THE SKY IS FALLING!

UH, OH... HERE COMES MORE REGULATIONS THAT WE NEED TO WORRY ABOUT **PART 6**

Word has it that a major end-user of ammonia refrigeration is using recommended practices from the American Petroleum Institute (API) as part of their PSM-RMP program. Oh, the horror!

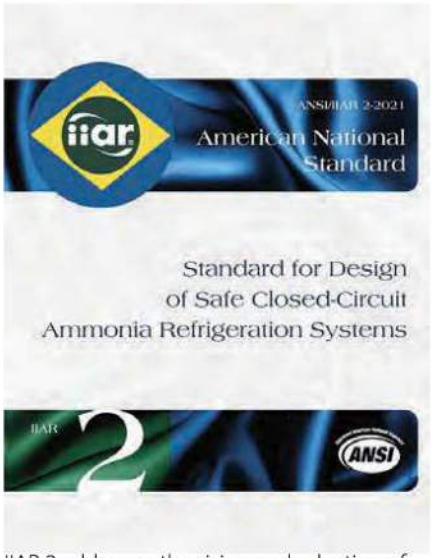
By Bill Lape, CIRO, CRST

In the last issue, I discussed the creation of the International Institute of Ammonia Refrigeration (IIAR) and the history behind its suite of standards for ammonia refrigeration systems. In this issue, I need to divert again from discussing details of the IIAR requirements in their various ammonia refrigeration standards, and once again back up. This time, it is not because of new regulations, but because of word getting out that a major end-user of ammonia refrigeration is using recommended practices from the American Petroleum Institute (API) as part of their Process Safety Management (PSM) and Risk Management Program (RMP). Oh, the horror!

As I mentioned in a previous article, many years ago codes and standards applicable to ammonia refrigeration were few and far between. The model codes didn't formally coalesce around specific requirements until the late 1990s. IIAR Standard 2 did not become well known in our industry until that time frame as well, despite being first published in 1974. ASHRAE 15 was really the only standard that could be reliably applied to ammonia, but it also had a number of holes in it, particularly prior to 2000. It was due to these holes that OSHA and EPA inspectors often tried to cite facilities with ammonia refrigeration for not following certain API standards, like API 570: Piping Inspection Code, or API 520-1: Sizing and Selection of Pressure Relieving Devices in Refineries.

Many of these holes have been plugged by IIAR's suite of standards. For instance, IIAR 2 addresses the sizing and selection of pressure relieving devices, thus eliminating API 520-1 as relevant *Recognized and Generally Accepted Good Engineering Practices* (RAGAGEP). IIAR 6 now spells out inspection, testing and maintenance requirements for closed-circuit ammonia refrigeration systems, thus eliminating API 570 as relevant RAGAGEP. IIAR's mission was, and remains, the development of standards appliable to ammonia refrigeration systems, thus providing facilities and regulatory officials with RAGAGEP for their refrigeration systems.

So, what's all the hubbub about this major ammonia refrigeration end-user using API Guidelines to enhance their process safety management programs? *The concern is obviously that someone is using API information as RAGAGEP, thus opening the door to citations against inapplicable standards.* However, that is actually not the case here. In this instance, the end user is using API RP 754: Process Safety Performance Indicators to establish leading and lagging indicators to measure the performance of their process safety programs.



IIAR 2 addresses the sizing and selection of pressure relieving devices.

Now, it should first be noted that API RP 754 is a Recommended Practice, not a

The American Petroleum Institute recommends best practices across the oil and gas industry.

standard or code, so it is not enforceable on its face as law. However, if one chooses to use this as part of their RAGAGEP, then it is enforceable. Why did this end-user choose to use this recommended practice? Well, it's because there are no guidelines in the ammonia refrigeration industry that establish performance metrics. Another example of an API Recommended Practice that could be used by an ammonia refrigeration end user is RP 2221: Contractor and Owner Safety Program Implementation, which offers a high level of detail on how to ensure that your contractors are properly evaluated for qualifications and safety performance. This level of detail regarding managing contractors is not found in any ammonia refrigeration industry guidance.

Why am I not losing sleep over this use of API guidance? It's because a facility/company is allowed to choose whatever RAGAGEP they deem appropriate, as long as the RAGAGEP chosen addresses the hazards of the process in a suitable manner.

For instance, managing contractor qualifications is addressed in both IIAR's PSM-RMP guidelines and the Ammonia Refrigeration Management (ARM) guidelines. A facility/company can choose to use this as their RAGAGEP for managing contractors, and that is perfectly acceptable. Regarding RP 754, the PSM-RMP regulations, found in 29 CFR 1910.119 and 40 CFR Part 68, respectively, do not require the use of metrics to manage PSM-RMP programs. Thus, you can choose whether to use them or not. However, be mindful that whatever RAGAGEP is chosen, it must be adhered to.

Please feel free to email me with questions at NH3isB2L@gmail.com.

Bill Lape, CIRO,CRST, is Project Director for SCS Engineers, and is the current Executive Vice President of the Refrigerating Engineers and Technicians Association (RETA).