny 70:2,15	post 54:18,18	primary 13:20	19:14 20:3 22:10
people 39:19 52:8	powerpoint 35:15	24:15 40:10 48:1	22:12 29:17 30:18
55:3 62:9,13	powerpoint 55.15	67:8,9	32:22 33:11 35:3
perform 43:6	46:13	principal 2:12 3:6	46:20 50:6,15
period 8:15 14:16	ppe 20:11 21:11	6:9	51:2 65:13 66:1,3
27:20 61:22 62:11	21:13,14 30:13	prior 29:12 59:17	66:10,11,15,17,21
periodic 26:22	practical 30:6	69:4	proposing 7:15
periods 40:11,18	practice 25:11	priority 58:6	19:9 20:4 29:15
permissible 12:3	34:15	private 7:1	46:8
perry 11:11	practices 16:10	proactively 43:5	protect 18:5 24:14
person 11:7 17:10	21:4 38:13	problem 59:19	25:22 26:13 36:19
23:18	precluded 29:20	procedure 41:11	36:22 37:1 38:3
personal 16:9	predict 62:2	procedures 20:8,9	41:3 43:8 44:13
37:10 43:16	preexisting 30:15	proceed 13:4	44:19 49:18,21
personnel 38:18	32:6 33:20 34:21	29:18	50:3
ph 39:3	preliminarily	proceeded 16:5	protected 24:18
phone 23:11,12	29:10	proceeding 70:4	27:6 38:20 55:16
53:6 63:7 64:19	preliminary 30:3	proceedings 69:3	protecting 15:10
65:2,18	prepared 70:3	69:4,5,8 70:6	protection 26:14
place 37:11 42:6	prescribed 25:5	process 7:1 8:21	30:13 34:22 43:6
43:12 45:5 48:1	presence 21:18	17:2 22:3,18 26:9	54:17
places 60:18	present 11:7 30:19	31:17 49:13 61:10	protections 14:15
plan 20:5 25:9	34:14 39:5	produce 13:21	17:14 27:9 43:14
38:12	presentation 9:15	44:18	46:22
planned 23:1	10:3 25:1 32:17	producers 52:3	protective 16:9
planning 19:10	35:15,18 45:9	producing 29:8	37:10 38:12 43:16
plans 53:19 60:4	46:8 48:16 49:10	production 54:19	protects 42:11
please 8:3 23:22	66:5 67:16,18,19	products 31:14	protocol 56:6
28:16 35:1,9,10	presentations	program 17:18	proven 32:7
35:14,20 36:14	54:9,22	44:3	provide 8:1 12:20
38:3 41:1,22	presented 9:10	projects 48:9	17:13 19:15 22:8
43:10 44:11 52:12	12:10,13 67:16	proliferation	26:14 28:10 29:20
pleased 24:12	press 23:21,22	37:21	34:13 38:17 39:22
plus 31:16	28:2,16 35:9	proposal 6:15	43:5,14 48:11
point 17:20 18:11	pressure 27:1,2	7:12 8:5,7,8 9:17	53:15 59:3 62:10
32:1 45:9 53:18	pretty 4:4	10:5 12:3 13:6	provided 6:22
56:20	prevent 24:14	14:18 21:22 22:2	14:14,16 16:13
points 8:19	27:7	22:6,8 23:1 24:9	28:5 29:11,16
popped 10:7	preventing 32:8	27:14,15 47:8	38:11 59:13
	37:5 42:8 45:6	50:19 56:12 64:22	

[provides - representative]

