

PSM SAFETY & COMPLIANCE CONSIDERATIONS IN THE AGE OF PANDEMICS

By Bill Lape, SCS Engineers

The last several months have turned our world upside down: close to 7 million confirmed cases of COVID-19; over 400,000 deaths worldwide; people being quarantined or sheltering in place; social distancing; non-essential businesses shut down; essential businesses operating with skeleton crews; essential businesses having to implement enhanced sanitation procedures, social distancing, PPE requirements, employee health screening; visitor restrictions; the list goes on and on and on.

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The distractions that occur because of all of this often cause us to forget some of our core safety programs, including process safety management (PSM) of our ammonia refrigeration systems. We are tempted to think that the immediate concerns with COVID-19 are a higher priority than our management of change, our hazard analyses, our system and equipment inspection testing and maintenance, and our operator training, to name just a few things.

In reality, these safety programs that are part of a PSM program are just as important today, if not more so. With much of our workforce sidelined due to illness, or sheltering in place due to fear, and our ability to bring our refrigeration contractor on-site limited by our attempts to limit the spread of this virus, we may find ourselves attempting to operate and maintain our refrigeration system with untrained, and therefore unqualified, employees.

This is an accident waiting to happen. Attempting to protect employees from being exposed to this virus is admirable, work. From a compliance standpoint, each employee before being involved in operating the ammonia refrigeration system must be trained on an overview of the refrigeration process and the operating procedures of the process are



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and is in fact, necessary if you truly value your employees and recognize them as your most valuable asset. However, valuing your employees must include protecting them from the hazards of working on an ammonia refrigeration system. This starts with proper training and instruction prior to performing such

required by 29 CFR 1910.119(g)(1)(i) and 40 CFR Part 68.71(a). This training is required to include an emphasis on the specific safety and health hazards, which, in our industry, would be the hazards of ammonia, an emphasis on emergency operations including



shutdown, and safe work practices applicable to the employee's job tasks.

Prior to COVID-19, new or inexperienced employees were often sent to a 4-5 day course to learn industrial refrigeration. As they gained experience, they might get sent to a second 4-5 day course to learn more advanced topics in industrial refrigeration, and, if they are eventually expected to begin working on maintaining the system, they might attend a third 4-5 day course. These courses are offered at several locations throughout the country and some companies take these course offerings around the country, bringing them closer to the end user.

However, with the social distancing and travel restrictions in place, along with having to make due with fewer people to operate our facilities, this is no longer a viable option. So what is one to do? There are a few options available to the end user today.

One option to train your employees in the age of COVID-19 is through on-line, or distance learning. Several companies have implemented such training over the last several months. This gives companies the ability to have their employees attend training while they work from home or maintain social distancing, and still maintaining operations with available manpower that may be dramatically reduced. Some companies are also offering these courses using different schedules, such as five 6 hour days, versus the usual four 8 hour days. This provides more scheduling flexibility for the company, often allowing them to send more employees, providing that they maintain social distancing, of course.

So what should you look for in an on-line training? First, does the course include ammonia safety and health hazards? Does the course include emergency operations and shutdown? Does the course include safe work practices? Second, as you would do with a face to face training course, look at the qualifications of the instructor. Third, does the company conducting the training offer flexibility of scheduling and topics included in the training?



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employees through the course. The on-line format also allows for employees to attend the training from home, if they are sheltering in place, or from their facility conference room with other

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ONE OPTION TO TRAIN YOUR Employees in the age of Covid-19 is through on-line. So what should you look For in an on-line training? your employees must include training on YOUR ammonia refrigeration system. While you may have to perform some hands-on training and evaluation for your employees yourself, does the company conducting the on-line training offer support in this effort by building system specific discussions into the class? Fourth, how does the company promote student engagement through the on-line class delivery platform? If the class is held as if it were a webinar with no opportunity to verbally ask questions, limiting the students to typing their questions into a chat box, then engagement levels will be low. Does the company encourage the use of web cameras to foster engagement? As an instructor, I can tell you that I am much more comfortable conducting a class when I can see the students' reactions to what I am saying. I believe that this is a two way street and that students need to see my reactions as well. Fifth, what resources does the company provide as part of the class? Are course materials sent to you directly or are you expected to print files that were emailed to you? Finally, how does the instructor measure understanding? Will there be a final exam? If so, how is it administered? Are there practice exams? Are the questions of the practice exams reviewed?

Another thing to bear in mind is that 29 CFR 1910.119(g)(2) and 40 CFR Part 68.71(b) require that refresher training on the topics required must be performed at least every three years. On-line training can be a good way to provide such refresher training in a timely fashion during this pandemic. This will help you to keep your employee's safe and maintain compliance for your PSM/RMP programs.

While on-line training will never be a complete substitute for live, face-toface training and instruction, in the age of pandemics and the associated struggles that we face, it is a viable option to provide the training that is necessary to ensure that your employees are qualified to operate and maintain your ammonia refrigeration system safely.

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