PARTICIPANTS

PRESENT:

Lee Smith, Chairperson
Brenda, Facilitator
Michelle Benjamin

SPEAKERS:

Hap Pigsley
George Kennedy
Robert Carbone, Jr.
Paul Meade
Phillip Prichard
Walter Tucker
Charles Flanagan
David Lamensdore
Colin Riley
Gary Hamilton

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DEPARTMENT OF LABOR

PUBLIC STAKEHOLDER’S MEETING ON CONFINED SPACE IN CONSTRUCTION

October 24, 2000

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WELCOME AND INTRODUCTION

By Lee Smith, Chairperson

CHAIRPERSON SMITH: Let's get started. Good morning, my name is Lee Smith. And I work as the Director of Construction in OSHA's National Office in Washington, D.C. I'd like to welcome you all here today to confined space in construction stakeholder's meeting.

This is the final stakeholder meeting that will be held. The previous meetings were held in Washington, D.C. and in Houston.

First of all, I'd like to apologize. I understand some of you had problems with the fax number, where you were attempting to send your attendance requests and speaker's requests. I'm very sorry for that. As you may know, we are working on a continuing resolution, which is if you are a government employee, you know how unpleasant every experience has been in the past. And it continues. And I apologize for that.

But I do want you to know it is a public stakeholder's meeting. Anyone who wants to attend, can attend. And anybody who wishes to speak will be given speaking time. If those of you in the audience wish to speak, just let us know and we will provide you a seat on the podium.

OSHA intends to issue a Notice of Proposed

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Rulemaking for confined spaces in construction next year. In order to develop that standard, OSHA has requested that we hear from stakeholders concerning confined space in their construction. A list of five significant issues that OSHA feels pertain directly to the confined space standard was printed and issued to nearly every stakeholder that, I think, is attending here today.

Those significant issues were addressed at the previous two meetings, as well as other as significant aspects of confined space in the construction. Once the speaker is done, we hope to hear from the audience members to also hear additional comments.

As I said earlier, everyone who requested to speak will be allowed to do so. As you can tell, this meeting is being video taped. The reason for that is OSHA will make a summary report of all comments heard today. Those comments will be non-attributed, even though the facilitator will ask you to identify yourself and your affiliation. The final report, or summary notes, will contain none of that. No identification. So you can feel confident anything you say will not be attributed to yourself or to your organization.

The summary notes will be made part of the rulemaking. The summary notes will also be posted on the OSHA web-site. As you probably noticed, the notice of the meetings is listed on our web-site, under the events calendar. That is

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where the summary notes will be placed. For those of you who
do not have access to the web-site, please give your name and
mailing address to Michelle Benjamin and we will have a copy
mailed to you.

I'd like to thank Dave Grafton, the Region I of the
Boston area office, --- liaison for helping OSHA organize this
stakeholder's meeting. Your work is very much appreciated,
Dave.

With me today from the national office is Bill
Smith. Bill Smith has joined OSHA. He's been with us for
about two months. His last job was the Director of Safety and
Health for International Union of Operating Engineers. Some
of you may know Bill and some of you may have worked with him
on the Crane Committee. You will --- as time goes on.

Also, the Facilitator is Brenda McLehan. Brenda is
the Assistant Regional Administrator for Administration and
Management in Philadelphia. Once I'm done, she will go over
the structure of the meeting, speakers' time, and the general
discussion and open discussion later.

Michelle Benjamin, among her other duties, is
timekeeper. She will casually inform the speakers of the time
they have left for their speech.

Anyway, OSHA's role today is to listen to you. We
are allotted this time, we want to hear from the stakeholders.
Particularly, the informative comments, the --- comments have
been given --- known to have ---.

So, thank you for your participation.

FACILITATOR McLEHAN: Thanks. Okay, good morning.

All right, as Lee told you, my task today is to facilitate and to make sure that things run smoothly and that you have an opportunity to bring your interest and concerns to OSHA's attention.

A few, kind of housekeeping things. The restrooms are right across the hallway and we will take a break about 9:30 or 10:00 for 10 or 15 minutes, depending on how our time is going.

We anticipate finishing today somewhere around 11:00, 11:30. And as Lee mentioned to you, we are taping this so that we will have a complete transcript of the meeting.

Each speaker will have 10 minutes to speak and Michelle will be your sign when you have two minutes remaining, and another sign when you have one minute remaining. So, just worry about the sign.

We ask that when we get to that point of the discussion where we're having people participate from the floor that you step up to one of the microphones, the microphone that's closest to you. And also identify yourself and your organization.

Our ground rules for our meeting today are that one person speaks at a time, that we all respect the ideas of Audio Associates

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others, that we attempt to stick to the schedule and that we
also attempt to stick to the topic.

Over here, we have the issues that OSHA is
particularly interested in and that’s not in any way to
indicate that that’s the only thing that we want to hear
about. But these were things that we, information that we
sent out to you to let you know what our concerns were. And
so, of course, we are particularly interested in that but we
are also interested in any information that you have to offer
on confined space in construction.

And our speakers today. The first group, we have
seated at the table. We have Hap Pigsley, from the Wisconsin
Underground Contractors; Mr. George Kennedy, from the National
Utility Contractors Association; Bob Carbone, from Local 103,
IDEW at Boston. My mother was a member of that union. Paul
Meade, with --- Boilermakers, Local 29; Philip Prichard,
Georgia Tech Research Institute; and Walter Tucker, Petra
Construction Corporation.

Okay, and are there any questions or any concerns
before we start?

(No response)

Okay, Mr. Pigsley, would you start please?

PRESENTATION

by Mr. Hap Pigsley

MR. PIGSLEY: Good morning, my name is Hap Pigsley.

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I'm a Safety Director for Platt Construction. I've been in construction since 1960. I do represent the Wisconsin Underground Contractor's and the Milwaukee GC.

We have several concerns. I think the majority of the contractors in Wisconsin have been following the 1910.146 standards since it came out in the applicable standards for respiratory professions and so on, like a majority of the contractors have.

We do agree that this does need to be addressed and we had five different areas that we felt needed to be addressed in particular. And the one that's the most important I feel is the permit originator. In the proposal for the 1910.146 standards, they addressed the permit originator as a person who was going to write the permits.

And when I deal with contractors now -- by the way, I teach trench rescue and confined space rescue. Two fire departments and so on, and I, myself, were rescuer.

All too often people go out there and they write a permit without identifying the hazards and the potential hazards. And the potential hazards being the ones that most time that trap or cause the incidents that we as rescuers have to respond to. And I think that's one place that really needs to be addressed. And in --- of the person writing the permit, so that we eliminate these hazards right up front.

The permit itself is no more, no less, than a check.
list to remind us of what we need to address. And all too often when we go out there and have to perform a rescue, we find that to be the failure of the entire program, was that they weren’t able or competent enough to address -- the obvious hazards are no problem, it’s the potential hazards. The drowning, the lack of oxygen. Those type scenarios that are addressed in the 1910 standard but they don’t show up with anybody having responsibility for it. And all too often, I see the contractors out there having a guy on site write the permit, if they do it at all.

And I asked them, you know, what did they look for. And they tell me maybe five of the multiplicity of things that can cause harm or entrapment or death in these situations. So, I look at it as being one of the things that’s left entirely out of it that needs to be addressed. Who’s going to write this to ensure that the person that goes into that environment has the opportunity to address every potential failure.

In Wisconsin, we have the entry supervisor and the first entrant as the same person. And that’s because in reality, I’m responsible for my safety. So I also ought to have the authority to say, yes, that is safe for me to go in, or it’s not safe for me to go in. Use this for the last probably eight years as our concept of how to do sewer entry.

My company works from anything from 300 feet in the
air to 300 feet underground. And what’s --- underground
contractor’s deals specifically with sewers, underground
structures and so on. And we build some of those. And so
we’ve made it mandatory that the first entrant is also the
entry supervisor. That looks at that permit and makes sure
everything’s in place to protect his life. And if he doesn’t
have the right to do that, I think we’re looking at something,
or overlooking something that’s very important.

We try to tell people that the employer will
identify the hazards, he will train you of what those hazards
are, and give you the equipment to protect you from those.
But we don’t deal very much on who has the authority to say
no. You know, I can be the entry supervisor and I can tell
George to go in that hole, but in reality, George ought to be
the one that looks at that and says, no, that’s not right.
It’s not going to meet my criteria for entering that
environment.

So I think what we need to maybe change not so much
the entry supervisor as to change the qualification of the
number one entrant. And a lot of times we have five, six,
seven, eight, ten people going into a confined space to do
work. But the number one person is the one that has the
responsibility for initial air monitoring, we always do
continuous air monitoring. We don’t allow any intermittent
air monitoring. Any time they’re in a tightly confined space.
And the attendant’s job, of course, is to be the what if person. What if this happens, what are we going to do? How are we going to respond?

So I would like to see a permit originator addressed in this legislation. And I would also like to see a tie in between the entry supervisor and the entrant. Give him the authority and the knowledge to make the decision if the permit meets the qualifications.

We also have a problem with the controlling contractor concept of what I’ve seen written so far. And, you know, the contractor is required to come out and evaluate me as a rescuer. And they have no concept at all of what I do. They have no concept at all of what the people have to do to do a rescue. And yet we’re requiring them to make an evaluation.

Well, my fire departments aren’t going to drop the ball or drop what they’re doing every time the contractor needs to do an evaluation on them and go out and do a site specific retrieval practice. You know, it’s easy to give them the SOPs or demand stuff, but to show them that we have the capabilities of doing it isn’t really the way to go. We need to address that in a different mode. What are we going to require of the contractor?

And as a general contractor ourselves, we hire plumbers, we hire electricians and stuff to do those specific...
jobs. And the reason we don’t build them is because we’re not trained to do them, so why should I be held accountable for their actions. I need to understand that there are confined spaces out there and so on, but if I’m not trained to go in that confined space and make an evaluation of it, how are you going to hold me accountable for it? You know, by law, I can’t go into that environment if I’m not a confined space person.

So I think that imaging needs to be addressed by this group here on how we’re going to be a little more definitive on these things. All these things seem to be way too broad for us to really give the contractors a way of dealing with this.

There’s a portion there about early warning systems. We do sewer work. We have gone 300 feet underground in these tunnel projects, etcetera. And by the time we hear the roar, it’s too late. We do need early warnings. And the way we do it is we look at the weather people, we have early warning through the weather departments. We go to the sewage districts and we look at what their lockouts and their diversionary capabilities are.

And we divert the waters and so on so that there’s no chance of them coming into our area. So we use half dikes, we use plugs. There are a lot of different ways of doing it and I don’t think that you can legislate a particular way of
doing anything. Because you have to have construction
knowledge in order to get in there and put in -- maybe they
don't need a half dike. Or maybe by going down to the local
water treatment plant, you can get the diverted from whatever
and get a lock out, tag out program to make sure it doesn't
come back.

We were working the water treatment plant and they
back flushed into our area with chlorine gas. And went down
there to find out what happened. And it was because they took
our lock out. So, there are requirements that the contractor,
or things that a contractor schedule in our safety program,
but I think by and large, it's going to depend on how the
permit is written.

And everything in this whole thing, as far as that's
concerned, comes back to the permit. In our company, there
are only two people allowed to write the permit. That's me
and my right hand man. And we allow no one to go there unless
one or the two of us was in there before and understand.

So I think a lot of attention needs to be paid to
the person that creates the permit. What is the skills,
knowledge, training and so on. And I've heard a lot of people
say, well, it's just common sense. Well, common sense is how
we react to a situation in direct proportions to our training
and knowledge and experience involved in that.

You know, if I were to ask the majority of people
and there was line pressure on a turbo 3400 in reverse, nobody's going to know until the mechanic is -- you know, and common sense, you know, 300 pounds. So, when we hear people say --- heavy, it was common sense to do that, well, if you're not training in it and you don't have experience and knowledge, it's not common sense. And that's where the errors show up.

That's, basically, all I have to put in at this time.

FACILITATOR McLEHAN: Okay. Thank you Mr. Pigsley. Are there any questions for Mr. Pigsley?

(No response)

Okay, Mr. Kennedy.

PRESENTATION

by Mr. George Kennedy

MR. KENNEDY: Thank you. I'm George Kennedy and I'm the National Safety Director for the National Utility Contractor's Association. Our members are primarily involved in underground utility work, the construction of sewers, water lines, gas lines. Now, we're reaching out and we have members in the telecommunications industry as well as electrical. And so, basically, anything that goes underground, our members could be involved with the digital and horizontal directional drilling. They're doing boring jobs, they're doing tunnels. Again, anything under the ground.
And we, the National Utility Contractors, have had a confined space awareness program in place for our membership for oh, about seven or eight years now. And we’ve trained around the country about 10,000, 12,000 people. And this training is done by our group of instructors. We have independent instructors who are, by our association, go through our instructor training program and teach this program. Hap happens to be one of those people.

And most of -- I shouldn’t say most, but they’re all very highly qualified and involved in the industry. So we’re looking at a lot of different things. We’ve been using the permit required confined space standard from general industry for years as our guideline to confined space entry. We know that our members don’t have to comply with every portion of that, but we still have been using it as a good teaching tool.

Primarily, we did that because the ANSI Standard, NIOSH criteria documents and anything else we could find on the market is similar to general industry and, quite frankly, might as well use that as free. I have faith in ANSI document.

But our members are getting involved as they’re entering into manholes and pipes and underground walls and, in some cases, tunnels and culverts and waste treatment plants. And I’m just trying to stress the issues here. New and existing lines is a big part of our work, and putting in new

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line. But our graduates are also doing rehab and inspection work. So they are in and out of confined spaces on a fairly regular basis.

