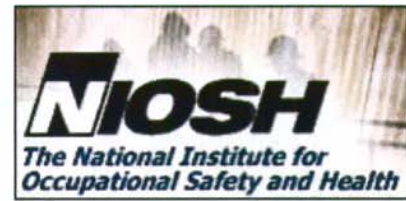


DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health



Stakeholder Meeting of the
NIOSH Fire Fighter Fatality Investigation and Prevention Program
November 19, 2008
Rosemont, Illinois

Verbatim Transcript

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STAKEHOLDER MEETING OF THE
NIOSH FIRE FIGHTER FATALITY INVESTIGATION AND PREVENTION PROGRAM
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[CONVENE 10:00 A.M.]

1
2
3 **Opening Session**

4 **P. MOORE:** Good morning. My name is Paul Moore. I'm the Chief of the Fatality
5 Investigations Team for the NIOSH Division of Safety Research. It's my pleasure to welcome you
6 today to the 2008 Fire Fighter Fatality Investigation Prevention Program Stakeholder Meeting.

7 A couple of words before we get started: we are recording the session today and we will
8 have a transcript of the meeting. And we plan to provide that probably on our web page so people
9 can get an idea of what we talked about.

10 It is our pleasure today to have with us Dr. Christine Branche, who is the Acting Director for
11 NIOSH, and Dr. Branche will honor us with some opening remarks. And so without further ado, Dr,
12 Branche.

13 **C. BRANCHE:** Thanks, Paul. Good morning, everyone.

14 **PARTICIPANTS:** Good morning.

1 **C. BRANCHE:** And thanks for letting me know you're out there. You guys are good. Often
2 you go to a microphone, and you say "good morning" and people go [mumble]. But thank you very
3 much and thank you for coming to this important meeting today.

4 NIOSH is pleased and honored to contribute to the safety and health of firefighters through
5 this program. NIOSH is interested in making certain that each of its programs, including the Fire
6 Fighter Fatality Investigation and Prevention Program, is relevant of the highest scientific quality and
7 positively impacts workers, and safety and health — excuse me — worker safety and health.

8 Routinely inviting stakeholder input and acting upon it is an important avenue for doing this.
9 Our stake in stakeholder input to shape and improve the program has been a hallmark of the Fire
10 Fighter Fatality Investigation and Prevention Program since its inception in 1998 — excuse me. This
11 is the third formal stakeholder meeting seeking input on the program as a whole.

12 Now our staff have been actively — have actively sought your suggestions through less
13 formal venues throughout the program's history. The information received has been invaluable in
14 guiding the direction we take in this particular program, and again, we do thank you for it.

15 Today, you will hear about several program improvements that we've made since the
16 last stakeholder meeting that was held two years ago as well as several accomplishments.
17 While we're proud of the program and its accomplishments, we are generally interested in
18 seeking your feedback on how we can improve and increase our impact on firefighter safety and
19 health.

20 We are also interested — we are also interested in your input on a draft strategic plan that
21 you'll hear about in summary today and that plan outlines our overarching goals for the program as
22 well as specific criteria on which we can measure our progress and impact. I thank you in advance
23 for your participation today. We expect that you'll have active participation. We do want your

1 feedback. We have microphones available so — and we have the recording information so that
2 we can truly capture your thoughts.

3 I also encourage you to submit written comments to our electronic docket as well and that's
4 found on our web site. Your opinions, perspectives, and experiences as well as your suggestions
5 are critically important to us as I've said. And we will be using this information to work with you to
6 advance firefighter safety and health through the Investigation Program. Thank you very much.

7 **P. MOORE:** Thank you, Dr. Branche. And it looks like we've got our first technical problem.
8 The second technical problem is I can't see with these glasses.

9 **C. BRANCHE:** Can I give you a hand?

10 **P. MOORE:** I think I'm all right. Thanks. Ah, good. Okay. Our next agenda item will be a
11 presentation by Mr. Timothy Merinar, who is the Project Officer for the Fire Fighter Fatality
12 Investigation and Prevention Program. And he will be joined by Dr. Thomas Hales, who is the Team
13 Leader for the CVD component of the Fire Fighter Fatality Investigation Prevention Program. Mr.
14 Merinar and Dr. Hales will be providing us with an overview of the program as well as a report of
15 progress since our last stakeholder meeting. Mr. Merinar?
16
17

18
19 **Overview of the NIOSH Fire Fighter Fatality Investigation and Prevention Program**

20 **T. MERINAR:** Thank you, Paul. Let's see if I can get my presentation opened up. Well,
21 Paul introduced me, so I guess I don't need to do that again. I'll — so I'll flip to the second page. As
22 Paul mentioned, I'm going to give a brief overview of the NIOSH Fire Fighter Fatality Investigation
23 and Prevention Program, and then provide some information on changes to the program that we
24 have made since the last stakeholder meeting in 2006, and also talk about some progress that we've
25 made.

1 I hope everyone here is familiar with NIOSH and the Fire Fighter Fatality Investigation
2 Program. Anybody here not familiar with us? I was going to real briefly go through just a few slides
3 that describe NIOSH. We're a federal agency that was created under the Occupational Safety and
4 Health Act of 1970. NIOSH conducts research and makes recommendations to prevent work-
5 related illnesses and injuries. We're part of the Centers for Disease Control and Prevention.

6 NIOSH programs follow a research-to-practice through a recommendations process and we
7 are not a regulatory agency. Most people think we're part of OSHA, but we're totally separate from
8 OSHA. NIOSH is in the Department of Health and Human Services, where OSHA's in the
9 Department of Labor.

10 The Fire Fighter Program was funded by Congress in 1998 to address the continuing
11 national problem of occupational firefighter fatalities. We received appropriated funds to implement
12 a Firefighter Safety Initiative and the focus of our program has been on the independent
13 investigation of firefighter line-of-duty deaths based on a — based on a 1998 stakeholder meeting
14 that kicked the program off.

15 The Fire Fighter Program operates out of three divisions across NIOSH. Traumatic
16 injury investigations are conducted out of Morgantown where I'm the Project Officer. The CVD
17 and medical investigations are done out of Cincinnati where Dr. Tom Hales is the Team Leader.
18 And any time an SCBA is implicated in a fatality or injury investigation, we have the capability of
19 testing and evaluating the SCBA and that's done out of our office in Pittsburgh.

20 The mission of the Fire Fighter Program: prevent firefighter deaths and injuries;
21 formulate recommendations on preventing future fatalities and injuries; and then working with all
22 of you out in the fire service to have the ability to impact firefighter safety and health to

1 implement the recommendations that we come up with. The goal, like I said, is to prevent
2 fatalities.

3 The objectives we use to accomplish this goal are the — investigating firefighter fatalities
4 and injuries; identifying the causal factors that lead up to these fatalities and injuries; developing
5 recommendations on preventing these injuries and fatalities; and then working with the fire
6 service to disseminate the information.

7 I'd like to quickly introduce everybody who's involved in the Fire Fighter Program. Paul
8 Moore is the Team Chief in Morgantown. We have six investigators in Morgantown who are full-
9 time investigators of the traumatic fatalities; that's Steve Beradinelli, Matt Bowyer, who's here in
10 the back. Virginia Lutz, Steve Miles, Jay Tarley and Stacy Wertman were not able to be here
11 today.

12 I'm the Project Officer and also help out on investigations. John Sines is our information
13 technology support person. In Cincinnati, we have Dr. Hales and Tommy Baldwin, who's here
14 with us today, doing all of the medical investigations. And then Vance Kochenderfer is here with
15 us today; he does SCBA evaluations in Pittsburgh.

16 Here's the problem that we're trying to address. Over the 31-year period from 1977
17 through 2007, there's been an average of 112 firefighter line-of-duty deaths as you all are well
18 aware of these statistics. Since the program started in 1998 up through 2007, NFPA statistics
19 show there were 995 firefighter line-of-duty deaths. We've conducted 386 investigations that
20 covered 419 fatalities or approximately 42 percent of all of these firefighter line-of-duty deaths;
21 that involves 222 traumatic fatalities and 197 CVD or medical fatalities.

22 So we do welcome and appreciate any input that you have for improvements on our
23 program. We met in 1998 with the kickoff meeting for the program. We met two years ago —

1 March 2006 — and we're here today seeking your input on improvements for the program, how
2 we're meeting your needs. And we intend to solicit comments from all of our stakeholders every
3 two years to ensure that we're meeting the needs of the fire service.

4 There's really three areas that I'm going to talk about briefly that we've used to shape
5 the program since the last stakeholder meeting; that was input at the last stakeholder meeting.
6 NIOSH also contracted with RTI International to do an evaluation of the effectiveness of our
7 program. I'll talk about that a little bit later.

8 These two activities led to what we call the "Future Directions Document," which is
9 posted on our web site, and I'll talk about this in more detail in a few minutes. But this
10 document — the Future Directions Document — outlines the focus that we've tried to shift the
11 program to over the last couple of years.

12 Also, you're probably aware that last year in 2007, the International Association of Fire Chief
13 Safety, Health and Survival Section had a task force review of our program and we appreciated the
14 comments that we received from that group. And then there was also an Office of Inspector General
15 report resulting from a Senate inquiry that reviewed our program. So all these areas have been fed
16 into improving our program.

17 Here's our Future Directions Document; it's published on our web site. There's basically
18 seven areas that we're focusing our program in: investigations, documents and publications,
19 information dissemination, outreach to the fire service, research, evaluation of our program
20 internally, and then technical assistance to the fire service.

21 I'm going to briefly go through each one of these steps, talk about progress that we've made
22 in the programs, and changes since the last stakeholder meeting in 2006. As I said, the first and the
23 main focus of our program is the investigation of firefighter line-of-duty deaths; that's the main focus

1 of our program. Since we don't have the resources to do every fatality investigation, we developed a
2 decision logic to help us prioritize investigations. You see this is fairly complicated; I tried to simplify
3 it here.

4 Traumatic injury investigations: we focus on multiple line-of-duty death incidents, structural
5 fires, motor vehicle accidents, and new and emerging hazards to the fire service. And Dr. Hales will
6 talk a little bit later about the priorities that the medical team has. In our investigations, we're trying
7 to focus more on training aspects of the — both of the victim, as well as the incident commander and
8 chief officers who are involved in the incident.

9 We're trying to look at the safety culture at each fire department that at the time the incident
10 occurred, what was the safety culture at each particular department? And then we're looking more
11 into the fire dynamics. We've been working with NIST (the National Institute for Standards and
12 Technology). They provided our investigators with training on fire dynamics, fire spread. We've also
13 worked with NIST in supporting their development of fire models on a number of major fires.

14 One of the big comments, input that we got from the stakeholder meeting in 2006, the RTI
15 report, as well as the Chiefs Task Force, and also the Inspector General's report were that we need
16 to be more timely in the conduct of our investigations. From 1998 through 2006, for the traumatic
17 investigations done in Morgantown, we were averaging approximately 33 days from the time that the
18 fatality occurred until NIOSH was out in the field conducting the investigation.

19 During this year, 2008, we've been able to reduce that down to approximately 15 days and
20 this is, like I said, for all the traumatic investigations: structural fires, the motor vehicle crashes and
21 other traumatic incidents. Also from time to time, fire departments do ask us to delay the
22 investigation and we will consider a request from a fire department. One example may be,
23 especially in smaller departments, they shut the fire department down for the funerals. And we've

1 been asked to not come in to begin our investigation until after that's been completed, so we've
2 honored that.

3 Each investigation ultimately leads to a final report. We have over 380 reports posted on our
4 web site. I'll talk about these reports more in a little bit and the dissemination activity. But each
5 report is mailed to the fire department and the union involved where the fatality occurred. We also
6 do periodic mass mailings to the fire service all across the country and they're all available on our
7 web site.

8 Another major feedback, input we got from the stakeholders was the need to have more
9 subject matter expert involvement in our investigations. So we were fortunate this year; we've been
10 able to hire two new investigators who work full-time investigating line-of-duty deaths. Both of these
11 individuals have significant fire service experience and they've very quickly been able to add
12 significantly to a program.

13 We've also begun using consultants to NIOSH in areas where we don't have particular
14 expertise ourselves. For example, any time turnout gear is implicated in an investigation, we've
15 been bringing in a consultant who does an evaluation of the turnout gear for us. Also this year, we
16 experienced a fatality involving an aerial ladder truck; it was a mechanical failure. And we brought in
17 an expert who worked directly with us on the investigation providing expert services to us. And
18 many of our reports now are peer reviewed by service experts before they get finalized.

19 Real briefly, we currently — we have 49 open investigations that cover 62 total line-of-duty
20 deaths; 33 of these cases involve 46 traumatic fatalities and 16 are medical cases. Also, I'd like to
21 briefly mention, we have had a high turnover rate since the program started among our investigators.
22 So at times, we've operated — while we currently have six right now who do traumatic
23 investigations, we've operated significant periods of time with as few as three. Most of 2007 and the

1 first part of 2008, we only had four investigators up until we were able to hire our most recent
2 recruits.

3 The next area that we focus our program is documents and publications. The first one I'd
4 like to mention here is the "Leading Recommendations Documents." This covers recommendations
5 coming out of NIOSH investigations from 1998 up through to 2005 and this publication covers both
6 traumatic fatality investigations as well as medical investigations done by Dr. Hales' group. And this
7 has been finalized. We're in the process of printing it right now and we'll be disseminating it to the
8 fire service hopefully by the end of the year.

9 The next publication we're working on is the "Workplace Solutions Document." This has
10 been submitted for final clearance and we hope to have this released early next year if not sooner.
11 This covers the hazards to firefighters that are working above fire-damaged floors. A third
12 publication that we're working on is what we call the "Risk Versus Gain Alert" or fighting fires in
13 unoccupied structures. We're in the process of posting this for public comment.

14 You can find information off of our web site on how to submit comments and we hope that
15 everybody here or your organizations would be able to provide public comments to us. We hope to
16 have this released in the spring of next year. And something new that we've never done before, but
17 we were able to do this year was the development of a "Safety Advisory." This came from the aerial
18 ladder fatality investigation that I mentioned earlier.

19 We identified that there were several models that did not have mechanical safety devices
20 that would prevent the type of mechanical failure that we saw in the investigation. We also
21 determined that this was not an isolated incident. There were at least ten other incidents that have
22 occurred in recent years, so we quickly put out the Safety Advisory to let the fire service know about
23 the problem.

1 Okay. The next area that we focus on is dissemination of our reports and information to the
2 fire service. I mentioned our web site; all of our information, all of our reports, all of our safety
3 publications as well as other information for the fire service is all posted on our web site. Last year,
4 we had over 822,000 visits to our web site.

5 As I mentioned, each investigation leads to a report. The reports are disseminated in a
6 number of ways. We periodically do mass mailings where we bundle traumatic investigation reports,
7 medical investigation reports, MVA reports into a package and then do a mass mailing to the fire
8 service all across the country.

9 We also take all the information on our web site, put it on a CD that we pass out at
10 conferences, and meetings and other venues. We update this every year or so and we just updated
11 it in August 2008, so it's pretty current. We were able to pass it out at both the IAFF and the IAFC
12 conferences in August.

