3M Transcript for the following interview: Ep-24-Confined Space Identification Mark Reggers (R) Ash Mayor (M)

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Welcome to the 3M Science of Safety podcast presented by 3M Australia and New Zealand Personal Safety Division. This is a podcast that is curious about the signs and systems of all things work, health and safety, that keep workers safe and protect their health. I am Mark Reggers, an occupational hygienist, who likes to ask the questions Why, How, and Please Explain. Whether you are a safety professional, occupational hygienist, or someone with any level of WHS responsibility in the workplace, maybe you are a user of safety products or maybe you are a bit of a safety nerd who finds this stuff really interesting, then this is a podcast for you.

(R) Today we are talking about confined space identification with Ash Mayor. How are you, Ash?

(M) I'm good, thanks, Mark.

(R) Ash, can you please introduce yourself? Where are you from, and what do you do?

(M) My name is Ash Mayor. I am a trainer with 3M Australia, part of the Safety and Training section in our Personal Safety Division.

(R) So, I imagine you do a fair bit of confined space training in your travels?

(M) Yep, that would be fair to say.

(R) Fair to say. So now we are talking about confined spaces. A lot of people think a small space is a confined space, but what is the actual definition of a confined space, if you are a workplace, what should I be going off?

(M) There is some really good information out there within the regulations, the Codes of Practice, and the Australian Standards, and [they] give you flow charts on how you can identify a confined space.

(R) So, a decision tree, essentially.

(M) Yeah, essentially that is exactly right. So with a confined space, it needs to be not designed or intended primarily to be occupied by a person, it is designed or intended to be at normal atmospheric pressure when any person is in the space, and it needs to be at risk from one of the following: an atmosphere that does not contain a safe level of oxygen, or contaminants including airborne gases, vapours, and dust that can cause injury from fire or explosion, or harmful concentrations of any airborne contaminants, or a risk of engulfment. So, one of those hazards needs to be present.

(R) So, we've got that flow chart, we've got tick, tick the first two, and we're looking for even if it is just one of them, confined space, but I guess a lot of confined spaces have multiple of those things as well.

(M) That's right, it can be one or multiple instances of those hazards.

(R) So, let's give a tank as an example, so I am assuming a tank is not designed for someone to occupy, it may be designed to hold fuel, so what would be the thing that ticks it into a confined space in that situation?

(M) Well in that situation it would be the risk of a harmful atmosphere. So, it could either have low oxygen or it could have a vapour left over from the fuel that is going to be a risk to your health.

(R) What are some other confined spaces? I mentioned tanks, what are some other ones that will get people in the right mindset of types of confined spaces.

(M) Well you can have boilers, the internal workings of a boiler, the mud drum, the steam drum of a boiler, the actual combustion chamber in a boiler, you could have silos, silos that contain grain can be a confined space, sewerage pipes, tanks, water treatment facilities, there is a whole range of different industries that contain confined spaces.

(R) It certainly is very broad. Does size matter when it comes to confined spaces, if it is small, does that automatically go yes, that is a confined space?

(M) Well no. In this situation size does not matter.

(R) Fair enough. I'll take your word for it.

(M) So, with a space that is deemed a confined space, it is not dependent on how large that space is. It has to fit the criteria as stated in the regulation standards and codes of practice.

(R) So, it's more what is happening inside the space as opposed to [M: Yeah, that's right, yep] what is the size of the space, we're worried about those particular…

(M) Yeah, what are the hazards, no so much how big is the space.

(R) What are some things that are not classified as a confined space that people may first go, ooh, actually that definitely is because that is small, but it may not have those hazards present that come to mind.

(M) It could be things like roof spaces, cold stores where you might have a forklift that runs on LPG operating in the cold store, although that has a hazard involved with it. The design of the cold store is for people to be working in there and the access, you know, is pretty good, so you've got the hazard there, but there is a good means of being able to get out of the space.

(R) I guess spray painting booths would be similar…

(M) Spray painting booths, blasting areas that people work in. In those situations, the space has been designed for people to work in that space although it contains a harmful atmosphere.

