NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

EMERGENCY PREPAREDNESS AND RESPONSE PROGRAM

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PROCEEDINGS 1 DR. KITT: Good morning. I think we're 2 going to go ahead and get started here. Hopefully 3 everybody is sitting around where they can see over the pillar here. Sorry about the awkward set 5 up for the room. Good morning. First let me say thanks for taking time out of your very busy schedules to be here with us today and engage in this 9 10 conversation with us. I know that everyone in this room has a real appreciation of the critical 11 role that the responder community has within our 12 nation's health. 13 So the selfless work force that we 14 strive to take care of really needs a voice to 15 help prepare it and take good care of it. And 16 NIOSH is certainly committed to be part of that 17 voice, and I know that everyone here in this room 18 is part of that voice, as well. 19 So let's go ahead and get started. I 20 know that most of you know Doctor John Howard, the 21 Director of the National Institute for

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Occupational Safety and Health, which, of course,

2 is part of the Department of Health and Human.

3 Services. Well, prior to his appointment as the

4 NIOSH Director, Doctor Howard served as the Chief

of the Division of Occupational Safety and Health

6 in the California Department of Industrial

7 Relations from 1991 to 2002. Doctor Howard has a

8 Doctor of Medicine from Loyola University, an MPH

9 from the Harvard School of Public Health, a Doctor

10 of Law from the University of California, Los

11 Angeles, and a Master of Law and Administrative

12 Law from the George Washington University.

13 He's board certified in internal

14 medicine and occupational medicine, and is a

15 member of the U.S. Supreme Court Bar. He has

16 written numerous articles on occupational health

law and policy, and we're very fortunate to have

18 him with us here today. Doctor Howard.

19 , DR. HOWARD: Thanks very much, Captain

20 Kitt. I didn't know you were going to be so

21 formal here this morning.

22 Thanks for everybody taking time to come

1	to our meeting today. This is extremely importan
2	for us. Just as a general background, let me tel
3	you briefly what we do at NIOSH, for those of you
4	that are not totally familiar.
5	We have a portfolio of programs that we
6	manage for the country, and of those 32 programs,
7	one of them, Emergency Preparedness and Response,
8	is an extremely important program for us. And on
9	of the reasons that you're all here today is to
٠ ١٥	help us determine what is the most relevant
l1	research for that area, how we can do that
L2	research with the highest quality scientific
L3	standards in mind, and how that research can have
L4	the most impact on emergency responders. If you
L5	look at our portfolio, we emphasize those three
16	attributes of relevance and quality and impact.
L 7	Now, for those of you that are familiar
L8	with a lot of our activities, you'll realize that
L9 _.	we're part of the Centers for Disease Control and
20	Prevention. We are also a part of the Department
21	of Health and Human Services. And a lot of our
22	activities that we've done in emergency response

1	since emergency response has become an area of
2	organized emphasis, if you will, with a name, has
3	largely been in response, if you will, to the
4	various real and exercised disasters that CDC
5	engages in, that HHS engages in, that across the
6	federal government, FEMA, Department of Homeland
7	Security and others engage in.
8	And for now about four or five years,
9	we've realized that our own emergency response
10	activities of significant scientific content and
11	merit really have been following along, if you
12	will, some of those cross government activities,
.13	the real and the exercised disasters. And so what
14	we wanted to do is to say to ourselves, we have an
15	emphasis in a particular area of responder safety
16	and health, and it's not related to what all these
17	other agencies are doing. We, ourselves, have to
18	get together and decide what is a research
19	portfolio of programs for emergency preparedness
20	and response for responder safety and health.
21 `	And one of the things that I have
22	learned from my work as the Department's World

1	Trade Center Coordinator of Programs; of the
2	health programs that we coordinate for responders
3	to the World Trade Center, and most recently to
4	the community affected by the World Trade Center
5	disaster, is that we in responder safety and
6	health have to constantly remind those whose view
7	is more general and more broadly oriented that
. 8	responder safety and health has to be put on the
9	same plane of importance and interest and
10 .	financing as victim rescue is, as site recovery
11	is, as clean-up activities are, because without
12	that, we will suffer the same things that we
13	suffer now in the aftermath of the World Trade
14	Center disaster, that is, a health disaster
15	following the original response.
16	So what we want to do here is to bring
17	all of you together, bright minds coming together
.18	in the same room, to help us chart a research
19	portfolio; what should we be doing at the
20	Institute to move responder safety and health
21	forward, per se, not related to victim rescue,
22	site recovery, all these other things that other

1	government agencies do. We are the only federal
2	agency whose sole responsibility is the protection
3	of individuals who work. And responders are
4	workers, workers are responders.
5	So I want to welcome you on behalf of
6	everyone at NIOSH who does this work. Thank you
7	very much for taking time out of your busy
8	schedules to come here today. I hope that we have
9	a great day.
10	Please contact me if anybody has any
11	interest in what we're doing at NIOSH beyond
.12	emergency preparedness or related to anything that
13	I do. I'll give you my email address, it's
14	jhoward1, that's an aerobic number 1,
15	jhoward1@cdc.gov. So please contact me at any
16	time if you want to know what we're doing in other
17	areas of NIOSH. So thank you, I appreciate your
18	attendance today, and I hope we have a great
19	meeting.
20	DR. KITT: Thank you, Doctor Howard.
21	We're also very fortunate to have with us today
22	our next speaker, which is Mr. Rich Duffy, who is

1	the Assistant to the General President,
2	Occupational Medicine, Health and Safety,
3	International Association of Firefighters. Rich
4	holds a Bachelor of Science in both Environmental
5	Health and Business Management, and a Master of
6	Science in Occupational and Environmental Health
7	Services Sciences, sorry. Rich has been
8	involved with worker occupational safety and
. 9	health issues for over 35 years, the past 30 of
. 10	which have been with the IAFF. He provides
11	technical assistance on firefighter's health and
12	safety issues and is internationally recognized as
13	a firefighter health and safety expert.
14.	He's responsible for the coordination
15	and technical aspects of the IAFF's Disaster
16	Relief Program and was instrumental in their
17	deployment and assistance in New York City after
18	911 and at the Gulf Coast after Hurricanes Katrina
19	and Rita.
20	He has authored numerous books, manuals,
21	and articles on worker occupational safety and
22	health issues and we're very pleased to have Mr.

Rich Duffy with us here today.

MR. DUFFY: Thank you, Kitt, and thank 2 you, John. When I was asked to come here today, 3 obviously I could have spoken about an awful lot of things as it affects emergency responders. I quess I could have given John's speech, which truly are some of the areas that we need to look 7 at, and we're certainly happy that the continuing 8 forum of NIOSH and the many areas is continuing 9 and trying to address these issues. So I'm 10 debating what I should talk about in a 15 minute 11 period. I want to just look and use the examples .12 that we learned very briefly after our response in 13 2005, after Hurricanes Katrina, Rita, and to some 14 extent, Wilma, and try to give you a flavor of the 15 emergency response activities, not only that we 16 were involved in, but more importantly the role 17 that the federal government needs to play and 18 NIOSH needs to play in assisting emergency 19 response and events that occur in the future, and 20 I'll attempt to look at those. 21 To give you a flavor of what happened

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1 after August of 2005, we did detail, an awful lot

- of people, which you'll see over the next few
- 3 moments, to the Gulf Coast, specifically in Texas,
- 4 and a more larger scale in Louisiana, where we
- 5 based our operations out of the only dry area,
- 6 which was in Baton Rouge, we assisted 45 of our
- 7 local affiliates, meaning 45 fire departments that
- 8 had paid career firefighters involved.
- 9 We did a minimum of 160 missions during
- 10 the first month and a half of our work out of
- 11 Baton Rouge, and we worked in the states of
- 12 Alabama, Florida, Louisiana, Mississippi, and
- 13 Texas. And again, as you'll remember, these
- 14 hurricanes happened one after the other. The
- 15 first responders had significant problems here.
- 16 This is a fire house in St. Bernard where
- firefighters still were being deployed out of, and.
- as you can see, the water here is probably about
- 19 four and a half -- five feet deep in this
- 20 particular fire house.
- 21 And they stayed in their fire houses.
- You know, you saw the pictures; perhaps you didn't

notice that emergency responders didn't leave

- 2 their particular community.
- 3 Not only did they stay within their
- 4 community, they stayed within their fire houses.
- 5 And this is not a rescue mission, these are
- 6 firefighters remaining in place at their fire
- 7 house.
- They were able eventually to get boats,
- 9 but they kept the boats in those particular areas,
- 10 and, again, there were significant problems
- 11 associated with that. And, again, just another --
- this is a New Orleans fire house, and you can see
- 13 -- and you've seen the pictures in the press.
- I just want you to know the next time
- 15 you see these pictures that typically there are
- 16 still emergency response people in there. And the
- same is true in other emergency response, with
- 18 police trying to deal within the capacities that
- 19 they had and the facilities that they had. They
- 20 weren't able to all get on a bus and leave the
- 21 particular area, they remained in that area, and
- 22 they were there for, as John alluded to, there for

rescue and recovery efforts after -- and for a considerable period of time.

3 Regardless of the rescue and recovery activities, they still did what they had to do on a daily basis, and that's fight fires. And as you 6 saw certainly in the New Orleans area, fires did-7 occur, numerous fires occurred, and firefighters from outside the area were deployed into New 8 Orleans to assist them in taking care of numerous 9 fire emergencies, as well. And, of course, then 10 we continue with recovery efforts. 11 The first particular area of need after 12 13 a disaster is clearly money and how that money is used. We started a policy a number of years ago 14 where we immediately provide \$500 of relief money. 15 It sounds like a minuscule amount of money, and, 16 in fact, in the total picture, it is a very small 17 18 amount of money, but you can't believe how important it is to put \$500 cash in someone's hand 19 after a particular event, where their ATM card 20 doesn't work, they can't cash a check, they're not 21

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getting a paycheck, and they have nothing. And so

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1	what you may not think is a significant issue
2	becomes a very significant issue. And within
3	hours, we had checks; in fact, we had to Fed Ex
4	them because it was the only way that we could do
5	them, sign checks without peoples' names and sent
6	Fed Ex with, I think we did \$50,000 at a time tha
7	they would cover them, and got there, signed the
8	checks, and wrote them out to people, and then
9	found a place to cash them right in our area,
10	which you'll see.
11 ·	We provided these checks within the
12	first month to over 3,500 of our members. We
13	distributed a million, almost two million dollars
14	in money that we collected. Every penny that we
15	collected, we gave out. Not only true, I should
16	say in the Gulf Coast, after 2005, but we
17	collected, in 911, about \$170 million, and that
18	\$170 million, including every interest penny that
19	was also gathered as we collected the money, was
20 '	divided by 347 and given to the families.
21	We kept no administrative fee, we kept
22	no set-up fees, so the money coming in, we were

able to immediately get that out. And every penny

- we collected under the Katrina, Rita, and Wilma
- 3 Hurricanes were given out to our members that were
- 4 affected, as well. We also assisted, to some
- 5 extent, the Red Cross.
- 6 Besides money, there is lots of other
- 7 activities that I want to really touch on. We
- 8 provided a command staff to assist numerous
- 9 members that we had both in place in the Gulf
- 10 Coast, in Texas, and to a larger extent,
- 11 Louisiana. We had every problem that was
- 12 imaginable. Communications were a significant
- issue. We went and we had our satellite phones
- 14 and our cell phones and the Nextels and the
- 15 radios, and for the first week communications, at
- 16 best, were a minimum. Face to face was typical,
- more so than using any electronic communications.
- 18 But it's an area that I think everybody has
- 19 learned quite well from.
- 20 We learned certainly after 911 in New
- 21 York City, when we lost all the cell capability or
- 22 they were jammed by the media. We certainly had

the same problems of capa	abilities in t	he Gulf
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- 2 Coast. And everybody that believes that satellite
- 3 phones are the answer, believe me, save your money
- 4 and probably hope for more face to face.
- 5 Evacuation was a significant problem
- 6 with our members in the Gulf Coast areas in
- 7 particular. In Louisiana, firefighters have
- 8 residency laws. They must live within the
- 9 community they work in. So the firefighters,
- 10 especially in New Orleans and in St. Bernard
- 11 parish specifically, almost every one of them lost
- 12 their home. There were just handfuls of
- 13 firefighters whose homes were not lost. And when
- I say lost, I mean, as you well know from the
- 15 media or if you were down there, they were gone.
- 16 Families were evacuated. And again, I should say
- 17 that all firefighters remained in place, as you
- 18 saw from some previous pictures. Food and
- 19 immediate shelter was a significant problem. We
- 20 attempted through our network to do our best in
- 21 that.
- 22 I should say that -- well, I'll get to

1	that in the next slide. But medical care and
2	medical vaccinations I am going to specifically
3	touch on in a moment, as well as our support
4	effort, which is really our behavioral health
5	response to this particular area.
6	Other issues that have come up, and it
7	took us away from our immediate mission of
8	providing immediate assistance, both medically,
9	behaviorally, and attempting to work with
.0	communications issues. There are some other areas
.1	that we got directly involved in and we're still
.2	evaluating.
.3	Transportation was a significant problem
4	in the Gulf Coast. The best way we and we were
.5	able to, for lack of a better word, borrow a lot
.6	of boats, everywhere from tugs down to small craft
.7	that just seemed to become available, that we did
.8	and had to use.
.9	Housing support became a very
20	significant issue, and the media report, and not
21	just for emergency responders, but everybody were
22-	looking for places to live, especially for their

1	families. We had staff up here in D.C. work over
2	that Labor Day weekend, and then for the first
3	couple of weeks, and we arranged homes around the
4	country with our members that either had vacation
5	homes that weren't used, had homes had room
6	within their current home, had rentals that were
7	available, and they actually put together a
8	significant network that we were able to house
9	every single member that was displaced in the Gulf
LO	Coast, nobody used it.
.1	They weren't prepared to leave, and
L 2	again, people that believe that you can displace
L 3	people, and people are ready and willing to go, is
.4	a fallacy, at least for emergency response
L 5	workers.
L 6	The families didn't want to leave, even
L 7	though they found relatives eventually had to go
L 8	somewhere because they lost their homes, they were
L9	not interested in going to Seattle, or Chicago, or
20	New York, or any other places where we put
21	together with significant staff time those issues.

So that's an issue that we now probably have taken

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1	off the board and won't use again. But even we
2	attempted to do it, very successful, but it was
3	not utilized whatsoever.
. 4	And talked about how financial
5	assistance is important. And then building
6	materials and housing repair crews, again, there's
· 7	a volunteer effort beyond what you can believe.
8	But certainly our people and other emergency
9	responders that are not only willing to come in to
10	assist in emergency operations, recovery
11	operations, relief operations, but actually want
12	to grab a hammer and a saw and rebuild homes.
13	Again, the coordination of this is very
14	difficult. We did the best we could with blue
15	tarp and housing materials that were sent in.
16	Because everybody wants to give materials. It's
17 ,	very, very difficult then to find a system to
18	utilize it.
19	And I've got to give lots of credit to
20	the church groups, because the church groups were
21	really the most significant coordinator of much of
22	these events. We were able to get a church in

T	Baton Rouge, and the church, we lived there for,
2	or had crews out of there for over a two month
`3	period. We assisted them in some of the
4.	construction within their church and also had
5	and eventually bought them a brand new bus because
6	they certainly deserved it.
7	We had all our relief operations and our
8	command and our medical operations out of here.
9	And I'll touch briefly on what we've done there.
10	We had crews around the clock working there that
11	we brought in from around the country to assist,
12	including significant senior staff out of the IAFF
13	headquarters in Washington, D.C., and again,
14	running all these programs, including the medical,
15	the behavior health, and the housing, and so
16	forth, and also the distribution of money. People
17	would come in, prove that they were an IAFF member,
18	we were able to check back in D.C., and the checks
19	were given out to individuals, or we made trips
20	into or operations into areas where fire houses
21	were still were firefighters were, delivered
22	that service there, as well.