provides 54:1	put 22:15 64:18	recognized 27:9	53:12,17 56:10
providing 8:22	65:3	37:18	regulations 24:19
33:8 38:1 45:2	putting 46:14	recommend 57:5	24:22 25:17,20
62:7	52:11	66:20	26:15 31:21 32:7
provision 19:6		recommendation	33:1,18
20:12,21	q	3:8 8:11 10:22	regulatory 8:16
provisions 7:13,16	qualified 69:7	22:22 56:21 64:22	12:21 30:15
8:6 12:7,18 13:5	question 5:19 24:1	recommendations	relate 19:12
14:9 15:9,16,19	27:21 47:11 49:8	65:2,8,10	related 15:16 20:8
16:2,8 17:7,13,18	50:22 52:1 53:10	recommending	21:9 37:19 40:19
18:1,8,20 19:1,7	54:6,8,21 55:6	65:22	53:11 55:2 61:10
19:12 21:5 23:4	56:5 61:10,11,18	recommends	69:11 70:7
24:11,13,16,22	questions 23:9,14	62:18 65:12	relative 69:13
25:3 26:1,21 27:8	45:11 46:10 50:21	reconsidering	70:10
27:17 33:14 35:4	51:1 53:7 54:3	24:13	relatively 61:11
36:17,19 37:2,10	56:19	record 7:12 17:3	release 25:8
37:15 38:5,6,17	quick 54:8	28:1 34:16 53:4	released 61:20
40:15 43:12,17,21	quite 10:14 51:15	59:16 67:5,16	62:2
44:13 45:4 46:15	quorum 5:21 6:1	69:9 70:5	relied 26:4
46:21 47:1,8 57:6	r	recorded 69:6	relying 26:12
58:22 60:2,3,7,18	r 2:1,2,18	recording 69:8	remain 13:19
60:22 62:19 66:8	randall 2:6	70:4	remarks 3:3 4:1
proxy 6:5	randy 4:13 48:14	recordkeeping	remedy 34:11
pubic 49:7	57:9 63:1,7 65:15	16:12,22	remodeling 49:16
public 1:20 2:18	range 30:8	records 25:7	removal 25:12
3:11 5:6 9:14,17	read 28:9	recycling 15:19	48:17
9:20,22 10:4 11:2	ready 23:13 37:12	21:17 48:21	remover 38:14
22:9 23:8,10 24:7	really 36:17 49:9	reduced 37:17	removing 19:19
27:15 28:12 34:7	52:7 61:2	69:6	20:7,20 21:3,10
35:7 52:4 60:1	reason 30:11	reference 40:6	21:13,16 22:3
61:9,20 62:9,11	50:17	41:6	renovation 49:15
64:6 67:10 69:1	reasonability 18:4	references 19:20	rep 5:10 6:5 50:5
69:19	reasonably 34:11	referral 21:21	57:4 59:12 62:17
publication 8:5	reasoning 46:18	referring 58:19	63:19 64:16 65:4
publish 22:7 48:10	reasons 24:20	regarding 26:4	68:4
65:22 66:21	27:15	41:5 60:2	report 22:4
published 8:7	recall 12:13	regardless 49:22	reported 1:20
11:20 16:6 29:14	recap 13:10	register 12:1 62:3	41:13
33:5,11 41:5	receive 15:21	regular 26:21	represent 5:1 36:9
56:13 62:3	received 7:8,11	regulate 32:20	36:11
publishing 23:1	14:17 17:3 47:2	regulated 25:8	representative 2:2
33:7 56:12	receiving 33:3	30:12 33:19 38:10	2:5,6,7,8,9,10,11
purpose 56:21	recognize 30:4	regulation 6:20	2:16,17,18 4:8,12
		25:4 29:6 33:21	4:14,16 5:6,13,17

[representative - sent]