(R) What about trenches?

(M) Trenches, not necessarily. Normal trenches wouldn't be classed as a confined space simply for the fact that they can cause engulfment, but if it contains something that is going to change the atmosphere, then definitely that would be under the confined space criteria.

(R) So, if I had a generator sitting on the top and it is putting CO, it is going to be going in there then you may look at that slightly different…

(M) Yep, generator, with the exhaust of a generator, somebody sticks a generator down in the trench that is going to change things up dramatically. There was a case of that a couple of weeks ago. Not in a trench, but in a I think it was a cellar out on a rural property.

(R) I guess it just highlights, it doesn't matter what the space is, it is about what is happening inside the confined space, whatever those hazards may be.

(M) Yep.

(R) Now out in my travels I have heard the term restricted space in industry, but I haven't seen that in legislation. What is a restricted space compared to a confined space?

(M) Well restricted space could include things that don't meet the strict criteria for being defined as a confined space.

(R) So, it meets the first two criteria…

(M) It meets the first to criteria but as far as the other criteria, with harmful atmospheres, contaminants, risk of engulfment, that sort of thing, it might not necessarily include them.

(R) …include them. Because I know, I guess when I have had it explained to me, it is sort of like technically it is not a confined space, but when I identify it, so if, depending on the task that we are doing in the space, it may flip over into a confined space very quickly, so it is really about the activities based in there, so, but either way, I usually like to say in my travels, it doesn't matter what you call a confined space, restricted space, pink polka dot room space, you've got to manage

the hazards, whatever is going on in there, you've got to manage them irrespective of if you've technically defined it as a confined space.

(M) Yeah, that's right. So even if people have different views on whether a space is or isn't a confined space for the purpose of the definition, which happens more often than you might think, you still need to put those controls in. If it is deemed a confined space, you need to work as per the confined space regulations.

(R) I had a trainer tell me many years ago, if looks like chicken and smells like chicken, treat it like chicken. Also, that I guess the confined space regulations for most states live in the occupational health and safety, the work, health, and safety regulation, and that is for the benefit of workers. So, if you are trying to strip back or technically, you know, that isn't technically confined space not managing it, it is not going to be looked upon too fairly, for that particular workplace if you are trying to roll back what is a benefit to your workers to look after them as well.

(M) Yeah, and I think sometimes there is a case of employers where they want to deem a space not a confined space, to negate the need to do some of these things that are involved with the managing of the hazards, but you need to be very careful when you are doing that. Also, once it has been deemed a confined space you will find it is pretty hard to treat it otherwise because people are a bit reluctant to withdraw those types of classifications which might put themselves at some sort of risk.

(R) I have seen some spaces where they haven't defined it as a confined space, but all the controls they put in place to manage it is pretty much exactly the same as a confined space, so horses for courses, but there is a lot of information that is out there to help workplaces. So why are confined spaces so hazardous. We talked about those four criteria, I mean what, these outcomes that I guess workplaces and why it is so strictly regulated?

(M) One of the things with confined space is once you've deemed it as such, by default you are saying that there hazard present there which can have some, you know, severe consequences including fatality.

(R) So, I guess worst case outcome, people can lose their lives if it is in that wrong situation.

(R) So, if they are so hazardous, I mean look at the hierarchy of controls, let's just eliminate going in them, but why are there so many people going in confined spaces so often?

(M) Well, because there is a range of different types of work that need to be undertaken in those spaces, and this things can include things like removing waste, inspection of the equipment or the space itself, maintenance equipment, maintenance of equipment, repair work, might be doing hot works within the space, recoating pipes, inspecting pipes and tanks, de-slagging of refractory inside furnaces, demolition of refractory in furnaces.

(R) So, with a lot of these spaces it may not be a daily occurrence but over the course of time, equipment needs to be maintained.

(M) That's right, there's a lot of plant maintenance activities that go on including scheduled maintenance, and then you've got breakdown maintenance occurring as well…

(R) Emergencies, yep.

(M) It can be something as simple as going in and doing an inspection or it can be more involved, with your heavy maintenance activity.