For the most part though, most of the members are not actively involved in permit required confined spaces because they don’t run into them that often, except maybe when they’re working in some of the sewer lines or working near a potential hazard that might have been near a sewer treatment plant or a garbage dump or even leaky lines, in some case, gas or sewer.

So they’re involved in a lot of this. And like Hap has mentioned here, we use permits. Or they use them when they’re required. We have people monitoring upstream. The good contractors are already planning for that. They go upstream, one or two manholes upstream, and they will, of course, check the weather first for the day and the afternoon so they know what’s coming. And post a watch upstream, or up the pipeline, at one of the other manholes. And radio communications with ANSI supervisor or the attendant, whoever standing by at the space down below.

They also use pipe plugs and diversion and flow control. One of the contractors had referred to it as throttling the flow by putting a plug partially in and letting some leakage. As Hap mentioned, they also do dikes sometimes. Bypass pumping is also used.
But when it comes to entry into the confined spaces, we try to stick with the rules and permit required. We use continuous monitoring. A lot of the members are now using continuous monitoring on all jobs. Some are still just doing it in the permit required jobs and using some periodic monitoring when they do an alternate entry or non-permit spaces.

I do have a problem with the term periodic in the standard. I think we should either define it or eliminate it because it leaves too many wide open-ended situations that could cause problems, both from a standpoint of the attendant or entry supervisor knowing how often they’re expected to test, as well as the possibility of OSHA citation.

Because you say you’re going to do it every hour and something happens, OSHA comes along and says, well, you should have did it every 15 minutes, so we’re going to cite you. You didn’t do a periodic analysis. So I always had a problem with that.

I don’t have a problem with continuous monitoring on permit required confined spaces. The instruments are there, the equipment is available, it’s not a difficult thing to do. Especially in a permit required confined space, it doesn't require any additional labor. You’ve got an attendant standing by anyway, you might as well post him there with a monitor and let him monitor the permit required confined spaces.
We find some of the contractors do have a problem with the cost of rescue equipment and such like that. And we do have a little bit of a problem with that, similar to what happened. As I said, I have been involved in rescue training throughout the country, working with fire departments and other groups and we have actually a program we call Bridging the Gap where we actually get together with local fire services and train together as contractors and firemen. And this has been successful.

We do have a problem with the concept of evaluating and, especially performance evaluation of a fire service. It may be possible in some areas, but when you get out in the outlying areas, like we have volunteer fire departments, realistically, they are not going to set up and do a performance drill for you so you can evaluate them. We need to rely on them to come up with a standard operating procedure.

And, actually, I’d like to recommend that OSHA consider finding funding to help the fire services training their people so that they’re ready to help us. Because they’re going to take over the job anyway. There are more, but I’m out of time.

FACILITATOR McLEHAN: Thank you, Mr. Kennedy. Mr. Carbone?
PRESENTATION
by Robert Carbone, Jr.

MR. CARBONE: My name is Bob Carbone. I am with Local 103 out of Boston. I'm an instructor. I'm also trying to follow the issues at hand.

Some of the types of specifics basis that we encounter typically are manholes, both sewer and electrical. But in the nature of our construction work, some form work and some remodeled wall work, can be considered confined spaces. Some gas shafts and some plenums now would be a majority of our work in the central areas where the plenums for the return and supply air is for the tunnels are below grade, under ground and are 300 and 400 feet long.

And even the classified spaces for regularly -- the classifications need to be determined. I think the standard as it's written now for the application of construction is a little vague. We have vessels, silos and vaults in certain building areas and certain roadway sections. We have viaducts and pipe chases, they would be considered confined spaces. Some of the characteristics again, the characteristics go with the permit required confined space standard as it's written now. Your access, your egress, your combustibles. The problem is, we in the construction field can introduce our own hazards just by the very nature of doing our job. Our combustible gases -- I'm sorry, no one's ever
accused me of being quiet before.

(Laughter)

The very nature of our jobs. The chemicals that we introduce into the spaces, the combustible gases, the propanes, the PVC ---, the equipment that we use.

Some of the examples that obstruct or impair the spaces, the very means that we use to access, some of our confined spaces are not necessarily below grade, they’re above grade. And we use aerial lifting equipment to access those spaces. Portholes, covers and/or the ladders in the convoluted equipment that we use can limit and restrict our means.

Equipment that we use in the space that can impair our rescue, some of the pulling equipment, some of the racking systems. For you gentlemen that are in the construction of manholes and do utility work, you’ll know that the energized cables are there. Especially, when you start to get to your medium and higher voltages, it’s 15,000, 65,000 volts. You have those cables that will impair your rescue.

I have some pictures that I will provide to you.

The form work is intrical into the construction of the job and it’s not necessarily a straight shot. And some of your fire departments that are here that do tour the central outer can describe to you the intricacies of some of the buildings where rescue will almost become impossible in the event that it
needs to be conducted.

And as far as your early warning hazards, I have to steal a quote from someone that says, "Make the space safe for the worker, not the workers safe for the space. Eliminate the hazards in the space, not try to provide the worker with all the extra equipment to make him safe. Make the spaces safe as possible for that worker."

As far as early warning systems for the construction industry. A little different than you guys would do, some of your sewers and waters. There aren't a lot of early warning systems provided for us. So I don't know how to accomplish that. As far as the electrical end of it goes.

Atmospheric hazards, the continuous monitoring is absolutely a must. I agree with George, the periodic monitoring is very vague and does not describe it to us enough. It should be continuous monitoring. The price of the gas has come way, way down in the last few years and it needs to be afforded to the employee while the employee is in the space.

Continuous monitoring would provide the employee in the space with an assurance that he is covered. He understands that if a hazard enters the space, he doesn't necessarily have to worry about it. We have employees working in a fertilizer plant, you know, in a ---, where they had a backup in the system. Now, water leaked in, the water was
contaminated. It tipped the scale on our hydrogen sulfide and we had to evacuate the space. With continuous monitoring, it may not have been detected.

Ways to make the standard more acceptable to smaller businesses, like George said, you provide grants. Provide the information and the equipment. The biggest thing is training. I am an instructor at the local apprentice school and you people would be appalled at how many people do not receive the training they need prior to entering the spaces. Even mandatory by the 1926 standard, these people do not get the training that they need, provided by their employers.

As far as attendant supervisors doing collateral duties, typically in the construction industry and our business, the attendant is typically the apprentice. The apprentice by the very nature of his description does not have the experience necessary to be a qualified attendant most of the time. He’s the cheap help. He’s the $3.00 an hour, $4.00 an hour minimum wage guy that you stick there. He should be a supervisor at a minimum, or at least someone that’s qualified, a journeyperson that has those qualifications.

As far as the supervisor being assigned as the attendant, typically in the construction industry the supervisor has a lot of collateral duties. He’s trying to watch more than just the people in the space. He’s trying to watch the crew down the street, the crew up the other end of
the building and he cannot effectively do that.

As far as the attendant being allowed to monitor
more than one space, again, there are a lot of variables. The
locations of the space, the types of space, the weather
conditions. We're outside 24 hours a day, seven days a week.
When it's snowing, when it's raining, when it's 95 and when
it's 110 out. So a lot of those things will play on what the
attendant can do or how he can facilitate different rescues or
different spaces.

Again, the experience the apprentice plays into,
whether the apprentice can monitor more than one space. And
again, obviously, the physical distance of the spaces.

As far as the supervisors monitoring, I want to
quote one of your standards or one of your preliminary
standards from the 1910.146 standard came out, it went out to
OTI. And one of the sheets they passed us out said, of 89
percent of the fatalities investigated that year, the
supervisor were present at the fatality. Eighty-nine percent.

And as far as continuous monitoring, again, I wanted
to stress that that is a must. Periodic is just too vague.

It doesn't describe it enough.

As far as rescue goes, the one thing that's always
bothered me personally about the rescue of -- the way the
standard is written as far as rescue goes, it says only one
member of the team has to be CPR and first-aide trained. And
I just for the life of me can't understand why only one member has to have an active CPR and first-aid training.

And as far as the permits go, the permits should be regulated a little bit more in depth. They should be broken down as far as in close spaces and a minimum, the air monitoring should be conducted so that the documentation can be made. So that the entrants know what the readings are as far as the gas monitoring goes, so that the information is available to them before they enter the space, even on an enclosed space. Again, I stress that the definition of the space's permit confined and enclosed in non-permit be more descriptive than it is at the current time.

FACILITATOR McLEHAN: Okay, thank you, Mr. Carbone.

Are there any questions for him?

(No response)

Okay, Mr. Meade.

PRESENTATION

by Mr. Paul Meade

MR. MEADE: Good morning. My name is Paul Meade. I am Assistant Business Manager for Local 29, Boilermakers. We serve all New England states, with the exception of Connecticut.

Boilermakers, obviously, see confined space as permit required and non-permit required in just about all phases of our work. From boilers and related vessels, steam
drums, steam headers, tanks, air heaters, duct work, condensers, fans and almost every other phase of a boilermaker's work.

To us, confined space comes in all shapes in sizes from opening the boilermaker, from opening the boiler door to the tank ---, to the working in very small steam rooms, super heaters, ---. Boilermakers find confined space in almost a large percent of their jobs.

A lot of the instructions that we run across, just like Bob was saying, faulty placed manholes and manways, piping, building steal. If they'll put a confined space opening someplace, I'm convinced they'll put something in front of it just to make it harder for you to get out.

This has been part of our problem in confined spaces. Not so much getting in and working there, but the obstacle of once you're in the confined space are a problem for us. Such as getting into duct work, ---. We had an incident up in Bolle, New Hampshire just recently where they had some men who were involved with some fly ash. Luckily, we only had some people burned. They weren't burned too bad, but the potential was there for somebody to die.

These are the things that have to be monitored. You can train your people. We do, like every boilermaker in Local 29 has been through a 10 hour OSHA course, including the confined space aspect of that. We train a little harder in

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confined space and rigging, naturally, because those are the things we get into a little more in-depth in other trades.

But what we try to do here is we try to instruct our people how not to panic in a confined space. And that’s part of the biggest problem we have here.

The main thing is we’re trying to get across, I think, more than anything else is to get a standard in the construction industry, and not just out of the general standard that will apply to us and eliminate some of the questions that are out there for our members and some of the contractors that have to do the work. If it was in the construction standard, I think it would be a lot easier for everybody to understand and go along with.

On the using the multiple attendants on the permit required confined spaces, with multiple entries and exits, there’s always going to be a chance that you’ll have multiple problems. Anything that you’ve got multiple entrances, you can have problems at the same time in different areas with one person trying to cover it. It sounds far fetched, although we’ve all seen accidents, looking at them in hindsight, that really shouldn’t have happened. I think if we’re going to have attendants at these confined spaces, than that’s what their job should be.

If you’ve got an area of confined space where you’ve got two holes next to each other, sure, there might be a

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physical possibility where one person can cover both of those.

But for the most part, our experience has been that you’ve got
a confined space in this area, 25 to 30 feet away you’ve got
another confined space facing in the opposite direction. So
that person out there really can’t maintain both of those
exits at the same time and have communication and feel it’s
going to be safe for both of those areas.

With given one confined space entry hole at a time,
one man should be guarding that hole. Unless there again you
take a look at it and you can see that one person can actually
cover both of these all at the same time. As far as the
supervisors becoming hole men, experience in our trade has
taught us that as soon as that supervisor has another problem,
whether it’s relating to the job or not relating to the job,
he’s probably going to go somewhere. And you’re going to get
somebody to replace somebody at that hole, we don’t know.
When we finally have a boilermaker assigned to that hole, he
knows what his job is, that’s where he’s going to stay.

Another problem with that guy out front, and I go
along with what Bob had to say, is the people sitting out
front are not being trained. We have companies that want to
use any other trade, a laborer or anybody, to watch that
outside hole with no training and no idea of what that man in
that confined space is doing. That’s another thing that we
consider very important in this business.

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The guy outside should have some basic understanding of what the guy inside is doing. Otherwise, he's not going to recognize if he has a problem or he doesn't have a problem. So our standby on that has always been to have that outside guy be a boilermaker as far as we're concerned. And trained in all the emergency aspects and everything else.

What experience does the construction industry have where the attendants have authorized entrants also serving as entry supervisors? I think that goes back to the same thing. The problem with that is supervisors overlooking men in the situation like that, is they're not going to be there when you most need them. And that's not a knock off, it's just that the man has so much responsibilities, in charge of running the job, he's in charge of keeping people where they belong. He doesn't always have that drive to just pay attention to that one thing. So, we would like to see that stay where one hole, one attendant.

And that's really all I have if you have any questions.

FACILITATOR McLEHAN: Okay, any questions for Mr. Meade?

(No response)

All right, thank you sir. And our next speaker is Philip Prichard. Mr. Prichard?

PRESENTATION

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by Philip Prichard

MR. PRICHARD: Good morning. I’m Philip Prichard with Georgia Tech Research Institute. Basically, I work for training in the OSHA Training Institute we have at Georgia Tech. Also, we do consultation. I retired from the fire service with 30 years experience and my last job was Assistant Chief of Training in the Safety Office.

One of the things at Georgia Tech that we see a lot in our training, that a lot of questions on construction that’s not clear cut may be some of things that are basically, 1910.146. But then when we look at 1926.21, we’ve got the definition there that addresses the four foot depth, really doesn’t have that 1910.146 you’re looking at day three under the rescue portion, that states that you’ve got to use a retrieval system and be wearing a harness unless it proves as additional harm. If we are over five feet and that -- I think those need to be consistent.