13 We also work with a number of fire service journals to have summaries of our investigation
14 reports published in these journals to get out to the fire service our information. One of the key
15 stakeholder inputs that we got over the last couple of years was the need to identify and disseminate
16 equipment problem information more quickly. So when we got into the aerial ladder investigation,
17 we identified the problem and thought it was worthy of this activity. So we developed the Safety
18 Advisory, which like I said, was something that we — NIOSH had never done before, but we were
19 able to do this in approximately one month.

20 We had some significant subject matter expert involvement in drafting the Safety Advisory
21 both from the fire service as well as from the equipment manufacturers. We were able to expedite
22 the internal review process within NIOSH. And I think one month from the date of the fatality, we

1 had the Safety Advisory out. And we've set the framework now so that as other cases come up in
2 the future, we will be able to do this more quickly to meet the needs of the fire service.

3 The fourth focus area for the program is outreach. We're doing that in a number of ways. I
4 serve as a liaison to the International Association of Fire Chief Safety, Health and Survival Section.
5 Matt Bowyer and Virginia Lutz are liaisons to the National Volunteer Fire Council. We've had
6 discussions with the Fire Department Safety Officers Association about working more closely with
7 them in the future.

8 Several of our staff have been involved in NFPA Committee work, including the 1500 Health
9 and Safety Standard; 1852 Selection Care and Maintenance of SCBA; 1981, the SCBA Standard,
10 who Steve Miles is representing the program on; and the 1982 PASS Standard. We've also
11 provided support for a number of programs. The IAF Chief Safety, Health and Survival Week,
12 National Volunteer Fire Council's Healthy Heart Week, and the U.S. Fire Administration Seatbelt
13 Pledge are examples of areas that we've provided partner support to.

14 We provided comments to ISO on their fire suppression rating schedule. You may be aware
15 they're proposing changes to this — to their fire suppression rating schedule, so we provided
16 comments to them back in September when they had a comment period. And we attend a number
17 of conferences, such as the Fire Rescue International, the International Association of Fire Fighters.
18 Both the biannual meeting and the Redmond Symposiums, we attend every year.

19 We've been attending the NIOSH Fire Conference. This year, some of our staff attended the
20 Northern Virginia Professional Fire Officers Association and Matt Bowyer's been invited to speak at
21 the Colorado State Fire Chiefs Association in December. We also recently developed a firefighter
22 blog, which we have on the main — our NIOSH web site. We just recently put this up and we've
23 already gotten several blogs come in from the field. We also have a "My Space" page where we

1 hope to broadcast firefighter safety issues through that venue to newer generations, much more
2 computer savvy than some of us old people are.

3 Research is another area that we're involved in. We just recently began or are in the
4 process of beginning an anthropometric study to evaluate firefighter sizes. This is particularly
5 important for the design of the apparatus to make the firefighters safer in the event there's an
6 apparatus crash, the seating arrangements and things like that. So we recently received funding for
7 this study.

8 We're working on a boot size study to make sure firefighters have appropriate size and fitting
9 of personal protective equipment. And NIOSH staff have been involved in a wildland firefighter
10 inhalation study. And I should point out that all these research activities use other funding sources
11 besides what we have for the Fire Fighter Program so we can leverage our program a little bit better.

12 Evaluation of our program: I mentioned earlier the RTI report. This was a contract NIOSH
13 had through CDC to evaluate the impact of our program. We did a survey of over 3,000 fire
14 departments as well as we had sit-down meetings with different firefighter groups. And got feedback
15 on the effectiveness of the program, how well our program is known, and how fire departments use
16 our recommendations and our safety publications in their own training in other areas to improve
17 firefighter safety.

18 And what we found from this report was that many or most of the municipal or larger fire
19 departments are all well aware of NIOSH and do use our information, but the smaller, rural
20 departments, a lot of the volunteer departments may not be aware of us and are not aware of some
21 of the information that we do make available to the fire service. So it's an area that we do need to
22 look at in the future.

1 Finally, technical assistance: there's a number of areas where the fire service has
2 approached us and asked for our involvement or technical assistance. I've been honored myself. I
3 was asked to participate in the International Association of Fire Fighters *Fire Ground Survival*
4 *Training Guide* — say that fast three times — and that included a presentation at the National Fire
5 Academy back in March to a graduating class of the Executive Fire Officers.

6 We also were requested to participate in a joint effort with the IAFC and IAFF in line-of-duty
7 death investigation manual — updates to that manual. We were requested to review a number of
8 fire grants for the U.S. Fire Administration. And just a couple of weeks ago, we were requested to
9 participate in an Advanced First Responder Locator Working Group that was convened by the
10 Department of Homeland Security.

11 And I think that's all I had. Here's my information — contact information. And so at this
12 point, I'd like to turn the program over to Dr. Hales and he can describe the medical program in
13 Cincinnati.

Overview of Changes to the FFFIPP Cardiovascular Disease Program

18 **T. HALES:** There we go. Great. Thanks, Tim. If I can just get this loaded up. Good
19 morning. As Tim mentioned, my name is Tom Hales and I am the Team Leader for the
20 Cardiovascular Medical Component of the NIOSH Fire Fighter Program. I want to thank you all for
21 being here today, taking time out of your busy schedule to be here because it — this is a very
22 important process for us to hear from you in how we can make our program better.

23 I'm very proud of the accomplishments that our program has made, but the purpose of this
24 meeting isn't to talk about what we have accomplished. It's really what we've done since the 2006
25 stakeholder meeting and that's what I'll be presenting this morning.

1 As Tim mentioned, we grouped your recommendations into these seven areas:
2 investigations and reports, documents, dissemination, outreach. And I'm going to go through each
3 one of these and talk about the changes that the Cardiovascular Disease Program has made based
4 on your recommendations.

5 The first is that the comment was that our investigations and reports should be the main
6 focus of our — of our program. And I want to tell you that that has been true and it's been
7 maintained. It's always been the focus of the cardiovascular disease part of the program and it will
8 continue to be.

9 The second thing about the reports was that we should maintain the current level and
10 number of investigations that we do. Prior to 2006, we were conducting about 19 investigations per
11 year. In 2006, that went down to 16; 2007, 17; and 2008, back down to 16. So the question is why?
12 After you just told us we should maintain that level of investigation, why did it go down?

13 Well unfortunately, we've had level funding for the past ten years and due to that, we've had
14 to reduce the number of investigators that we have within the Cardiovascular Disease Component.
15 We lost one person, Scott Jackson, and now there's only two people — Tommy Baldwin and myself
16 — in the Cardiovascular Disease Component.

17 The second issue was that because of that limited process, the limited funding and limited
18 personnel, we needed to prioritize the cases we investigate. We've — as Tim mentioned, we have
19 posted that prioritization process on our web site, specifically based on your input in 2006. We are
20 prioritizing hypo- and hyperthermia deaths; deaths due to seizures, diabetes or medication-over
21 deaths; and training deaths: training deaths that occurred during emergency response training or
22 physical fitness training.

1 The next area that you had recommendations in the investigations was that during our
2 reports, we cite and reference the *Best Practices* documents. We do that for all our
3 recommendations, specifically citing NFPA documents, as well as the consensus documents
4 developed by the fire service, as well as specific medical literature as well.

5 You also suggested that we conduct some non-fatal cardiac events that occur on duty. The
6 NFPA estimates that there are about 1,000 on-duty non-fatal cardiac events occurring per year. We,
7 over the past year, we have investigated one of these. And that was conducted not under the Fire
8 Fighter Fatality Program, but under another NIOSH program known as the "Health Hazard and
9 Evaluation Program" (or HHE Program). And I actually did that fatality investigation. Because of our
10 limited resources and limited personnel, I'm concerned that we will not be able to fill this — fulfill this
11 recommendation that you had in 2006.

12 You also mentioned timely reports. It takes us on average about six months to get out in the
13 field after a cardiac fatality. Although this seems like a long delay for the cardiac fatalities, this is not
14 usually a significant problem because the site at which the fatality occurred usually is not a big part
15 of our investigation. So we feel that this delay is — and I think the fire service agrees that it's not a
16 huge issue to get there right away.

17 After we do get to the site, our report does take on average four months to get sent to the fire
18 department, the union and the family. And then after that, it takes about six months to get posted up
19 on our web site. And we're currently working with our support staff infrastructure to reduce the
20 amount of time after the departments get the report to when it's actually posted on our web site.

21 The second major area that you had recommendations was in the issue of documents,
22 specifically documents such as the *NOSH Alerts*. In 2007, the cardiovascular disease group

1 published this document, which is known as *Preventing Fire Fighter Fatalities Due to Heart Attacks*
2 *and Other Certain Cardiovascular Events*.

3 Another document that we worked on as co-authors with our Morgantown colleagues was
4 the one Tim mentioned: this technical document called *Leading Recommendations for Preventing*
5 *Fire Fighter Fatalities* from our program. In addition, we've published one article in a trade journal.
6 Tommy Baldwin and I published an article about prescription medication overdoses within the fire
7 service causing on-duty deaths. And finally, we have contributed to two blog web sites: both
8 NIOSH's blog as well as the Public Entity Risk Institute on the issue of firefighter cardiac fatalities.

9 The third area is outreach and this is an area where I personally have been trying to work
10 very hard at reaching out to the fire service, specifically making presentations at the NFPA
11 Conference this past year; at the IAFF Redmond Conference in Chicago last year; at the Chief's
12 Meeting in Denver this year; a Congressional Fire Service Institute in Washington; as well as the
13 training and data exchange meeting at the National Fire Academy. We've also helped the National
14 Volunteer Fire Council develop their wellness and fitness programs.

15 I serve on the Technical Committee for Occupational Safety and Health, the NFPA, as a non-
16 voting member, specifically working on the task groups that NFPA 1581, which is infection control in
17 the fire service; NFPA 1582, which is a comprehensive occupational medicine program for fire
18 departments; as well as 1584, which is rehabilitation during emergency responses and training
19 exercises.

20 Last, this year — actually, just this past week, I replaced Christine Branche on the IAFF
21 Hazardous Materials Weapons of Destruction Advisory Board and also have been in contact with
22 Michael Dubron on the Firefighter Cancer Support Network. We've also attended meetings and

1 conferences, specifically the FDIC meeting in Indianapolis and the National Fallen Firefighters
2 Foundation — their Life Safety Summits in the meeting last year in Nevada.

3 So what about research? What are we doing in the research area? They — specifically your
4 comments that we leverage resources within other parts of NIOSH as well as external to do some of
5 the research that's needed in the fire service. In this regard, we have — both the Cincinnati group
6 and the Morgantown group has served as reviewers for the Homeland Security Fire Administration
7 Fire Act Grants. Internal research — actually we have submitted a proposal to seek internal money
8 to study heart and cancer among fire departments as part of the NORA process, which is the
9 National Occupational Research Agenda.

10 In addition to the NORA proposal, we have also conduct — helped to facilitate as well as
11 conducted what are known as “HHEs” or health hazard evaluations in the fire service, specifically
12 looking at cyanide, the potential for cyanide poisoning in the firefighters in the Providence Fire
13 Department. We also recently looked at exposures during motor vehicle fire suppression up in
14 Yellow Springs, Ohio. We also got a request to look at carbon monoxide exposures during water
15 rescue — the firefighters who are doing water rescue using jet boats. And finally, we've recently
16 been asked to look at heavy metal exposures among Boca Raton Fire Department and firefighters
17 there.

18 Evaluation: we're currently under — conducting a pilot program to assess the impact of the
19 NIOSH Fire Fighter Program, specifically after we conduct an investigation of a particular fire
20 department, sending a survey to that department, to the union, to the family with our report saying,
21 “What did you think about the report as well as what do you think you're going to do with the report?”
22 We follow that up a year later with another survey saying, “Not only what did you think of the report,
23 but did you actually do anything or implement the changes that were in the report?”

1 And finally, technical assistance: you requested that we provide information to fire
2 departments that have experienced a line-of-duty death, but are currently not getting an evaluation
3 or an investigation by the NIOSH team. And as part of that process, we call every department that
4 has gotten an on-duty cardiac fatality to collect information about that test to put it into our
5 prioritization process.


6 If it looks like we will not be doing one of those investigations, we will provide at that point
7 that department with resources — such as NFPA standards, IAFF/IAFC documents, as well as
8 medical literature — then and there to help them. And we share resources with them that we would
9 normally share during an investigation; we just wouldn't make a site visit. In addition, we are always
10 available by phone to provide assistance. And with that, I will turn it over to Paul Moore, who will talk
11 about our goals.

12 **P. MOORE:** Thank you, gentlemen.

13 **T. HALES:** We can't see the screen, so we're going to come down.

14 **P. MOORE:** Well, you have handouts.

15 **T. HALES:** True.
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Overview of the FFFIPP Draft Strategic Plan

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20 **P. MOORE:** I'd like to take a moment now and present to you a description of our draft
21 strategic plan which we've developed for the Fire Fighter Fatality Investigation and Prevention
22 Program and you should find a copy of this plan in your handouts. And if you check your packet, if
23 you don't have one, please see me some time during the meeting and we'll make sure you have
24 one.

1 The plan's also available for review on the NIOSH docket, which is you can reach that
2 through our web page. We're going to keep this on the docket open until December 19th so that
3 everybody has a chance to review it and provide comments. I encourage you to review the plan and
4 provide comments to us regarding your thoughts of its relevance to the needs of our nation's fire
5 service.

6 We intend to use the plan to guide our activities toward a positive impact on firefighter safety
7 and health. And we believe it will provide us with the necessary criteria to measure the program's
8 progress and effectiveness. The plan follows a framework that NIOSH has used to develop a
9 number of research plans.

10 As noted by the previous presenters, NIOSH conducts research and recommends safety
11 improvements. We do not have authority to mandate changes in workplace safety and we rely on
12 others to direct impact worker safety and health. Thus, NIOSH's strategic plans address the role of
13 others and identifies steps that NIOSH can use to foster our — use of our research results.

14 The components of a NIOSH strategic plan include a mission statement, a statement of
15 strategic goals and associated intermediate goals, activity/output goals and performance measures.
16 Our program's mission is to prevent deaths and injuries of firefighters by formulating and
17 disseminating recommendations based on research-based investigations of firefighter line-of-duty
18 deaths and facilitating the implementation of these recommendations by groups in position to impact
19 firefighter safety and health.

20 Strategic goals are top-level goals that state a specific desired change. Our strategic goals
21 articulate reductions in work-related illnesses, injury and exposure for firefighters. As noted, NIOSH
22 cannot directly achieve these reductions. However, by working with others, we can foster positive

1 changes toward a — changes based on our research. Our goals are meant to guide not only
2 NIOSH, but also to serve to guide stakeholders and partners toward a common research goal.

3 Our goals are consistent with draft goals developed by the NORA Occupational — or excuse
4 me — the National Occupational Research Agenda Public Safety Sub-Council and they align with
5 goals and activities of stakeholders and partners, such as the United States Fire Administration, the
6 International Association of Fire Fighters, the International Association of Fire Chiefs, the National
7 Fallen Firefighters Foundation, and the National Fire Protection Association.