September 9, 2019

Page 13

	1	1	1
6:4 46:12 48:15	retention 36:17	rule 8:2,5,12,14	65:20
49:7 53:10 54:8	38:5	11:18,21 13:2,13	sanitation 21:6
58:2,17 60:1 61:9	reverse 46:17	13:14 14:8 15:7	saying 58:3
63:10,13,16 64:4	reversed 33:4,10	15:15 16:2,19	schedule 25:5
64:6,10,13 65:20	review 30:2 35:2	17:22 18:7,10	science 26:4
representing	47:3 61:20 62:4,5	24:11,15 27:18	sciences 36:11
28:22	reviewed 17:2	30:18 33:5,6,11	scientific 33:17
request 52:7,19	reviewing 11:14	38:7 39:3 43:15	scope 7:5 12:17
requested 62:5	revise 23:2 57:5	44:14,17 48:11,12	13:12 52:22
requesting 50:12	62:18	50:6,7,13,15 51:2	scott 2:3,11,15 4:9
50:15	revised 35:3,3	51:2,4,6,8,9,12,21	5:3,8,9 8:18 9:15
require 20:5 42:4	revising 21:20	52:22 53:3,4	10:15 45:16,17,19
43:17 60:5	57:1	54:13,16 55:5	63:14,15,17,18,19
required 25:3	revisions 19:10	56:12,12,15 58:11	65:10
34:10,21 43:14	revoke 8:6 14:9	59:17 60:5,19	second 25:17 30:3
51:14,19 56:2	18:1	61:1,4 62:13	35:14 54:21 55:6
requirement 17:9	revoking 7:17	65:13,13,22 66:1	57:9 62:7,22 63:1
20:15,16 21:1	18:8	66:4,6,7,10,15,22	63:7,17 65:15
requirements 7:20	richard 2:9 5:15	rulemaking 7:14	66:20 68:6
17:5,5 20:8 21:3,6	5:16 64:11,12	8:12 14:19 15:7	secondly 20:19
21:13,16,18,21	right 5:7,18,22 6:6	16:4,15 17:2	55:13
22:3 30:12 33:12	9:7 10:20 23:16	22:18 23:2 31:17	seconds 34:6
48:18,20,22 56:1	28:12 35:6,19	32:10 34:16 52:8	secretary 2:12 3:7
requires 56:11	45:15 46:6 50:6	52:11 55:10 59:16	6:9 56:11
rescind 7:12 24:9	56:17 61:17 62:15	65:6 66:12,17	secretary's 34:10
25:2 27:16 46:21	63:2,6,11,17	rulemakings 15:6	section 44:6
66:7	64:14,17,20 65:5	rules 50:9	sectors 32:22
research 41:4,5	66:19 67:4,10	ruling 66:21	security 22:4
42:16	68:7	running 9:5	see 11:18 13:15
resolution 6:21	rights 41:4	ruskin 2:13 3:12	36:12 38:8 39:14
respect 15:18	risk 18:5 34:12	8:19 9:10 11:3	46:10 59:3
respectfully 59:18	39:7 42:18,20	46:20 47:18,21	seek 47:9
respects 47:13	44:6,9 55:7	48:10,20 49:20	seeking 11:17
respirator 44:3	risks 34:14	50:9,14,17 51:9	22:22 46:21
respiratory 30:13	riveness 1:20 69:2	51:15,19 52:7,16	seen 21:9 40:16
34:22	69:18	53:3,18 55:5	48:4
response 14:17	roll 4:6 45:13	60:20 62:1 65:8	sensitive 60:15
44:8	ron 2:18 5:14	S	sensitization 26:9
restate 62:16	10:15 46:1,2 49:7	s 2:1	37:4,5,22 40:17
result 32:15	53:6 58:16 59:11	s & g 2:13	42:7,21 43:3 45:2
retain 14:11 36:18	59:22 64:5,6	safe 45:3 58:4	sensitized 42:15
retained 37:2	ron's 52:1	safety 1:2 26:3	sent 8:8 22:6
retaining 27:7	room 1:17 6:14	36:11,13 38:18	50:10
	11:9 46:9	44:5,10 63:12	
		т.5,10 05.12	

www.CapitalReportingCompany.com 202-857-3376

September 9, 2019

[separate - supporters]