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1 We had all the visitors that would come in, here's the Secretary of -- Department of Homeland Security, he was down and visited with us 3 a couple times in the whole process. And we, of course, briefed DHS and the 5. FEMA folks as we continued there for the main two 7 months of operation. And, of course, we housed our people, В and there was no creature comforts there 9 whatsoever. We weren't at the High Regency Hotel, 10 we were in the gym of the church, and our staff 11 housing and the folks that commenced housing were 12 13 right here. We found mattresses and bedding, and 14 there were bathrooms and some shower capabilities, 15 some washing machines that we hooked up to fire 16 trucks outside so we could clean clothes, and did 17 the best we could. But anyone that came down 18 there expecting a mint on their pillow at night 19 certainly never -- didn't find that at all. And 20 this was after a couple days. The first few days 21 were even worse than that, without bedding, but so 22

be it, we were at least dry. Again, operations

- 2 activities were here.
- 3 Two major areas that we found out that
- 4 were remiss, and I'll end in a moment on these
- issues, but I wanted to touch on, and that is
- 6 baseline testing and medical surveillance of
- 7 individuals.
- 8 Unlike New York City, where the
- 9 firefighters in New York City were in a program
- 10 that the IAFF developed along with the fire chief's
- 11 back in the late 1990's called our Wellness
- 12 Fitness Initiative, where we put together a
- 13 mandatory non-punitive medical evaluation program
- 14 for all firefighters.
- And in the first year of the program, we
- implemented in ten cities, which included New
- 17 York, and about 26,000 firefighters, with a
- 18 complete medical -- full medical evaluation which
- 19 would be done regardless of age on all
- 20 firefighters.
- 21 And, in fact, the firefighters that
- 22 responded in New York City to 911, all of them,

1	depending how many years they had on the job, but
2	if they had over four years on the job, they had
3	four physicals done for them, the original
4	baseline, and then an identical physical that was
5	done every year after that. And certainly, as
6	Doctor Howard can testify as the 911 czar right
7	now, the way that we could actually respond to the
8	health needs of those firefighters, whether it was
9	lung problems or other medical problems, is, in
10	'fact, that every one of these firefighters had a
11	physical within the last 12 month period, and
12	before that, and before that, and before that.
13	It didn't happen in New Orleans. These
14	firefighters, if they were lucky, they had a
15	medical evaluation when they got on the job, or if
16	they saw their doctor for another health reason,
17	they may have had a physical. There was no
18	baseline to evaluate this, and there were
19	significant concerns. And there is today some
20	more significant concerns.
21	We attempt the best we could with our
22	medical staff, as well as with folks that assisted

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1 us outside, in trying to determine what we

- 2 immediately had to do. First of all, very few of
- 3 these firefighters, unlike New York City, and even
- 4 though there wasn't a need for it there, but in
- 5 New Orleans and in the Gulf, in the entire Gulf
- 6 region, very few people had hepatitis vaccines.
- 7 Ironically, hepatitis A vaccine is only required
- 8 for workers if you're working in -- or your
- 9 anticipated work is in dirty water activities.
- 10 Well, guess what, every one down there was in
- 11 dirty water activities. No one had hep A vaccine.
- 12 Ironically, though, kids in this country
- can't go to school unless they have a hep A
- 14 vaccine. In fact, my kids, I have two college
- seniors, my twin daughters, they can't even go to
- 16 a university, and they go to universities here in
- 17 Virginia, without getting an annual medical.
- 18 They're not required for emergency workers, nor
- 19 many workers, and this was the case down in the
- 20 Gulf area.
- We did blood draws on over 1,100
- 22 firefighters, we did complete blood counts,

basically provided them a background in case

- 2 disease perhaps would ensue afterwards. We did
- 3 some other medical -- for individuals just to
- 4 create a baseline, and also documented what
- 5 vaccinations they did have, and provided -- began
- 6 the process for providing hep A, hep B
- 7 vaccinations while we were down there, and did so,
- 8 I don't want to say a haphazard basis, because we
- 9 actually recorded everything, but a very difficult
- 10 basis.
- In fact, I still have medical records in
- my office that are preserved for firefighters. We
- were never able to get them because their homes
- 14 were gone and there was no place to mail them to,
- but we're still following up on that, and have
- 16 some of our medical residents working on the data
- for that particular issue. So it was a very
- 18 significant area.
- 19 And the other area was the behavior
- 20 health response. We learned in New York City a
- 21 very valuable lesson in the first few days and
- 22 then in the years since that, that the first need

1	for behavior hearth response is not an automatic
2	debriefing of people that you may hear about, not
3	bringing folks in and going through a critical
4	stress management course, it's providing for their
5	basic needs, showing people that you really care
6	about them, actually showing up in the fire house,
7	and people say I need a car, a car would show up,
8	you know.
9	I haven't had a chance to go to my house
.0	to check and see if groceries are needed, send
.1	someone to the house and get groceries. I got
.2	called up, and we were in midtown Manhattan two or
.3	three days after 911, and I got a call, and a
.4	fireman called me up on my cell phone, got a hold
.5	of me and said, you know what, every time a
.6	firefighter dies in New York City, we put bunting
7	over the fire houses. We lost 343 New York City
.8	firefighters, and there's not bunting anywhere on
9	any fire house in the city. And it may not sound
0	like a significant issue when you look at the
1	massive the entire problem, but it was a
2	significant issue in this guy. And we found a

1	couple of undertakers in New York, and by the next
2 -	morning, by the time the sun came up, every fire
3	house in New York City had bunting on them. Not a
4	big deal, but it was a big behavior health deal
5	that involved our people.
6	So we learned in New York that this is
7	not about immediately providing health care for
8	behavior health issues, it's providing a need of
9	being there for people. And not only did we learn
10	and achieve that in New York, but we also did that
11	same process, same lessons back in Louisiana.
12	And we brought teams in from here, we
13	brought them from Austin, Boston, Dallas, Fairfax
14	County, LA City, LA County, Massachusetts,
15	Phoenix, New York, and Wisconsin. We kept people
16	there for only five day deployments, we learned
17	that lesson very well, too.
18	Anything after five days, in all due
19	respect for people who have been deployed,
20	anything after five days, individuals start
21	becoming tourists. You can get them to work their
22	butts off for five days, but after that fifth day

.1	comes, they want to go down we'd like to take a
2	trip downtown and stuff, we send them home, come
3	back in another two three weeks, we'll bring
4	you back again, but after five days, we found that
5	we've lost the usefulness for the projects that
6	they were involved in.
7	And that accounted our own staff. So we
8	started rotating people in and out. But I'm not
9	trying to be disrespectful, I'm just trying to
10	show you exactly what had occurred down there.
11	And we went and worked with these individuals.
12	In New York City, we built the
13	Counseling Service Unit in New York City. In
14	Louisiana, we were able to work with our state
15	association and other responders in building
16	through Louisiana State University, a project to
17	further medical member support, not medical,
18	member support issues.
19	Again, in the outcome, the first couple
20	of months, it was actually providing just basic
.21	support. We're here to help you out, what are
22	your basic needs. And from there on, we're able

1 .	to intervene medically when those have to be done.
2	And that program is continuing. Many
3	multiple millions of dollars in New York City, \$5
4	million is the amount through the Louisiana State
5	program of which we continually remain above. The
6	lessons that we learned out of Katrina, Rita, and
7 .	to some extent, Wilma, and I don't include Wilma a
8	lot, because Florida emergency responders, if you
9	want to learn a lesson on how to respond to
10	hurricanes, you go to Florida, not only because
11	they have the experience, they have the tools, and
12	they do have regional mechanisms to respond to
13	many of these issues down there, which the other
L4	Gulf states do not have. So really, it was mostly
L5	Katrina, to some extent, Rita in Texas, but the
L6	Wilma issue worked out much better.
L7 ·	Pre-training, pre-planning for what
L8 .	occurs, again, we still talk about it, I don't
19	think we're there yet. There needs to be
20	considerable planning issues and continual
21	training issues on what's expected from emergency
	hath there that live and work in

the disaster areas and those that may be expected to come in there.

We need to have a better control of the resources that are available, what is in place, 5 what's locally available. We have to understand the culture. It's very different, believe me, to work in the culture of New Orleans versus the culture of New York City. And again, some people work very well in New Orleans, others work very 9 well in New York City, or California, and so 10 forth. And then we have to better address for 11 12 emergency responders arriving resources. We've been working with FEMA and the Department of 13 Homeland Security, and a number of people have 14 been working on this project, not just the IAFF, 15 16 actually credentialing people, after, in fact, the 17 presidential Homeland Security directive, where they want to ensure that federally deployed 18 resources, i.e., individuals, are capable to 19 safely perform and officially perform if they're 20 deployed by the federal government, meaning, the 21 federal government wanted to have a better control 22

. 1	of the people that they're everyone wants to go
2	to an emergency, and just because they're called a
3	firefighter doesn't mean they're capable of doing
4	that, and just because they're called a police
5 .	officer, may not be capable of doing that, or an
. 6	emergency response worker, or a physician, or an
7	epidemiologist or so forth, if, in fact, they're
8	not trained to do that and credentialed, we
9	believe, to do that.
10	And credentialing means that they have
11	to have specific training, and they also have to
12	have, most importantly for us, be physically and
13	medically capable to be deployed, meaning that
14	they have had a medical within the last 12 month
15	period, they had a physical evaluation during the
16	last 12 month period, they have all their vaccines
17	up to date, because you can't catch up on site in
18	Louisiana, you can't catch up on site in New York
19	City or LA or wherever the deployment may be.
20	And, in fact, if you want to have a cadre of
21	people able to perform, the only way to do that is
. 22	credentialing

1	We're working on that FEMA has been
2	working on that for some considerable period of
3	time. The problem is, it gets lost in the
4	logistics. Who's going to buy the camera, whose
5	logo is going to be on that credential, the stuff
6	that the federal government does its best at.
7	And then, of course, the final issue is
8	post events of war. The event doesn't end in a
9	couple weeks. We're still, to this day, working
10	on issues in New York City, certainly with Doctor
11	Howard in the medical response program at Mount
12	Sinai and in the fire department of the City of
13	New York, that's continuing.
14	We're still financially supporting the
15	Counseling Service Unit in New York City Fire
16	Department. The IAFF is still financially paying
17	for that activity. And, obviously, we're doing so
18	in the Gulf. Everybody believes that you pack
19	your bags and you go home after a couple of
20	months, those activities continue for a long, long
21	period of time. And as I said, we're still
22	working on the New York and the entire Gulf area.

1 The coordinated training is still a concern of ours. The communications issue which I addressed, 3 not only the multiple agency, not only the interoperability buzz word that you hear all the 5 time, but the capability to speak it just to your partner becomes a particular issue as you work on б 7 there. The needs assessment post event I talked 8 of, regional corporation systems have to look at 9 10 the examples that we found, at least for emergency response, out of the Florida hurricane capability, 11 which is regionalized throughout the state and 12

> with our local affiliates throughout the state. And then the question is, are we really ready for the next one? We certainly don't think so, even though there are lots of activities that have taken place in 911, there are certainly major areas that need to be addressed, and hence, that's why NIOSH has been working on this project in multiple facets, and I think have been doing --

does work very, very well. And ironically, it is

a labor management project. They work very well

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. 1	efforts in trying political and certainly economic
2	times to address these issues, and that's why
3 .	we're here today.
4	So to sum up for a discussion, I want to
5	bring my three areas that NIOSH needs to do
6	significant more continue with research
7	activities. First of all, I think that the
.8	which is one of the issues you've seen on the web
9	article is, the personal protective clothing and
10	equipment issue for emergency responders. Again,
11	we've done a very good job over the last couple of
12	decades in designing clothing for firefighters,
13	for the fire environment.
14	I think we've done a fairly good job on
15	defining clothing for firefighters, for the
16	chemical response environment. And we're starting
17	to do a little bit better job in firefighters for
18	a WMD type of environment, both in the clothing
19	that they wear and the equipment they'll use,
20	i.e., respirators.
21	NIOSH has come to the plate for their
22	certification of respirators for CBRN faster than

any certification process they've done in the 1 2 history of NIOSH, going back since the beginning, in 1969 -- 1970. They were able to 3 administratively get through that process quite well post 911, and we now have self-contained breathing apparatus, PAPRs, and APR's that are 6 certified to weapons of mass destruction, 7 especially sarin and mustard gas, which are --8 they're tested to not only provide a respirator for CBRN, but provide a better overall -- That 10 similar job, they've done a lousy job in doing 11 respirators for health care, or biological --12 13 response. And again, I'm not going to blame NIOSH 14 on this, I'm going to blame their parent agency in 15 the attempts to address that. We've done a lousy job at providing respirators for those that would 16 have to respond to a biological event, especially 17 pandemic flu. 18 19 We, I guess the government, has resigned

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itself to the fact that economics and availability

is the issue instead of worker protection. And I

think the silence of many is deafening on the

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1	issue of proper respirators for pandemic flu
2	situations, relying on a respirator that is 95
3	percent effective based on technology for
4	certification for World War II perhaps, and not
5	looking at new technology is certainly going to
6	put significant numbers of people at risk if, in
7	fact, a pandemic flu situation does actually
8	occur.
9	NIOSH does have the capability to
10	further do that in their NPPTL, their National
11	Personal Protection Technology Laboratory in
12	Pittsburgh. Those that are not aware, and I'm
13	sure everybody in this room is, NIOSH inherited
14	the PPE facilities up there NIOSH work is
15	continuing at that lab.
16	That is a national laboratory solely for
17	the purpose of protecting clothing technology.
18	That needs to be funded way more than it is right
19	now, and its capabilities need to be expanded to
20	address all workers. Selfishly, we get a lot done
21	for emergency response, the firefighters, because
22	we've been personally involved in that process

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since its inception. And again, we believe 1 there's the capability to do much more work. 2 3 And finally, the federal deployment, and I think Doctor Howard touched on this, I need to 4 expand on it. If we're going to send the federal government out to a response, I don't care if it's New York City, I don't care if it's the Gulf Coast after a hurricane, or Southern California, or 9 California, or the West Coast after a wild land 10 fire, we need to immediately be able to provide medical and perhaps even behavioral health 11 response immediately. It's only talked about when it occurs. 13 And it's been our position, and we have actually 14 15 gone with Congress every year for the last number of years with this requirement, that if the federal government declares a natural -- declares 17 a federal national emergency, that NIOSH would be 18 deployed immediately to assess and provide either 19 short term, and if needs to be, long term 20 surveillance of those emergency response workers 21 22. that are responding to this event.

1	What happens politically in this
2	process, people add baggage to it. And all due
3	respect for the communities that are involved,
4	every time we attempted to do this, the baggage
5	would be, well, if NIOSH is going out for the
6	workers, then the federal government has to go out
7	for everybody, because people that live there
8	probably have health effects, too. And that may
9	be right, but NIOSH's role, as Doctor Howard said
10	this morning, is for worker protection.
11	And we believe that a system needs to be
12	put in place that, in fact, if the federal
13	government believes that the emergency is such
14	that they're going to declare a national
15	emergency, a process should be in place to look at
16	short term first, assessment, and then long
17	term and short term surveillance and health
18	health surveillance, behavioral and medical health
19	surveillance, those responders.
20	So I think those are probably a couple
21	of the key areas that are on your list, some of
22	the areas that certainly would merit some

1 discussion further today. And I want to thank you

- 2 all for giving me the opportunity to speak for
- 3 five minutes longer than I was supposed to. So
- 4 thank you all very much.
- 5 DR. HOWARD: Mr. Duffy, could you answer a
- 6 question?
- 7 MR. DUFFY: I can if you'd like.
- B DR. HOWARD: I think that in your allusion
- 9 to the last slide there, being your -- under a
- 10 bushel, the Safe Port Act that passed a few
- 11 years ago has a very important section in it, I
- 12 was wondering if you could comment on that section
- 13 so we could all -- anyone here who may not know
- 14 about that -- about it.
- MR. DUFFY: Which?
- DR. HOWARD: In the Safe Port Act --
- 17 MR. DUFFY: Allows for NIOSH to get
- involved, yeah. The problem is money. I think
- 19 it's clearly an issue.
- 20 And, first of all, Doctor Howard and I
- 21 have known each other for a long, long time, and
- 22 he's the longest -- I guess you are the longest

NIOSH Director in the history of NIOSH, so -- and
I think his passion, even though he's restrained

somewhat, is equal to our passion. I mean I think

we're there for one reason, and that one reason is

5 health and safety of workers.

6 When we do have this -- there's a lot

7 difference in language that's in a congressional

8 piece of legislation than the bottom line, which

9 is the funding part of it, which is significant.

10 It costs a lot of money to do surveillance.

11 And in the current -- the current way

12 that -- and again, I'm not picking on people at

DSHEFS, I'm not picking on the HETAB folks or any

of the people out in Cincinnati that do this

response activity for worker surveillance issues,

whether it's a technical assistance or a health

17 hazard evaluation, which is specific to one cause

18 and one particular worker.