8 Intermediate goals address activities that NIOSH believes need to be undertaken by
9 stakeholders, either organizations or individuals, using NIOSH research. Steps that NIOSH will take
10 to foster these activities are identified by activity/output goals. Several of our intermediate goals also
11 align with the NORA Public Safety Sub-Sector goals. If you'd like to review the NORA Public Safety
12 Sub-Council goals, they can be found at this web address. And by the way, you should also have a
13 copy of the slides for this presentation in your packet, so you should have a copy of the web address
14 there.

15 Our strategic goals address the high risk of cardiovascular disease; the death and injury
16 associated with structural firefighting operations; vehicle crash-related death and injury; and
17 firefighter death and injury from other causes. The activity/output and performance measures apply
18 to all our strategic goals and their associated intermediate goals.

19 These goals have been developed from — using input from the International Association of
20 Fire Chiefs Safety, Health and Survival Section; the Fire Fighter Fatality Investigation and Prevention
21 Program Task Force; the Office of Inspector General Report to Senator John Kerry; a Fire Fighter
22 Fatality Investigation and Prevention Program Evaluation, which we had conducted by RTI

1 International; input from the 2006 stakeholder meeting; and also relies on our *Future Directions*
2 document, a copy of which you should also have in your handout packet.

3 Our activity/output goals identify NIOSH projects and steps that NIOSH will take to
4 encourage use of the findings. The performance measures indicate progress toward our goals and
5 we plan to provide annual reports of our progress to our stakeholders. Fatality investigations remain
6 the primary function of our program. Toward that goal, we intend that each of our investigators
7 conduct three investigations per year, which at present staffing levels will provide 24 completed
8 investigations; 90 percent of our investigations will be for cases of cardiovascular disease, structure
9 fires and motor vehicle accidents.

10 We will strive to conduct a site visit within three weeks or less for 80 percent of the cases.
11 We also plan to obtain input to improve the design of our reports and we will seek input from our
12 stakeholders on case prioritization. To improve the timeliness of investigation completion, our goal
13 is to complete 50 percent of cases in six months; 70 percent of cases in nine months; and 95
14 percent of the cases in 12 months.

15 In addition to our reports — excuse me — in addition to our reports, we will continue to
16 develop other dissemination products, including *NIOSH Alerts*, safety advisories, workplace
17 solutions and peer-reviewed journal publications. We will seek to improve our products through
18 continued and increasing use of expert review for our fatality reports. As well, we will seek expert
19 consultation during investigations and we'll arrange for testing when investigative findings suggest
20 that failure of equipment or personnel protective gear are issues.

21 To improve the fire service expertise of our program staff, each of our investigators will
22 attend one fire service training class annually and at least one fire service conference. Additionally,

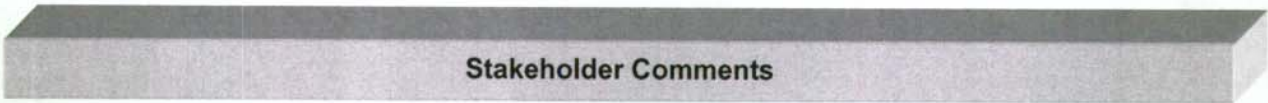
1 all new hires will be required to have fire service experience as well as occupational safety and
2 health knowledge.

3 To ensure adequate use of our findings, we will meet annually with the NIOSH National
4 Personal Protective Technology Laboratory and — pardon me. I think I must have gone ahead. No,
5 sorry. And we'll communicate our findings to the NFPA and other standards setting bodies. We also
6 plan to conduct at least two outreach activities annually with our partners.

7 Further, we plan on communicating our findings to manufacturers on a biannual basis and
8 we will continue to seek web site — or implement web site improvements. We also plan to develop
9 a fire department follow-back survey and also seek funding for continued evaluation of the impact of
10 our study.

11 As I indicated earlier, we have the draft strategic plan available on the NIOSH docket for
12 comment. It will be open until December 19th. You can make comments to the NIOSH Docket
13 Office, Robert A. Taft Laboratories, Mailstop C34, 4676 Columbia Parkway, Cincinnati, Ohio or you
14 can send us comments via e-mail at the noted e-mail address. We request that you make your
15 comments in Microsoft Word format and reference the "NIOSH Docket Number 063-A" in the subject
16 heading.

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20 **Stakeholder Comments**

21 **P. MOORE:** Prior to today's meeting, we had some notification from a number of our
22 stakeholders that they would be providing comments. So at this point in time, we're going to yield
23 the floor to those folks. The first commenter will be Battalion Chief Ed Hartin of the Gresham Fire
24 and Emergency Services, Training and Safety Division, Gresham, Oregon.

1 You should also note that through this comment period, I request that the commenters
2 please try to keep your comments to ten minutes and I'll indicate to you when the ten minutes is up.
3 But later today, we also will open the floor for more comments from the audience. So if you would
4 like to make additional comments, that would be the time to do it. Thank you.

5 **E. HARTIN:** Okay. As I mentioned to Paul this morning that I had some pointed criticism for
6 the program, but it's as a critical friend; that this is an outstanding program and a — and a true asset
7 to the fire service.

8 At the March 2006 public stakeholder meeting in Washington DC, I gave a brief presentation
9 that focused on several key issues: the upward trend in the rate of firefighter fatalities due to trauma
10 during offensive, interior firefighting operations; and the failure of NIOSH to adequately address fire
11 behavior; and limited understanding of fire dynamics as a causal factor or contributing factor in these
12 fatalities.

13 The issues that I raised at the 2006 stakeholder meeting continue to be a significant concern.
14 In 2007, extreme fire behavior was a causal or contributing factor in 17 firefighter line-of-duty deaths
15 in the United States. Where these incidents were investigated by NIOSH, the investigations, and
16 subsequent reports, and recommendations did not substantively address the fire behavior
17 phenomena involved nor did they provide recommendations focused on improving firefighters and
18 fire officers understanding of practical fire dynamics.

19 In the 20 months since the 2006 meeting, NIOSH has implemented a number of stakeholder
20 recommendations and I was encouraged by a number of the things that I — that I heard this
21 morning. However, the line-of-duty death reports continue to lack sufficient focus on fire behavior
22 and human factors issues contributing to traumatic fatalities during offensive, interior firefighting.
23 Where these reports could provide substantive recommendations for training and operations that

1 would improve firefighter safety, they continue to provide general statements reflecting good
2 practice.

3 While the recommendations contained in the NIOSH reports are correct and critically
4 important to safe and effective fire ground operations, they frequently provide inadequate guidance
5 and clarity. In incidents involving extreme fire behavior, investigators frequently fail to adequately
6 address the fire behavior phenomena involved in the implications of the action or inaction of
7 responders. In addition, while training is addressed in the — in the — in terms of national
8 consensus standards or a standard state fire training curriculum, there's no investigation as to how
9 the level of training in practical fire dynamics, fire control and ventilation may have impacted on
10 decision-making.

11 Examination of *Death in the Line of Duty Report F2007-29* will be used to illustrate the
12 limitations of these important investigations and reports in incidents where extreme fire behavior was
13 involved. There are many important lessons — many important lessons that can be learned from
14 this incident. However, the — this analysis focuses on fire behavior and related tactical decision-
15 making. Examination of this incident is completed with all due respect to the individuals and
16 agencies involved in an effort to point out systems issues related to identification and implementation
17 of lessons learned from firefighter fatalities.

18 On August 3, 2007, Captain Kevin Williams and Firefighter Austin Cheek of the Noonday
19 Volunteer Fire Department lost their lives while fighting a residential fire. Neither names of the
20 individuals, nor the departments involved nor any reference to the report released by the Texas
21 State Fire Marshal's Office was included in NIOSH *Death in the Line of Duty Report F2007-29*. This
22 is critical to locating additional information regarding the incident, even more importantly, to

1 emphasize that firefighter line-of-duty deaths involve our brother and sister firefighters, not simply
2 "victim number 1" and "victim number 2."

3 NIOSH *Report F2007-29* does not clearly identify that extreme fire behavior was a causal or
4 even contributing factor in the deaths of Captain Williams and Firefighter Cheek. It simply states that
5 they died as a result of smoke inhalation and thermal burns. This incident involved fire in a single
6 family residence. The first arriving crew initiated offensive, interior fire attack in conjunction with
7 placement of a positive pressure fan at the entry point.

8 There's an inconsistency between the NIOSH report and that completed by the Texas State
9 Fire Marshal regarding the timing of positive pressure ventilation. This seems to be a minor point,
10 but effective ventilation would have significantly changed the fire behavior indicators observed from
11 the exterior and inside the building. NIOSH *Report F2007-29* did not speak to the fact that none of
12 the first arriving personnel verified the size and adequacy of the existing ventilation opening; the
13 potential implications of inadequate exhaust opening size; and the need to verify that positive
14 pressure ventilation was effective prior to entry.

15 In addition, the initial attack crew observed flames moving from the — moving towards the
16 point of entry, which would not be likely if the positive pressure ventilation was effective. However,
17 no mention was made in the NIOSH report regarding the conditions inside the building and the
18 observations of the attack team. Recognition of this discrepancy along with a sound understanding
19 of practical fire dynamics would have pointed to the ineffectiveness of tactical ventilation and
20 potential for extreme fire behavior.

21 In reading this case study, it would be useful for the reader to be able to make the
22 connection between key fire behavior indicators, the decisions made by on-scene personnel and
23 subsequent fire behavior. The NIOSH report did not identify the indicators initially observed by

1 interior or exterior crews, nor did it draw any conclusions regarding the stage of fire development,
2 burning regime or effectiveness of the positive pressure ventilation, all of which were likely factors
3 influencing the outcome of the incident.

4 As the description of the incident continued, the report provided limited information regarding
5 fire behavior indicators observed by on-scene personnel. However, smoke and air track indicators
6 discussed in the State Fire Marshal's report along with photographs of incident conditions provides
7 valuable information. Understanding what occurred in this incident requires more than the cursory
8 information provided in the NIOSH report. Discussion of fire behavior indicators and their
9 significance in NIOSH reports would provide an excellent learning opportunity.

10 *Report 2007-29* addresses the need for the incident commander to conduct risk versus gain
11 analysis prior to and during interior operations. However, the report does not address the
12 foundational skill of being able to read the fire and predict likely fire behavior as a part of that
13 process. In addition, reading the fire and dynamic risk assessment are not solely the responsibility
14 of the incident commander. Everyone on the fire ground must be involved within the scope of their
15 role and work assignment. For example, initial and subsequent attack teams were in a position to
16 observe critical indicators that were not visible from the exterior of the building.

17 While there's no way to tell, it's likely that if Captain Williams and Firefighter Cheek
18 recognized the imminent probability of extreme fire behavior or significance of changing conditions,
19 they would've withdrawn the short distance from their operating position to the exterior of the
20 building. Likewise, if the incident commander and others operating on the exterior recognized
21 deteriorating conditions earlier in the incident, it's likely that they would've taken action sooner to
22 withdraw the crew working on the interior.

1 Understanding practical dynamics, recognition of key indicators and predicting likely fire
2 behavior are critical to situational awareness and dynamic risk assessment. Fire behavior and fire
3 dynamics receive limited focus in most standard fire training curricula. It's important that NIOSH
4 examine this issue when extreme fire behavior is a causal or contributing factor in a line-of-duty
5 death.

6 The NIOSH report makes general — makes a general recommendation that fire departments
7 should ensure proper ventilation is done to improve interior conditions and it is coordinated with
8 interior attack. However, the report is misleading and fails to address key issues related to tactical
9 ventilation, its effective application and its tremendous influence fire behavior. It would be helpful to
10 provide more specific guidance. Lack of an adequate exhaust opening prior to pressurizing the
11 building has been a major factor in a number of incidents which resulted in extreme fire behavior,
12 such as ventilation-induced flash over a backdraft.

13 The NIOSH report pointed out that smoke pushed out the inlet and overrode the effects of
14 the blower, but attributed this to the presence of an attic floor that interfered with vertical ventilation
15 rather than the lack of an adequate exhaust opening for the initial horizontal ventilation. In addition,
16 the report fails to note that the location of the horizontal opening made later in the incident placed
17 the attack team between the fire and an exhaust opening. As with the — as with the lack of
18 adequate exhaust, this has been demonstrated to have the potential for disastrous consequences.

19 NIOSH made six recommendations based on analysis of the incident in which Captain
20 Williams and Firefighter Cheek lost their lives. All are important to firefighter safety, but two more
21 closely address the major factors involved in the outcome of this incident: the importance of ongoing
22 risk assessment and the use of proper and coordinated ventilation. However, these broad

1 recommendations miss the mark in providing useful guidance in minimizing the risk of similar
2 occurrences.

3 Other than indicating that ventilation must be coordinated with interior attack, the NIOSH
4 report did not speak to fire control operations conducted during this incident. Just as ventilation
5 must be appropriate and coordinated with interior fire attack, fire control must also be appropriate
6 and coordinated with tactical ventilation. NIOSH death in the line-of-duty reports must explicitly
7 address the effects of tactical operations, particularly where effectiveness or ineffectiveness are a
8 contributing, causal factor in the line-of-duty death.

9 While this assessment has been quite critical of NIOSH's investigation of traumatic fatalities
10 involving extreme fire behavior, it's important to emphasize that with all its faults, the Firefighter
11 Fatality Investigation and Prevention Program is a tremendous asset to the fire service. The
12 following recommendations are made to further strengthen and improve the quality of this program
13 and the utility of recommendations made to reduce the risk of firefighter line-of-duty deaths as a
14 result of extreme fire behavior during structural firefighting.

- 15 • The first is to emphasize the criticality of understanding fire behavior, causal factors in
16 extreme fire behavior, and the influence of tactical operations, such as fire control and
17 ventilation.
- 18 • Increase attention to fire behavior indicators when investigating incidents which may
19 have involved extreme fire behavior as a causal or contributing factor.
- 20 • Examine training in greater detail with specific emphasis on fire behavior, situational
21 assessment, realistic live fire training, and crew resource management.
- 22 • Provide fire behavior training to all NIOSH investigators to improve their understanding of
23 fire development, extreme fire behavior phenomena, and the impact of tactical

1 operations. And I'm encouraged by the comments earlier that this is — these are some
2 steps that are already being taken.

- 3 • Include a fire behavior specialist on the investigation team when investigating incidents
4 that may have involved extreme fire behavior as a causal or contributing factor. And I
5 know in some instances this has — this has been done and there's been some
6 partnerships between NIOSH and NIST in this area.
- 7 • And initiate investigations quickly to avoid degradation of the quality of information
8 obtained from individuals involved in the incident and other witnesses.

9 Thank you.

10 **P. MOORE:** Thank you. Thank you for those comments. Our next comments will be from
11 Carl Petersen, who's the Assistant Director of Public Fire Protection for the National Fire Protection
12 Association.

13 **C. PETERSEN:** Thank you. Actually, I'm here this morning more as the staff liaison to the
14 NFPA Committee on Fire Service Occupational Safety and Health. That committee has
15 responsibility for seven documents, all of which benefit tremendously from this program and the
16 input that the recommendations and the investigations are able to provide.