(R) Going back to what I said before, if I don't have to enter a confined space, if I can do those tasks from the outside, I take it that is going to be the best option when you start talking about hazard and risk identification and management?

(M) Yeah, sure, with anything like that, it comes down to your hierarchy of control and the first thing you want to do is investigate whether there is an actual need to perform that task. Do you have to go inside the confined space, can it be done from outside? Is there another way that you can achieve the desired result? The actual entering of a confined space should be last on the list.

(R) I'll give you a couple of examples of things that something you may have mentioned, but ceiling spaces, when would that be not a confined space, and when would it maybe turn into a confined space?

(M) Well, what is in the ceiling? Go through the check list. Go through the identification checklist to start with, so…

(R) So that goes back to typically no, if nothing is happening in the space, but just say you've got to go up there and you've got to do some welding. [M: Yep] Would you call that a confined space? Obviously, we're talking quite broad things here, but as a hypothetical…

(M) Well it really comes down to your hazard identification, doing that risk assessment, doing your hazard identification, and looking at what is in the space to start with, identifying it as the way it is before you start work, and then looking at whether you are going to change anything that is happening in there, so if you're going to go in there and do welding, are you going to change the atmosphere by introducing…

(R) Welding fumes…

(M) …some sort of contaminant in there. There could be pipes running through a ceiling space, they contain gases or things like that, is that going to…

(R) Sludge engulfment, yep…

(M) …is that going to change the atmosphere in any way.

(R) So, I guess it comes back to what we sort of covered earlier, what is happening in the space. That is the key determinant, whether it is small, or big, if those risks are there and it is not designed, well then, we are safe to define it as a confined space.
(M) What hazard do you have in the space, and are you going to introduce a hazard.

(R) So why is it, you have two people looking at the same space, a potentially confined space, but one person will say, I don't think it's a confined space, the other person will say, I think it is a confined space. I mean it seems well-defined in regulations and Australian Standards, there are slight differences, but why is there so much variance at times?

(M) Because people have different opinions on…

(R) Everything?

(M) Everything. Pretty much it comes down to people have different opinions. People have different perceptions of the level of risk as well, so like anytime you are doing a risk assessment you are better off to do it with a broader range of people rather than leaving it to one person or two people and come to some kind of

consensus. It really does create a situation where those differences can be quite critical.

(R) I guess people's past experience, if they have been involved in a previous work location where there has been an incident in a confined space they are going to treat that quite seriously, versus someone who maybe has not been involved with an incident at all, and that is that variance you are going to see from a range of backgrounds.

(M) Yeah, that is part of it, yeah, and I think just people's perception of risk as well tends to be different.

(R) That is the fun of life, eh, we are all different with different opinions I mean, we are going to do a couple of episodes with you, Ash, this is our first one, Confined Space Identification, now if people want more information around confined spaces, where would be a good starting spot for them to go.

(M) Well a good place to start would be the WHS regulation, or OHS regulation depending on what state you are in…

(R) Or territory?

(M) Or territory. The Codes of Practice, the Australian Standards, the workplace regulators, they will all have additional information.

(R) That's always a good starting point, this is such a high-risk environment and we see unfortunately fatalities, so plenty of information out there for people to go and get.

(M) There is. There is a lot of information out there, and it is going through it and making sure that you are covering your duty of care.

(R) Well Ash, thanks for your time today, I really appreciate you coming in.

(M) You're welcome, Mark.

(R) Well thanks for listening, everyone, if you have any questions, comments, suggestions for future topics, or guests you think we should get into the studio, you can shoot us an email to scienceofsafetyanz@mmm.com. You can also contact us via that email if you need any information around confined spaces, confined space training, we are very happy to come out and help in your work site and provide some assistance. Be sure to subscribe to the podcast, wherever you get your podcast from, so you don't miss any future episodes. If you enjoyed the podcast or found it informative, we would really appreciate it if you could take a few moments to leave a review, as it really helps other people find the podcast. And as Albert Einstein said "Life is like riding a bicycle. To keep your balance, you must keep moving." Thanks for listening and have a safe day.