This is very global, nation-wide, and

20 the capability to do this, the capability to have

21 these people on standby, the capability of

22 building this infrastructure becomes quite

1		expensive. So, again, Congress has been has
2		included in language the need for NIOSH to be the
3		have the capability of doing this response,
4		they have not done so for appropriating the
5		correct the amount of money that's needed for
6		that.
7	•	And again, it's something that needs
8		considerable debate. It's something that needs
9		input from a lot of people. But most importantly,
10		I think the understanding needs to be there. Once
11	•	we get over that hurdle, once we try to let people
12		know that these first responders do have a
13		problem, use the vast information and lots of
14		successes out of New York City, how a surveillance
15	-	program truly should be working. And again, it
16		was very easy to do nothing was easy. It was
17		easier to do in New York City for political
18		reasons, for where it was, for the nation's
19		passion because of that response, but you know
20		what, the people in the Gulf Coast medically are
21		hurting just as much as the firefighters in New
22		York City. The people in the West Coast, after

significant exposures to a wild land fire, in the

- 2 case where -- most case, no PPE is -- firefighters
- 3 that fight fires in forests and wild land
- 4 vegetation typically don't have respirators, and
- 5 there are health effects after that, deserve that
- 6 same response after that.
- 7 And is there an employer responsibility?
- 8 Of course, there is. This should be in place
- 9 prior to this ever happening. But if it's a
- 10 national disaster response, there needs to be a
- 11 capability to begin that system.
- 12 I can give another better example. CDC
- has just come out with, a couple weeks back, I'll
- 14 give you two, a couple weeks back on the trailer
- issue. Everybody wants to hide from the trailer
- issue, who was to blame, point fingers at the FEMA
- 17 trailers, whether they're sitting in Arkansas or
- there are people living in them right now.
- 19 . Every single fire house in St. Bernard
- 20 parish, every single one is a trailer to this day.
- They have not rebuilt one fire house in St.
- 22 Bernard parish, and I think there's a dozen or so

1	of them out there. So the firefighters of St.
2	Bernard go home to their FEMA trailer, leave their
3	FEMA trailer, and come back and live in a fire
4	house. FEMA and CDC CDC, not FEMA, CDC came
5	out with a couple weeks ago say people should be
6	moved out of FEMA trailers. And John and I have
7	been talking, and his folks, what do you do about
8	firefighters that not only live in it, but that
9	respond to it?
10	And then if you want to care to go to
11	the web site, go to the New York Times, and I
12	think it was Sunday's New York Times, they did an
13	article about pandemic or avian flu or one of the
14	flu responses, and they address it as a public
15	health issue, and I think that's very important.
16	I think you need to address it and look at the
17	health local health services, whether it's
18	state or local level, and how they respond to it.
19	But they're responding to it after
20	somebody has packaged and delivered to them. And
21	the one thing that was missing in that article,
22	which is missing more is this major emergency

1	response area. How are we going to take care of
2 .	the people that actually respond to the people in
3	the field and perhaps package them and deliver
4	them to a health care system where that all would
5	kick in, and then you could talk about the short
6	comings there. But there's a big void and space
7	out there that we need to do a better job in
8	addressing that issue. And, hence, I think those
9	are the issues that we're here to talk about today
10	and hopefully continue this effort to allow the
11	more programs that are being worked on where
12	emergency response is addressed and these town
13	meetings. Yes, sir.
14	MR. SKOLNICK: Barry Skolnick from I
15	think I met you at one of the national conferences
16	responders were interested in courses for
17	getting involved with terrorism and I'm
18	wondering at the present time if there's
19	been any progress and any federal support, any
20	involvement with the local responders and
21	environmental whether a particular building
22	or not and what are the characteristics of

1 talk about ---

MR. DUFFY: Well, in Washington, D.C., I

can -- we can get in my car and I can show you all

the sampling sites around this town where

5 measurements are done all the time, whether it's

6 being in the mall, you can go up the street and

7 you can see the sampling sites at the Pentagon and

8 so forth.

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9 I think those activities in major 10 metropolitan areas may be working quite well.

areas such as Katrina.

The issue that we're concerned about is

the short term industrial hygiene involvement in

The Gulf Coast is a good example. I

mean the mold issue, everybody wants to hide their

head about, no one wants to do sampling of that.

So the individual response sampling is to define

or to assess exposures I think on the short term.

Individual worker process still needs a lot of work that needs to be addressed.

21 I think we have capability of doing, you

22 know, badge monitoring, immediate -- acute effects

Ŀ	to have you back offer, make your determinations
2 .	and operations, I don't think we've done that good
3	a job in determining using that information for
4	initiating health care.
5	So I think we and I'm probably
6	rambling too much for what you're asking for. But
7	I think for that particular case, for actually
8	initiating health involvement, we're not doing a
9	good job. For initiating stand back or how your
LO	operations will change, whether it's I think
11	we're perhaps doing there is a better job
2	monitoring.
L3	We monitor to how what PPE we may
L 4	wear, we monitor how far we should go in, and I
L 5	think that process is we're doing a much better
16	job on. But to use to back off that to
L7	bring it back into the health arena, I don't think
1.8	we're doing as good a job.
L 9	DR. KITT: We have another question back
20	here. And I would ask that anybody that asks
21	questions, if we could go ahead and turn back the
	minushess around and identify yourgelf because

	· ·
2	MR. SCHARF: Thank you, Margaret. Ted
3	Scharf from Cincinnati. I do work in the
4	behavioral health area. I appreciate what you're
5	saying about it. I want to throw a question back
6	to you. The dedication of firefighters is very,
7	very well known, and we can site thousands of
8	examples.
,9	You show the example of the firefighters
10	staying in their flooded station. I appreciate
11	they don't want to abandon their post, but it

we are transcribing the meeting.

more effective somewhere else?

Or in a more general sense, what I worry

about, and the people I work with worry about is,

firefighters exhausting themselves, or, in a

sense, going beyond their capacity, putting

themselves at risk, and their crews at risk.

seems their post abandoned them. What would it

take to get them to say, okay, it's time to be

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How do we find a way to provide, you know, quicker turnover in staff, but also to get those firefighters to say, hey, I've done as much

as I can right now and I've got to take a break?

2 That's a key question that we need to find a way

3 to address. Thank you.

MR. DUFFY: And there's one I don't have

5 the answer to, because, you know, I've been with

6 the IAFF now for 30 years, and they are not --

7 you've got to realize, someone -- someone didn't

8 have a camera in his pocket to take these

9 pictures. These pictures happened days later.

10 It's like, you know, when the fellow jumped off

11 the bridge here when we had the air crash, I knew

12 the news media wasn't there taking pictures. The

13 pictures you saw on the news last night happened

14 hours and many cases later when that TV man got

there, or in this case, days later when they were

16 still there. They're not going to leave.

17 You know, everyone says we're going to

18 bring outside resources in to replace people, let

them go home for a breather, this is their 911

20 even, this is their Katrina event. They do not

21 want those resources to replace them to go home.

22 And I wish there was a better way to do it. I

1	donit	know	the	answer	to	that	one
1	LICHI L	Killiw	1.115	answer	LU	LIIAL	une.

2	They actually left those fire houses
3	when they were so dehydrated, they were sick, and
4	finally we got tugs in there to take those folks
5	out. They didn't leave they were not leaving
6	there, they were going to stay there in their life
7 .	preservers sitting on top of fire trucks until the
8	water receded. In fact, we finally got them in
9	and said, we're taking people out of here, you've
10	got to get out of here, someone else is going to
11	be here, it's okay, we're going to just get you a
12	shower and get you back here, and that was like
13	pulling teeth. They did not want to leave there.
14	They didn't want the papers when the papers
15	finally started coming out, they never saw papers,
16	but the USA Today saying, you know, firefighters
17	abandon their posts and they weren't going to let
18	that happen, they stayed there.
19	SPEAKER: Rich, can I ask a question?
20	MR. DUFFY: Sure.
21	SPEAKER: Just picking up on that, about
22	health and safety into the command system, where

1	would the authority come like in that particular
2	situation, like to make a call, like you were
3	saying the five day rule, for example, how would
4	that come in to an incident command structure, the
5	safety of
6	MR. DUFFY: Well, we did it very easy,
7	we were paying for it, and so we made the
8	decision, here's your plane ticket, here's how you
9	get here, here's how you get home, and it worked
.0	that way. I don't know, because the local
.1	system in the Gulf Coast, there was no system,
.2	the system was no offense the command people
.3	and any of those fire departments. It was very,
.4	very difficult. They had no resources, they had
.5	no infrastructure, they had nothing, everything
.6	was under water. And they weren't going to leave.
.7	And so we have to understand that to be
.8	able to address that, be able to address that
.9	certainly medically in the short term, which we
:0	did not do a very good job of, and the behavioral
1	health issues, which are which, in the long
2	term, become significant become significant to

22

1	everybody, some people just handle it better than
2	others, and some need actual medical behavioral
3	medical intervention. Anyway, thank you all for
4	having me.
5	DR. KITT: Thanks, Rich, for your very
6	insightful comments. I know from our own personal
7	experience at NIOSH, we found very similar
8	situations after Katrina with the New Orleans
9 .	Police Department, which we did some work with,
10 .	and also your comments about the issues of medical
11	surveillance, behavioral health issues, your
12	lessons learned are really straight to the heart
13	of what our portfolio is about and what we want to
14 '	be able to move forward. I met a lot of you prior
15	to starting this morning, but there's been a
16	number of people that have come in since we
17	started, and I just wanted to go ahead and
18	introduce myself. I'm Margaret Kitt, I'm the
19	Associate Director for Emergency Preparedness and
20	Response Office for NIOSH, and I'm also the
21	Program Research Program Portfolio Manager.
22	But as such, I'm not the person who does the real

work out of that research portfolio; the people

- who do the real work are the Coordinator, which is
- 3 Renee Funk, and the Assistant Coordinator,
- 4 Chia-Chia Chang.
- 5 And what they're going to do before I
- 6 start to give you a little bit of background on
- 7 our portfolio is kind of give you an overview of
- 8 the procedures for the day and the logistics. And
- 9 so, Renee Funk.
- 10 MS. FUNK: Thanks, Margaret. I'm Renee
- 11 Funk, this is Chia-Chia Chang.
- 12 MS. CHANG: I am Chia-Chia, I'm just
- 13 going to start with some very basic logistics for
- 14 the day. The bathrooms are over there to the
- 15 right by the elevator. There's a coat check in
- 16 . the front by the registration table.
- 17 We have evaluation forms; please do fill
- 18 them out. If you can fill them out by the end of
- 19 the day and give it to the registration table.
- There's also a box for anonymous comments. And
- you can also submit comments through April 13th to
- our public docket. You are offered that, you

1	should have already had in the federal register
2	it's in your binder. And, please, again, if
3	you're going to be speaking, please use the
4	microphone, because our transcriber is writing
5	everything down, and identify yourself. That is
6	it for logistics.
7	MS. FUNK: I just wanted to take a
8	minute to go through the binders that you should
9	have all gotten. We first had the schedule for
.10	today. We do have Margaret's presentation under ,
11	the second tab, or first tab.
, 12	And I also include I thought you
, 12 `13	And I also include I thought you might be interested on some of the projects that
`13	might be interested on some of the projects that
13 14	might be interested on some of the projects that are going on in this area at NIOSH. This one
13 14 15	might be interested on some of the projects that are going on in this area at NIOSH. This one flips out. These are the intramural projects that
13 14 15 16	might be interested on some of the projects that are going on in this area at NIOSH. This one flips out. These are the intramural projects that are going on with NIOSH scientists in the area of
13 14 15 16 17	might be interested on some of the projects that are going on in this area at NIOSH. This one flips out. These are the intramural projects that are going on with NIOSH scientists in the area of emergency preparedness and response.
13 14 15 16 17	might be interested on some of the projects that are going on in this area at NIOSH. This one flips out. These are the intramural projects that are going on with NIOSH scientists in the area of emergency preparedness and response. And we did it in a matrix format to kind
13 14 15 16 17 18	might be interested on some of the projects that are going on in this area at NIOSH. This one flips out. These are the intramural projects that are going on with NIOSH scientists in the area of emergency preparedness and response. And we did it in a matrix format to kind of show the cross linkages between the other

1	On the next page is the extramural
2	project. Most of you are probably aware that
3	NIOSH has an Office of Extramural Programs. We do
4	have RO1- RFI??? grants, some other types of grants that
· 5	we give out. And these are a couple of projects
6	that are going on in the emergency preparedness
7	and response area. And on the back side of the
8	page is the Office of Extramural Programs web site
9	and where you can find our we have a continuous
10	on general announcement that is reviewed three
11	times a year, the proposals are submitted there,
12	and so several of these projects are funded
13	through there.
14	Also, we periodically have like
15	specialty requests for our proposals, and so check
16	the web site periodically because those change.
17	And so some of these were funded under there
18	was one for infectious respiratory diseases that I
19	don't think is open any longer, but that's what
20	one of these projects is funded under, just to
21	give you an idea of what that's like.
22	The next one is the strategic goals, and

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1	this is what we'll spend quite a bit of time
2	talking about today. And hopefully you've had a
3	chance to look at that a little bit before today.
4	The next one is the discussion topics,
5	and this is what was posted on our web site in the
6	federal register of the questions that we hope to
7	cover today, to hear from you.
8	And as Chia-Chia mentioned, if you did
9	want to submit comments and didn't have any
10	prepared, if you did want to use this to write
11	them out and hand them in to the registration desk
12	before you go, that's perfectly fine. You can
13	also type them up and send them in to the docket,
14	as Chia-Chia mentioned. The next is the federal
15	register notice for this meeting today. And the
16	last is the attendee list. And I know that
17	there's a couple of people who were added after we
18	types this up, so I apologize for that, there
19	might be a few
20	And then the last, we have two CD's; the
21	first is a NIOSH guide for chemical hazards,
22	hopefully many of you are familiar with that. And

1	the last is emergency response resources, this is
2	mostly from our topic page on the NIOSH web site,
3	also some other useful documents and things, and I
4	think it'll be a good research for you all.
5	And I did want to take a moment to
6 ·	introduce some of the other NIOSH staff who are
7	here. If you want to stand up and wave your hand
8 ,	or something when I say. But I did want to
9	mention the Steering Committee sat it was the
LO .	main authors of the Strategic Goals, a document
L1	that we'll be talking about today, and they are
12	the heavy lifters, so to speak. So Myer, Ted
L3	Scharf is in the back, Kathleen
L4 .	Kowalski-Trakofler, Joe Burkhart, Steve Ahrenholz,
L 5	Ken Martinez, Lisa Delaney, John Szalajda, and
L6 _.	Jennifer Hornsby- Myers. Did I forget anyone?
L7	And also, in our just to we have emergency
L8	preparedness and response office, and I asked
L9	Margaret Kitt if that myself, Jennifer Hornsby
20	Myers, Lisa Delaney, Ken Martinez, and also Joe
21	Little are all in our office, we're a small group,
22	but we're mighty. And so I think that

1	DR. KITT: Mighty, huh, okay. Well,
2	once again, thank you for being here and joining
3	in this conversation with us today. I wanted to
4	give you a little bit of an overview about our
5	office, but more importantly, our portfolio.
6	And so the Emergency Preparedness and
7	Response Office for NIOSH has really two focus
8	areas; the first sort of pillar is the
9	preparedness and deployment area of our office,
10	which includes making sure that our own NIOSH
11	personnel are as prepared as possible to deploy to
12	a multitude of different disasters, whether they
1,3	be natural or man made disasters.
14	The second focus area really
15	incorporates our research and technical assistance
16	capabilities. And what our office does is try to
17	sort of coordinate institute-wide technical
18	assistance and provide that technical assistance
19	to other areas of CDC, to HHS, to DHS, to OSHA,
20	and too many other agencies, as well. We have a
21	great deal of technical experience, as you know,
22	all across the Institute, in many of our field

1	offices, as well as our own office, as well. The
2	other part of that research and technical
3	assistance pillar really is what drives the heart
4	of our research program portfolio. And we have
5	been tasked to identify the Emergency Preparedness
6	and Response needs and to help prioritize and to
7	work to fund and help coordinate the Emergency
8	Preparedness Response on research projects.
9	Emergency Preparedness and Response is
١٥ .	one of 24 cross-sectors. And our research
11	portfolio, as Renee mentioned, is really through
12	the collaboration of an entire Steering Committee,
13	many of whom are here today. And it was really
14	based off RAND Volume 3, which I'm sure many of
15	you are familiar with, as sort of the starting
16	base of which to develop our research portfolio
L7	and expand from that area.
18	We developed eight strategic goal topic
L9	areas, which we're going to go through in a little
20	bit more detail here shortly. And we've been able
21	to solicit a long list of internal NIOSH comment
2	already on our research portfolio ideas But

1	really this is our opportunity to reach out to you
2	as the external stakeholders, to get comment and
3	provide feedback on the relevance of this
4	portfolio, to try and identify gaps which we may
5	have missed, and really to help focus priorities.
6	As many of you know, trying to prioritize your
7	efforts is really one of the biggest challenges,
8	and we really hope that you can help us do that
9	today. So for those of you that are familiar with
.0	the NORA Sector Programs and cross-sector
.1	programs, I'm sure that you can see that there's
.2	going to be a lot of intersection with other
.3	programs that exist throughout NIOSH. And we're
.4	currently working with some of these other
.5	programs to identify areas for integration and
.6	collaboration.
.7	So I've listed some of the areas, some
.8	of the program areas that we've identified, either
.9	that they are very close integration with our
20	performance measures or objectives or that we know
21	that we focus on the same group of responders, or
22	partially on the same group of responder and

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1 recovery workers.