17 For those of you not familiar with the seven documents, they are NFPA 1500, which is the
18 Fire Department Occupational Safety and Health Program; NFPA 1521, which is the Fire
19 Department Safety Officer; NFPA 1561, Emergency Service Incident Management System; NFPA
20 1581, Fire Department Infection Control Program; NFPA 1582, Comprehensive Occupational
21 Medical Program for Fire Departments; NFPA 1583, which is Health-Related Fitness Programs for
22 Firefighters; and NFPA 1584, Rehabilitation Process for members during emergency operations and
23 training exercises.

1 As we look at the Fire Fighter Fatality Program — Fire Fighter Investigation and Prevention
2 Program, I want to address the question of what is NFPA's stake in this program? The simple
3 answer is to use data produced as a result of investigations to enhance NFPA's Annual Firefighter
4 Fatality Study; provide input for NFPA's Fire Service Health and Safety Standards; and support
5 requests for information on firefighter health and safety issues.

6 For the NFPA firefighter fatality studies which are done annually, the report provides a
7 reliable source of information as thorough in reporting the factors and the deaths; provide relevant
8 recommendations; often include details not otherwise available; and they're consistent in format,
9 unlike reports from various fire departments.

10 Technical committees are constantly reviewing the codes and standards they are
11 responsible for to determine if the existing requirements are working or whether different
12 requirements should be included. Such decisions are made using the best available information
13 which sometimes is less than complete.

14 The Fire Fighter Fatality Investigation Program has provided both detailed information for
15 technical committees to use and technical staff who are involved with the NIOSH programs to
16 participate as members of the technical committees to help interpret the information and develop the
17 standards language needed to address the problems.

18 We frequently get questions about firefighter deaths and injuries, which we answer with a
19 combination of statistics over a range of years and examples. The NIOSH reports provide excellent
20 details and specific recommendations that the person or fire department requesting the information
21 can then incorporate into their training, operating procedures and injury prevention programs.

22 At the 2006 stakeholders' meeting, NFPA provided comments on 13 questions in seven
23 areas where NIOSH requested stakeholder input. NIOSH made several changes to the program

1 based on stakeholder needs and posted them on their web site. These were modifications, and
2 future directions, and some obviously contingent on available funding. We now want to focus on the
3 future direction.

4 NFFPA supports NIOSH's decision to maintain the intensity and — of the investigations at the
5 current level and we encourage an increase if additional funding could be found. The posting of the
6 *Prioritization Guideline* is helpful, but we question why sudden cardiac death incidents is not a
7 priority. In the five-year period from 2003 to 2007, there were 206 sudden cardiac deaths of which
8 51 occurred at fires. In fact, based on the *Prioritization Guide*, 174 of the 206 sudden cardiac death
9 incidents over the past five years would only be investigated if they were in proximity to another case
10 being investigated.

11 This slide shows the magnitude of the firefighter fatality problem over the five-year period
12 from 2003 to — through 2007. Very close to half of the deaths are related to medical problems of
13 which sudden cardiac death is the largest. However, there have been 29 fatalities that were
14 medically-related, but were not cardiovascular disease. These include stroke and CVA, 14 cases;
15 aneurysms, 2; embolisms or blood clots, 3; drug overdose, 3; heat stroke, 2; septic shock, 2;
16 seizure, 1; pneumonia, 1; and hydrogen sulfide fumes, 1.

17 While a couple of these appear specifically on the NIOSH *Prioritization Guideline*, others do
18 not. We would suggest that the right side of the *Guideline* be relabeled as either “non-traumatic” or
19 “possibly medical” to indicate that it is broader than just cardiovascular. We would further encourage
20 that the decision box that is currently for seizures, diabetes or medication overdose be expanded to
21 include the other non-cardiovascular or medically-related deaths.

22 NFFPA concurs with the NIOSH focus for investigations and fatality reports as shown on this
23 slide and additionally feel there is a great value in increasing references to best practices and

1 standards where appropriate. While additional review by external experts and the development of
2 training aids for reports to enhance the reports, timeliness is also important in getting lessons
3 learned incorporated in training and operational procedures in the field.

4 NFPA supports the efforts to investigate some non-fatal cardiovascular disease incidents.
5 Likewise, investigation of some significant non-fatal trauma injuries would be useful. However, on-
6 duty fatalities needs to remain the primary focus. And as we've already heard, with limited
7 resources, this program — at least at the current time — is not going to be able to be expanded in a
8 lot of other areas. We encourage investigation of non-CVD fatalities that result from other medical
9 problems. As I previously mentioned, there have been 29 of these over the past five years.

10 NFPA staff currently — excuse me — NIOSH staff currently participate on nine NFPA
11 Technical Committees which develop 29 — 21 standards on fire service occupational safety and
12 health and personal protective clothing and equipment. These staff include Tom Hales, who you just
13 heard from, Jay Tarley, Les Boord, William Haskell, Tom Reack, Angie Shepard and Roland
14 BerryAnn. Some of these individuals serve on multiple committees. In addition, the Fire
15 Investigation Program staff work closely with Dr. Rita Fay of NFPA's Fire Analysis and Research
16 Division to get important statistical information incorporated in the reports and special studies when
17 appropriate.

18 NFPA is committed to assisting with the dissemination of information on the availability of
19 NIOSH reports. We are developing a new web site focused on fire service issues which will allow us
20 to increase the exposure of the reports to the fire service. I also have some other ideas which I'm
21 going to discuss with our staff when I get back as for better ways to incorporate some of this
22 information.

1 NFFPA supports efforts to foster research that builds on NIOSH investigative findings in
2 coordination with other NIOSH divisions, other governmental agencies and the private sector. NFFPA
3 currently has a memorandum of understanding with the National Personal Protective Technology
4 Laboratory that is supporting research to improve NFFPA personal protective equipment standards.

5 More than ever before, people at all levels throughout the fire service are focusing on
6 creating a safety culture in the fire service and focusing on behaviors and wellness programs. This
7 is helped in part by the constant drumbeat of NIOSH reports when they are released. In the past
8 with fatality figures reported only annually, there was only a brief time each year when the attention
9 of the fire service and the public was focused on firefighter safety.

10 The NIOSH Fire Investigation Program makes a difference. The investigation reports, the
11 research projects that NIOSH can build around the investigations, and the *NIOSH Alert* bulletins are
12 all essential components that drive to inform the fire service of the issues that lead to firefighter
13 fatalities; to develop and maintain relevant codes and standards; and to legislate, enforce and fund
14 changes in the fire service that will make firefighters safer. Who will fill the void if the level of fire
15 investigations is cut back?

16 NFFPA promulgates many standards whose purpose is to improve firefighter health and
17 safety. I mentioned seven of them when I opened it up; there are others, of course: NFFPA 1901 on
18 fire apparatus; NFFPA 1971 on protective ensembles for structural and proximity firefighting; NFFPA
19 1981 on self-contained breathing apparatus; NFFPA 1982 on personal alert safety systems, and
20 many, many more.

21 We encourage the continuation of this very important program and stand ready to assist
22 NIOSH for reviewing and providing data for reports and using and disseminating the information to
23 improve firefighter safety. Thank you.

1 **P. MOORE:** Thank you. Thank you, Mr. Petersen. Next we will have comments from J.
2 Gordon Routley, who's here representing the National Fallen Firefighters Foundation. Mr. Routley?

3 **G. ROUTLEY:** Thank you. Good morning. I look out; I see a lot of familiar faces out there.
4 I'm here today representing the National Fallen Firefighters Foundation at the request of Executive
5 Director Ron Siarnicki and Chairman of the Board Dennis Compton.

6 The National Fallen Firefighters Foundation strongly supports the mission of the NIOSH Fire
7 Fighter Fatality Investigation and Prevention Program and unequivocally shares the goal of
8 preventing future firefighter deaths and injuries. We also support and recognize the progress that
9 has been made toward accomplishing the specific objectives of this program, which are to better
10 define the characteristics of line-of-duty deaths; develop recommendations for the prevention of
11 deaths and injuries; and to disseminate prevention strategies to the fire service.

12 NFFF believes that this program is an — is an important program that provides critically
13 needed information and education to the fire service. The Fire Fighter Investigation Program —
14 Fatality Investigation Program has a very difficult name to say — has had a significant positive
15 impact on making the fire service and individual firefighters aware of important safety information
16 and reducing the risk of firefighter fatalities.

17 As background, the National Fallen Firefighters Foundation, in partnership with the U.S. Fire
18 Administration and several other fire service organizations, is committed to the goal of reducing line-
19 of-duty deaths by at least 50 percent. In 2004, the Foundation convened the first "Fire Fighter Life
20 Safety Summit," which produced the 16 Fire Fighter Life Safety Initiatives. One of those initiatives
21 clearly states the need to thoroughly investigate all firefighter fatalities, injuries and near misses.

22 The Foundation and our partner organizations have actively supported and promoted the
23 adoption and integration of this particular initiative and all 16 of the initiatives throughout the fire

1 service. The NIOSH program as well as the IAFC Near-Miss Program are important components of
2 that effort. Excuse me for a second while I get myself back lined up here.

3 We would like to make comments about the program, but from the point of view that we fully
4 support what has been accomplished by this program. We simply want to ask for more. We think
5 it's — the program is doing a very good job of, to the extent that it's possible with the resources that
6 are available, we think the mission is appropriate. We think the approach is appropriate. Really, we
7 just want more to be done. We would like to see continued progress.

8 We're very pleased with the effort that has been accomplished with the current level of
9 funding. We begin by noting that there are two major components of the program as noted
10 previously: one addressing cardiovascular and medical fatalities and the other traumatic. Most of
11 our remarks are intended for the traumatic side, not because we don't think that the cardiovascular
12 and medical side is unimportant, but we think what's going on there is just doing an excellent job and
13 we want to encourage continuation.

14 We're particularly happy to hear of the expansion into further areas, particularly into cancer
15 and some of the other causes that we think are equally important. With respect to the Traumatic
16 Fatality Program, we have three areas that we'd like to emphasize. We think more investigations
17 should to be conducted; that more detailed and comprehensive investigations should be conducted
18 of individual incidents; and there should be an increased emphasis on research and analysis based
19 on the findings.

20 We believe that those enhancements would lead to the identification of previously
21 undiscovered or overlooked problem areas and the development of additional strategies to reduce
22 the risk of firefighter fatalities. We also believe that the program should examine and possibly
23 challenge some of the existing assumptions that may be contributing to the loss of firefighter lives.

1 There's a widely held assumption throughout the fire service that this program brings to bear
2 the full capabilities of NIOSH and the federal government to conduct extremely detailed and
3 comprehensive analysis of each incident that results in a firefighter fatality. In reality, the resources
4 that are available to the program permit only a limited number of investigations to be conducted.
5 And those investigations are generally conducted at an "overview level" as opposed to a detailed
6 and comprehensive analysis of the incident and all of the related and contributing factors.

7 The program, as it is currently configured, is aimed at capturing the basic circumstances,
8 identifying the most significant contributory factors, and producing non-judgmental reports that will
9 deliver educational information to a broad fire service constituency. The NIOSH investigators do not
10 have time, the resources or the broad scope of expertise that would be required to conduct more
11 comprehensive investigations.

12 While the program is making a valuable contribution to the overall effort to reduce firefighter
13 fatalities, it's not satisfying the need for detailed and comprehensive investigations of each incident,
14 nor is it providing the scope and depth of analysis that would support major advances in firefighter
15 health and safety. Additional resources and/or alternative methods would be required to accomplish
16 that objective.

17 One of the major problems that really has to be addressed is the general misunderstanding
18 of this program objectives and capabilities, which tends to discourage the establishment of
19 alternative mechanisms that could conduct more detailed and comprehensive investigations through
20 other mechanisms or organizations. There's a common belief that NIOSH is conducting such a
21 thorough and detailed examination that there's really no need for further investigation or additional
22 investigation in many cases.

1 There are several examples of individual fire departments, state agencies and fire service
2 organizations that have established sophisticated systems to conduct detailed line-of-duty death
3 investigations using standard protocols. And there was mention earlier of the refinements that are
4 being made in the protocols sponsored by IAFF and IAFC for that particular purpose. Some of the
5 reports that have been produced in this manner go far beyond the level of analysis that's found in
6 most of the reports produced by the NIOSH program.

7 The overall goal of reducing firefighter fatalities could be enhanced if NIOSH could support
8 the establishment of highly capable and qualified teams to conduct comprehensive fatality
9 investigations and then work closely with those teams. This approach would support a more
10 cohesive effort to ensure that fatal incidents are fully investigated and the results are freely shared
11 throughout the fire service.

12 The cooperative approach could be even more efficient if the NIOSH investigators could
13 focus on specific areas where NIOSH has the most advanced capabilities, such as — such as
14 breathing apparatus and respiratory protection, while other members could provide expertise that's
15 not within the domain of expertise of NIOSH. Working closely with organizations to conduct more
16 comprehensive investigations would also help to alleviate a problem that has been reported in
17 several instances where the NIOSH report included observations or recommendations that appeared
18 to conflict with the findings of another report.

19 While the potential for differing conclusions cannot be totally eliminated, most of these
20 problems could be avoided if the investigators worked cooperatively and exchanged information
21 instead of duplicating efforts and working independently. In many cases, the program objectives
22 could be satisfied by making reference to a comprehensive report that was prepared by another
23 qualified investigation team, allowing the NIOSH resources to be utilized for additional investigations.

1 A second area of concern involves the limited scope of the findings and recommendations
2 that are produced by this program. The program appears to be directed primarily toward a narrow
3 range and limited analysis of complex issues. The investigation reports tend to focus on hazards
4 and operational issues that are already well known and provide recommendations that emphasize
5 accepted good practices. Many of the same recommendations are found in multiple reports and can
6 be referenced directly to existing NFPA standards, OSHA regulations and other credible published
7 sources.

8 It is an unfortunate reality that firefighter fatality investigations often identify situations where
9 a tragedy could have been prevented if existing knowledge and accepted safety practices had been
10 applied. It is also evident that many of the same contributing factors and recommendations apply to
11 many similar incidents. We must continue our efforts to educate the fire service to stop making the
12 same mistakes. This — the reports produced by this program provide strong reinforcement for
13 lessons that should already be integrated and ingrained throughout the American fire service.

14 But at the same time, we need to critically examine our conventional wisdom and accepted
15 good practices. We need to look beyond what went wrong to determine why the same mistakes are
16 made repeatedly. We may be overlooking or misinterpreting important information that could point
17 toward different recommendations. The accepted good practices may be based on inaccurate
18 assumptions. There may be unrecognized causal factors that are contributing to the loss of lives.
19 We should be continually reevaluating the underlying assumptions and supporting the development
20 of better practices.

21 The Fire Fighter Fatality Investigation Program should be our most powerful program to
22 conduct applied research on the causes and prevention of firefighter fatalities. There's no other
23 national program that has the ability to investigate individual cases, compile and analyze the

1 information from a large number of occurrences, and support research and development efforts to
2 identify and address problem areas. The information that's produced through this program should
3 support and influence the development of the next generation of standards and good practices.

