THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH STAKEHOLDER'S MEETING TO SEEK INPUT ON THE FIRE FIGHTER FATALITY INVESTIGATION AND PREVENTION PROGRAM Wednesday, March 22, 2006 Commencing at 9:00 a.m. at the Washington Court Hotel, Atrium Ballroom, 525 New Jersey Avenue, NW, Washington DC.

PROCEEDINGS 1 2 MR. REED: Good morning. 3 My name is Larry Reed, and I am the Deputy Director for the Division of Surveillance, Hazard 4 5 Evaluations, and Field Studies of NIOSH, the National Institute for Occupational Safety and 6 7 Health. I'm pleased to welcome you here today for 8 our important meeting, our stakeholder's meeting. 9 10 And, also, I'll be the moderator for today's 11 session. 12 Before I begin, I would like to just talk 13 about a few things related to logistics and also to 14 go around the room and have people identify 15 themselves and their organization very briefly to 16 sort of set the context for the background of the 17 group. On logistics, you all should have received 18 19 a packet of information. And in that packet is an agenda that we'll 20 try very hard to stay close to because, as you can 21 22 see, it's a very aggressive agenda, and we want to

make sure there's ample opportunity to get input
 from all of you who want to participate in this
 meeting. And we hope, very much, that all of you
 can and will participate.

5 There's also a draft report that's on our 6 website that's a summary report of what we have done 7 to date.

8 There's also a CD that is a compilation of 9 fire fighter investigation reports, as well as other 10 related reports to the fire fighter program.

11 And also, in terms of local restaurants, 12 at the break for lunch, there's a map as well as a 13 list of restaurants. So this is an important 14 packet.

If you don't have it, the folks who run -our contracting group outside have that for you. I think what I would like to do now is just -- let's start maybe in the back, and then just, if you would please -- and we don't need to record this for the record here.

Just if you would stand, please, and justidentify yourself and organization.

1 We'll start in this corner. 2 (Introductions were held off the record.) 3 MR. REED: Okay. Thank you all. 4 As you can see, we have a large group and we hope for a lot of interaction throughout the day. 5 So this is a very important meeting for NIOSH in 6 7 terms of our future direction here. Now, the purpose of the meeting is to 8 summarize our accomplishments to date. And there 9 will be some speakers related to that, in the 10 11 morning, for NIOSH. And we also, most importantly, want to get 12 13 a sense of direction from you. 14 We think we have accomplished a lot in the 15 last eight years since the program began. And this is our opportunity to kind of get a sense from key 16 17 stakeholders where we should be going in the future. 18 As you can see from the agenda, we have a 19 very aggressive schedule. I would like to try to 20 stay on it as much as possible. The time frame is important here, so that we give everyone an 21 22 opportunity to talk who wants to speak.

Because, you can see from the agenda, we 1 2 have opening remarks from Dr. Howard in a moment. 3 Then we have comments from Dr. Tom Hales and Tim Pizatella. 4 5 We have invited stakeholder speakers following -- in the remaining part of the morning. 6 7 And in the afternoon, we have -- we become 8 aware of additional stakeholder speakers who want to comment on the program who notified us either by 9 10 phone or email. And then we purposefully left ample time 11 at the end of the day, we hope, for engaging you in 12 13 a dialogue as much as possible to interact with us 14 and to engage us with questions. 15 So with that, I would like to introduce 16 Dr. John Howard, who, as most of you know, is the 17 Director of the National Institute for Occupational Safety and Health. 18 19 And John has some opening remarks for us 20 this morning. 21 MR. HOWARD: Thanks, Larry, and good 22 morning, everybody.

Happy spring, although it certainly does 1 2 not feel like that. I just wanted to, first of all, thank you 3 for coming to the meeting today. This is an 4 5 extremely important meeting for us. For the Institute to have hosted this 6 7 program for the last eight years has been a privilege and an honor. There is no finer 8 profession than that of fire service, response and 9 10 rescue, and medical response. And at the same time, though, the 11 Institute is extremely interested in making sure 12 13 that each of its programs is relevant to the issues 14 that we are all dealing with in the world today, 15 that our work is of the highest scientific quality, 16 and that the results that we produce from any 17 program has impact on the people who are affected by that program. 18 19 So it's important for us in the Institute 20 to review each and every one of our programs. 21 So I am delighted that the program is 22 being reviewed here, after eight years. Certainly

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after eight years, there's a maturation process that 1 2 occurs. 3 And, as Larry says, we're going to talk 4 about where we have been, but, more importantly, we 5 have to decide where we should go. The Institute cannot decide that on its 6 7 own. This is your program. And we have to do that together. 8 9 We are implementors of stakeholder 10 interests and direction. So that's what we want to 11 do here today. I think it's extremely important that we 12 13 have a robust and vigorous -- as the diplomats would 14 say -- frank and spirited exchange because that gets 15 us to where we need to go. 16 We can't define in some mystical way the 17 kind of directions that you would like us to go in. So we need to hear those. We need to have 18 19 a record of it. We need to move ahead. So I want to thank, again, each and every one of you for 20 coming. Please participate. 21 22 If you leave the meeting today having said

nothing, you have failed in your job. So please 1 2 contribute, contribute freely. Tell us what you 3 think. 4 This is an extremely important program, as 5 I said, to the Institute. We are proud of this 6 program. 7 But like any program, we want it to grow. 8 We want it to continue to serve you, so we need that input. 9 10 So thank you very much, and I look forward 11 to today's session. Thank you. 12 (Applause.) 13 MR. REED: Thanks, Dr. Howard. 14 I put this slide up because we thought it 15 would be a good contact slide for setting the stage for our discussion today, the NIOSH speakers, and 16 17 then later on for a discussion from the stakeholders themselves, as well as a dialogue for where we think 18 19 we should be going. As many of you know, since the 1970s, the 20 U.S. Fire Administration and the National Fire 21 22 Protection Association have gathered data, have

counted numbers of fire fighters who have died on
 duty, and this graph tracks those data. Total
 number of deaths, both traumatic injury, as well as
 cardiovascular related deaths.

5 The fire service was able to reduce the 6 number of deaths from the late '70s through the 7 early 1980s. However, you can see the decline 8 leveled off in the mid '80s, and actually into the 9 early '90s.

10 This troubled NIOSH, troubled Congress.
11 And Congress, as a result of that, in 1998, funded
12 the work that NIOSH is doing in the fire fighter
13 program.

Tom Hales and Tim Pizatella are going to summarize the work that has been done so far in the NIOSH fire fighter Program. And I'll explain the background or the framework for what they're going to talk about in just a moment.

But you can see here that we think there is work yet to be done. And the leveling off of the fire fighter deaths is one of those issues and how can we impact this yet further.

1 The other questions to discuss are there 2 other markers, are there other indicators of fire 3 fighter safety and health other than total numbers 4 of fire fighter deaths.

5 In other words, this is a good barometer of the performance of the program. And more 6 7 importantly, this is a good barometer of overall fire fighter safety and health, and other things 8 that NIOSH can be doing and should be doing in the 9 10 community, as well as other stakeholders in the fire 11 fighter arena to improve overall fire fighter safety and health, and most certainly reduce the number of 12 13 fire fighter deaths yet further.

14 So with that as a backdrop, at the end of 15 the day, you know, we hope to engage, as Dr. Howard 16 said, with dialogue from you, the key stakeholders 17 here who have come today to give us input in our 18 effort to help shape the future of what we're going 19 to be doing in NIOSH.

We most certainly will continue to do, as
you will hear later on, the fire fighter
investigations.

There may be other opportunities for us to 1 2 do other research. We would like to hear about 3 that. There may be other opportunities for 4 outreach, for document development, for 5 dissemination. And so this is, again, further ideas 6 7 that we would like to hear from you about. 8 So with that as backdrop, this morning you will hear from two NIOSH presenters. The first 9 presenter is Dr. Tom Hales, and he will discuss the 10 11 bullets that are in yellow. I won't read those bullets, but basically 12 13 they represent that background information and key 14 findings and recommendations from the program to 15 date. In other words, what we have done so far. Tim Pizatella will talk about the bullets 16 17 in white, which generally represent outreach dissemination, and, most importantly, the bullets 18 19 related to where we should -- ideas for potential areas for what we could do in the future. 20 21 So with that as background, I will 22 introduce Dr. Tom Hales.

Tom is a physician who is -- worked with 1 2 the Hudson evaluation branch of the NIOSH field studies division for his entire career. 3 And Tom is the team leader for the fire 4 5 fighter program in Cincinnati. 6 So with that, and he is primarily focused 7 on the cardiovascular deaths in his research area. 8 MR. HALES: Thanks, Larry. 9 Good morning. I would like to echo 10 Dr. Howard's comments. It has really been a privilege and an 11 honor to get to know the men and women working in 12 13 the fire service. As Larry mentioned, I coordinate the 14 15 illness investigations of NIOSH fire fighter 16 Fatality Investigation Program, which for -- because 17 that's really a big mouthful and a long title, I'm just going to shorten it to the fire fighter 18 19 Program. This morning, I'm going to be talking 20 about our Congressional mandate and our goals, 21 22 review and outline how we conduct our

investigations, review the association between heart
 disease and fire fighting, summarize some of our
 most common recommendations on both the injury and
 health investigations, and present some of our key
 findings.

In Fiscal Year '98, Congress mandated that
NIOSH conduct fatality investigations.

And I quote here directly from the 8 appropriation language: "Identify causal factors 9 10 common to fire fighter fatalities, provide recommendations to prevent similar occurrences, 11 formulate strategies for effective intervention, and 12 13 evaluate the effectiveness of those interventions." 14 This mandate gave rise to the NIOSH fire 15 fighter Program. 16 The goals of our program are to prevent 17 fire fighter fatalities. The objectives are aligned with our Congressional mandate, to do 18 19 investigations, to identify causal factors, provide recommendations, develop intervention strategies, 20 and evaluate our effectiveness. 21

22 The NIOSH program operates out of three

locations: Morgantown, West Virginia; Cincinnati, 1 2 Ohio; and Pittsburgh, Pennsylvania. 3 Our injury investigations are conducted out of Morgantown by these eight investigators and 4 two support staff. 5 Our illness investigations are conducted 6 7 out of Cincinnati by myself and two of my colleagues. 8 9 Our SCBA investigations are conducted out 10 of Pittsburgh by these three investigators. We're notified by a -- of a fatality by 11 the U.S. Fire Administration, and we accept their 12 13 criteria for on-duty fatalities, basically, any 14 injury or illness sustained while on duty that 15 proves fatal. 16 Everyone agrees when a death, due to 17 traumatic injury, is on duty. However, for cardiovascular fatalities, this is less clear. 18 19 Prior to 2004, the Fire Administration 20 criteria used to determine an on-duty CVD fatality was that the fire fighter expressed symptoms 21 22 consistent with an MI or a heart attack within 24

1 hours of performing fire fighter duties.

2 This changed in 2004.

To be consistent with the language in the Hometown Hero Survivor Act, the Fire Administration changed the criteria to, Died of a heart attack or a stroke within 24 hours after participating in non-routine stressful or strenuous physical activity.

9 Given that up to 20 percent of heart
10 attacks are asymptomatic, we feel this dropping of
11 the symptoms criteria is an improvement.

12 Once notified of a fatality, we make 13 telephone contact with the fire department, the 14 local union, and the state Fire Marshal's office to 15 gather more information about the case. We use this 16 information to prioritize our investigations.

Site visits are made for all our
investigations that we do, which we -- during which
we conduct interviews and review documents.

20 I would like to point out, for the injury 21 investigations, to ascertain symptoms and family 22 history of potential cardiovascular problems, we

include the family in the process since day one. 1 2 This not only includes interviewing them, 3 but we also request that they review and comment on our draft report. 4 5 Our findings are compiled into a report, which summarizes the circumstances, provides 6 7 recommendations to prevent similar occurrences, 8 and -- in that department and in other departments, and then these reports are disseminated in the 9 10 process that Tim Pizatella is going to be talking 11 about. While there is some controversy whether 12 13 cardiovascular deaths should be considered work 14 related fatalities, I want to take a few minutes and 15 review the association -- the literature associating 16 fire fighting and heart disease. 17 There are a number of acute and chronic factors associated with heart disease. 18 19 Exposures causing acute effects include 20 carbon monoxide, which is found during all phases of 21 fire suppression. Of particular concern is carbon 22 monoxide exposure during mop-up or clean-up

1 operations.

2 Due to incomplete combustion, mop-up 3 operations have some of the highest measurements of carbon monoxide. Unfortunately, fire fighters 4 5 frequently remove their SCBA during this phase of б fire suppression. 7 Another acute exposure of concern is the rapid increase in heart rate and blood pressure when 8 responding to alarms or performing heavy work at a 9 10 fire center. The pattern of sedentary periods at the 11 fire station interrupted by adrenaline surges 12 13 associated with an alarm has been suspected to put 14 fire fighters at risk for heart attacks. 15 Epidemiologic studies, not among fire 16 fighters, but among non-firefighters, have shown 17 that heavy physical exertion can trigger heart attacks. 18 19 Besides acute exposures, there are also chronic fire fighter exposures associated with heart 20 21 disease. 22 These include shift time, shift work,

overtime, heat exposures, noise exposures, 1 2 environmental tobacco smoke, and exposure to various 3 chemicals, including chronic, not just acute, 4 exposures to carbon monoxide. 5 So everyone agrees that fire fighters have exposures putting them at risk for heart disease, б 7 but do they actually have increased rates of heart disease? 8 9 Epidemiologic studies are needed to assess 10 this question. There are over 25 cohort mortality studies, or SMR studies that have examined the 11 relationship between heart disease and fire 12 13 fighting. Unfortunately, these results are 14 conflicting. Some support the association, and 15 others do not. 16 It is important to recognize an important 17 limitation of this type of study, known as the Healthy Worker Effect. 18 19 As I will be showing you, most fire 20 fighter candidates are screened for heart disease and coronary artery disease risk factors, such as 21 22 diabetes. Candidates with these conditions

generally are precluded from entering the fire
 service.

3 Therefore, given the strong Healthy Worker Effect among fire fighters, we do expect that the 4 heart rate that fire fighters -- instance of heart 5 disease would be lower than the general population. 6 7 In 2000, Choi published a review paper, which attempted to control for the Healthy Worker 8 Effect in these studies. And he concluded: "There 9 10 is strong evidence of an increased risk of death from overall heart disease among fire fighters." 11 Other authors reviewing this literature 12 13 came to the same conclusion. 14 After viewing the fire fighter mortality 15 literature, Guidotti concluded: "Sudden death, 16 myocardial infarction, or fatal arrhythmia occurring 17 on or soon after near-maximal stress on the job are likely to be work related." 18 19 With that quick review, let's move on to 20 some of the key findings and recommendations. From 1998 to 2005, there were 821 total 21 22 fatalities.

Now, NIOSH investigated 324, or 40 percent 1 2 of these. 175 were injury investigations, and 149 3 were illness investigations. 4 Of these 324 investigations we have 5 conducted, 183 or 56 percent occurred in career б departments, and 44 percent occurred in volunteer 7 departments. These investigations took us to every 8 state in the Union, except Rhode Island and Idaho. 9 10 Those are the blue states in the map. Red states -- or I guess they sort of 11 turned out orange, but they're supposed to -- they 12 13 look red on my thing. 14 The red states here actually don't --15 aren't meant to look at political affiliation, but 16 rather represent states that have at least five 17 investigations that we have conducted. Turning to the findings from the illness 18 19 investigations. This is a slide I presented at the '99 Redmond Symposium, which has been updated 20 through 2004 with data. 21 22 The X axis describes the time of the

incident, while the Y axis describes the number of 1 2 fire fighter fatalities. 3 As you can see, most of the on-duty CVD fatalities occurred in the afternoon or evening 4 5 hours. This finding is very different than the general population. 6 7 Sudden cardiac death in the general population occurs three times more often in the 8 morning hours compared to the evening hours. 9 10 This finding is one piece of evidence 11 suggesting that on-duty CVD fatalities among fire fighters are work related. 12 13 In 2003, colleagues of ours from the 14 Occupational Medicine Program at the Harvard School 15 of Public Health used data from our website to conduct a case control study of on-duty fire fighter 16 17 fatalities. This graph is from their paper, charting 18 19 the number of fatalities on the Y axis, by the time of day by quartiles on the X axis. 20 21 They found a significant -- they found a 22 significant difference in the temporal pattern of

sudden cardiac deaths compared to the general 1 2 population. 3 This proved some statistical support for the idea that these deaths didn't just happen to 4 occur at work, but rather that something at work 5 triggered them. б 7 Another slide I presented at the '99 8 Redmond Symposium was this pie chart showing the location of the cardiovascular disease fatalities, 9 10 which have been, again, updated with 2004 data. 11 About 66 percent of the CVD fatalities occurred at an incident, or traveling to or from an 12 13 incident, or during training exercises. 14 These are locations where fire fighters 15 are known to have increased heart rates and elevated 16 blood pressures from either responding to the alarm 17 or performing physically demanding tasks. Again, our colleagues at the Harvard 18 19 School of Public Health analyzed our cases and found 20 that being involved in fire suppression, training 21 activities, and alarm response were very strongly 22 associated with on-duty CVD deaths. Findings, very

suggestive, that on-duty cardiac deaths among fire 1 2 fighters are work related. 3 Autopsy information is important to 4 determine the cause of death, as well as required to 5 apply for Federal Survivor Benefits, known as PSOB. Using data through 2004, of the 134 6 7 on-duty deaths investigated, only 92, or 69 percent 8 had an autopsy performed. 9 In addition, while the majority of the 10 cases had coronary artery disease, over here, it is important to note that a significant number had 11 cardiomyopathy, both hypertrophic and dilated 12 13 cardiomyopathy. 14 This finding is important because it's 15 very difficult to detect or screen for 16 cardiomyopathy, particularly in asymptomatic 17 individuals. Take home message from the slide is we 18 19 need to do a better job of getting an autopsy 20 performed. And, two, given the number of cases of cardiomyopathy, we need to temper our goals that all 21 22 fire fighter deaths due to cardiovascular disease

1 can be prevented.

2 Now, let's focus on some of these 3 cardiovascular coronary artery disease cases. The American Heart Association has 4 5 identified eight risk factors for coronary artery disease, three modifiable, and five -- three б 7 non-modifiable and five modifiable. 8 The three non-modifiable are history, male gender -- family history of heart disease, male 9 10 gender, and advancing age. The modifiable risk factors include 11 smoking, hypertension, high blood cholesterol, 12 13 diabetes, and lack of exercise and obesity. 14 All of our illness investigation 15 fatalities had at lease one CAD, or coronary artery disease, risk factor, and most had multiple. The 16 17 most common being elevated cholesterol, here, as well as followed by smoking and then hypertension. 18 19 These CAD risk factors should have been 20 identified by the fire department medical screening programs and appropriately treated. 21 22 NFPA 1582 recommends fire fighters with

two or more of these risk factors be referred for an 1 2 exercise stress test. 3 Of the 134 illness investigations we conducted, 101 had fire department preplacement 4 5 medical evaluations done. All career departments perform these exams, while only 31 percent of the б 7 volunteers do. Now let's turn to our periodic medical 8 evaluations. 9 10 Overall 57 percent of fire departments 11 with fatalities conducted periodic medical evaluations. 83 percent of these were career 12 13 departments versus 29 percent in volunteers. 14 These medical evaluations typically 15 consisted of a history, an exam, a blood pressure 16 measurement, and most also included a cholesterol 17 check. Unfortunately, only 21 percent of the fire 18 19 departments required an exercise stress test for 20 high risk fire departments. 21 These findings led us to recommend that 22 fire departments, one, conduct periodic medical

evaluations to screen members for coronary artery 1 2 disease risk factors. 3 And, two, for those members with multiple 4 CAD risk factors, they should be conducting exercise 5 stress tests. In our investigations, we also inquired 6 7 about fire departments' wellness and fitness 8 programs. 9 Only 39 percent of the 134 departments had 10 wellness programs, typically consisting of smoking 11 sensation, blood pressure screening, cholesterol lowering classes, and counseling on weight reduction 12 13 and diabetes. 14 66 percent of the -- or 66 departments, or 15 49 percent, had fitness programs, of which only 12, 16 or 9 percent, were mandatory. 17 These findings led us to recommend that fire departments should phase in mandatory 18 19 participation in wellness fitness programs, with the 20 results of those programs being non-punitive. 21 Now, let's turn our attention to these 175 22 injury investigations.

For the 175 injury investigations, most 1 2 occurred at or en route to a structure fire or 3 during training. 4 This slide shows the type of fatality for 5 our injury investigations. The most common type was asphyxiation, followed by motor vehicle trauma, and 6 7 burns. Many of our injury investigations found 8 that the fire department did not have written 9 10 standard operating procedures, or SOPs, thus 11 developing and enforcing SOPs were a common recommendation in our reports. 12 13 Another problem was that two-way 14 communication was lacking between the incident 15 commander and the fire fighter crews. 16 Two-way communication should always be 17 established before entering a dangerous environment. Another problem was there were -- and thus 18 19 a common recommendation -- was that the incident 20 commander was not clearly identified. 21 The incident commander should not only be 22 clearly identified, but direct operations and scene

1 management.

2 The lack of seat belt use for a motor 3 vehicle fire fighter fatalities was a significant problem. Fire departments should develop and 4 5 enforce seat belt use policies at all times. During many of the injury investigations, 6 7 a rapid intervention team had not been formed. Prior to allowing fire fighters to enter a dangerous 8 environments, the incident commander must insure a 9 10 rapid intervention team is properly trained, 11 properly equipped, and properly positioned to 12 perform a rescue. 13 During both the injury and illness 14 investigations, there were a number of fire 15 departments with incomplete respirator programs. 16 SCBAs must be routinely inspected, 17 regularly maintained, and the fire fighter must be annually fit tested and medically cleared. 18 19 During many of our injury investigation of 20 fatalities, there were inadequate personnel and equipment on scene. NIOSH recommends staffing 21 22 levels consistent with NFPA standards 1710 and 1720.

Many of the fires causing injury 1 2 fatalities could have been avoided all together if municipalities had been addressing building safety 3 4 requirements. 5 NIOSH recommend municipalities adhere to their own fire codes. 6 7 Finally, NIOSH has also recommended research organizations develop technologies to 8 improve fire fighter safety, such as locators to 9 10 find missing or downed fire fighters. In addition to fatality investigation, the 11 program has also conducted some non-fatal 12 13 investigations and evaluations. 14 These include nine non-fatal injury 15 investigations involving 19 fire fighters, and ten 16 health hazard evaluations. 17 The health hazard evaluations involved investigating health concerns over asthma and 18 19 cancer, exposure to lethal exhaust, bloodborne pathogen exposure, and respirator issues. 20 21 In addition, the HHE program has 22 involved -- has been involved in the health and

safety of fire fighters during emergency responses. 1 2 For example, we worked with FDNY post 9-11 3 to assess exposures and health effects. We have also worked with the New Orleans 4 5 fire department, post Katrina, to assess their exposures and health effects of fire fighters, post 6 7 Katrina. 8 To wrap up my portion of the NIOSH presentation, I would like to return to our 9 10 Congressional mandate, conduct investigations, 11 identify risk factors, and provide recommendations. Over the past eight years, we investigated 12 13 324 incidents involving 366 fire fighters. 14 For the health investigations, we have 15 identified that most of the sudden cardiac deaths 16 were triggered by activities that increased heart 17 rate and/or blood pressure, and that subsequent epidemiologic studies support the Association. 18 19 We also found that less than half of the 20 fire departments screen for CAD risk factors, and less than a fifth performed exercise stress tests. 21 22 Finally, less than 10 percent of fire

departments had mandatory fitness, wellness 1 programs. 2 3 As I mentioned earlier, our recommendations have been derived from our findings 4 5 of our evaluations. These three involve -- in б white, are from our injury -- illness 7 investigations, and the resulting nine are from our injury investigations. 8 At this point, I would like to turn it 9 10 over to Tim Pizatella, who is going to be talking about basically our dissemination and outreach 11 12 effort. 13 Tim Pizatella is the Deputy Director of 14 the Division of Safety Research in Morgantown, West 15 Virginia. 16 Tim. 17 MR. PIZATELLA: Thanks, Tom. Good morning, and welcome. 18 19 Again, I would also like to offer my appreciation, our appreciation for you taking the 20 time to participate in the stakeholder meeting for 21 22 the fire fighter Program.

What I would like to do this morning is 1 2 provide a brief overview of some key accomplishments 3 in each of these areas of the program: 4 Dissemination, research -- excuse me. 5 Dissemination, outreach, research, impact, and then end with some discussion of potential 6 7 future program directions where we would like your input on. 8 9 On the dissemination side, as Tom 10 mentioned, a final report is provided back to the department that sustained the fatality and the 11 12 union, if there is one. 13 We also post all reports to the NIOSH fire 14 fighter web page, and provide periodic mailings of 15 hard copies of reports and other related NIOSH 16 documents to the fire service via hard copy. 17 And we also try to distribute materials at key fire service conferences that occur around the 18 19 country every year. On the investigative reports, to date we 20 21 have more than 300 reports that have been posted to 22 the NIOSH program web page.

And in 2005, our -- this particular web 1 2 page received greater than 60,000 visits to the page 3 itself or specific investigation reports from the 4 program. 5 On the SCBA testing side, at times fire departments will request an investigation of the 6 7 breathing apparatus, or the NIOSH investigators will request such an investigation. 8 9 So our colleagues in Pittsburgh will do 10 analysis of the SCBA and provide a report of their results in test to the NIOSH investigators, as well 11 as back to the fire department. 12 13 These results are also included with a 14 NIOSH investigative report, typically as an 15 appendix. 16 Based on the evaluation, if warranted, a 17 field problem investigation is initiated by our National Personal Protective Technology Laboratory. 18 19 They have indicated that about 5 percent of the samples that they have received over the last five 20 years or so have fallen into this category. 21 22 In trying to disseminate the results of

our investigations more broadly, we have been
 working with a number of fire service journals who
 have been reprinting summaries of our investigations
 in their journals.

5 We just look at this as one additional way 6 to try to get the results of our investigations into 7 the hands of the fire service.

8 We also develop NIOSH documents, NIOSH 9 numbered publications, a variety -- around a variety 10 of topics that we're finding with our 11 investigations, and these include NIOSH alerts.

12 And these two show, one is on truss system failures, which we released last summer, 2005. And 13 14 then one on structural collapse that we released in 15 1999. These provide a comprehensive summary of the 16 investigations on each topic, and provide 17 recommendations for preventing future type incidents. 18 19 We also have a document called a Workplace

20 Solutions, which is a little shorter than the alert, 21 but it, again, tries to summarize issues we're 22 identifying through our investigations around a 1 common cause.

2 And then we disseminate these to the fire 3 service.

4 Over the last eight years, we have
5 developed about six of these. And the latest one,
6 last summer, was on live fire training in acquired
7 structures.

8 We have also done workplace solutions on 9 training dives, electrical hazards during wildland 10 fire fighting, tanker truck rollovers, traffic 11 hazards, and then propane tank fires.

Currently working on several new documents 12 13 based on our investigations. We have four alerts in 14 the works. One on fire fighter training, motor 15 vehicle incidents, risk versus gain, and heart 16 attacks and sudden cardiovascular events. 17 We also have a workplace solutions on the use of military surplus vehicles in the fire 18 19 service, and we hope to have all of these completed in Calendar Year 2006. 20

21 We have also worked with other agencies to 22 develop joint publications where our missions cross.

We worked with the Department of 1 2 Transportation in Operation LifeSaver to develop a 3 document on railroad crossing safety for emergency 4 responders. This was released in 2003. 5 In 1999, we worked with the Food and Drug Administration and put out a public health advisory б 7 jointly with them on the flashing of oxygen 8 regulators. 9 We're currently working with the FDA on a 10 public health notification, again, on oxygen 11 regulators. This time, it's an issue with gasket seals. And we hope to have that released within the 12 13 next few months. 14 We have also worked with some agencies to 15 develop other products. We worked with the FDA to 16 develop a video entitled Hidden Danger, Oxygen 17 Regulator Fires, after our collaboration in 1999. We have also worked with the National 18 19 Institute for Standards and Technology, who have 20 developed a fire dynamics model, simulated fire 21 models for some of the investigations that NIOSH has 22 done.

And these fire models are useful in 1 2 helping NIOSH investigators, as well as the fire 3 departments themselves better understand the 4 dynamics of the fire and how it unfounded, and then 5 we used those to help us in developing б recommendations for prevention. NIST also makes these fire models 7 available on CD-ROM, as well as through their 8 website. 9 10 On the internet, I mentioned that briefly 11 earlier, we're trying to use the internet more to provide access to our reports and other documents 12 13 and materials. 14 We have implemented a website subscription 15 service where individuals can provide their email address, and we will include -- send an email to 16 17 them whenever a new report or other document or information is added to the website. 18 19 Very recently, within the last week or so, we have added a report -- search capability to the 20 reports on the web. This provides a little easier 21 22 way to access the types of reports that the

2 We have been working to develop a 3 bi-weekly safety quiz approach, where this provides 4 a series of questions and answers. 5 And the purpose is to try to get the fire service to use these in terms of, like toolbox б 7 talks, and the answers are provided back into the 8 reports. 9 And the goal is to try to get the 10 recommendations from the report used for 11 preventative activities. And then the website also includes links 12 13 to the many, many resources that are available from 14 other organizations around the fire service. 15 Another method of dissemination is the use 16 of a CD-ROM. Some individuals and organizations 17 like to use a CD-ROM approach for their materials, so we have developed a CD-ROM. 18 19 The most recent one was released in January of this year. It includes all reports and 20

individuals would like to review.

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publications through December 2005.

22 It also includes links to other NIOSH

resources, such as the NIOSH Pocket Guide to
 Chemical Hazards, which is a popular document with
 the fire service.

And we also provide hard copies of all of the materials because some individuals do prefer hard copy, as well. So we have not abandoned the hard copy approach.

8 Next, I would like to talk about some of
9 the outreach efforts over the last eight years or
10 so.

II In June of 2005, we partnered with the IFC and another fire service organizations in the Stand Down for Safety initiative.

14 NIOSH materials were referenced in that 15 safety initiative, and we plan to participate in the 16 stand down that I understand is going to occur again 17 this June.