Some of the sectors where we hope to continue to develop further collaboration is 3 certainly the public services sector, and particularly the public safety sub- sector, which 5 focuses on law enforcement and fire services. 6 health care and social assistance sector, which 7 incorporates all our health care workers, and as Rich mentioned, there's quite a bit of issue 9 related to respirator use and protecting our 10 health care workers. The transportation, 11 warehousing, and utility sector, obviously, is 12 very important, as we will rely heavily on these 13 individuals during a time of disaster as we rely 14 15 on them every day. The cross-sectors that we have close integration with, certainly a personal 16 protective technology cross- sector, work 17 organization, and stress related diseases, and 18 traumatic injury. During disaster is probably one 19 of the most important times to have good work 20 organization, and we feel like this is an 21 22 extremely important part of our portfolio.

1	And as you've already been introduced to
2	our research program portfolio staff, myself,
3	Renee, and Chia-Chia, but really the whole
4	Steering Committee and the and my entire office
5	really contributes significantly to the portfolio.
6	And this is the entire portfolio
7	Steering Committee, recognizing those people that
8	couldn't come and be with us here today. But you
9	can see, it's a very multi disciplinary group that
10	stretches all across the Institute.
11	So here I've listed the eight emergency
12	preparedness and response topic areas for our
13	strategic goals. And as Renee mentioned in the
14	briefing book, we have a full description of those
15	strategic goals and the performance measures
16	associated with them. We are going to be in the
17	process of revising those based on what we hear
18	today, some of the other comments we get through
19	the docket, or our anonymous comments, as well as
20	sort of a revamping of the way we're dealing with
21	our performance measures, and so we hope to, over
22	the next six months, come up with a revised plan

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based on all the different input.

- 2 But the topic areas that we came up with
- 3 were safety climate, personal protective
- 4 equipment, engineering and technological
- 5 interventions and controls, characterization of
- 6 potential hazards, subgroup specific strategies,
- 7 surveillance, environmental microbiology,
- 8 environmental and biological monitoring of
- 9 terrorism agents.
- Now, like I said, the briefing book has
- a lot more detail on this, so we're just going to
- 12 talk about them briefly. But the first topic area
- is safety climate. With the strategic goal to be
- 14 to improve the organization of emergency response
- work, to reduce exposure to risks, and enhance the
- 16 health and safety of emergency responders.
- 17 And in developing this strategic goal,
- 18 we felt that it was important to have a discussion
- on how to improve preparation and organization
- 20 during emergency operations, to minimize
- 21 exposures, to prevent injuries and illnesses, as
- 22 well as to promote work force resilience. The

1	safety climate is obviously influenced by many
2	factors, which include the nature of the hazards,
3	management practices, crew base collaboration,
4	communication, and training, and spans all phases
5	of a response from pre-event to after action
6.	review.
7	So I've listed out here, it's not a
8	comprehensive list, but I listed out some of the
9	issues that we think are very important to focus
10	on, including work hours, and shift work, work
11	force resilience, and recommendations that we hope
12	to be able to make on appropriate screening
13	programs.
14	The second strategic goal is to improve
15	PPE assortment, proper selection, and wear, and
16	decontamination.
17	And obviously, our NPPTL office has a
18	lot of work in this area that they're currently
19	conducting.
20	During the earliest phases of the
21	response, responders and safety managers need
22	guidelines, checklists, and decision-making tools

1	to develop those initial strategies, and need to
2	be able to ongoing to develop ongoing
3	reevaluation of those protection strategies.
4	Current issues that are in discussion
5	are things like preventing cross-contamination
6 .	from victims to responders, how to estimate the
7	quantities of PPE that is going to be required for
8	a given incident, how to manage donated PPE
9	supplies, which can be an enormous problem and
LO	challenge to overcome, and PPE decontamination,
li	and certainly reducing the physiological burden
12	that certain PPE brings along with it in order to
13	maximize our protection and minimize the burden on
14	the responders.
15	The third strategic goal is to improve
L 6	engineering controls, technology, and tools, to
L 7	minimize responders' exposures to or hazards
L8 _.	associated with CBRN, which is chemical,
L9	biological, radiologic, and nuclear, which I think
20	most people in this room are familiar with that
21	acronym, toxic industrial compounds and other
22	hazardous materials.

1	Prior I mean, sorry, poor integration
2	of engineering controls during structural design
3	and procedural developments result in almost total
4	dependence on PPE to minimize exposures during
5	emergency response operations. So focusing on
6	engineering controls must be addressed even if
7	complete control of hazard can't be achieved
8	through engineering controls alone.
9	The fourth strategic goal is to develop
LO	methods to evaluate the spatial and temporal
L1	distribution of gases, vapors, and aerosols, as
12	well as liquids or particulates associates with
13	surface contamination. Knowledge of this
14	distribution, resuspension, and persistence of
15	aerosol is extremely important in determining the
16	risks associated with aerosol agents. Developing
17	methods to evaluate the spatial and temporal
18	distribution of biological and chemical aerosols
19	is critical in identifying sampling strategies to
20	predicting exposure based risk and designing PPE
2 1	and engineering controls, as well as identifying
22	strategies for building reoccupancy.

1	Strategic goal number five is to improve
2	sub-group awareness, develop targeted messages,
3	and expand sub-group preferred channels of
4	communication. Protective messages may not
5	equally reach all of its intended audience due to
6	cultural, social, and language barriers.
7	Furthermore, sub-groups may not fully
8	understand or appreciate the importance of
9 *	implementing protective guidance. And one of the
10	issues we've currently been involved with is
11	trying to focus messages specific to strategies
12	and communication efforts to migrant workers
13	during a pandemic event, as we realize that this
14	may be one challenging issue during an influenza
15	pandemic, but that's just one example.
16	The next strategic goal is to develop
17	surveillance reporting systems to improve
18	emergency responder safety and health through a
19	systematic collection analysis and interpretation
20	and exposure, hazard, injury, and illness data,
21	obviously, a huge task. But surveillance data can
э́э	certainly identify sub-groups at risk of exposure

1	to specific hazards so that problems can be
2	identified early, interventions can be
3	implemented, and plans can be made for longer term
4	surveillance of effective workers.
5	Currently, and I'm going to speak about
6	this in just a few minutes, developing an
7	inventory of what response surveillance resources
8	are out there today is an important starting
9	point. And then trying to apply those
10	surveillance information data sources can mitigate
11	consequences.
12	Strategic goal seven is to improve the
13	understanding of environmental biology of threat
14	agents. And I think we know that there are
15	critical gaps that currently exist in the
16 [.]	knowledge based of environmental microbiology and
17	the relationship to public health emergency caused
18	by microbial agents. And these pathogens can
19	include bioterrorism agents, as well as emerging
20	infectious pathogens.
21	It would be certainly desirable to have
22 '	the capability to estimate risk of human infection

1.	using data on the number and viability of
2	organisms in an environment, the persistence of
3	the agent, dose infection relationships, and
4	anti-microbial resistance patterns. And last, but
5	not least, the final strategic goal is to improve
. 6 [.]	the identification and characterization of terror
7 .	agents to reduce exposures to response and
8	recovery workers.
9	In some instances, we may be able to
10	measure how much of an agent is absorbed into the
11 ·	body using biological monitoring techniques.
12	Rapid and field deployable methods that can be
13	used to assess exposures are certainly essential
14	and need to be timely in order to quickly identify
15	positive agents. And how effective is the PPE
16	that we have for reducing exposure to these

Now, one thing I wanted to mention, it's somewhat tied in with what Doctor Howard brought up about the Safe Port Act, which was passed I believe in 2006, and gives through the president the direction to the HHS secretary to initiate the

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1	Safe Port Act, and there's certain criteria that
2	need to be met in order to do that.
3 .	But in the Safe Port Act, there is a
4	section about what needs to be done for the
5 .	responder community, and that involves
6	surveillance issues, exposure monitoring, it
7	involves looking at what the how you can tie
8	all that information to determine the longer term
9	surveillance efforts that may or may not be needed
.0,	for the community. As a result of getting some
.1	interest and awareness that the Safe Port Act was
.2 . •	out there, as well as many other issues that were
.3	going on at the same time, Doctor Howard asked my
.4	office to come up with a project plan to look at
.5	responder safety and health before, during, and
.6	after a disaster.
L 7	I should add that along with the Safe
L 8	Port Act, there were not resources allocated to do
L9 ·	any of these activities. But we've taken on in
20	our office sort of the baby steps of starting to
21	implement such a program, where we would try and
	dovelop and provide quidance that could be

1	tailored to the federal community, to the state
2	and local community, as well as private employers,
3	and non-governmental organizations, and volunteer
4	agencies, that could sort of walk them through the
5	process of what needs to be done for
6	pre-deployment screening, training, and
7	credentialing, worker exposure assessment during
8	events, how to roster workers during disasters,
9	who's going in to the event, what type of activity
10	are they doing, what type of geographical location
11	are they in, what their exposures are, in trying
12	to work on this very big issue of disaster
13	surveillance systems and monitoring for workers
14	during an event if it's necessary. And then how
15	do we link all that exposure data and health
16	information together to determine what the needs
17	for long term monitoring are, so that we don't get
18	into the same situation that we did with the World
19	Trade Center in many instances. So that's
20	currently a really exciting project for our
21	office, because I think it goes back to the heart
22	of what we need to be doing. And it really sort

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1 ,	of touches on a lot of the different aspects of
2	our research portfolio.
3	And I would also like to say that Dori
4	Reissman and Jennifer Hornsby, my from NIOSH,
5	have been working with HHS on developing a plan
6.	for what HHS responder program would look like.
7	And the other part of that is, Renee and I will be
8	working with some of our state partners. NIEHS
9	has agreed to work with us on a CDC workshop at
10	the end of May, where we're going to bring in
11	about ten states to attend the workshop.
12	The first day is going to be the
13	disaster surveillance working group doing a
14	presentation on overall surveillance tools and
15	getting input from the states on what they have
16	available.
17	And then we're going to actually have a
18	'second day that's going to be a breakout session
19	just for occupational safety and health with about
20	ten states. And with the health NIEHS, we're
21	going to hopefully make that a very successful
2.2	workshop to get us started with the state and

1	local health departments. So that really is sort
2	of a quick overview of what people have been
3	working on for the research portfolio for a very
4	long time and sort of a short summary. So I don't
5	know if there's any questions at this point.
6	MR. SKOLNICK: Yes, I'm Barry Skolnick,
7	an independent analyst. And I'm curious, up until
8	now and into the future if you'd comment on the
9	extent to which you reach out to extramural
10	involvement of academic and industrial scientists,
11	not in the government, for purposes of peer review
12	and for purposes of actual project involvement in
13	research and development in any of these areas.
14	I'll talk later about the service
15	testing, where this has been quite deficient in my
16	experience. But I wanted to know in general, in
17	your philosophy, whether you are engaging the
18	larger scientific community or limiting yourself
19	to in-house resources.
20	DR. KITT: Well, I think the fact that
21	we are organizing this town hall meeting is the
22	first step in recognizing that we do want external

input, it's very valuable to us, obviously. So
this -- the comments that we can get from you,

- both in writing, verbally, anonymous, through the
- docket, or if you have colleagues out there that
- 5 couldn't come today or were unaware of our town
- 6 hall meeting, you know, I would encourage you,
- 7 they can still go into the docket and submit
- 8 comments, and we really would appreciate those
- 9 comments, and we will use them to try and help us
- 10 move further forward.
- And then as Renee mentioned, there's
- opportunities for extramural program funding
- through the OEP Program and through that web site
- that you have in your book. So we'll have to take
- that issue of extramural funding as things come
- 16 along. Thanks to Jennifer for walking the
- 17 microphone around for us.
- MR. KRAVITZ: Jeff Kravitz Mine Safety and Health
- 19 Administration. I've got a question about your
- 20 pre-disaster screening. Does that go beyond the
- 21 fitness for duty exams that we normally have? And
- 22 how far along are you in determining what that

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1	should do?
2	DR. KITT: Well, I think that, you know,
3	it's not a new concept by any stretch, it's a
4	matter of getting that concept out to a much wider
5	group. I was in the Air Force for many years
6	before I transferred over to the Public Health
7	Service, and it's a concept that's very well
8	embedded in the military organization. It's based
9 ·	on the same concepts as fitness for duty, but I
10	think it's a little bit it's a little bit maybe
11	more proactive, trying to get it done all as up
12	front as possible. But it incorporates a lot of
13 ·	the same issues.
14	And where we are right now, like I said,
15	it's not a new concept, there's plenty of programs
16	out there that have pre-deployment screening in
17	place, it's just a matter of getting it tailored
18	to each different sort of activity or each sector
19	to make it appropriate for what they need and what
20	they can do.
	MP 'SKOINICK: Barry Skolnick again:

there are two buzz words that I think are valuable

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and I wonder if you can comment on their utility
up until now and the future. One are lessons
learned, and secondly are best practices.

And I'm particularly interested to know in terms of the inner agency, the effort to avoid 5. stovepiping and to try to learn from what DOD and EPA and others have done, whether you found that it's important to focus considerable effort on gathering information both historically and in the 9 future about lessons learned and best practices, 10 because others in NIOSH have been involved in some 11 of these incidents in the past, and it's always 12 tough to gather people together, or if you do it 13 in this day and age, you may be able to do it by 14 teleconferencing, not have to move people in the 15 same room. But I'm wondering if you could speak 16 to those two points of lessons learned and best 17 18 practices.

DR. KITT: It's interesting, I forget where I was just not too long ago and we were talking about this phrase, lessons learned, and it's great to have lessons learned, but then

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you've got to do something about it, and so I 1 think it's a matter of incorporating all the 2 different stakeholders, what their experiences 3 have been, and try and determine what the lessons learned are all across the board and where you can 5 make some end roads. Best practices, well, that's kind of 7 maybe an over used term in certain circumstances. Everybody is going to have their own different view maybe of what best practices are. But, once 10 again, I think it's the melting of all the 11 different stakeholders and have their best 12 practices in place and see how they can be 13 tailored to different uses. So I think there's -14 MS. LEVICK: Nadine Levick, EMS Safety 15 Foundation. I just wanted to follow up on that, 16 with the use of buzz words and probably knowledge 17 transfer of what's underlying this in many ways. 18 And I think the interdisciplinary aspects of 19 knowledge transfer are very critical when it comes 20

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to emergency response safety, both for the

responders and the public. And the issues of

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1.	understanding, as you mentioned, characterizing
2 .	the hazards and risks, and the issues that
3	system that has transportation as a component, and
4	integrating personal protective gear with
5	transportation safety issues such as head *
6 '	protection device that's going to protect someone
7	from a head injury, as well as protect them from
8	biohazards, and transferring knowledge, what we
9 . :	have in related transportation, systems
10	engineering, with our understanding of health
11	care, safety, and biohazards I think is a big
12	challenge for emergency responders at the moment,
13	and isn't really well addressed, it's sort of
14	outside of the transportation industry, where
1'5 ;	there isn't much overlap between our health and
16	safety and transportation safety and protection.
17	DR. KITT: Thank you. I guess the other
18	thing I would encourage everybody to do, if you
19	haven't signed up to speak today, that's fine, but
20	if you have had a change of heart or would like to
21 .	sign up to speak and have a five minute time slot
22	dedicated to you, there's still opportunities for

this afternoon if anybody would like to do that.

- But at the end of the day also, if you hadn't
- 3 signed up and you still would like to make some of
- 4 those comments, if we have the latitude, and
- 5 time-wise, you'll be welcome to do that. Okay. I
- 6 think, Renee, is it time for a break? Okay. We
- 7 have until 10:30, thanks. I think we're going to
- 8 go ahead and get started.
- 9 MS. CHANG: Hi, we're going to get
- started now. I forgot to mention that we have a
- 11 list of restaurants outside on the registration
- 12 table. There are little sheets of paper like
- this, there's a map of the local area, and on the
- 14 back are a list of restaurants for lunch.
- We're going to start with the public
- 16 speakers. We're going to ask the people who have
- 17 signed up to please come up and use the
- 18 microphone. And questions, please save them for
- 19 the afternoon session. We'll start with the first
- 20 one, Tamara Blow, Director of the American
- 21 Association of Occupational Health Nurses.
- MS. BLOW: Thank you. Good morning,

1	everyone. My name is Tamara Blow and I represent
2	the American Association of Occupational Health
3 .	Nurses. For those of you that don't know about
4	AAOHN, we are a national professional organization
5	that's dedicated to the health and safety of
6	workers and worker populations. And we just
7	appreciate this opportunity to be able to speak,
8	because employee health and safety is not only
9	important to us because we take care of worker
LO	populations, but also, we are first responders in
L1	many instances to emergencies. And one of the
L2	things that is near and dear to our hearts is the
L3	concept or the possibility of having health and
L4	wellness and ongoing activities for emergency
15	responders, particularly having mandated annual
16	testing for our worker populations.
17	A survey that was conducted with our
18 .	constituency indicated with the 911 event that one
19 👫	of the major barriers to being able to administer
20	appropriate health care was not having data on the
21	employees, medical surveillance data, as well as
22	no environmental data, and communication was one

1	of	the	major	barriers.