Also, when we look at 1926.21 and the other construction standards, we really don’t address what is a permit required confined space. I think we should make these consistent across the board where it says for a confined space in 1910.146 and what is a permit space.

When we look about the characteristics of confined spaces, now when OSHA came out with appendix F in February of ’99, they had four there that listed internal configuration,
elevation, portal size and space access. I think these should be incorporated as part of the standard, not being in the appendix itself because we’ve got some good information there under internal configurations, it says either open or obstructed. When we look at obstruction, a lot of times in the construction industry, you’ll look -- if we’re taking in ladders or other equipment to do work in here, that can fill the needs of it.

When we look about elevation, it says elevated or non-elevated. The only thing about it, in the appendix there it says elevated, the portal opening is greater than four feet off the ground. Not totally comparable with that because even though that’s over more than four feet off the ground, we’ve got to look at the anchor point. What are we going to hook up a retrieval system to? What are we going to use to get somebody out if we’ve got to have a retrieval system with that?

And so I think that needs to be a little more addressed in there and make that a little more definitive. When we look about portal size, we look about restricted and non-restricted. That’s broken on the 24 inch here. Now pretty much everybody in this room, this is a 24 inch square than you’re going to be able to go in or out of. Twenty-four inch round opening, you’re going to be able to go in and out. Now, we’ve got a 24 inch oval opening, it’s going to get tight
for some of us here in the room. Well, what about if we’ve

got to rescue somebody? What about if we’ve got to put them

on a backboard? What about if we’ve got to put them on

the ---? We’ve got to look about how we’re going to get

those out.

So, we need to kind of clarify these a little more

by the shape of the opening, not just the size of the opening.

And when we look about space access that -- where Paul brought

up, a lot of times these are obstructed. They’ll make an

opening here, they’ll put a pipe in front of it or they’ll put

an air handling unit. We need to look about how we can get to

these, not just horizontal and vertical.

And again, when we look about, you know,

obstructions that are going to impair these, we look about

what we’re doing. Basically, we’re either building these in

the construction industry or we’re doing maintenance on them.

A lot of the equipment we have will obstruct these.

When we look about the government concerns, I agree

with Hap about where we gather the damming and diving, but

we’ve not got that one system out there that’s going to work

in every case.

We’ve got to monitor things like the weather and all

and not just have some type of device or somebody on a radio

that’s going to let us know. We’ve got to evaluate each

situation, not necessarily is one thing going to work for
every incident.

On the continuous air monitoring, I believe we always need to do this. But one thing about it, when we’re doing the air monitoring, we need to monitor different levels, not just have that person in the space because we’ve got to look about vapor density. And because we’ve got some gases that are lighter in air, some that are heavier. So we’ve got to monitor at different levels due to space.

We also got to look about our sequence. In 1910.146 it tells us to monitor for oxygen, flammability and toxins. We go to put our probe in there and we’ve got a gross of atmosphere, we just wiped out the sensory. So we need to measure for prosivity first. And one thing that’s going to save us some money that it would wipe out the other sensors or our meter and all, we could do that with PH paper or PH meter or something. But we need to address the prosivity issue.

When we look about the monitors, ideally that person is -- our entrant is going to be wearing a monitor and our attendant will have one. Use something as a cross section. We look about three or four gas monitors now and you can buy one for about $1,200.00. And excellent meter that we’ve got out there.

The attendant duties, monitoring more than one space, we’ve got to look about the distance. When we look about the distance, now if we’ve got a space at the end of

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this table or one at the end of that one, one person can pretty much monitor that. But if we’ve got one in the back corner of this room, versus the front corner here, one person is not going to do that.

We have that incident at Dulles Airport and the fuel --- aircraft and one attendant, basically, he was about 10 feet from the --- entrance on it. And one person died from that. So we’ve got to look at the situations. We’ve got to look about the hazards that we have on those.

Also, our entry supervisor, we’ve got to have additional training for that person. And whoever is preparing that permit has got to understand the different duties, the different hazards that we have. Not just because, you know, you are going to issue the permit today, they’ve got to understand the hazards.

And we’ve got to look about the different hazards, such as engulfment, changing circumstances, they’ve got to be aware of these. Again, we look at the permit, this is nothing more than a safety check-list that we have on these, so we need to make it safe for our workers.

We also need to address, if you look in 1926.352 on welding and cutting, this addresses a number of issues about welding in confined spaces. The other’s need to be incorporated into the standard also.

We seem to get more questions about those in the OTI
programs than most people wasn’t even aware that you’ve got
different training. It says we’ve got to attend them with a
preplan rescue plan that will be assessorul if we’re doing
welding. It doesn’t say that in the other parts of the
standard. So we’ve got to be aware of that.

When we look about the underground construction, we
also need to look at the requirements that’s listed in those.
We also need to look about the respiratory standard. What it
looks about IDLH atmospheres and what criteria that we have in
those.

Truthfully, I don’t believe that we totally need a
whole new standard. Why not do something like we did in the
Power Industrial Truck Standard. Make this across the board
here, maybe have some specific paragraphs that address these.

And one thing that we do need to look about, and
where Hap brought up about the rescue, a lot of time on
construction sites they’ll soon then call the fire department.
You’ve got the fire department training. We looked in
Appendix F, it says we should have a least a verbal agreement,
ideally, a written agreement that we will have -- and most
people don’t assume that we have a viable rescue team. And
that’s something I think we should look about.

That’s all I have.

FACILITATOR McLEHAN: Thank you very much, Mr.
Prichard. Mr. Tucker? Excuse me, are there any questions for
Mr. Prichard?

(No response)

PRESENTATION

by Walter Tucker

MR. TUCKER: My name is Walter Tucker. I am the Director of Safety for Petra Construction Company in New Haven, Connecticut. We're a relatively small construction company, unlike my compatriots here on the panel. We don't get down 300 feet in the ground, we don't get up 300 feet in the air, we don't do a lot of more complicated things. We build houses, we build small commercial structures. And we face some vastly different problems that many of ---.

I also have several years of experience in the chemical industry. I worked for Sika Industries for a number of years and I can tell you that the problems faced with entering a confined space which would be defined as a vessel tank, silo, or something of those lines, particularly, in atmospheric hazards, are vastly different than the problems faced with entering a more generic type of a confined space.

We have to look to the definition of confined space. Is it large enough to enter? Is there a restricted means of entry and egress? And is it not designed for human occupancy? Boy oh boy, is that something for interpretation. Not designed for human occupancy.

One of the spaces that we get into is a telephone...

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cable entrance facility. Now, a cable entrance facility could be an underground vault, but in our case it’s not. In our case it’s a big room in the basement of the telephone company’s central office. In our case, when I say a big room I’m talking about a room about 50 or 75 feet long with doors at each end. And we’re talking three foot wide doors that are six foot, eight inches high, just like any other door in the world.

Very often, we’re talking about a room that has an alarm system on it that’s got a monitor for oxygen deficiency, it’s got a monitor for hydrogen sulfide, and a variety of other things. And very often, that built in monitoring system is far more sophisticated than any I could possibly bring on to the site.

The difficulty is that the current confined space standard requires me to use a direct reading instrument. And they’re alarm system isn’t a correct reading instrument. Even those more sensitive than mine, I have to use mine. That doesn’t make too much sense to me.

The other thing we have to be concerned about is the definition of construction itself. Construction can be construction to alteration and so forth, as opposed to maintenance and repair. Oddly enough, I actually read an interpretation of an OSHA standard that said if you’re going to paint a room, that’s painting, that’s construction. But if
you repaint it, now that's maintenance. It doesn't make any sense to me. You're still putting paint on a surface and on one hand it's construction and on the other hand it's not.

And the problem is when you get into some of the other standards, as in the telecommunications standard, the second one in the telecommunications standards says this does not apply to construction.

So why have a fellow who's in a cable entry facility, who's installing a hazardous gas detection monitoring system and, by virtue of the that, what I mean is he's basically running a conduit, drilling a couple of holes, putting a couple of army brackets on, snaking the wire, putting in the detectors. He's doing, essentially, the same work that a telephone company employee would be doing in that same facility, and yet the requirements are vastly different for the two individuals.

Why? Because my guy is undertaking construction. The telephone person is doing telephone work, whatever that means. Because that's not defined either.

So it seems to me that we need to pay more attention to the manner in which the construction standards dove tail into the other standards. Whether it's general industry or whether it's any of the various specific special industry standards that we have up there.

Another problem we get into is elevator pits. And
when I say elevator, I'm just talking about a pit probably, oh, eight feet deep. We're not talking about an elevator for a skyscraper, we're talking about an elevator for a three story building. Okay, it has nothing in it, nothing what so ever. Is it large enough to enter? Absolutely. Does it have restricted egress? Absolutely. You've got to climb down a ladder to get in there. Is it not designed for human occupancy? Nope.

So, therefore, it's a confined space. Is it a permit requirement confined space? Doesn't have a hazardous atmosphere. Indeed, if it's an interpretation of 1910.146, that discusses elevators, and points out that, generally speaking, the only atmospheric hazard you're going to get from an elevator pit is one that's introduced from the outside. For example, if you're working in a chemical plant, where I used to work. And, theoretically, there are vapors or gases that might be heavier than air that might get trapped down at the bottom of that pit and cause a problem. But when I'm building an elevator pit, there's just no atmospheric hazard down there. What we're talking about is an eight foot hole. There's not an atmospheric hazard.

The hazard is the kinetic energy hazard. The hazard is when the guy goes to the top of that pit and ends up blocking tackle, and now all of a sudden they run the risk of this big thing falling down and landing on the guy at the

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bottom of the shaft, now that's a genuine hazard. I'll go along with that. But my point is, that strictly speaking, as soon as we hang up that blocked tackle, now it becomes a permit required confined space. Now I have to have rescue procedures.

Now, this is not rocket science to get the guy out of an eight foot pit. There's not an atmospheric hazard. And this is what I'm asking OSHA to address is the numerous confined spaces that are out there, where the hazard is going to be a hazard of kinetic energy. The hazard of something falling on the guy. Or possibly an electrical hazard. When the electrical hazard is simply the temporary lighting that you put in next to the guy that's working down there can see what he's doing.

Finally, I'd like to take a moment for us to wonder why it is that OSHA can impose various constrictions on fire services in terms of their turn out here and so forth. You know, why do they require the fire services to be trained in confined space entries? Why lay the burden of confined space rescue entirely on the builder? Why not shift a little bit more of it to the fire service? Why should I be in working in a town, call the fire department and they haven't the vaguest idea of how to do a confined space entry?

So I wonder whether we need to adjust those regulations as well. I should be able to count on the fire

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department to at least have a moderate knowledge as to how to get somebody out of that space.

Thank you very much.

FACILITATOR McLEHAN: Thank you, Mr. Tucker. Are there any questions for Mr. Tucker? Yes?

MR. PIGSLEY: I do want one clarification. The fire departments do fall under OSHA standards. We do have to protect our people when they go into environments, and like you brought up one of the things that has not been addressed in the fire service's entry into confined space entry, and that does need to be addressed by OSHA.

FACILITATOR McLEHAN: Okay. Any other questions or comments for any of the members of this first group of speakers?

MR. HAWKINS: I have just a comment about this.

FACILITATOR McLEHAN: Sir, excuse me. Would you come over to the mic please and say your name and organization?

MR. HAWKINS: You bet. My name is Dusty Hawkins. I'm with Univoice. We manufacture rescue gear. And I've just been listening to everybody here and we've got some people that are saying the fire service needs to be trained in confined space and on the other end you've got people saying there's huge variations of the types of spaces that we're going into. And I am out every day myself. I deal with a lot
of companies like yours. I also deal with the fire service and deal with the general industry and deal with the regular confined space in the industry.

And just to address why I think we couldn't ask the fire departments to be trained or demand it is that there's just too many types of spaces. So, they're not really going to be able to be prepared for every single type of space and has to wage a bunch of money to do it. And we just think it's impossible.

FACILITATOR McLEHAN: Okay. Thank you.

MR. TUCKER: Could I respond to that?

FACILITATOR McLEHAN: Certainly.

MR. TUCKER: That also points to a flaw in the existing confined space regulations, which requires the construction company to train his people for entry into confined spaces. I don't think that that's real possible in the sense that the states, they are so varied.

The knowledge that you need to have to enter, for example, a cable entrance facility, a telephone cable entrance facility or an elevator pit, is a vastly different set of knowledge that you might need to, for example, enter a formal and reactor vessel at Zytech. They are way different skills.

And it would seem to me that if a company in general industry is to hire a construction company to go in and work in his confined space, than the burden of training should land...
on the general industry company rather than on the
construction company. Because the situation is too vastly
different.

MR. HAWKINS: Right. And I think that the company
that they're going to work for, who the contractor is working
for to build their project, should throw into their bid money
what it takes to get trained or hire a rescue team to come out
for that site. And that should be -- it does fall on the
company that's asking to build the project.

FACILITATOR McLEHAN: Thank you. Yes, Mr. Flanagan.

MR. FLANAGAN: Yes. I'm a speaker and my name is --
- Flanagan. I'm a --- Rescue Coordinator for the
Massachusetts Fire Fighting Academy. I'm also a -- I have my
own training business and I'm deeply involved in technical
rescues. I'm a safety officer for the Massachusetts Task
Force, one of them being an --- Search and Rescue Program. I
have a lot of background in a lot of these areas.