18 Last fall, we developed a memorandum of 19 understanding with the U.S. Fire Administration to 20 increase the use of NIOSH reports -- NIOSH materials 21 and reports in the USFA training programs for fire 22 fighters.

NIOSH staff across the Institute are 1 2 members of a number of NFPA standards committees. 3 These are just a few examples, Incident Command, 4 Medical Program, PASS Device, and SCBA. 5 Our colleagues in Cincinnati assisted with the implementation of the IAFF/IAFC wellness and б 7 fitness initiative, as well as participated in the work group with the National Volunteer Fire Council 8 on their Heart Healthy Program. 9 10 And they were on a couple of work groups with U.S. Fire Administration -- U.S. Fire 11 Administration, excuse me, updating -- helping to 1213 update the autopsy protocol as well as to assist in 14 determining Line of Duty Death criteria. 15 On to research. 16 Throughout the last eight years, we have 17 conducted some research under the guise of the program. A number of articles have been published 18 19 in the scientific literature by a number of the NIOSH staff in the program. 20 21 These are outlined in Appendix 1 of the 22 stakeholders Document.

Some of these include articles on the 1 2 flashing of oxygen regulators, risk factors for 3 injury in structural collapse, and the occupational 4 transmission of bloodborne pathogens to emergency 5 response personnel. 6 We have also been conducting some research 7 through the NIOSH National Occupational Research agenda, which is separate funding from the fire 8 fighter Program, Investigative Program. 9 10 These include looking at the effects of 11 fire fighter apparel on the operation the fire response vehicles. 12 13 What we're trying to look at here is what 14 impact bumper clothing and leather and rubber boots 15 has on response times in braking and other related 16 issues. 17 We're looking at the effects of the biomechanical and physiological effects of the fire 18 19 fighter boots. Leather on the fire fighter boots 20 can add up to eight pounds of weight to fire fighter 21 clothing, and can also have a significant increase 22 on their oxygen consumption.

So we're trying to do a study to look at 1 2 the effects this may have on fire fighters of 3 biomechanical and physiological properties. 4 And we're also doing an anthropometric 5 study that's assessing the glove size and fit of fire fighter gloves. And we hope that the results б 7 of these research projects will be useful to the various NFPA committees. 8 9 As a result of some of our investigations, 10 we identified some hazards in the patient 11 compartments of ambulances. 12 And what we were finding is that most of 13 the patient compartments were equipped with lap 14 belts, which don't provide an easy way for EMTs to 15 provide patient care while the patient is being 16 transported. 17 So we did some testing to determine that some restraints could provide additional protection 18 19 for the EMFs, as well as allow them the mobility 20 that they need to provide patient care while the 21 ambulance is moving, back in the patient 22 compartment.

We're currently assessing some human 1 2 factors issues, as well, regarding the design of the 3 patient compartment. So we hope to have those 4 results out within the next year or so. 5 Through the NIOSH Research and Training Grants Program, we have funded a couple of -б 7 several research and training grants. These are for 2005. 8 9 One is on SCBA Oximetry for fire fighter 10 physiologic monitoring. We also funded a bioelectric telemetry 11 system for fire fighter safety, and then hazardous 12 13 substance training for emergency responders, a 14 training program with the IAFF. 15 On the impact side, we believe that the 16 NIOSH findings and recommendations have been used in 17 multiple ways. They were cited in the 2003 New York 18 19 legislation, which made it illegal to use people in the role of victims in Line of Fire training. This 20 is known as Bradley's Law. 21 22 It was also referenced in the 2003

1 Hometown Heroes Survivor Act.

Back in April of 2005, based on NIOSH 2 3 investigations, we identified some issues with PASS Devices that we communicated to the NFPA 1982 4 5 Committee. These issues surrounded the PASS devices not being heard or being barely audible. б 7 So we provided the results of our investigation to the committee. One of the NIOSH 8 staff is on the committee. 9 10 And the standard was revised, which addressed a number of the issues identified through 11 the NIOSH investigations. 1213 The public comment period on that revised 14 standard closed in early March. And I understand 15 that the goal is to approve a new performance 16 criteria and certification test methods for PASS 17 devices by the summer of 2006. NIOSH findings and recommendations were 18 19 also incorporated or referenced into NFPA standard 20 1710 and 1720, which are minimum staffing levels for 21 career and volunteer fire departments, as well as in 22 NFPA 1500, minimum requirements for Occupational

1 Safety and Health Programs.

I mentioned earlier about working with the
FDA on the oxygen regulator flashing hazards that
were identified.

5 The public health advisory that we did 6 jointly with FDA was used to support a manufacturer 7 recall of the oxygen regulators to provide a 8 retrofit kit to replace aluminum high-pressure parts 9 with brass parts.

10 Our investigations identify aluminum as a 11 contributing factor to these flashing hazards, with 12 brass being a safer alternative.

And the manufacturer also offered a
trade-in program with credit towards the purchase of
the new brass -- the newer brass regulators through
this program.

Was have also received input from fire
departments and training academies across the
country.
Some examples include a training academy

21 in Pennsylvania, who is now requiring 1,200 local 22 instructors to incorporate accountability into their

training programs, based on the NIOSH reports and 1 2 investigations. 3 Fire departments -- some fire departments have also let us know that they're using the NIOSH 4 5 reports in their fire fighter Safety Training 6 Programs, including the ones I have shown here on 7 the slide. Currently we're working with a contractor, 8 9 RTI, to do a formal assessment of the impact of the 10 NIOSH program to date. The goal of this program is to -- or this 11 12 evaluation is to assess the extent that fire 13 departments and fire fighters are aware of the NIOSH 14 program and its recommendations, and to identify 15 ways to enhance the impact of the program. Data collection for the evaluation has 16 17 begun in February of this year. It will include a survey of 3,000 fire 18 19 departments, as well as focus groups with frontline fire fighters. And the results of this evaluation 20 21 are due back to NIOSH in September of 2006. 22 So just to summarize some of our

accomplishments, we believe we are fulfilling the 1 2 Congressional mandate for the fire fighter Program. 3 We are widely disseminating our findings 4 to the fire service. 5 We're working with a number of fire service organizations who are responsible for 6 7 developing and implementing fire fighter safety and health programs. And we're working to address 8 stakeholder expectations. And this meeting is going 9 10 to take a large step, I believe, to help us do that 11 better. As Larry mentioned earlier, data for the 12 13 last eight or so years has indicated that the number 14 of fire fighter fatalities has essentially remained 15 level. So clearly, more needs to be done to 16 17 significantly bring this -- the numbers of fire fighter fatalities down. 18 19 So what we wanted to do with -- what I 20 wanted to do to end with this presentation is provide some potential future program directions 21

22 that we would like to outline here, and then we're

clearly wanting stakeholder input on these and other 1 2 issues that you feel can help us make the fire 3 fighter Program better and have more impact. 4 Some suggestions on the investigative 5 side, we suggest continuing to conduct fatality investigations with priority on events accounting 6 7 for a larger number of deaths, investigations likely to result in new recommendations, and investigations 8 that impact current prevention efforts of other 9 10 groups. On the dissemination side, suggestions are 11 to increase our efforts to develop more education 12

other documents that summarize multiple
investigations and hazards that we're identifying
through our investigations and seek new approaches
to disseminate these materials, and even facilitate
their use by the fire service, what can we do to
facilitate their use more broadly?
On the outreach side, suggestions are to

material, such as alerts, Workplace Solutions, and

13

21 expand our outreach and partnership efforts to
22 better increase the use of our NIOSH findings and

1 products by the fire service.

2 Those include more involvement in the 3 standard-setting committees, the state training 4 academies, or fire service organizations. 5 On the research side, suggestions are to conduct a more in-depth analysis of available data 6 7 on fire fighter deaths and injuries; increase our 8 efforts to encourage research, which builds on investigation findings; and conduct formal 9 10 evaluations of specific interventions to determine 11 their effectiveness in actually reducing risk and 12 injury. 13 Cost effectiveness of wellness/fitness 14 programs is another proposed area. 15 Investigate the barriers to implementing 16 NFPA 1582. Analyze NIOSH data regarding return to 17 work and medical clearance. And then investigating issues surrounding heat stress. 18 19 So to end my presentation, again, we 20 appreciate your taking the time to spend with us 21 today. 22 We look forward to interactive discussion

and your comments on how we can make this program 1 2 better, and to ultimately increase its impact and 3 help to reduce the number of fire fighter fatalities 4 that occur each year. 5 Thank you. MR. REED: Thanks, Tom and Tim. 6 7 We have -- we're well ahead of schedule. We have ample time, I think, for questions from the 8 audience. 9 10 And I forgot to mention early on in the 11 logistics part of my introduction that this meeting is being transcribed. It's an important record of 12 13 the documentation for what happens here at this 14 meeting. And we'll use that to summarize the, you 15 know, where we're going in the future part, and 16 create a summary document that I'll describe in a 17 little more detail later on. But I think we have time for questions of 18 19 Tim and Tom and their respective staff. 20 So if you do have questions now, could you please go to the microphone. 21 22 MR. HALES: Can I say one thing?

On Tim's slide, he mentioned that we had 1 2 helped implement the fitness and wellness program 3 that the IAFC and the IAFF put together. And, actually, we have just been invited 4 to be on the work group to help implement that. 5 We were -- that actually -- program came 6 7 into being before the program even got started. So I just wanted to make that clear, that we aren't 8 taking credit for that good program that the IAFF 9 10 and the IAFC are doing. MR. DUFFY: That's okay, I'm going to send 11 12 them to you. 13 MR. REED: Thank you for that 14 clarification, Tom. 15 Any questions from the audience? 16 Again, not to detract from the dialogue 17 and discussion that we had scheduled time for this afternoon, but any specific questions on these 18 19 presentations, we could certainly have time to 20 address now. 21 So would you please come to the microphone 22 and identify yourself for the record.

MR. PREZANT: I'm David Prezant, New York 1 2 City Fire Department. 3 Very excellent presentation on the incidents of cardiovascular death. 4 5 There you go. Dave Prezant, Fire Department, New York 6 7 City. Excellent presentation. He just wanted to hear this twice. 8 9 This is what happens. Hales wanted me to 10 say excellent presentation on the cardiovascular death, and he wanted to hear it now three times. 11 12 MR. HALES: Is your mike on? 13 MR. PREZANT: The reality is that the 14 death rate has not changed in the last ten to 12 15 years, and there are lots of factors for that. 16 But we certainly are underestimating the 17 incidence of cardiovascular events, given the fact that we have improved treatment on the scene, 18 19 improved treatment at hospitals. And, therefore, for every cardiovascular incident, it should result 20 21 in a lower death rate. 22 So are we underestimating the nature of

the problem, and do you have any data on the 1 2 incidents of cardiovascular events rather than 3 merely the cardiovascular fatality rate in fire 4 fighters? 5 MR. HALES: That's a very good question. 6 The -- for every death, there's probably 7 at least ten to 20 non-fatal events that we are not being notified of or not investigating, and that's a 8 9 given. 10 And I know there has been some talk about 11 investigating near-miss incidents, of which I think you could include non-fatal heart attacks on the job 12 13 to be in that group. 14 So, yes, that is a problem. 15 There is another component to your 16 question, I think. Could you maybe -- is there 17 something else besides the near-miss? MR. PREZANT: So the obvious is that we're 18 missing a ton of these events. 19 20 And, you know, you can say that it's ten to 20, and we could even say that it's 50, and who 21 22 would know what the right number is?

We know that at least 50 percent of the 1 2 ischemic cardiovascular deaths are related to elevation in cholesterol, assuming that it follows 3 4 the general population risk factors. 5 If 50 percent are not explainable by cholesterol, but a portion of those are explainable 6 7 by other risk factors; all right. So to me, it would seem like, number one, 8 you should be tracking events, not just deaths. All 9 10 right. And it may be difficult to track events, 11 all cardiovascular events within 24 hours or 72 12 13 hours or whatever the time span is after a fire, or after a tour of duty, but you certainly should be 14 15 tracking those events during a tour of duty. That's 16 not impossible. 17 It may be impossible to investigate them, but it's not impossible to track them; all right. 18 19 And you should require for those events at least some type of mail-in risk identification history, 20 very miniscule. 21 22 It could just be, you know, cholesterol,

weight, some measure of fitness and something of
 that sort, diabetes, you know, just a sort of
 ten-point checklist.

And then we would be able to get an even
greater picture on how bad this problem is.
MR. HALES: In commenting on that, I think
currently the way we're notified about fatalities
from the Fire Administration, they collect fatality
data.
I think the issue of addressing the

11 non-fatal cardiac events needs to be a different 12 mechanism, a different study of which you would have 13 to take cohorts of fire fighter departments and then 14 look at all of their events over time.

I think there would have to be a different study designed. And I think this is one of the -- a very lucrative or potentially very rich data to explore, which would require a different study design than our current model.
That's one thing.

21 The other thing you mentioned early on was
22 that the fire fighter deaths, at least due to

cardiovascular disease, have not been going down. 1 2 They went down in the '80s. 3 And you can make an argument that the only reason why they went down is actually better medical 4 5 treatment, had nothing to do with the fire service doing a better job of screening or treating or б 7 whatever. It's really medical treatment has improved. 8 9 And in that sense, I think if you measure 10 the success or the benchmark for our program as do those -- have those fire fighter deaths due to 11 cardiovascular disease gone down over the past eight 12 13 years, I think is a poor measure. 14 Because, as you know, the fitness and 15 wellness programs are going to reduce the risk 16 factors over decades. And you wouldn't see the 17 decline in the number of cardiovascular deaths to occur for decades. 18 19 So I think it's a little short-sighted to 20 expect the number of fatalities to go down that 21 quickly when we're just starting to address and pay 22 attention to the risk factors.

Those risk factors develop over decades. 1 2 We would expect the reduction to take decades to 3 occur. 4 MR. REED: Other questions. 5 MR. MORRISON: Pat Morrison with the International Association of fire fighters. 6 7 The stress test, just a question on that 8 because that was brought up in your presentation. Are there other screening methods that we need to 9 10 know about in the fire service? 11 I know that a cardiac stress test, I guess according to those using it, that it will pick up 12 13 when it's at 70 percent blockage or more. 14 Are there other screening tools that are 15 going to be used -- are we looking at other 16 screening tools to find the cardiovascular disease 17 earlier in the fire fighter rather than later? MR. HALES: That's a good question. 18 19 The quick answer that I have for you is 20 that we essentially follow the American Heart Association, the American College of Cardiology 21 22 recommendations.

There are a lot of new technologies out 1 2 there to detect -- that are non-evasive, that can be 3 done quickly, although not necessarily 4 inexpensively, to look at this. 5 The trouble is when applying them to an asymptomatic group, such as fire fighters. And б 7 currently, I don't believe the American Heart Association has, sort of, blessed those tests and 8 screening tests for the general population. 9 10 So we have essentially taken the recommendations for stress tests from the American 11 Heart Association, from the ACC. And as far as 1213 using other more advanced technologies, I guess --14 I'm not a cardiologist. We are sort of on the 15 cutting edge of doing that research. 16 So I think we need to relate -- wait until 17 those bodies that do those cost effectiveness studies of those technologies come forward and say, 18 19 Yes, this is a good screening tool for the general 20 population. Right now, I don't think we're there yet. 21 22 I know that individual departments have

embraced some of those more advanced tests. I 1 2 just -- I think that NIOSH to recommend them is 3 going to have to wait for the American Heart Association and the ACC. 4 MR. REED: Any other questions? 5 MR. WHITNEY: Mark Whitney with the U.S. 6 7 Fire Administration. You mentioned telemetry. And that, of 8 course, as we become more and more a wired world in 9 10 the fire service or safety officers on a fire grant 11 or a disaster grant will be getting biometrics live, different types, including location, heart rate, et 12 13 cetera, et cetera, you also mentioned standards. 14 Will your standards be looking at the 15 standards for telemetry for the data content, 16 perhaps, some of the top of the list so that we 17 don't have different fire departments showing up on different people's disaster grants, fire grants, not 18 19 being able to interface with whoever the safety officer is for that incident? 20 MR. PIZATELLA: My understanding is that 21 22 was a grant to really develop or at least refine the

1 technology for the system.

2 I believe that the standards part would
3 probably come later, but that certainly seems like a
4 reasonable approach.

5 But I think this is just at the research 6 stage in this particular program, the grant.

7 MR. DANIELS: David Daniels, International
8 Association of Fire Chiefs.

9 I have some curiosity about the future of 10 the program in terms of evaluating some of the 11 social and psychological factors that go along with 12 these fatalities.

13 There seems to be a lot of work, a lot of 14 time invested in the results, the heart attack the 15 person had, the injury the person sustained, the 16 results.

But are we spending any time looking at the type of environment we place folks into, the types of social pressures that exist in fire departments, some of the psychological and social things that are going on and how folks interact, you know?

Do we have a Counselor Troy, like they 1 2 have in Star Trek, waiting to help us out? 3 Just a question along those lines. 4 MR. HALES: You know, the medical literature does suggest that emotional factors do --5 can play a triggering role in coronary -- sudden 6 7 cardiac death and coronary events. You know, it's hard to define that --8 those terms. 9 10 And we collect data about the fire 11 department culture and some of the situations the individual has gone -- had -- that had -- that 12 13 individual is going through, were there any deaths 14 in the family and things like that, financial 15 stresses they may be under. 16 Those are not included in our reports, 17 although some of those variables are keyed into our database that we have. 18 19 We have not done a great job of looking at that or trying to define that. I think part of it 20 is it's a difficult area to study. And I think it 21 22 would require a different study design issue to look

1 at that rather than collect that data through a 2 fatality investigation. 3 I think, at least, that's my initial 4 thought on it. 5 MR. REHFELD: Mike Rehfeld, Baltimore 6 County Professional fire fighters. 7 This is probably for Tim, more than anyone 8 else. 9 Have we looked at the follow up issue on 10 whether any of these recommendations involving the 11 specific departments are being followed up on and 12 implemented, and is there any plans in the future to 13 do that? MR. PIZATELLA: Let me address that to one 14 15 of the investigators in the program. 16 Dawn, can you handle that one, or Bob? 17 MS. CASTILLO: Tim, can you hear me? MR. PIZATELLA: I can hear you fine. 18 19 MS. CASTILLO: Yeah. We don't have specific --20 21 MR. REED: I'm sorry, excuse me. 22 For the transcript, could ...

MS. CASTILLO: We don't currently have 1 2 specific plans to do that follow-up. 3 If that's something that you guys think is 4 important, we would be happy to hear it. 5 Part of the reason for that is our purpose б is not -- is not limited to making a change in the 7 fire department. That's not a big topic. Generally, that traumatic event in itself 8 is enough for that fire department. 9 10 Our purpose is to have a broader outreach, 11 to have other fire departments do it. And that's -- the background behind the 12 13 evaluation study is that we are doing a wide evaluation to see to what extent our fire 14 15 departments, in general, are acting upon our 16 recommendations. 17 But, again, if that's something that you think is important for us to do, I'm absolutely 18 19 willing to consider it. MR. HALES: Yeah. I would also like to 20 mention, the -- NIOSH's HHE program has a 21 22 follow-back effort in which they look at have the

recommendations been followed, so they send out a 1 2 survey. 3 Right when we issued the report, sort of almost like a customer satisfaction survey, but then 4 a year later, it gets distributed saying, Have you 5 implemented some of those things. 6 7 Modeling sort of a follow-back effort 8 after that program, we have just, last year, started to mail out a brief one-page questionnaire saying, 9 10 Have you implemented some of our recommendations. 11 So we have just started to get some of those back. Whether -- I don't know what those are going to 12 13 show. 14 We know that some departments have sent us 15 emails saying thank you for your recommendations. 16 We have implemented all of those based on this date. 17 But those are anecdotal reports that hasn't been collected in this systematic way, but 18 19 may be in the future we will have that data. MR. DUFFY: Rich Duffy, IAFF. 20 21 You know what? Why don't you explain -- I 22 think it's important to understand NIOSH's role,

both in E-Chiefs (phonetic) and E-Tab (phonetic), of 1 2 doing those type of evaluations, some of those which 3 were done as TAs for fire fighters, but generally globally for other work forces, and following that 4 5 process, because I don't think a lot of people in 6 the room understand that. 7 MR. HALES: Got you. 8 NIOSH has a program called the Health Hazard Evaluation Program or HHE Program. And it is 9 10 a provided as a free service for companies or unions 11 or workers themselves to request that we come to their work site to look at exposures that they're 12 13 concerned about or health problems that they're 14 having. 15 And NIOSH will respond to that request, 16 individually, either by making a site visit or 17 sending them a letter addressing their specific 18 concerns. 19 We do get a number of requests from the 20 fire service, either from fire departments or individual fire fighters, or for the unions. 21 22 And as my slide mentioned, to address the

issues of diesel exhaust is a common one. Cancer 1 2 clusters is another one. Asthma comes up. 3 And that program is where we initiated some of the efforts for the FDNY, post 9-11, as well 4 as the New Orleans Fire Department, post Katrina. 5 That program, about three years ago under 6 7 Dr. Tepper, who is here today, under her direction, 8 has asked that same question of, What's the impact of the HHE Program; have the individual companies 9 10 where we send our reports to, do they have -- have 11 they made those changes that we're suggesting that they make? 12 13 And that follow-back process involves, I 14 think, two or three letters in which they ask, 15 initially, when a report is sent, do you agree with 16 these changes and things like that, and then send, a 17 year later, about have you actually implemented 18 them. 19 And they have actually had three or four years' worth of data to collect and analyze. 20 The fire fighter Program has looked at 21 22 that and said, Boy, this makes a lot of sense.

Maybe we should be doing the same thing to gauge the 1 2 individual fire department impact of our reports. 3 Now, that doesn't gauge the broader fire service because our reports are disseminated widely, 4 5 and our recommendations can be adopted to many other б departments, not just the one department we 7 investigate. And so by doing that follow-back effort, 8 9 we are not going to be surveying the broader impact 10 of these reports, but it is a snapshot at what was 11 the impact of that report on that department. Does that help? 12 13 MR. DUFFY: Since you're trying to keep it 14 going another ten minutes, I can fill in. 15 I think it's very important, at some 16 point, to recognize the role of those two programs, 17 especially the role of those -- and I'm now talking about the E-Chiefs and the E-Tab and the whole 18 19 Health Hazard Evaluation Program, and certainly NIOSH's role. 20 Because I believe -- and I can document 21 22 it. So it's not just my belief -- that the birth of

occupational medicine and occupational health in the
 fire service began with NIOSH.
 And it truly began at the second health
 hazard evaluation that you ever did.

The first was in a small town in Ohio, but 5 the second one that was ever done was done at the 6 7 chemical control fire in Elizabeth, New Jersey, back in 1980, where there was 55,000, 55-gallon drums 8 burned. And the fire fighters were on that site for 9 10 many days with no personal protective clothing or 11 equipment and no evaluations of their health status, both immediately following that incident and then, 12 you know, a time period later. 13 14 And we asked that NIOSH did do that. We 15 had a NIOSH trailer in a firehouse in Elizabeth, New 16 Jersey within days. 17 And I think it was just not the PR communications value, but it was truly the first 18 19 time the fire service recognized -- not just 20 recognized, but did something about fire fighters 21 that needed (sic) health consequences from that 22 event.

And I think that played a big role of 1 2 where we are today. 3 And that continued. And I think if you look back and if you go 4 5 through the internet, or you go through the NIOSH б folks in Cincinnati, and look at the former health 7 hazard evaluations and the technical assistance NIOSH did before the fire fighters Investigation 8 Program, you can certainly see some success stories, 9 10 and success stories that are going to show up way beyond with the focus groups or with fire department 11 surveys we'll do today. 1213 Because there's not many of us around any 14 more that remember, you know, the early birth of 15 those systems. 16 So I think it's important to recognize 17 NIOSH's role, and the immediate effect and the long-term effect it had on general fire fighter's 18 19 health. 20 So I'm patting you on the back without asking a question. 21 22 MR. HALES: They're sitting in that third

1 row, that you can sort of thank.

2 MR. REED: I think we have time for one 3 more question.

4 UNKNOWN COMMENTER: Sort of a statement 5 followed by a question.

I think that if you are viewing this
conference as an evaluation of where we are at eight
years, then you really have to be willing to ask the
tough question; all right.

10 And that is not just what new things can 11 you come up with, but how can you make the fire 12 service be compliant with the old things; all right. 13 And it's really sexy to be able to find 14 something new. It's really difficult to get people 15 to become compliant with difficult things that have 16 been time proven.

17 Because if they're time proven, and 18 they're obvious, and people are not compliant with 19 them, there must be a reason, and that reason must 20 be difficult to overcome.

21 What we do as scientists and physicians 22 and healthcare policy people, is we often forget

that and move on to find something new that's sexy.
So, for example; all right, there's some
really great things that have come out of this
program that, you know, with the exception of a
little bit of money, they can be implemented really
fast.

7 So the things that you found with the 8 aluminum and the oxygen cylinder bottles, I mean, you would have to be an idiot not to make that 9 10 change; all right. And that change will happen. 11 And it doesn't really require people buying into it. It just needs people to buy new stuff; all right. 12 13 No fire fighter would say, I don't want to wear that bottle. I mean, I want to wear the old 14 15 ones that blow up on me, you know. That would be 16 crazy; all right. 17 But then we have a lot of other data; all

17. Fight, about cardiovascular risk. And we know that 18 right, about cardiovascular risk. And we know that 19 that requires a reduction in cholesterol and 20 improvement in exercise performance and reductions 21 in lots of things; all right, health factors. 22 We know that respiratory problems require

really wearing respirators. They're not 1 2 comfortable, and you can't communicate, and all of 3 those things. 4 Unless we remove the barriers for that, we're not going to achieve really big results. 5 6 And that doesn't require a new education 7 program or a new training program; all right. Because I don't think there's a single fire fighter 8 out there who feels that he should be overweight and 9 10 should have high cholesterol. So hearing it from us again isn't going to 11 make the change; all right. 1213 What it requires is us to take a look at 14 the systems we have in place now and figure out how 15 we can make it mandatory and how we can improve 16 compliance; all right. 17 And that requires the stakeholders in an individual fire department or nationally to come 18 19 together and say, How can we make these changes as 20 non-punitive as possible? And how can we accept the 21 remaining punitive aspect because there's no program 22 that isn't completely non-punitive.

Unless we're able to grasp that problem, 1 2 and unless you guys are willing to push that problem 3 forward with the help of the unions, we're not going 4 to make the next big change. And that's what it's 5 going to require. 6 It's going to require fire fighters, fire 7 departments to buy into mandatory exercise programs. It's going to require fire fighters to buy into the 8 fact that they have to participate in it. 9 10 It's going to require both the departments, the unions, and the fire fighters to 11 realize that if their weight and their cholesterol 1213 and their tobacco smoking persists, then there's 14 going to be a change in their job assignment. 15 Now, there needs to be a lot of time where 16 we phase these things in so they're as non-punitive 17 as possible. But we shouldn't be constantly saying that 18 19 we're just going to tell people about their 20 cholesterol for the next twenty years and think that they're going to make a change; all right. 21 22 Thank you.

MR. HALES: I mean, that could take up a
 whole discussion in the afternoon, but just a couple
 of thoughts on that.

Mandatory participation, non-punitive
results. So you gave got to participate. There is
consequences if you don't participate in those
fitness/wellness programs. At least, that's my
perspective on what's involved.

9 I think the issue is NIOSH doesn't want to 10 reinvent the wheel. I mean, the fire service has 11 got great safety and health programs. NFPA is out 12 there. The IAFF is out there. The IAFC, all 13 addressing safety and health issues.

We just want to tap into some of the good work that you are already doing and how could we reinvigorate, readdress, use some of our research to help you readdress the question, how to reinvigorate the safety and health programs.

And the question you ask is, you know,
NFPA 1582 is out there for medical standards for
fire fighters, and yet our data shows that they
aren't following it.

So one question is why aren't they 1 2 following it? What are the barriers? And one of them, believe it or not, is 3 that they just aren't -- a lot of the docs are not 4 5 aware of 1582, particularly if you talked about non-occupational, non-fire department physicians, 6 7 departments that don't have physicians. They use family practice docs that are in 8 the community. They have no idea of the stress 9 10 factors that fire fighters go under. They have no idea that there's a standard out there that has 11 guidance for medical clearance. 12 13 So one of the issues is educating 14 non-occupational physicians about these consensus 15 standards that are out there. That's one big 16 component. 17 The other major barrier that, when I go around and do investigations, is departments say, We 18 19 don't have the money to implement these programs. We try and say that, Well, there are studies that 20 show that it's cost effective in the long run. 21 22 But a lot of times they aren't willing to

take -- they -- well, they will say, Well, what 1 2 literature do you have? And then we'll present 3 literature from the manufacturing sector that says 4 that, yes, fitness/wellness program -- well, that's 5 not fire fighters. That's not the fire service. 6 You need to show me the cost effectiveness 7 in the fire service. Then I might implement a fitness -- good fitness/wellness and medical 8 screening program. 9 10 And so I think, clearly, financial issues is a barrier. Clearly education is -- or training 11 of physicians that are doing this clearance is an 12 13 important issue. 14 But I think we can study that issue in a 15 better way. And that's one of our proposals is to, 16 What are the barriers to implementing some of those 17 medical standards? MR. REED: Thanks. I would like to 18 19 continue this dialogue when we have ample opportunity this afternoon. That's a great thought. 20 21 And what I would like to do now is break 22 and regroup at 10:30, so we can keep on schedule.

Thank you all for the meetings and the --1 2 excuse me, the presentations this morning. 10:30. 3 (A recess was taken.) 4 MR. REED: I have a couple of logistics things to address while people go back to their 5 6 seats. 7 I have been informed that we will have a list of attendees after lunch. And that list of 8 attendees, for those of you who are interested in 9 10 getting a copy of that today, it will be at the desk 11 outside the registration desk. Also not in your packet is a -- also a 12 13 piece of information at the registration desk that 14 shows how you can submit comments to the docket. 15 We have a docket specifically for this topic, for this meeting. And the docket, I 16 17 understand, is open for one month from today. And we would like very much to have comments, reports, 18 19 anything that's not part of this meeting to be submitted to that docket. 20 And information about how to submit to 21 22 that docket is on this piece of paper that you can

1 get outside at the registration desk.

