Mike Taylor:

Hello everyone. This is Mike Taylor. Welcome to the second episode of the workplace safety review.

Mike Taylor:

I am the OSHA practice chair at Greenberg Traurig. I am located out of our Washington DC and Northern Virginia offices today. Our guest speaker is Mike Hazzan. Uh, Mike has been a good friend of mine for many, many years. Um, we've done a lot of auditing together as well as other workplace safety and health type of work. Um, so it's a pleasure and honor to have Mike with us today to talk about PSM, uh, auditing, things like that, uh, with COVID-19, uh, occurring. Mike is a mechanical engineer with over 45 total years of experience in process safety, risk analysis, security engineering, and plant operations. He has extensive experience in PSM slash RNP programs, including leading many process hazard analysis, IEPA chip PHAs and the development of mechanical integrity and other PSM slash RNP management systems and procedures. Mike has led over 275 PSM slash RMP audits since 1995, focusing mostly on the mechanical integrity aspect of auditing. Mike. Welcome. Thanks Mike again. Thanks for agreeing to be on the podcast. Uh, I know this is going to be a great experience, you know, so now we have COVID 19. The, how has that been impacting, uh, some of your clients or your work dealing with auditing under PSM?

Mike Hazzan:

Well, um, clients we use, uh, try any audit deadline date, uh, came due here in the spring of 2020, uh, faced a unique set of circumstances because PSM RMP audits, uh, traditionally have been done. Face-to-face uh, and they generally have been done in a sort of a compressed one week, uh, work schedule where you arrive on site early on Monday, and you, you work, uh, almost feverously until a Friday, you have a closeout meeting and then you go home and write your report. So that the amount of time that the site, uh, was spending on the audit aside from some prep time was essentially, uh, fit into that four straight into that one week period. Well, because of travel restrictions and, uh, prohibitions in many companies against, uh, uh, being face-to-face with the third parties and, and people that are not the company employees and these sorts of things, which are of course widespread throughout the economy.

Mike Hazzan:

But what that did is of course cut us off from, uh, doing audits, uh, the way we would normally do them fairly. We can't be onsite. Uh, and so how do you do an audit? That's that's come down well, as you guys know, uh, both OSHA and EPA have, uh, issued some, some notices, uh, here, early in the, uh, the COVID, uh, shutdown stage back in late March, early April, that sort of hinted at some flexibility with, uh, adhering to, to things like audit deadlines, but, uh, they wanted, uh, all of, uh, all the PSM and RMP community to look into alternate ways of accomplishing these, uh, these required activities. Some of our clients, not all of them, but some of them have opted to try to do their audits, uh, remotely or virtually. And as we started to think about that as a, we were approached by several of our clients who didn't want to defer their, uh, their audit schedules.

Mike Hazzan:

Um, we thought about how you do a PSM audit and the, the, the basic things you do. And there's three basic sets of activities. You interview you, people, usually a fairly lengthy list of people during that one week period, you look at lots of records and documents, and you actually go out into the plant and look at a few things physically, although in a PSM audit that field work, generally isn't quite as extensive as a

general health and safety audit, or maybe an environmental audit, but there's a little bit of it. And as we thought about that, we said, well, certainly we can interview people almost diseases early, uh, on the phone, uh, or using, uh, telecommunication software, like blue jeans that we're on right now, or zoom or one of the other ones that's pretty easy to do. Um, we can't, and in fact, we can, we can interview multiple people at the same time using those methods, certainly documents and records can be either sent to us.

Mike Hazzan:

Uh, copies electronically can be sent to us for review or using methods like zoom and BlueJeans. You can, uh, that have screen sharing capability. You can, uh, you can see them, uh, live. The only thing you can't do, uh, remotely originally clearly is go out into the plant and look at something physically. So as we step back and sort of plan what, you know, how much of a PSM audit could we get done? It was pretty clear that we could get done about 90 or 95% of the things that we would have to do in a virtual or remote. So with a number of our clients, uh, we have been, uh, doing audits like that, and they've actually been, uh, been quite successful.

Mike Taylor:

That is terrific. Do you think, what would you say would be a con associated with doing these audits virtual, if you will?

Mike Hazzan:

Well, uh, as I stated a minute ago, one of the things that, uh, when you do it face to face it, the, it, it compresses the time that you have into that one week period. So everybody is geared up and ready. And when an auditor, uh, darkens your door and says that he's here to, to, to interview about this or that sub subject, um, you know, that you have to set aside whatever else you're doing and pay attention to it and get it done, um, in a, when you do it virtually or remotely, of course, that that time pressure is removed. Um, and that's an advantage in some cases, because you have more flexibility to do a little bit now, do a little bit, uh, tomorrow, and then maybe take a couple of days off and come back to it. So you have a longer period of time to get everything done, but what it does is it removes the immediacy or the pressure to get it done during the one week period. So things tend to stretch out and sometimes that you lose your efficiency. Once you get your audit, as you know, Mike, you've done this enough, once you get your audit motor going, uh, if you keep it going at the same rate, uh, you know, you start to, uh, do, do the work more efficiently. So stretching it out has some pros and cons, uh, and, uh, we've, we've, uh, experienced the, both of those.