I respectfully disagree with the gentleman from
Univoice. The fire service, we aren't specifically trained in
everything we do day in and day out, whether it be fire
suppression, EMS calls, whatever. We are trained to be able
to react to situations. And if the proper funding is out
there and you don't get locked into having site specific
equipment -- one of the problems is with the industry, the
industry tries to tell the fire service what they should buy
for equipment. And too often, dollars are spent on site
specific appliances and equipment for jobs. If people are
trained to be thinkers, not grunts, and learn how to basically
diagnose the situation, use their training and education, it
can be done. It’s just a question of the funding being put in
the right place.

One of the road maps that’s helping that now is the
NFPA in 1999. It just came out with a standard called NFPA
1670. It’s entitled, Training and Operations in Technical and
Rescue Incidents. It’s a road map for the fire service to
what they need to do to be able to handle specific things.

One of the disciplines in this confined space
rescue, it’s very detailed in what --- a technician level, you
need to be trained to. What needs to happen is --- industries
and the fire service need to get together to see that the
funding is out there so this kind of training can trickle down
to the first line of fire fighters.

Because the bottom line is we’re going to be there
any ways and, historically, when the fatality numbers of
serious injuries of then would be rescuers, there is never
going to be a situation where the fire services is not going
to be there, whether it be --- or volunteer. We just need to
sit at the same table and identify these different regulations
and get together on --- think it could be worked out.

The fire service, I know in ---, which is
primarily ---, especially, the --- Boston Professional are readv ready and willing to provide the service, they just need to identify the funding to get the equipment to do this type of -- training. And I've had people make very successful, very -- rescuers. And --- anything with practice, they just know how to do their job because they are professionals and I respectfully disagree with that last comment.

FACILITATOR McLEHAN: Mr. Kennedy?

MR. KENNEDY: I agree with Charlie and I do disagree with the prior speaker in that if you're going to have the contractor to deal with their own rescue, you're talking about having to train the worker in some cases, workers there are on a high turn over mode from one company to another.

And you're going to have to train that guy to do more than just enter the space. He has to be trained to package the patient, handle the patient if the patient's injured and get the person out of the hole. And it's a very difficult task to train that.

The fire services have more experience in this area of removing people from, of course, building that have burned, buildings that have collapsed, automobiles, and other situations. And they are the best people to train because they're experts in doing that and handling a situation.

If you've got a contractor group and now our guys, for example, are two, three and four men crews out there, one
guy down in the hole and he's trapped, the other three may not be enough people to do a proper rescue. So we teach our people, dial 911 first. That's the first thing you do. And then maybe if the hole hasn't been ventilated, and it should be, but then set up the ventilator and get some air down there and start moving, evaluating the situation so when the fire service can show up you give them the information.

But one way or the other, we're going to dial 911 and in nine out of ten situations, the fire service is going to show up and the guy getting out of the right seat of that fire truck is in charge. Where they don't care if you've been trained or you've got a supervisor or an owner on the job, it doesn't matter. That lieutenant, that captain, he's the man. He's in charge, he's taking over that job site right then and there. And they're going to pull your people in most cases from the space.

And that means they're going to do the rescue. So in that respect, I think they need to be trained and then money needs to be provided so they can get the training. Yes, we can coordinate our efforts with them and invite them out to the site so they can see what they're dealing with, see if they can handle that kind of thing if they want to do that. But they are going to be doing it.

I mean, they're firemen, but the world is changing
and the technical rescue services are becoming a part of every fire service. And then, you know, we go out and they tell us to buy the equipment. Well, we buy the tripods and we buy other equipment and keep it on the site and if they come on the site and see if you've -- in use, chances are they are going to move it out of the way and use their own equipment because they don't trust your equipment to begin with.

So it just becomes a waste of money. I'd rather see the money go to the fire services and help them get their people properly trained. Again, they're trained in first-aid, CPR, their EMTs on their squads and they're ready to handle it. And they just need some training.

And in some situations, obviously, there are some big facilities, petro-chemical plants and things like that, where maybe specialize coordination between the fire services and the particular company may be necessary. But I think that's being done in a lot of areas where there are big --- IBM and Union Carbide, people like that, are already doing that if they don't have their in-house people. And even then, they're still coordinating their efforts with the outside teams.

So I think we need to really look towards the rescue services for their help. And Hap pointed out, we hire electricians and plumbers and pipe layers and operators and they're pros at what they do. But, they're not rescuers. And

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fire service people are pros in what they do. And I think we’re endangering the lives of workers by making them perform rescues if they’re not properly trained.

Annual training once a year, that’s a bunch of nonsense. It’s not enough. It won’t work. And I’m afraid we’re going to end up with people left in a hole because we didn’t respond properly. We didn’t have the equipment or we didn’t have the proper training. Or we had turn over and now we only got one guy trained on rescue on our crew and the other two guys haven’t been through the program.

And realistically, there’s not a contractor out there who can run a trench rescue training program every month so he can have his people up to speed at all times. It’s just not going to work.

MR. TUCKER: And the follow up to that would be that in the State of Connecticut the fire chief is in charge. If you call the fire department and he shows up, --

MR. : In most states it is.

MR. TUCKER: -- he is -- well, I can’t speak for most states. All I’m pointing out is if he wants to evacuate the building, everybody that’s there is out of there and the fire department is going to do the job. It’s out of my hands. We have to be cognizant of that.

MR. KENNEDY: For the most part, it’s a national -- for the most part, it’s a national requirement, the fire
chief, the lieutenant, the officer that gets out of that right seat of the truck is in charge until his chief comes on site and his --- commander gets on site and they take charge. And they’re going to run the job. And they’re going to run the rescue.

And the volunteer fire departments and other fire departments, even some big cities do turn down the job. We won’t do confined space rescue they say. But in reality, you call 911, they show up anyway and they’re going to take charge of the scene. And if we’re going to do something, let’s try to help those volunteers or those departments that don’t have the money get the proper trainings and work with them and help them to be ready to help us in a situation. It’s a team effort.

FACILITATOR McLEHAN: Yes, sir?

MR. MEADE: Yes, I’d just add that, and nothing against the fire fighters because they’re my favorite people, believe me. But I think what we’re losing here is if that person standing next to the hole inside of a minute, or less than a minute, could either save somebody’s life or --- their life. That’s why it’s the person trained. That’s why that person sitting next to that hole can’t just sit there and wait for the fire department. He’s got to have some type of training for first response. Absolutely.

And when these guys get here, they’re in charge.
But up until the minute they get there, somebody’s got to lay down and be responsible for that person in the hole. That’s where this training comes from. And if it’s only used for 15 seconds and it saves somebody’s life, it’s well worth it gentlemen, I don’t care how much money it costs.

MR. KENNEDY: No, I agree. If you try and --- has permit required confined space and they had the equipment, external rescuers definitely defers to response.

MR. MEADE: Yes.

MR. KENNEDY: And the attendant should be trained in how to do that and not to go into the hole and try to save somebody. But if he’s hooked up to a harness and a life line, pull him out. Absolutely, I agree with that 100 percent.

FACILITATOR McLEHAN: Mr. Prichard, you had something?

MR. PRICHARD: Just to go on what Charlie said, the MBA did 1670, if the --- also did --- just in technicians. And there are specifics in there for confined space. And I think that should be looked about. We’re looking about the construction standard here. One thing about entrapment, a lot of people say, oh, I’m going to go buy a tripod and that will solve all my confined space problems. The majority of confined spaces, unless you’ve got a manhole, it’s not going to work. You’ve got to look about some other type of anchor points, stuff with that.
And, Greg, I go along with the fire departments. You’re going to be in charge, but again, we’ve got to coordinate with them to see if they’re trained. They’ve got to have the funding for that. They’ve also got to be trained. We also need to consider response time on that. Because, again, if we’ve got the person that’s not breathing, we call the response team, or whatever, and it takes them six to eight minutes to get there, that person’s not breathing, well, in six minutes we’ve got brain damage. So that’s something we need to consider.

You know, what’s going to be our timely manner? I know, I hate that, the way it’s written in 1910.146. Because it’s too vague and stuff. Got some specifics, it came out in the preamble, but we looked at the standards, it says for the situation applicable. What’s that mean?

You know, give us some definitive parts and stuff that we’ve got on that. But again, we need to all look about working together on this rescue and, ideally, hopefully, that we never have to do to rescue, because everybody’s following that procedure to start with. We’ve got this safety check list, we’re doing our monitoring, we should never have to do rescue. That should be, you know, one in a million times that we do this.

If we’re doing our following procedures, we’re doing our monitoring, and we’re doing our training, we shouldn’t
have to worry about this.

FACILITATOR McLEHAN: Okay. Any -- yes, sir?

MR. MCLAIN: Ken McLain, Business Safety --- Tunnel Worker Safety Coordinator with Internal Workers. Mr. Kennedy and Mr. Pigsley, Underground Contractors Association, do we consider tunnel work as confined space?

MR. PIGSLEY: Absolutely. One, it falls under the 1910 --

MR. MCLAIN: And is it the -- I was wondering if it's a permit non-required confined space? I know it's under the 800 standard, but is it a permit required confined space? Is that what the tag in, tag out is for? I'm just wondering?

MR. KENNEDY: Generally speaking, I don't consider a tunnel a confined space. You're covered by 1926.800, you have your own specific requirements for rescue and communication. You check in and check out, testing electrical and all the other things that are related to tunneling operations. So I generally speaking, unless it's a small boring job or something, you know, a small tunnel that they're boring a pipe under a highway or something, generally speaking, I don't consider a tunnel that you have here in Boston to be a confined space.

MR. MCLAIN: Like micro-tunnelling, you think maybe a 42 --

MR. KENNEDY: That's still up in the air. We need
to decide on that one. We’ve had our arguments with for and
against that.

MR. PIGSLEY: I think the majority of the
contractors that do the micro-tunneling and so on follow the
800 standards even though -- you know, we follow the criteria
that’s in there. We implement the 1910.146 standards and the
800 standards --- and all that. And we use that as the
guidelines to what we’re doing now. So, like George, I don’t
think we really consider that as a confined space.

I’m from Wisconsin and we don’t do that up there.

We looked at the 800 standards.

MR. MCLAIN: Yes. There’s no doubt that it comes
out of the underground construction, the 800 standards. But
maybe the tension from OSHA or something, and we can get
something that does definitely qualify. We treat it as a
confined space. One way in, one way out most of the time.

MR. PIGSLEY: Yes, but that’s all covered by the 800
standard what you have to do.

MR. MCLAIN: Right. Right. But I guess I’m
generally not just --- underground contractor ---, but
everybody to consider that confined space within that confined
space, if you would. I mean, I think everybody here agreed
that technically when you go down into the hole, there’s one
way in and one way out. And then you’re moving yourself
around the equipment and stuff down there that it is very
confining. Limited access and egress being the one way in and one way out.

I’ve been down 460 feet down a fire --- diameter. I think I consider that a confined space. So, if we can establish that OSHA -- if we can establish it one way or the other if that is a confined space. Once we’re in that tunnelled area, to go ahead of the TBM into a TDM, into a covered area, crawling through that opening and so forth, I think we can agree that that is a confined space there.

Also, to draw some attention to the first-aide, if there would be. I think I agree with Bob, that the first-aide part of it and the qualifications of the people in that first-aide area. If we’re out nine miles out, we see the need for a certain amount of first-aide qualified people. And right now there’s nothing that really covers the amount of people that’s ---. So being that we’re in a safety forum here if we would, I think something should definitely address the amount of qualified first-aide trained people in those areas.

MR. PIGSLEY: The 800 standard addresses the rescue squad type training. And it’s tunnel rescue too.

MR. MCLAIN: Yes, that’s five --

MR. PIGSLEY: They address the five man teams and exactly how many have to be on site and all that. And I agree with you, they don’t discuss the length or how long it takes to get back in some of these tunnels. We might run a mile or
two miles, whatever. --- I do agree that needs to be addressed, but I think of all the things that we have out there. The 800 standard is very comprehensive as far as protecting the employees. For a number of people down there, we don't have ---.

FACILITATOR McLEHAN: Yes, sir?

MR. MEYERS: Bud Meyers. ---. The five on five, if I'm not mistaken, in the 800 standards, that will allow the fire department to be the main rescue. But we know that we're an hour away. If there was an injured person in the heading, than we're an hour away from the fire department getting there, giving response and getting in on a Lokey to that position.

My interest is to get more people trained -- and it gets somewhat more mandatory just to leave it up in the air that you're rescue team, per se, rescue team rather than medically trained people, personnel, on the job itself. See what I'm getting at?

MR. PIGSLEY: Yes.

MR. MEYERS: If you were down there and all of a sudden there was something amputated, and you're starting to shoot blood, are you going to make it out the hour or are you going to wait for the fire department to come in and be the main rescue, and so forth? Are you going to make it? You know.
MR. PIGSLEY: Most of this time, this has been mandated by construction job sites that we have on site the number one five man rescue team. And most times, in Illinois and Wisconsin, they demanded that we have the back-up team on site and, basically, the fire department is the people who is going to come out there and provide the EMS service and so on.

But I've been in the deep tunnel in Milwaukee and the deep tunnel in Chicago. And in both incidences, it ended up that we had to have people -- I just got done training a crew last week for Michaels, that they had to have those guys on site. The standard doesn't specifically say that, but I think a lot of people have been doing it.

FACILITATOR McLEHAN: Okay.

MR. : --- for Mr. McLain, I think one of the situations he's talking about, I'm a Captain of the ---, Mass. Fire Department and I was first due to one of his sites --- tunnel. They had a gentleman that had a crushing injury from the Lokey, seven, seven and a half miles up. There was a paramedic that was part of the crew --- the time at that site. I really believe this gentleman would have survived, but because of the speed at which the Lokey could travel from the hazardous situation where, even if the fire service or --- the rescue crew, immediate ALS intervention might have been the difference in that particular situation.