2 So we're at a part of our program where 3 we're going to be asking the invited stakeholders to present and give their perspective on the program. 4 5 But before we do that, I just had one last slide here that I wanted to mention to you all. And 6 7 that is, obviously from here, now through the end of the day, we're going to be hearing very important 8 information from you, the stakeholders, both the 9 10 invited and as well as those who indicated to us 11 that you wanted to speak. There will be ample time afterwards for 12 13 those who want to present to do that. And we would 14 ask that you do that after those who have been 15 identified to speak have done so. 16 And then at the end, there will be a 17 chance for some dialogue for interaction. And Tim and Tom have agreed to come up to 18 19 the table, here, for that. And that would be at the very end for this dialogue part. And they may 20 choose to engage their staff in questions or that 21 22 part of the dialogue period, you know, at their

discretion. 1 2 So with that, just a couple of other 3 points, too. There is the docket information that I 4 5 mentioned, that in more detail is listed on this handout at the registration desk. б 7 For those of you who wanted to make 8 comments later, you have one month to do so. 9 And then most importantly, I wanted to 10 mention to you the product that will come from this 11 important meeting. And that is -- you have to be fully 12 13 conceptualized. But at this point in time, we at 14 NIOSH feel so strongly about this meeting as 15 something to shape the future direction of where 16 we're going and an assessment of what we have done 17 to date, that we have agreed to develop a report that we will, when finalized, be placed -- that will 18 19 be placed on the website. Most likely, it will look something like 20 the draft document that's already on the website, 21 22 that you have in your folder, modified to include an

executive summary of conclusions and the directions 1 2 that we have heard today at this meeting. 3 So we don't even know the shape of that yet, but we have committed to make this publicly 4 available, at least, through the website. 5 So with that, the first of our invited 6 7 stakeholders is Charlie Dickinson, who is the Deputy Administrator for the U.S. Fire Administration. 8 9 And I understand, Charlie, you don't have a PowerPoint presentation. 10 MR. DICKINSON: That's correct. 11 MR. REED: Okay. And so with that, 12 13 please --14 MR. DICKINSON: Thank you. 15 I have a couple of comments. 16 For those I don't know, I'm glad I'm here 17 with you. For those I do know -- and some of you in this room we have crossed paths with many, many 18 19 different events in our careers. 20 I could talk to you about what I think the 21 rest of the day, what our experience has been, what 22 my collective experience is in my fire service, the

one I have been honored to serve in for a long, long 1 2 time. 3 And I think I'm living proof of careful what you don't wish for because if you hang around 4 5 in the federal government long enough without a tool in your hand, they'll give you something to do. 6 7 People ask how am I doing. I'm with the U.S. Fire Administration. I kind of laugh -- and I 8 think Kevin has heard this. 9 10 I'm living the dream because I never 11 dreamed I would be doing this. It wasn't on my horizon to interact at this level for the nation's 12 13 fire service, but I found it every bit as 14 challenging and rewarding and puzzling and 15 frustrating as -- it's almost like being back in the 16 fire department. Just the money is bigger. 17 They don't talk about thousands of dollars. They talk about millions of dollars. 18 And 19 I throw that term around now like it's nothing, and it's everything. 20 It's -- that's what moves the federal 21 22 government. It's one of the things I have learned.

The other thing I have learned in the 1 2 federal government in my four, five years now, it's 3 all about process. 4 I would have never guessed that. The 5 process is there and alive and well. It's simply because the organizations are 6 7 so large. It's huge. To move anything, to make 8 anything happen takes an enormous amount of effort. 9 But then we meet people along the way. 10 I was fascinated with Dr. Tom Hales' 11 picture in his presentation of the exercise facility, fitness center that had stairs but then 12 13 had two escalators running up the sides. And I 14 wondered if he put that picture on there just to see 15 if we were paying attention, and we were. 16 I think that's an oxymoron if I ever saw 17 one. I can only share with you -- I want to 18 19 share a couple of things with you that Mark Whitney 20 who runs our program that interacts with NIOSH and, you know, a whole group of people over there in the 21 22 fire data center, who I asked if he -- to make sure

that I made some intelligent comments up here. 1 2 And one of the things we're very proud of 3 at USFA is just on our web page alone, a quarter of a million visitors a year tap into or get online 4 with the fire fighter Fatality Program. 5 Somebody is looking out there. Somebody 6 7 is paying attention. The question is -- we heard it here this 8 morning -- what are they doing with it? See, that's 9 10 the question. What are they doing with it? And, of course, our U.S. fire fighter 11 fatalities, the United States report includes an 12 13 appendix with a brief summary of each incident. And 14 where available, we include the link to more 15 detailed information on our web page. 16 There was a huge shift in the fire 17 service's ability to get online. And I would like to tell you it's because we made that happen, but of 18 19 course, we didn't. It occurred between the years of 2002 and 2001. 20 If you recall, when the Assistance to fire 21 22 fighters Grant Program was implemented, several of

1 us at the USFA were the implementers of that 2 program. 3 It was the first time in the history of 4 the fire service that we finally got something from 5 the federal level that went directly to the fire 6 departments. 7 And oh, by the way, the states still hate that. These awards go directly to the fire 8 department. 9 10 The point I'm about to make, though, is 11 that there was a guess how many applications there would be. And that then, the U.S. Fire 12 13 Administration, being in FEMA, the good guess was 14 somewhere around 7,000. Of course, we now know it's 15 30,000 separate applications. Somewhere around 16 14,000 departments applying because you can apply 17 for two categories. Fast forward to the year 2001, when it 18 19 became an electronic application. And that electronic application, the volume was just the 20 same, but America's fire service got online. 21 22 It was amazing how many departments

contacted us and said they had no ability to get 1 2 online. They had no computer system in their fire 3 stations. 4 Now, remember, the majority of the fire 5 services is one station spread throughout the country, with very small resources. It's the few 6 7 fire departments that have the full robust types of electronic communications that we all enjoy today in 8 the larger organizations. 9 10 So we thought that was profound. 11 There's a Captain Willy Moore of San Antonio, Texas, who used almost 20 NIOSH fire 12 13 fighter fatality reports on fire fighters who were 14 caught or trapped and to study fire fighter 15 disorientation, which you know is a huge issue. 16 And that -- of course, his report, the 17 U.S. fire fighter Disorientation study has been linked from the U.S. fire fighter Fatality section 18 19 of the USFA website. 20 And I could read you more, but I want to talk to you personally. 21 22 Because, see, '95 still haunts us in

Pittsburgh. That's where I was. 1 2 It's called Bricelyn Street. Rich was there. Rich remembers. 3 There's no fire department, whether it's 4 5 Baltimore County, New York City, that ever wants to б have a NIOSH fire fighter Fatality study done. 7 Now, in '95, I believe in those years -correct me if I'm wrong, Mark -- the U.S. Fire 8 Administration contracted with Tri-Data to do those 9 10 types of studies. I believe that when a study was done, that 11 12 was prior to NIOSH. 13 There was a concern when NIOSH was 14 designated by Congress to do this study, to do this 15 type of reporting, that they would have the 16 expertise to do that. Because, you see, in the fire 17 service, there's us, and then there's the rest of 18 you. 19 I'm being very candid with you now, folks. Because we're not sure anybody outside of 20 what we do really understands what we do. And  ${\tt I'm}$ 21 22 not sure we understand sometimes because there's

1 some real disconnects in what work we do.

But, boy, have you demonstrated twopowerful things for NIOSH.

As a government agency, you could do it right. And the value -- and I don't know if anybody has ever told you about this -- but the value that the NIOSH investigations are, is you're neutral. You're not prejudiced when you come. You don't have a vested interest at a local level, and everything that you work on happens at the local level,

11 everything.

The disconnects that occur as you move up 12 13 in the, let's just call it the architect of what state or -- local, county, parish, state, and 14 15 federal are far different than what occurs at the local fire station, completely different. 16 17 Because, yes, we have ranks. We have organizational structure. Of course we do. 18 19 But this business is so compoundingly different than what the structure of normal life is 20 really all about, is where the disconnects really 21 22 become.

And I will give you an example. 1 2 We are talking about PASS devices that was 3 one of the contributing factors in the Bricelyn Street incident in Pittsburgh. 4 5 And as the fire chief, I knew -- there was no question in my mind that the PASS devices were б 7 not being used as we thought they should be used by the rank and file, by the officers and -- the 8 lieutenants and the captains and the fire fighters 9 10 who were wearing that. And we said, collectively, they were 11 12 falsing. 13 No, they weren't falsing. They were 14 working exactly as they were designed. 15 What happened was is that somewhere along 16 the line, the disconnect was that fire fighters 17 sometimes are momentarily still, and they become bothersome. 18 19 And because of a whole lot of other issues that I don't have time to explain to you, as the 20 fire chief, I knew that they were not turning those 21 22 PASS devices on.

That wasn't the battalion chief or the 1 2 assistant chiefs' or the captains' or lieutenants' 3 responsibility. It was the fire chief's responsibility to 4 5 either enforce it or change it. 6 And I didn't. 7 And I can't tell you if Tom and Patty and Mark would be here today, but I can tell you with no 8 9 uncertainty, they wouldn't have laid there for 17 10 minutes. And that's the challenge that you have 11 12here as a group. 13 There's no mystery about what some of 14 these issues are. We have enough information today 15 that we can make a profound difference. It's the question that's been asked 16 17 already. Who's listening? The gentleman from New York City, that I 18 19 never met before, he got it right. What changes are we going to insist that we make ourselves? 20 21 Is there any mystery about what the most 22 dangerous piece of apparatus that has wheels in the

1 fire service? If you don't know, it's call a 2 tender. 3 We watch that each and every year, but yet you have to go a local department and you have to 4 5 ask them, Did you give any specialized training for б this particularly dangerous piece of equipment. 7 And, by the way, can the driver, whoever that might be, can they tell you what the GVW is and the 8 stopping distance? 9 10 Because today, I -- and this is the 11 greatest way I can explain it. Again, a lot of older cities have fire 12 13 stations that are built, if you have a hilly city, built on top of the hill. That's because the horses 14 15 could run faster downhill. 16 And today, in those very same stock fire 17 stations that have been modernized. They have 400 horses in them, under each hood. A profound 18 19 difference. And it takes skill today to navigate those 20 pieces of equipment, 30 to 50 tons in some cases, 21 22 requesting the right-of-way. Not demanding the

right-of-way because we don't own the right-of-way. 1 2 It's about knowing where you are, what you're responsible for, and well trained, and 3 4 applying everything. 5 And if you want to watch one of the most 6 disheartening things is to watch people leave the 7 stations unbuckled. And are there issues about buckles versus 8 buckles versus SCBA? You bet there are. 9 10 Because, see, the challenge is, for all of 11 this, do you want to be -- do you want your department to be, or do you want to be part of the 12 13 system that the outcome was, because we didn't apply 14 some of the things, some of the basic things that we 15 know, that you're waiting for the family or the 16 loved ones in the emergency room, and you already 17 know what the outcome is? Because you wouldn't want to be there as a 18 19 family member walking into that emergency room knowing that that department failed to enact a 20 21 simple safety policy. 22 Because no fire fighter dies in the line

of duty, is killed in the line of duty in this 1 2 business because something went right. 3 Nobody that I have ever heard of has ever 4 given a direct command in this business that meant 5 certain death. Nobody. 6 So we have this challenge of what we know. 7 And if you work where we work, where Mark 8 and I work, you see those flags up and down. And more through the year, they're down more than they 9 10 are up. And that meant that there has been at 11 least one department, if not multiple departments, 12 13 that have had a catastrophic failure. 14 It may be a local incident that's not even 15 newsworthy throughout the state. But for that 16 department and those who are associated with it, and 17 those who are trying to help it, make it understand that safety isn't some farfetched issue that should 18 19 be applied occasionally. It's at the very moment that people come 20 on duty. It should be paid attention to because 21 22 safety and application of safety programs, and

application of all the things that we know that the
 Fallen fire fighters Foundation, with Ron Siarnicki,
 for the 16 Life Safety Initiatives, that are defined
 so well.

5 There are no mysteries out there. We may discover some along the way as we 6 7 evolve more and more on the technical side, as we do more investigations. But I think early is it's --8 or at least, what I felt we -- that this body had 9 10 already said to itself, We probably have enough 11 information now. The question is is who's listening? 12 13 Because that's the challenge. 14 I don't know about you, but we make 15 decisions even on what we're going to read every day 16 because there's so much that comes at us today. 17 From publications to reports, to emails, the cursed emails. All of those things, the 18 19 taskings that we get, the letter that arrive all are distractions. And it's no different at the local 20 21 fire department level than it is here. 22 It's about those challenges.

See, there's this old question that's so 1 2 true. And the question is, when the engine company 3 arrives at the front address and that person is on the third floor, is that the time to look backwards 4 and see if we have got everything right? 5 And it may sound melodramatic, but 6 7 somebody is going to do that today. And what would 8 you want if it was your mother on the third floor? 9 Because chances are, it will be someone's. 10 And that's true about those crews that 11 respond, career volunteer. They're somebody's mother, somebody's father, somebody's son or 12 13 daughter. And those that are responsible for those 14 need to ensure that we're trying, in every way that 15 we can, to apply what we already know about safety. 16 And I think maybe I have drifted off 17 course a little bit, but I think the thing that I'm most pleased about is the collaboration and 18 19 cooperation between NIOSH -- and, of course, NIST is a big part of what we do, too -- and the fire 20 service itself, and our allied professionals, and 21 22 the Fallen fire fighters, and the IAFF.

Because collectively, if we don't continue 1 2 to stress and work on this, we're going to continue 3 to attend those services that we know in some cases don't have to occur. 4 5 I don't think I'm naive in this business that we're ever going to see zero fire fatalities, б 7 but I will share with you there's a huge difference between dying in the line of duty and being killed 8 in the line of duty. There's a huge difference. 9 10 In this business, the ultimate choice 11 should be because you're trying to get your hands on somebody. That's the only reason. 12 13 Then it's a roll of the dice. 14 It should never be because you don't know 15 the apparatus, the policy, the training, the 16 equipment. It should never be for those reasons. 17 It should never be because you didn't follow a policy or a safety practice. 18 19 It should always be because we're trying 20 to make a difference in someone else's life, not an 21 empty building, not a vacated building. Those are 22 risk versus rewards.

And I know in the spirit of what your 1 2 challenge is today, you're trying to get us there, and for that, we appreciate it. 3 4 Thank you very much. 5 MR. REED: Thank you, Charlie, for those eloquent comments. б 7 The next speaker on the list is Maggie Wilson, who is the Director of Health and Safety for 8 the National Volunteer Fire Council. 9 10 Maggie, you have a PowerPoint; correct? MS. WILSON: Yes. 11 12 MR. REED: Okay. 13 MS. WILSON: Thanks. I want to first thank NIOSH for inviting us to speak here today. 14 15 I'm going to talk to you a little bit 16 about why we think the NIOSH program is useful, and 17 a little bit about the NVFC Heart Healthy fire fighter Program. 18 19 There are several reasons we think this 20 program is useful. 21 To start with, it assists with finding 22 trends in fire fighter fatalities, which helps with

1 the NVFC in our direction.

2 Based to any trends or areas of concern, 3 they then make recommendations to fire departments, and these procedures help fire departments keep 4 their fire fighters safe and healthy. 5 One issue that has been identified through 6 7 this program is that a large number of fire fighter deaths are cardiac related, as we have talked about 8 most of the morning. 9 10 48 percent of all the investigations done 11 through the program reveal cardiac related problems. And many of the recommendations included in the 12 13 reports stress the need for stricter health and 14 safety programs in the fire department. 15 Some of the specific reports that I looked 16 at while doing this presentation recommend, among 17 other things, that departments phase in a mandatory wellness/fitness program. And we saw through Tom 18 19 and Tim's reports how many fire departments have 20 those now. They also recommend that annual physicals 21 22 be performed on all fire fighters.

They talked a lot about NIOSH or NFPA, and 1 2 the work that they have done with NFPA in 3 influencing their standards. And the Department of Homeland Security, and working to identify 4 priorities for the Assistance to fire fighters Grant 5 6 Program. 7 Data in the NIOSH reports and also in working with NFPA and USFA led in part to the NVFC 8 creating our Heart Healthy fire fighter Program. 9 10 In 2002, we launched the program for all 11 fire fighters, both career and volunteer. We launched a standalone website for the program at 12 13 www.healthy-firefighter.org. 14 We created the Heart Healthy fire fighter 15 Work Group, which I'll talk about a little later. 16 We also created the Heart Healthy fire fighter 17 Resource Guide, which to date has been distributed to about 10,000 fire fighters nationwide. 18 19 We began performing free health screenings 20 at some of the fire service trade shows, FDIC, Fire Rescue International. To date, we have performed 21 22 about 10,000 screenings for cholesterol, blood

1 pressure, and body composition.

2 And thousands more individuals have 3 stopped by the booth and picked up the resource 4 guide or other valuable information on their health. 5 These are some of the results that we have gotten from the program. These are the cholesterol 6 7 screenings from 2004 and 2005 on three of the shows that we have been to. 8 9 Most of the cholesterol scores that we 10 have seen, the average is below 200, which is considered desirable. 11 12 However, you can't take just the total cholesterol into account. You have to look at both 13 LDL, HDL result. If their HDL is below 40, you need 14 15 to bring that up. 16 The blood pressure screenings, these are 17 at four of the shows that we have done. I'm not sure if you can read the bottom, but it's normal on 18 19 the left-hand, prehypertension, Stage 1, and Stage 2 20 hypertension. 21 These are some of the more shocking 22 results that we have seen in the program.

And also body composition screenings. 1 2 They say it's considered 25 percent or above body 3 fat percentage is considered obese. 4 You can see just one of these results is 5 below that 25 percent. We have also launched, each year, the 6 7 Fired Up for Fitness Challenge, which encourages fire fighters to become more physically active. 8 9 They can go to our website, log their 10 daily physical activity. And at certain points they 11 get sent T-shirts with the program sponsors and our workgroup members' names on them, and then 12 13 certificates of completion. We have about 2,500 participants signed up 14 15 for the challenge at this point, and that number is 16 growing every day. 17 We have also started an annual Fired Up for Fitness Award, which highlights one member of 18 19 the challenge that's made a significant impact. 20 Last year, it was Mike Bittney (phonetic) from Spooner, Wisconsin, who was part of the program, 21 22 lost 40 pounds, lowered his cholesterol and blood

1 pressure.

2 We're just starting Phase 3 of the 3 program, which would be the third and most 4 comprehensive year. We're planning on adjusting all 5 avenues of heart healthy lifestyle, fitness, 6 nutrition, heart health. 7 We have created a mini health fair that 8 we're going to be taking around to the trade shows this year. It's going to include health screenings. 9 10 This year, we will be doing cholesterol, glucose, 11 and blood pressure screenings. Additionally, we'll be doing cooking 12 13 demonstrations to help fire fighters learn how to cook heart healthy, both at the fire department and 14 15 at home, and also fitness demonstrations. 16 This year, the spokesperson for the 17 program is Erron Kinney. He's a pro football player for the Tennessee Titans and also a volunteer fire 18 19 fighter in two departments in Tennessee. 20 Erron is going to travel the country with us to some of the trade shows and other events, and 21 22 speak about the program, and he will also play a

1 role in the NVFC website.

2 Additionally, we have just finished talks 3 with Novartis Pharmaceuticals, who run the BP Success Zone Program. And we will be working with 4 5 Joe Montana this year to go around to six different б fire departments and talk about blood pressure and 7 lowering the blood pressure. We'll be going off and meeting with him to finalize all those details next 8 9 week.

10 NIOSH joined the Heart Healthy fire 11 fighter Work Group about a year ago. The current members of the work group are listed here. 12 13 The Heart Association, Dietetics 14 Association, National Heart, Lung and Blood 15 Institute, NIOSH, USFA, NFPA, who is also a sponsor 16 of the program, and the Medical Reserve Corps, which 17 is through the office of the Surgeon General. They have assisted us in many ways. 18 19 Tom Hales and Scott Jackson have been 20 great supporters of the program and given us a lot of great information to use. 21 22 We post all of the fire fighter Fatality

Reports on the Heart Healthy fire fighter website, 1 2 and encourage fire fighters to follow the 3 recommendations in those reports. 4 The recommendations that we have now for 5 NIOSH, we believe that the Heart Healthy fire fighter Program is an important tool in reducing б 7 fire fighter deaths due to cardiac related illnesses. And we recommend that local fire 8 departments use it as part of their program. 9 10 We also believe that NIOSH would reference 11 this program in their recommendations as a tool for fire departments and fire fighters. 12 13 And we would also be pleased to offer more 14 information on the Heart Healthy fire fighter Program and collaborate with NIOSH and local fire 15 16 departments in expanding its implementation. 17 And that's all I have. MR. REED: Thanks, Maggie. 18 19 I just want to say, too, that also that, at the end of the day, if we have enough time, I 20 21 think if we have questions of the speakers 22 themselves, we should be able to entertain those

questions in addition to having the dialogue. 1 2 So our next speaker is Gary Tokle, who is 3 the Assistant Vice President for the Public Fire Protection Division of NFPA. 4 5 Mr. Tokle. 6 MR. TOKLE: Good morning. 7 It's a pleasure to be here, and we appreciate the opportunity to take part in this 8 important meeting. 9 10 What I'm going to do this morning, 11 briefly, is look at two areas. One, is the areas -the first area is what is NFPA's stake in the NIOSH 12 13 investigation program. And then we're going to try 14 to address several areas that we picked out of the 15 report that was submitted in our packages where 16 NIOSH was asking for stakeholder input. 17 NFPA's stake in this program really falls in these three areas. And in the next three slides 18 19 that I look at or bring up, we will address each of 20 those areas. Technical committees -- hold on just a 21 22 second.

What do the investigations give us? 1 2 The reports provide thorough 3 recommendations, often include details that are not otherwise available, from situations such as local 4 5 fire department reports, which prove very valuable in having that consistent format for all of the 6 7 reports. What do investigations give? Us, 8 technical committees are constantly reviewing their 9 10 codes or standards to determine if existing 11 requirements are working, or whether new requirements should be added. Such decisions are 1213 made using the best available information, which is 14 sometimes less than complete. 15 The fire fighter Fatality Investigation 16 Program has provided both detailed information for 17 technical committees to use. And technical staff from NIOSH who participate on those committees 18 assist the members in understanding what the 19 20 problems are and coming up with solutions to develop 21 the standard language needed to address the 22 problems.

Some of these standards were identified 1 2 earlier by the NIOSH staff. NFPA 1500, NFPA 1581, 1582, 1584, 1710, 3 1720, Fire Apparatus Standard 1901 and 1982. 4 5 Frequently, NFPA gets asked questions from the media or other government officials relating to б 7 fire fighter deaths and injuries. Much of this information we answer by 8 using a combination of information, both the 9 10 statistics that NFPA develops, looking particularly 11 at trends in various areas, as well as the specific examples that we can draw from the NIOSH reports. 12 13 And this proves very helpful in assisting 14 the local governments, as well as the media's 15 requests. 16 The next series of slides is going to 17 address the areas that have been identified within the NIOSH report, where they ask for input from 18 19 stakeholders in several areas. 20 We extracted 13 specific questions in 21 seven areas. And in this case, we will document and 22 address those.

The First area is should the fatality 1 2 investigation continue to be the focus of the 3 program? Fatality investigation should continue to 4 be the focus of the NIOSH program. 5 Ideally, ways should be found to maintain 6 7 or increase the level of investigations while supporting more outreach and research. 8 9 Any decrease in the number of fatality 10 investigations should only occur because there's a focus or a shift in focus to investigate more 11 on-duty fire fighter injuries. 12 13 The NIOSH investigation program documents 14 in a standard format the reasons for the fatality 15 recommendations that will help other fire 16 departments prevent similar occurrences. 17 Reports can be used by fire departments to evaluate the adequacy of their own health and safety 18 19 programs, and prioritizing and focusing training efforts. 20 21 Research shouldn't be done at the expense 22 of data collection. However, there needs to be a

balance between investigations and research. 1 2 NIOSH should be funded to follow up and 3 perform research when the fire fighter Fatality 4 Investigations reveal problems that might be solved 5 with product changes. For example, fire fighter protective 6 7 clothing, or fire fighting tools and equipment, or cultural or procedure changes that should be 8 reflected in training and educational materials for 9 10 the fire service. And several of those were discussed here 11 earlier this morning. 1213 And one of the best examples that I was 14 going to use -- and it was already used -- and that 15 has to do with the issues surrounding the PASS 16 alarms and the audibility. 17 The NFPA technical committees specifically began addressing that issue when it was brought to 18 19 their attention by NIOSH through their 20 investigations and some research they did that determined that PASS alarms were not being audible 21 22 at temperatures above 300 degrees.

And the committee is working on that. 1 2 Hopefully they will be able to come up with a 3 solution that will improve that, but, again, this was directly because of the efforts through the 4 5 NIOSH program. 6 Research projects are typically going to 7 require further investigations and data collection in order to have the relevant data to focus the 8 research and monitor its effectiveness. 9 10 Ideally, NIOSH will be provided with the 11 necessary resources to allow them to investigate all on-duty fire fighter fatalities. 1213 Again, some of the overview this morning 14 that talked about the means of dissemination of the 15 information NIOSH collects. 16 We feel that NIOSH alerts are a very 17 effective tool and a way to make overall fatality statistics available from NFPA, and combine them 18 19 with the findings of the fatality investigations relative -- relevant to a specific topic that 20 focuses on the causes of fatalities and their 21 22 prevention.

1 An important specific topic that should be 2 addressed is the role of incident management. And 3 again, this was mentioned earlier.

4 It has been noted that these systems can 5 play a significant role in preventing fatalities or 6 reducing the risks of fatalities based on the NIOSH 7 investigations that document the effect and the lack 8 of such systems.

9 NIOSH has done an excellent job of searching out ways to disseminate the investigative 10 11 reports, making the incident reports available to fire service magazines for publication, is getting 12 13 the information to individual fire fighters. 14 Simply sending hard copy reports or 15 emailing electronic versions to fire departments 16 generally will not get the information into the 17 hands of the individual fire fighters. The email notification available on the 18 19 NIOSH website is another excellent means to reach

20 interested individual fire fighters.

We would like to suggest that NIOSHconsider establishing a web based conference board

where fire fighters could post comments, discuss
 changes they made to their SOPs based on the lessons
 learned, or other information.

This would give NIOSH feedback on their investigative program, and would also encourage fire departments to incorporate to findings into their training and procedures.

8 NIOSH staff participation in the NFPA
9 codes and standards process is extremely valuable.
10 Instilling the findings from the
11 investigations into suggested changes to codes and
12 standards is possibly the most direct way that NIOSH
13 can effect a reduction in fire fighter deaths and
14 injuries.

Beyond that, NIOSH, to look at studying the barriers that prevent their recommendations from being adopted by fire departments, and, again, that issue has been addressed by several people this morning, already.

20 For example, implementing a health 21 screening program should have an event on CVD 22 deaths.

The fire departments do not always follow 1 2 NFPA 1582. What are the barriers that prevent 3 implementation of a given standard that is designed 4 5 to prevent or lessen fire fighter injuries or б deaths? 7 Once we have a better understanding as to whether the barriers are financial, lack of 8 awareness, or some other reason, they can be 9 10 addressed. Epidemiological studies of deaths and 11 injuries based on NIOSH investigations and any other 1213 data available, would have great value. And NIOSH 14 would seem to be the ideal agency to conduct these 15 studies. 16 These studies could address questions 17 concerning cancer rates among fire fighters as compared to the other occupations. 18 19 Illness rates from long-term exposures, such as to diesel exhaust. Again, that was 20 21 mentioned this morning. Some data from Workman's 22 Compensation programs might be used to study

patterns in fire fighter injury and illness as well 1 2 as other data sources mentioned. 3 NIOSH had looked more at injuries. NFPA estimates approximately 75,000 fire fighter injuries 4 5 occurred in 2004, almost half of these on the fire 6 ground. 7 Approximately 3,000 were due to burns, 2,000 to smoke or gas inhalation. 600 were a 8 combination of burns and smoke inhalation. 9 10 In addition, close to 1,000 fire fighters 11 are stricken by non-fatal heart attacks and strokes, annually while on duty. 12 13 Clearly, there are vast numbers of 14 injuries each year that might be prevented if the 15 fire service knew more about how they occur and 16 steps they should take to prevent them. And we 17 recommend the focus should be on the most severe injuries. 18 19 It's unrealistic to expect that the NIOSH Fatality Investigation Program, in only seven years, 20 could be shown to have single-handedly reduced the 21 22 U.S. fire fighter fatality problem.

Each year, of an estimated 1.1 million 1 2 career and volunteer fire fighters in this country, 3 approximately 90 are killed on duty. Of those 90 fire fighters, approximately 4 70 die of fatal injuries while dealing with 5 emergency incidents. 6 7 The trauma investigations have great value in clearly showing how fatal injuries occurred and 8 make excellent training tools for fire departments. 9 10 But directly translating the investigation 11 findings into changes in culture and behavior may be somewhat beyond the role of NIOSH. 12 13 Fire service leadership and the members of 14 the fire service must assume that role and focus on 15 the results of the investigations. 16 As stated earlier, the NIOSH participation 17 in NFPA codes and standards making process is a way that NIOSH staff can impact the way the fire service 18 19 benefits from the investigations. NIOSH staff are often the most familiar 20 with the circumstances of fatality, and can suggest 21 22 specific changes to the safety and health standards

that are used to regulate processes and procedures 1 2 that could prevent future reoccurrences. 3 Fatalities due to sudden cardiac death, which make up almost half of the emergency duty 4 5 related deaths of career and volunteer fire fighters, are largely due to risk factors that take б 7 decades to develop, and substantial time to address. 8 And, again, these were listed weight, cholesterol, hypertension. 9 Kind of in conclusion, NIOSH's fire 10 11 fighter Fatality Investigation Program has had a positive effect on the move toward a safety culture 12 13 in the fire service. 14 More than ever before, people at all 15 levels throughout the fire service are focused on 16 creating a safety culture and focusing on behaviors 17 and wellness programs. This is helped, in part, by the constant drum beat as NIOSH reports are 18 19 released. In the past, the fatality figures were 20 reported only annually. We had only a brief time 21 22 each year when the fire service focused its

attention and the public's on the issue surrounding 1 2 fire fighter safety. 3 The NIOSH fire investigations make a difference. Who would fill the void if the level of 4 5 investigations is cut back? 6 The investigations reports, the research 7 projects that NIOSH can build around the investigations, and the NIOSH alert bulletins are 8 all essential components in a drive to improve the 9 10 relevant codes and standards, and to legislate and enforce and fund changes in the fire service that 11 would make fire fighters safer. 12 13 Thank you. 14 MR. REED: Thank you, Gary. 15 Our next speaker is Chief Ronald Siarnicki, who is the Executive Director of The 16 17 National Fallen fire fighters Foundation. Sir. 18 19 CHIEF SIARNICKI: Well, good morning to all of you. 20 And, first, let me say thank you for 21 22 inviting the National Fallen fire fighters

Foundation to be here and have an opportunity to
 present.