4 The reports rarely today include a recommendation that cannot be referenced to a
5 recognized credible source. This creates the appearance that the credibility of the program is based
6 on the credibility of those referenced sources and it tends to institutionalize the presumption that
7 they represent conventional wisdom in the fire service in relation to firefighter health and safety. We
8 simply should not be satisfied with the guidance that is provided by existing norms. We should be
9 testing their validity, questioning the inherent assumptions and seeking better answers. This can't
10 occur if the process doesn't look beyond the current horizons.

11 Most of the existing firefighter safety standards and recommended practices are based on
12 the experience and opinions of the individuals and small groups that were involved in their
13 development. The resulting body of accepted knowledge represents the mainstream of the fire
14 service health and safety movement. And these fundamental concepts and values have been
15 gradually integrated into the modern fire service culture over the past 30 years.

16 This program should be the primary source of validated information and critical analysis to
17 support further progress in firefighter health and safety. We should be questioning assumptions and
18 recommendations that have never been proven, seeking validation or looking for different answers.
19 We should be asking whether the best practices could be improved upon. We should be looking for
20 indications of problems that have been overlooked or misinterpreted. These goals will not be
21 realized if the mission of this program is limited to producing findings and recommendations that
22 keep pointing back to the conventional wisdom.

1 We just can't afford to presume that all of our problems can be solved through education and
2 compliance with things that we already know. Continually reinforcing the same lessons and best
3 practices gives the impression that everything important in relation to firefighter safety — health and
4 safety has already been discovered. This program should have a direct path to the organizations
5 that are involved in developing new standards, refining existing standards and conducting research
6 on newly defined problems. The communications process must be bi-directional. Those
7 organizations should also be directing questions to this program and seeking information to support
8 their efforts.

9 The National Fallen Firefighters Foundation participated in and fully supports the
10 recommendations of the Task Force that was convened by the Safety, Health and Survival Section
11 of the International Association of Fire Chiefs. We're also fully prepared to work with NIOSH to
12 further the objectives of the program and those recommendations. Those recommendations
13 included additional resources for the program to increase the number of investigations that are
14 conducted as well as the depth of analysis and dissemination of information. The NIOSH
15 investigators must have the time, the resources and the scope of expertise to look below the surface
16 as they conduct investigations.

17 We also fully support the Task Force recommendations relating to the establishment of
18 regional or national teams to conduct more comprehensive investigations of selected incidents. And
19 we feel this should be fully compatible with the NIOSH program. The investigation teams should
20 include individuals who have a solid background in fire department operations and understand all of
21 the assumptions and presumptions that are incorporated into existing standards and recommended
22 practices.

1 Increasing the use of subject matter experts will help to provide greater depth to the
2 investigative process. Every investigation team should include expertise in the full range of issues
3 that could be related to the incident. The Task Force also recommended the establishment of an
4 advisory process to increase stakeholder guidance and review of the Fire Fighter Fatality
5 Investigation and Prevention Program. This meeting is evidence that that effort has begun and the
6 National Fallen Firefighters Foundation is fully committed to making it successful. Thank you for the
7 opportunity to make these remarks today.

8 **P. MOORE:** Thank you. Thank you, Mr. Routley. Next we'll have comments from Mr.
9 Richard Duffy, Assistant to the General President, Occupational Health, Safety and Medicine,
10 International Association of Fire Fighters. Mr. Duffy?

11 **R. DUFFY:** Great. Well, thank you all for having me here today. I'm Rich Duffy. As I said,
12 I'm with the International Association of Fire Fighters. And also joining me here today is Jim
13 Brinkley. Jim's with — been with us now for about a year. He's a former firefighter, fire officer
14 directly involved in lots of health and safety issues in the Prince George County Department and was
15 a former president of our local in Prince George County. So Jim's with me today. If there's
16 discussion this afternoon, both of us will be involved with that.

17 Again, I want to certainly thank Dr. Branche for being here. It's an honor and not just to me
18 because she's a good friend of mine, but I think it's an honor to the program to have the head of a
19 federal agency come to a meeting as small as this, especially in a — in a time of — an exciting time
20 of a transitional government where I know her workload is beyond — well, is pretty detailed. So
21 thank you, Dr. Branche for being here.

22 And I want to thank some of the other NIOSH people and I think at some point, we should
23 break, perhaps introduce the other folks in different programs beside the Fire Program: the Division

1 of Safety Research folks, the HHETAB folks, and certainly the folks from NIOSH that work in the
2 NORA Program. There's an awful lot of people that are involved in this process and we're quite
3 elated about it, but again, we would like to certainly recognize the additional work that's been done
4 for firefighters by NIOSH.

5 NIOSH has been our friend for a long, long time in many, many avenues and we certainly
6 appreciate it. And our comments here today reflect that friendship and also reflect some needs in
7 this particular program. I think everybody in this room knows who the IAFF is. We represent almost
8 300,000 men and women in the U.S. and Canada that do firefighting and emergency medical
9 response.

10 It's great being here in our second largest city. It's also good to see a good friend of mine,
11 Tom Ryan. Tom Ryan is the president of Local 2 and represents the men and women, the
12 firefighters and paramedics here in the — in this city. Well, I guess we're almost in the city of
13 Chicago. And also there's — I'm not the introduction MC, but you bump into people that you haven't
14 seen or have been a friend of yours for a long time.

15 Also, the fire marshal for the — for the state of Illinois who is formerly the state president
16 here in Illinois for decades and has been a friend of mine for 30 years; Dave Fulmer's also here —
17 so hi, Dave — and a bunch of other people that I don't — I guess I almost mentioned everybody.
18 But it's good here; it's good to be here and it's good to discuss this program.

19 I'm going to spend one moment to talk about little historical issues here because I think it's
20 important that people don't forget the history that's involved in this program. As I said before,
21 NIOSH was involved in a number of firefighter issues during my tenure of 30 years at the IAFF. In
22 fact, one of the first involvements that they had in detailed investigations happened in Lubbock,
23 Texas after a number of firefighters were killed when their Scott 2 breathing apparatus failed. And

1 that investigation was run out of the Division of Safety Research where they were doing the
2 certification at the time and they certainly made a difference in the — in a first time detailed look at
3 fire departments.

4 It moved over to the health side, and ironically, the — one of the first health evaluations that
5 the federal government ever did of firefighters non-fatality happened in Ohio. It was small city,
6 Alliance, Ohio, where they had a pesticide fire a couple of years before and they had a lot of
7 neurological — I guess I've said it fairly — effects of firefighters. And they actually went in and did a
8 health hazard evaluation, which we've done dozens upon dozens that led up to this program.

9 But in the — in the late '90s, President Clinton, who listened to some of the things that we
10 asked for, we went to him on a number of occasions and said at him and the — and his
11 Administration — and said, "It's time we begin a program to investigate firefighter fatalities." And we
12 used the analogy which we've used many, many times. You know, when a cop dies, it's a crime.
13 And there is a big investigation and there's considerable resources, lots of federal resources as well
14 as local resources to look into that police officer's death because killing a cop is crime.

15 When a firefighter died, we did good funerals and we still do good funerals. But you know
16 what? We did a lousy job of going out and investigating those. And we said — and it was hit or
17 miss and I don't want to take anything away from the work that people did to investigate fires. I
18 know NFPA for years historically went in. The Fire Administration began doing them. Gordon
19 Routley, who just spoke, was involved in numerous investigations of fires through the Fire
20 Administration and through Tri-Data.

21 A subcontractor worked with them for many years, but it was hit or miss or it was big
22 incidents that was national attention; and that we learned from those, but we thought there was

1 indeed a need for the federal government to do that. And NIOSH was the logical group to do it
2 because they have the statutory authority to address and to look into workers' health and safety.

3 So from the beginning of — from President Clinton first coming out and actually put it into his
4 budget — and I think it was, at that time, was \$2½ million which I guess is what it still basically is,
5 unfortunately, around that today — began that program. So we're in our — moving into our second
6 decade of a — of a program that NIOSH has been involved with. And we certainly appreciate it and
7 we certainly stay involved in it.

8 Again, in my 30 years at the IAFF, I've been involved now in probably 2,200 firefighter
9 fatalities. And that involves either going to them — and I've been at every multiple firefighter fatality
10 in the past, I guess, 28 years now. So more than one dies, we go. And again, you learn from that,
11 but you assist in that. And you assist our local affiliates in that fire department at the time of their —
12 of their biggest needs.

13 And we also think the investigation part, and the history part of this investigation part, and
14 our thought process from the beginning was if we had the federal government in there, fire
15 departments would do a better job to investigate that incident and that has occurred. I think that is
16 one of the biggest successes of this particular program; the fact that NIOSH, *i.e.*, the federal
17 government is going to come into your fire department and investigate an incident if a firefighter dies
18 is pretty important.

19 And don't look at it as negative. That is not a negative statement; that is certainly positive.
20 And the fact that fire departments, whether big or small, are using their own tools to investigate it in
21 coordination with — hopefully, will continue coordination with those programs. And then there's the
22 big incident — incidents. I mean, those are — who aren't aware which should be, and for the record

1 will be aware, Gordon Routley who just spoke is the Gordon Routley of the Routley Report from
2 Charleston, South Carolina.

3 And I don't care to give up and I don't think it's important how many tens of thousands, many
4 tens of thousands of dollars it cost for that investigation, but it took over a year's worth of effort from
5 Gordon and six of his colleagues put that report together. And it's a fantastic job and no one has the
6 tools to do that for all incidents, but there were a lot of reasons for it. And we certainly were not
7 proud, but professionally, we were very carefully reviewing that report and it did make a difference.

8 The Charleston Fire Department today is an order of magnitude that it was 18 months ago
9 and we expect that to incrementally increase. And it was from that effort, from the effort of the
10 Routley Report that made a big difference. And the NIOSH involvement in that process and the
11 other federal agencies that were involved, including NIST that was involved in that process, was
12 indeed important. And it did make a difference, not just for the safety of the firefighters, but in this
13 particular case, it's making a tremendous difference for the safety of the community there.

14 Some of my comments on this — and I certainly agree with Chief Hartin's comments. I
15 agree with probably all the comments here on some of the more details. But I want to give you
16 some global comments in my limited time here. One, these stakeholder meetings: we've got to stop
17 holding stakeholder meetings in the middle of November at airports with limited time for people to
18 come here.

19 It's great that some handful of people are going to see that — see this thing, but there are
20 venues where thousands of people would come to this meeting. I mean, you hold this stakeholder
21 meeting at the Fire Departments Instructors Conference, for example — of which the IAFF attends,
22 but it's not our deal; it's a separate deal — 26,000 firefighters attended over a five-day or so period.

1 And I can assure you, you hold a stakeholder meeting there, people will be waiting down the
2 hallways to get into this room.

3 That's an important part of this program, but it's also an important part of the feedback. I can
4 speak in front of this microphone, which I do all the time. People get tired of hearing me, but I enjoy
5 hearing people that we haven't heard before. And I think if we have bigger audiences such as that,
6 that's important. And there are other venues. Certainly, the IAFF conferences where we bring
7 thousands of people in and people would attend either stakeholder meetings or additional focus
8 meetings that you already have them to discuss; the IAFC; the Congressional Fire Institute.

9 There are those that if you schedule them early, I can assure you — at least any of those
10 that I have any involvement in either directly or indirectly — that we could fill rooms and get that
11 needed input to the government for these particular programs. So not a shot, but just a comment to
12 begin with.

13 I think — and I've said this from day one when Linda Rosenstock began the program two
14 former directors ago. I said this to Dr. Howard during his tenure and I'm going to say it. I'm going to
15 continue to say that to Dr. Branche, and her successors and so on until this is accomplished. And
16 Chief Hartin's also said that this morning.

17 It is a dishonor to not include the fire department and the man or woman that died when you
18 investigate that particular incident. I think it's — and again, I say this personally because I know
19 these people. Even though there's 2,200 of them, I've been with their wives, their husbands, their
20 mothers, their fathers, their kids, and their fire department and their union over my past 30 years.
21 It's public information. It was on the front page of that newspaper from the day it happened through
22 — and in many cases, many days or years afterwards.

1 It's not information that's not available. It's not HIPAA-protected or any other excuse and I
2 understand the NIOSH FACE Program. I understand how that criteria came out. I understand that
3 you want to — you believe that that works for FACE because of that. Because if you say a
4 warehouse with "employee A, B, C and D," it doesn't show where it is. It's different in the fire
5 service. We're public organizations. It's a public event, and certainly, there are faces involved.

6 The Charleston — whether it's the Charleston one or any single one death — and I just
7 picked them because when I did this slide show, they were on my top. But each of these nine men
8 have a face. They have an identity; they have a name and they have a fire department. And the
9 incident doesn't need to be called "a South Carolina fire."

10 It was a specific fire and I think that's — I think it's important for the investigation to know
11 where it is, but I think it's an honor for those people — a dishonor for not to include them and I think
12 that should be, once again, considered. And if it's not considered, you're going to hear me say it the
13 next time there's a stakeholder meeting. I hold that personal. My organization, my union holds that
14 personal.

15 I don't think there should be any reduction in investigations. I understand your strategic plan
16 right now, but no event is the same and I think that there should be NIOSH involvement there. Dr.
17 Hales talked this morning about the follow-up questionnaires. I think there needs to be part of this
18 process follow-up investigations, formal follow-up investigations — whether they're picked randomly
19 or there's some form for where they're picked — but I think there is a need to go back in there.

20 I have every single and have read every single NIOSH investigation since the beginning.
21 Many of the recommendations are very similar. I would bet you I know for a fact — well, let me just
22 say this. So in the fire investigations, every single one of them recommends that that fire

1 department immediately implement the wellness fitness initiative as one — just one specific
2 recommendation. I bet you 90 percent of them haven't done it yet.

3 Well, let's go back. Let's go back and find out what they have done. Let's go back and find
4 out some of the traumatic injury ones and what they have done. I think it's important. Why make
5 recommendations if they're not going to be done not as a punitive issue, but as an educational issue
6 and as a responsibility issue for the — for NIOSH doing the program? I think it gives more credibility
7 to the program and it'll certainly have a more significant impact.

8 I also agree with the previous commenters and those that you're also going to hear. I know
9 it's part of the Chief's report, which we were — we worked on that process; that there has to be large
10 significant events, *i.e.*, perhaps the Charleston one, and the Worcester ones and so forth need to
11 have additional resources devoted to them and I think there could be forms to use to do that.

12 I think the dissemination is working quite well; I think the web site, the e-mail blasts that you'll
13 — that you do. But I think one other step that needs to be part of this process is that on the —
14 whether it's done on — well, it needs to be done on the NIOSH web page because I think that's
15 where we get to our work. I know the Chief's work and I know others are using electronic
16 capabilities as the — as perhaps, some day the sole means of disseminating information, but it
17 works quite well.