2	The second barrier that was hindering us
3	from being able to utilize our services or
4	administer our services was actually legal and
5	regulatory red tape, and those were two things.
6 .	Now, the survey and the study was limited just to
7	our occupational health professionals, but it was
8 ,	all based on not being able to have everyone
9	communicate and collaborate, having a side load
. 0	approach to emergency preparedness, and everyone
.1	having their own regulations. And we feel that
.2,	because the emergency responders are so dear that
.3	they do need to have a gate keeper, they need to
. 4	have someone to oversee their health and wellness
L 5	activities, and so some of the things that we
.6	suggest would be having that mandated annually,
L 7	having medical surveillance for emergency workers,
L8 ·	and having it being regulated.
۱9	The second things that we came up with
20	was the training, what's expected of them, because
21	every emergency responder has different
22	regulations and state plans and what not, and so

they need to be trained on the appropriate hazard

- 2 response and that type of situation.
- 3 We've seen that not only in the work
- 4 place, but in community response. And primarily
- health and wellness activities, not only just
- 6 surveilling for hazards, but health and wellness,
- 7 looking at biomarkers, and determining whether
- 8 those people would need further intervention.
- 9 Now, I know it's always about the money,
- they're always saying it cost too much to do
- 11 medical surveillance, but research has shown that
- for every dollar spent on health and wellness
- activities, there's a \$3 ROI, return on
- 14 investment. So -- and we could just look at what
- happened in the past with the 911 event. We spent
- 16 -- 70 percent of our workers were exposed,
- 17 firefighters, law enforcement officers, and
- 18 construction workers, volunteers and other
- workers, they all have lung problems. This
- 20 accounts to hundreds of millions of dollars spent,
- 21 it calls for workers compensation, as well as
- lawsuits. Now, if you consider that amount and

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the amount it would have saved if we would have

- 2 had that data, I want you just to ponder that,
- 3 it's mammoth.
- So it's not about the money, it's about
- 5 caring for those special populations that respond
- 6 and care. And uniquely, occupational health nurse
- 7 professionals, we do show that caring, because,
- 8 again, not only do we function as gate keepers to
- 9 perform medical surveillance, but also, we convey
- the ongoing, dealing with work force resilience,
- and monitoring the environment, and making sure
- that those who do respond, communicating that
- 13 caring.
- 14 They need that, not just -- but I care
- about you, I care, have you gotten your proper
- 16 rest, have you gotten your sleep, and have you
- 17 eaten, those things as a firefighter who spoke
- this morning and said that's very, very hallmark,
- 19 it's important to know someone cares about you.
- 20 So thank you for this opportunity for us to speak,
- 21 and take care.
- 22 MS. CHANG: Thank you very much. Now we

1 have Mr. Joseph "Chip" Hughes, Branch Chief of the

- NIEHS Worker Education and Training Program.
- 3 MR. HUGHES: Good morning. I'm really
- excited to be here. And like the previous
- speaker, I'm fired up about this issue and that's
- 6 why I came. I wanted to thank Margaret and her
- 7 staff and also John Howard -- I think are trying
- 8 to explore, as the comment was made before, how to
- 9 break down stovepipes in the federal government.
- 10 And I see that as really a critical issue that we
- need to figure out in trying to move this issue
- forward definitely. We'll talk more about that in
- 13 a minute.
- 14 I work for the National Institute of
- 15 Environmental Health Sciences, we're in the
- National Institute of Health, we're a sister
- 17 agency to NIOSH in the stovepipe department. The
- 18 HHS, which, you know, sort of about as stovepiped
- 19 as that other DHS department, which really has a
- lot to do with why this problem hasn't gotten
- 21 dealt with.
- 22 So we were -- and actually, to be

1 honest, that was one of my final comments, which

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- 2 is, you know, really a lot of this issue is owned
- 3 by DHS and FEMA, and you know, I think one of our
- 4 challenges as public health people is, you know, I
- 5 don't know if there's any staff here from either
- of those agencies, but if there's not, that's
- 7 really sad, but, you know, because I think part of
- 8 our mission is to try to figure out how to get
- 9 them to the table on this issue particularly, and
- 10 it goes beyond just incident command, I mean it's
- to try to figure out how does health and safety
- 12 fit in with an overall response, and that's kind
- of been a passion for us, our program, since we
- 14 started in 1986 under SARA (Superfund Amendments and Reauthorization Act) , under the Super Fund
 - 15 Act, and our program is specifically focused on
 - 16 hazardous waste workers and emergency responders
 - 17 and trying to figure out what training
 - 18 requirements there need to be for that population.
 - And we're the HAZWOPER people -- 120.
 - 20 If this is -- nobody knows what I'm talking about,
 - 21 I'm sorry. I'm a bureaucrat, I talk in acronyms.
 - 22 But, you know, HAZWOPER really is the basis of

1 .	response in our country and it's the most
2	comprehensive standard. It encompasses all the
3	aspects of the issues that Margaret had talked
4	about earlier.
5	So, again, our passion is to try to
6	figure out how do we take that message out to a
7.	better population. And we are really excited that
8 .	NIOSH is trying to I'd say elevate this issue
9.	within your own agency and hopefully within the
LO	federal government.
11	Because what we've done is, through the
L 2	extramural community, through cooperative
.3	agreements, we fund training programs all around
L 4	the country that are university based, union
L5	based, community college based, and I think, what
L6	I was going to say to John was that, you know, I
17	think we have a broad group of stakeholders that
18	are out there in the emergency response community.
19	We also our program has been, to my
20	mind, a prevention laboratory Over the years,
21	we've really tried to figure out, how do we take
	an idduc or a training tonic or a situation and

1	turn it into a learning opportunity.
2	And I feel like we've probably not done
3	a great job in publishing in the peer review
4	literature as much as we need to. We've done
5	probably a better job in capturing our own lessons
6	learned that we've done, out of every incident
7	from the Exxon Valdese in '89, Love Canal, to the
8	more recent ones that have been talked about here
9	this morning, and take that from a worker safety
L O	and health point of view.
1	So, again, in terms of the development
.2	of the NIOSH agenda, I just encourage you to look
L3	at the things that we've already created in terms
L 4	of our own training materials, our own
L5	interventions that we've done, our own lessons
L6	learned reports that we've created, and hopefully
17	some of that can be raw material for developing a
18	research agenda. And that's kind of what I wanted
19	to, in my five minutes, say something about. Our
20	staff had a really good meeting with Margaret and
21	with Jen, I don't know, about a month ago, and I
	111114 libe to true to figure out how we

could have an MOU with NIOSH that would really lay 1 out specific areas that we could cooperate on that 2 I think both relate to thinking about, well, 3 breaking down the stovepipes, number one, but also, how could we leverage, you know, training 5 that's done by IAFF, and then have that somehow 6 relate to, you know, the NORA Agenda for thinking about how preparedness can be better for emergency 8 responders, and how could we sort of leverage 9 things that we have going on in the training world 10 and help them, you know, feed this needed agenda 11 12 for EPR. So that's something that I think we 13 really would like to help figure out how to do 14 that as bureaucrats, and hopefully we can sort of 15 maybe match our resources and match money and, you 16 know, do something more with less, which is --17 18 that's our goal as bureaucrats always. The other thing, I think that much has 19 been talked about safety climate. You know, I was 20 actually just talking with Margaret about the 21 mining community, and you know, thinking about

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Rich and IAFF, and you know, thinking about the 1 last 30 years of don't just rush in kind of culture. I probably know more about it from the 3 construction macho culture. But, you know, I think there's been some success in sort of turning 5 around the just don't rush in rescue culture that we've seen over this past decade that's really I 7 think an important development, and that has to do 8 both with individuals as responders, and it also has to do with responder organizations. 10 You know, as we think about what it is 11 that is the basis of making a decision, go, no go, 12 what's my mental checklist for why I need to take 13 a step back right now versus go in. 14 So I think from the mental health point 15 of view, in terms of responders, we've seen a lot 16 of good developments of resilient capacity, to use 17 Dori's term, that we have within the responder 18 community, and I think a lot of what NIOSH could 19 also bring to the table is to kind of think about 20 what the progress is that we've made in that. 21

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community and maybe how we can do a lot more, how

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we can, you know, kind of package it for people, turn it into, you know, potential training 2 opportunities, and hopefully kind of create some 3 diffusion around what our program believes is ' 4 everyone's emergency response collateral duty. 5 You know, in the HAZWOPER world, really every 6 person has an emergency response collateral duty, 7 which is the fact that you might find yourself in 8 a particular situation, in a particular time where 9 you may actually be part of a response. And for 10 us, in terms of first on the scene, training and 11 HAZWOPER, which is basically get out of the way, 12 stand back, call 911, et cetera, you know, those I 13 think are concepts that we need to diffuse across 14 our whole culture. 15 And then also, you know, as we think 16 about emergency response, we need to think about 17 who has the capacity to actually respond and 18 understand how to get those people onto the scene 19

thought would be good to explore more. And, you

So those are kind of some issues that I

in a timely way.

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1	know, really I think the other part is that the
2	response culture does not think about worker
3	safety and health issues, and that has to do with,
4	of course, with FEMA and with DHS, with the
5	Incident Command System, with our ongoing effort
6 ·	to like infuse worker safety and health into the
7	Incident Command System.
8 .	You know, those are maybe more
9	they're political issues, they're structural
.0	issues, but I think they're clearly issues that
1	NIOSH should really wrestle with as we think about
.2	how to diffuse the safety culture into the
.3	emergency response process. I guess just to
.4	close, bringing VHS and FEMA to the table, you
L 5	know, what I've seen as a big issue is that health
16	and safety decisions are not being made by health
L 7 .	and safety people, and so we need to figure out
	how to turn that around or at least get to be at
L9	the table when those decisions are made, maybe
20	activate our own department, HHS, to take a stab
21	at doing that.
22	I think the other thing is, we've

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.1	actually been engaging in some of these national
2	exercises, like two, three, and four, thinking
3	about how to infuse worker safety and health
4	issues into those exercises, and I guess I'm
5	bringing this up as kind of research thought that
6	there might be a way for NIOSH to kind of be part
7	of those exercises, try to do evaluation, try to
8	infuse worker safety and health into those
9•	processes.
10	Again, with VHS, and with our program,
11	and every local community in this entire country,
12 .	people are doing exercises and they're doing
13	training, you know, how can we sort of be part of
14	that process, infuse health and safety into that
15	process.
16	And I think the challenge there is with
17	how big this problem is to how small we are is,
18	you know, how can we have small pilots, small
19	studies, small interventions that could, you know,
20	lead to those bigger words, best practices, SOP's,
21	lessons learned, so that we can kind of make some
22	dent in this ongoing issue that we joined with you

1	in trying to figure out how to make better. So
2	anyway, that's my rant. Thank you all, I
3	appreciate it.
4	MS. CHANG: Thank you. And we really do
5	appreciate everybody having kept within the five
6	minute time limit, that really helps us out a lot
7	with our scheduling. Next we have Mr. Daniel
8	Youhas with MTB, Incorporated.
9	MR. YOUHAS: Good morning. Actually,
10	I'm with NIHS, National Clearinghouse for Worker
1 1	Safety and Health Training. The National
12	Clearinghouse supports the work of NIHS Worker
13	Education and Training Program's staff and its
14	awardees. It is the national source for the
15	worker education and training community to access
16	technical documents and workshop reports, safety
17 .	and health information, and curricula produced by
18	any NIHS WETP awardee.
19	The Clearinghouse also provides numerous
20 .	services for NIHS WETP staff, awardees, and the
21	public. We facilitate the dissemination of
22	technical information related to the development

1		of safety and health training. We arrange,
2		manage, and document NIHS WETP technical meetings
3		and workshops related to scientific,
4		administrative, and regulatory issues associated
5	:	with training for hazardous waste worker and
6		emergency responders. We also develop, analyze,
7		and compile NIHS WETP research products to enhance
8		ongoing initiatives, support new training
9	,	initiatives, and the continuation of program
10		efficiency.
11		NIHS and the Clearinghouse have a long
12		history of involvement in emergency response and
13		preparedness activities. NIHS and its awardees
14		have participated in the response activities for
15	٠.	the Oklahoma City bombing, World Trade Center
16		attacks, anthrax attacks, Hurricanes Katrina and
17		Rita, and the October, 2007 California wild fires.
1 _. 8		We've also been working to prepare
19		training tools for workers who will be involved in
20		responding to avian influenza outbreaks, dirty
21		bombs, and earthquakes. The Clearinghouse, in
22		conjunction with NTHS and its awardees, with input

1	from multiple stakeholders, have developed
2	training tools for hurricanes, avian influenza,
3	and dirty bombs. We are currently working on one
4	for earthquakes.
5	These training tools are by no means
6	full blown curricula, but basic information that
7	identifies the hazards workers and volunteers and
8	likely to face. Generally speaking, we are trying
9	to reach skilled support personnel who may not
LO ·	have had any training on the hazards they may face
11	on the work site. Trainers can use these training
12	tools to develop curriculum. The next training
13	tool we plan to develop will address the hazards
14	of chemical attacks.
15	I've actually brought with me today some
16	of the training booklets. I'll put these out here
17	for anyone to take. We have the AI booklet, which
18	has been translated into Spanish, and the
19	hurricane booklet has been translated into Spanish
20	and Vietnamese.
21	And for anyone who's interested in
22	ordering some of these booklets, you can go to the

1	web site, I can give you the url later, but
2	there's an order form on the National
3	Clearinghouse web site, if you'd like to order any
4 .	of these booklets free of charge.
5 .	The NIOSH program portfolio talks about
6	the importance of using lessons learned. NIHS
7	held two particularly important workshops that
8	sought to identify the lessons learned following
9	both the World Trade Center attacks and Hurricanes
.0 `	Katrina and Rita. We will submit each of these to
.1	the record when we file our written comments.
.2	With regard to NIOSH's strategic goals, we will
.3	provide more information specific to what we think
.4	are the three top goals when we submit our written
.5	comments later this month. Generally speaking,
L 6	safety climate, specific sub-group categories, and
L 7	surveillance are likely to be our top picks.
L8	Finally, we know more effort is needed
L9	to ensure workers who are likely to participate in
20	a disaster recovery and response receive through
21	pre-incident safety and health training and that
22	more attention must be paid to the psychological

1	hazards that workers face in a disaster response.
2	Thank you.
3	MS. CHANG: Thank you. Next we have Mr.
4	Barry Skolnick, Technical Analyst with Johns
5 .	Hopkins.
6	MR. SKOLNICK: Thank you. Actually I'm
7	not with Johns Hopkins, I'm unaffiliated, so I
8	wouldn't want to blame them for anything I have to
9 '	say. I am an independent analyst and have evolved
10	into rather a harsh critic of the environmental
11	surface testing practices used in the anthrax
12	incident which remains today, so you should take
1.3	everything I say with a grain of salt and give it
14	the kind of critical scrutiny which I wish were
15	more applied to these issues.
16	To start off, I want to give you a set
17	of four brief quotations that I think apply to a
18	lot of these areas of emergency response and
19	particularly to the anthrax incident type of

attribute it to. He, and I appreciate the ladies

response. The first is three parts of a Chinese

or a Persian proverb, depending on who you

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1	for the gender bias, but it goes like this; he who
2	knows and knows not that he knows is asleep, wake
3	him; he who knows not and knows that he knows not
4	is a child, teach him; but he who knows not and
5 .	knows not that he knows not is a fool, spurn him.
6	And I know, like John Rumsfeld, there
7	are things I don't know that I don't know, and
8	that may apply to everything I have to say, so
9	take it take a grain of salt.
ĽO	A couple more, and this one is a little
l1 '	provocative attributed to Doctor Ellen Rayber at
12	the Lawrence Livermore Laboratories back in 2002;
L3	it is possible to do a poor job of decontamination
L4	and to make it look good by doing a poor job of
15	sampling an analysis. And this does not
16	necessarily mean, I must say, intentional, it
17	could be unwitting problems, which is what I think
18	was the case.
19	And parenthetically, I'd like to say
20	that EPA has the Triad Program which is based on a
21	recognition that sampling uncertainties may be
22.	more important than analytical uncertainties in

the overall test method uncertainties. And it is

- 2 the sampling that is kind of a weak link in
- 3 environmental response for a bioterrorism
- 4 incident, in my judgment. A third one was a
- 5 comment made at a hearing in 2003, one of four
- 6 oversight hearings that had been held dealing
- 7 with, to some measure, with anthrax incident
- 8 response, by a Doctor Jack Melling, who was a lead
- 9 scientist with the British Center for Microbiology
- 10 -- which is their combination of CDC and
- 11 biodefense establishment.
- He said a concluding remark in terms of
- quantitation, it was a British scientist, Lord
- 14 Kelvin who said, if you can't put numbers on it,
- it's not science. And this relates to the broadly
- 16 qualitative character of the anthrax testing that
- 17 was done in 2001.
- 18 And finally, and in a self to facing
- 19 mode, there's a proverbial sign that hung in
- 20 Albert Einstein's office that was said to have
- said; not everything that counts can be counted,
- and not everything that can be counted counts.