What I hope to do is to kind of bring you through, quickly, where the National Fallen fire fighters Foundation has developed over the last two years in relation to preventing fire fighter fatalities, and how that fits into the whole idea of the investigation and prevention of those incidents through this organization.

10 And what I would like to do is talk about, 11 as Charlie Dickinson mentioned, the 16 initiatives because they are really a flavor of what the 12 13 American Fire Service is saying needs to be 14 addressed and needs to be taken care if we're going 15 to make a difference in reducing fire fighter 16 fatalities. 17 And of course, I need to at least do what

18 I call the commercial, always, of the National
19 Fallen fire fighters Foundation.
20 It was created by Congress in 1992. So

21 we, too, have a congressional mandate. And that is 22 to honor every fire fighter in our country that dies

in the line of duty and to assist their families 1 2 with the rebuilding of their lives. So we definitely see all these incidents 3 long term at the end. 4 5 And one of the pieces that our Board of Directors has moved with and has added to our 6 7 mission in a prevention effort is to work with the fire service community to reduce fire fighter 8 deaths. 9 10 And so that's a new piece for us, and it's 11 an exciting piece. It's an area that, I think, all of us agree something has to be done. 12 13 It's all about a grateful nation. It's all about service and commitment. It's all about 14 15 what fire fighters and emergency service providers 16 do each and every day. 17 And our goal is to ensure that everyone goes home at the end of the day. 18 19 The end of the shift, the end of the visit to the fire station, they pack up their toys. They 20 go home, and they come back another day. 21 22 And our logo here is to reduce fire

fighter fatalities through these life safety 1 2 initiatives. 3 I would like to run you through them very 4 quickly and then talk about some of the things 5 throughout that will answer your questions. 6 This process started back in 2003, with a 7 focus group at Fire Rescue International, in which fire service chiefs got together with the 8 foundation, and we asked the question, Will the fire 9 10 service really embrace a problem, really embrace a program to reduce fire fighter fatalities? 11 12 Sometimes we talk about that, but to be 13 really, really truly going to put everything into 14 it. 15 And the answer was, of course. And the 16 answer was, we need to convene the fire service 17 organizations and try to unify in this initiative. And so that occurred in Tampa, in 2004, at 18 19 the first Line of Duty Death National Summit. And if you look at each fire fighter 20 fatality that occurs in our country, it can be 21 22 grouped into six areas or domains that came out of

that summit, health and fitness, vehicle operations, 1 2 structural operations, training and general 3 research, wildland operations, and fire prevention. If we reduce the occurrences and 4 5 incidents, we're going to reduce fire fighter death and injury. б 7 And so out of those six areas, the group of 250 representatives of the fire service developed 8 16 life safety initiatives with the goal of reducing 9 10 fire fighter fatalities, embracing the United States Fire Administration's goal of a 25 percent reduction 11 in five years, and a fifty percent reduction in ten 12 13 years. 14 And if we just look at the two leading 15 causes, and we have talked about them, 16 cardiovascular and vehicle, both which have 17 significant issues in prevention, I think those goals are easily obtainable if everybody works 18 19 together. 20 And I think that's part of what we're talking about as stakeholders, in making that 21 22 happen.

And so the initiatives came to all of us 1 2 as a result of these two days. 3 And the first is truly to define and advocate the need for a cultural change in the fire 4 service. It's about doing what we do differently. 5 It's about changing the thought process 6 7 that allows people to participate in emergency 8 operations without protective clothing, as depicted in the slide, or allows people to think that they 9 are invincible, and can do -- if you want to refer 10 to the backdraft syndrome or anything else related 11 12 to how fire fighters operate. 13 There are a lot of rules and regulations 14 out there. There's a lot of pieces in place that 15 tell us what we need to do and how we need to do it. 16 The issue is getting people to, in fact, 17 do it. And that's related to culture and changing 18 that culture. And we hope that we can talk about 19 20 culture throughout all these aspects, that culture 21 should be addressed in the reports. It should be 22 looked at.

What is the culture of that organization? 1 2 Are rules and regulations followed when 3 investigations are done? And that should include 4 safety, leadership, management, supervision, 5 accountability, and personal responsibility. 6 The second initiative talks about 7 enhancing the personal and organizational accountability for health and safety. 8 9 We have to make every single person in the 10 fire service system responsible for their own well 11 being and the well being of their partners, their crew members. 12 13 And it isn't just the chiefs. It isn't 14 just the informal leaders. It isn't just the fire 15 fighters. It's everybody. 16 Holding everybody responsible and 17 accountable for their own actions and the actions of people out there providing services each and every 18 19 day. The third initiative is to focus greater 20 attention on integration of risk management with 21 22 incident management. Risk a lot to save a lot.

1 Risk a little to save a little.

2 And sometimes that's tough for the fire 3 service to do as we sometimes rush in to take care 4 of a situation.

5 But the analysis is, has there been a risk assessment done of that scenario, of that incident, 6 and has that been looked at after the fact to 7 8 evaluate that department? Have they done risk assessments on their service levels? 9 10 Initiative 4, empowering fire fighters to 11 stop unsafe practices. Does the culture of the organization allow fire fighters to speak up and say 12 13 something is wrong with this picture?

Yes. We're a paramilitary organization, and there's a chain of command. But we believe that every single person has the skills and abilities to assess the situation and say, Something is wrong here; why don't we re-evaluate.

19 That's a piece that should be included as 20 we do postincident investigations, but also need to 21 be done beforehand in empowering organizations to 22 embrace the culture that allows members to question

why do we do it this way, just because we have done 1 2 it that way forever. 3 Initiative 5, develop and implement national standards for training qualifications and 4 certification, including regular recertification. 5 There are a lot of standards out there, 6 7 but are departments following it? Now, when somebody reaches a level within 8 an organization, do they continue to show that they 9 10 can continue to perform at that level with the wide changes in the environment both internal and 11 external to the organization? 12 13 And I would ask that question be looked 14 into the investigative reports, as well. 15 Are people showing their ability? Have 16 they mastered their toolbox, and do they keep it 17 current when they're out there providing services to the communities? 18 19 Initiative 6, develop and implement national medical and physical fitness standards that 20 21 are equally applicable to all fire fighters. 22 You have heard that discussed here today,

1 tenfold. I don't think I need to enforce that 2 anymore because we know that's a major issue. 3 No. 7, create a national research agenda and data collection system that relates to the 4 5 initiatives. 6 And that, I think, addresses two of the 7 very specific questions, which you posed to the 8 stakeholders. 9 This past year, a group of fire service 10 leaders got together and developed a research agenda 11 through this program. 12 We will be more than willing to share that 13 information with you and give you a list of topics 14 that the fire service has said needs to be looked at 15 in way of research. 16 And data collection is a critical point 17 because we need to see where we're going. There's a lot of organizations that do 18 19 that. The more that do it, the more that analyze it, I think the more we will learn from that data. 20 21 So to answer that question, yes, that has 22 to be looked at and continued further.

Initiative No. 8, utilize available 1 2 technology wherever it can produce higher levels of 3 health and safety. 4 There is a huge array of technological 5 advancements that are going on. A lot at the Department of Defense, our space program with NASA, б 7 we need to get those into the fire service. We need to look at the Federal Lab 8 Consortium and other groups that are trying to move 9 10 that technology out of the federal sector and into the private sector so we, in the fire service, can 11 benefit from that. 12 13 Initiative 9, directly related to today, 14 thoroughly investigate all fire fighter fatalities, 15 injuries, and near misses. 16 And we do believe that the investigations 17 need to go even deeper and our concern that there is going to be potentially a reduction in the intensity 18 19 of those investigations. 20 We applaud the Near-Miss Program. We 21 applaud the organizations that are tracking injuries 22 out there. I think we need to tell the story, and

tell it like it is, and we have to do it in a timely 1 2 fashion. 3 No. 10, grant programs should support the 4 implementation of safe practice and mandate safe practice as an eligibility requirement. 5 There is a lot of money flowing through 6 7 the fire service. But if somebody receives money, for 8 example, for a piece of fire apparatus, they should 9 10 demonstrate they have a vehicle operator training 11 program, they have a seat belt policy, they a response policy in place as a requirement to receive 12 13 those funds so that it isn't just a gimmick, and 14 they go back to the same way, the same culture that 15 contributes to those 100 plus deaths each year. 16 No. 11, National Standards for Emergency 17 Response Policies and Procedures. And this could be a whole range of things 18 19 from emergency vehicle response procedures to interior versus exterior operations. 20 The piece is, that an organization has to 21 22 assess their delivery system and have policies in

place and the culture to have those policies 1 2 accepted throughout. 3 And that takes a labor, management 4 relationship, not just dictates from the top down, 5 but a true relationship in which people are working б together to make the business safer. 7 And so those standards and those policies and procedures need to be addressed for that risk, 8 for that community, and for that need. 9 10 No. 12, national protocols for response to 11 violent incidents should be developed and championed. It's pretty self-explanatory. 12 13 As we hear continually, where fire 14 fighters are shot, become part of the situation when 15 they arrive to help. 16 And so an area that needs to be looked at 17 is response policies related to violent incidents. No. 13, fire fighters and their families 18 19 must have access to counseling and psychological 20 support. 21 We talk a lot about health and fitness. 22 We also need to make sure we include the mental well

1 being.

2 Our fire fighters see some of the worst in 3 our communities, and so that aspect needs to be 4 addressed.

5 14, public education must receive more
6 resources and be championed as a critical fire and
7 life safety program.

Prevention is the cure. And it will be 8 great to see, when we have these incidents, what are 9 10 the prevention aspects in that community? Was the prevention budget cut as resources dwindled? What 11 is being done to reduce the occurrences of fire? 12 13 And most assuredly, what's being done to help keep 14 fires in check when they do start? 15 Which leads to Initiative 15. 16 Advocacy must be strengthened for the 17 enforcement of codes and the installation of home fire sprinklers. 18 19 Pretty self-explanatory. And Initiative 16, safety must be a 20 primary consideration in design of apparatus and 21 22 equipment.

Another area that I think would warrant a 1 2 lot of investigative work is what safety features 3 were built into the tools and equipment apparatus the crews are using when they're involved in an 4 incident, and what is being done on a national level 5 as equipment is being designed. б 7 And I used to joke -- and some of you may be familiar with that. There use to be a product 8 out there called Jet-X. We actually gave explosive 9 10 devices to fire fighters to blow up things. No 11 safety built into that at all. But that keeps me out of litigation by 12 13 using anything current. Those are the 16 initiatives that came out 14 15 of the Life Safety Summit. 16 And so the question is, okay, what are we 17 going to do about it? The Foundation, through the assistance of 18 19 fire fighter Grant Program and the support of the Fireman's Fund -- and, yes, this is the 20 commercial -- is working to implement five specific 21 22 deliverables this year related to the implementation

1 of these 16 initiatives.

2 And I think that there has been members of 3 NIOSH involved in our summit. There has been members of NIOSH involved in our activities. And I 4 5 think the biggest thing we can do is partner. 6 All the stakeholders here, buying in and 7 partnering is significant to reduce these fire fighter fatalities. 8 9 And so we're in the progress of producing 10 and distributing a training package to 30,000 fire 11 departments across America. 12 As a matter of fact, they're in their 13 final stages. And those kits are going to be 14 delivered in the next probably about six to eight 15 weeks. 16 It's going to be an opportunity to put 17 this material in every single fire station, free of charge, to anyone who wants it. 18 19 It's going to include lesson plans, teaching aids, handout materials, PowerPoints, video 20 information, and, yes, references to a lot of the 21 22 NIOSH investigative reports.

The second piece that is we have developed 1 2 a website. The internet is a huge tool. 3 "Everyone Goes Home," website. And we have in there a lot of information, including all of 4 the reports that have been made available to the 5 public. 6 7 And I think it's a way to continue this 8 partnership. 9 And we are developing a speakers bureau as 10 part of our outreach to tell the story to anyone that will listen to it. 11 And what we're starting to see, for 12 13 example, in the State of Pennsylvania, is that 4,000 14 members of the Pennsylvania fire service hear pieces 15 of our program, who have been given a taste, a 16 flavor of what we're doing. And we're starting to 17 see messages and emails and letters come back and saying, this has helped me to open my eyes. 18 19 I'm not saying it's the only answer, there's a lot of answers that we have to embrace, 20 but awareness is a significant part. 21 22 Plus, of course, a monthly newsletter.

We have been working with two research 1 2 centers to look at what we're calling hardware 3 elements, things you could touch, tools, equipment, 4 rules and regulations. 5 That is Oklahoma State University. And we have been -- or, excuse me, the 6 7 University of Maryland, through the Maryland Fire 8 Rescue Institute. 9 And we're looking at a research center to 10 do some intellectual components or software 11 components, decision making, leadership, and that is 12 Oklahoma State University. 13 What makes an incident commander send fire 14 fighters into a building that's being razed? 15 They're tearing the building down for an 16 interchange, and the incident commander sends fire 17 fighters into that structure for an aggressive interior attack. 18 19 How I learned about it? I read a 20 newspaper article where the battalion chief was being interviewed, and said, I don't know if the 21 22 fire fighter fell through the floor because it

burned through or he entered the part of the
 structure that was being demolished for the
 interchange.

What makes people make those decisions?
And that, I think, is an area that the
investigative reports you do should be intensified
to look at some of that wider scope of that decision
making process.

9 And then, of course, I had mentioned
10 technology transfer, and getting some of these tools
11 and equipment that's out there in the Department of
12 Defense, in NASA, into our hands.

We have been in the process, and one of our other major components is doing a series of mini-summits.

16 This is an opportunity, throughout the 17 country, where members of the fire service can come 18 in, just like the stakeholders meeting, and have a 19 say in what they think needs to be done, and what we 20 need to address, and where the program needs to go. 21 We have conducted four mini-summits, and 22 now we're doing basically forums or open mikes.

All of those reports are available. 1 We 2 will share them with anyone who wishes them. 3 They're all posted on our website. 4 It gives us a grassroots idea of what the 5 men and women, riding the rigs and out on the streets every day, think need to be done to help 6 7 turn this culture and change the way we do business. And the last piece is, we're working on 8 five demonstration projects. 9 10 And it's great to see Dr. Prezant here. We have done a lot -- the Fallen fire fighters have 11 done a lot in New York City since 9-11. 12 13 And we just recently met with the 14 administration, and they have agreed to work with us 15 on some of these initiatives. We're excited about 16 that. 17 Montgomery County, Maryland has signed on. We're working with the NFPA on some of the 18 19 vehicle aspects related to fire fighter line-of-duty 20 deaths. We're looking at merging or taking care of 21 our own program, which is what you do when a death 22 occurs, and tying it up to preventing that as well.

And the last piece is "Courage to be 1 2 Safe," which is what I'm going to kind of end on. 3 And these five demonstration projects are kind of our beta test to see what's going to work, 4 what's going to make an influence looking at 5 different types of departments, different 6 7 organizations, and different associations. Now, "Courage to be Safe," is a three-hour 8 program that started in Pennsylvania, that is an 9 10 in-your-face presentation using fire service instructors and survivors of fallen fire fighters, 11 who talk about how things could have been different 12 13 for their family and for themselves if certain 14 things hadn't occurred that attributed to the death 15 of that fire fighter. 16 Moms, spouses, children of fallen fire 17 fighters telling their stories and saying, you know what, they were brave, they were heroic, but we wish 18 19 they hadn't died. We're hoping that that's going to be the 20 21 impact to make a difference to get people to 22 consider all of these thing's.

So I want to thank you. My time is up. 1 2 And just say that all of this information is 3 available. We appreciate all of your support. And if 4 5 there's anything the Foundation can do, we offer our б full support. 7 We think the investigative and prevention program is well worth it. And we want to see that 8 9 continued. And we hope that we can partner and do 10 that. 11 Thank you. 12 MR. REED: Thank you, Chief Siarnicki. 13 The next speaker is Gene Madden, who is 14 the Chairperson for the Safety and Health Working 15 Team, National Wildfire Coordinating Group. I understand, Mr. Madden, you don't have a 16 17 PowerPoint; correct? 18 MR. MADDEN: Not today. 19 MR. REED: All right, okay. MR. MADDEN: Thank you, and good morning, 20 everyone. 21 22 I am very flattered and pleased to be here

today, given a chance to tell you a little bit about 1 2 what we do in the wildland arena. 3 I would like to tell you first about the National Wildfire Coordinating Group here, and then 4 I want to do a little sales pitch on our own safety 5 and health working team within the NWCG 6 7 organization, and give you a few observations, and then wind up with some recommendations. 8 9 So, first of all, how many in the room 10 actually understand about who the National Wildfire 11 Coordinating Group is? And one, two -- and Ron, if you're still 12 13 in the room, you can't raise your hand. And, 14 Charlie, you can't raise your hand either. 15 So I have a handful of people. So this is great. This is going to be a little I and E 16 17 opportunity for you all. The National Wildfire Coordinating Group 18 19 is made up of a number of federal agencies and state 20 agencies. 21 We have the U.S. Forest Service. The four 22 agencies, wildland agencies out of the Department of

Interior. That's the Bureau of Land Management, the 1 2 National Park Service, U.S. Fish and Wildlife, and 3 Bureau of Indian Affairs. Can't forget them. And, of course, we also are represented, 4 all the states, by the National Association of State 5 Foresters. And the most recent partner to the NWCG, 6 7 in fact, is the U.S. Fire Administration. 8 And through them -- I guess they have been on a few years now. That's where all of the other 9 10 fire communities are part and parcel of what we do. 11 The NWCG was formed in January of 1974 to expand the operational cooperation and coordination 12 13 of the departments and agencies I just mentioned, 14 along with the National Association of State 15 Foresters. 16 The NWCG specifically coordinates programs 17 of the participating wildfire management agencies to avoid the wasteful duplication, and to provide the 18 19 means of constructively working together across the 20 country. Its goal is to provide more efficient 21 22 execution of each agency's fire and management

1 program.

2 And of course, lately the all hazard thing 3 has been creeping into our business each year. 4 The NWCG provides a formalized process or 5 system to agree upon the standards, training, equipment, qualifications, and other operational б functions that we all share. 7 The Safety, Health, and Working Team was 8 chartered as one of the original support teams back 9 10 in 1987, to analyze specific problems in fire and 11 management, and make recommendations back to the 12 parent group. Specifically, our first primary 13 14 responsibility was to serve as the national 15 clearinghouse for major forest fire and wildland fatalities and accidents, and the data analysis of 16 17 that and its dissemination. That process and responsibility grew. And 18 19 in 1992, the workload had expanded so much that our charter was revised, and we acquired a great number 20 of other responsibilities. 21 22 Since then, the Safety and Health Working

Team has overseen research in health hazards of 1 2 smoke issues, providing tracking and investigation 3 quidelines to the National Wildfire Coordinating Group, reviewed various medical -- excuse me, 4 reviewed various medical qualifications and training 5 standards for wildland fire. 6 7 We have overseen research into fire 8 fighter fatigue and various nutrition aspects. We have also participated in the development of a new 9 10 fire shelter for the wildland community. 11 And in addition, we recently set the standards for the medical unit for wildland EMS 12 13 issues in our realm. 14 There has been a number of other safety 15 and health issues that go far beyond the scope of 16 our original charter over the last 25 years. 17 I probably should also mention that another annual publication that just went out is our 18 19 annual Safetygram, which is a compilation of all the 20 fatalities and serious injuries throughout the 21 wildland community here in the country, including 22 entrapment and burnover investigations.

And we worked hand-in-hand with the U.S. 1 2 Fire Administration in developing that. 3 And this past year, 12 fatalities occurred during a wildland event. And that is on our NWCG 4 5 website. And I urge you all to take a look at that and use that as a training tool and an educational 6 7 opportunity. The purpose of the Safety and Health 8 Working Team is to identify the necessary emphasis 9 10 among the wildland fire management agencies, 11 concerning fire and management policy, program direction, and training so as to improve the safety 12 13 and health of all fire personnel in the wildland 14 fire environment. 15 Subject specific safety and health 16 recommendations are made through the NWCG 17 implementation process, either directly back to the parent group, or to the appropriate working team 18 19 under the NWCG organization. 20 And when things go amiss in the wildland community, whether it's on the fire line, a motor 21 22 vehicle accident, or an aviation mishap, we do have

a direct process to conduct the means of an accident 1 2 or fatality investigation, either directly through 3 our own agencies, or, perhaps if it's an agency that doesn't have the wherewithal, they always have the 4 5 opportunity to approach their state forestry agency or their local U.S. forest service to get that done. б 7 So we think we do have that strong 8 advantage within our own bailiwick. 9 I would like to make a few recommendations, specifically to our meeting here 10 11 today. In looking over the preconference 12 13 materials, we concur that perhaps there are some 14 areas to -- I hate to use the word "reduce" the fire 15 fighter fatality investigation program, but perhaps 16 to re-evaluate it. 17 And I agree with a number of the speakers we have heard here this morning, and some of the 18 19 comments from the floor. 20 We would propose that rather than just 21 have a scattergun approach, perhaps a more close 22 prioritization of the investigation process, and

focusing less on the larger career and wildland 1 2 agencies that have the wherewithal to conduct the 3 investigations, but rather reduce this redundancy and save the time, money, and effort that goes along 4 5 with this process, and focus more as a meaningful service, to the rural and volunteer communities that б 7 are out there, that very frequently, we see, don't have the financial wherewithal. 8 9 It's interesting that a large part of our 10 fire agencies in this country are volunteer and 11 rural. 12 And we heard here today that our 13 cosmopolitan areas are blessed with large 14 professional paid, large career fire departments, 15 and a lot of bells and trinkets that go with it. You take out those areas, and the vast 16 17 majority of this country, you have the one- and twofiretruck responses out there. 18 19 We urge that perhaps you consider reaching 20 out to them in partnership, as we already heard, through such organizations as the National Voluntary 21 22 Fire Council, as we heard from them this morning.

1 The International Association of Fire 2 Chiefs, and the International Association of fire 3 fighters, and many of the other groups that are listed on the agenda, here today, and perhaps aren't 4 even listed here. 5 6 For instance, perhaps one of the focuses 7 needs to be a re-emphasis on volunteers and rural fire fighters gaining the knowledge and benefits of 8 9 establishing and maintaining a year-round health and 10 wellness program. It's easy to go into those career fire 11 12 departments where they have the staff to maintain 13 that, but I think the real challenge is with your 14 rural and volunteer fire departments, that they really may not have the constant workforce there to 15 16 maintain that knowledge, to receive and maintain that knowledge. 17 18 I would suggest you explore to develop for 19 these rural fire fighters and volunteers model programs for all the various size departments, 20 including those specifically that don't have the 21 22 financial wherewithal.

We heard already this morning that there's 1 2 some excellent web based programs that are out 3 there, but perhaps there might be some other 4 mechanism that you may facilitate or take part in. 5 I think Charlie Dickinson was mentioning it this morning about reaching out to volunteers. б 7 And we're with that, too, in terms of 8 reaching out to the volunteers and looking at their driving programs. 9 10 We see that there have been a number of 11 fatalities and serious injuries involving driving vehicles to and from incidents and on incidents 12 13 themselves. 14 And we would suggest that new programs on 15 defensive driving, water tenders, and EVOC 16 (phonetic), and other specialized programs --17 because there's a number of very strange vehicles we drive at times -- to be part and parcel of your 18 19 process as you're reaching out. 20 And I would be so bold as to suggest considering some non-traditional partnerships 21 22 perhaps with the insurance industry. If there's a

group out there that is a data collecting machine,
 it's the insurance industry.

3 Finally, to wrap this up, with the concerns that everyone has in this room now about 4 homeland security and what that means to each and 5 every one of us as an individual, back home, and as б 7 an organization, from hurricanes and other natural disasters, to weapons of mass destruction, I would 8 challenge NIOSH and the program to focus some of its 9 10 energies toward assisting these same volunteers and 11 rural fire fighters, as well as all of us in this room, who we represent, to think of ways that you 12 13 can help mitigate or prevent some of the issues we 14 may be running into when we are thrust into these 15 situations.

We think that there's an opportunity here to really educate the fire community of the country by doing so, and it's going unfulfilled.

19 I would like to think that these
20 recommendations I have brought to you here today are
21 preventative in nature, and certainly would be
22 welcomed by the rural and volunteer fire departments

across the country, as well as all the other fire 1 2 fighters as well. As well as the CDC, that we would be 3 mitigating some significant issues impacting the 4 5 fire fighting community of this country. 6 Thank you very much. It has been my 7 pleasure to be here and speak to you all, and I'll be here most of the day. 8 9 Have a great session. 10 MR. REED: Thank you, Mr. Madden. 11 Our next speaker is John Tippett, who is the Project Manager for the International 12 13 Association of Fire Chiefs. MR. TIPPETT: Good morning, everyone. 14 15 While the technical difficulties are being 16 squared away, just on behalf of Gary Brease 17 (phonetic) and the International Association of Fire Chiefs, it's not only a pleasure to be here, but 18 19 it's a real honor to have an opportunity to talk to such a distinguished group, folks that I know and 20 21 don't know. 22 MR. HALES: I remember back in the old

days, when you used to have slides, you know the 1 2 actual slides. 3 Somebody would be working on it in the 4 back, and you would hear them unravel, and all of 5 the sudden you would hear this crash and all of the 6 slides go down. And then your next slide that would 7 come up, would be upside down. (Discussion throughout room off the record.) 8 9 MR. TIPPETT: Okay, here we go. 10 This morning, we're going to talk about --11 a little bit about the relationship between the fire fighter Fatality Investigation reporting and the 12 13 IAFC. In particular, the fire fighter Near-Miss 14 Reporting system, which is a project that I work on. 15 I also work as a battalion chief in 16 Montgomery County, Maryland, which is suburb of DC. 17 So it's a great opportunity to be here today. 18 19 What's the mutual goal here? 20 The mutual goal is to look at fire fighter safety and reporting. 21 22 The Near-Miss reporting system works in a

fashion that's -- don't know if that's going to run 1 2 probably not, but anyway, the program is designed to 3 try to look at fire fighting and at fire fighter 4 safety in a different role. 5 The concept behind it is that the national attention that was drawn by the fatality 6 7 investigation program sort of spurred the interest 8 in finding another way to do things. 9 There was an entire metronome-like quality 10 of how the fire fighter fatality reports kept drilling home the same point, over and over and over 11 again, about what was causing fire fighter 12 13 fatalities. 14 And that became the point where members of 15 the IAFC, in particular the executive director, 16 said, There has to be a different way of doing 17 business. If that small video clip had run to 18 19 fruition there, we would have seen some very well 20 protected fire fighters crawl into an environment -and I think a lot of people may have already seen 21 22 that video clip, but it is very poignant in that it

shows that, despite everything we have done with 1 2 standards, equipment, procedures and policies, we 3 still make mistakes. 4 We still do foolish things that don't seem 5 to make any sense to anyone. So the Near-Miss reporting program was 6 7 designed at the impetus of what came out of the fire fighter Fatality reports over the last several 8 9 years. 10 It serves -- the fatality program serves as a reference for Near-Miss reporting. 11 It's included in the links on the 12 13 Near-Miss reporting system, and it is a very vital 14 component of what we do. It is the place that we 15 turn in -- to where things can go particularly 16 wrong. 17 There's an incident pyramid that has been modified through the years, and it really drives 18 19 home the point. The NIOSH focus, of course, is at the end 20 of the pyramid there, the peak of the pyramid, the 21 22 catastrophic event that results in life changing

1 events that haunt fire departments for years.
2 But there's a different way to do
3 business.
4 And as a result of, again, the near-miss
5 reports coming -- I'm sorry, the fatality reports
6 coming out time and time again, and people started

7 to talk about what it meant to have an almost event 8 occur.

9 How many of those almost events occur?
10 Well, according to some industry predictions, up to
11 10,000.

12 So there are 10,000 opportunities to make 13 changes in the fire service versus waiting for the 14 funeral to occur. And that's where the two teams or 15 the two groups work together, the two programs work 16 together.

As Chief Dickinson noted, the one great component about the fire fighter Fatality Program is that it's a trusted broker. They have no vested interest. They don't belong to anybody in particular, not the manufacturers, not the NVFC, not the locals, not the International, not the IAFC.

They come in completely with clean hands. 1 2 Their only interest is to find out what happened. 3 And we believe that that's one of the strongest components to the program. 4 5 And we believe that it is because of that trust that they have developed, that the program 6 7 needs to continue, and it is very strong. Very quickly there, one of the significant 8 recommendations we think that needs to be made is 9 10 there needs to be a greater emphasis on culture. If I could have got that little video clip 11 to run, you would have seen there, everything that 12 13 we talk about as far as department culture. It's 14 that aggressive interior attack mentality. 15 And on a personal note, there was an 16 experience last spring when I was traveling with the 17 program during the pilot testing, of a fire department that had suffered a fatality. 18 19 We were taken to the station on the shift that suffered the fatality. A truly, truly, truly 20 moving experience. 21 22 And to this day, that fire department,

those people in that fire station, still believe
 that they would go out under the same circumstances
 and do the same thing.

4 So essentially they're making the 5 statement that they would kill the fire fighter 6 again, or they would allow him to kill himself. 7 And it's, again, it's because of that 8 culture.