18 I think all fatalities need to be logged and available on the — on the site. I think it needs to
19 be said that NIOSH is investigating, either they're investigating or not investigating, where that
20 investigator process. You don't know how many phone calls I get — and Tim can let you know that
21 later on — that we have myself, or Jim or one of the staff go up and say, "You know, where's the
22 investigation from Baltimore City?" I think that's the one we made the other day.

1 And because we get called, and we get called and you get called. And I think there is a way
2 to do that: place the fatality on your web site, identify whether it's going to be investigated, the
3 status of that investigation, and when the follow-up is done to do that. I think it would be a great part
4 of the program, save certainly us and others a lot of work and should be used.

5 I think the participation of other NIOSH agencies, as I said, historically, but in a — as we go
6 in the future, is also important. There are a lot of good worker protection tools that relate to the fire
7 service that are done by many more, a lot of the other agencies in NIOSH, not just the NPPTTL —
8 the laboratories in Pittsburgh — but certainly by the folks at DSHEFS, DSR (the Division of Safety
9 Research), the Health Surveillance Groups and others that play a significant role, and the outreach
10 and the work with them. There are other groups doing stuff with firefighters that people need to be
11 aware of, and certainly, NIOSH is focused on that.

12 We're envious. I mean, we appreciate it. Unfortunately, my colleagues and the rest of the
13 labor movement are certainly envious. We get more out of NIOSH than most other workgroups and
14 we appreciate it. We're — we'll always be appreciative of it, so please hold our comments here. We
15 are being reverent and we'll continue to do so.

16 I think the research issues, the partnerships are working much, much better in this whole
17 process. I mean, obviously I can't say enough for the work that NIST has done and not just, I mean,
18 the obvious big works that they did at the World Trade Center, but you know, the work that we did in
19 Washington, DC at the Kennedy Street and the Cherry Road fires that were done, the work that's
20 been done in Charleston.

21 NIST does a wonderful job of reconstruction and the fact — I'll even give them a plug. If no
22 one has gone, and gone through either the web site or a presentation on the World Trade Center
23 and the NIST program, what the World Trade Center did, not about the firefighter fatalities which

1 we've seen lots of places, not about all the issues. But the actual reconstruction of that building and
2 that incident, it's phenomenal.

3 I sat through it at least three times and every time I've learned more of it and I want — use
4 pieces of the — of the CDs. But they do a very good job of fire reconstruction. And the World Trade
5 Center was a big one, but they also got it from small condos. And the grocery store fire, which was
6 the Kennedy Road and the Cherry Road fire — Kennedy Street and Kennedy Road fire in
7 Washington, DC and they did it in many other places, so there are valuable tools.

8 And I think that better partnership with that and the coordination with these other agencies
9 are getting much better. And there is no doubt in my mind that the focus of this next Administration,
10 not just through the transition over the next two months, but actually as a beginning, that there is
11 going to be a clearer focus on the fire service in terms of Homeland Security.

12 So I think the partnerships with the DHS folks, not just the FEMA and the — and the U.S. —
13 the U.S. Fire Administration, but certainly the folks in the Science and Technology Branch of FEMA
14 and others as it's reorganized that are going to have a significant direction, a mandated direction into
15 Homeland Security issues of which we, the fire services, the first responders to those incidents. So I
16 think there's going to be more involvement. I know there's going to be more involvement in both
17 research and direction from the federal government, but those programs are getting much better and
18 we hope they continue to do so.

19 I think it's time for this program at some point to look forward for an IOM/National Academies
20 review. NIOSH has been involved in this in a number of their programs. They did it for noise; they
21 did it for respirators. And we just finished a program — which I was one of the panelists or whatever
22 they call the participants — an evaluation of the NPPTL (the Personal Protective Laboratories in
23 Pittsburgh).

1 It brings outside people in to do a very detailed, painful review of a program. And again,
2 besides stakeholder meetings, these IOM reviews, if you haven't — you haven't ever seen them, go
3 to your web site. Next time you open up, go to the IOM web site — the Institute of Medicine web site
4 — and you can see and look at the NPPTL program that we just did, not just critical of it, but it gives
5 direction for future direction for that program. I know Dr. Branche, I know the folks in DC in NIOSH,
6 they pay for the programs. They get these programs done. They step out of it; they're not involved
7 in it and can make a significant outside difference.

8 I don't think there needs to be any reinventing the wheel. That was part of my input, certainly
9 with the Chief's Program. We want this program to continue and do what it does. Someday, maybe
10 someday as was our hope back in 1998, that the NIOSH program will replicate the National
11 Transportation Safety Board Programs where there's an incident and we actually go do that. We're
12 not there yet. Hopefully, someday we will be there, but — and those of us in this room that'll push
13 for it, hopefully, we'll continue to push for it.

14 And I think the recommendations here need to go — I think we're going to also see a big
15 difference in this country in terms of the Occupational Safety and Health Administration. You may
16 not of heard of it in the last seven or eight years, but it did exist and it still does exist. And I think
17 they are prepared now. Well, they will be prepared shortly to actually begin addressing issues and
18 there's a number of those out there.

19 I think there's been a number of specific firefighter standards or firefighter issues out there.
20 They've attempted to do harmonization of all the protective clothing and equipment programs that's
21 been sat on the shelf for the last three years. And they also have a full set of vertical standards,
22 specific standards for firefighters which have not been updated since 1980; that's been crawling —
23 well, it was crawling. Now it's been shelved and we expect those to be dusted off very shortly.

1 So we think that input, once again, which is NIOSH's responsibility. NIOSH was created as
2 the research arm for federal OSHA, so I think direction to them is — should be forthcoming and then
3 part of that process. I thank you for the opportunity to have me here today and let me end by saying
4 "good job." Thank you very much.

5 **P. MOORE:** Thank you very much. Thank you. Thank you, Mr. Duffy. Next we'll have
6 comments from Chief Larry Grorud, President of the International Association of Fire Chiefs.

7 **L. GRORUD:** Thank you, Paul, and good morning. As mentioned, I am Larry Grorud, Fire
8 — or President of the International Association of Fire Chiefs. And I'd like to take the NIOSH — take
9 — I'd like to take the time to thank the NIOSH Director, Dr. Christine Branche, and the NIOSH Fire
10 Fighter Fatality Investigation and Prevention Program staff for convening this stakeholders meeting
11 on the progress and strategic goals of the Fire Fighter Fatality Investigation and Prevention
12 Program.

13 I'm happy to have this opportunity to explain the importance of this program to the fire
14 service and relay how the fire service can help the program increase its impact on the health, safety
15 — and safety of emergency service personnel across the United States. The role of the Fire Fighter
16 Fatality Investigation and Prevention Program is necessary because of the number of firefighter —
17 because the number of firefighters fatalities is way too high. According to the most recent numbers
18 compiled by the U.S. Fire Administration, the fire service has witnessed 102 line-of-duty deaths thus
19 far in 2008.

20 In 2007, this unfortunate count reached 117. The IAFC appreciates the level of seriousness
21 and respect that the Fire Fighter Fatality Investigation and Prevention Program brings to their
22 investigations and in their work with those affected by tragic loss. While 102 firefighters have died

1 serving their communities in 2008, countless widows, family members, colleagues, neighbors and
2 friends remain to grieve the loss.

3 The Fire Fighter Fatality Investigation and Prevention Program and its ability to investigate
4 firefighter line-of-duty deaths is important to the IAFC and fire service. The Fire Fighter Fatality
5 Investigation and Prevention Program identifies the lessons that the fire service must learn to
6 prevent future tragic events.

7 NIOSH has worked closely with fire service groups, leading to improvements in standards for
8 equipment, such as PASS devices. In five investigations prior to 2003 where PASS devices were
9 reported not to have been heard, NIOSH documented those findings in reports that went out to all
10 fire departments and associations, leading to lifesaving improvements — one of the major purposes
11 of the program.

12 Fire Fighter Fatality Investigation and Prevention Program reports have been used to
13 properly show medical and situational facts that have helped surviving families receive support from
14 the Department of Justice Public Safety Officer Benefit program. The work of the Fire Fighter
15 Fatality Investigation and Prevention Program also has lead to countless improvements in protocol,
16 training programs, SCBA performance, personal protective equipment performance, revisions to
17 NFPA standards, and most of all, the saving of firefighter lives.

18 Since its inception in 1998, the Fire Fighter Fatality Investigation and Prevention Program
19 has handled over 400 investigations. The program is able to investigate approximately 30 to 40
20 percent of the fatalities in a given year based on criteria for selection. While the budget for the
21 program is approximately \$2 million annually, the level of funding has not mirrored its level of ability
22 and impact. According to a 2007 report by the Inspector General of the U.S. Department of Health
23 and Human Services, such shortcomings are caused by a lack of resources.

1 The IAFC tasked its Safety, Health and Survival Section to work collaboratively with other fire
2 service groups in the creation of recommendations for improvements to the program and challenges
3 it faces in meeting its goals. These were presented to the Fire Fighter Fatality Investigation and
4 Prevention Program in 2007 and were productively received by the agency. Chief Dave Fulmer of
5 the IAFC Safety, Health and Survival Section will elaborate on these consensus goals and positive
6 action that has been taken shortly. We are deeply grateful for this response from NIOSH.

7 With all the work that the Fire Fighter Fatality Investigation and Prevention Program
8 provides, it is important for the fire service to assist in reducing the number of line-of-duty deaths.
9 While we value the work of the program and seek support for their expansion, it is important for the
10 fire service not to see it as a substitute for aggressive prevention efforts.

11 Fire departments must work not only — must work to not only take the lessons of the Fire
12 Fighter Fatality Investigation and Prevention Program investigation reports to heart, but also use
13 them as a proper tool in reducing future incidents. This should not only occur on the fire scene or
14 during fire suppression, but in personnel fitness, wearing seatbelts en route, and proper training
15 techniques. And of course, I mention the seatbelts. One simple move, I appreciate NIOSH signing
16 on to the National Seatbelt Pledge. Simply getting our firefighters to buckle their seatbelts is going
17 to make a difference and save lives. Thank you.

18 Of course, while these preventative activities will help, the Fire Fighter Fatality Investigation
19 and Prevention Program also should receive the resources necessary to fully implement its mission
20 of ensuring that everything is learned from each firefighter fatality. The IAFC believes that the Fire
21 Fighter Fatality Investigation and Prevention Program should have the resources at its disposal to
22 investigate all line-of-duty deaths.

1 These reports should be expansive, continuing the tradition of sound science and in-depth
2 research that the Fire Fighter Fatality Investigation and Prevention Program has strived for. It
3 should also continue to maintain the positive and constructive relationship between the federal
4 investigation program, state and local authorities, and local departments.

5 On average, the fire service witnesses over 100 line-of-duty deaths per year and this is over
6 100 too many. The Fire Fighter Fatality Investigation and Prevention Program can, has and will play
7 an important role in providing lessons that will reduce these fatalities. The IAFC is grateful for the
8 opportunity to take part in the development of the strategic direction of this program and is
9 committed to working with the Fire Fighter Fatality Investigation and Prevention Program to ensure
10 its successful future. Thank you.

11 **P. MOORE:** Thank you. Next we'll hear from Chief David Fulmer and he's here
12 representing the Safety, Health and Survival Section for the International Association of Fire Chiefs.

13 **D. FULMER:** It appears I have the dubious honor of standing between everybody out there
14 and lunch, so I will try not to reiterate what many have said. But it's my pleasure to present the
15 recommendations based on roughly eight months of work by representatives of the fire service, not
16 only from the International Association of Fire Chiefs: representatives from NIOSH, representatives
17 from Fallen Firefighters Foundation, and a special thanks to Rich Duffy, who represented the IAFF
18 and was really a grounding force for folks that maybe have not had as much longevity and sweat
19 equity into the NIOSH program that they have had. So a special thanks to those folks.

20 On behalf of our International Director, Chief Dave Daniels from Renton, Washington, and
21 Billy Goldfeder from Loveland Symmes, and my co-chairperson, Colleen Walz from the city of
22 Pittsburgh, it's our pleasure to be here today.

1 Back in early 2007, the IAFC, more specifically, the Safety, Health and Survival Section,
2 convened a group of individuals to look at the NIOSH FFFIPP Program — I wish I could come up
3 with a better acronym; it'd be easier — to look at it from the end-user perspective, more specifically,
4 we as fire chiefs and chief officers.

5 And I think it's important to note that with that task, had we not been somewhat diligent and
6 maybe a little smarter than some tasks in years past, at least that I've been involved with, we quickly
7 realized that we needed to open that forum to folks that were not necessarily representatives of the
8 IAFF — or excuse me — the IAFC to get the broad perspective of what the program was, how it was
9 developed, and what the opportunities and challenges were, and where we can move forward based
10 as end-users on our point.

11 So the IAFC president directed us to do what's up there on the screen. And I should note
12 that this Task Force report with recommendations and an implementation report is available on the
13 Safety, Health and Survival Section web site should you wish to have it. And I know that this little
14 PowerPoint presentation will be posted on the NIOSH site as well.

15 So with that seven or eight months worth of work, and several conference calls and a couple
16 of meetings, we basically developed three recommendations. And those are broken down into
17 action items which I'll cover very briefly, but those three are to enhance and support the existing
18 NIOSH program as far as firefighter fatality investigation and prevention.

19 As Rich was quick to point out early on, we are one of the few professions that have a
20 dedicated program for fatalities. And we should be thankful of that and we are. And we wanted a
21 way in which we would not recreate the wheel, but could build and strengthen a program that's
22 currently funded. And while nobody will probably disagree that it needs more funding and more
23 resources, we didn't want to do something to jeopardize the integrity of the program.

1 We wanted to develop a national system to conduct line-of-duty deaths. Because of the
2 shortfall of resources and money, we realize that there will be incidents that require folks outside of
3 NIOSH to do investigations. And while that may be private contractors that an entity brings in, much
4 like Gordon and his group, maybe it's the local fire department that wants to do or has a necessity to
5 do an investigation. And we quickly realized that there needs to be some criteria where we can build
6 that redundancy and that consistency within our vocation.

7 Develop a system, network or organization to collect, analyze and distribute information
8 relating to protective clothing and equipment issues: and really that's where the IAFC probably took
9 notice, and decided to have some form of action was with the PASS devices and some of those
10 equipment failure issues. So now I'll quickly go over how we broke those three segments down into
11 some action items.

12 And what I have to tell you is this PowerPoint presentation is going to show the action items
13 as they were in their raw form. In late 2007, we met and we convened in Las Vegas for a meeting
14 that involved the IAFF, the National Fallen Firefighters Foundation, staff from NIOSH, staff from the
15 USFA, a broad coalition of folks to say, "All right, here are the recommendations from the
16 International Association of Fire Chiefs. Are they realistic? All the — are they on target? Are they
17 accomplishable?" And we have modified those action items to make sure that these things could be
18 met or at least seriously considered.

19 One of the first things was to develop an advisory board. And I think what we didn't realize
20 until some folks that have to operate in the bureaucracy of the federal government pointed out was
21 that while that might sound easy, it's not. And actually, I didn't know that there's a Federal Advisory
22 Committee Act that governs all federal agencies and advisory boards.