congrata 12.1	single 19:6 42:14	27:9 38:2 42:4	stel 14:12,12
separate 12:1	single 19.0 42.14 site 60:9	44:6 47:14 53:16	21:20 36:21 51:18
september 1:7 29:12			step 6:21
	sitting 11:13 situations 54:19	specifically 25:21 39:18	-
serve 9:1			steps 22:5
services 40:1 59:2	sizemore 2:7 4:11	spend 11:14	stop 63:6
severe 42:9	4:11 46:11,11	spent 32:15	strategies 25:16
shanna 9:22,22	47:11,20 48:6,13	spring 15:8	stress 8:9
23:10,19,20,21,22	55:21 56:5,16	stage 61:14	stribling 2:14 10:7
24:1,4 27:19 28:2	57:11,19 58:1,2	stakeholders 8:1	45:13,14 63:12,12
28:4	64:16,16 68:4,4	15:1 19:16 22:8	65:19,19 66:3,9
share 55:15	skills 69:10 70:6	29:20 33:9	66:18
sheeler 64:8	slag 31:8 41:9,10	standard 3:10	strong 29:5
shipyard 24:10	44:17	7:14,15,17,22 9:9	structure 8:13
27:11,16 32:21	slide 11:19 13:16	11:1,6 12:6,17	struggling 58:11
shipyards 12:2	35:19,20 36:14,15	13:5,7,15 18:8,16	studies 39:9,18
14:10 16:20 17:21	38:3,21 41:22	19:20 21:6,10	study 32:3
31:21,22 33:6,12	43:10 44:11	23:3 27:3 29:17	subject 7:3 8:18
short 4:4 12:5	small 14:3	34:10,13 37:17	30:10
24:19 26:10 27:20	social 22:4	38:1 49:9,17,18	submission 51:1
28:9,10 40:11	soil 31:11 52:14	49:20 50:2 56:3,7	submit 28:7 52:8
54:15	sokol 2:18 5:14	57:1 58:20 61:6	52:12
show 53:16	10:15 46:1,2 49:7	62:18,21	submitted 52:22
showed 42:17	49:7 50:4 58:16	standards 3:13	61:18
shown 39:8,18	58:16 59:22,22	7:6 9:11 11:11	submitting 27:22
42:22	61:7 64:5,6,6	12:1,8 14:14 15:5	subsequent 14:8
shows 52:17,20	sokol's 46:2	17:4,6,13,16 22:2	19:20 27:3
sic 38:14	solely 26:12	23:5 33:20 34:20	substances 30:8
sick 59:15	solicitor's 11:12	34:21 35:5 40:2	substantial 34:1
signature 69:17	somebody 65:11	41:1,18 43:13	substantive 15:21
70:14	soon 65:7,13 66:1	46:15 47:1 51:20	16:6
signed 9:18,19	66:22	57:5,8 60:19	substrates 30:10
23:18	sorry 9:19 28:9	67:17	30:22
significant 15:12	sought 14:13	star 23:22 24:1	suddenly 33:4
18:5 33:7 34:12	source 42:15	28:2,17 35:9	sufficient 62:8
34:14 39:17 48:11	sparking 39:16	start 4:7,21 6:14	suggests 30:5
49:4	52:5	18:12,13 23:10	suit 40:3 46:16
silica 53:14,20,20	speak 65:3	29:10 46:9 58:1	summarize 24:20
58:20	speaker 10:17	started 6:7 36:1	32:17 33:16
similar 12:7 13:8	28:13 35:7 59:14	state 63:12,15	summary 35:1
14:14 43:7 48:22	speakers 34:7	65:20 66:3	44:12
53:14,19 59:4	speaking 19:9	statement 27:22	support 30:14
simple 32:1	specific 16:16	28:5,10	33:4 36:16
simplify 16:14	17:16,19 18:13	statutory 18:4	supporters 24:9
20:4	20:20,22 21:3	29:22	

[sure - untrue]

September 9, 2019

41.10.51.15	4	th an alta 57.10	tuon govint 70.25
sure 41:18 51:15	tasks 25:8 43:7	thoughts 57:18	transcript 70:3,5
51:15	47:16	thousands 31:12	transcriptionist
surfaces 30:9,22	team 11:8	three 8:9 9:19	69:7
surprised 12:11	technically 66:11	12:1,13 31:9	trigger 21:11,12
surveillance 12:15	teleconference	threshold 34:13	triggers 26:10
16:11,21 17:15,18	4:20	tiffany 11:9	true 69:8 70:5
19:13 25:11 26:22	tell 48:18	time 9:20 11:14	trying 42:1
37:3,8,20 38:2,14	term 12:5 26:11	14:18,20 22:8	turn 67:13
40:15,22 41:22	54:15	27:20 28:9 30:2	twa 21:20
42:2,6,9,11 43:5,8	tessier 2:9 5:15,16	34:9 35:2,4 40:12	two 6:2 8:13 13:15
43:21 44:20 45:1	5:16 64:11,12,12	46:13 50:10 51:11	15:6 17:22 18:19
susceptibility	test 37:21 44:1	57:2 61:6 62:8,12	67:7
42:21	testifying 69:5	timeframe 61:21	tying 21:18
susceptible 42:18	testing 19:13 40:4	times 31:9,13	type 17:14 30:19
43:2 55:1	text 12:21	41:14	32:1 58:19 59:4
sweatt 2:12 3:6	texts 8:16	timing 8:4 51:5	types 29:4 52:10
6:8,11	thank 9:1,6 11:3,4	61:5	52:15
sworn 69:5	23:6,7 24:3,4,5,5	title 50:19	typewriting 69:7
system 20:17 59:8	27:18,19 28:11,21	titled 67:19	typical 31:10
t	35:5,6,21,22 36:6	titles 20:6	typically 31:8
table 53:15,19	36:15 45:7,8,19	today 4:3 6:16,21	u
57:22 58:19,21	46:12 48:13,15	8:11,14,17 9:2	unanimous 67:4
59:4,6 63:3	49:6 50:4,11,21	11:5,9 13:1 22:21	unaware 26:18
tailer 47:8	53:5,17,18 55:17	50:18 66:10 67:12	uncovered 32:11
tailor 7:19	56:16 61:7,16	today's 4:3 6:3	understand 8:20
tailored 18:10	62:14,14 66:18	66:5,10 67:6	51:7,16 55:22
23:4 57:7 62:20	67:11 68:2	tool 39:18,19	understanding
take 6:22 18:16	thanks 59:11	tools 39:16,16,21	19:21 46:14 54:12
30:1 35:2,4 40:7	thing 9:13 38:22	52:5	underway 14:19
taken 6:21 69:3,12	64:18	topic 61:13	undoubtedly
70:9	things 8:9 48:8	toxic 25:8	26:17
talk 16:2 37:12	49:16 58:17	trace 14:1 15:3,12	unfortunately 9:4
talked 49:11 54:9	think 9:13,18 28:6	30:20 31:3,5,19	29:19 31:15
talking 23:17	36:18 45:9 52:13	32:20 49:2 50:1,2	unidentified 10:17
47:18 50:17 66:4	54:9 58:15 59:12	trade 39:1 44:14	union 40:5
66:15	65:4	traditional 15:1	unique 14:17
tanenbaum 10:1	third 25:20	trahan 2:5 6:6	18:17 25:22 27:10
28:13,18,21,22	this'll 62:2	train 25:14	44:8 47:2 54:4
34:3,8 52:13	thorough 29:21	trained 60:13	unnecessary
tannenbaum 34:4	thoroughly 17:2	training 38:15	33:21
targeted 23:16	29:22 30:2	41:5 44:5,10 60:3	unrecognized
targets 58:5	thought 9:5 49:3	60:7,11,17,21	37:16 42:15
task 58:9	53:13	transcriber 70:1	untrue 24:21

