Petrol

Robert McChan Takes a Hard Line Against Unsafe Working Conditions

Site health and safety programs can prevent injury and illness, save dollars and avoid regulatory citations and penalties. Simple steps can be taken to optimize the functioning of a site safety and health program. Jaime Kammerzell interviews Robert McChan, a safety consultant and safety trainer.

Stay out of his "scene"

If you're ever around a petroleum facility where an area or "scene" is cordoned off to keep people out, don't cross the line. If you do, you could be injured. At best, you may be "scorned" by the safety officer who put up the barrier. The latter is sure to be the case if the man in charge of safety is Robert McChan. He's not trying to be nasty, he's vigorously doing his job to keep people from getting hurt on his watch.

Bob, where do you work, and what do you do?

I am president and owner of EPIC Training/Environmental Services, Inc. based in Independence, Missouri. We do safety consulting and safety training. Also, I am a member of the United States Air Force reserve program. Currently, I am a Chief Master Sergeant and Fire Chief for the 442nd Fighter Wing Civil Engineering Squadron at Whiteman Air Force Base, Missouri. As a reservist, I have 27 contingency fire fighters in mobility positions, which means if any type of conflict breaks out they can call us up and we deploy. We go into places where there is no fire protection—what they call a bare base—and we provide fire protection operations to protect the incoming troops. So we are what is known as a contingency fire protection operation.

Where were you educated?

I earned my Associates in Science degree in Fire Science through the Community College of the Air Force and an Associates in Liberal Arts degree at Longview Community College, where I am just six hours short of finishing my degree in Criminal Justice.

How did you get involved in the Air Force?

I joined the Air Force right out of high school in 1973 during the Vietnam Conflict and went on active duty. I got off active duty in 1977, was in the inactive reserves until 1979, had a break in service and went back into the Air Force Reserves in 1984. I've been a Reservist ever since.

How did you get involved in fire protection?

When I joined the Air Force, I actually wanted to get into air conditioning and refrigeration. They said there weren't any slots available at that time, but they had an available slot in fire protection. So if I wanted to get in, I could get into the fire protection program, and later on when a slot opened in air conditioning and refrigeration, they would let me know, but they never did. So I've been fire protection for 27 years.

Are you happy with that?

Oh, yeah. It's been my career. I was active duty fire protection, a civilian fire fighter for a fire district and a military contract fire fighter on an Air Force base. Fire protection is my background and that's where my safety background comes from. Not only was I fire protection, but in the mid 1980's I became a safety officer for fire protection. They sent me to all the available safety schools for Air Force Occupational Saftey and Health(AFOSH), which is the Air Forces equivalent to the Occupational Safety and Health Administrations (OSHA)requirements. So actually, I started my safety career through fire protection and the Air Force. I became a part of the Base Safety Council, was HAZ/MAT safety coorinator and on-site safety officer at fire scenes. The base, Richards-Gebaur AFB in Missouri, closed down in the 1990's, but that's what got me into the safety end of it.

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Safety officer Bob McChan also serves as the standby person while a worker is lowered into a sump. The yellow conduit is supplying fresh air. Therefore, SCUBA gear is not required.

With your background in fire and in safety how did you get involved in the petroleum industry?

When I was working in the fire department in the 1980's and 1990's, I worked a 24/48 shift, which means I worked a 24 hour shift and was off 48 hours and then worked another 24 hour shift. On my days off, I worked with companies that did underground storage tank (UST) removals and hazardous waste site remediations. During this time, I gained knowledge in the processes and hazards involved in these operations. Through the Air Force and through a lot of civilian entities, I attended multiple HAZ/MAT courses. As I started getting further into it, I took more safety courses and I got more involved in the site safety side.

How did you start your own business and what do you do?

In 1991, when the Air Force base that I was working at shut down, my job was eliminated. So two of the other guys and I started our own company, Epic Training and Environmental Services. Since then, I have bought my two partners out and I am sole owner. What we do more than anything else is OSHA compliance training and environmental site safety. Once I started my business, I got more education on the safety side.