9 And we believe that through Near-Miss 10 reporting and the fire fighter Fatality Reporting 11 program, that we can break that chain, that this is the opportunity to do that by making more emphasis. 12 13 Through the years, the fatality reporting 14 program has talked about a number of things, a 15 number of components on the fire ground, that continue to haunt us, driving mistakes, command 16 17 mistakes, failure to communicate. And all of those points are -- continue to 18 19 be valid. And in probably one of the most 20 significant enlightenments of my career, Dawn 21 22 Castillo, at a task force meeting for Near-Miss, had

a fire officer challenge her and say, You guys keep 1 2 telling us, you know, it's the same 12 things over 3 and over again. And she very succinctly said, It's the same 12 things that are killing you. So it's 4 time to do business a little bit different. 5 That's the value of the fire fighter 6 7 Fatality Program. The benefit to Near-Miss is it's a great 8 catalyst for us to use as a place to make change. 9 10 So what the IAFC would like to recommend -- and I think Near-Miss is going to bear 11 this to fruition because we have already received 12 13 over 650 reports. And of the 650 reports, 14 75 percent cite human error as the cause for the 15 mistake. Not SOPs, not staffing, not any of the 16 other things you may find, but the human error 17 elements. So we think that the one thing that the 18 19 reporting system should do from the fatality 20 perspective is dig down into that fire department 21 culture and not be afraid to say that, Your fire

22 department culture is dangerous. You're creating

the environment that allows fire fighters to make bad decisions or condones fire fighters making bad decisions. There's a directed element we would like to see added. And, again, I know I'm reiterating a lot of what we said this morning, but I think that also

8 is taking that metronome and turning it back in the 9 other direction.

10 The fatality reporting system has told us 11 for years, it's the same things that are killing 12 you.

Now, it's time for us in the fire service to turn it around and say, Yes. Give us some more directed points about the NFPA standards that are required, tell us about the actions taken by the departments, tell us if a fire department takes no action.

19 We need to know that.

20 I think among the fire fighters, fire
21 service people sitting in the room, we know fire
22 departments that are out there that have suffered

1 fatalities. They have had the International 2 Association of fire fighters come to that organization and say, Make change. And five years 3 later, they kill another fire fighter in the same 4 5 way. 6 Brookline, Massachusetts is a perfect 7 example. Not to cite a specific department, but that's the case. It's an interesting case. 8 9 We would also like to see discussion 10 questions develop. One of the things that's come out of 11 Near-Miss reporting already is a program we have 12 13 called Report of the Week, where the reviewer selects a report. They send it out with five 14 15 questions. 16 It's become very popular. It kind of 17 feeds people, gives them some points to discuss. We kind of take it upon ourselves -- or we think that a 18 19 lot of people will go ahead and discuss these things on their own. 20 21 Well, some feedback we're getting is they 22 like the directed questions.

So while the NIOSH report does a 1 2 phenomenal job of telling the story of what 3 happened, we think it needs to become a little bit 4 more directed as to what kind of results we would 5 like to see. 6 That's it. 7 MR. REED: Thank you, Mr. Tippett. Our last speaker this morning of the 8 invited stakeholder speakers is Rich Duffy, who is 9 10 assistant to the General President for the Division 11 of Occupational Health, Safety and Medicine of the 12 IAFF. 13 MR. DUFFY: Good morning, or good 14 afternoon. 15 Again, I'm Rich Duffy, with the IAFF for 16 the past 28 years, and we certainly are happy to be 17 here today to address the issues regarding this NIOSH program. 18 19 But before I do, I should also mention that Pat Morrison, who is our health and safety 20 21 director -- and we have worked together a number of 22 years, since prior to that he was an officer and a

fire fighter in the Fairfax County Fire 1 2 Department -- is here with us. 3 And also, Sue McDonald, who is with our research and technical systems branch. And really 4 5 is one of our data gurus that collects labor statistics on salary and working conditions of our 6 7 membership throughout the United States and Canada. And my only commercial is who we are in 8 case people want to know that. 9 10 We are a labor union. And we represent about a quarter of million fire fighters and 11 emergency medical personnel through the United 12 13 States and Canada, in these particular areas. 14 When I was asked to speak a little bit 15 today, I pulled up the slide show I gave eight years 16 ago when we had the first program. 17 And it served two purposes. One, I didn't have to look for another 18 19 template for a background, but most importantly, I think the issues that we talked about eight years 20 ago with the NIOSH folks, have some relevance in 21

22 what they expected from us as part of our

1 conversations here this morning. 2 So I'm -- as we sat through it the last 3 few days, I took some of those points, and I'm going 4 to talk from them. 5 This is a very important program for the International Association of fire fighters, as well б 7 as the rest of the fire service. 8 And I think as I go through these slides, you will understand that. 9 10 Plus, there's specific recommendations 11 which follow suit with the recent ones that John just made and that we certainly concur with. 12 13 We talked about -- originally about the 14 different accident investigations, all the parties 15 that are interested in the NIOSH investigation 16 process. 17 And the parties not only include the fire fighters, which I think is extremely important. 18 19 There's not a fire fighter in this country -- and I 20 can speak from the career sector, but I can also 21 speak for the volunteer sector -- that doesn't know 22 who NIOSH is today.

Perhaps eight years ago they didn't, but I 1 2 think everyone is well aware of it. 3 But most important -- more importantly or 4 equally importantly -- there's others that are 5 interested, including the management of those fire departments, the jurisdictional political leaders, 6 7 and the public at large. And indeed, the public at large is 8 interested in the results of fatality investigations 9 10 because, all too often -- not all too often. All 11 the time, you know, when a fire fighter dies, that plays an important part in the news and the 12 13 newspapers of that jurisdiction, not just for the 14 day, but for many days to come. 15 So there is extreme interest in this 16 investigation process, not just from the men and 17 women on the street, but all through the whole members of that particular community. 18 19 We talked about the planning issues, how the investigations should be conducted, and 20 21 certainly the follow-up. 22 I think the preplanning stage and the

conducting investigations have been very good with 1 2 the NIOSH process. 3 We have talked about the system integration issues back then, and spent much more 4 time on it then than we are today. 5 But we know the causes of injuries. We 6 7 know how the circles interact and whether it's 8 people, tools or the environments that are the problem, or to what extent of the problem, I think, 9 10 the NIOSH reports better demonstrate. 11 We know there are problems with -- you know, there can be employee error, employer error. 12 13 The tools of our trade that fail all too frequently 14 and the environment that we work in. 15 The interesting part about the emergency 16 environment, back a number of years ago, the work 17 effort of fire fighters was looked at. And in the late '60s, when the South Bronx 18 in New York was burning, we were able to demonstrate 19 20 that fire fighters were actually fighting fire, 21 putting water on flames less than 5 percent of the 22 time.

So if you look -- and they were, at that 1 2 time, were probably doing forty working fires a 3 tour. 4 Some fire departments, they don't do forty 5 working fires a year. These were doing it every 12 or ten or -- well, they were working nine- to 6 7 15-hour shifts back then. So every shift they were doing, that many 8 working fires. They were fighting an awful lot of 9 10 fire. What I'm saying is that the emergency 11 environment, the one you see on the front page of 12 13 the paper every day, with the flames showing, is not 14 something the fire fighters do all the time. 15 So there other environments that they work 16 in, other environments that are hazardous. And some 17 of those, we can do better control than we're doing today. 18 And I think the NIOSH program has been 19 pointing that out. 20 21 We addressed at length, back then, the 22 investigation team, how it should have been put

1 together.

21

Again, there were some saying that NIOSH had used that money to fund fire fighters out in the field or fire officers in the field to come do the investigations.

6 It was our position, back then, and it's 7 our position today, that we should continue the 8 effort to have full-time NIOSH staff to go out and 9 do those investigations, keep them trained, keep 10 them active.

Well, you don't have to keep them trained 11 because they're gone all the time. But certainly be 12 13 a part, continuing that particular effort. When we envisioned this whole NIOSH 14 15 investigation process, the IAFF did, we wanted to 16 model it after the NTSB process, you know, plane 17 goes down, train crashes, or another transportation entity has a crash, NTSB is first on the field. 18 19 And, again, to do an investigation. Not only are they doing it, the public expects it. They 20

expect to see those blue windbreakers every time

22 there is such an incident of the National

1 Transportation Board on the scene.

2 And I think we're getting to the point
3 that fire fighters expect that, too, and I'll get to
4 that as I conclude here today.

Issues that I think we need to do a better 5 job on because we addressed each one of these, 6 7 again, in detail back eight years ago, is the 8 gathering of or using the tools of the investigation process, evidence gathering, mapping where the 9 10 evidence is, the whole chain of custody issue, 11 examination and testing of the products or the tools that may have led to the injury or fatality, and as 12 13 well as how to diagram, photograph and so forth. 14 I think NIOSH needs to do a better job 15 in -- and not that you're doing a bad job, but I 16 think a better job in explaining the whole 17 investigation process right from the beginning, so people, before they have a fatality, knows what 18 19 NIOSH does, and when they come in, what the 20 expectations are, and the fact that NIOSH may or may not, and, often the case, may not be there within 21 22 the hours or the initial days of the incident.

And they have to do -- work with that fire 1 2 department to reconstruct an awful lot of that 3 incident so they can make their specific 4 recommendations. 5 The witnessing issue is equally important. 6 I think one issue that has been extremely 7 important for us -- and I have to compliment NIOSH for doing a good job -- and that is involving 8 9 management and labor, at least in our sector of the 10 fire service. When NIOSH does a study or does their 11 investigations, they do contact the local IAFF 12 13 leadership, and informed of -- the investigation 14 goes on. 15 And the NIOSH -- excuse me, the IAFF local 16 leadership is allowed to participate in the process, 17 as the management of that particular fire department does. 18 19 And in no case that I'm aware of right 20 now -- and I think I'm aware of every one of them --21 have we had any labor management problems with the 22 investigations themselves.

The public relations value and the 1 2 communications value of this whole process, I can't 3 stress enough. 4 And I'm not trying to grandstand fire 5 fighter fatalities. I'm trying to grandstand the NIOSH participation in this process. б 7 And I can probably give you the best example that where the picture tells 1,000 words. 8 9 Unfortunately, I don't have the picture, so I'll explain it. 10 We lost six fire fighters in Worcester, 11 one that we debated at length with the NIOSH folks 12 13 and tried to get them in there immediately for a lot 14 of reasons. And they agreed. 15 They flew immediately within a day into 16 Worcester. We had the state police escort them from 17 Boston airport all the way into Worcester. And I can't explain to you the effect it 18 19 had on the men and women on that job, working Worcester, to see NIOSH people coming in there. 20 They were still trying to recover a number 21 22 of the fire fighters that took -- well, eight days,

it took until, we guess, we got the last one out. 1 2 And I think that served a very important 3 role, preinvestigation, the fact that someone was 4 going to be there. Someone was going to come in and 5 investigate that incident. 6 And they went back on the pile, continued 7 working after NIOSH got there, but I think that was a very important part of the process. 8 9 And I think we need to continue that and 10 do a better job on that because it really did make a difference to the attitude and the -- for a while, 11 the work that was being done up there. 12 13 Addressing the issues, ironically, 14 everything that we said back eight years ago, is in 15 almost every report that NIOSH does. NIOSH is critical of staffing in fire 16 17 departments. And this goes from the New York City fire department down to the smallest fire 18 19 department, where those issues are responsible in part or in total for the fatality of the fire 20 21 fighter. 22 A lot of the managerial issues, both

command staff, incident commander responsibility, 1 2 safety officer responsibilities, and the fire 3 fighter responsibility in all of the traumatic 4 deaths have been addressed, and, again, hopefully to 5 some extent have led to change. 6 Emergency scene, where you have 7 communications issues, structure training, accountability, rapid intervention teams, we talked 8 in theory about this eight years ago. 9 10 I think over this eight-year period, 11 especially in the reports that have come out, they have made a substantial contribution to make those 12 13 changes in the fire service. And a lot of it is not just cultural 14 15 changes. 16 I have problems blaming a lot of things on 17 culture. It's not just culture. It's the actual 18 19 structure. And those issues, once addressed, we have the tools to further seek those changes in 20 those areas. 21 22 The communications issue is probably one

of the biggest issues that receive a lot of
 attention in the fire service, especially the
 pundits and the politicians that stand up on their
 soapbox and try to say the words, interoperability,
 all the time.

6 I would think the pet peeve we have in 7 that is, until you have intraoperability -- until a fire fighter can talk to his or her fellow fire 8 fighter within their own fire department, we 9 10 accomplish that goal. Then we can start talking 11 about talking to the fire fighters in the departments or talk to the water management people 12 13 or talk to the sheriff's office or the police office 14 on the same radios. 15 We haven't gotten there in this country 16 yet. We have fire fighters that are -- well, don't 17 have the capability to talk with each other. And Until we address that -- and I think 18 19 that comes out very clearly in the NIOSH areas. And we have moved. I'm not saying we 20 haven't moved. 21 22 I know when I first started with the IAFF

28 years ago, you know, it was only one member of 1 2 the crew had a radio. 3 And then -- and of course, that's -- that hasn't improved in some areas, but many are that we 4 have every fire fighter with a radio. 5 And there's ways to manage that. And I 6 7 think that's being addressed, and we continue to do 8 that within this particular process. 9 The tactical issue, the detailed tactical issue, I think one of the greatest achievements that 10 11 NIOSH has done -- and we say this over and over and over again -- it has forced fire departments to do 12 13 their own investigations, where we didn't have it 14 before. 15 And I probably should have said this later 16 on, but I'll say it now so I don't forget. 17 When we started this program, we talked about the difference between cops and fire fighters. 18 19 When a cop died in the line of duty, it was a crime. 20 There was yellow tape came out. I don't care if it was an accident, a 21 22 shooting, or whatever happened. If a cop dies, to

this day, it's a crime scene. It is treated by a
 crime scene. And those people that investigate
 outside cop issues, the cops investigate themselves
 as a crime.

5 Fire departments give good funerals. We 6 never did investigations to the extent that they 7 were needed done, but we did some very, very good 8 funerals.

9 So the difference between the police and
10 fire then, cops investigated. Fire fighters, we
11 buried our dead.

12 And we did a good job on it, and a proud 13 job of it, and we still do. But we failed to look 14 at these issues to the extent that they needed to 15 be.

With NIOSH's partnership -- and I truly call this a partnership, with fire departments that have fatalities -- we now see, and I have seen it across the country now that fire departments are doing their own investigations, either prior to or in concert with the NIOSH process.

22 Because who is the better to address the

specific fire ground tactics issue and better 1 2 address it in -- well, in truth, knowing that there 3 is a government entity coming in to watch over your 4 shoulder to many, many of these issues. 5 And of course, as Tom discussed, the whole medical aspects of it, we talked back then that we 6 7 were beginning this process. We have the process of 8 the wellness/fitness program that has been out there now since 1997. We look at fire departments' 9 10 occupational medical programs as part of the 11 investigation issue. Since the beginning of this program, there 12 13 was the birth of the NPPTL as well as the movement 14 of the SCBA issue up into Pittsburgh. 15 And I think we are now seeing -- and 16 that's changing as the months go by, not just the 17 years go by, the increased use of the expertise at NIOSH, both in division safety research in 18 19 Morgantown, as well as through the NPPTL, National 20 Personal Protective Technology Laboratories, in Pittsburgh, in assisting and looking at worker PPE 21 22 issues.

I had the luxury, as well as Pat does now, 1 2 in working, not just with the fire fighters, but 3 with the other members of the labor movement, both in the trades and in the industries. 4 5 And I have been doing this for over 30 years. And the fire fighters have been one of the 6 7 few working groups, until recent times, that really, our only choice was to work on PPE issues. 8 9 We don't have the luxury of having -- you can't engineer a controlled fire. You can't put a 10 11 big vent over an emergency. You have to deal. And fire fighters use protective clothing and equipment 12 13 more than any other trades. 14 And we spent all of our energy on that. 15 And I think now the other trades are 16 beginning to spend the energy -- or they have been 17 for a while, but adjoining many of the issues that we have now in addressing the worker, all worker 18 19 personal protective clothing issues. 20 And, again, we have documented problems with SCBAs. 21 22 You heard this morning the problems that

we have seen with PASS devices. No particular 1 2 manufacturer, in this case. This one involves all 3 of the manufacturers. Significant comments are being addressed on that, as well as the overall 4 protective clothing of fire fighters. 5 Training issues and training fatalities, 6 7 again, we are still killing, maiming, and injuring fire fighters and have significant near-misses in 8 our training fatalities. 9 10 Just last night, for example, we have a 11 fire fighter out in western Washington who is probably going to die today, was injured in a --12 13 critically, very critically injured in a rescue 14 training exercise in the water. 15 And, again, we're still having fire 16 fighter fatalities in training areas. 17 The addressing of standards by NIOSH in the reports is of critical importance and must 18 19 continue, whether it's the OSHA standards that are, even though in the most case, obsolete, they're 20 still there. 21 22 There's certainly the NFPA standards,

which they do cite throughout, when there is that 1 2 issue, up to and including the NIOSH respirator 3 standards. And we'll now start seeing their newer standards in the CBRN area. 4 5 I talked about that. These are the final slides that we showed 6 7 back then. And, again, I want people to remember that 8 this program was initiated, a lot of lobbying by the 9 10 IAFF with then President Bill Clinton. 11 He finally supported the program. He included it in his 1998 budget. And then we worked 12 13 through Congress, and at that time got \$2.5 million 14 authorized and appropriated by Congress for this 15 program. 16 And then Clinton did sign it. 17 Back then, the trauma facilities were in DSR in Morgantown. And as Tom talked about, the 18 19 cardiovascular were in E-Chefs, in Cincinnati. 20 And of course, since that time, we have 21 added the NPPTL labs and the SCBA evaluations up in 22 Pittsburgh.

Their program, back then, is what the 1 2 recommendation for this meeting was, to look at database development, research projects, laboratory 3 and field research, and of course, information 4 5 dissemination. And now I'll talk about and finish up with 6 7 our recommendations specific to the requests for 8 this meeting. 9 Again, I should add that not -- the IAFF 10 notifies NIOSH as well as the President of the 11 United States, the two senators from the individual state, and the local Congressman of the person that 12 13 died, the United States Fire Administration and 14 others as immediately as we received these deaths. 15 So the deaths of IAFF members are 16 reported. They're up on the IAFF website as soon as 17 that member -- it's reported that they died. It's on the front page of the website to 18 19 his or her funeral service, and then it comes down and it goes into our database. So we obviously 20 collect this. 21 22 Recommendations. We believe there should

be not one bit of reduction in investigations at the
 cost of any part of the program.

3 And I have to just say again and again and again, no event is the same. Even though it may 4 5 sound the same, whether you want to label it as an incident -- a management issue, a staffing issue, a 6 7 vehicle incident, there are particular circumstances 8 to all of those events that make then different. 9 And I have said this, and we have said 10 this continuously, and I think it puts this in 11 perspective what I mean. On 9-11, we lost 347 fire fighters in New 12 13 York City, 343 FDNY members, one member of the Fire

15 former FDNY members that were safety directors at 16 the WTC.

Patrol, and three World Trade -- IAFF members and

14

We said over and over again, we didn't
lose 347 fire fighters. We lost one fire fighter
347 times.

20 The issues, the family suffering, and the 21 information you learn from those events are the same 22 as the deaths that occurred a week before the World

Trade Center and a week after. 1 So we have to look at these fatalities as 2 3 individually and not collectively. They all have a very big significant 4 5 impact both on the locality as well as the fire service in general. People are more and more б 7 relying on reading, reviewing, and in some cases, implementing the NIOSH recommendations. 8 I think the dissemination of information 9 10 needs to have some changes. I think it's -- in order to stop the 11 confusion of the issue, I think NIOSH needs to log 12 13 in all of the fatalities. 14 They get them from us. I know they get them from the NVFC. They get them from the Fire 15 16 Administration. 17 If it's a line-of-duty death, it should be logged in on the NIOSH website. 18 19 And then next to that name, there could be three categories: No investigation is going to be 20 21 done; the investigation is pending, and when it's 22 really completed you have the report right there.

So we can follow up, we know where these deaths are. 1 2 And I think that would help not in the dissemination issue, but I think it would help in 3 4 the review issue. 5 People will go to that website and follow-up more and more and more if they know that б 7 there was a fatality here, what the fatality issue 8 was, whether in NIOSH's investigation, whether it's 9 still pending, and then downloading the report when 10 it's out there. I think the outreach issue, we certainly 11 support the issues that were addressed in the 12 13 program materials. 14 But I think we have to continue -- and I 15 know they do so, but I have to say I'm one of the --16 in fact, I think I'm the only person in the room 17 that knows every NIOSH person here. I know more NIOSH people in this room than 18 19 John Howard knows, and he's the boss of you all, so --20 And I say that with some pride because I 21 22 have a lot of good friends from NIOSH, over 30

years, or 28 years now -- or 30 years now, because I
 did so before the fire fighters that we worked
 together on.

And it's good to see you all again, and to see that you're still alive. And I guess some of you appreciate, probably some of you don't, that I'm still alive, but that's okay.

8 I think that participation has to be more 9 so, and not just relied on the Fire Investigation 10 Program.

Certainly with the -- I hate using 11 acronyms, but you get so used to it in DC, Division 12 13 of Safety Research, the Division of Surveillance 14 Health Evaluation and Field Services, and the 15 National Personal Protective Technology lab, needs 16 to better coordinate that whole process together, so 17 the left hand knows what the right hand is doing. And I know the difficulty because Pat and 18 19 I can argue all the time, and I don't know what he's 20 doing, and he doesn't know what I'm doing half the 21 time. 22 So it is difficult. But I think that

participation across the board needs to be continued 1 2 within the fire fighter investigation process. Saying that, I know full well that 3 NIOSH -- and many do. NIOSH has other jobs. They 4 do not exist just for fire fighter investigations, 5 and -- but when they can work together on these 6 7 issues, we certainly appreciate it. You also need to reach out and start to 8 partner with other federal agencies and departments. 9 10 And I'll say this publicly. There's an 11 awful lot of money out there, an awful lot of money out there, and an awful lot of money being directed 12 13 toward first responder issues, more so now after 9-11 than ever before. And a lot of that money, I 14 15 think, is being perhaps misdirected. 16 So I think we need to look at the missions 17 of places like Department of Homeland Security. I think we need to do a better job. 18 19 NIOSH has to recognize, and they -- well, they have heard my story before. NIOSH is a 20 national institute. 21 22 It's not part of the National Institute of

Health, but it clearly is a national institute. 1 2 Even though there was talk, lots of times, of moving 3 them over there, they're still -- perhaps we can 4 argue that another time, whether they belong where 5 they are now or move it to a national institute. 6 But there are groups there with money. National Cancer Institute, the blood, the heart 7 institutes there that would like to look at data 8 that addresses worker groups. 9 10 And we have said this on and on. 11 In our wellness/fitness program we have developed the database, a database for fire 12 13 departments to use that are in the wellness/fitness 14 program. 15 In fact, we have now computerized it, and 16 we're going to distribute it to everybody for free. 17 And, again, to follow specifically the medical evaluations and the fitness evaluations that are on 18 19 an annual basis so we have that data, have data in a 20 mandatory program that everybody is involved in that 21 addresses high risk category group. 22 People that would drool over, back when

they just felt -- they started looking at the 1 2 Framingham study, that we're offering now, and we 3 can't get the bite of interest. 4 I think instead of trying to reinvent the 5 wheel, to work with some of these programs and look at these government agencies. 6 7 The Department of Transportation, in fact, 8 they even have the next slide, we need to look at them. 9 10 The Department of Transportation has been crash testing vehicles for safety issues and being 11 used as a marketing issue for the auto dealers and 12 the auto makers. 13 14 Again, for the first time -- and I think I 15 can run this, so I can talk -- I'm probably not 16 supposed to have this, but I do. 17 NIOSH has done an ambulance study. If people in this room aren't aware of it, it's because 18 19 they haven't released it yet. They haven't released it yet because there's a legal -- ah, damn, it 20 doesn't work. 21 22 I thought this would work. It worked when

I did it on my computer. You probably don't have
 whatever it took.

3 So, anyway, this is a nice picture of an4 ambulance crashing that NIOSH did.

5 The first time, the first time -- and 6 Steve Proudfoot, who was part of that program and 7 first investigators here, the first time that it was 8 ever done for a worker issue, not for a marketing 9 issue or safety of a product for a consumer issue, a 10 worker issue, actually crashing an environment that 11 a worker works in.

12 And I think there's phenomenal information13 in this part.

First of all, the safety of the vehicles 14 15 that are being built out there. How well they are 16 constructed for the safety of the occupants, the 17 workers, as well as the safety of the occupants, the workers in the back of those vehicles tending to the 18 19 public or whoever they're transporting out there. Hopefully this will -- more work will be 20 done. 21

25 percent of the fatalities of fire

22

fighters, including both career and volunteer, last 1 2 year, were vehicle issues. 3 And I think a number of those -- and I'm 4 not going to deny it. A number of them had a lack 5 of seat belts. A number of them were excessive speed, the fun of being still in the fire department 6 7 and driving real fast, a failure to do a lot of 8 things. 9 But a lot of it is the equipment here. 10 And I'm certainly proud, and I know that people are, that NIOSH is addressing the issue for the first 11 time, of looking at that. 12 13 On Tuesday of this week -- and I know 14 everybody is hungry so I can end up on this -- or 15 excuse me, Monday of this week, Secretary Chernoff 16 was at the IAFF legislative conference, which was 17 held across the street. And I always listen to what politicians 18 19 say all the time because I know I can find a sentence that's useful, and this is exactly what he 20 said. 21 22 He went up and he said, You can't ask

people to go out and save lives if you don't give 1 2 them the tools to make sure they're able to conduct 3 these activities without putting their own lives unnecessarily at risk. 4 5 Of course, we made sure the AP knew whenever all the other people -- or our 6 7 communications people did. This was in context -- so I don't tell you 8 I'm taking this out of context. This was in the 9 10 context of talking about avian flu. 11 And in fact, he went up and he said that all first responders -- and he's talking to fire 12 13 fighters, so he meant all fire fighters -- need to 14 be the first people in line to get vaccinated and be 15 provided antivirals for an avian flu issue. 16 And then he went on to say this quote. 17 So I just somewhat take it out of context from the avian flu issue, but I haven't taken it out 18 19 of context to a safety issue, nor have I taken it 20 out of the context of what this country needs to recognize for our first responders. 21 22 We need to given them the tools, and we

1 think NIOSH has done exactly that.

2 So if anything I can do up here, I'm not 3 here to wave the NIOSH flag. We are critical when 4 we need to be critical, but we fully support the 5 continuation of this program.

6 In fact, as an investigation program for 7 fire fighter fatalities, we appreciate the add-ons 8 to it, which are the research project, in other 9 words but first and foremost, let's continue these 10 investigations for the process.

11 And I forgot I had a slide that I just 12 said all those things. So that's -- oh,one more 13 thing I want to say.

14 That is my last slide, so I am going to 15 say it.

16 When NIOSH evolved -- and NIOSH was part 17 of -- well, NIOSH was born when OSHA was born. So 18 back in the late '60s, when OSHA appeared, NIOSH 19 was -- basically, there was the research arm for 20 OSHA. 21 In fact, during the first ten years or 15

22 years of NIOSH, they did a great job of putting

together what was called criteria documents. 1 2 NIOSH was actually the standard writer for 3 all the OSHA standards. And for those of you who go back that far, you remember the multicolored books. 4 5 And I have them all, by the way, in boxes б because I think they're wonderful documents. 7 Most of them were for health issues, but there are a couple of them for safety issues or 8 criteria documents. 9 10 It wasn't a consensus document. It was a scientific document that NIOSH did the study 11 together and made recommendations for standards to 12 13 OSHA. 14 They haven't done so many of them anymore, 15 for whatever reasons, political, I will say, funding 16 perhaps. 17 And maybe they think they caught up with everything, which we know they haven't. 18 19 But I think part of the NIOSH 20 investigation stuff should also be putting official 21 recommendations in, as the law required, as the 22 process required when NIOSH was originally set up,

1 so. 2 And I can give you a final example, and 3 then you go to lunch. 4 Back in the early '80s, when we started 5 working on PASS alarms for the fire service, personal alert safety systems or the boxes that buzz 6 7 off that Charlie talked about earlier this morning, that was an issue -- was the issue -- an issue up in 8 9 Pittsburgh, in 1985. 10 But back in the -- or '95. But in the early '80s, we had a fire 11 fighter -- a number of fire fighters that were 12 13 killed. 14 The recent one was a fire fighter in Los 15 Angeles City where an alarm went out that one of our fire fighters went down. And right after that, a 16 17 fire fighter came out of the warehouse building, and he had upper airway burns and wasn't able to talk. 18 19 They thought that was the fire fighter that was down. He wasn't able to explain that there 20 was another fire fighter in the building. 21 22 Well, that fire fighter was packed and

sent to the hospital. And the fire fighter that --1 2 they continued fighting the fire, and the fire 3 fighter died. 4 If they had a way to signal someone to get 5 out, I think he would have been alive today. It's probably 60 percent of the fire 6 7 fighters in the last 20 or so years that have died in fires that, if their personal alert systems 8 worked, they would be alive today. And we can show 9 10 you the data to show that. Back then, we wrote to OSHA. 11 We said, OSHA, you need to have a standard. You need to 12 13 address this issue, require fire departments to have 14 PASS device, fire departments. 15 We got written -- in fact, the person that 16 wrote us back was a good friend of mine at the head 17 of OSHA, Yule Bingham. So it wasn't a political issue back then. 18 19 It was the way that OSHA worked. And said, you know, we don't have a standard for PASS devices. We 20 21 can't require fire departments, yada, yada, yada. 22 Well, through the NFPA process, we

developed probably the quickest standard NFPA ever 1 2 had, was the PASS alert standard, which I think we 3 did in less then two years. 4 It was the quickest, I think, area test --5 it was the quickest one we ever put together and got out. 6 7 To this day, now, 20 years later, OSHA 8 still doesn't require emergency personnel to have PASS alarms. 9 10 So I think those recommendations need 11 to -- and I think we need to continue to follow that process in an official effort of making 12 13 recommendations. 14 Whether OSHA needs them or not, or whether 15 they have -- or denied doing it, at least there is a record to follow that, which I think would also lead 16 17 to more change. I am done rambling. Thank you very much. 18 19 We will participate throughout this 20 process this afternoon. 21 And, again, I got to, here, on behalf of 22 my organization, behalf of our general president,

Harold Schafer, I want to thank NIOSH for what they 1 2 do on the investigative issues, and all the help 3 that you give for fire fighters in this nation. 4 So thank you very much. 5 MR. REED: Thanks, Rich. We have had some great speakers this 6 7 morning among the invited speakers. So -- we're at 12:30. 8 We're theoretically on time here, for the 9 schedule. But given the timeframe for lunch, I 10 11 think I'm going to suggest that we regroup at 1:45. I think we have enough time built in, and 12 13 I think we're going to need probably a little more than an hour, anyway, for lunch, given the logistics 14 15 of where we are. 16 So I'm going to suggest that we regroup, 17 but promptly at 1:45. And that we will start with the rest of 18 19 the stakeholder comments that will be five-minute 20 comments, and then we will open it up for additional 21 comments, as well as dialogue for the end of the 22 meeting.