[update - years]

September 9, 2019

update 3:5,9 6:8	ways 53:16	38:3,19 39:1,2,3,9
6:10 7:16,19 9:8	we've 6:6 40:16	39:22 40:3,5,9,13
11:1 54:3	53:5 56:18 60:15	40:20,20 41:20
	66:4 67:10	· · ·
updated 61:6		42:7,10 43:6
67:17	webex 4:20	44:13,14,15,15,19
updates 18:9	website 54:2	49:11,14 52:1
19:11,12	weeks 40:12	58:4 59:15 60:6
updating 61:4	weight 13:17	60:13
upload 35:14	18:22 31:6,10	workforce 42:13
uploaded 35:18	welcome 4:3 22:20	workgroup 61:12
urge 30:1 32:3	66:19	working 6:11 11:7
use 20:2,16,17	welcomes 22:11	39:19
34:21 39:15	65:9	workplace 26:16
users 49:4	welding 42:5 52:6	works 18:5
usually 48:10	wellman 40:4	wrap 34:5
utilization 49:12	went 9:4 50:20	write 60:4
utilized 58:21	wes 5:14 10:15	written 20:4 25:6
v	46:3,4 54:7 64:8,9	25:9 27:21 28:7
van 42:16	wesley 2:17	29:13 38:11 60:19
various 29:4	wheeler 2:17 5:14	у
various 29.4 versus 47:1 53:21	46:3,4 54:7,7	yeah 5:5 10:19
	55:17 64:9,9	23:17 28:4 45:17
vicinity 59:9	wheeler's 46:4	
virtually 30:21	whipsawing 32:18	53:9 57:19
virtue 8:12	widely 30:19	years 12:12 26:2
vote 6:5 13:3 57:2	witness 69:4	31:16 32:10,15,19
63:3,10,13,16	words 33:13 57:13	36:14
64:1,4,7,10,13	work 6:13,18	
65:3 66:22 67:4	10:20 16:18 25:8	
voted 65:1 67:6	25:11,13 38:12	
W	39:11 40:6 43:7,9	
walk 8:19	44:10 49:15,17	
want 6:14 8:9 11:4	54:18	
35:14,19 57:17	worked 39:6,10	
58:2 60:20	40:11	
wanted 18:16,19	worker 36:11	
19:15 36:3 39:1	38:14 42:12,15	
40:7	54:11 60:8	
warning 21:16	worker's 41:4	
48:17	workers 14:15	
washington 1:18	15:10 24:10,14,17	
way 10:12 29:19	25:22 26:13,14,18	
30:16 36:14		
		1
50.10 50.14	26:20 27:6,12,16 36:19,22 37:1	

www.CapitalReportingCompany.com 202-857-3376