When you have a site that's a massive construction
site like the Big Dig in Boston, or the Boston Harbor --,
sometimes how far -- you have some situations that are set up
on paper that look good as compliance, but the compliance
safe, but the practical application is non functional in an
emergency situation. And the scope of the that particular
project was one of those situations where as far as -- we call
it tunnel mask incident. They had to come --- the Boston Fire
Department ---, but it was the medical emergency, the
threatening medical emergencies where you were at the --
basically, to be --- far out they were, how long it took for
the Lokey to get back in.

Because I happened to be there in that particular --
- worth the base of the shot. It was a good 25 minutes from
the time we were notified ---, that person with no medical
attention was brought in. He was conscious, alert at the time
of the accident. By the time he got to the base of the shaft
he was in cardiac arrest, --- arrest. So these are the kind
of situations I think we're looking at.

MR. PIGSLEY: I think those were a good point. I
guess in our area, we look at it being mandatory by contract
that we have those people on site. And I was surprised, some
of the comments I heard were they don't have people training,
first-aid and CPR, on site and kind of take it for grant it
we're going to do that.

MR. GRAFTON: Dave Grafton from OSHA. On site is

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not enough. At the heading is where you need them.

MR. : Absolutely.

MR. : Right.

MR. GRAFTON: Because an hour and twenty minutes to
ride the man trip out, because I wrote it up for three
accidents out there. Three fatalities. An hour and twenty
minutes out. The man's gone. Nobody's going to survive an
hour and twenty minutes when they're crushed. And we lost two
other people in that tunnel out there. Why? Because four
people were out there only. There was no rescue out there and
by the time they brought them in, it was an hour and twenty
minutes.

MR. KENNEDY: Well, a job like that it wouldn't be
practical to depend on the local rescue teams, from the fire
department, because you are too far out. I mean, you can't
even get close to leading a reasonable response time, so I
think in a situation like that the contractor or the owner of
the job should specify that they need to have people trained
in a rescue.

And, of course, in a tunnel job like that, you're
talking a long-term job where training some people and having
some professionals available to you is more practical and
reasonable. What we're referring to in terms of -- when I
refer to rescue teams being there to help I'm talking about
the smaller jobs, the putting in the manholes and the pipe and

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the culverts and the, you know, the average everyday job as opposed to the massive tunnel job or plant job where you've got special hazards.

And, in this case, a really long response time if you depend on the rescue services. So I think we need to look at the situation in each case and the contractor should be aware of that. In case of first-aid, they should have had some first-aiders in that crew. I mean, that's your own regulations that they have to have a response time of four to five minutes, with basic --.

I mean, that's basic. And, again, you know, are they going to --

MR. GRAFTON: That's basic -- what they have makes it --

MR. KENNEDY: --- response time.

MR. GRAFTON: -- fellows out there, right, Kevin? With basic trained first-aid. A fire department responded very well. They were four minutes, they were on the site in four and a half minutes. But from site to heading. And now we've got men in confined space in front of the TVMs through an 18 inch hatch, I would --- myself, with between the face and the cover head, or 28 foot cover head, and the contractor out there did put in a double confined space he used to call it. Once the man went through that hatch, it was lock out, tag out was incorporated into the confined space because you

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were in no man's land down there.

And that's something we have to address is the training aspect of our own personnel in these areas where they are the first -- like Paul said, the first person there, while we're waiting for the fire department to come to take over, our people have to have the training and accept responsibility to do it. And when I say accept responsibility, that's the sub-contractor, the general contractor, and the owner of the property, accept that responsibility to do this on the job.

We don't want the fire department to come. We want an engineer --- in a standard so we don't have to call them. But if we do need them, we want it right. Thank you.

FACILITATOR McLEHAN: Okay. Yes, sir?

MR. I wonder whether the construction standards ought to be more firmly delineated to where these larger projects and any of the low cash basis that the rest of us are doing. If you look at the general industry standards, there's a whole section of special industries. Why shouldn't there also be a separate section of the construction standards for these larger projects -- the tunnel that you guys are doing?

The hazards are way different than hazards that we face. They're way different.

MR. KENNEDY: Well, that's the 800 standard most of that. It works out fine. The 800 is a great standard. I
think it's a good standard.

MR. : Well, all I'm getting at is that I
don't want to have the little guys being saddled with the same
types of regulations that would be required for a bigger
project.

MR. KENNEDY: It's the same hazard. How do you
change it?

MR. : Well, I'm not sure that it is the
same hazard. I'm not sure that a generic defined space hazard
is -- you know, there are problems enough just trying to --
again, I get back to this elevator pit business. In the
general industry standard for confined spaces, it's a big time
---. Is that a permit required space? There's no atmospheric
hazards. The hazard is maybe that elevator might fall.

All I'm saying is that the hazards are different in
smaller scales.

FACILITATOR McLEHAN: Okay. All right, thank you
gentlemen. And if you would be kind enough to take a seat in
the audience, we'll get the other speakers up.

And how about we take a 10 minute break. Okay, it's
9:30, let's -- well, it's about 9:32, let's be back here at
quarter of ten. So you get a little more than 10 minutes.

(Whereupon, a short recess was taken.)

FACILITATOR McLEHAN: Okay, I'd like to introduce
our next group of speakers. We have Charlie Flanagan from the

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Massachusetts Fire Fighting Academy; David -- is that Lamensdore?

MR. LAMENSDORE: Lamensdore.

FACILITATOR McLEHAN: Lamensdore from Safe Environment Engineering; Colin Riley from Unique Concepts; and Gary Hamilton from Unique Concepts.

Okay, Mr. Flanagan?

PRESENTATION

by Charles Flanagan

MR. FLANAGAN: Good morning. I’ve already spoken on the other people’s dime, but I just wanted to get a point across.

My name is Charles Flanagan. I usually go by Chuck. I’m a Captain with the Winter Fire Department. I’m Technical Rescue Coordinator for the Massachusetts Fire Fighting Academy, but I’m actually here representing myself. I also have a private consulting firm that does technical rescue training, a great deal of it with confined space. I also provide standby rescue for industries. And a lot of it is the construction industry in certain areas.

My main interest for coming today was relative -- the topic that we’ve been referring to the last few minutes, and that’s the rescue service as part of it. And the biggest problem that I see out there right now is just the fact that the assumption, and I think several of the speakers in the
first group made reference to it, is that private industry in
the general industry -- to some extent, the construction
industry has an assumption of what the capabilities are from
one fire department to the next.

And where that became a real eye opener for myself
is my community is adjacent to Deer Island, which for those of
you who are not from around here, with the Boston Harbor Clean
Up Project, which is pretty much winding down. But it was
about a 12 year project where it was practically mandated for
the clean up of Boston Harbor. And it was a massive
collection project. It was a highlight of --- Tunnel, which
--- planning. With references, you know, being in the ---,
get a wonderful job in constructing. Like with a lot of
serious set backs that ---, but it really had a scope that was
unbelievable.

And one of the things I did find out is that that
project brought construction workers in from all over the
United States. And because of that, they all had different
perceptions of the capability of the fire services. Certain
parts of the country where it’s strictly volunteer, they’re
expectations were one way.

If you were somebody that grew up in L.A. County or
L.A. City, where they are tremendously highly trained because
of a lot of reasons. It’s an OSHA state, unlike
Massachusetts. It’s relative to the fire service, which is
not an OSHA state. Their expectations were different.

It even came down to the basic concept of when that project started, we did not have 911 in Massachusetts and people were calling 911 when there was an emergency down here and we literally had a black out the place with bumper stickers to how to notify the emergency response teams.

And when you think about a project that was a multi-
billion dollar project, that a simple notification thing wasn’t in place and, actually, when the job started --- just show you that we think in a positive mode, that these situations aren’t going to happen. So we tend to be reactionary versus pro active.

And I think a lot was learned on the Deer Island Project which made, for instance, the Boston Fire Department much, much better prepared to handle the Big Dig Project, because it learned a lot, based on the Deer Island Project.

Some of the problems I see, and I just wrote down a lot of bullets because I didn’t have anything formally prepared, but relative to some of the things that are on the board here. The atmospheric testing, continuous or intermittent. My experience has shown when I’ve dealt with people both in the private sector and in the fire service, it responds to some of the new finagled atmospheric testing devices which we have, which are very good instruments.

They know how to use the instrument based on the

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training they received from the manufacturer. And it's
designed for all adults and --. So you really have very well
trained -- and I don't interpret the information using the
positive mode. In other words, we have a specific --- whether
it be hydrogen sulfide, CO, we have an exposure level, times a
time line, what does that make it? Is this a rescue versus a
recovery?

Are we putting people in harms way when we have
situations and they should never have taken place in the first
place because they're reacting to the red light of the alarm
going off on their meter, but they didn't use that information
to determine really what could actually happen right now. How
involved do we need to get?

I have dealt with situations where they have an on
site response team, an in-house response team and not.
Reference was made today, earlier, that the fire department
would be there, which is the case. A lot of times what
happens is that they over estimate their capabilities and they
let a lot of valuable time go by before the initial
notification goes. And time is lost.

Most confined space emergencies, especially the
atmospheric ones, there's a very small window of opportunity
to make that rescue. That is determined by the ability of the
people who test the atmosphere properly, the inside
information, and then the equipment level of the people

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responding. I agree with the gentleman from the Boilermakers, that if you can make that non-entry rescue prior, absolutely, do it. But one of the things that we have to also be aware of is that you are trained, and a situation presents itself. And because of your training, you know that you can't do anything until someone comes in and has supplies, their respirators, that kind of thing. That is a pro-active decision. That’s not doing nothing. And what you did is you made a decision that did not escalate the --- into the would be rescue, and becoming the victim.

We have to really take the training to a broader base. I was talking to one of the gentleman during the break. And you deal with companies that have had confined space training within their corporate parameters, the specific locations, real site specific for instance.

The gentleman from Connecticut was talking about the simple spaces. He may have trained some people, simple work --, because they're --- a hoist or a tripod or whatever. But they may be listed in the corporate directory as confined space trained. You then send that person to be the attendant or the standby person to another location that’s totally out of the scope of what his training was because the parameters are not spelled out for that job. We don't have a hazard risk assessment for that job by a qualified person.

A lot of times it’s not just based on --
historically, we’ve never had that problem. The fire service can make a living on things that never happened before. And this is the kind of stuff that has to happen. Competent people. There’s got to be a criteria for that competent person.

I found with some of the big jobs that we have consulting companies that ---. I’ve got industrial hygienists and things like that. They have much more stringent guidelines --- because the person that wrote the permits or supplied the information really understood the scope of the hazard. Whereas, you have the worker who might have been a very competent employee, whether it be an electrician or boilermaker who goes up the food chain to the point where he’s now a supervisor.

Because he’s at the point now where they don’t want to physically do as much work, but they want to use some of his experience. They may not actually have all of the qualifications that we make in that hazard, a misconception. A lot of it just comes purely from experience.

I’d like to see more interaction between the construction industry and the fire service. Not so much in just the big jobs -- because of the Metro Boston area, that’s been pretty positive over the last 10 or 15 years. The fire service and big projects are working pretty well hand-in-hand. There’s been a lot of vindication money. And I’ll be honest
with you, a lot of the smaller entities benefitted from it because a lot of --- equipment, opportunities, we’ve had to be trained and train outs were a result of funding in this area. And it trickles right down to the community level.

What we need to have -- to use the fire service more than we do. And not assume that they have the capabilities and the training ---. Give them a call. Find out what they’re capable of doing. A lot of times they do have the training but don’t have the equipment, things like that. So, a phone call wouldn’t hurt.

I routinely work with cities and towns that have a lot of target ---. But the point that the gentleman from OSHA made, it’s an excellent point, getting to know -- the hazards don’t know, they cannot equipment train. For a small fire department, if we have a big fire -- our big fire department when we have a big fire. But fires, you only have 10 fire fighters where you’ve lost maybe 20 ---. The hazard and the risks are still there. So we have to make sure we’re not losing things through translation if it’s a small job versus a bigger job.

But what I would just like to see is that -- because I know in other parts of the country where they tend to be more loyal and more real estate involved as far as the locals. The fire service be continually put into the plans. And if there’s a good dialogue between the fire service and industry,
it will help the fire service when it’s time to expand with its adoption of these new --- standards that we were talking about.

If a fire department became what we call all risk trained in that area, it would be able to handle just about any situation that it has the likelihood of a positive outcome. There’s always going to be an incident that it didn’t. It’s catastrophic and the other is going to be no positive outcome. But for the most part, if you go in with the tools -- and I always tell people the best tools is what’s between your ears -- that’s going to also prevent fatalities.

People sit and plan the problems out at the jobs, but I just would hope that you would plan us into the job. That’s basically what I was here to lobby for today.

FACILITATOR McLEHAN: Thank you, Mr. Flanagan. Any questions for Mr. Flanagan? Yes, sir?

MR. : The first -- go ahead.

MR. : Just one quick question, Charlie.

You mentioned that you have a rescue team for service, a paid off site --

MR. FLANAGAN: Right.

MR. : -- rescue team. How relatively available are they throughout the country? I mean, do you find that --

MR. FLANAGAN: I think they’re there, but it’s not

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something you look in the Yellow Pages and see confined space
standby rescue teams. I’ll be honest with you, when I get a
job, it’s usually because of a major consulting company that
works with my job, is aware of the fact that we’re out there.

You know, I’m primarily doing training, but I have a
really good academy of qualified people and I have a trailer
full of equipment so that I can be on site. And we have a
diverse group of people, like myself. I’m a hazmat technician
in the State of Massachusetts. I’m the regional sponsor. So
we can handle the atmospheric policy of -- people with
extensive --- capabilities and things like that.