So thank you all, again, for this 1 2 morning's sessions, and we'll see you at 1:45. 3 (A recess was taken.) 4 MR. REED: We have the attendance list that was promised this morning, and it's at the 5 registration desk for those of you who want -- the 6 7 reservation desk, I should say, for those of you who want a hard copy of the attendance list. 8 There will also be a more of a formal 9 10 record of that, you know, on our website, and -- but if you want a hard copy, it's there now. 11 And Tim Pizatella asked me to remind 12 you -- or actually to request support for a study 13 that he mentioned in his talk. It's the -- in his 14 15 slide where the formal assessment of the impact on 16 NIOSH programs. It's the contract effort that's 17 being done by RTI. And we strongly encourage that if you are 18 19 part of that, or your fire department, or fire 20 fighter group has received this questionnaire, that 21 we request that you fill it out. 22 Again, the impact of this study is to help

identify ways to enhance the program. 1 2 So it's directly helping us with many of 3 the same things that we're getting here today in terms of direction and evaluation. 4 5 So please encourage your staff and your fire departments and fire fighters to complete that 6 7 questionnaire if they receive it. I think we're at about 30 percent response 8 rate at this point, but we would love to have even 9 10 more so, so thank you. We are at -- after lunch, the point where 11 we're talking about additional stakeholder comments. 12 13 And we have five and maybe one no-show at 14 this point. Is Jerome Ozog here? Okay. I don't 15 think... 16 So I think we're at a point where we can 17 begin the additional stakeholder comments and still have time for the dialogue or additional comments 18 19 from people who have not yet had a chance to talk. 20 And then for the dialogue part, are there questions of us or the other speakers, or just sort 21

22 of this brainstorming that we had talked about

earlier that's so important to us? 1 2 So with that, our first speaker for the five-minute additional stakeholder comments is Ed 3 4 Hartin. 5 And Ed Hartin is a battalion chief for the Gresham Fire and Emergency Services Training and б 7 Safety Division. So, Ed. 8 MR. HARTIN: Good afternoon. I'm 9 10 Battalion Chief Ed Hartin. I'm Chief Training and Safety Officer with Gresham Fire and Emergency 11 12 Services in Gresham, Oregon. 13 In that we only have five minutes, my --14 the scope of my comments will be considerably 15 narrower than my colleagues' this morning. I believe that the NIOSH fire fighter 16 17 Fatality Investigation Program has provided a substantial benefit to the fire services, with 18 19 reports published by this program serving as a valuable resource in the effort to reduce fire 20 fighter injuries and deaths. 21 22 However, there are some gaps in the

information provided by these reports. 1 2 Given the limited time available, I'm 3 going to focus my comments on investigations and reports related to traumatic fatalities during 4 5 structural fire fighting. Safety during structural fire fighting in 6 7 the United States has seen minimal improvement over 8 the last 27 years, despite significant technological advances. 9 10 National Fire Protection Association and the United States Fire Administration reports have 11 identified a number of trends. 12 13 The average number of fire fighter 14 fatalities occurring on an annual basis has 15 decreased, as has the number of structure fires. 16 This has resulted in a relatively stable 17 rate of fire fighter fatalities during structural fire fighting. 18 19 Data also shows a market increase in the number of traumatic fatalities during this type of 20 fire fighting activity. 21 22 Most traumatic injuries during structural

fire fighting occur in one or more of the following 1 2 three ways, structural collapse, rapid fire 3 progress, or fire fighters becoming disoriented, lost, and running out of air. 4 5 Often, following collapse are rapidly worsening fire conditions. 6 7 In examining traumatic fire ground fatalities, Rita Fahy of the NFPA, indicates that 8 anecdotal evidence points to fire fighters and fire 9 10 officer's lack of experience as a potential causal 11 factor in these situations. A study by NIOSH staff published an injury 12 13 prevention, identified the eight most common 14 recommendations in the NIOSH fire fighter fatality 15 reports related to incidents involving fatal 16 traumatic injury during structural fire fighting. 17 And as illustrated on this slide, this list addresses key organizational and operational 18 19 issues, but something is missing. What is missing is a consistent and 20 explicit focus on knowledge of fire behavior. 21 22 While this knowledge is an essential and

integral part of situation assessment, the 1 2 recommendations do not clearly identify this. 3 Only three of the 67 reports dealing with incidents involving traumatic fatality between 1998 4 and 2005 made specific recommendations regarding 5 fire behavior, even though 35 of these incidents 6 7 involved extreme fire behavior as a causal or 8 contributing factor. 9 In the cases where recommendations were 10 made, they focused primarily on recognition of 11 backdraft and flashover indicators. In other cases, the importance of understanding fire behavior hides 12 13 within a tactical context. 14 For example, in the 11 cases where the 15 recommendation was made to closely coordinate 16 ventilation and fire attack, ventilation performed 17 by fire fighters caused rapid fire progress or negatively influenced fire spread. 18 19 Fire fighters must develop adaptive 20 expertise in the application of fire behavior 21 knowledge on the fire ground, and act proactively to 22 avoid or mitigate the hazards presented by rapid

fire progress or the fire's effects on structural 1 2 stability. 3 What can NIOSH do to assist the fire service in addressing this complex problem? 4 5 Action is required in several interrelated б areas. 7 First, provide consistent focus on fire behavior and structural factors in reports related 8 to traumatic fatalities during structural fire 9 10 fighting. Ensure that the investigators probe 11 observations of key fire behavior indicators, 1213 specifically building factors, smoke, air track, 14 heat, and flame. 15 It has been my experience that fire 16 fighters and officers often see key indicators but 17 do not make the connection between these observations and subsequent fire behavior. 18 19 Provide a narrative that follows fire development and emphasizes the positive and negative 20 21 influences of tactical action. 22 Consistently capturing and reporting this

type of detail would further increase the utility of
 NIOSH reports and case studies for building
 proficiency in the application of fire behavior
 knowledge.

5 Second, more thoroughly examine the impact6 of training, experience, and expertise.

7 A single question comes to mind when I read these records, if the fire fighters or officers 8 involved knew what was going to happen, would they 9 10 have taken the same course of action, would they have searched above the fire without a hose line if 11 they recognized that the fire was about to reach 12 13 flashover, would they have vented in the same way if 14 they recognized that the fire would increase 15 dramatically in intensity and overtake crews working 16 on the interior? 17 I suspect not.

18 NIOSH fire fighter fatality reports19 addresses training in a general sense.

20 It would be useful to delve more deeply 21 into the training of not only the individuals who 22 died, but also others -- others who had a situation

assessment and decisions making role in the 1 2 incident, looking in particular at training and 3 experience related to the specific causal factors involved, such as structural stability and fire 4 5 behavior. 6 The foundation for situation assessment 7 and tactical decision making is a solid understanding of fire behavior and its effect on the 8 involved structure in incidents involving fire 9 10 fighters being caught or trapped by rapid fire progress, or those in which fire behavior was a 11 precursor to becoming disoriented or structural 12 13 collapse. NIOSH should included an explicit 14 15 recommendation for in-depth fire behavior training 16 and its application in a realistic context. 17 Thank you. MR. REED: Thank you, Ed. 18 19 Our next speaker is David Daniels, who is the Fire Chief for the Fulton County, Georgia, Fire 20 21 Department. 22 David.

1 MR. DANIELS: Thank you. 2 I appreciate the opportunity this 3 afternoon. Now, to do two things, first of all, do a 4 5 little commercial for the International Association of Fire Chiefs Safety, Health, and Survival Section. 6 7 I couldn't pass up the opportunity because 8 we -- at least my perception anyway, are as an organization, kind of new at putting effort and 9 10 resource behind safety to the degree we do today. And as a matter of fact, a lot of credit 11 is due -- as we were walking to lunch and having a 12 13 conversation about safety in the fire service, when 14 you think about certain organizations, and 15 specifically a lot of credit to the IAFF, who has, 16 for years, had formal programs in place, budget 17 assigned to it, people assigned to it, and the Fire Chiefs, as an organization, are starting to realize 18 19 that's pretty important. That if we're going to get some things 20 21 done, we have to have people that are dedicated to

it, and they're going to do it on a regular basis.

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One of the things that happened here 1 2 recently, is we had a committee, and the committee 3 basically was made up of about 12 people. And we found that that wasn't quite enough to put the 4 5 effort that we wanted to put into fire fighter health and safety related issues. 6 7 So we went to the group, the International 8 Association, and asked that we become a section, which gives us a few more resources in terms of 9 10 people. 11 So as of today, we're 420 or so people, who are interested in fire fighter health, safety 12 13 and related kinds of issues, and are spending a lot 14 of our free time, those of us who have it, to try to 15 get some of those things done. 16 In general, we -- our goal is to try to 17 help -- help the leadership of the fire service in terms of the appointed officials, the fire chiefs, 18 19 understanding the importance of safety, 20 understanding the importance of keeping their folks 21 healthy, and getting them home the next day. 22 A few of the things we have done, just in

a very short period of time, is we wanted to start 1 2 off with something positive. 3 There's a lot of conversation about the 4 bad things that happen. And so one of the first 5 things we did was have some recommendations and give some awards for some departments and officials 6 7 around the country, who are actually doing some 8 things right. 9 And that happened, actually, in our first 10 year. 11 We're also engaged in writing for different -- lots of different publications, Fire 12 13 Chief Magazine, Fire House Magazine, what have you, 14 and what we want to see is not necessarily a group 15 of folk who tries to do it all themselves, but wants 16 to see it happen. 17 So we're engaged in some of these kinds of activities in terms of writing and that. 18 19 We also have been partnering with other segments of the IAFC, specifically with the Metro 20 Section on this particular item, is trying to 21 22 develop a vulnerability assessment tool.

We also had some conversation with the 1 2 IAFF on some work that they're doing to a greater 3 degree, and they're looking for a way to complement 4 that process to put a tool in the hand of a fire 5 chief. 6 These are some of the other kinds of 7 things that our membership is involved in. And, again, we're still fairly new, but 8 involved in a number of different activities around 9 10 the country. If there's a fire chief who is involved in 11 safety in any way, shape, or form, you probably --12 13 if it traces back, they're probably connected to our 14 section in one way, shape, or form. 15 We pride ourselves to some degree, being 16 safety zealots, but want to be a little bit more 17 professional about it in terms of our presentation. And that suggests that there is one way to 18 19 keep our folks safe, but there are a number of different ways of doing that. 20 Now, how this relates to the -- to NIOSH 21 22 is that we found that of all of the information

that's available to us, this is the information that 1 2 is most scientifically based. 3 Interestingly enough, as a fire service, much of what we do today, somebody just made up. 4 They just made it up. There was not necessarily 5 scientific basis or study. Someone made it up, and 6 7 we all picked it up and we continue to do it. 8 So we're encouraged -- we're encouraged by the fact that the information that comes out of 9 10 NIOSH has a strong scientific background and basis 11 behind the recommendations. Some of our suggestions include, of 12 13 course, having -- continue to have adequate budget 14 to do what's necessary. And we, as fire chiefs, 15 always recognize that it takes money to get things 16 done. 17 We also -- let me go back to that one for 18 a second. 19 We also think there may be some value in 20 providing informational sessions to fire chiefs 21 about how the process works so they understand that 22 here is what happens, here is what -- when we do an

investigation, here is what our folks do, just to kind of take away a little bit of the concern that may be raised by a fire chief that doesn't understand the process.

5 Now, also, we think that there would need to be pretty clear connections between what NIOSH is 6 7 doing and the other bodies that exist in NFPA, 8 IFSTA, what have you, the folks who are creating the standards and creating the training, if we can see 9 10 linkages, visual linkages, this study produced this 11 standard, which produced this set of training. Again, it kind of helps people understand 12 13 the value of the process, helps them understand the value of being involved, and the value of continuing 14 15 to support the process long-term. 16 Five minutes. Thank you very much. 17 MR. REED: Thank you, David. Jerome Ozoq, is he here? Okay. 18 19 The next speaker is Steve Austin, who is 20 the project manager for CVF -- I'm sorry, I don't 21 know the acronym, Emergency Responder Safety

22 Institute.

1 So Steve. 2 MR. AUSTIN: Good afternoon. My name is 3 Steve Austin. I'm with the CVVFA Emergency 4 Responder Safety Institute. 5 We're an arm of the Cumberland Valley Volunteer Fireman's Association, 105-year-old б 7 nonprofit fire service education association. We have been working since 1998 to reduce 8 the number of secondary incidents on the roadways 9 10 that injure or kill fire fighters, police officers, 11 and other emergency workers. 12 Other than fatalities, there are no 13 records kept documenting injuries or near-misses on 14 the highway. And we know from our work that this 15 incident happens several times each day in the 16 United States. 17 We attempt to identify these incidents, and report them on our website, respondersafety.com. 18 19 Our Institute includes members from across the public safety spectrum, including the career and 20 volunteer fire service labor and management. 21 22 We're most proud of the support we receive

from many of the organizations that are here today 1 2 in this room. 3 One of our key partners, are members of the fire fighter Fatality Investigation and 4 Prevention Program. Investigator Mark McFall and 5 Branch Chief Dawn Castillo have been especially 6 7 supportive. Lessons learned from tragic roadway 8 fatalities that occur to fire fighters working to 9 10 assist accident victims have been made a part of 11 fatality reports and are most useful in preventing future tragedies. 12 13 We're especially grateful that NIOSH 14 recognizes and promotes that high visibility 15 garments must be warn by emergency workers operating 16 on the roadways. 17 On alert bulletin published by NIOSH on this subject listed our group as a resource for 18 19 information and training. NIOSH representatives have attended and 20 participated in our training session, and most 21 22 recently in a best practices photo shoot on the

1 Pennsylvania turnpike.

2 The outcome from this activity will result
3 in the production of free instructional injury
4 prevention materials.

5 We're pleased with the cooperation we have received from the entire NIOSH team at every level. б 7 We understand that in light of the federal budget restriction, this group of dedicated men and 8 women are pushed to the limit in the effort to 9 10 conduct the legislatively mandated investigations. 11 Prompt investigations and timely reports are crucial to preventing similar deaths and 12 13 injuries in the future. 14 Most fire departments do not have the 15 relationship or laboratories, engineers, and other

16 experts that are often needed to support an indepth 17 investigation.

18 NIOSH has these valuable contacts.

We will urge our fellow stakeholders, who are permitted to do so, to communicate with Congress about the need to support full funding for the fire fighter Fatality Investigation Program, so that the

program's mission can be completed in a timely 1 2 fashion. On behalf of our President, Gene 3 Worthington, we thank NIOSH for holding this 4 5 stakeholders meeting, and allowing us to be here 6 today. 7 Thank you. MR. REED: Thank you, Steve. 8 9 The last speaker that we have on the formal list is Jack Jarboe, and the Vice President 10 for Grace Industries. 11 12 MR. JARBOE: Good afternoon. My name is Jack Jarboe. I'm the Vice President of Grace 13 14 Industries. For 30 years, I was an active fire 15 16 fighter, and retired as a Division Chief in Prince 17 George's County, just outside of Washington DC. 18 I also sit on a couple of NFPA committees 19 for respiratory protection and for electronic safety, which now deals with the PASS devices. 20 21 I have the pleasure to work with a number 22 of people from NIOSH, Bill Haskell and Les Foord, on

1 both of those committees.

2 And let me just say that their activity, their proactive activity, and the things -- the 3 technology they bring to both of those committees, 4 5 offer the committee a great deal, and we're very appreciative of their assistance and guidance, you 6 7 know, things that they do. I also wanted to mention to you the 8 website, the NIOSH website that we have talked about 9 10 earlier today. I go there often. I think it's an 11 outstanding website with a great deal, wealth of 12 13 information. It's well crafted. It's done 14 15 professionally. 16 The one thing I do think that happens from 17 time to time is, as I travel around the country and I talk to fellow fire fighters and I ask them about, 18 19 you know, have you been able to, in fact, take some of the recommendations that NIOSH has put forth and 20 put them in place? And I see their eyes glaze over 21 22 occasionally.

That's an indication to me that they have 1 2 not looked at that website. 3 And this actually occurs in some 4 departments where I know that they have suffered a 5 fatality. 6 So it's very important that we get this 7 information to as many people as we possibly can. 8 Again, the reports are just absolutely outstanding if you take time to read them. 9 10 One suggestion I would make -- because 11 some of the same people that I converse with when I mentioned other issues of the day, they're very 12 13 quick to respond to whatever the issue might be --14 that they read this or that on firehouse.com, and 15 they can almost quote it verse by verse. 16 So I'm wondering if perhaps maybe NIOSH 17 should consider -- I know you can navigate it, but if it takes you 15 minutes to navigate from that 18 19 site to the NIOSH website, you're going to lose 20 people. 21 You only have probably 15 to 30 seconds to 22 capture their interest. And if you don't get them

right away, you know, they have other things that 1 2 distract them. But I think a direct link from that and 3 other websites like that, where people look for a 4 lot of their news and information, that might get 5 them directly to the fire fighter fatality website. 6 7 And I think the click-through rate would increase probably by tenfold. 8 9 One of the other things I would like to mention is this, just before I retired 12 years ago, 10 11 we lost a fire fighter in small, 600 square foot house fire, in Suitland, Maryland. 12 13 He was 19 years old. 14 He had effected a rescue, put the child 15 out, along with his partner, who rescued a second 16 child. And in the confusion and chaos that 17 surrounds Medevac airlift, we simply lost track of this 19-year-old. 18 19 Forty minutes later, we found him, dead, 20 with his facepiece dislodged, on the stairwell. 21 And when you go back and look at it, you 22 know, we failed this fire fighter. We failed his

family. We just needed to do a better job at fire 1 2 fighter accountability. 3 That's when I got involved with Grace Industries. They were a small family business, and 4 they were interested in trying to help us out. 5 In any event, we have worked on that for a 6 7 number of years. I just want you to know that there is 8 technology available today that can address these 9 10 problems of distress signalling and evacuation 11 signaling. The incident commanders need to know when 12 13 a fire fighter is down. The incident commander 14 needs to have a mechanism to evacuate the building 15 and everyone in there if he has an impending 16 collapse or some other calamity that he might see. 17 It just doesn't work using some of the old techniques that we have employed for over 50 years, 18 19 blowing the air horns, et cetera. There are a number of companies that 20 either have technology or have technology that's 21 22 emerging that I think can solve, to a great deal,

1 distress signaling and evacuation signaling.

But what we lack and have lacked for some eight or nine years is the ability to have a test that could validate that these technologies will, in fact, perform in the environment in which fire fighters are going to work.

7 And I would ask that the people here from NIOSH, who have the expertise, and the people from 8 NIST, who have the expertise, you know, to maybe 9 10 spearhead this, get together and come up with a test 11 that we can validate, perhaps using NFPA 5000 as a backdrop because you're going to need to look at all 12 13 the environments, all the types of construction, and 14 what have you.

But as long as we lack that mechanism to test these technologies, we're not going to be able to say to the fire service, with confidence, that they're going to perform in the environment in which you have to work.

20 I want to thank everyone from NIOSH for 21 the wonderful work they do.

22 Again, I can't say enough about the people

that do the investigations. They are absolutely 1 2 professional in every way they do. 3 From time to time, I have had a few 4 questions about something I may see, where sites 5 particular standard that might be out of date, what have you. I have emailed NIOSH. They have gotten 6 7 back to me immediately and corrected that. I think they do a great deal for the fire 8 service. 9 10 I would just like to see the fire service take advantage of all they have to offer. 11 12 Thank you. 13 MR. REED: Thank you, Jack. We're at the end of the formal 14 15 presentations for those people from whom we have 16 heard. 17 So are there others in the audience who have not had a chance to speak, who would like to 18 19 speak and -- before we get into more of the interactive, then go ahead, please. 20 21 If you would please identify yourself, 22 name and organization.

You can come here or ... 1 2 MR. BRYNER: Nelson Bryner with the fire fighting Technology Group at the Building and Fire 3 4 Research Laboratory at NIST. 5 And I made some comments to both Larry and Tom earlier, and to Tim, about injuries and the cost 6 7 of their prevention. I think the focus on fatalities here is 8 appropriate, but I think NIOSH also wants to 9 10 consider the cost of injuries, as well as their 11 prevention. 12 NIST recently through a contractor, 13 Tri-Data, took a first cut at estimating fire 14 fighter injuries and their prevention. 15 It wasn't a large project, so it didn't 16 allow for the creation of a model specific to fire 17 fighters. It, instead, surveyed existing cost models 18 19 and incorporated fire fighter specific injury data from places like NFPA and USFA. 20 21 The cost estimates ranged from three to \$8 22 billion; okay.

Now, there's a lot of issues with the way 1 2 the cost estimates were done, but the main point is 3 it's not a \$10 million problem. It's not \$100 4 million problem. We're talking about a billion 5 dollar problem. 6 So I would like to encourage that, while 7 the focus on eliminating fire fighter fatalities is important, I think NIOSH should include the cost of 8 9 injuries and the cost of preventing them as part of 10 the program. 11 Thank you. 12 MR. REED: Thank you. 13 Could we get a copy of that report, 14 please, for the record? 15 MR. BRYNER: I have, well, like three 16 copies, but if you give me a business card. 17 MR. REED: Actually, it sounds like we have it with Tom, so we're all set. Thanks. 18 19 We'll make sure we get it entered into the docket. 20 Other speakers? 21 22 UNKNOWN COMMENTER: Well, it's an absolute

1 honor to be here today.

2 And there's probably very few things that 3 are going on in the fire service that are more 4 important than this. 5 This really set the template eight years ago for really giving some scientific basis to many 6 7 of the programs that were ongoing or were starting 8 at that time. 9 And I think that there could be is a much 10 better linkage between the NIOSH fire fatality 11 investigations and some of the major epidemiologic surveys that are ongoing. 12 13 For example, the NFPA has a survey updated 14 every year on injuries and illness. IAFF has a 15 survey updated every year on injuries, illnesses and fatalities. Just like the NFPA, different 16 17 perspective of membership. The Phoenix Fire Department has one. 18 19 Our wellness/fitness program, which is ten cities, has often thought about having one. 20 21 That epidemiologic data sort of sets the 22 characteristics for what's going on in the fire

service and could yield a lot of additional 1 2 information if it was joined together and properly 3 analyzed, with specific attention on some of the things that don't result in fatalities immediately, 4 5 but ultimately might. By that I mean, what I have talked about 6 7 before, which is not heart attacks resulting in 8 death, but heart attacks or ischemic events that are occurring. 9 10 There's better treatment for this, thank 11 God, deaths will decrease, but the ischemic events 12 may actually be increasing. 13 We need to understand that. We need to 14 record it. We need to study it. If we link 15 together, we might be able to do that. 16 Occupational illness is more than just 17 heart disease in the fire service. And fatalities resulting from occupational illness is more than 18 19 just heart disease in the fire service. 20 Specifically, there are two other large areas which need to be looked at, and that's lung 21 22 disease and cancer; all right. And we need to find

1 out what's going on there.

2 And, unfortunately, much of our data is 3 being wrongly influenced by what we call 4 longitudinal dropout. 5 We know, in New York City, who is coming down with lung disease and cancer, for the most 6 7 part, in our membership, in our active fire fighters, in our active EMS workers. 8 9 Yes, some may be keeping it from us, but 10 for the most part, people are admitting it. We have good disability benefits, thank 11 God, for these two problems in New York. So for the 12 13 most part, people are telling us about it. 14 But once they retire, how do we find out 15 about this? Are these deaths occurring five years 16 of retirement, ten years of retirement, 20 years, 30 years? We should know that. And we should be able 17 to compare that to the general population. That's 18 19 the least we should be able to do, to other first 20 responders who have similar stress issues, but not the carcinogens and toxins that we inhale on a 21 22 regular basis.

And possibly, in the great world, maybe to 1 2 family members; all right, who have never had any of 3 these events or exposures; all right, and that's a 4 lot to hope for. 5 But we certainly have a long way to go, and could start instantly by trying to get the б 7 retirees to share medical information with the same 8 databases that are already existing for active members. 9 10 Maybe there could be a financial incentive 11 for them to share this information, but we are missing a large cohort. 12 And just linking with national death 13 14 registraries is not the answer because, as many of 15 you know, the last occupation is frequently the 16 occupation recorded on a death certificate, and 17 frequently the actual cause of death is no longer required on a death certificate as well. 18 19 So we are missing a tremendous factual basis for making decisions in the future. 20 21 And if it's just going to be on the 22 illness side, cardiovascular deaths, then we could

be coming to very wrong conclusions; all right, with 1 2 a limited database. 3 What I want to sort of concentrate on is 4 the issue I brought up earlier this morning. 5 We are -- in the New York City Fire Department, have been blessed to have started the 6 7 International Association for fire fighters 8 Wellness, Finance program years before the World Trade center, in 1996. It revolutionized the way we 9 10 did medicals. We did a complete medical rather than a 11 shortened medical, and we tried to do it on an every 12 13 12- to 18-month basis. 14 And we have data before the World Trade 15 Center, so we were able to compare, after the World 16 Trade Center, what has happened, and that's resulted 17 in a lot of publications that have helped our wellness, finance labor management and initiative, 18 19 and also it's gotten people good medical treatment, 20 which is really the bottom line. But despite us having this program, I 21 22 cannot clearly point to a reduction in

1 cardiovascular deaths.

2 So if we were talking -- the speaker 3 before me was talking about what is cost of these 4 programs. 5 We cannot, from a cardiovascular б viewpoint, say that we have reduced costs. And 7 that's because of the disconnect between having a 8 mandatory program, our program is mandatory, it's 9 non-punitive. 10 So if you repeatedly miss our medical, we try to get you to keep coming for it, but we don't 11 really do anything about it if you miss it, but 12 13 despite that, we have a good program. 14 About 85 percent of people participate in 15 it, and that's really fantastic. 16 Well, it's not fantastic if the 15 percent 17 of people that really need the program are actually avoiding it. If it's a random 15 percent, then it's 18 19 okay. It's not a good thing if, when we 20 repeatedly find that you're overweight, that you're 21 22 out of shape, that you have high cholesterols, that

1 you have high blood pressure, et cetera, et cetera, 2 that you either ignore it, or you only temporarily 3 deal with it; all right. That's not a good thing. 4 We heed to have a labor management 5 initiative that takes this makes it as nonpunitive as possible, but does something. 6 7 We have to start actually doing more than just talking. We need to actually do the thing that 8 we all are afraid to do. 9 10 Fire fighting is the most dangerous 11 profession on the plant Earth, and, therefore, it needs the fittest fire fighters on the planet Earth; 12 13 all right. 14 If they're not the fittest fire fighters 15 on the planet Earth, and if they repeatedly are not 16 getting fit, then we need to do something; all 17 right. It's going to hurt that fire fighter maybe 18 19 a little bit, but it's going to save his life. But more than that, it's going to send a 20 message to every other fire fighter in your work 21 22 force that it is time to become accountable, and

1 it's a mutual responsibility.

2 You're absolutely right, when the union 3 says, that guy, who is 40 pounds overweight, did not come on the job 40 pounds overweight. Management 4 5 watched him gain every one of these pounds; all right. Management watched him eat every one of 6 7 those donuts and not exercise, so management has 8 responsibility. 9 The worker also has responsibility; all 10 right. So we have to have a partnership that says, 11 the time is over, to stop playing this game. We have been trying to be consistent with 12 13 NFPA 1582 Medical Standard, which is a major 14 advance. And the last two additions of NFPA 1582 15 have really started to do more than just say we're a 16 loose set of guidelines. 17 They actually have real medical specifics

18 to them and give doctors that don't have a lot of 19 education about the fire service, real things that 20 they should be looking for and acting upon.

21 However, there are interests out there
22 that are trying to water down those standards. We

need to say to those interests; all right, that we
 have to protect these fire fighters; all right, that
 we have to maintain these standards.

4 It's a great thing for the volunteer fire 5 departments to come here and say that they are all 6 for a heart healthy program. They need to be for a 7 heart healthy workforce.

8 Because frequently; all right, when we 9 come up with very tough medical standards, there are 10 fire departments or there are groups, aggregate 11 groups out there that aren't that happy because it 12 costs money.

13 Well, we spend money on the fire trucks. 14 We have to spend money on the fire fighters. 15 And, you know, we can have education, and 16 we have programs, but if your cholesterol is 17 constantly 250, if your weight is constantly 50 pounds overweight, we need to do something about it. 18 19 The slides that were shown before, where 20 the average cholesterol was 199, that's fantastic, but that means that almost 50 percent of the people 21 22 have cholesterols above 199; all right. We need to

do something about that. 1 2 So if I can leave you with some things, 3 it's we have to start doing the programs that are 4 already out there. 5 We have some fantastic programs. We have 6 the NFPA from 1528. We have the IAFF 7 wellness/fitness Initiative. We have the fire fighter Fatality Investigations. We have the NIOSH, 8 NPP Tech Lab that's helping us bring some of this 9 10 stuff into the forefront. We have to maintain those programs. 11 But then what we have to do is we have to 12 13 say, What are some things that we need to really 14 institute, test them as interventions and see 15 whether they work, and here are some quickie ideas. They may not be right, but they're worth 16 17 thinking about, and they're worth somebody doing. For example, we need to talk about a real 18 19 risk benefit analysis for going into a fire. If there's nobody in that building, maybe we shouldn't 20 21 be in it. 22 Well, we have been saying maybe for a long

time, why don't we institute that in one big city 1 2 and see what happens? We need to think about extending work 3 4 hours, shifts, and SCBA bottles. 5 If there's no lives in jeopardy, if there's no major gigantic property that's going to, б 7 you know, spread out of control and take out the entire city, we need to say, one bottle rule, 8 period, for the interior structural fire fighting. 9 10 Bring more fire fighters in, have mutual 11 aid, but when you're done with your bottle, you don't grab another bottle and go back in. 12 13 If this is the most dangerous fire -workforce in the world, if this is the most 14 15 physically vigorous in the world, if this is the 16 most exposed hazmat thing in the world, one bottle, 17 and you're out. And that's something that just requires 18 19 guts. It requires a little bit of money and some administrative oversight. 20 Sometimes we're our worst enemies. 21 22 And the fire fighter is the one that wants

to go back in, this is the best fire I have been in 1 2 in the last year; all right. 3 And we need to do the same thing with health, weight, cholesterol, certainly multiple risk 4 5 factors, we need to put the brake on, and we need to just say, You're coming out of here; all right. 6 7 Those are the things that I would leave us -- that's what I think we need to be studying. 8 9 We need to put those interventions in 10 place, study them, and see what happens. Bite the bullet. 11 Thank you very much. 12 13 MR. REED: Thank you. 14 Other speakers, yes. 15 MR. REHFELD: I'm Mike Rehfeld, Baltimore 16 County Professional fire fighters, IAFF Local 1311. 17 Just a couple of thoughts that I had that I think NIOSH needs to hear. 18 19 The first is, is that this program has 20 truly been priceless for the fire service. The information that we have gained over the last eight 21 22 years has led to a tremendous amount of change in

1 the fire service.