What I do more now than anything is train. From small "mom and pop" companies to major corporations nation wide, I help major manufacturers and companies in all industries develop in-house emergency response teams for hazardous materials, do facility inspections, hazard assessment, program development and employer/employee safety training. I also am subcontracted by various companies to do site safety development, site safety planning and site safety coordinating. A number of companies that do remediation on a daily basis pretty much know what they need to do, but a lot of the companies call me when they have something out of the ordinary. Then I go in and do a site assessment to determine the hazards and the risks of the job. I make sure that when the people go into these jobs they do them as safely as they can.

A number of companies that I have dealt with in the past call me to deal with underground storage tank jobs that are out of their ordinary expertise. They might have a tank that has cyanide in it, certain types of lead, extremely volatile hydrocarbons or products that they do not handle on a daily basis. So, I go in and get all the information about the products that are there, make a determination about what types of equipment that will be used and the personal protective equipment required for that type of hazard. I also determine what type of areas I need to block off for safety and determine what types of hazards could be involved with each individual situation. Another safety concern I deal with is whether we will come into other areas of work, like confined space operations, during the job. I do all the monitoring to clear people for entering confined spaces. I always make sure that I know the training and background of the people that I work with and make sure they are knowledgeable before I put them into any type of risky situation.

The standby person must be able to see the man inside the sump, and has no duties other than standing by.

How do you prepare for a job?

Before any job, I sit down and think the job through and try and think of any types of hazards or safety conditions that could possibly be encountered while this job is taking place. I've got in my mind Plan A, Plan B and Plan C. At a recent job we got into a confined space operation that was not part of the origional scope of work. Once we got to that area, I shut the whole operation down and reassembled all my people. I told them we were going to a different phase of operation—a confined space operation—and I did another pre-brief for the confined space operation. I set up everything and then I oversaw the confined space operation. Once the confined space operation was done, we backed off, shut that operation down and had another meeting.

One of the things I do is designate an area where people can stand and watch. When there is an insurance job or tank job there's going to be a lot of people trying to watch the job. That's fine, but they are not allowed inside my scene. If someone walks inside my area, I shut the whole operation down. Anybody that is inside the cordoned off area is my responsibility. So I let them know—outside of this line you can do anything you want to, but watch your step inside this line because you'll deal with me. When we get inside operations where we deal with toxic products, flammables, corrosives and certain types of highly volatile hydrocarbons, I can't be watching other people. I have a job to do.

If someone outside my area wants to come in and see something, I can shut the operation down. They can come in and look at what they need to look at, as long as it is within my safety guidelines, go back out, and then we can recommence the operation. A lot of people call me in just to be their

"Heavy". They know that if I am running the job, I will say what needs to be said, to whomever, in order to make sure the job is done safely and to keep out those persons not authorized to be there.

How relevant do you think the 40 hour HAZ/MAT training is in the petroleum industry?

As far as remediation, I think it is very important—not only important, but mandated by OSHA.When you start getting into remediation, HAZ/MAT response, or working on at a hazardous waste site, OSHA requires hazardous materials training under 29 CFR 1910.120. I think the 40-hour training is just a stepping stone or foundation for more advanced training that people need in the petroleum industry. You could be in the petroleum industry all your life and never need that training. It depends on what your job function is and whether or not that training is required. It makes no difference what either one of us thinks about the training since its an OSHA requirement under 29 CFR 1910.120 and an EPA requirement under 40 CFR 311.1.

The people who do any type of hazardous waste removal on my site must show proof that they went through the training program, the same as they do with confined spaces. Before I allow anyone to get in confined space operations, I will pull out the training documentation that says these people have been trained under 29 CFR 1910.146. It is my responsibility to make sure that this site is safe and I can't let workers on that site that aren't trained to do the job that is supposed to be done.

What training program do you teach?

Most of the work that I do is OSHA compliance training. I am not an OSHA compliance officer nor do I work with OSHA officials, but I will do OSHA-type inspections and sit down with the management to tell them the areas that I think they are weak in. I help them develop programs so they comply and I also do the training for employers and employees to help get them closer to their own companies' OSHA requirements. But the majority of the training that I do is hazardous materials response training.