Mike Taylor:

Do you think that, that, uh, even after post COVID, um, that this might be a trend that companies end up doing in terms of fulfilling their PSM obligations? I E a virtual audit, as opposed to a face-to-face audit.

Mike Hazzan:

I think some of them will, uh, that that's entirely possible. Of course it, it, uh, it removes the need for any travel expenses, uh, which is a, is a plus. Uh, and it does allow for a little bit more flexibility in, uh, uh, in how, and when you, you schedule the audit activities, which is, uh, for some people is a, is a positive, but it does by stretching it out. Like I said, it does, uh, does introduce some loss of efficiency, but I think a lot of companies will think about that, uh, once, uh, we're beyond the, uh, the health crisis portion of this.

Mike Taylor:

Well, yeah, by doing the PSM audit virtually, I know you've been to a gazillion, uh, PSM covered facilities, but if you've never been to a particular facility and you're tasked with doing a PSM audit, particularly mechanical integrity, does it bother you or concern you that you're not able to look at the equipment, uh, at a particular,

Mike Hazzan:

Well, being able to look at the equipment is always a plus, uh, to actually work through most of our audit protocol questions, which are, uh, to a large degree programmatic, for example, in mechanical integrity. Uh, I focused mostly on the testing and inspection records and, and look at them to see if things are overdue or not. And to make sure that the, say the thickness data for piping and pressure vessels and similar types of activities it's collected, right. Analyzed, right. Uh, and, and so forth. I don't actually need to look at the piping or the pressure vessel to draw those types of conclusions, but, uh, having the equipment at hand, uh, is, uh, is sometimes an advantage, uh, when, when reviewing things like repair records, uh, those sorts of things, uh, once in a while, certainly I will go out and actually physically confirm that the equipment physically, uh, agrees with what the records say, but most of what I can do or have to do in a PSM RMP audit is mostly programmatic. So I don't need as much physical access to the equipment that say safety and health auditor, who is looking at a lot more physical kinds of things, uh, than a PSM auditor is.

Mike Taylor:

Right. Exactly. Um, You know, in terms of PSM and, uh, COVID-19, uh, you know, everyone knows that the gas prices have been plummeting of late. Um, and the demand for gas is, um, well below normal, right? How has that been impacting some of your clients in terms of how to be in terms of, uh, operating safely, if you will, when the demand is so low?

Mike Hazzan:

Well, currently most oil refineries and this Just is just isn't in the United States, but globally are operating at about 70 or 80% of their nameplate output capacity plus or minus a right now, gasoline demand globally is down by about 50% jet fuel, uh, demand is down even more it's down by 70%. So only 30% of the normal demand is being consumed these old, uh, fuel, uh, not as impacted because the, the trucking industry and the, the railroads are still operating at or near their, their normal rates. So the refineries, uh, are, are not able to sell a large part of their products. So if demand is down like the 50% for gasoline and by 70% for jet, but we're still producing at 70 to 80, there's a gap of, you know, 20 or 30% there where we're producing more liquids, more fuels. Then, uh, the, the, uh, the companies that make them re able to sell and distribute that gap is starting to constipate.

Mike Hazzan:

Uh, many of these facilities, uh, their tank farms and their, their, uh, intermediate storage, uh, can handle that for a while, but they're getting pretty full. And I know that a few facilities are scrambling pretty hard to define the offsite storage, saying that in the midstream or in the pipeline industry, where there are some other tankage that they can lease. So, uh, right now there's a fairly high inventory, higher than normal inventory of refined products. And of course, it's those refined products that, uh, uh, represent a fair amount of the process safety risk it's out there. So, you know, there's large inventories of material the other way, and that, uh, that reduced demand, it can, um, can affect, uh, at least an oil

refinery, uh, maybe more than, uh, other types of chemical and processing facilities that oil refineries are not designed to operate at very low output rates.

Mike Hazzan:

Once they get below about 50% of their, their design output rate, they start to suffer instability problems, mostly with flow rates, rotating equipment, operating at the edges of their performance curves, heat transfer rates start to get a bit unstable. The facilities are just not designed to operate at that low capacity. So yeah, if they can't go below 50% without suffering these instability problems, uh, and the demand is even lower that, uh, then you had trying to force a facility to operate lower, uh, is a, is a potential safety problem. So, um, that's a, that's another issue that, uh, that, uh, the re at least the refining sector is, is having to, uh, having to face, uh, on a, on a positive note, uh, uh, the petrochemical, uh, part of the industry, the petrochemical demand is actually, uh, higher than it has been recently because the medical and health industry three is, uh, in order to produce very high volumes of, uh, personal protective equipment masks and gloves and gowns, and these sorts of things. Plus all of the, all of the consumable materials that the health industry needs on a daily basis, tubing and all kinds of other things, but demand for petrochemicals is actually a little higher than, uh, than for fuels. So, uh, a little bit of the, the, uh, the higher demand can be made up there, but not, not, uh, enough to, to take up that, you know, roughly 50% demand that's missing.