2 Prior the NIOSH starting these 3 recommendations, not many fire departments knew what an INS system was, much less, did it. Not many of 4 5 them knew what a rapid intervention team was, much 6 less, did it. 7 In my particular department, we instituted 8 a rapid intervention team program from scratch as a result of the NIOSH recommendations. 9 10 So there is value to the program, and I 11 don't think any cuts are warranted at all, much less, trying to get full funding. 12 13 Kind of a background on the next step and 14 where I think, from a stakeholder standpoint, I'm 15 just a truck driver on a truck company, so I don't 16 have any political agenda. I don't have any, you 17 know, need to be seen or heard, so we get full value at the ground level. That's what I do. 18 19 There needs to be a mechanism to move from 20 recommendation to compliance. With the 21 recommendation, say it from an event, has got to be 22 moved from a point to where it's enforced to occur.

If we don't do that, we're not going to
 accomplish the end result, which is reducing the
 fatalities and the injuries.

4 Right now, there doesn't seem to be that
5 mechanism, anywhere. If a jurisdiction doesn't
6 adopt an NFPA standard as law, there's no force for
7 it to be complied with at the department level.

8 If OSHA doesn't adopt the regulation, and 9 make it mandated or mandatory to comply, it doesn't 10 occur, for the most part.

11 There needs to be political involvement in 12 the NIOSH reporting, and I'll get to how to do that 13 in a second.

And then, again, there needs to be compliance enforcement once the recommendations are made, and they need to be followed up on, and then there has to be some enforcement mechanism to make sure that they're acted on.

19 And I don't think that exists right now.
20 Recommendations, I think Rich Duffy said
21 the morning that police view police fatalities as a
22 crime scene every time. Whether it's a motor

vehicle accident, whether it's a shooting, a 1 2 stabbing, or another act of violence, it's treated as a crime scene, it's investigated like any other 3 4 crime scene. 5 I really think we need to move the NIOSH program in that direction, i.e., if you have a plane 6 7 crash, NTSB is notified, FAA is notified, and there's an immediate response mechanism. 8 9 Right now, NIOSH doesn't have that 10 immediate response mechanism in place. And I really 11 think that we need to look at that to preserve the evidence, and to do an adequate crime scene 12 13 investigation. 14 There needs to be a follow-up on the 15 recommendations. 16 I made that comment this morning. I won't 17 beat on that point, but there needs to be some mechanism to go from these are the recommendations, 18 19 or is your department now complying with them at some point in time, and some follow-up. 20 21 And a lot of that follow-up doesn't take 22 anything more than a phone call to get that

1 information.

2 I think the reports need to be 3 disseminated to the political entity that that event occurred in, i.e., if it involves Baltimore City, 4 5 than a copy of that report goes to the major of б Baltimore City. A lot of the recommendations that are made 7 in these reports deal strictly with staffing or 8 funding or making sure an INF system was inforced. 9 10 If the fire chief of that subdivision doesn't address the issue, he has no one over the 11 top of him going, are you doing this, or why aren't 1213 you doing this, where he has to justify that 14 operation. 15 So I think that would be an important step 16 in moving forward. 17 And then, I think there needs to be a way to move all the near-miss and close call information 18 19 into this process, so that it's not out there on Chief Goldfetter's site, closecalls.com, or in the 20 Near-Miss site for the I chiefs, or wherever. It's 21 22 spread out.

We need to be able to pull that 1 2 information in. And I think, to move NIOSH one step 3 further is to try and reduce some of these incidents 4 5 that they need to take and move a little more towards the injury issue, and look at the 6 7 near-misses, especially the ones that result in significant injury or disabilities. 8 9 I think that would give us a clear picture 10 of where we are and where we need to go. 11 Thank you. 12 MR. REED: Thank you. 13 Others? 14 MR. BERNZWEIG: Dave Bernzweig from 15 Columbus fire fighters union. 16 There has been some good comments today, 17 but there's one thing that I have felt has been missing largely from the discussion, with the 18 19 exception of Chief Hartin mentioned a little bit 20 about. 21 We talked a lot today about the rate of 22 cardiac fire fighter fatalities and how that has

pretty much stayed the same, remained level in the 1 2 past 25 years. 3 What we haven't talked a lot about is the rate of fire fighter fatalities inside of 4 structures, and specifically, as Chief Hartin 5 6 mentioned, was the noncardiac rate. 7 NFPA did a study in 2002, looked at 8 basically 23 years with a rolling average, and found that inside structures, these noncardiac deaths, the 9 10 rate actually has been on the rise since '77, and 11 it's actually nearly doubled in some areas, specifically in the area of asphyxia or lost -- fire 12 13 fighters who get lost and running out of air. 14 This is a problem. 15 Asphyxia is a very big problem. Chief Dickinson mentioned a little bit 16 17 about disorientation, which is a contributing factor to asphyxia, obviously. It's not the cause of 18 19 death, but it is certainly leading up to the 20 problem. 21 The fire service has begun to recognize a 22 disorientation problem. We have -- been some the

1 studies done on it.

There's the U.S. fire fighter 2 Disorientation study, looking at what causes 3 disorientation. The U.S. Fire Administration has 4 5 published that in the last two fire fighter Fatality б reports. 7 It's getting more play, but we're solving the problem. 8 9 And in the NFPA report by Rita Fahy, she 10 asked the question at the end, why? Why is this 11 happening? Why are we killing these fire fighters? Why is the rate increasing? 12 13 And we have answered it. 14 Well, it's increasing because 15 disorientation is a big problem. And the solution 16 to that, that the fire service has largely adopted 17 is air management. We said, Well, you have got to manage your 18 19 air better. We looked at this issue about four years ago in Columbus, and we decided that air 20 management wasn't the solution for us. 21 22 We think it's a cop out.

We think that what air management is doing 1 2 for the fire service is it's putting -- they're 3 blaming the victim. 4 Air management is trying to -- what it 5 does is we're saying, Well, we're not giving ourselves enough air. Let's go ahead and manage our 6 7 air differently. The reason we're not giving ourselves 8 enough air is that we don't have any margin of error 9 10 when we plan our air. 25 percent alarm is what the fire service 11 uses. We know we need more than 25 percent. But 12 13 rather than adjust our alarm, we say, Well, just 14 leave before your alarm goes off. 15 It's a human solution. 16 The fire service has a human solution to a 17 mechanical problem. And it's a mechanical problem only because it's a regulatory problem. 18 19 What I'm referring to is 42CFR, been in place -- I know it's been revised. That got revised 20 in what, '91, '94, but it didn't change, at least, 21 22 this portion of it, since prior to 1960, where the

20 to 25 percent end of service alarm was in place. 1 2 So here we are, since 45 years now, at 3 least, where we have a low air alarm, which has an upper limit on it. 4 5 And so four years ago in Columbus, we decided we were going to get a new SCBA, wanted a 6 7 larger bottle, allocating more air for exit, keep 8 our work period the same, address all those concerns that departments have when we talk about air. 9 10 We're worried about depth of entry. We're 11 worried about the structural degradation, worried about cardiac stress and thermal stress, and all 12 13 these things. 14 We don't want to change any of that. What 15 we wanted to change was our margin of error. We wanted to exit earlier. 16 17 What we found is that we can't do that because of 42CFR. 18 19 Now, I realize that's covered by NPPTL. 20 It's not necessarily the fire fighter 21 Fatality Investigation branch, but one of the 22 responsibilities of the branch is to recommend

1 changes and to identify areas that there could be 2 work. So what we need, what I'm asking for, is 3 that we do, from this branch, that you do ask for 4 5 some regulatory action, ask for a change. 6 Also, what we do for the fire service is 7 we could put an alert together and talk about disorientation, and say this is a fire service 8 9 problem. 10 We need a NIOSH alert on disorientation, 11 and talk about ways we can mitigate the problem. 12 Because the fire service can't really 13 address it until -- completely address it, 14 appropriately address it until 42CFR addresses it. 15 So I appreciate your time, appreciate 16 everything everybody had to say here today. 17 Thank you. MR. REED: Thank you. 18 19 We'll go to this side now, next. MR. KREIS: My name is Steve Kreis. I'm 20 21 the Operations Chief for the Phoenix Fire 22 Department.

Let me just speak today just a little bit 1 2 from a perspective of maybe the local fire chief or a local operations chief, or a chief in a 3 4 department. 5 Is it -- and I thought when I got here today that I had a pretty good understanding of 6 7 safety systems and safety organizations within the fire service, but I'm probably more confused now 8 today than ever, is that there are a ton of 9 10 outstanding programs going on in the United States. 11 And just listening to all of you talk about them today, and thank you all for putting this 12 13 thing on, as it really is good for us. 14 But I guess what I would ask -- and I 15 don't know if it's NIOSH's role to do this or if 16 it's the IAFF, or the IAFC, or who, is I think we're 17 to the point that we're right on the edge of making a difference for fire fighter safety in the United 18 19 States. 20 If you look at the programs that are going 21 on, we're close. But I think we need a little bit 22 of leadership.

And maybe it's NIOSH or somebody to gather 1 2 these groups, put together some sort of 3 collaborative effort where we don't have redundant programs going on in certain areas, where that we 4 5 end up working together in these events and these types of incidents that are going on. 6 7 So I guess I would challenge NIOSH or somebody in this group here -- and all of you are 8 very high powered folks -- but from the local guy's 9 10 perspective is that I don't know who to call when. 11 And I really don't know what to do about a 12 lot of things that are going on. 13 And it would be nice if you could help us 14 with that because we're simply -- we're trying to 15 make our fire departments run. 16 And if you talk to the average fire chief 17 or the average operations chief, I'm worried about putting trucks on the street. 18 19 And second is some of the stuff that we're talking about today. But this is truly the most 20 21 critical topic in the American fire service. 22 So I think that's a big deal for us.

Just a couple of other notes that I took 1 2 here that probably do apply to NIOSH. 3 And I think that we need to maintain 4 the -- or the funding needs to be maintained, 5 probably needs to be increased. 6 But if you look at, I think again, from a 7 local's perspective, is that I would hope that NIOSH 8 is going to help me. 9 And I think the perception out there, 10 again, is the federal government is coming in to 11 regulate us or do something to us. And I think, if you could -- I would hope 12 13 that if you could maybe focus on some advertising 14 and education, and figure out ways to assist the 15 local fire service. 16 And I must admit that we had an incident 17 on March 14, exactly five years ago, where fire fighter, Brett Tarver (phonetic) died in the line of 18 19 duty. And the folks that you sent out were just 20 outstanding, is that they were first class and assisted us with that process. 21 22 But I suspect a lot of organizations in

the fire service may not be in that kind of 1 2 position. So, again, if you could figure out a way 3 to assist us and help us in those types of 4 investigations, I think that would be great. 5 6 The vehicle safety deal that Rich was 7 going to play for us having to do with ambulances is outstanding, is that fire fighters die in the line 8 of duty, as you all know better than I do, driving 9 10 to and returning from calls, is that there has got to be a better way to make a safer vehicle for us to 11 ride in. 12 13 So please continue with that. 14 Another focus that I would like to see 15 from NIOSH, especially, is maybe focus on some 16 prevention, injury prevention. 17 I don't know how you prevent fatalities, but there has got to be a way to do it in the fire 18 19 service. And you capture -- in your investigations, 20 you capture the reasons why fire fighters die in the 21 22 line of duty. It would be nice to twist that a

little bit and do some front end stuff having to do 1 2 with fire fighter fatality prevention. 3 One other aspect that I would -- and I would like to volunteer Phoenix maybe, if you 4 haven't already done it, to be the first -- as 5 again, I mentioned five years ago, fire fighter 6 7 Tarvar died in the line of duty -- is that to date, 8 right now, going on in Phoenix, is a revisit of that whole event. 9 10 Is that we have done five years of 11 training, five years of operational changes, five years of SOP changes, and it would be really nice 12 13 if -- and I had a chance to talk to Dawn at the break, if you could come out -- if NIOSH could come 14 15 out and assists us in looking at the things that we change, and see if, in fact, we did the -- if we 16 17 followed through on the recommendations that you all 18 made. 19 It would be nice to have that sort of an 20 assessment. I think Dr. Prezant said it this morning, 21 22 probably better than any of us can -- and I would

echo a lot of his comments that he made just a few 1 2 minutes ago -- but the new stuff is fun, discovering 3 new ideas, discovering new medical procedures. 4 The tough part is enforcing and putting those recommendations into place. 5 And the old part or the things that we 6 7 have been -- we continue to go around in circles 8 with fire fighter fatalities, your reports show it as that it's the same sets of things that get fire 9 10 fighters every day. I don't know for sure how we fix that in 11 the fire service. I would hope that we can come up 12 13 with a way. 14 I think a collaborative effort on all of 15 our parts would really get us there. 16 But I think -- based on that, I think, 17 like I started out saying, is that we're right on --I believe we're right on the edge of making a 18 19 significant difference in the American fire service 20 today in how we -- as far as injuries and safety and welfare of fire fighters is concerned. 21 22 And I would challenge this group to step

up and maybe collaborate and work together and help 1 2 out the locals. 3 Thank you. 4 MR. REED: Thank you. 5 MR. REALL: Thank you. My name is Jack Reall. I'm with the Columbus, Ohio Division of 6 7 Fire. I just took a couple of notes, a couple of 8 9 things that I saw here, and I'll just reiterate a 10 couple of them, actually, that have been mentioned 11 already. 12 One of the things that I really like, the 13 NIOSH reports. They come across my desk every week, 14 ten days, two weeks, whether they get there, and I 15 try to read through them. 16 My colleague, Dave Bernzweig, signed me up 17 for the mailing list, so I can get more mail. 18 I appreciate that. But they're very good. 19 I look right at the recommendations, see if there's anything that we can start doing in our 20 department to make change. 21 22 But -- and fortunately, I read all of

them. The problem for me is I look for things that 1 2 I can use the data out of that. We collect data. 3 There's a lot of data collected to do a NIOSH investigation. But then it becomes unusable 4 data for us, for the most part. 5 We can sort and search based on very few 6 7 things out of the NIOSH report. 8 And I would like to have more accessible use of the data that's collected so that I can 9 search for departments in my size or my operational 10 11 window to identify the trends that are occurring. Another thing I would like to see is some, 12 13 click links, for lack of a better word, to other 14 NIOSH reports that have similar involvement or 15 recommendations, and include the Near-Miss reporting 16 System in that. 17 And if we're getting 10,000 near-misses for one fatality, I would like to see 10,000 links 18 19 on there, you know, so that I can see how many times 20 we have made that mistake before we got caught. 21 I think that's a good thing. 22 But all of these refer back to this

similar thing that I think everybody has mentioned, 1 2 is they are good documents. I would like to see 3 nothing degrade out of them. 4 I would just like to see them a little bit 5 more user friendly, for those of us that are using them for -- to hopefully make change before we have 6 7 a need for a NIOSH report. 8 And that's pretty much it. 9 I really enjoy them, and I would like to see them keep coming out the way they are, but just 10 11 make them -- at least the data a little bit more user friendly for us. 12 13 Thank you. 14 MR. REED: Thank you. Any other? 15 MR. HORN: Afternoon, Gavin Horn, Illinois 16 Fire Service Institute. We are the state statutory 17 training institution for Illinois. And what really got me very interested in 18 19 this was the relationship between training and these reports. We use them. 20 21 We change our SOPs as much as we can, not 22 only the research that we do in-house, but also some

of the results and recommendations that we get from 1 2 these. 3 And I think that's pretty common across a lot of the state academies. 4 5 We would also like to see some of the information going the other way. In fact, I believe 6 7 that was mentioned before, Mr. Hartin, what is the relationship between the training and the 8 experience, and these fatalities? 9 10 We're doing a little bit of research in 11 terms of how someone's training and experience affects their decision making. 12 13 But unless we can collect the data that 14 says how this discission making ability affects them 15 in terms of injuries or in terms of fatality, we 16 can't make as strong of a point. 17 So that's one area that we would very much be interested in learning more in terms of whether 18 19 we can gather that data and how detailed that data 20 can be, not only have they had the training, when is the last time they had the training and how recently 21 22 was that updated.

I know that's a lot of data that needs to 1 2 be collected on top of what you're already 3 collecting, but it could be useful. 4 Now, the other point that was made a 5 couple of times today was the change in the fire service activities. 6 7 So we can say, in a sense, that we have the same number of fatalities over the last ten, 15 8 years, but if we look at it, we can also say, well, 9 10 we're reducing the number of fires. 11 So some might expect from the outside, that we really actually increase in the rate of the 12 heart attacks. 13 14 But then again, if we look at it, there's 15 other stressors that are now coming into the fire 16 service, that we're just now beginning to 17 understand. We have typically looked at heat stress 18 19 just from a structural fire fighting and also from a wildland fire fighting point of view. 20 21 But there's also heat stress, we're 22 finding, from a three-hour technical rescue

1 validation exercise.

2 We're starting to find people that we need 3 to send to the hospital from working three hours in 4 the heat.

5 This isn't in a fire, but it's in the heat, and this is changing the stresses on the body. 6 7 So with some of this data, if we can 8 understand what were the activities that were being carried out before or during, we might be able to 9 10 understand how certain new types of activities in the fire service are affecting the human body, as 11 opposed to just the traditional measures that we 12 13 have looked at in the past. 14 So those are a couple of recommendations 15 from our point, that we would really like to see. 16 And we appreciate everything that NIOSH 17 has done, and we very much use them. And thank you very much. 18 19 MR. REED: Other speakers? 20 Okay. Not seeing any, we have some time, and we would like to take advantage of this rare 21 22 gathering of people to maybe engage in a dialogue,

or perhaps some discussion from the -- for some of 1 2 the speakers, you know, in terms of questions. I'm thinking, for example, that NIOSH 3 4 staff might have questions of some of these great 5 ideas for future work, you know, where there's Near-Miss, or you know, additional health studies, 6 7 cardiovascular disease, or injury prevention. 8 So now is the time. 9 We have this rare gathering of expert people, and/or vice versa, you know, the 10 stakeholders asking questions of NIOSH staff, 11 12 perhaps. 13 So if you have comments or thoughts, we 14 would love to hear them now. 15 That includes both directions, you know, NIOSH staff of the stakeholders, and vice verse. 16 17 So, again, the only thing I would ask is that you go to a microphone for the record and just 18 19 identify yourself. MR. HARTIN: Ed Hartin, from Gresham Fire. 20 21 I guess this is more in the form of a 22 comment more than a question.

I know, several times, I have wanted to 1 2 follow up on something I read in a NIOSH report, and 3 I go to the NIOSH website, which I find to be very 4 handy, except when it comes to finding out who do I 5 call to find out the answer to this question. If I'm looking for Jay Tarley's email, it 6 7 took me a little bit of doing to find it, or who is in charge of this or that or the other thing. 8 9 I guess a comment if you want to make the 10 information more accessible encourage more dialogue, 11 to provide some sort of hear's how the program is organized, here are the people that you can contact 12 13 easy access to the email, and addresses of the individuals involved in such. 14 15 MR. REED: Thank you. 16 MR. ROMAKA: Bill Romaka, with the 17 Uniformed fire fighters, Health and Safety Officer. One of the things that I think that I 18 19 would like to see you guys do is with your fatal 20 fire reports, the fatal reports, if you could do one on somebody who dies of cancer, administrative line 21 22 of duty, I think you would bring the message and hit

home with regard to how -- what we're not doing 1 2 correctly might be killing us in the field. 3 You put down causes. It would be 4 something that if you did it like on a yearly basis, 5 it would keep people -- it on the front of everybody's mind. 6 7 Just a consideration. 8 MR. REED: Thank you. Any comments or reaction. 9 10 MR. HALES: This is Tom Hales. The issue of cancer clusters are 11 difficult. And in general, we have handled those 1213 situations where we have been asked to look at 14 cancer clusters through our NIOSH HHE program. 15 Sometimes those involve extensive studies, and sometimes it's just addressing the potential and 16 17 how to help yourself. There's a wide spectrum of the ways we 18 19 handle those evaluations or those requests. 20 I'm hesitant to offer the fatality program services to cancer clusters or cancer fatalities 21 22 because that could easily take up everything we do

1 and all our time, and more so.

2 That's, you know, that's something worth 3 discussing here. And, you know, let's open it up to 4 the audience.

5 I -- Dave Prezant mentioned, you know,
6 that maybe we should be doing larger cohort
7 mortality studies looking at cancer.

And I sort of go back to one of our CBD 8 meetings we had, where Jim Mellious (phonetic) was 9 10 there, and he saying, Look, the Healthy Worker 11 Effect is so strong in this workgroup, and the problem with ascertaining information, people, once 12 13 they retire because their job is listed -- their job 14 of record is what they're doing at the time they 15 died, and we lose that information. 16 And that those barriers to conducting

17 these good -- one study to answer all these 25 18 studies that have looked at this issue, is really 19 not feasible.

20 And it's certainly not the answer you want 21 to hear, but from my perspective, it's a difficult 22 issue, and I don't have an answer for it.

MR. PREZANT: Well, first off, I think --1 2 MR. REED: Could you identify yourself 3 again, please? 4 MR. PREZANT: Dave Prezant, New York City 5 Fire Department. I think that Bill Romaka -- yeah? I think 6 7 that Bill Romaka, from the Uniformed fire fighters Association in New York City wasn't actually arguing 8 that you do a cancer cluster investigation, which 9 10 would really have a lot of problems associated with it because you're not certain. And being the 11 federal government, you sort of have to be certain. 12 13 What he was suggesting, if I heard him 14 right, is that you just highlight a single case, 15 that you don't come down and say that it was definitively a fire, but rather this is one death. 16 17 It's one death in an estimated number of X deaths 18 per year. 19 And it highlights to us all of the 20 potential carcinogens out there that fire fighters are exposed to regularly. 21 22 It should highlight to us the need for

proper respiratory protection, for proper medical
 evaluations pre and post retirement, for more
 reserve time in the SCBA, for one-bottle rule in the
 SCBA, et cetera, et cetera.

5 These are potential things that -- I don't 6 have all the answer to how this should be, but I 7 think the purpose was to just highlight it so that 8 people could start talking about it, and to 9 recognize that these are fatalities.

10 There's something -- highlight a young 11 person; all right, that there's something about fires that may be synergistically part of the 12 13 problem. I mean, that's what he was suggesting. 14 I think to follow up on what you were 15 saying, I don't think it's impossible to do these 16 studies. I think that it would take millions and 17 millions and millions of dollars to duplicate a Framingham study in the New York City or any fire 18 19 service. 20 But we could be simpler.

21 We could, as Phoenix suggested, have a 22 subsequent meeting with some collaboration of

current ongoing survey tools, IAFF, NFPA, Phoenix, 1 2 some big databases like FDNY, with some NIOSH input, 3 and see if we could get to the next level of 4 recommendations and a future FE study. 5 It could be a ten-question thing that we mail to every retiree in X number of fire 6 7 departments, and get the unions and management to 8 buy in that, you know, every two years or whatever, we're going to mail this out and get it back, and 9 10 have a website so they can even go online and do it. 11 This is something that, if you keep it to ten questions, it's not going to be a perfect study, 12 13 but it will give you some information, have you had 14 a heart attack this year, have you come down with 15 any lung diseases this year, have you come down with 16 any cancers this year? 17 It could be that simple. MR. HALES: I think there's a lot of 18 19 programs in looking at, like we say, the nonfatal cardiovascular disease issues, and in exploring 20 21 that, about the circumstances of those, is very 22 fertile in my view.

And picking a couple of departments in 1 2 which to focus on there, and use that as a 3 springboard to talk about the issue in general. 4 Because right now, there's no national 5 reporting system, as you know, for nonfatal cardiac 6 events. 7 I would like to say one thing. A separate issue, different topic about the NFPA standards. 8 9 And we frequently refer to the NFPA 10 standards during our reports, about what the consensus standards say and that they're being 11 12 followed. 13 And at least with the illness 14 investigations that we do, we frequently ask them 15 are you in compliance with NFPA 1582, which is the medical standards. 16 17 And they say, yeah, of course we are. And then you actually go into their program, and they 18 19 aren't even close. They aren't even close to doing it. 20 21 So it's this disconnect in which 22 departments feel that they're in compliance with the

1 fire services consensus base standards out there, 2 and yet, they aren't. 3 And part of that is, you know, we have talked about the barriers to implementing our 4 recommendations. 5 Well, if they think they're compliant with 6 7 1582, and they aren't, that's not a financial issue. That's not a local union blocking issue. That's an 8 education issue. 9 10 And so I think it's a combination of 11 education and other financial barriers that are some of the barriers to implementing our recommendations. 12 13 MR. PETERSON: Carl Peterson, NFPA. 14 And I have been involved in a past life in 15 NFPA with fire reporting, data gathering, and one of 16 the things I have realized early on, and I think 17 it's still true today, is that the fire service doesn't like to report things. It doesn't like to 18 19 collect data. 20 But I also wanted to follow up on 21 something that you just said, in that I think 22 sometimes what people think they have got in place

versus what's really happening are two entirely 1 2 different things. 3 Do we have a seat belt policy? Yes. Well, then why did the guy fall of the fire truck? 4 5 Okay, do we have our health and safety program? Yes. Well, then why are people sick or 6 7 injured, or whatever? So I think oftentimes there is -- you 8 know, whether it's part of the reporting or whether 9 10 it's perceived as to what's really going on in the 11 department, that, yeah, we have got -- we are taking care of the bases -- we have covered the bases. We 12 13 have done an SOP, or whatever, and, therefore, 14 things are wonderful until the shit hits the fan. 15 And then, well, it must have been, you 16 know, Charlie or Johnny or something, you know, not 17 doing something right. But we're not looking at things on a 18 19 day-to-day basis and realizing sometimes that, you 20 know, the potential is there because we're not 21 following the SOPs, or we don't have the proper 22 procedures in place or whatever, so...

1 That's it. 2 MR. HALES: Yeah. And part of the data 3 that we collect during the fatality investigations ask are they following NFPA standards that are 4 5 appropriate. And then we also ask the question, Are you 6 7 enforcing them. So not only do you develop them and 8 enforce them, but, you know, in our snapshot in 9 10 time, we're still left with the same problem if they 11 say, Well, of course, we enforce them. And then we're like well -- I mean, 12 13 particularly when we're talking about NFPA standards 14 that aren't related to that particular fatality. 15 So if, let's say, it was a cardiovascular 16 fatality, and I'm asking about seat belt, which is 17 part of our data collection process. And, you say, of course we have got a policy, and of course we 18 19 enforce it. But we, you know, if you have some great 20 21 ideas that we can figure out how to gauge the 22 honesty of that answer, that would be great.

MR. REHFELD: Mike Rehfeld, Baltimore 1 2 County fire fighters. 3 I can give you a suggestion on how to 4 gauge it, go ask a fire fighter. Don't ask the 5 management. 6 Go down and ask the guy on the street, you 7 know, is your department doing this. And chances are, he's probably going to give you a pretty honest 8 9 answer. 10 MR. HALES: Got you. One other thing I mentioned, I have 11 forgotten who brought up the issues of links to our 12 data on our website. And I think Tim's group has 13 14 done a really nice job. 15 I think Mark McFall has done some work in 16 trying to link particular recommendations, as well 17 as particular type of fatalities so you can click on a menu and get all of our reports on that particular 18 19 topic. Is that adequately -- Mark. 20 21 Mark, do you want to mention that, or talk 22 about it?

MR. MCFALL: Apparently --1 2 MR. REED: Could you do the -- go to the 3 microphone, please? MR. MCFALL: Currently --4 MR. REED: And identify yourself, I'm 5 б sorry. 7 MR. MCFALL: That's -- there we go. Currently, the future that Dr. Hales is 8 talking about doesn't list the cause of death or the 9 10 type of injury or the recommendations, but we have 11 built the foundation to expand into that. 12 Obviously, that takes time and resources. 13 But you can pull up state, year, and/or 14 type of incident, whether it be medical or trauma 15 related, so. 16 MR. WHITNEY: If I could -- is this thing 17 turned on? 18 If I can just comment on that? 19 MR. REED: Yeah. Your name, again. MR. MCFALL: I'm Mark Whitney of the U.S. 20 Fire Administration. 21 Our website, which, as Charlie mentioned, 22

we get a quarter million visits just to the fatality 1 2 section. We have links built into the NIOSH reports throughout our website, including in our database. 3 4 One of the features we're going to be 5 adding to that web site and to the database, hopefully within the next half year or so, will be a б 7 keyword type search. Because I get phone calls all the time for 8 specific, hey, I'm looking for this keyword. 9 10 And without having to go through and read, 11 they can actually search on the keyword, find it in the summary, and then click. 12 13 Because our reports, our summaries are by 14 their nature brief because we know we have the asset 15 of NIOSH reports to rely on. So they can go to the 16 keyword, find the initial summary, and if they want 17 more information, click on the NIOSH report and go to the more detailed information. 18 19 So hopefully that will help more in that 20 regard as far as making the NIOSH information even 21 more accessible for specific type things that people 22 are looking for.