Do you have your own training manual?

I have my own 40-hour training manual. In order for a company to teach the 1910.120 standard they have to develop their own 40-hour training manual to go with the training. When we first started this company in 1991, it took us about 6 months to put our manual together. Currently, my manual is 528 pages and it covers everything that is required under 29 CFR 1910.120.

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Removing backfill using a vacuum truck. The safety officer is identified by his red hard hat.

Do you have any suggestions about how the petroleum industry can make remediations safer?

There are a number of ways. First, always try to designate a site safety officer for each job. Assign that individual no other duties. Most jobs have workers assigned as safety officers as an additional duty. You can't be a worker and keep an eye on everything going on at the same time. Second is site security. If you do not designate an individual work site and mark the work area, then you will have a hard time controlling that site and the people around it. Foremost, have an individual with a safety and work background that understands the work to be performed. If you don't know the job, how can

you keep it safe?

New technology and applications that keep the site safer and don't create hazards should also be considered. For instance, in a recent job I did, we did not use a backhoe to excavate the gravel around a tank, we used a vacuum. We still had to use a track-hoe and break up the concrete slab covering the tank, but once we got down to the pea gravel, we vacuumed it up. It seemed to save not only damage to existing connections, existing piping and unknowns, but it was a way to get in there and pull all the gravel and rock from around the tank and leave everything that's there undisturbed. We were looking for a mystery leak. So, using the vacuum leaves all the pipes untouched while it sucks up everything around them.

If you were to put together a safety training course for remediation what would you

cover? If I were to do a safety training course, I would develop a course for site safety officers that would let them know what their job is. Their job is not to do the remediation. Their job is to make the site safe while the workers are doing the remediation. I would train the safety officers to understand the requirements set down by OSHA, to do initial site assessments, to do the site safety plan, to look for areas of concern, to shut the operation down and to do personnel control.

Believe it or not, personnel control is one of the hardest things to deal with. When you develop a site safety program—it is one of the things that you do during your pre-briefings in the morning—you outline who is allowed in and who is allowed out. Controlling people walking around the site is the hardest thing to deal with. I would train safety officers to handle the people around them without making them mad but letting them know you are just doing your job. I would be more interested in teaching site safety control rather that the actual remediation because that is not my job. My job is to make sure that, while they are doing that job, everything is done in accordance with safety standards and procedures.

What is your safety record?

Luckily, as long as I've been doing this, I have never had anybody hurt. I've never had anybody even close to being hurt because part of my job is to recognize that something is going to happen prior to its happening. I can recognize something is going to happen and shut that operation down, back up, regroup and talk about what we are doing before we go back into the job. The biggest problem is getting false information from people about what they think is in the tank. People have told me they've only had Product A or Product B in the tank and there has never been anything else in there and I go down and sample and find that there is other stuff in that tank that is a lot more harmful than what they told me was there.

Mesh fences define the safety scene.

Regardless, I've never had any close calls at all. I spend more time doing pre-site assessments and developing site safety plans than I do actually working on-site. For one recent job, I started working on site assessment two months before the job ever started. I only spent three days on that job, but I probably put 60 hours into the safety and site preparation of that job. That's what needs to be done.

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People get hurt when nobody does a pre-site assessment or a pre-analysis.

Where does your safety discipline come from?

A lot of it goes back to my fire department training. As an On-scene Incident Commander on a fire scene, it is my responsibility to make sure if I tell somebody to go into a burning ng house that they can go in there and do their job safely and the building is not going to collapse. I also know by looking at that building that it is getting close to potential collapse and I call my people out.

All my on-site safety goes back to the fire department. I am responsible for everybody, and a favorable outcome is an outcome where I lose no people and I nobody gets hurt. I tell everyone that I train, whether it be HAZ/MAT response, fire response, spill response or remediation, if we complete a job and have no injuries or loss of life, then we have had a succesful operation. I can replace the property, I can replace the environment, I can replace the equipment, but I cannot replace a body. That's my only concern, my people.

Managing Editor of PE&T