Mike Taylor:

Interesting, interesting. Um, you know, in terms of a refinery operating at half capacity, if maybe even less than that, you mentioned that there could be, um, hiccups that could happen with temperatures of flows and pressures. So, which ultimately, I think what you were saying is if they're operating at a low capacity for a certain period of time, you can't have a lot of safety issues associated with that.

Mike Hazzan:

Facilities are just not designed to operate in, in that, uh, in that domain. So things, uh, these stability problems that I referred to when, when he transfer rates start to, uh, to go down, for example, then that means the temperature in one area of the plant, maybe other areas of the plant is going to go up, uh, and they may not, uh, either the, the equipment is not able to deal with that or partially deal with that. And even the, uh, the operators and the other people are just not used to operating in that, in that domain. Uh, and they may not have seen that before. So their ability to diagnose and respond to it, uh, maybe a little slower. I haven't, I haven't seen anything or heard anything of any, any serious incidents that have occurred because of these sorts of stability problems. But, uh, if these facilities are forced where they try to operate at those low rates, that kind of stuff could, uh, could occur.

Mike Taylor:

Interesting. What about, um, one of the questions I was thinking about when it asked you about our refineries working at, um, in terms of, uh, personnel, uh, some of your clients, are they scaled back in that sense, maybe working with like skeleton crews, or are they still, um, operating full capacity with, with the number of employees?

Mike Hazzan:

Well, the total number of employees, uh, especially during day shift, which is normal under normal conditions, the, the, uh, the time of the day when the, uh, the population onsite is highest, they have a re requested or required, uh, nearly everybody who can work remotely to do so. Uh, so that, that

removes at least from day shift, uh, out fairly large part of the, the environmental health and support, uh, safety support, the engineering support, uh, some of the maintenance people, uh, are just not on site. Uh, now most of those folks can do their jobs if they have a lot laptop, computer and internet access, uh, from a remote location, but having all of their records available, uh, to them, uh, is, uh, even electronically is probably not, uh, is not happening. And it's certainly anything that's written on paper. They, they're not working on site.

Mike Hazzan:

They're not gonna be able to get at it if they, it, so even routine PSM, things like, you know, the, the creation and routing and review and approval of MOC is maybe, uh, harder to do things like that. Uh, maintenance may be harder to do because they're operating with reduced maintenance workforce just to keep the number of people on site, uh, as low as a, as absolutely possible operations is not going to be as, uh, affected, uh, because you need a fixed number of people to, uh, to safely operate, uh, PSM covered facilities. But I know in one or two cases, uh, I know one client of ours they're operating a, a medium sized oil refinery with about 2122 operators. And just doing the arithmetic of how many units this plant has and how many operators that is that's that's right at the edge, or maybe even a little less than being right at the edge of, you know, the normal operating workforce. So I know the facilities are trying to keep as few people on site at any given time as they can, and that's for health reasons. And, and clearly they're, they're trying to prevent the spread of the virus, but, um, you know, they'll not having the right people or the right expertise when you need it. Uh, it could be a potential problem. Again, I'm not aware of, of any incidents that have resulted because of that, the reduced Manning, but it's a possibility interesting.

Mike Taylor:

How, so that would also impact if you have a near miss or a catastrophic event, um, you know, a facility being able to, uh, implement, uh, an emergency response, uh, to that incident, if they're running on skillets and crews, correct? Correct.

Mike Hazzan:

That's correct. The, uh, most of the emergency response teams in, uh, the PSM community, uh, are made up of a few, uh, uh, fully trained, uh, you know, fire protection, professional type folks, but most of the emergency response team are volunteer responders, uh, taking mostly from the operating and maintenance workforces they've volunteered to serve on, on the emergency response team. And then they receive special training. So when, uh, you know, a fire or an explosion or release occurs this sort of thing, uh, uh, the, the alarm sounds and, and those folks stop their normal jobs and gear up and respond to the emergency situation. Hopefully in most facilities, they still have enough people to, uh, fully man their emergency response teams, uh, as they normally would, um, you know, without the COVID situation going on, lot of those folks are on call and, you know, they all have radios and, and cell phone communications and on a normal night shift or a weekend, you know, the virus not withstanding, you know, if they needed more help because of an emergency situation, they would, they would put up the, uh, the all call and people would start rushing in.