1	And having said that, I just another
2	finish my preamble by saying that over a period
3	of six years or more, I've tried to study some of
4	the science behind environmental testing of
5	surfaces for microbial contamination, and I have
6	Powerpoints, I have a lot of allocated files
.7 8	and things, I'd be glad to share with anyone interested. The basis of what has been a
9	conclusion, that there's over 20 variables that
.0 ,	have not been evaluated by the government
.1	agencies, including NIOSH, to my knowledge, that
.2	may be important in the efficacy of surface
L 3	testing methods.
L 4	And I would hope that eventually,
15	hopefully before some of the modern friends
16	package again, that a lot of these will be looked
17	at scientifically. I will offer three ideas; the
18	first one relating to all these others. You can
19	either think as I do that the surface testing
20	message are untrustworthy and have not been
21	scientifically substantiated.
22	And in fact, the government

1	accountability office said in 2005 that none of
2	these methods are validated. And there is a
3	project aimed at validating message. That's kind
4	of the gold standard of providing insurance.
5	But before validation, you just have to
6	substantiate that they work in some some
7	context. And I would argue that that hasn't been
8	done either to the extent that and the way they
9	called for, which is kind of an end to end
10	process. But let's assume they do work as
11	designed, that isn't enough, you have to make sure
12	that they will work and practice. And so the
13 .	first issue that I wanted to raise with is the
14	idea of positive control. And I would make the
1 [.] 5	argument that there's an experience in NASA called
16	the Planetary Quarantine or Planetary Protection
17	Program which goes back to 1960 in which a
18	credible positive control approach was used for
19	the testing of environmental services for public
20	contamination, and that this might be a model for
21	that is usable in the field under a
22	bioterrorism condition.

1	And without going into detail, I'll just
2	make an assertion, but I will give you a notional
3	idea of what I think would be an effective
4	positive control. It would be something like you
5	would dispatch a team with a bell jar type of
6	shroud and with a little inhaler type of meter
7 - 1.	dose dispenser, and you put the shroud on the
8	surface, and you would put a meter dose of a
9	power that would be allowed to float down to the
10	surface and sit there, and that powder would have
11	in it probably a combination of simulants of
L2 ·	spores that you can grow as simulants of anthrax
13	or some other agent, and also something else that
L4	you can see visually, and that's actually my
L·5	second point, I'll get to that.
L6	But the point is that by creating a
L7	contaminated surface on site, on varying kinds of
L8 -	surfaces, with a predictable amount of some
L9 · ·	measurable agent, you raise the possibility of
20	having a predicted outcome, the end to end process
21	of collecting the sample, transporting the sample,
22	analyzing the sample in a laboratory. Without

that, at least at the stage of method development,

- you don't have a control system.
- And I would just point out that in the
- anthrax incident, there are plenty of examples
- 5 that work very well of negative control, they were
- 6 called sample blanks, and in these you would
- 7 handle everything in a similar way to actually
- 8 collecting a specimen, but you wouldn't touch the
- 9 specimen, so it should be negative.
- 10 And if it's not negative, it suggests
- 11 either you get a cross-contamination in the field
- or a cross- contamination in the lab. And people
- understood that very well and this was done, maybe
- one in ten specimens collected of -- were that
- 15 kind.
- But they did have positive control.
- 17 Until you have a positive control system, you not
- only don't have control of what you do, I would
- argue you don't have a basis for proficiency
- 20 training, for quality assurance, for
- 21 certification, for anything associated with the
- 22 kind of regulated scientific science based

behavior that applies in almost every other area

- of clinical practice that I know of, critical
- 3 laboratory practice or environmental monitoring
- 4 science. So there's really a deficiency here, and
- I hope that the agencies, not just NIOSH, but all
- of them, will start working more on it,
- 7 particularly since there's been congressional
- 8 hearings and GAO's saying that this was needed.
- 9 So that's the first idea is of positive
- 10 control and one that would not only be used in a
- lab condition, but could be deployable. And there
- may be other techniques. You can even say as a
- 13 secondary approach that if you had pre-
- 14 contaminated surfaces like little thin layer
- 15 chromatography sheets or something that you could
- put that on a surface and have somebody rub it and
- 17 collect a sample.
- 18 Well, after these poor folks in their
- 19 personal protective equipment ensemble have been
- working for an hour and they're totally fatigued
- and fogged up in their face masks, they may have
- lost the ability to collect a sample adequately,

and you might catch that by bringing with you a 1 contaminated surface to be sampled on site. 2 That would be a different kind of positive control, but it doesn't deal with the essential problem on site. Not only do surfaces vary under the best of conditions, but they might have toxins on them. And part of my message to people that I've communicated with is, there is a legacy science going back about 90 years in food 9 sanitation and other fields, this is not a blank 10 slate that you can write the book as you go along, 11 there's a history. Part of that history is the 12 recognition that toxins exist on surfaces. If you 13 want to measure microbes, you have to take in 14 account the fact that when you pick up a sample, 15 you may kill it after picking it up, and you have 16 to protect it. 17

That applies to clinical specimens, too, by the way. The biological transport system to avoid killing clinical samples are quite sophisticated. But that's just one area where, again, without a positive control, you may not

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1 know it, and there's some incidents during the

- 2 anthrax response like that.
- 3 So that's one idea of positive controls,
- 4 it needs a lot of focus, because without it,
- 5 nothing else can be truly convincing to an
- 6 observer or the public, particularly negative test
- 7 results, which, of course, predominated in the
- 8 anthrax incident, all the buildings were
- 9 fumigated, et cetera. Okay. The next one is a
- simpler idea to think about, it's kind of common
- sensical; what if you had a powder that had
- intensely florescent particles in it, so that
- 13 you'd spread it on a surface rather thinly, and
- then if you darken the room and shine a black
- 15 light, you might see individual particles because
- of the intensity of florescent. You could also
- see them on the swab or the wipe when you pick
- 18 them up.
- 19 I believe that adding such a particle,
- 20 along with maybe viable spores to a simulant
- 21 powder, would provide part of a positive control
- 22 system and a training system.

1	People need some sensory feedback as to
2	what they're doing. One of the characteristics of
3	the anthrax incident response, as I understand it,
4	is that the target was invisible except for the
.5	letter or letters, you actually saw the powder.
6	Everybody was sent in wearing all this protective
7	gear to look at an invisible enemy, invisible
8	target, with no way of knowing maybe when they
9	were doing their sampling how effective their .
10·	sampling was.
11	And I believe that focusing on a visual
12	detection of these micron scale particles, it
13	can't be too big, and they have to have some of
14	the physical attributes of the first powder,
15	this should not be difficult. And there are other
16	aspects of the same thing. You can have chemical
17	reactions on bio that have enzymes the same
18	and get response. But the idea of giving the
19	responder something to look at will tell him and
20	his trainer and his supervisor on site that he's
2 i	doing it right, whatever that is, I think it's a
22	valuable area to explore. That's number two.

T	Number three is much more provocative and
. 2	controversial and may not work, it may get a lot
3	of people killed.
.4	But I would point out, it's time to get
5	real about the scale ability problem with an
6	anthrax incident response.
7	The number of buildings effected, the
8	number of people killed and contaminated and sick
9	last time, was relatively small.
10	What would happen if one of those
11	proverbial plumes went out over a city and you had
12	hundreds of buildings actually or suspected of
13	being contaminated? The models we have now,
14	particularly of sending in responders with level A
15	particular equipment, I would argue, is not
16	realistic scale up in the event of a large attack.
17	We must come out with more appropriate
18	technology, cost effective ways, including
19	protecting our people. But here is what I would
20	propose as far as that!s concerned, an approach
21	that would attempt to move from level A, protect
22.	very complex and extensive equipment to level B

1	and C, okay, that puts people at risk, what do you
2	do about that? There are two conditions that I
3	believe are feasible to reach to allow you to do
4	that with acceptable safety, keeping in mind that
5 ·	our purpose is to protect the public, and exposing
6	the responders to some elevated risk is a price we
7	may have to pay to serve the public that we're
8	there for. But one approach is to one
9	requirement is medical surveillance and
10	therapeutic, that is, in the case of bioagents
11	between the vaccines, which have to be given in
12	advance, you have to know what you're giving it
13	for, you may be able to protect individuals so
14	that some minimal exposure is less likely to cause
15	illness.
16	There's also therapeutics, the Cipro,
17	the antibiotic type treatment, and others. And
18	nature bicagents is that they don't generally
19 .	incapacitate immediately, so that even if you
20	really are exposed, you have time to be treated
21	substantively and to be monitored, and that should
22	allow a certain degree of accentance of higher

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7	risk	_

2	But it's the second one that may be
3	controversial and a little out of the box
4	thinking. What if it were true, as I believe it
5	is, that anthrax more specifically lost their
6	infectivity without being killed because of some
7	phenomenon that either occurs naturally or that
8	you could induce rather rapidly. It turns out
9	that there is such a mechanism possible, and I've
10	been trying to speak to this with various people
11	in government for years now without much success,
12	an engineer named Willis Whitfield at
13	Laboratories who is famous for developing laminar
14	flow principal use for biosafety cabinets. And
15	they just erected a statute with his apogee, in
16	commemoration of that.
17	He did experiment in early 1970 for
18	NASA, demonstrating what he calls humidity
19	immediate adhesion of fine particles of surfaces.
20	And what he showed was that particles below ten
21	microns exhibited a hygroscopic type of effect
22	whereby they would either resolve something or

Т	2000 Something either that they promote up or share
2	they had in dust and building, making them
3	stick to a foil surface and resist being thrown
4	off by a puff of gas.
5	And he shows this is progressive and
6	would approach 100 percent of all the particles i
7	a mixed dust sample at elevated humidities above
8	90 percent, 93 percent, 100 percent. And even in
9	low humidities, as low as 30 percent, you saw
LO	productivity.
1	And the implication of this kind of has
L2	to be related in the case of anthrax specifically
L3	to what happens in nature. Why is it you have
L4	animal outbreaks or zoonotic outbreaks, you
15	have animals die, very few people are reported as
16	victims of inhalational anthrax disease. It may
17	well be that the simple reason is, you rarely get
18	particles smaller than the five to ten micron
1,9	level, which is believed by experimental work to
20	be necessary for anthrax. Anthrax is very
21	sensitive to particle size to cause inhalational
22	disease, cause cutaneous disease, gastrointestina

disease, yes, but inhalational, it has to be very small apparently, and that's based on animal model studies and his convention to wisdom. 3 If you could make the particles bigger, then you may no longer have infectivity that is 5 high enough to be worried about. 6 I believe that's possible for anthrax specifically. There's recent work saying that the 8 -- the organism for -- which is not a spore, that 9 causes plague also shows a size dependent 10 infectivity in animal models. Most of the select 11 agents won't. And maybe some day a bioengineer 12 practice won't. But as far as anthrax is 13 concerned, it may be possible to apply a 14 treatment. 15 Again, a notional idea is, you mist the 16 room with humidity and which has some carrier 17 particles in it, big enough, the anthrax will 18 stick to it efficiency, you let it fall, you let 19

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it dry out, and you vacuum it all up, and you may

and go in with minimal respiratory and protective

be able to do this as a precautionary treatment

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gear. And you could also argue that -- and maybe

- 2 this is more fanciful perhaps, but when
- decontaminating, instead of trying to
- 4 decontaminate a fully clothed personal protected
- 5 gear enclosed person with bleach or other agents
- 6. intended to kill the agent, what if you tried to
- 7 treat it with something that will render it non-
- 8 infectious -- disinfection, it doesn't kill it,
- 9 but it aggregates it -- it, and you know, maybe
- 10 sticky stuff will do that, spray maple syrup on
- 11 them or something.
- 12 And it just may turn out that if you
- focus on this non-lethal approach -- and by the
- 14 way, part of my notion which is in the -- what I
- put on the docket, I have an 11 page document I
- 16 put on the docket that describes all this and
- 17 gives some citations to the work, is that you
- 18 focus on efficient removal.
- 19 This is probably already done, but if
- you have surfactants in your water, detergents,
- 21 alcohols, like windshield washer fluid, you may do
- 22 a very good job of removing most of the spores or

1 '	other agents that are on the body as opposed to
2 、	just plain water, and there's also the possibility
3	of with spores of inducing germination by using
4	some small additives. Once they germinate,
5	they're vulnerable and they won't survive and they
6	probably won't infect you either. So there are
7	different ideas. But this third idea, which is a
8	little radical, but it's based upon the firm
9	belief that we will not be able to respond to
10	large scale incidents using the models of very
11	cumbersome and limited responders on the one
12	hand and the very expensive fumigation type
13	decontamination approaches on the other.
14	.That's what we did in 2001, it's not
15	scalable, it leaves us vulnerable in the future,
16	and we need to do some creative thinking to be
17	able to so those are my three ideas. Thank you
18	for your time.
19	MS. CHANG: Thank you. If anything
20	you've heard this morning inspires you to come out
21	of your shy shell and come up and speak, please do
22	gion up for speaking this afternoon. We are done

1	for the morning. We're breaking for lunch until
2	1:00, as scheduled. Please let us know if you
3	have any questions. Thanks.
4	(Whereupon, a lunch recess was
5	taken.)
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AFTERNOON SESSION

2	MS. CHANG: Good afternoon. I'd like to
٠3	welcome everybody back. We are going to start off
4	with a recap of the morning session by Doctor
5	Kitt. I hope you had a good lunch. All right,
6	thank you.
7	DR. KITT: And don't worry, I don't want
8	to hear myself speak anymore than over again
9	than you do. So I just wanted to, for the benefit
10	of there's at least a couple people that were
11	not here first thing this morning, so I just
12	wanted to briefly go over some of the highlights
13	from this morning's discussion. And I'm Margaret
14	Kitt, I'm the Associate Director for Emergency
15	Preparedness and Response for NIOSH.
16	And as I mentioned this morning, we have
17	two primary focus areas within our office. We
18	have the preparedness and deployment aspect of our
19	office, which helps to prepare our own NIOSH
20	personnel for deploying and have them be as
21	prepared as they possibly can for disasters,
22	whether they be natural or man made, and make sure

1	that we are integrating with other CDC, HHS
2	policies related to preparedness and deployment.
3	And then the other side of our office
4	focuses on research and technical assistance. We
5	provide sort of the coordination for NIOSH, for
6	the Institute to provide technical assistance to a
7	multitude of different agencies, including other
8	parts of CDC, as well as HHS, DHS, OSHA, et
9	cetera.
10	But the real piece that we're talking
11	about today is the research aspect. And our
12	office was tasked with developing a research
13	portfolio related to emergency preparedness and
14	response. This portfolio is one of 24
15	cross-sectors within the NIOSH program. We worked
16	through a NIOSH Steering Committee to construct
17	this portfolio, and it was a very collaborative
18	effort from a multi disciplinary group across
19	NIOSH.
20	We developed eight strategic goal topic
21	areas. We've had some internal feedback from

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NIOSH itself, our -- parts within NIOSH. But now

22

1	is the time when we really want to hear what our
2	stakeholders feel and have the external community
3	review and comment in order to provide us feedback
4	on how relevant our portfolio is, identify gaps
5	that we may not have seen, and to really help us
6	focus our priorities.
7	There's a much more detailed listing in
8	your briefing book about what goes into each of
9	these topic areas for strategic goals in much,
10	much more detail, so I'd refer you to that. But
11	essentially we focused on safety climate, personal
12	protective equipment, engineering interventions
13	and controls, characterization of hazards,
14	sub-group specific strategies, surveillance,
15	environmental microbiology, and environmental and
16	biological monitoring of terrorism agents.
17	I mentioned also briefly a project plan
18	that our office is working on right now through a
19	request that Doctor Howard has made of our office
20	to try and reach out to the federal community, the
21	state and local health, the non-governmental
22.	agencies, private sector, as well as volunteer

1	agencies in order for us to help guide them and
2	provide them guidance on all the aspects of
3 .	responder safety and health before, during, and
4	after a disaster, and that includes pre-
5	deployment screening, training, and credentialing,
6	exposure assessment during an event, developing
7	rosters during disasters so that we can identify
8	who's going into an area, what their geographical
9 .	location, what their activities are, and how long
.0	they're spending within those areas doing those
.1	tasks, improving the disaster surveillance system
.2	and medical monitoring for workers if it's needed,
.3	and then how do we link all this information
.4	together in order to determine the longer term
.5	monitoring needs of the worker population.
.6	So that's something we've just embarked
.7	upon, and we're in the process of our initial
.8	stage of gathering information from all those
.9	different stakeholders and working with them.
0	So this morning, just to sort of recap
?1	some of the things that we heard, and this is not
2	an all encompassing list, we will have the

1	transcript available at a later point in time that
2	will be posted on our web site. But we talked
3 *	about the issues and the importance of medical
4	surveillance, the issue of annual health
5	evaluations for emergency response workers, the
6	need for a gate keeper for the emergency response
7	community, health and safety to be on the radar
8	screen along side of victim rescue, converting
9	what we have learned into training opportunities,
10	continuing to move resiliency issues forward,
11	making sure that those with occupational health
12	and safety expertise are more engaged in the
13	actual decision-making processes, increasing the
14	use of training tools, and then there was also an
15	increased emphasis on improving our environmental
16 ·	sampling strategies, and just a couple points on
17	that suggestion for positive controls, as well as
18	issues related to a large scale event and more
19	realistic approaches to the PPE.
20	So those are some of the things we heard
21 .	today. We'll be addressing those, as well as some
22 -	of the other comments as we move forward. Doctor

1	Howard did have to leave, he had another
,2	engagement he had to follow up on, so he wanted
3.	to, once again, thank you for your participation
4	in this meeting. And I think we're ready for I
5	think we'll be able to wrap up early today and
.6	hopefully get everybody out a little bit early,
7	and turn it over to Chia-Chia.
8	MS. CHANG: The first speaker we have is
9	Nadine Levick with the EMS Safety Foundation, the
10	Director of Research.
11	MS. LEVICK: (Off mike)
12	MS. CHANG: I'm sorry?
13	MS. LEVICK: (Off mike)
14	MS. CHANG: Okay, sure. The next
15	speaker is Perry Roper, Industrial Specialist,
16	Public Research Management Association.
17	MR. ROPER: Good afternoon, everyone.
18	My name is Perry Roper and I represent the Public
19	Risk Management Association. We are literally two
20	metro stops away. And when I walked in this
21	morning first of all, let me just state that

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this is the first meeting I've ever had with

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1 NIOSH, and I really didn't know what to expect.