1 So we quickly realized that that might be a monumental task that we would spin our wheels.
2 And one of the "compromises," for lack of a better term, is to have more stakeholder meetings like
3 this. And we're happy to see that that has been embraced and the fact that instead of multiple
4 years, that NIOSH is going to do their best to solicit input in the form of stakeholders' meetings every
5 two years.

6 We talked about the need to develop, between the IAFF and the IFCA — IAFC, a Line-of-
7 Duty Investigation Committee. As the two probably largest segments of end-users, it may be
8 beneficial to both organizations, much like the Joint Labor Initiative, to have a committee of folks that
9 can look at the line-of-death investigations and have dialogue on a more frequent basis with the folks
10 at NIOSH.

11 Develop a NIOSH Report Working Group: one of the things as you've heard today is that
12 NIOSH has developed some benchmarks. And that was one of the common themes that you've
13 heard today and that we heard as we discussed within our Task Force is the timeliness and the
14 comprehensiveness of reports. So we're glad to see that that philosophy of trying to have
15 benchmarks and trying to speed up the process, while not diminishing the integrity and the quality of
16 the reports, and the need to continue to use external subject matter experts. We think that's
17 important.

18 In conjunction with other fire service organizations, we need to identify if there's statutory
19 changes, and funding sources or enhancements to resources that will benefit NIOSH and their
20 mission. And as you've heard, you know, funding being flat for ten years. If you think of your own
21 households, your own organizations that you represent, the cost of inflation and doing business, it's
22 amazing that they can keep up with what they're doing.

1 So as a government entity, they're oftentimes prohibited from doing those things which get
2 them more staffing. And as end-users, we felt it necessary to work with our — with our government
3 liaisons within the IAFC, and the IAFF and any other stakeholder organization to make sure that they
4 have the necessary funding and resources to do what we ask them to do as end-users.

5 Develop a plan to integrate fire service subject matter experts into the Investigation Program:
6 I think you've heard today that they are committed to doing that; they are doing that. And whether
7 that be in the form of contractors or in their recruitment for investigators, I think they're well on their
8 way to meeting that task and we thank them for that.

9 All right, recommendation B was further broken down to formulate written criteria to identify
10 incidents that require or merit the more in-depth investigations. And I think between the comments
11 that have already been said, everybody understands the fact that there are going to be incidents that
12 need to be investigated. And based on the current funding and resources or lack thereof, there are
13 going to be those that sit on the shelf or sit on the sidelines until that funding happens. The Task
14 Force was just adamant that there needs to be some prioritization of incidents so that those ones
15 that will have the most impact on preventing future loss of life or injury will hit the forefront to our
16 folks.

17 Provide a method for these investigations to be conducted and funded: and basically, that
18 results into money; that results — that's going to take some legislative action on behalf of the
19 agencies that — or the end-users for NIOSH. And, you know, with today's economics, it's going to
20 be a hard fight, but one that the International Association of Fire Chiefs and I'm sure every other
21 end-user feels appropriate so that we can get what we desire from NIOSH.

22 And implement an expanded investigations team: you know, in our world, every line-of-duty
23 death should be investigated. But again, money and resources are a huge gap to make that

1 become a reality. So the fire service has to determine a way to get NIOSH the necessary resources
2 that they need to meet that goal.

3 Develop a program to collect, analyze and disseminate information regarding personal
4 protective clothing and equipment problems and failures: the committee had talked about the need
5 to develop a program much like the "Near Miss Reporting System," specifically designed for
6 protective clothing, equipment and apparatus failures. While there's been some preliminary
7 discussion about whether the Near Miss Reporting System could accommodate that, I don't think
8 anybody would disagree that there needs to be a point of contact, one house that collects, analyzes
9 and disseminates that to our folks in a timely fashion.

10 Promote rapid development and enhancement of capabilities when the — within the NIOSH
11 NPPTL campus in Pittsburgh: the implementation step for this for the IAFC — for the Task Force
12 was to approach FAMA and FEMSA to explore the possibility of forming a risk pool that would
13 provide funding to NPPTL to develop and coordinate testing of equipment involved in line-of-duty
14 deaths and injuries and alleged equipment failures.

15 Over lunch, maybe Rich could share or you probably already heard it that — at least I know
16 that he and the IAFC — or the IAFF, pardon me — have a vision for that campus. And wouldn't it be
17 nice that we had one spot that when you had a failure, that you could contact and get information or
18 send it to? And right now, we don't have that.

19 You know, you may as a — as a fire chief or a representative of an organization have to
20 search high and low to figure out where to send a piece of protective clothing, or equipment or an
21 appliance. And we have a resource there that's in its infancy that does an outstanding job. Should
22 we expand that focus, and the resources and the capabilities to better serve our need when it comes
23 to these injuries and these line-of-duty deaths? And the Task Force thought that we should.

1 So on behalf of the Safety, Health and Survival Section of the International Fire Chiefs, that's
2 just a brief overview of our report. Again, if you'd like those two documents, they're available on the
3 Safety, Health and Survival Section web site.

4 **P. MOORE:** Thank you. Thank you and thank you for all the comments we've received so
5 far. It's been very good to hear some encouraging words from you and we're very happy to hear
6 that. But of even greater importance to us are your critical comments because without those
7 comments, we can't make improvements. And so your comments are extremely important to us.

8 Again, I'd like to encourage you to visit the NIOSH — visit the NIOSH docket and look at our
9 strategic plan. And please feel free to provide any comments to that docket that you would care to.
10 At this time, are there any other folks in the audience that would care to provide comments to us?

11 All right, then I think what we should do is break for lunch. What I'd like to do is ask,
12 particularly my NIOSH colleagues, to reconvene here at 1:15 or so and we'll proceed with the rest of
13 the day. If anybody else is — would like to come back and provide comments, we'll be here for that
14 opportunity. Thank you very much.

15 [LUNCH 12:15 P.M.-1:30 P.M.]
16
17

18 **Open Discussion**
19

20 **P. MOORE:** Once again, is there anybody that would like to provide further comments to
21 us? If so at this time, we'd be happy to yield the floor to you. Yes? And if you would state your
22 name — you can come up here if you want, but if you would state your name and affiliation for the
23 record, please.

24 **D. BERNZWEIG:** My name is Dave Bernzweig. I'm with the Columbus, Ohio Firefighters,
25 IAFF Local 67. I'll keep this kind of brief. I'd like to see an improvement in the future with the data

1 collection that is performed by the — by the program. Currently, the — if we look at the database,
2 you know, data that is — that is shared with the user community or really the public, the data is really
3 at a — at a micro level. It allows us to maybe look at cause and nature and do some sorting that
4 way.

5 But there's a lot of data that would be very useful for future research needs that is in the
6 report, but can't really easily be extrapolated from all the reports that we have. If we had a way to
7 maybe consolidate that or take some of the macro-level data (such as crew size, line size, tactics
8 employed, the type of gear that people are wearing, the appropriate standard that it is current with,
9 things like that, building construction information, benchmarks as far as timelines go), if we — that
10 information which is already being collected when the investigation is done, if we can put that into
11 the actual database so that we can sort it and look at trends, it would be very useful for future needs.
12 Thank you.

13 **P. MOORE:** Thank you. Are there other comments? Yes sir?

14 **M. PETROFF:** My name is Mike Petroff. I'm a representative of the Fire Department Safety
15 Officers Association. We're just glad to be a part of this process and want to offer the assistance of
16 the Fire Department Safety Officers in any way that you feel that we may be able to assist the
17 program or anything we can do to help, we'd be glad to do that.

18 **P. MOORE:** Thank you. Other comments? Yes sir?

19 **D. GLUCKSMAN:** Dan Glucksman with the International Safety Equipment Association.
20 And I was wondering if the FFFIPP, in terms of data collection, also uses recalled information from
21 NFPA or SEI (Safety Equipment Institute) which does the third-party certification? Do you guys use
22 their information, their recall or their information from their recall authorities in any of your activities
23 or reporting?

1 **P. MOORE:** I probably need to defer that question to one of my other NIOSH colleagues.
2 Tim, can you answer that?

3 **T. MERINAR:** We have in a few cases.

4 **RECORDER:** Sir, your mike's not on.

5 **P. MOORE:** Oh, you need to ...

6 **T. MERINAR:** We have in a few cases, probably not that many. Bob Stein or Vance may be
7 able to give you more information on that.

8 **D. GLUCKSMAN:** I'll talk to them.

9 **T. MERINAR:** Okay. I don't know if you were looking for specific details or not?

10 **D. GLUCKSMAN:** No, not specific details. If there's some other ...

11 **RECORDER:** Sir, we're recording.

12 **D. GLUCKSMAN:** Okay.

13 **RECORDER:** You're going to have to go to a microphone. Thank you.

14 **D. GLUCKSMAN:** No, not specific details, but there seemed to be a lot of discussion earlier
15 about where the FFFIPP gets its sort of information from. And I was aware that there's other
16 organizations that are — that have recall authority and I didn't know if you used their information
17 from recalls of other organizations to either begin investigations or to help inform your own
18 investigations and so forth.

19 **T. MERINAR:** Well, for example, the PASS issues that came up a few years ago that we
20 talked about earlier. We did speak with Steve Sanders at SEI about any problems that they might've
21 had reported to SEI that NIOSH was not aware of. That's one example. Bob, do you have any other
22 examples?

23 **R. STEIN:** No.

1 **P. MOORE:** Okay.

2 **R. STEIN:** Well, you could ask Vance about it.

3 **V. KOCHENDERFER:** Yeah, that's what I was going to bring up; Vance Kochenderfer with
4 NIOSH. Yeah, when we do the SCBA evaluations, one of the things we look at is whether the units
5 that we're getting have had, you know, the retrofits for upgrades that have been done as a result of
6 some kind of a problem investigation. We look to see if those have been upgraded in accordance
7 with the user and it's went out. I can't say I have any statistics on that, but you know, that is one of
8 the things that we try to look at.

9 **T. MERINAR:** Thanks, Vance.

10 **P. MOORE:** Other comments? Okay. That — with that, we did receive a comment this
11 morning from Mr. Duffy and that was that the NIOSH folks ought to stand up and introduce
12 themselves. So I beg the pardon of our transcriptionist because I don't think we're all going to get to
13 the microphone, but if the NIOSH folks could get up and introduce ourselves and — or do you have
14 a walk-around?

15 **RECORDER:** You can pass around the wireless mike.

16 **P. MOORE:** Okay. I guess we can do that. Thank you.

17 **D. CASTILLO:** Paul, can we have everybody introduce themselves?

18 **P. MOORE:** That's probably a good idea. Yes, let's do that. Thank you.

19 **E. HARTIN:** Ed Hartin, Battalion Chief, Gresham Fire and Emergency Services in Gresham,
20 Oregon.

21 **C. PETERSON:** Carl Peterson with the NFPA staff.

22 **J. BRINKLEY:** Jim Brinkley, Director of Health and Safety for the IAFF.

1 **R. DUFFY:** Rich Duffy, the IAFF. And when the NIOSH people introduce themselves, they
2 should have time. Could they give like a couple of sentences of what they do so everybody knows?

3 **P. MOORE:** Sure can.

4 **D. CASTILLO:** I'm Dawn Castillo. I'm with NIOSH. I'm in the Division of Safety Research
5 and the Fire Fighter Fatality and Investigation Program is one of the programs that I oversee.

6 **J. DALTON:** Jim Dalton, I'm the Coordinator of Research and Development for the Chicago
7 Fire Department.

8 **N. BRYNER:** Nelson Bryner, National Institute of Standards and Technology, Fire Research
9 Division. I'm the Program Manager for the Advanced Fire Services Technology Program.

10 **D. GLUCKSMAN:** Dan Glucksman, International Safety Equipment Association and I work
11 on general public policy programs there.

12 **M. PETROFF:** Mike Petroff from St. Louis, member of the Board of Directors of the Fire
13 Department Safety Officers Association, and also a regional advocate for the National Fallen
14 Firefighters "Everyone Goes Home" Program.

15 **V. KOCHENDERFER:** Vance Kochenderfer with the NIOSH National Personal Protective
16 Technology Laboratory in Pittsburgh and we deal with the SCBA that come in: injury- or fatality-
17 involved SCBA.

18 **R. STEIN:** Bob Stein, NIOSH, the National Personal Protective Technology Laboratory. I
19 was going to depend on Vance to get that out. I'm an engineer also in the certification program.

20 **T. SCHNORR:** I'm Terri Schnorr. I'm the Director of the Division of Surveillance, Hazard
21 Evaluations and Field Studies. And the cardiovascular component of the Fire Fighter Program is in
22 my division and Tom is in charge of that. I am also the Program Manager for the Public Safety Sub-

1 Sector of the NORA Program, which is the group that sets the research agenda for the Public Safety
2 Sector.

3 **D. UTTERBACK:** I'm David Utterback with NIOSH in Cincinnati and in Terri's division. I'm
4 the Coordinator for the Services Sector and for the Public Safety Sub-Sector for the National
5 Occupational Research Agenda. I co-chair the Public Safety Sub-Council and we were the one —
6 the group that set national goals, actually international goals, for health and safety issues for the
7 next ten years within public safety and within the fire service. There's people that are in attendance
8 at this who have helped us establish the scope.

9 **A. TEPPER:** I'm Allison Tepper, and I'm in NIOSH in Cincinnati and I'm in Terri's division.
10 I'm the Chief of the Hazard Evaluation and Technical Assistance Branch, which has two programs:
11 one of which is the Fire Fighter Fatality Investigation Program and the other one you also heard
12 mentioned a little bit this morning, the Health Hazard Evaluation Program. And so I'd be happy to
13 talk to any of you about either of those activities.

14 **T. PIZATELLA:** Hi, I'm Tim Pizatella. I'm the Deputy Director of the NIOSH Division of
15 Safety Research in Morgantown where the Fire Fighter Program resides.

16 **M. BOWYER:** Matt Bowyer, NIOSH Morgantown; I'm also one of the team members of the
17 Fire Fighter Fatality Investigation.

18 **D. FULMER:** Dave Fulmer, Fire Chief, Miami Township Division of Fire EMS and also the
19 representative of the Safe — Safety, Health and Survival Section of the I-Chiefs.

20 **T. BALDWIN:** Tommy Baldwin, investigator with NIOSH in Cincinnati. We do the
21 cardiovascular disease investigations.

22 **L. MATKAITIS:** Larry Matkaitis, retired Deputy Commissioner of the Chicago Fire
23 Department and currently the state fire marshal in charge of Northern Illinois.

1 **T. HARTY:** Terrence Michael Harty, Vice President of Local Number 2, Chicago Firefighters
2 Union, also Chairman of the Health and Safety Committee for Local 2.

3 **P. MOORE:** Thank you. And again, my name is Paul Moore. And oh, I've got one more to
4 go. Sorry. Okay.

5 **D. BERNZWEIG:** Dave Bernzweig, Columbus Ohio Firefighters. I'm Vice President and the
6 Chair of the Health and Safety Committee.