So, it’s a situation where it runs in spurts. I’ll
have four or five jobs real close together because a lot of
people that were communicating, but it’s not actually what I
want. If you want a regular basis -- I’d much rather see if I
go into a given town and a company, well, maybe --- would like
to hire my people everyday to standby on a job.

I’d much rather see them train that fire department,
you know, spend less money and maybe for 10 or 12 days and put
in a comprehensive training program and then -- because that
becomes a staffing ---. And the point being made --- in a
rescue is, at the industry level, is overwhelming.

And the first time you run a training program it
costs you a lot of money. And then you find out two days
later, no --- I have to do it all over again. So even if you
decided two years to run a program, if you were training the
same group, that being the municipal fire fighters, their
skill level raises so the risk level lowers. And that’s kind
of the direction I’d like to see it go.

Where it’s possible, it certainly not possible in
parts of the country where it’s not appropriate because some
of these projects in the industry are just not close to a fire
department, you know, time wise.

But you could also look at --- even if you did train
them, it may be an availability. We hire a police officer in
a private detail and ---. If you have a fire department, it’s
like all hazard trained, it could be an opportunity to do that
also. So, I just think it’s a, you know, ---
organizational --- they can put numbers together quickly.
They have the first-aide training, they have, you know, even
advanced medical training, patient --- whatever, that they can
handle that job.

And the other thing that we’re overlooking on the
construction site is what --- confined space accident that the
--- was something else. So it’s not just in confined space.
You know, a lot of issues that happened on these major
construction sites, when you get there, it goes well beyond
confined spaces.

To lock into just emergency response plan that’s
geared strictly to the confined space as the scope of the
incident gets out of hand, I would think that ---. By having a group like a fire department go out there serving --- certainly a better condition --- condition.

MR. : So teams like yours are available everywhere or?

MR. FLANAGAN: Yes. We’re mostly the big cities. You’re looking -- in a major city do a training consultant. Usually a training consultant that does it -- that’s well versed in what -- they usually do it. It’s a --- part from what they’re doing.

And sometimes you may have a job that may be worth your while to put one together because they have the people that are fully trained, fully equipped. But that’s generally -- the people that do it are generally trainers primarily and it’s a spin off of what they’re doing.

In fact, a lot of times because they are training people, they have a good handle on capabilities. And they actually take their students and make them part of the list and group all the time. Because it gives them a, you know, a big group of people to draw from.

FACILITATOR McLEHAN: And I remind you to use the microphones when you’re speaking on the floor please. Yes, sir?

MR. LAFORD: My name is --- LaFord. I’m a Lieutenant of the Boston Fire Department. I’ve been on 30
years. I did most of the technical rescue training in the
Boston Fire Department. The Big Dig came in 1992. And I did
physically all the training for the NWA Project Tower. With,
of course, a bunch of other guys. But I was part of it.

I was ready to --- to speak and one thing I just
wanted to say to add on to what Charlie was saying is,
speaking from the fire department's point of view, and then I
do have to leave and I just wanted to get my two cents in as
that.

FACILITATOR McLEHAN: Okay.

MR. LAFORD: All of these spaces that I've
encountered at the fire service tunnelling, we've done, you
know, 1926.800. All the confined spaces, pipe jacking
operations. In the City of Boston, we had pipe jacking going
on for five years. Pipe jacking is in construction, yet, what
part of the standard -- I think what we're saying in the fire
service is, you --- doesn't matter. To us, it's a rescue.
It's a confined space rescue, a tunnel rescue. You can put a
name on it, it's a rescue. We know how to do it. We have
companies train that know how to do it.

I think a couple issues we deal with on the
definition of confined spaces in construction is one of them.
No one's brought up trenching. Trenching comes under the
1926.651 or 650, I'm not so sure. We're trained in the City
of Boston for trench rescue. We know how to do it.
No one has mentioned that all these confined space, all the construction standards ---. We're going to these incidents and we're making rescues. All right. We know how to do it. I think the point we're trying to say here is that the fire service is best person to do this. We are the best people to do it, that's what we do. Our mindset is rescue. It's emergency. We know what we're doing.

The first thing I told everybody here is, the first thing the fire service has to do is come up and shake hands with the contractor and work together. Although we do know emergency, I don't know how to tunnel. I don't know where ventilation is. I don't know how to write a ---. And I need to work with these people and we need to work with the construction people here.

The Big Dig project -- if I go to a site and I find the person in an area -- let's identify this confined space to mean he's unconscious and there's no one around there, I'm going to have to treat that as a confined space. I would have to treat that confined space ---. What we're saying is that the contractor and the fire service have to get together and work together all the time while they're doing this on these big projects. The Big Dig took all the subcontractors, and I can't tell you how many there are, 3,000? But --- 3,000 contractors and put them all into one rescue ---. That's a massive project.
I think, personally, OSHA should mandate these companies to identify their rescue teams in writing. It says in the appendix that they should notify the rescue service and have contact with them, but it doesn't say -- I can't tell you how many places I've gone to that write on the permit, 911 and the fire department has five guys working. They're out in a smaller town. No one can provide that service.

And what's, basically, going to happen is the fire department's going to show up and you --- the statistic there as a would be rescue, because they're not trained properly. And maybe they don't even have a --- level training that is a confined space.

So maybe OSHA can, first of all, we identify I think construction -- absolutely, we should have confined space standards and they should be --- about rescue services. And maybe OSHA can go one step further and say to these people that you have to identify in writing who your rescue service is. And we get that out of the way.

There are 780 high rises in the City of Boston. Two have contacted the fire department for rescue services. How many hotels are in the City of Boston that have normal maintenance in confined spaces? How many high rises? Nobody contacts us. They expect it. And they right down 911.

And that's what I see in the standard and what Charlie was talking about, that's where it doesn't -- we need
to work with the contractors, but these people need to call
us. They don’t call. And, in turn, OSHA will go ahead and
cite them, but yet it’s too late then.

I told Dave one instance where we went over to a --
I won’t name the company, but they were making an entry and we
were doing a training drill and Charlie was there. And we
went over and on the permit and it had the telephone number
for emergency rescue. And it was the outside pay phone booth
for Engine 5 over in east Boston. And that’s what they write
down. And it gets the job done. And they get through the
job, they walk away, and --.

MR. FLANAGAN: This is a multi-national company, so
this isn’t putting a little model --- operation.

MR. LAFORD: Oh, this is a major player. This is
what they do. And even if OSHA said to them, you need -- like
I said, like Charlie, I travel around the greater Boston area,
do a lot of training --- fire departments and do a lot of
training for industry. I also, like Charlie, --- contract
rescue standby services. For the small companies in the
community that don’t know where to go. There needs to be a
need for everything like that.

And there are people out there that do it. The fire
departments are the best equipped and I really only see the
fire departments doing it. I know small communities sometimes
don’t have the manpower, but big towns and big cities, maybe a
group of fire department getting together. I don't know how
you can do it in the industry part of it, that consortium
groups of people to pick.

The cost of the fire department and I can just say
to the Big Dig, it was millions of dollars for us. Millions.
Any NWA project is millions of dollars. But that doesn't mean
that it can't be done. It can be done. And it should be done
by the fire service.

FACILITATOR McLEHAN: Okay, thank you.

All right, any other questions for Mr. Flanagan or
comments?

(No response)

All right, Mr. Lamensdore.

PRESENTATION

by David Lamensdore

MR. LAMENSDORE: Good morning. I'm David
Lamensdore, I'm --- from Safe Environment Engineering. We
manufacture systems approach for workers going into confined
and hazardous locations. And our goal when we really started
out was to really create a system. We found too many
instances where people were treating the OSHA regulations and
looking at it and essentially creating it into different
elements and there was no consistency. So we manufactured a
communication system that incorporates both radios and ways of
doing continuous environmental monitoring. And creates a way

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to integrate that all in tracking individuals and creating permits and the like.

And my goal here today was to make some specific comments on -- coming out and talk about it. Specific areas where I'd like to point out that -- exists out there and how it might get integrated.

First off, in conjunction with my favorite standards and talking about definitions, one of the things that we really find out that there is somewhat of a lack of consistency. And that incorporating definitions such as 1910.146 would be a great asset. We can conceive standards not only from 146, but also things are happening within the military and such like that where that contractor or civilian folks that are following a different set of standards. The --- ways for your major point here, at least be a reference.

The second issue talks about engulfment and early warning systems. Frankly, there isn't -- the definition just for confined space standard and such like that addresses the fact that there must be some sort of a need for an early warning system. And they're out there. We have a system that works. There are alarming systems. Even something as simple as what a lot of amateurs call the probing tank monitor, or probing tank watch person that is outside the space that's constantly looking and addressing things from the outside of

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the space could really be used.

It's really important in these kind of situations to be pro-active versus reactive. And one of the things that an early warning system does is allows the person, the entrant, that person inside the space, to receive that information much more quickly.

We are certainly at a stage and everybody here has probably either brought a cell phone or has a pager or --- on it. Where we've grown dependent, at least, with communication standpoint, on wireless technologies and such like that. They do work. We are at a phase and stage of manufacturer and reliability where these systems can be put in place. And that's one of the things that we've been trying to work in and point industry towards.

There are other systems that are also available, not only are life systems, but physical gas systems are now becoming wireless as well. Where they can be easily put into place, especially in a construction environment. It is set up, at least, we have some sort of an early warning system that's available. Again, I think a gentleman up here also talked about just two-way radios. Having that type of communication and just having some way of talking to people and getting information across is also available.

And also, they can even take that one step farther and look at video surveillance. That also is another early
warning system where you can see and monitor what's going on in the space.

The question also was brought up about how often and under what conditions. It's really important that these be done, as far as conditions go, on a continuous basis. If you're going to put something into place as far as an early warning system, it needs to be a continuous system.

That also does tie into the periodic versus continuous question. But in order for any kind of an early warning system to be effective, it needs to be fail safe and it also needs to be as consistently as part ---. And, obviously, training has to be a big factor in that.

As far as continuous versus periodic is concerned, one of the things that a lot of the new systems will allow you to do is to have that opportunity. It's more accurate, given the fact that you're looking at something over a longer period of time. One of the things that it will bring into play what -- which periodic really doesn't, is the whole issue of stealth and --.

The fact is, the question is to really be compliant under the confined space regs., it is questionable if we're not doing some sort of continuous monitoring. The fact is, the technology --- is out there to allow that to happen.

And, obviously, it can be much quicker response as well too. A lot of companies when they're doing periodic
monitoring on occasion, you are never going to get that instantaneous change as to what might have happened in a space if somebody knocks over a can of sealant or something like that. That's something that's going to happen right then and there. And there needs to have some sort of immediate response.

The simple fact of the matter is if a space is defined as permit required, than obviously there's enough of a hazard to justify the fact that there should be some kind of continuous monitoring going on.

Going further into that, are there cost or labor savings that can be put in with any kind of a monitoring system. The fact is, yes, there can be considerable cost savings that they look at. A lot of companies use a person that they coin as a sniffer. This is a person that's going around and periodically doing those tests that's not under the continuous ___. That if the actual entrance in the space, or there was some sort of a monitoring system in place, there needs to have to have periodic of those individuals doing the sniffing, and ___ the sniffle fact is that's can be a reasonable cost savings.

Companies that do shut downs or turn arounds or there is often times the need to do testing between shifts to break down a facility. But when they're bringing your monitoring system or ___ and we test the space. Well,
obviously, if you're doing continuous monitoring, that goes away. And that can be a very significant cost factor.

Also, the simple fact that if you're providing industry with some sort of communications on a continuous basis, you're looking at doing continuous monitoring. You're gathering these readings. You can know where your workers are. You also have the basis for generating that permit. That permit becomes more of a dynamic permit.

In other words, it's not something that has to be in place right at the beginning of an entry process. It's something that's a living document throughout the process. Certainly a check list, we've discuss it here, a number of times. But ---.

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PRESENTATION

by Colin Riley

MR. RILEY: My name is Colin Riley, ---. The problem is, we can't help you. We are continually innovating, continually in terms of designing and developing the products. If you went to the Orlando show, the NSC show, you saw our booth. You saw us with a light weight system, easily man portable, towable, the whole nine yards. You also saw a new higher end system with a built-in shock absorber on the mast. The whole idea of lightening the system, making it more suitable, easier to carry in the situation to set up and break
The point is that either one can work, but neither one will work for all situations. If you're going to have engineered systems -- anchor points, you have to give some consideration to how that anchor point is going to relate to the situation of the confined space entry, particularly where it's permit required and hazardous present.

With regards to requirements of monitoring and combining the roles of entry supervisor and attendant, monitoring one attendant with multiple entries is certainly possible. I would tend to define it personally along the area of what kind of entry you're going in to. What are you using to put a person into that confined space and what are you planning to use to get him out if there's a problem?

If what you've got is a series of ladders, and they're all close together and your attendant is able to monitor the hazards adequately, it should be possible to get away with a minimal number of attendants. But if you're using a position device such as a wench, or a three-way retractable, or anything like that, you're going into a fairly complicated space. It would seem to me that in an emergency situation, one attendant per entrance and one system per entrance should be the minimum, if possible.

Because, if you don't do that, sooner or later your attendant is simply going to get into the situation of having

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to make a decision, who lives and who dies. Who comes up first. Even where you're using the systems, what happens if you have a power drive system, which are allowable and they're properly mandated. You have one attendant and then a couple of people in emergency come up with self extraction and get hung up? Somewhere along the line, that attendant is going to have to quickly disengage the power drives and do manual crank retrieval. He's not going to be able to do it for more than one person. Someone's going to get left hanging.