- 2 It's sort of like walking into a party and not
- 3 knowing anyone, but also realizing that, oh, gee,
- 4 I am in the right place, because all through the
- 5 presentations, I was nodding, going yes, yes, this
- 6 is really making sense to me.
- 7 Let me give you an idea of what the
- 8 Public Risk Management Association is about.
- 9 Since 1978, we've represented public risk managers
- 10 throughout the United States and Canada, as well
- 11 as we do have some international members.
- 12 Risk managers, we serve over 1,700
- 13 entities within the organization, and risk
- 14 managers do quite a variety of jobs in this
- 15 capacity. We're also huge users of NIOSH
- 16 material, so we're very familiar with NIOSH. What
- 17 we would like is for you all to become familiar
- with us, and we'd like to offer our services to
- 19 NIOSH.
- 20 As I stated before, we serve over 1,700
- 21 entities within the organization. And there's a
- 22 garden variety of issues that pop up for us as

	•
1	risk managers, many of those that were cited
2	earlier today. For instance, we administer many
3	of the HAZCOM programs, for instance, within
4	cities, towns, counties, states, and other public
5	entities, joint powers, authorities in California,
6	for instance.
7	We also administer the workers
8	compensation claims process in many instances. So
9	essentially, we're the ones who see the claims, we
10	administer the claims, we see the actuarial data
11 .	that we have access to, and also, we sometimes
12	provide some of the training for emergency
13	responders or we help them develop it or we find
14	it for them through a third party.
15	So we're heavily involved in with
16	fire departments, police departments, in
17	particular, EMS in particular, as far as training
18	and as far as safety and loss control issues are
19	concerned. We also are the purchasers of
20	insurance, as well. So we're the ones who take a
21	look at the policies and determine what's right
22 .	for that particular entity. In addition, we also

have access, as I said, to the claims and 1 actuarial data. But earlier there was talk about benchmarking, medical -- baseline medical information, and we do sometimes have access to that information, as well, through our members. We also write many of the RFP's for the 6 organization. And so we get involved in not only 7 the RFP's, but often times the purchasing 9 function. A prime example of this would be in 10 relation to the bridge collapse that occurred in Minneapolis last year, where the risk manager for 11 the city of Minneapolis was the person designated 12 to purchase the PPE for those first responders. 13 And she was also a part of the incident management 14 team. It's not unusual to see a risk manager as a 15 part of the incident management team whenever some 16 sort of crisis occurs. 17 Basically, we're called upon to help 18 public entities determine a lot of different 19

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things, and that includes lessons learned and the

best practices. We often sit in on those sessions

with the fire departments, with police

20

21

22 .

1	departments, with others involved in the process.
2	Basically, what I'm here for is to offer you our
3	services. Be aware that you can get access at the
4	ground level. We work with the folks on the
5	ground level. We work for those entities, as
6	well.
7	We have a global view of the
8	organization, so we get to see the risks in a
9	totally different light than others, where we're
.0	not in a silo, we do get to work with everyone
1	within the organization, including the responders
.2	and the people that they work with. So we do have
.3	a different view of the process.
4	Also, we also have some venues of our
.5	own through Prima. We have our own conference
.6	once a year that allows folks to come in and talk
.7	about their various topics, one being emergency
.8	management and preparedness. We also have a Prima
.9	Institute that allows you to come in and actually
0	teach.
1	So those are some other resources that

are available, as well as our Internal/External

1	Affairs Committee, say that five times real fast,
2 .	which is by the way, how I found out about this
3	particular meeting was through a member of our
4	External Affairs Committee who happens to live in
5	Arizona and said, hey, you're right up the street
6	from here, why don't you go over there and see
7	what this is all about, and I'm really very happy
8	that I received that phone call. This has been a
9	very valuable meeting for myself. And, in fact,
10	we have a meeting of the External Affairs
11	Committee coming up on Thursday, and I will be
12	very, very happy to pass on the information that
13	I've received and speak of the people that I have
14.	met today. I've been very pleased to meet some of
15	you and speak with you. And it sounds like we
16 '	could have some really good collaborations going
L 7 .	on.
18	So I want to make my comments just very
19	brief and say, please take advantage of this
20	offer. My information is on the very last page of
21	the handout. And I look forward to working with
22	you at some time in the near future. Thank you

1 very much	much	1701717	1

- MS. CHANG: Thank you. And Dr. Levick,
- 3 again.
- 4 Dr. LEVICK: I'm not to use the
- 5 computer, so -- bad luck. You missed out on the
- 6 pictures, but I can show them to you later. I
- 7 think they illustrate a lot of the issues. But
- 8 let me run through what I think this perspective
- 9 can bring to this group and what I see as some of
- 10 the gaps in knowledge that are unfolding in front
- of us in the delivery of particularly emergency
- medical services. Let me just go through a little
- 13 bit about where my background and where I'm coming
- 14 from and why I'm here. I'm an emergency medicine
- physician with a public health degree from Johns
- 16 Hopkins, and I've been actively involved in the
- 17 safety of emergency medical service delivery and
- 18 transport for some time, and was actually -- am
- responsible for conducting the first ambulance
- vehicle crash test for my claim to academic fame.
- 21 It sure beats doing a chart review.
- 22 But anyway, what I'm here to talk about

1	is, from the platform of the research director of
2	the EMS Safety Foundation, which is a new not for
3	profit that has really been established to fill
4	gaps in safety interdiscipline safety innovation
5	in the delivery of emergency medical care,
6	technical knowledge transfer, practical
7	interdisciplinary R and D, evaluation and
8	implementation of system safety enhancements for
9	emergency medical and medical transport services.
10	And this has been established as a not for profit
11	institute.
12	Some of the key issues that were
13	mentioned earlier this morning, characterization
14	assessment of potential hazards, safety climate,
15	engineering, technicological interventions and
16	controls, personal protective equipment, our very
17	key to the central core and theme of the
18	activities of this not for profit institute. But
19	really what we're talking about is system safety.
20	We should be looking at global hazard analysis and
21	integration of safety solutions that address each
22	of the elements of a global hazard analysis. Key

1	issues, if you do look at what data we can scrap
2	together, and particularly in contrast to what we
3 ,	have with the fire service, and in many ways other
4	emergency responders. Emergency medical service
5	providers don't have a lot of health and safety
6	data.
7	But looking at what we do have, the
8	occupational environment clearly is in two fairly
9	distinct environments, whether it's day-to-day
0.	practice or a mass disaster, transportation and at
1	the scene, whether the scene is a biohazard scene
2	or a violent scene or some scene where there's
3	some hazard to the provider.
4	The nature of the hazards that the
5	providers are exposed to are automotive, in the
6	vehicle, transportation, during transport, at the
7	scene, at risk of other automotive events, at risk
8	of being pedestrian, they have huge hazards.
9	Whoever designed an ambulance has
0	obviously never sat in one and tried to provide
i.	patient care, they had to have arms like a
2	gorilla. Psychological and criminal consequences,

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1	two-thirds of the people killed by ambulances are
2	the public. If you are driving that vehicle, you
3	have two big problems, you have a psychological
4	problem, your OC health and safety problem, and
5	you go to jail for vehicular manslaughter. These
6	are issues that pertain to the big, broader scope
7	of delivering emergency medical care. And, of
8	course, there's bio hazards.
9	So really one of the focuses of this
١0	particular foundation is R and D, rip off and
1	duplicate. Avoid reinventing the wheel at all
.2	costs. Where are the best practices that we need
۱3	to transfer knowledge from? We don't have the
L 4	luxury to go reinventing the wheel, conducting
L 5	studies that have already been done in a related
.6	area or by the transportational ergonomics.
L7	There are three ergonomic papers on
.8	planet earth pertaining to emergency medical
L 9 .	service care. One is pertaining to stretchers
20	written in Germany last year; the other one was
21	pertaining to the ambulance environment written
22	. two years ago in the UK and not really relevant to

1	our environment; the most recent one was December,
2 .	last year, done in Israel, that's it.
3	You've got 10,000 papers on the
4	ergonomics of a work station. When were you last
5	called to an emergency response because someone
6	sat wrong at their desk? We have three papers on
7	the ergonomics for the emergency medical service
8	provider. So, as I mentioned, we've got to
9	transfer knowledge from day-to-day safety
.0	practice, getting it right day-to-day, so that
.1	when we're dealing with a mass disaster, when
.2	we're dealing with a casualty environment, when
.3	we're dealing with a hazardous environment, we
.4	sort of just at least have got basic day-to-day
.5	safety practice to develop from, to expand upon,
.6 ·	so people have got some basic fundamental
.7 .	knowledge.
.8	And the other issue is, as I touched on
.9	just at the start, yes, we're worried about
20	provider safety, but the safety of our patients,
21	the people we're transporting, and the public. As
	The state of the month involved in

1	emergency vehicle adverse events were not the
2	patient. And that falls back to what's our
3	transportation policies, how do we address
4 .	intersections, how do we interact with the society
5	as the society is dealing with a mass disaster or
6	even day- to-day events.
7 .	Ambulance is actually responsible for a
8	fatality every week with the vehicle alone.
`9	Seventy-four percent of EMS providers that get
10	killed at work get killed in a transportation
11	event. Biohazards are less than three percent of
12	the fatalities. So are health and safety in this
13	arena is almost fundamentally a transportation or
14	automotive safety issue. It's a system safety
15	issue, not just what we've learned from health
16	care, understanding biohazards. As a matter of
17	fact, biohazards have a whole bunch of safety
18	standards for our providers. They've got no
19	traumatic injury safety standards, no ergonomic
20	safety standards, what they can lift, how they can
21	lift. It's s shame you're missing out on the
.22	pictures.

1	But anyway, they have a unique work
2	place, it's in vehicles, and it's at the road side
3	and other emergency scenes. We need to focus our
4	attentions on what do we need to know and
5	understand about those two environments so that
6	our providers can provide their care safely for
7	themselves, their patients, and the public.
8	A bit more data that we've just pulled
9	recently, and, in fact, the most lethal vehicle on
0	the road per mile traveled happens to be an
.1	ambulance. It's three times more lethal than any
.2	other vehicle on the road per vehicle, as well as
.3	per mile traveled.
4	There's no transportation systems
15	oversight over the system engineering of that
L 6	transportation system. And it so happens that the
L7	vehicles themselves in this country are not
18	designed by automotive engineers, nor are they
19	based on any known automotive safety technology or
20	ergonomic practice.
21	So importantly, ergonomics and
22	automotive transportation safety issues are

interrelated in the safe delivery of emergency

- 2 care and response.
- A good example of that, and there was a
- 4 picture, is an event that took place in Anchorage.
- 5 The medic was in an emergency vehicle responding
- 6 with a patient on board to the hospital, and he
- 7 undid his seat belt to stand up to put the needle
- 8 in the -- container on the other wall of the
- 9 ambulance. Unfortunately, he did that at a time
- 10 'when the ambulance driver was driving the
- ambulance through an intersection against a red
- 12 light.
- Unfortunately, the ambulance was painted
- 14 red, the most invisible color that we know from
- our automotive science and optic science. You
- 16 can't see red at night; it was at night. So some
- 17 passenger vehicle maybe didn't see them, maybe
- 18 couldn't stop in time, ran into the side of the
- 19 ambulance.
- 20 Well, the ambulance wasn't particularly
- 21 badly damaged because they're not designed to
- 22 absorb energy and crumple like an automotive

vehicle because they're not designed by the

- automotive industry, because they're not designed
- 3 to meet a single standard for occupant protection.
- 4 Once you're 60 centimeters, seated two feet behind
- 5 the driver of that vehicle, once you're in the
- back, the only thing that's going to protect you
- 7 is luck, and luck wasn't working that day. So as
- 8 the guy stood up to put his needle in the
- 9 biohazard container on the other side of the
- 10 vehicle, they got hit.
- 11 Well, he's not a paramedic anymore, he
- has a life threatening head injury. He was
- intubated at the scene by the medical director.
- 14 The problem is, what could we have done in system
- 15 safety design for this man? Multiple things from
- the color of the vehicle, to the vehicle
- operations, to where we put the -- container, do
- we need the -- container, should the equipment be
- 19 able to self -- sort of absorb its needle to how
- 20 we design that vehicle.
- 21 A lot of issues. When I mentioned
- 22 global hazardous analysis, this is a very

1	characteristic example. We need to make sure
2	we've got all those things in mind. And then just
3	so we well, we can't change a fleet of 50,000
4	vehicles over night, but we recognize the hazards.
5	Maybe there should be head protection, okay. So
6	you've got head protection. What then when you
7 .	want to put on your biological PPE, is it going to
8	work with your traumatic head protection? That's
9	where we need to be thinking globally. We need to
10	be making sure that no one goes off on a tangent
11	and design something to meet one hazard that fails
12	in another hazard, a clear example that we saw
13	here. The biohazard was perfect, it nearly killed
14	the medic. His risk is traumatic head injury in
15	that environment.
16	So I think when you start to look at
17	fatality rates of 100,000 workers, they're very
18	high for EMS providers, and they're high and
19	skewed towards transportation issues. And if it's
20	a bad day today, as I said at the start, it's
21	going to be just as bad, if not worse, during a
22	disaster.