Mike Hazzan:

Well, I'm sure if something, uh, you know, an emergency happened today, they would, they would do the same thing and they would, they would live with the, the, the potential virus exposure in order to respond to, uh, an emergency situation.

Mike Taylor:

Yeah. It's an interesting dichotomy. Um, the virus and responding to a near miss or catastrophic event, um, particularly on a, when your crew, if your emergency response team is also, um, working for a moment, if you will. That's correct. Um, what about any of your clients had, have what's called a turnaround. So for your listeners out there that may not know what that is, but, uh, oil refineries, for example, have what's called a turnaround. And every, so often they empty out all their processes and they do maintenance and things like that. Um, and then they start their refinery back up to do the turnaround, they'll hire, um, contractors and a GC, uh, to do the turnaround, do the maintenance work. And those people tend to come from elsewhere outside of the state of where, where the refinery is. Have any of your clients had to delay doing a turnaround, or is this been impacting turnarounds at all? It

Mike Hazzan:

Has any, any facility that had a turnaround that was due here in the March, April may timeframe that we're in right now. Uh, we'll have to defer that maintenance outage because the travel restrictions, they just, uh, for the largest facilities, you would have hundreds, even several thousand contractors on site. And as you noted, most of them come from, um, come from out of state, uh, not just out of the city or the town where the facility is located. So yeah, airline travel, being what it is and the hotel industry and restaurants being closed. Uh, you know, it's difficult to, to support hundreds or thousands of extra people, uh, in an area in a concentrated area at any given time. So yeah, those, uh, those, uh, maintenance outages have been postponed. Also a few facilities we're thinking about. I know we're thinking about moving up, uh, some, uh, some outages, but, uh, while the demand was lower, uh, which seemed like a coincidence kind of thing, but again, because of the travel restrictions, they, they just were not able to pull that off.

Mike Taylor:

Interesting. Do you see if, if the shutdown, if you will, and the various cities and states continue much longer, and I asked you to get out your crystal ball, let's say for a year from now, do you think that, uh, the shutdown in the PSM world and operating on a skeleton crews using, operating with skeleton crews and the low demand for gas, you think that's going to have an impact on the safety of refineries, uh, a year or two years down the road?

Mike Hazzan:

Well, most facilities, uh, will only be able to defer, say an audit or a PHA or some, some activity that's required to be done in a PSM or a, you know, a vessel inspection or piping inspections, these sorts of things. They're only going to be able to defer those for so long because, uh, eventually, uh, either they're, you know, the regulators will, will, you know, discover that and, and not react well to it. You know, a little bit of time, a little bit of delay, we arranged for a different contractor to inspect your pressure vessel, this sort of thing. Uh, they would probably be flexible about that, but, uh, you know, widespread delays of many activities, um, probably would not be tolerated, certainly a major release, uh, if it were to occur, uh, would not be tolerated. Uh, I'm, I'm guessing. So doing this for a long, long period of time is probably going to be very, it's going to be almost untenable.

Mike Hazzan:

Uh, they will only be able to push off activities that are required, uh, for a short period of time a year or something beyond a year, as you asked about, I, I'm not sure that that that's going to be possible to do, but I don't know. I mean, as time goes on here, we, we learn more about how to adapt, how to adapt

businesses, how to adapt our health care systems and all the rest. Uh, I don't know, maybe, uh, you know, the, the chemical processing refining business, we'll figure out a way to, to hold the risks where they are, or even lower while still meeting whatever demand for their products is out there. Uh, without them making the risks go up, but it's going to be increasingly difficult. And all it takes is one really bad event, of course. And then, you know, going to be a very difficult situation for everybody. And we've had that one event already, probably not in the United States, uh, but, uh, the, uh, styrene release over in India, uh, that the result of 11 fatalities occurred about a month ago. Uh, certainly nobody wants a meeting like that occurring anywhere else in the world.

Mike Taylor:

Indeed, indeed. Well, Mike, thank you for joining with us today and giving some insight on the PSM world. Um, during the COVID crisis, we really appreciate you taking your time out, um, to talk with us today. Um, Mike Hazen, uh, Mike works for Aquatech consulting group and Mike are based on Philadelphia area, right?

Mike Hazzan:

Uh, Aquatech has offices in the Philadelphia area. Our headquarters are in Northern Virginia, just outside of Washington. We also have an office in Houston and several offices, overseas, India, uh, Shanghai. Uh, so we're, we're kind of spread out, although we're a relatively small company, we're kind of spread out

Mike Taylor:

Lots of Marriott rewards points. Yeah, I hear ya. I hear ya. Well, thanks Mike. We really appreciate it. Um, that wraps up the second episode of the workplace safety review. Stay tuned for episode three.

Mike Hazzan:

Thank you, Mike. My pleasure.

Mike Taylor:

[inaudible].