In our view, the issue of combining roles of entry supervisor and attendant is simply competency. It's an issue of who knows what is in that location. And there are two specific kinds of competency. A general competency where that's kind of confined space in general in the industry. And the second one is a competency for that specific confined space. The quirks, the little unique things, the twists of that confined space that are different from the industry standard.

And those are my comments.

FACILITATOR McLEHAN: Thank you, Mr. Riley. Any questions or comments for Mr. Riley? Yes, sir?

MR. : One thing I would like you to clarify for me is, what it is, you say one attendant per entrant? Not one attendant per entry space? I mean, are you proposing that we have six attendants if we have six people in

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a space?

MR. RILEY: I am proposing that you should have sufficient attendants there to get the people out in an emergency situation. It would almost come down to one attendant to means of retrieving people. There are going to be confined spaces where it's simply physically impossible to get more than one system in place. And yet you are going to have two or three people down there.

In that situation, in terms of operating the engineered system, one attendant is all you're going to have. But where possible, where possible, the rule that I would aim for is one retrieval system per entrant, and one attendant per entrant to operate that in an emergency situation. To me, in terms of preservation of human life, that would only make sense.

FACILITATOR McLEHAN: Okay, any other questions?

(No response)

All right, our next speaker is Gary Hamilton.

PRESENTATION

by Gary Hamilton

MR. HAMILTON: Good morning everybody. I'm here representing the Volunteer ---. I'm from the ---.

MR. : We can't hear you.

FACILITATOR McLEHAN: Mr. Hamilton, can you ---.

MR. HAMILTON: As a ---, my comments will be fairly

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geared towards our particular products and types of products. And things that we have come across in the industry.

Basically, what I would like to talk about right now is an issue that we have come across related to our products that we feel are not adequately addressed in existing confined space regulations.

And, basically, the four points I want to touch on. The first one is that we need some definition of some minimum performance criteria, more mechanical engineered devices and structures. We need some kind of guideline on what kind of retrievals we need to be looking at for mechanical products. It would be nice if there was some kind of a requirement put in place requiring that qualified, competent people be involved in designing, testing and manufacturing these systems.

And the fourth issue is the relationship between entry retrieval equipment and vault protection equipment. Very often we've seen that where there's an entry, there is also a hole protection requirement to that and we haven't seen anywhere where there are standards that relate performance requirements for entry retrieval products and structures to those that are laid out in other OSHA publications for protection.

The first issue that I wanted to talk about is strike performance criteria for entry retrieval and the

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position devices. We would like to see established a working
load limit requirement for devices and structures being used
for confined space entry retrieval, rescue and what
positioning within confined spaces.

The number that we have been working with and what
we would like to recommend be set as an industry standard is a
450 pound minimum working load. We’ve arrived at this number
and feel that it is acceptable because number one, it should
cover loads that you’re going to see a five tier structure
that tier equipment in the raising and lowering of any worker
and his related personal equipment tools.

We haven’t been able to really come up with a
situation where there is going to be a load -- we’ve ---
around one person that’s going to be in excess of 450 pounds.

Number two, it’s adequate to provide for the entry
and retrieval of the two people in the event that somebody has
to go in after a downed entrant. Provides for enough of a
safety factor in there to have two people on the line at once
in a rescue situation.

And number three, it provides some --- what we see
is going to be the inevitable misuse of the equipment, such as
--- material handling. We have seen pretty scary situations
with equipment coming back to us where it has been obviously
overloaded past our rated safe working loads. In excess of at
least four times and has subsequently suffered some degree of

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damage to it, which has rendered it incapable of performing its intended function.

Related to that is establishing minimum design factors on that particular rated working load. Everything that we manufacture right now has a design factor built into it that is a minimum of four to one, what we go as high as eleven to one on some of our systems. But four to one is the absolute minimum number that we feel comfortable with engineering our products to.

The reason for that is number one, that provides what we feel to be an adequate and acceptable margin of safety, compensating for potential --- loadings, if somebody happens to fall while they're using our equipment or something like if they get dropped or whatever.

Intentional or unintentional overloading. And any foreseeable degradation of equipment through user damage or neglect while it's being used. We've seen an awful lot of products come back with cables and broke some life lines that have been partially severed. You have damaged straps in the cables, you have --- components that have very obviously been overloaded. And we feel that the minimum of four to one is required to compensate for equipment damage and as such it is still going to be in service.

Another reason for the four to one design factor is that when we apply the four to one to our graded 450 pound

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working load limit, you come up with a static anchor point requirement of 1,800 pounds. Eighteen hundred pounds ties very nicely into OSHA’s current requirements for a minimum tool and design factor of a fault protection system, an engineered fault protection system, when you’re using readily available retractable devices and --- are in places that are on the market right now. That’s --- level, that later on --- with minimum fault protection applications of our products.

On the issue of retrieval speeds, we would like to see some way of resolving the problem that how long do you have to get somebody out of the space between the time that you realizing there is a problem and the time that that person is extracted from the space.

We would like to see established some kind of a number, and obviously we’re not medical people. We are not involved in that end of things, and we’re not really qualified to be making a statement on how long it should take to get somebody out.

But we would like to see some kind of a regulatory requirement on how long a system such as ours should take to extract a person so that we can, number one, design our products to meet that, and number two, select the proper of our products to be used for a given application.

And that’s, obviously, going to depend on how far the victim is going to have to be transported, how far they

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have to move through, and the various specific natures of the --- itself.

The third issue is that of engineering requirements for products such as ours. We would like to see it required that equipment be design tested and manufactured by competent people, possessing training, experience, and required certifications to make sure that this equipment that we’re making, that hang people’s lives on, is going to be what it needs to be for your given situation.

As part of that, we would like to see manufacturers required to publish product performance and specification sheets, the product that they can provide, independent third-party verification of any testing activities that are done in any situations such as ours where products are tested and developed in-house. We would like to see a requirement for independent certification of special manufacturing product, processes involved in building these types of products.

An example of that would be certification on welding procedures and such that are carried out as part of building these devices. And we would like to see it required that companies manufacturing products upon which people’s lives are going to depend, implement and maintain the certification in some sort of a recognized quality insurance program. So that you know that what you’re being promised is what you’re going to get. You have to be able to count on the products that are

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being provided to you.

As part of that also, we think that it's important that any piece of equipment such as ours should carry identification of the rated strengths of any anchor points in any lifting positions and tie off positions and whatever that are being used for the support of human beings at any point during an entry retrieval or rescue operation.

The fourth and last issue is the tie in of fault protection into confined space safety products. Something that we have come across almost from the very beginning of our involvement in this business has been, I'm using this hoist here to raise and lower somebody, is it strong enough, is it good enough, is there a spot on it where I can tie off or anchor off or attach some sort of a fault protection device where I can incorporate a fault protection system to get to this entry retrieval with a positional device?

We would like to see some clarification made on when fault protection is actually required when you're using equipment such as this. And when a single life line for entry retrieval rescue and fault protection would be adequate if that is ever an acceptable situation.

And as I touched upon earlier with the strength requirements for the system, we would like to see that such systems are required to have a minimum anchor point strength at any point where you're going to be tieing off fault

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protection devices, of a minimum of 1,800 pounds proof load
tests to meet OSHA's minimum requirements in the two to one
design factor on an engineered system for fault protection.

To summarize a little bit here, I'll be as
quickly -- I see on the time here, is that what we would like
to see and what we recommend be incorporated into this
standard, and similar standards, is a minimum strength and
performance criteria for mechanical positioning devices and
entry retrieval devices. We would like some kind of an idea
on retrieval speeds and retrieval times for products, such as
the ones that we manufacture.

We would like to see a regulatory requirement for a
competent design and documentation of the design testing and
manufacturing process involved in such products. And we would
like to see some clarification and some refining of the
relationship between entry retrieval devices and fault
protection products.

FACILITATOR McLEHAN: Okay. Thank you Mr. Hamilton.
Are there any questions or comments for any members of this
group of speakers?

(No response)

Okay, thank you gentlemen. If you want to have a
seat in the audience and we will begin to wrap this up.

QUESTIONS AND COMMENTS

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by Brenda McLehan, Facilitator

MS. McLEHAN: Are there any questions or comments that anyone in the group would like to share with OSHA? Yes, sir?

MR. PIGSLEY: My name is Hap Pigsley, Wisconsin Underground Contractor's Association. One of the things that I read in the draft proposal is that they're talking about an alternate procedure for confined space entry. And I believe that to be a potential problem for the people in the construction industry. It's either a permit required confined space or it's a non-permit required confined space.

When we start giving people options out there, I think we're running into a mess. The permit identifies, or helps us to identify a hazard. It tells how to beat that hazard. Gives the equipment needed to abate that hazard and so on. And I think that once we go -- and, basically, it is my understanding the alternate procedure, that's what it's doing. It's allowing us to ventilate the system and beat the atmospheric hazard and so on.

I think that's exactly what we're doing for confined space permit system. We look at it, we identify a hazard, atmospheric or a physical hazard, and we abate that hazard with a still and confined space permit required area, even though we're ventilating it. If you had a power --- down and the ventilation goes out, or whatever happens, you're right

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back to the hazardous situations.

So I think that in the draft proposal, to have an alternate to confined space procedure is something we shouldn’t even go near. It’s either a confined space that does require a permit or there’s no hazard and it doesn’t require it. But there’s no such thing as maybe.

We have too much gray area in the law right now and we don’t need to introduce any more. Thank you.

FACILITATOR McLEHAN: Okay. Anyone else? Yes, Lee?

MR. SMITH: Yes, Lee Smith, OSHA. I’d like to ask the audience two questions, one of the unique characteristics of confined space in construction --- general industry, we need to get a look at characteristics that pertain specifically to confined space in construction. And the two should assume the --- communication procedures when it should, and all the employees in and around the confined space are aware of the specific hazards.

FACILITATOR McLEHAN: Yes?

MR. : I won’t take up a lot of time to --- one of the things that we have in construction the general industry doesn’t have, is our sites change from minute to minute. And I think he talked about that we create our own hazards and often times that’s what happens.

This room right here, as pristine as it is, doesn’t necessarily qualify as a confined space. But if we’re cutting
up galvanized steel in here with a torch, we've not created an atmospheric hazard and it could kill the majority of the people in here. So, the work that we're doing in the confined space often times creates the hazard, not necessarily the of the confined space being a problem. So, I think that we need to identify the work process, not just the space itself as being part of the requirement.

Here again, you go back to the permit that says this is the type of work we're going to be doing in there, we're going to be using a two-part epoxy -- a two-part epoxy is an atmospheric contaminant that absorbs and takes away the oxygen so we have to have respiratory protection. So, I guess I can't over emphasize in my mind the importance of the person writing that confined space permit. That is going to identify not just the obvious hazards, but that potential hazard. It's going to come in and cause the problem down the road.

And I think that we need to address not so much the situation itself, or the physical parameters of the confined space as the work that we're doing in there that changes so often.

FACILITATOR McLEHAN: Yes, sir?

MR. KENNEDY: George Kennedy, NUCA. Two issues. In terms of characteristics of the space, one of the things that we run into in the Underground Contractors is we're putting in new manholes and --- new walls and things like that. We often
don't have a lot of dirt or some place to put a tripod or other retrieval device around our system. I know there are some new systems out there that are starting to address this issue, but we don’t always have a place to set up for that. Or our situation is different because we’re in soft ground or in an open excavation, open area. And that creates problems for some of our members.

Entry and exit into the spaces can be delayed or interfered with because of the same reason of having to bridge over too the top of a manhole or climb up the side of it ---. Inside the trench box or something like that. So those are a few of the characteristics that we’re dealing with.

Also, it is common for us, actually, a lot of horizontal entry into pipes and culverts that can be another problem. And so those are a couple of the characteristics.

I need to comment on Hap’s comment about alternative space for a moment. Hap and I have some disagreement in this area, mainly because I’ve heard some of our members that they’d like to see this alternate addressed, but they want it very clearly defined. Which, actually, it making 1040.146, but if you have to do this option or that option, than it’s confusing.

So if you are going to address an alternate space, I think the whole definition and approach to it needs to be very clear and understood by everybody. And not a lot of issues
jumping back and forth from one part of the standard to the other to figure out what we want.

FACILITATOR McLEHAN: Thank you. Yes?

MR. I think the issue of a horizontal entry is one that's too often ignored. When I was in general industry in the chemical company, some of our most frequent entries were for horizontal entries. Climbing under a dryer to clean something out and whatnot. We've paid an awful lot of attention lately to the tripods and all the different retrieval devices and the fact remains there's so many spaces where somebody just has to climb in there and pull the guy out.

You can have all the ropes and lanyards and belts and whatnot and, eventually, somebodies going to have to climb in there and pull the guy out. It's really what it comes down to.

Another concern that I'm having is that many of us in the room are not as mindful of the fact that most construction in the United States, particularly in New England, goes by an electrician and his kit. They're out there running electrical company and they have to climb down into a sup and replace a sup-pump. Not all of us are putting in tunnels through Boston Harbor. Not all of us are -- even building the buildings that I built.

Most of the regulations that we're crafting today
are going to directly impact on a guy whose total profit on a job is going to be $50.00 or $100.00. So we have to be mindful of where we make mandates. And if he’s got to have a $2,000.00 retrieval system that may or may not be useable in that given situation.

FACILITATOR McLEHAN: Okay. Yes, sir?

MR. : I had a comment on the issue of horizontal retrieval. First of all, economical, mechanical needs of horizontal retrieval do already exist for many situations. The equipment --- can even be manufactured, some of it, and some of our esteemed competitors, ---, can also be adapted for more horizontal retrieval.