1	So one of the issues that I think is
2	very important to focus on is, capturing the data
3	of how we're getting hurt, what are the
4	mechanisms, as you've said, surveillance, very
5	important, so we can make sure when we target our
6	solutions, they're well targeted to embrace the
7	global hazard, not targeted down one stream or
8	another without a win.
9	The problem that we have is an
10	automotive safety person who's not an ergonomist,
11	and a biohazard person who doesn't even speak the
12	same language as an automotive safety person. And
13	we also have this bizarre situation, more in EMS
L 4	than in fire or any other emergency responder.
15	There are really no safety standards for biohazards
16	so the people who are designing products don't
17	know what to design to. Yet there are unique
18	safety and hazard protection needs that I've just
19	touched on very briefly. We also have the
20	situation now where there are a number of lists
21	and appropriate products out there that may
22	actually make the overall situation more

13'

1 hazardous. But we're not capturing surveillance

- data, so we won't know until it's quite late.
- 3 So, you know, I'll quote the head of
- safety for General Motors NASCAR, who I spoke to
- 5 about this topic about this time last year. And
- 6 he had had the opportunity to look in an emergency
- 7 vehicle, and his comment was, on the patient
- 8 compartment, where you provide your occupational
- 9 environment, this is a death vault.
- 10 So there's a lot that we need to do and
- we need to do it bridging the disciplines that are
- out there that have this. We do need to rip off
- and duplicate, we do need to transfer knowledge,
- we don't have the luxury to reinvent the wheel and
- to go and do all the automotive research, it's
- 16 already out there. And I think that my appeal to
- 17 this group is to make sure that
- interdisciplinary approach is there. I follow up
- on one of my colleague's comments, reach out to
- 20 the academic and technical worlds where this
- 21 knowledge is sitting, where people are very keen
- to collaborate, and to participate with projects

that are underway. I'm feeling -- interested to

- look at the pictures. I'll show them to you
- 3 later. But I think that's my five minutes, right,
- 4 so thank you. There's a web site. If you want,
- 5 I'll give you a card with a web site. There's a
- 6 web site where we've got all the activities that
- 7 have been undergoing with the foundation, so if
- 8 you want that, just let me know and I've got --
- 9 MS. CHANG: Thank you. Our next two
- speakers are both with the Department of Health
- and Human Services, the Office of the Assistant
- 12 Secretary for Preparedness and Response. The
- 13 first would be Tim Davis with the National
- 14 Disaster Medical Service.
- MR. DAVIS: I'm Tim Davis, Commander --
- 16 Deputy Chief Medical Officer, I was acting, but
- 17 Deputy Chief Medical Officer in EMS. So I'm
- 18 actually not going to talk about -- response, but
- 19 something I did in a previous life. I come out of
- 20 CDC, I'm a -- the injury epidemiologist figure me
- 21 as a disaster epidemiologist, my disaster friends
- 22 consider me an injury epidemiologist, but it kind

13:

of plays out in both ways here. And just sort of

- 2 to point out that just one letter is missing after
- $\,$ 3 CBRN (chemical, biological, radiological, nuclear) and that's the E for explosives, and
 - 4 if you look at just what the threat to first
 - 5 responders is as far as terrorism goes, it's
 - 6 bombs, it's bombs 74 percent of the time based on
 - 7 some State Department study, what terrorists use:
 - 8 And then incendiary bombs are actually used
 - 9 additionally to that.
 - 10 But if you look at all violence towards
 - things against what terrorists use, it's like 99.9
 - 12 percent are conventional types of weapons, be it
 - 13 stones, sticks, guns, bombs, and things like that.
 - 14 If you look world wide who victims of
 - terrorists! bombs are, it's very unusual, 65
 - percent are between the ages of 15 and 29, that's
 - 17 the population at risk, that's world wide. It's
 - different, though, when you look in the United
 - 19 States, who the victims of terrorists' bombs are,
 - 20 because it's actually everybody in this room, it's
 - 21 government workers, our people that have business
 - in government buildings, New York, the World Trade

1	Center, the New Jersey New York Ports Authority
2	building, the government building, the Pentagon,
3	Murrow Federal Building in Oklahoma City, judges, post
4	offices; and then as far as workers goes, it's
5	soldiers, it's EMS, it's fire, it's, again, judges
6	and soldiers, things like that. So the population
7	at risk is actually the people in this room, but
8	it's actually the people we've come here to talk
9	about, and it's the first responders. And I don't
10	just surrender that risk when we look at the
11	hazards to disasters and response to just the
12	security folks that we need to protect us and
13	sweep the area for bombs, because we are the
14	population at risk, it's our job, we are going to
15	go into that area, that's our job, but we need to
16	make sure we're not a naive population going in
17	there.
18	In epidemiology, we generally don't send
19	the population at risk into ground zero, but
20	that's our job, the people we're here to serve,
21	and just sort of keep that in mind. I know the
22	focus is not on explosives, but that is what, at

1	least in the immediate future, that's going to be
2	our biggest risk for the people we're here to
3	serve. Thank you.
4	MS. CHANG: Thank you. And the next is
5 .	Captain Laura McNally with the state and local
6	initiatives in HHS.
7	CAPT McNALLY: Good afternoon. My
8,	presentation will be five minutes or less. But at
9	any rate, what I wanted to do is just sort of give
٥.	you a very quick overview of some of the things
.1	that ASPR is looking at. I've only been with ASPR
L2	since January, but I have been involved in the
L 3	emergency preparedness arena through an OPDIV
14	since right after 911. And so I have watched what
15	ASPR is doing and how it's emerging and how it is
L6	collaborating and how it's, you know, it's its own
L 7 .	silo, I won't lie. However, it is. But one of my
18	responsibilities on the state and local
19	initiatives team as the team leader is to take
20	many of these parts and try to pull them together,
21	because ultimately, as we know, all disasters are
! ጉጉ	local state and local response, you know, I am

- 1 responsible for what's going on out in those
- states and at the local level, and trying to
- 3 ensure, particularly through the PAHPA (Pandemic and All Hazards Preparedness Act) legislation,
 - 4 that coordination that may or may not be
 - 5 happening, that may have gotten broken down, and
 - so when it comes to the health and worker safety
 - 7 project, I do have someone on my staff who has
 - 8 been working with a number of the NIOSH
 - 9 individuals, slowly, baby steps, and she is
 - leaving, and so I am really working to try to
 - identify someone who will be able to step into
 - that role and run with it at a higher level.
 - There are a number of activities going
 - on in ASPR, they're just not very well connected.
 - We are going to be working with NDMS. We have a
 - meeting set up for the beginning of April to begin
 - 17 looking at that collaboration with all the NDMS
- folks. We've got the ESAR-VHP (Emergency System for Advance Registration of Voluntary Healthcare Professionals) program, which is
 - 19 your, you know, registry in the states of all your
- volunteers, and they work with the MRC (Medical Reserve Corps) program,
 - which, again, is the volunteers. So there are a
 - 22 number of activities that are going on, and I

1 ,	become within my team the pivotal point of trying
2	to link these up.
3	I also am involved with DHS. We have a
4	committee that meets on a monthly basis, and
5	they've had a lot of changeover there. And so one
6	of the things that we're going to be doing is
7	meeting with the Office of Health Affairs folks to
8	try to, again, bridge some of those gaps that are
9	going on and to begin doing more discussion and
LO	collaboration on how we can work together, not
.1	just around the grants that we give out, but
L2	around some of these other kinds of projects.
L3	So while we all know that DHS and FEMA
14	are, you know, an entity into themselves and a big
15	black hole, we are trying to make some inroads.
16	So I just wanted to let you know that representing
17	ASPR, I am somewhat new, but not new to the field,
18	and am fully aware of the projects going on.
19	One of the others, of course, as an
20	officer that I've always been concerned about is
21	the 6,000 commissioned officers in the Public
22	Health Service that get deployed, and what are the

1	kinds of information and the instructions that
2	are being given before we deploy. And I have to
3	say, sometimes it's just So, you know, whether
4	it be the civilian out in the state and local
5	community, whether it be the NDMS volunteer who
6 ·	has been federalized, whether it be me, as a
7	commissioned officer, or whether it be my staff
8	person who's a civilian, all of those are
9	interwoven and are a part of what ASPR is trying
0	to give more attention to, so thank you.
1	MS. CHANG: Thank you. Next we have
.2	Matthew Korbelak, an industrial hygienist with th
L3	Federal Bureau of Prisons.
L 4	MR. KORBELAK: Well, they were begging
L 5	for folks to fill some time, I guess, so I felt
L6	inspired. I wanted to get up here and say hello
L7	and echo some of the sentiments we've already
L8	heard. I had not planned on saying anything,
L9	though I felt prompted to do so.
20	Especially I had written down the words
21	"reinventing the wheel" prior to just being
22	spoken, and then the mention of explosive devices

1	I had down in my notes, as well. As that has been
2	part of the course I teach on weapons of mass
3	destruction, the problems seen here with secondary
4	devices being a problem for responders and
5	rescuers. So this is a new aspect of responding
6 [.]	that we have to look at and be aware of and
7	sensitive to. I've also been involved with the
8	Incident Command System. How many of you have
9	taken some of those FEMA courses, incident
10	command, so you're familiar with the incident
11	command structure maybe a little bit. There's
12	command staff, general staff, and other
13	nomenclature that goes with that.
14	I would say that the role of safety
15	officer as it's coming on as being developed is
16	one that we need to keep developing and one that
17 ्	is to be involved in the organization running
18	management of a crisis situation under the NIMS,
19	National Institute Management System, Incident
20	Command System there.
21	This is one of the command staff roles,
22	a very integral part. This is one where we have a

1	huge say so. This is one where we, the safety
2	officer, can address issues of PPE, adequate rest
3	for our transportation, we can talk towards that,
4	and proper protocols there, and certifications,
5	licensures, just not rushing in. And so those
6	aspects I wanted to echo.
7	I also wanted to say why reinvent the
8	wheel if someone else has already looked at
9	something. Has USAMRIID gotten data on anthrax? Do
L 0	they have information that could be helpful to us
.1	on respirable anthrax for quantities and such that
12	we don't have to reinvent the wheel and study
L 3	again? Can we get into that? Is there something
L 4	that may be declassified, or if we know somebody
15	that can we get something declassified that
16	would be helpful and beneficial to our workers
L7	that might be posed with such a threat? So I
18	would encourage developing a relationship there
19	possibly or other folks that have dealt with such
20	weapons of mass destruction in their study.
21	Lastly, I wanted to say some notes. As
22	a photographer, I studied some photos from

1	Hurricane Katrina. I was developing a catalog of
2	photographs, and I noticed that several of the
3	earlier ones coming out, when the workers were
4	photographed inside the homes, these flooded
5	homes, and you see knee high water and water marks
6	up on the walls, and mold everywhere; do you
7	remember those photos?
8	Those really struck a note with me,
9	especially when I noticed that the workers weren't
10	wearing any PPE, they were in there without masks.
11	And then it wasn't too long after that I
12	started noticing similar photos a week or so
L3	later, where those workers did have masks and
14	protective equipment in similar conditions.
L5	So the word got out, but it wasn't right
16	away. A good safety officer on the site would
17	have taken the classic industrial hygiene
18	anticipated recognition of hazards and applied
19	those prior to going in there and saying
20	anticipating that, or at least first being in
21	touch with the people that were out there, saying
22	we might have comething is that something that

our workers are at risk on, and can we do anything

- about it. Anyway, that's all I have. Those are
- 3 some of my notes that I was reflecting on, I just
- 4 wanted to share them, and thank you.
- 5 MS. CHANG: Thank you. I wanted to
- 6 remind everybody to please fill our your
- 7 evaluation forms. We've moved the anonymous box
- 8 to just the table inside the room, so that's not
- 9 next to the registration table, so it really is
- anonymous. Do we have any other speakers that
- suddenly feel inspired? If not, we will have
- 12 Doctor Kitt come back again, and we'll start the
- 13 discussion for the afternoon.
- DR. KITT: I actually think it's going
- to be a little bit more of a wrap up session.
- But, once again, I wanted to -- I think I've asked
- everybody from our Steering Committee if there's
- anything particularly that they wish to bring up.
- 19 I haven't had any takers thus far, last
- opportunity. So I appreciate all the speakers,
- 21 especially the last minute people who volunteered
- 22 to contribute their words: And this has been very

useful for us. It certainly is a first step. Renee is going to talk a little bit more about how we can continue on with this dialogue. I just 3 thought I would open it up for one last opportunity, if people wanted to discuss anything or had any specific questions for us. Yes, sir. MR. SKOLNICK: Barry Skolnick again, analyst. Yeah, first of all, I'd have to say about Ms. Levick's -- Doctor Levick's comment, 9 I've caught up with the new terminology, R and D, 10 rip off and duplicate, I -- and in conjunction 11 with that, I wanted to put in a plug and maybe 12 refer specifically to Laura McNally's area in 13 ASPR under HHS. 14 The Department of Homeland Security 15 funded, starting several years ago, a series of 16 centers of excellence, which are academic 17 consortia that put in certain grants, proposals, 18 involving faculty from multiple universities, and 19 they funded them, and they have been cooking along 20 for several years now, and it represents an . 21

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immense talent pool of academic people in a

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1	variety of disciplines that are relevant to some
2 .	of the things here that you're talking about,
3	which is funded by DHS, in one case EPA funds,
4	the CAMRA, Center for Advancing Microbial Risk
5	Assessment, that's just one of them. And I was
6	reminded, listening to Mr. Davis and Laura
7	McNally, that just as an example, there's a
8	professor, Assistant Professor Hodges of
9	Hodges at Hopkins, it's called hygiene, who made a
LO	presentation last year and this year, they had
11	university networking summits every year, and
L2	they've had two of them now, and I attended both.
13	And last year they were talking about
14	this new assistant secretary for, was it ASPR for
15	disaster preparedness response or something, I
16	don't remember the terminology, but it was an
17	academic study of the new law, the legislation
18	that was implementing that and some of the issues
19	that might arise with the interaction with local
20	authorities.
21	And I thought it was very interesting
2.7	just because it was a proactive sort of thing from

1	an academic perspective. And what I don't know is
2	whether HHS has, even though there's an there
3	needs to be an arms length relationship between
4	the government and academia, but it may represent
5	a source of academic expertise and motivated
6	students and so forth that would be helpful.
7	And this year actually I heard that one
8	of the things that this same young faculty member
9	is doing is working on model memos of
10	understanding that would get local responder
11	organizations to make proactive arrangements with
12	government authorities on what to do in case of
13	emergencies.
14	Now, HHS may be doing that themselves,
15	but this is, again, coming from the academic. So
16	the message I wanted to suggest for anyone
17	involved in this whole field is, look for those in
18	academia that have like interests, and if somebody
19	else is funding them, maybe you can escape the
20	stovepipe and get the advantage of their
21	curiosity, interest, and motivation, and kind of
22	rip off the, you know, the work that's being done,

and seek, you know, a relationship.

And who knows, this is very naive, but if DHS has the deepest pockets, and maybe NIOSH 3 has something that might be worth some 5 collaborative study, it's through the academics, maybe new funding can be gotten to accomplish what you're trying to do with limited budgets if you could take advantage of the academic community. 8 9 So this is a model, the centers of excellence, of which there are five or seven or 10 so, and they just announced three new ones this 11 year, are doing a lot of things in the disaster 12 response area that are relevant, and I would just 13 . 14 encourage anyone in this field to learn about them, mostly through the DHS web site, and I can 15 certainly provide some links to anyone interested 16 in pursuing that further to see which of these are 17 doing things that are relevant. 18 DR. KITT: I think one of the clear 19 messages we hear from a number of people today is 20 there are some real opportunities for us to form 21

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some more collaborative partnerships, including

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15.

1	academia outside the federal government, so we
. 2	hear that. Anyone else? Okay, Ted.
3	MR. SCHARF: Ted Scharf, NIOSH
4	Cincinnati. I'm one of the psychologists, and
5	everybody always wonders what's a psychologist
6	doing here. I'm really grateful for all of the
7	preparation on safety climate.
8	I was reminded of something from Doctor
9	Levick's talk that sounds like a contradiction,
10	but it's really crucially important, and that is,
11	while we look for generalizations across different
12	emergency settings and situations, it's also
13	critically important to understand what might seem
14	like petty, unimportant details of each particular
15	emergency setting.
16	I had no idea that ambulances weren't
17	qualified in crash tests. I mean that's just an
18	astounding thought to me.
19	But that's the environment those workers
20-	are in every day, and so they understand that.
21	What's the message to them in terms of safety

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climate? Well, your safety doesn't matter that

1 much. And so I guess what I want to encourage all

- of us to do is, on the one hand, while we try and
- draw out the broader themes from today, we also
- 4 don't lose track of some of these important petty
- 5 details, because to the workers in that situation,
- 6 they are not petty, they accept the climate of --
- 7 another great example is a respirator that's
- 8 uncomfortable; if it's uncomfortable, you're going
- 9 to find a reason to take it off sooner than you
- 10 would otherwise.
- 11 Stupid little stuff like that can make a
- 12 huge difference. And at the risk of saying we
- have to pay attention to everything, we really do,
- 14 it's just -- it's a difficult task we face.
- 15 Anyway, sorry for that, and thank you.
- DR. KITT: Anyone else? Okay. Well,
- before I turn it over to Renee to kind of wrap us
- up for the afternoon, I certainly want to thank
- 19 the Steering Committee for all of the work that
- they have done over the course of the last several
- 21 years. And certainly for those of you who could
- make it to attend today, it's very important for

1	us	to	have	you	here	٠.

2	Certainly to my office, who, no matter
3	how small an event like this is, you can imagine
4	how much work it takes, especially when you're in
5	a different city and you're trying to organize
6	something here, so I certainly thank everybody in
7	the office. And then most especially to Renee and
8	Chia-Chia for all of the hard work that they've
9	done. And for you for all being here, we really
10	do appreciate it, and I know Doctor Howard does,
11	as well. So I will turn it over to Renee.
12	MS. FUNK: I just wanted to talk for a
13	few minutes about just to let you all know what
14	we plan to do with this information today. This
15	has really been sort of the first opportunity that
16	these strategic goals that we've developed have
17	had an opportunity to be reviewed by external
18	partners, and so we really appreciate all the
19	information you provided us today.
20	And we will be revising them, based on
21	your comments, and also some requests from the
22 .	NIOSH OD, as well.

1	And we'll post that up on our web site,
2	and we'll let you all know once that has been
3	revised.
4	One of the things that we have been
5	talking about is how could we sort of engage you
6	all on a more regular basis, and so one of the
7	thoughts was to start a stakeholder list or
8	something like that, and I think by you all's
9	participation today that you sort of identified
10	yourself as someone who's interested in this topic
11	area. So I don't have that set up yet, but I will
12	email that out soon. And if you don't want to
13	participate, there will be opt out instructions,
14	so don't worry about that. But it's probably just
15	easier to put you all on, and you can individually
16	take yourselves off if you want to. So just to
17	let you know about that, and that way you can be
18	aware of what's going on in this research area and
19	what our office is doing.
20	So I think that's everything. Please do
21	fill out your evaluations before you leave. And
22	if you didn't have a chance to prepare your

1	comments today, you have until April 13th to
2	submit them to the docket. So thank you very
3	much.
4	(Whereupon, at 1:54 p.m., the
5	PROCEEDINGS were adjourned.)
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