1 MR. PETERSON: Carl Peterson, again. Just 2 another thought. 3 All NFPA standards now are available 4 online in a read-only format. 5 It might be helpful if people see NFPA Standard 1500, 1582, whatever it is, and say, oh, I б 7 can't afford that, or whatever, and have a link right there that will take them to our site, and I 8 9 can work with Mark, or whatever, on these if you 10 want, and you know, write that standard. MR. HALES: They're all online now? 11 12 MR. PETERSON: Yeah. 13 MR. HALES: Wow. 14 MR. PETERSON: Every standard. 15 Now, it's a read-only format. 16 You can't print it. You can't -- you 17 know, it has got an index and whatnot, but it's there. 18 19 So there's no, I can't afford the \$35 or 20 whatever. 21 MR. HALES: Thank you. 22 MR. MADDEN: Gene Madden, again.

And, yes, I did change my trousers. 1 2 There's a maybe interesting wildland fire statics on our NWCT website, if you don't already 3 know, since our fatalities, U.S. Injury Records go 4 5 back to 1910. And you can go onto that site, and either 6 7 by year, state, or type of fatality, that you can query the data and bring that up very rapidly. 8 9 Also, within that, besides the annual 10 safetygrams that you can go back and review as well, 11 you can also link to the lessons learned center, which is now a repository for our lessons learned 12 13 from accident data. 14 And that might be helpful to you as you 15 start to get those trucks and slip on units, and 16 kind of dabble out there in the wildland community 17 and deal with those kinds of issues. Also on our website, is the 310-1 Wildland 18 19 Standards Guide, if you are interested in and curious about what our training standards and 20 21 requirements are, you can query that, as well. 22 I'm sure many in this room have done so,

but that's another opportunity for you all to go 1 2 home with. 3 Thank you. 4 MR. REED: Any other questions? I guess I'm also looking to the NIOSH 5 staff here also in terms of clarification of points 6 7 from the stakeholders' presentations. I'll start. 8 9 First, I'll be the first to admit that I'm 10 the relative newcomer to this arena, have no -don't have the level of expertise that the others in 11 NIOSH have in this area. 12 13 But there are clearly common themes that we have heard across here today. And, you know, we 14 15 do take this meeting very seriously, and we find it 16 to be a very good meeting. 17 In fact, tomorrow, well in advance of our transcript being finalized, I know we will be 18 meeting by tele-videoconferencing to talk about, 19 sort of while the information is still fresh in our 20 mind and the lessons learned from this meeting, and 21 22 talk about the common themes that we have heard.

Most clearly and most certainly, you know, 1 2 the continued fatality investigations are clearly universally important, and we will most certainly 3 4 continue those. 5 There are other themes that we certainly want to investigate. Limited resources, you know, 6 7 will make that a difficult tasking to try to implement in a research mode these days. 8 9 But we will certainly make every effort to, you know, to prioritize what we have heard here 10 11 and implement it as much as we possibly can. We also -- as I mentioned this morning, we 12 13 also had promised to prepare a summary report, and 14 at least conceptually, we don't know exactly what it 15 would look at this point in time, but most certainly 16 it will be a summary report based upon the themes 17 that we have heard here today, and in our conclusions from those themes. 18 19 We may even be able to post that on the web in draft form for comment. And that's something 20 that needs to be worked out, I think. 21 22 But to allow at least participants of this

meeting, if not the entire public in an open forum, 1 2 the opportunity to react to that, those, for 3 example, who couldn't be a part of this meeting 4 today. 5 Are there any last opportunities for comments or for, you know, points, discussion points 6 7 or clarifications or just dialogue while we're all 8 here? 9 MR. DUFFY: I need to say -- Rich Duffy 10 International Association of fire fighters. I want to bring up another sore point 11 topic that I brought up eight years ago, right from 12 13 the beginning. 14 I think you need to reconsider how these 15 reports are reported out, and I understand the 16 history of it. 17 I understand it came from the prior NIOSH industry fatal accident investigation, but, you 18 19 know, I think it's a disrespect to the deceased. 20 I think it's disrespectful to the family. And I think it's disrespectful to the fire 21 22 department to put these reports out as "six fire

fighters died in central Massachusetts on this 1 2 date." We all know it was Worcester. Or 343 fire 3 fighters died in Southern New York City, you know. 4 I mean -- and that's how you report it. 5 And I understand the industry, but we're talking here very public information. 6 7 And every time I read a report of investigations in the abstract -- well, just the 8 opposite. Every time I read a report that 9 10 personalizes it with the name of the fire fighter, 11 the fire department he or she is from, I think it sends home that it's not in the abstract anymore. 12 13 And I think you need to reconsider that 14 because I think it's a -- I just find it very, very 15 disrespectful. 16 For all of the work that we have done, to 17 go out reporting it in the abstract, you know, fire captain dies wherever it was, and without clearly 18 19 saying who it was. 20 There is no problem with confidentiality. 21 It appeared on the front page of every newspaper. 22 His or her picture was on the front page of that

newspaper. The fire department website has it. 1 The 2 United States Fire Administration reports it out on 3 it's official government website. 4 We report it out. 5 Other fire service organizations report it out, and no one has ever complained to us about 6 7 reporting out, nor the newspaper, and so forth. So I would -- I know it's not a big deal, 8 but for me, it is, for my organization, it is. 9 10 And you know, we tell the report 11 available, we certainly put the names down and the fire department where it's from. 12 13 So I would bring that point up this time, 14 as I did eight years ago, and I will probably bring 15 it up eight years from now, but I wish you would 16 consider that, again. 17 MR. AUSTIN: Steve Austin. I actually paid a lot of attention to 18 19 Rich's presentation this morning. 20 And I think that -- I think that, Rich, it was the third from the last slide, if it were, and 21 22 you brought up a point that no one has mentioned

here today, and that was the point about 1 2 collaboration. Let me expand on that a little bit and 3 4 talk about it from an area that I know a little bit 5 about. 6 We know that we have emergency responders 7 struck on the highway every day. We have recently learned that more police 8 officers die in motor vehicle related injuries than 9 10 they do being shot by a gun. 11 And we know that transportation workers, primarily people working for state DOTs, about 1,000 12 13 of them get killed on the roadway every year, struck 14 by another vehicle. 15 And we know that the EMTs get struck on 16 the road, and fire fighters get struck on the road. 17 This just isn't a NIOSH problem. This just isn't a fire service problem. 18 19 This is a problem for people, not only in HHS, but in justice, in the DHS to be working in 20 21 DOT. 22 Now, there are various programs in all

those agencies that deal with this issue, but there 1 2 is zero collaboration. 3 I think that's where Rich was going this 4 morning. 5 We need to get together, even among the cabinet level of departments in the federal 6 7 government, and pull these very valuable resources. Because basically, the same thing is 8 killing these other populations, and that's somebody 9 10 in an automobile that's not paying close enough 11 attention to somebody that's working on the highway in an unusual situation. 12 13 So I would ask that NIOSH and HHS maybe 14 step up and be the leadership area here because 15 you're already investigating these, and work with 16 DOT, and reach out to the folks who are at NIJ and 17 Justice, and reach out to others and try to put together something like maybe the Wildfire 18 19 Coordination Group, or at least a think tank or 20 something that would take a look at these reoccurring injuries and see if we can all work 21 22 together to try to eliminate some of them.

1 Thank you. 2 MR. WHITNEY: I would like to address that 3 comment just a sec. Mark Whitney, again, from the Fire 4 5 Administration. There is, as a matter of fact, a good deal 6 7 of collaboration going on between a number of the different agencies, transportation, Department of 8 Justice, U.S. Fire Administration, et cetera. 9 10 I'm not saying that there couldn't be and 11 shouldn't be more, but I really do have to speak up for Bill Troupe, on our staff, who a number of our 12 13 reports, if you look on the inside cover of all of 14 the different people funding, you know, DOT is 15 funding, USFA is spending the money with DOT on 16 doing the studies for roadside safety type reports 17 and things. So just -- there is collaboration, but 18 19 your point is well taken. It could be and should be 20 and hopefully will be more. 21 Thank you. 22 MR. HALES: One of the issues with

collaboration with DOT with sort of the illness 1 2 investigation side is the DOT does have a commercial 3 drives license program, where they put out the standards and guidelines for medical evaluations for 4 5 commercial drivers. 6 Currently, fire departments are exempt from that regulation. 7 Does the fire service feel that that is an 8 area in which we should try an collaborate with the 9 10 DOT and address whether the importance of driver operator certification such as -- like the CDL, 11 commercial driver's license? 12 MR. DUFFY: Rich Duffy, IAFF. 13 14 What do you think that gives you? 15 MR. HALES: I think it's a way of enforce -- well, it's a way of regulating that 16 17 medical evaluations occur. Currently, there aren't any regulations. 18 19 Now, is it going to be for all fire fighters, no. It's just going to be for your 20 driver, operators. 21 22 Have driver, operators been involved in

motor vehicle crashes that have killed anybody else? 1 2 Not that I know of, but they have been involved in 3 motor vehicle crashes where they have destroyed 4 equipment, yes. 5 MR. DUFFY: I see. I think we have to be very careful on the 6 7 perception of this overall quote, unquote, "what is a medical evaluation." 8 9 I think a fire department that does blood 10 pressure and cholesterols every year is doing a fine 11 thing, but that's not a medical evaluation of the fire fighter. 12 13 MR. HALES: That's not enough. 14 MR. DUFFY: That's not enough information. 15 I think -- and in fact, that's why we went 16 to the wellness/fitness program and sat down and 17 didn't take American Heart Association, American Cancer Association, the Canadian Heart Association, 18 19 and all of the ABCs out there of medical 20 associations and use their recommendation, but we 21 spent an awful lot of time with physicians and 22 validated the actual requirements needed for medical

evaluation of a fire fighter on an annual basis, 1 2 both for immediate treatment like in the case that 3 Dave talked about at the WTC, or to create a historical database on the medical hazards of fire 4 5 fighting. And I truly think we have done that. 6 7 Fire departments that do half a loaf are doing half the loaf, and not -- and should not be 8 reported as, you know, well, we went into 38 cities, 9 10 and 28 of them had medical programs. 11 If they have a program that's just doing cholesterols, that could be noted, but they 12 13 certainly would have recommendation, as you have 14 done in every single heart case, that they should be 15 in the IAFF, IAFC Medical wellness/fitness Program. 16 And the vast majority of them have not, as 17 yet, I would suspect in the -- at least in the areas that we have addressed here. 18 19 So I think it's important to look at what the medical requirements is. 20 21 The OSHA respirator questionnaire, medical -- is medical. 22

MR. HALES: Yeah, I have heard. 1 2 MR. DUFFY: What is that saying, if you don't have medical, check yes on everything, or 3 check no, you know, whatever boxes will get you 4 5 something, and check that box. 6 And I would venture to say that the 7 majority of the workers checked it that way so that it would have to go to the next step, 8 9 self-questionnaires. 10 MR. HALES: Yeah. MR. DUFFY: But the important thing, we go 11 back and said we do annual OSHA medicals, which I 1213 don't believe that is the case. So I think it's indeed important. 14 15 What we have done with that is that our organization has pushed -- well, we already pushed 16 17 the USRT. The urban search and rescue teams that now 18 19 respond in the various regions, not only have annual medicals, but they carry their medicals with them 20 whenever they're deployed. 21 22 For the most obvious reason in the world,

1 but it's very difficult to achieve that.

Additionally, through the presidential --Homeland Security Presidential Directive, it was either five or eight, one of them, that was going to require credentialing.

6 A credential process where when the 7 federal government needs assets in times of a 8 federal emergency can assure that those assets 9 are -- can perform efficiently and safely, and 10 effectively.

And in order to do the efficient and 11 effectiveness, the credential would include the 12 13 training of that individual, including the updated 14 training of it to various fire fighter standards 15 that may be required as part of that deployment. 16 And additionally, we push for and I think 17 we finally have now gotten, that they require an annual medical, the medical be up to date, and that 18 19 be part of the credential.

20 This doesn't now say required to be -- it 21 has to be credentialed. It's saying that the 22 federal government are going to use you as an asset

in times of federal emergency. You have to have a 1 2 credential with you, or, guess what, you don't get 3 through the fence, or we're going to call upon you. 4 So we're making bite-sized steps in this, 5 the NFPA 1582 standard, which is the medical standard for fire fighters. 6 7 Right now, as of the 2002 edition for 8 incumbent fire service personnel, mirrors IAFF IAFC wellness/fitness program. 9 10 We have done it that way because the same 11 docs that worked with us developing the wellness/fitness initiative, we all worked together 12 13 under the NFPA umbrella to develop that system. 14 So those fire departments that don't like 15 the words IAFF, or don't like the words IAFC, but 16 mostly the IAFF, can now adopt something they called 17 the NFPA, and we just smile and say, Well, that's fine. Don't adopt ours, but adopt theirs. 18 19 So it's the same program. So I think that's effect, that it's for --20 most important, it's not consistent, that we're out 21 22 there, at least, major fires service organization,

we have the IAFF and the IAFC and NFPA pushing for 1 2 their systems in the same exact standard. 3 But that's what we need to be looking for. MR. HALES: No. I threw it out there 4 5 because we were having a discussion. 6 MR. DUFFY: Well, first of all, you raised 7 the drug testing issue --MR. HALES: Oh. 8 9 MR. DUFFY: -- which is not part of the 10 medical program. 11 MR. HALES: Yes. 12 MR. DUFFY: Which, by the way, the Iatook 13 (phonetic) was the first labor union, organization, to support drug testing, if done properly, and we 14 15 still have done that. 16 That's a separate issue on a separate 17 page. 18 MR. HALES: Yeah. 19 MR. DUFFY: But that comes into place in the CDLs all the time because it's done as part of 20 the medical program. 21 22 And what it entails in that CDL medical

1 evaluation. 2 But, hey, if that achieves the point of 3 getting everybody in the medicals, if they have the proper one, we -- in fact, we talk about the CDLs 4 5 all the time. 6 If it's going to get us something, it 7 gives us a bargaining rate, too, because everybody who is CDL, we believe, is upper level notch on the 8 pay scale. 9 10 But we look at a lot of things all the 11 time. And I think that doesn't solve the problem 12 13 until you know what all the issues are beyond a CDL. MR. HALES: I only raised -- the reason 14 15 why I'm not actually in favor of this is because the 16 CDL is actually very poor. 17 It only says you have to do an exam, and doesn't have a lot of quantities about what you 18 19 actually do, other than measure blood pressure. 20 And I don't know if you have seen some of the horrific accidents that have occurred among 21 22 people who are certified CDLs, and look at what docs

have cleared those people for. 1 2 So it's really not a good process. 3 And, actually, interestingly, the ACOM is actually looking at certification tests for people 4 5 to issue CDLs. 6 But ideally, you get somebody doing the 7 exam as recommended in 1582 or the fitness/wellness initiative. 8 9 That's the goal. 10 Trouble is, right now, I don't think in 11 the near future there's a way to regulate that. It's a voluntary basis. 12 13 MS. TEPPER: My name is Allison Tepper, with NIOSH. 14 15 And as a manager of the program, Tom's 16 program, doing the illness investigations, I really 17 appreciate the input that everybody has provided here today. 18 19 And, you know, I think as Larry referred -- you know, indicated, we have had several 20 21 messages that I think have been consistent through 22 many of the speakers. And it's very helpful and

1 important for us to hear that.

2 And clearly, one of them is the important 3 role that the investigations play in probably so 4 many ways that we don't actually really appreciate 5 and understand.

6 So thank you, everybody, for making that 7 comment.

8 You know, I which the challenge, and I'm 9 wondering if it's possible today, as we heard that 10 message, and I'm, you know, sitting here today, I 11 have three investigators who are investigating the 12 health incidents.

And we heard not only the, you know, the argument for us to continue the investigations at the level we're doing now, but actually investigate all fatalities, plus near-misses, plus a lot of other ideas about things that we could do to enhance our program.

19 I'm wondering if it's even possible with 20 all these people sitting in the room today, to come 21 out of this at the end of the day with maybe one or 22 two very sort of -- some sort of consensus about one

or two very sort of specific things that people 1 2 think, you know, beyond what we're already doing, 3 kind of what are the highest priority things that we 4 might need to add to or embellish our program. 5 So that's -- I don't know if it's possible 6 with this many people to actually kind of try to do 7 that, or if we have time to. But if we do, I think it might be helpful 8 to think very concretely about what would be the 9 10 highest priority areas that everybody is in 11 agreement on. 12 MR. REED: Any reaction to Allison's 13 question? 14 I guess in simplest words, I guess it 15 would be like the 80/20 rule, you know, if we could 16 identify some of those that have the most impact, 17 what would they be. 18 MS. TEPPER: Right. 19 MR. DUFFY: Oh, I'll start. I mean, I think it's clear today what 20 21 everybody said is that the investigation portion of 22 the fire fighter Investigation Program should not be

1 decreased to fund other areas.

2 I think we should look at continuing the 3 investigation process, at least at the levels, if not identify why we're not actually investigating 4 5 all fire fighter deaths. I think the visibility of the program 6 7 continues to be extremely important, and we should learn from the issues of the past. 8 I think if -- I don't know if I mentioned 9 10 it before, but when National Transportation Safety Board went to their first incident, you know, they 11 were nobodies. 12 13 And this is a true story, it's in some of 14 their anecdotal history files. 15 But the first thing they did after they 16 came back from that investigation, and I don't 17 remember the person who was in charge, but he went out and he ordered badges for all of the 18 19 investigators so they had authority. 20 And they went to the next one with a badge for authority. 21 22 And they also went out and got

windbreakers with NTSB on the back, before the FBI 1 2 did it, before fire did it, before everyone else did 3 it, and that's where that all started from. 4 So they had identity. 5 So they had people with authority and identity, and that increased to this day that no one б 7 questions NTSB. And we have used the NTSB when we had the 8 fire fighters killed up in Connecticut a number of 9 10 years ago, two fire fighters were killed. 11 We had the NTSB investigator in there, and she not only had her blazer on and her badge, but 12 13 she was in charge of that -- of that investigation, 14 period. 15 And anyone else that wanted to say anything, they told him, go sit under the tree until 16 17 the NTSB is gone. And I hope that's how we look forward to 18 19 this program as an authoritative recognized 20 investigation. 21 And I will end up with a third point, I 22 have three instead of two.

I really want you to reconsider or 1 2 consider doing follow up investigations. 3 I don't know if you pick them randomly, 4 figure some statistical relevant process to do that, 5 but I think you should go back, and I don't care if you pull them out of a hat, take the investigations 6 7 and go back to those cities, some of them with cardiac, some of them with trauma injuries, and 8 literally -- and I think it's more in the phone 9 10 call, go back and say hey, NIOSH recommended in this 11 year you do this process, where are you today, and document it. 12 13 You're not going to write OSHA violations, 14 you're not going to cite them on it, but I think 15 that's a very important part of the process, both 16 for that individual locality and to spread the 17 message around that NIOSH is not just making recommendations, they like to follow up and report 18 19 on that. 20 And I think that would be a good one for 21 the program. 22 MR. HALES: Can we just follow up on that,

follow up on the follow up? 1 2 Can that be done by a survey in a letter, 3 or do you think we need to do site visits to do 4 that? 5 MR. DUFFY: I think -- to begin with, I think you can site visit it, and then that 6 7 experience will generate how you continue with the 8 program. 9 But I think it's a -- you want to do 10 evaluation of your program. Don't look at, you know, that's the old --11 that's the -- we're -- that's what you here down the 12 13 street over here, Capitol, what do we need OSHA for, 14 we haven't -- OSHA has been here for 30 years, we 15 haven't reduced the injury rate or the fatality rate 16 of workers. 17 Well, everyone knows what OSHA has done for the American workforce. And no one would ever 18 19 want to get rid of it, but that's the rhetoric you hear all the time. 20 I think it's more important to evaluate 21 22 the effectiveness by actually seeing how well your

1 recommendations have taken place.

2 You know, if you're OSHA, they should go 3 good in the -- if they cited you for admissions on a 4 factory, they should go back later, and they do do 5 that.

6 They go back and they do follow-up 7 inspections to see if those admissions are still 8 there.

9 Well, if NIOSH recommended that a 10 wellness/fitness program should be initiated, and 11 they go back two years later after a cardiac death of one of their fire fighters, and find nothing, 12 13 they said well, they still haven't done the 14 recommendations and report that out. 15 And then if that comes back successful, 16 then I think surveys should -- but surveys are 17 obviously -- written surveys are easier. The problem in the fire service, are 18 19 folks -- actually Pat and Sue can tell you this, as 20 well as the 100 people that work down the block in the IAFF, getting survey results back here, it's 21 22 harder than pulling teeth, even from our own

1 membership. 2 And they have every excuse in the world. 3 I know the chief will tell you the same 4 thing, volunteers will tell you the same thing. 5 It's not very easy -- and probably other 6 people will tell you the same thing, getting 7 surveys -- you know, we clap and applaud and buy pizza for everybody if we get 10 percent of the 8 9 responses back from people, you know, I mean that's 10 a home run. So I think that's tough, but when you 11 actually show up. 12 MR. HALES: Yeah. They can't ignore you 13 14 if you show up, where you wear the coat and the 15 badge. 16 MR. KREIS: Just back to revisiting sites. 17 Is it -- I think I said it earlier, but if you wanted to start that program, is that we are 18 19 just beginning to implement a revisitation of the fire departments, and for us, we would be -- the 20 city of Phoenix would be happy to volunteer to kick 21 22 that off for you.

I would add that it probably would require 1 2 at lease one site visit just to kind of see what's 3 going on, get a feel for it. 4 But we would be more than happy to help 5 out with that. MR. REED: I guess I would like to 6 7 continue that theme that Rich responded to Allison's good question about the major impact 8 recommendations, are there others. 9 10 And obviously, you know, we will staff and 11 within NIOSH, the experts here, we will be going through all of our notes and making this an 12 13 important process for digesting and coming up with 14 these themes of what we can do differently. 15 But to help us, you know, with that, I 16 think it would be good to try to sort of get that 17 sense from you all directly, again. MR. REHFELD: Mike Rehfeld, Baltimore 18 19 County Professional fire fighters. 20 Allison's response doesn't fall on deaf 21 ears. 22 I think all of us in the fire service

understand that most of what we have added to what the program is now, and what we would like to see later, understand a lot of it is a budgetary issue, you know, staffing, manhours that you have to put into it.

I was talking to, I think, Tom Baldwin at 6 7 lunch, and one of the things that I suggested to him 8 or talked about was if need be, if we need to hear from NIOSH, you know, that you need support from the 9 10 IAFF, from the chiefs to start moving some funding 11 from one direction to another, that's the political entity that we have to us to be able to do that. 12 13 But, again, it goes back to the very 14 difficult question of where do you pull it from? 15 You know, if they go and lobby on your 16 behalf, you know, that money may come out of DHS, 17 and now we're going to have somebody over there screaming, and you just get into that political 18

19 nightmare of an issue.

But, you know, you need to know that we understand that, you know, out in the fire service, that that's a significant problem, and we're not

just throwing these suggestions to make the program
 bigger, you know, and thinking that that's reality
 and that's going to happen.

4 Back to a more pointed question of exactly 5 what we would like to see out of the program in addition, I think one thing, and I don't know if you 6 7 do this now or not, in traumatic events, do you 8 assign a medical officer to review that to see if it was maybe medically related prior to the traumatic 9 10 event, you know, loss or disoriented because they 11 had a stroke.

12 You know, I don't know if you delve that 13 far into it or if you do that, but that would be one 14 thing that would be important to me to see.

Was the vehicle accident -- did the vehicle go off of the right side of the roadway because the individual had chest pains or got dizzy, you know, do you delve into that, and then subsequently die from the traumatic event of the accident, you know, do you look at that. In respect again, that would be useful to

22 us out in the field to know, you know, that maybe we

have a bigger medical problem that's leading to the 1 2 dramatic deaths in the process. 3 And I don't think the reports reflect that 4 if I remember correctly. 5 MR. HALES: Can I respond to that? It's a very good question. We are 6 7 concerned about that as well. And we work with our colleagues at 8 Morgantown to address that issue. 9 10 With the motor vehicle crashes, there has 11 been 14 instances which were medically related that caused the motor vehicle crash. 1213 As far as the other traumatic fatalities, 14 it's harder to grab some of those because no one was 15 able to witness the person going down in a building 16 collapse, or frequently the autopsy information is 17 not helpful because of the circumstances of the death. 18 19 And those are a little bit harder to get 20 at, but we feel pretty confident that those -- the one that we attributed to traumatic injuries are 21 22 traumatic and not medical causes.

Now, I can't give you the 100 percent 1 2 stamp on that, but that's based on our expertise. 3 I think with the motor vehicles, clearly 4 it has been an issue and we use data from not only 5 the autopsy information, but also the type of crash б that occurred to make that assessment. 7 And so we do go out together on some of 8 those. 9 MR. REED: Just also a response. 10 Just to be perfectly clear for the record, NIOSH, as a government agency, can't lobby congress 11 12 for additional funding. 13 So given the likely event that we have 14 hopefully level funding, then we will be in this 15 difficult task of prioritizing and adjusting what we 16 do. 17 Comment. MR. REHFELD: I guess going back to the 18 19 question of what's important or what's most important, I think one of the things that I have 20 21 heard all day is that the investigations are 22 important, and reports that came out of that are

1 important.

2 And, as I said in my earlier presentation, 3 to have richer detail about the events, being able to follow the temporal sequence more easily, that's 4 not so much a -- that's not so much a new thing, but 5 just simply a refinement of the existing program. 6 7 And one of the other things that I was talk with Don about this morning, is that I know for 8 a fire fighter, when they pick up a report and they 9 10 read it, they read that report in a sense, in 11 isolation, they're looking at what's there on the page, and there's not a connection to gee, what did 12 13 the other 13 reports or other 67 reports that have

14 some relationship to this say.

15 I'm in the process now of doing some 16 qualitative analysis of all of the reports that deal 17 with extreme fire behavior in some way, shape, or 18 form.

But I think that looking at reports across topic area and saying okay, what's common -- what's common with these events, and then presenting that. And I know there has been -- some of that

has been done looking at the alerts and so forth, 1 2 with wildfire training, and so forth. 3 But I think there are some other areas, whether it be in the traumatic area, or whether it 4 be in the medical area, that I think looking across, 5 maybe going back, and I know having read all of 6 7 those that relate to traumatic fatality in the last two months, cover to cover, I found a number of 8 interesting things that were jumping out at me. 9 10 And I read them when they came out, but I 11 hadn't put that together. So I think that might be another place 12 13 where we can take something that's already there and 14 get some great value -- get some great value out of 15 that. MR. REED: Okay, good points. 16 17 Well, we have got a ton of information to go through. 18 19 Rich, yeah. MR. DUFFY: You know, I'm sitting next to 20 a microphone, so I can talk forever. 21 22 But since this is a public meeting and

there's a public record kept of this meeting, and I 1 2 know there's some people here, and there probably 3 other press here, but more importantly, there's 4 people up on the hill that may want to look at this 5 session and the results of the session. 6 And you don't have to provide it today, 7 but can you provide it for the record, when this is 8 closed, the budget for this program? 9 And both, you know, current budget, and I 10 don't know if you have last -- the last couple of 11 years. But the eight-year budget would be 12 13 tremendous if that could be put together, but 14 certainly the current budget. 15 And I apologize, I'm getting stared at from the folks behind me, but I think that's 16 17 important to put in here because I can attest to many here, there has been an awful lot done on this 18 19 program, on clearly a shoestring. 20 So I think it's important that that be added to part of the record. 21 22 Thank you.

MR. REED: Thank you.

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2 Tim reminded me to remind you all, again, as I mentioned this morning, that the docket will 3 remain open for one month from today, an that 4 5 information is on a handout sheet at the registration desk, if you don't have it, from the 6 7 email, or I should say from the slide this morning. So please make sure that you submit 8 whatever relevant information you feel is important. 9 10 And even those who are not here today, we 11 would very much appreciate having submission that are relevant to this effort. 12 13 And if you have follow on ideas, you know, 14 in terms of Allison's question on sort of the 80/20, 15 you know, the major priority areas for us, please 16 send those in as well. 17 MR. HALES: I would actually make a bigger pitch for that and say we would like everyone here 18 19 to log onto that site, and make either one or two 20 priority comments that we should be addressing. 21 And that way we will get everybody's 22 comments, you know, one or two things that we should

be doing which we aren't currently doing, would be 1 2 very helpful. 3 MR. DUFFY: Will you mark that part of the 4 record, or how would you do -- handle these 5 comments? 6 MR. HALES: Yeah. I think that we easily 7 could. And I think that we're looking at putting 8 together, as Larry has mentioned, some sort of final report from this meeting. 9 10 We aren't sure of what shape that will 11 take, but we will be giving that back to you. And that can easily have that type of 12 13 information. MR. REED: Yeah, that's a good point. 14 15 So a good sort of homework assignment 16 would be to send us those, you know, priority areas, 17 each of you here, and it will be part of the record, it will be part of our final report, the assessment 18 19 of that in terms of where we go. 20 And just to mention once again, we will 21 have a report from this stakeholder meeting. 22 So thank you, again, for your

1	participation. And it's been a fabulous session and
2	we appreciate all the hard work.
3	Thank you.
4	(Whereupon, the proceedings in the
5	above-captioned matter were concluded at 3:41 p.m.)
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## CERTIFICATE OF REPORTER

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2 I, Joseph A. Inabnet, do hereby certify that the transcript of the foregoing proceedings was 3 4 taken by me in Stenotype and thereafter reduced to typewriting under my supervision; that said 5 б transcript is a true record of the proceedings; that 7 I am neither counsel for, related to, nor employed by any of the parties to the action in which these 8 proceedings were taken; and further, that I am not a 9 10 relative or employee of any attorney or counsel 11 employed by the parties thereto, nor financially or otherwise interested in the outcome of the action. 12 13 14 15 Joseph A. Inabnet 16 Court Reporter 17 18 Original transcript provided by the commissioned court transcriber 19 was modified on 2/20/2007 to correct an obvious error on page 70 20 that incorrectly attributed a statement to a NIOSH employee. 21 An additional modification was made on 4/23/2007, page 220, to correct 22 an error that incorrectly attributed a statement to a NIOSH employee.