The second an officer issues -- gentlemen, if you have a --- problem as a manufacturer, as a marketing --- manufacturer, please come and tell us. We would be more than happy to work with you.

FACILITATOR McLEHAN: Okay. Anyone else? Yes?

MR. : I have an issue that I just want to make sure I make it very clear that everybody has talked about money and the principles, but which one of you is going to call my wife and tell her that I’m not coming home today? All the equipment, everything you need, should all be on that focus. You want to stress, again, making the space for the guy, not the worker safe for the space.

You have to -- that’s your priority. Not the mom
and pop guy because I worked for small electrical contracting company, with just me and one other guy. And yes, that $100.00 profit is all he’s taking in for that day. But, again, if he doesn’t have the experience and he doesn’t have the knowledge.

And David will tell you stories of mom and pop operations where the trench caved in, the father drove the son to the hospital and he never made it. So that’s a priority that everybody in this room has to take. You have to understand that and I don’t know how clear I can possibly make that. That’s all I have.

FACILITATOR McLEHAN: Thank you. Yes?

MR. : Hello, my name is --. I am a Certified Safety --. And one thing, I have been involved in safety for almost 25 years now and I’m also a civil engineer. Is what I come across now in my consulting practice quite often is that the person, the plans have been written by someone who doesn’t have safety background, doesn’t understand the concept of the auxiliary hazards that might exist. And also the implementation. There should be someone on a site or within the company who understands not only the development of the plan and the safety concepts, but also the implementation functioning under the -- person should have some safety background.

A certified industrial hygienist, a certified safety
professional. Or someone in that area should have some input on the safety plans of the implementation that is going on at these sites.

Because quite often, I see they’re getting the usual monitor for an individual and as long as it doesn’t go over the red line, you’re safe. And the person doesn’t know what to do when he approaches the red line, or the red light goes off. Or if the batteries are even working. Or the batteries have been dead for three weeks. I’ve seen that happen also. So that’s one of the things that need to be addressed is that qualifying person has to know and implement the plans from a safety point.

FACILITATOR McLEHAN: Okay. Anything else?

All right, let’s walk through our list of OSHA issues and just to kind of heighten your memories and see if you have anything else that you want to share with us.

Anything else for definition of confined space in construction? Any other ideas that you want us to take back and consider in development of this standard? Yes?

MR. : One more comment on that. The existing standard under general industry standard talks about a space that has restricted access and egress. I don’t think that definition goes far enough. I’ve had some compliance officers tell me that if the sill in the door is higher than "X" than that constitutes a restricted access or egress. And
we could be talking about a garage door here. To a
construction worker, that's not a restriction at all.

Another portion of the general industry standard, it
talks about is the space not designed for human occupancy.
Well, of course it's not, it's under construction. And it's
not done yet. So that aspect of it has to be tightened up.
I'm not exactly sure how to do that. So I think when we talk
about confined spaces in construction, the definition is
vastly different from the general industry definition.

FACILITATOR McLEHAN: Any other comments on this
first issue? Yes?

MR. : One. And I think construction --
you may want to make a reference to both permanent and
temporary, because you --- and make the construction on a
daily basis, the site would be an ongoing changing
environment. We have a tendency based on the general industry
standard to look at spaces that are fixed locations. They're
always there. And in construction, you may have all the
hazards of a general industry type space, but it's a temporary
condition, we may decide to just --- change in a half an hour,
don't worry about that. But there are hazards there so we ---
temporary and permanent situations.

FACILITATOR McLEHAN: Okay. All right, any
additional comments on early warning system?

(No response)
On continuous monitoring? Yes?

MR. : I keep hearing a lot of talk about people monitoring from an attendant’s position. I don’t think that’s the right position to be monitoring with. I believe someone in the first group talked about the atmospheric levels of gas and --- bottom line and --- gas be at the top, and so on. We make it a standard up in the State of Wisconsin that the person in the hole has an --- monitor with them. We don’t want the guy up on top to be reacting later if the situation has already overcome the man down below. And there are certainly gentlemen here that make equipment, certainly, have a remote reading and stuff like that, which we use in our company, that give us the reading up on top as well as the man down below. By the time the man up on top takes a reading at the bottom of the hole, and we have a guy going back laterally 200 feet, there is an entirely different atmosphere there. So I think that people down the hole have to have continuous monitoring with them.

FACILITATOR McLEHAN: Okay. Any other -- yes?

MR. MEYERS: Dave Meyers, --- Department of Engineering. I want to back up that point also. The continuous monitoring. If you put in a monitor and it’s on the person in the tank, whereas I do agree that the station be made as safe as possible, there are always those unknown hazards that do occur at the space. And systems are out there.

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that can easily utilize the --- monitor on the person.

I've seen too many industries unfortunately that are out there that use the monitoring system to just be compliant. And those systems are out there to go well beyond the --- so that the --- happens to ---.

One other point, not --- related, but it's training. On an --- system, anybody is going to put out there is the manufacturers and the like, it has to be used and it has --- conjunction with training. I would certainly love to see someday there --- the current regulations that would make through system training certification, there is some periodic level associated with the entrants, the attendants, and the facility.

FACILITATOR McLEHAN: Yes?

MR. : There's a lot of confusion, I think too, in air monitoring about what the requirements are for recalibrating air monitoring equipment. And I think that should be written down, not as a manufacturer recommends. They've been talking about doing bump gas testing, I support bump gas testing before entries. And I think that's something that should be addressed in the standard, is what is the requirements for the air monitors. You talk to one air monitor supplier that's doing a recalibrate for a year. That's moronic as far as I'm concerned. We need to address pre-entry testing about gas testing of air monitors.
MR. : I want to reiterate on what David said, one thing again, we need to look about the training. We also need to make about, we've got to narrow rescue part, and then we'll have the rescuers --- just on rescues. We need some type of refresher training on there for attendants, entry supervisors also. And, again, on the monitoring, that's going to be something that's going to be specific, the different type of monitor that you're using and they need to also have additional training that needs to be documented and specified also concerning that.

FACILITATOR McLEHAN: Did I see another hand up in the air? Okay.

All right, any more comments or issues on accommodating small business? We do hear a lot about that.

MR. : In talking to some of my members before coming to this program, some small, some large, it seems like their feeling was that when we talk about accommodating small business, that if you're going to do the job, you need to do it according to the required requirements.

And, I mean, maybe we can accommodate them in areas of small jobs versus the large tunnel type jobs and things like that, but generally speaking, if they're going to enter into a confined space, they should follow procedures.

Because, you know, we get small contractors, bidding, you know -- fly by nights, as we call them sometimes,
bidding against large contractors. Or even other small contractors and not putting in that line item for the safety equipment to do the job right in entering into a confined space. And they get the job and they do it wrong. And somebody gets hurt and killed.

So, we want to see the workers protected first, and that means that they need to follow the procedures.

FACILITATOR McLEHAN: Okay.

MR.: One aspect of construction is renovation. And it seems to me that if a company has an existing confined space and calls a construction company in to do a renovation to that space, than it should be the burden of the owning company to do the confined space training for the people who are going to be doing the construction. And that way, everybody's on the same page. Everybody knows exactly what they're going to be doing and who is responsibilities are whose.

FACILITATOR McLEHAN: Okay. Yes, Mr. Meade.

MR. MEADE: I agree with his comment. The 1910.146 standard requires that right now. But the majority of the contractors don't understand that that is a requirement. And I believe that should be referenced in the 1926.36 standard. The 1910.146 requirement that the owner identifying the confined space and informing the incoming contractors what they are and overseeing that program. So, it's in there, but
the majority of contractors don't know that.

FACILITATOR McLEHAN: Okay.

MR. : But what's not in there is an obligation by the contracting company to actually train the guys who they've hired. I mean, yes, it's an obligation to say, okay, we have this hazard and we have this hazard and we have this hazard, but they also need to bring the contractors in and say, okay, these are our on-site rescue people and this is what they're going to do if there's a problem. These are the hazards that you need to deal with and this is the training that you're going to get in regard to those hazards and so forth.

There are a lot of companies that completely go at that. I have taken contracts from companies that don't even tell you that you will be going into a confined space. Until you're in the door and there it is.

FACILITATOR McLEHAN: Okay. Yes?

MR. : I think that we agree with what Hap said that the host employer should advise the contractor that is coming on site. But I think in many cases these employers, if anything, I don't know if they're going to be able to do the training for every time they bring somebody in to do their contracting, but they should at least evaluate the company and determine if they have capabilities to enter a confined space safely. Fill them in and inform them of any unusual hazards
or problems they may encounter.

But I think you’re going to find that a lot of contract people say, my people have been through the training and to go through the training over and over and over again -- not that you can’t learn more every time you go, you learn. If anything it’s going to place a burden on the general industry people as well as the contractor for time and training these people.

But I do believe that the host should make sure that contractor is qualified to do that type of work. And if not, than provide the training that’s necessary.

FACILITATOR McLEHAN: Okay. All right, our last OSHA issue was attendants and supervisors. Any additional comments or concerns or anything you want to say about that?

MR. : They didn’t say anything about that earlier.

MR. KENNEDY: I never go around to comments on attendants versus supervisors, but our membership tends to think, and it’s not everybody because there are companies that have their own ways of doing things, but we seem to believe that if you properly train the entry supervisor, he could serve as an attendant on a smaller job, of course. If he’s got other duties on the job as a supervisor or foreman, it’s going to take him away from the space, that’s a different story.

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But there's no reason that an entry supervisor or a competent person, whatever you decide to call him or her, could serve as an attendant and should certainly qualify, in most cases, to do so. In the case of an attendant being entry supervisor, obviously, he's got to receive additional training to be able to do it. But there's no reason that all these people can't be cross-trained and receive adequate training. At least that's how we feel.

FACILITATOR McLEHAN: Yes?

MR. : I agree with George. A lot of times when we've got a two man crew out there -- let's say George and I go out and do a repair on a sewer structure or an underground tank, or whatever. I'm going to be the first person in, I'm going to be the entry supervisor because I'm going to make sure it's safe for me to go in. And so on the permit, my name is going to be listed as entry supervisor and first attendant -- would be listed as the entry supervisor and first entrant. George's name would be listed as the attendant while I'm in there. And then if I come out and do some, you know, because we have time constraints sometimes because of heat, cold, or just the work situation itself, we have to do it on a rotational basis, I come out and George goes back in. So my name would be listed as the attendant, his would be listed as the entrant.

And that's the value of the entry permit. As a
rescuer, if I come up there, if I see the entrant permit
there, it's got all the information I need to decide how am I
going to do it to assist the people that are in there. And so
I think that as far as the attendant and the entry supervisor
and so, you know, whether it's the entrant or the attendant, I
think the entry supervisor should be the people there at the
time to see what's going on and make a judgement call.

But I prefer that the first guy go in and has the
authority and the training and background to do that. And we
train the attendant and the entrants the same way. Because
most of the time we're using them interchangeably. So,
whether the attendant's outside and is aware of the peripheral
hazards, traffic, or rain, or whatever it is, and the
entrant's inside working, or the entrant decides to come out
and he is now the attendant. And the other guy goes in, they
still are aware of the hazards. So we train everybody the
same way straight across the board. We don't differentiate
between them because sometimes they change positions.

FACILITATOR McLEHAN: All right. Yes?

MR. : One point that I had wanted to touch
on before and that I kind of slipped my mind until this
gentleman was talking about recalibrating the certification of
monitoring devices is inspection maintenance and
recertification of your mechanical devices that you're using,
as well as something that we've seen as being a huge problem
is the mechanical devices used for entrant retrieval and rescue are not being serviced at recommended intervals.

What we have done, the approach that we've taken in solving that problem is that --- a number of monitoring devices into our mechanical products. There's no overload indicators for lifelines. We have built three-quarter indicators into our --- and we've built --- into our --- devices. We built a counter system that keeps track of them and monitors how much that unit has actually used and then we, as a manufacturer, specify, based on our testing and our designs, we specify the minimum servicing intervals for that ---.

And I think that it's important that it's regularly --- that it be kept track of, and it be monitored and maintained and recertified by qualifying people at the manufacturer's recommended intervals.

FACILITATOR McLEHAN: Okay. Now, we've recapped the OSHA issues and just think real hard whether you have anything else you want us to know about. This is it. So speak now or.

Yes, Mr. Pigsley?

MR. PIGSLEY: I don't want to keep harping on it, but I think I heard a lot of people here to back it up. If there's anything that you as OSHA can do to facilitate the fire departments getting appropriate training -- that means including them time to get out to our job sites and do hands
on rescue to see how our job sites change, I think that’s something that really should be addressed. Is to properly fund these people we’re calling 911 to come out there and help us to do a job. And they know how to do rescues itself, but it takes them awhile to acquaint themselves with our situation.

So, as far as this, if there’s something we can do to drag in mandate, or give them extra money to train these rescue people, I think it would be a good idea.

FACILITATOR McLEHAN: Yes?

MR. : Primarily, I just have a question. You said next year on the proposed standard, approximately what time frame will that be for, or whatever, for comments ---?

MR. : (Away from mic) Did I say that --- first.

(Laughter)

MR. : (Away from mic) --- we have asked our ---. But we intend to do that. And that’s --- these meetings. To sum it up and --- changes ---. So we can do that ---. So I ---.

FACILITATOR McLEHAN: Okay. We’d like to thank all of you who took the time to attend our meeting today and thank you for your contributions. We’ve gotten some valuable information and we certainly appreciate your assistance.

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Okay, that's it. Thank you.

(Whereupon, the meeting was adjourned.)