7 **P. MOORE:** Thank you. My name is Paul Moore. I'm the Chief of the Fatality Investigations
8 Team for the NIOSH Division of Safety Research in Morgantown. In addition to the Fire Fighter
9 Fatality Investigation and Prevention Program, my team also implements three other projects: one
10 of which is the Ambulance Crash Survivability Improvement Project; the Fatality Assessment and
11 Control Evaluation Project (or the FACE Project), which is the project that provided the model that
12 the firefighter investigations follow; and the last one is a — another FACE project which is
13 implemented through cooperative agreements with nine state health departments.

14 At this time, I'd like to turn the floor over to Dr. Hales, who would like to clarify a couple of
15 things from this morning's presentation.

16 **T. HALES:** Thanks, the — having the opportunity to actually hear people comment about
17 what you said this morning and then say — being able to respond to it right away, the issue on
18 prioritizing our cases for investigation; and Carl Peterson mentioned that, you know, the way it's
19 currently structured, we wouldn't be doing any cases in which a firefighter had a cardiac event at the
20 fire ground.

21 And I just wanted to clarify that that process is what we got out of our last meeting and it's
22 only been implemented for about the past year. Prior to that, there were a series of criteria that we
23 sort of went through in doing our investigations. One of them was that although we did not — we did

1 a number of volunteer departments' investigations, we emphasized the career departments because
2 we felt they were in a position to implement many of our recommendations much better than the
3 volunteers. So although the number of investigations we did was sort of split between volunteers
4 and careers — about 50/50 — if because there are less careers that are dying in the volunteers for
5 cardiac conditions, we over-sampled the careers. So that's one issue.

6 The second issue: a number of those cases were fire ground deaths, so that — we weren't
7 missing that group. In 2005, in addition to that, we looked at younger firefighters in the sense that if
8 a — if there's a firefighter who's 81 and died of a cardiac event, that would not rank very high on our
9 prioritization process. They had to be under age 70, was what we listed.

10 Then another thing came up is we were looking at our investigations. There were a number
11 of young firefighters that were dying under the age of 40 which surprised us for cardiac disease.
12 And since we weren't doing all of the firefighters under the age of 40, we thought well, maybe we
13 have some sort of sampling problem. So from 2003 to 2008, we investigated all firefighters under
14 the age of 40 who had a cardiac event, which then — which is actually we haven't published this yet,
15 but if you look at those cases, particularly the "under the age of 35," they were not heart attacks.

16 They were primarily cardiac arrhythmias associated with an underlying cardiomyopathy is the
17 vast majority of those cases. So I just wanted to clarify that that has — is just the recent priority
18 cases that we're doing and that can be modified according to what the stakeholders and you all say
19 is important to us to evaluate.

20 **P. MOORE:** Any other — yes? If you wouldn't mind, Mr. Duffy, thank you.

21 **R. DUFFY:** You know, I love to go to the microphone. I think it's ...

22 **RECORDER:** Could you state your name again, sir?

1 **R. DUFFY:** I shall. I'm Rich Duffy with the IAFF. I want to point out since you have some
2 time here another very important success of the — of the heart investigation part of the program.
3 And I know and we couldn't have done this without the assistance — well, without the investigations
4 that Tom and the group did — but most importantly, about the data they collected.

5 Those in the fire service are aware there was change in the PSOB benefits a couple of years
6 ago with the Hometown Heroes Edition that were — that added heart and stroke fatalities in the
7 families, then enabled them to get the PSOB benefits. The Department of Justice in their, whatever
8 wisdom they had, decided to put a criteria together in the regulations for that — for that program that
9 basically include a — the Framingham — well, I don't want to get into the specifics, but they put in
10 criteria that was so great for — as part of the evaluation criteria for benefits, that none of those
11 investigations that NIOSH did, those families would ever collected on — collected those benefits.

12 So here we had Congress in their wisdom, the President of the United States that signed the
13 bill saying that any firefighter that had a stroke or a heart event while on duty or within a 24-hour
14 period of being off-duty from that event would collect the benefits. The Department of Justice
15 regulations were so strict that none of the — none of those fatalities that happened since NIOSH
16 began their investigation would be able to collect it.

17 Now we then used rhetoric. We actually took all of Tom's data; I sat down with Tom. We
18 looked at every single — what? — we had 149 or 169, whatever the number was — 100-and-a-half
19 or so data points to look at. And we carefully took each one of those cases, compared it to the
20 regulations that NIOSH was putting together — excuse me — that PSOB was putting together for
21 the benefits and none could collect.

22 So one of the — I think one of the — and we submitted those in our comments, which are
23 public comments up on our web site and are circulated all around the place, that we think made a

1 big — we know that made a difference. It wasn't just the fire organizations. All of us together,
2 collectively that made a complaint that the fact that we actually had real data, we were able to
3 demonstrate that no firefighter would ever collect again on something that Congress had. So again,
4 I appreciate that. I know all of the families appreciate it.

5 And it just goes that not only do these investigations help individually on a fire department
6 basis, not only does it help us all as an educational means, which they truly do, but the data itself
7 was so important. It made a major change in policy for the Administration on the collection of
8 benefits for those families that lost a firefighter. So we thank you for that. I'm trying to stretch it for
9 you guys.

10 **P. MOORE:** Thank you. Are there any questions or issues that might need clarification from
11 the presentations that we presented this morning? At this time, we'd be happy to try to
12 accommodate those questions.

13 **R. DUFFY:** Where do you go in a year in this process? I think that's — I mean, you hear
14 from stakeholders that ...

15 **RECORDER:** Sir, please speak into a microphone. I've got to record you.

16 **R. DUFFY:** I know. My question is — Rich Duffy, International Association of Fire Fighters.
17 I'd like the group to explain — we've heard, you know, from this stakeholder meeting as well as
18 others and public information you've gathered, what are — what are your next steps?

19 **P. MOORE:** Well, that's a good question and I'm not sure I have a complete answer for that
20 yet. Because we are seeking your input and our docket will be open for another 30 days, you know,
21 we're still collecting input from that. But we do value your contributions, your comments and we plan
22 to act on them as best we can.

1 I think that, you know, from some of the presentations this morning, you've seen that we've
2 taken some action on previous comments and that's kind of a book that's yet to be written. Would
3 any of my other colleagues have some comments on that — Tim or Tom?

4 **T. HALES:** You just have to hold it down the whole time? One of the things I envision that
5 we can do, at least the cardiovascular side can do pretty quick, is do a better job of getting out to the
6 investigations within that three- to nine-month period, getting the report done and posted all within
7 the same — once we get started, all within six months. I think we can realistically get that done and
8 I think we're taking steps to get there.

9 The other aspect about we don't have the resources to do all of them and we need your input
10 on which cases are most important to get done. You mentioned getting the other — expanding,
11 besides cardiac, getting into some of the other non-medical ones. We did do a number of
12 investigations that did aneurysms as well as stroke cases. Unfortunately those, we didn't — we
13 weren't able to offer the departments many recommendations about how to prevent these cases
14 because it's very hard to screen for it.

15 And other than "stop smoking" and "treat your hypertension," it was not much we could offer
16 those departments. So we made a conscious decision to not do aortic aneurysms and strokes
17 because we've learned sort of everything after doing five or 10 of them, we weren't contributing
18 much we felt to the ones that we were doing. So at that point, we stopped doing those. If there are
19 other types of medical ones that are important for us to do, please let us know. We're certainly open
20 to that.

21 **P. MOORE:** Yes, Dawn?

22 **D. CASTILLO:** So Dawn Castillo at NIOSH. So as Paul noted, it's still an open book. We're
23 still seeking comments for the next month. The intent is for the team as a whole to get together, look

1 at the comments, consider them within our existing resources and within our mandate, and identify
2 changes, tweaks, modifications to the program. We also plan to share with our stakeholders what
3 those changes and modifications are.

4 The last time we did a — the *Future Directions* document that was sent out to the
5 stakeholders who attended the meeting. It was posted on our web site. We'll have some other
6 formal way to let you know what changes were made that we will, again, share with those at the
7 group and also post it on our Internet site.

8 **P. MOORE:** Also, it just now occurred to me that there are a couple of areas that we are —
9 some of our current cases are — will address. They're still open cases, but we are taking a little
10 closer look at such things as influences of safety culture within the fire departments. And we're
11 doing a lot or a little bit more emphasis on doing investigations of training-related fatalities. Is there
12 anybody else that might have some — yes sir?

13 **R. DUFFY:** If I could just follow up?

14 **P. MOORE:** Sure.

15 **R. DUFFY:** My flight's not until 5:00-something and I can't change it. So Tom brought up
16 an issue that I mentioned and others mentioned that I'm concerned about. And I hope just from how
17 he said it brings a concern that we have. He mentioned a couple of areas that they're not going to
18 investigate, which are fine. And I understand and I, in fact, I agree with that.

19 However, when a firefighter dies, regardless of what they died from, there is a perception out
20 there that NIOSH is coming in. And how do they know that? I mean, I could — another phone call I
21 get is, "When NIOSH's coming?" So I think that's why it's important for to use your resources that
22 are available, include them on your disks and your educational materials, but also include them on

1 your web site that — you know, and I hope you look at our recommendations on the names and the
2 — and the fire departments and such.

3 But somehow say, you know, "We're not investigating this. No offense to the incident; no
4 offense to the fire department; no offense to the geography, or where the person lives or the travel
5 budget," or whatever excuse. The reason why is because the recommendation is very clear and this
6 is the type of death that there is not a need for because you know what the results of that would be
7 and somehow better explain it.

8 We need to do that and I think you're — you just did a better job explaining why there is a
9 need for it than my making recommendations to you and I think that's the problem that we face on
10 this. Why isn't NIOSH coming or when — or when are they coming? Because that's what the
11 expectation is in the country right now.

12 **T. HALES:** You know, as I — as I mentioned, Tommy Baldwin in our group makes a call to
13 every department having a medical death and I think tries to help us prioritize them. And I think at
14 that point, if it's pretty clear we aren't going to come, we'll provide some sort of resources. I feel
15 pretty confident, at least in the cardiac ones, that we're getting back to them pretty quickly if they
16 respond to our phone calls. Sometimes with volunteer departments, it's hard to get a hold of them.
17 But I think we're doing a pretty good job of saying it's unlikely we're going to be able to make it and
18 still give them the information. I guess that's one thing.

19 The second thing is on the issue of age. You know, I sort of mentioned that, you know, if
20 there's a guy who dies — 91 — and dies directing traffic around the fire scene, you know, I
21 personally don't think that's worth, you know, our limited resources. What is the age? Where do we
22 stop? I don't have a good answer for that and I don't have a cutoff number, but — and if, you know,
23 your input would be helpful to help us justify whatever we use.

1 **P. MOORE:** Other comments, questions? Yes sir?

2 **C. PETERSON:** Carl Peterson, NFPA. Just a quick question: are you fully staffed at this
3 point based on your available funding?

4 **P. MOORE:** We have the staff that we can afford.

5 **C. PETERSON:** Are you fully staffed right now?

6 **P. MOORE:** I don't know. I think that's the best way to answer that question.

7 **C. PETERSON:** Do you all have open positions that would help the program?

8 **P. MOORE:** We don't have open positions at the moment, no.

9 **A. TEPPER:** Yeah, Allison Tepper, NIOSH. So a couple of people mentioned the Health
10 Hazard Evaluation Program and I don't know if people — how many people here are familiar with the
11 program? But, you know, there was talk about, you know, other resources in NIOSH to look at
12 firefighter health and safety issues and HHE Program is one of those. And you know, Tom
13 mentioned some things that we're kind of getting into that are — compliment some of the work in the
14 Fatality Investigation Program as well as kind of, you know, extend it.

15 So Tom looked at a cyanide case. We've had a couple of HHE requests recently looking at
16 issues of contamination of turnout gear and station clothing that, you know, we're looking to. So if
17 there are people in the room who aren't familiar with the HHE Program and I'd be happy to, you
18 know, either talk to you in a group or individually about what our resources are. We, of course like
19 any other program, have limitations. But maybe an avenue for looking into some of the issues that
20 don't rise to the level of the priorities of the Fatality Investigation Program that the HHE Program
21 might be, you know, another resource for.

22 **R. DUFFY:** Could you also just mention for the record what you did your doctorate
23 dissertation on?

1 **A. TEPPER:** It's been many, many years, but my first — my first interaction with Jim when I
2 was a graduate student in epidemiology at Johns Hopkins in Baltimore — and I was fortunate to
3 hook up with a professor there who had looked at respiratory symptoms in pulmonary function in the
4 Baltimore City Fire Department. And so as part of my dissertation, I spent two years visiting all the
5 fire stations in the city of Baltimore doing pulmonary function testing of the Baltimore City Fire
6 Department. So it's kind of nice to go back to that and remind me of that every now and then. And I
7 actually got a small NIOSH research grant to do that project while I was a student with a letter of
8 support from Rich, so ...

9 **P. MOORE:** Also, we'd like to reiterate that part of Mr. Merinar's presentation today
10 mentioned some other projects that NIOSH is — that the NIOSH Division of Safety Research is
11 involved in: one of them being a firefighter anthropometry project and we're also looking at — blank.

12 **T. MERINAR:** Boots.

13 **P. MOORE:** That's right. We're looking at the interaction of firefighter boots with being able
14 to work controls of the firefighter apparatus. And with that said, one of the — what most of our
15 research right now is done through a competitive process. So one of the things that our program is
16 working very hard to do is to facilitate the information transfer among our own NIOSH colleagues
17 who may not be field people like we are, but are, you know, more laboratory-based researchers to
18 look at other issues that pertain to the fire service. So that is another effort that we're working on.

19 **T. HALES:** Just to add, you know, now that we're sort of trying to talk about all the work that
20 NIOSH is doing with firefighters, our Respiratory Diseases Group several years ago was in the field
21 studying "hotshot wildland firefighters" and measuring their, basically, inflammatory processes in
22 their lungs and their pulmonary function as well. And that's — I think they actually have published
23 some of their data already.
24

1
2 **Closing Session**

3 **P. MOORE:** Other comments or questions? We thank you very much for coming to be with
4 us today. Again, we really do appreciate your comments. We value your input tremendously.
5 Please visit the docket, look at the draft strategic plan, provide us any comments you care to make
6 on that plan or any comments you care to make on our program in general. We'd very much like to
7 hear from you.

8 Beyond the docket, I think probably most of you have some contact information for one of us,
9 so we're an e-mail or a phone call away. So we'd appreciate hearing from you. If there'd be no
10 other comments, then I think we'll adjourn for the day. Thank you.

11 **[ADJOURN 2:30 P.M.]**

NOTARY'S JURAT

State of Georgia)
)
County of DeKalb)

I, Nadine Rivera, do hereby certify that the foregoing transcript, consisting of pages 1 - 76 in total, was personally typewritten by me and is a true, complete and accurate transcript of the proceedings recorded by me.

I further certify that I am not related to, employed by, or attorney of record for any parties or attorneys involved herein. I further certify that I have no financial interest in this matter.

WITNESS MY HAND AND OFFICIAL SEAL BELOW this 25th day of November, 2008.

Nadine Rivera
My Commission Expires: August 1, 2010

[Seal]

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