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REFRIGERATION REVIEW

Email Response for Second Public Review for ANSI/IIAR 2

The following is a recent reply Bill Lape gave regarding an article in which I critiqued the current proposed ANSI/IIAR 2. While there are major voids on the standards committee and codes committee (in terms of members that are design engineers), I appreciate the few of us that “tune in” to reality, and have included Bill’s comments complete. I would however like to add my comments in this regard following Bill’s comments.

While I understand Hank’s lament, I do take issue with some of his facts.

The NEC does, in fact, recognize IIAR and Standard 2. In fact, it aligns with IIAR for the 150ppm level for emergency ventilation initiation. It has done so for the last two editions.

The reference to four air changes per hour in the NEC appears to be for unclassified areas where flammable vapors are not likely to be released that are adjacent to classified areas that contain the flammable vapors. For garages themselves, the requirement is 1 CFM per square foot of area to be unclassified.

Granted, this may have differed in an older edition. I also recognize that it is ironic as to the amount of ventilation required in this example, but I also view that the release of flammable vapors in a repair garage are typically limited to

incidental releases in the dispensing and transfer operations, not a failure of containment.

Also, much like the exemptions in the PSM and RMP requirements, the NEC does take into account the potential impacts on retail or service businesses. Hence, the low requirements. Industrial occupancies do not enjoy the same benefits, again much like the PSM and RMP regulations.

Keep sending out the great articles. I miss your stories in the Code Committee, Hank.

Hank's Further Comments

While the NEC now does recognize ANSI/IIAR 2, there are many code authorities that still prefer to use older issues, i.e., NEC 2002, to which I had made reference, and to which recognized 1,000 ppm as the necessary level for emergency ventilation. When you consider such realities as the ammonia vial capsule that professional athletes use, or the common household ammonia water used for cleaning, or the levels you get when draining oil, -- all of these are in the 2,000-3,000 ppm range. This is the real world, and I am still trying to identify the geniuses who came up with the 30 air changes per hour rule and 150 ppm. All my calculations on the evaporation rate of liquid if it covered the entire machinery room floor say it would be dissipated and maintained below explosive levels at much lower air change rates. Once it flashes to its saturated temperature, its evaporation rate would be lower than that open bucket of gasoline. I doubt one can find an injury caused by a properly ventilated machinery room using the RAGAGEP of old.

It's sad to think that IIAR is playing God by putting forth a RAGAGEP issue, which can obviously not change the industrial refrigeration standards that have been in place for literally hundreds of years. While we want to make things better, we have subjected our industry to standards it cannot afford. Large refrigerated warehouse PRWs like Americold are going to single-stage freon systems because of the cost of regulations. Who would have thought that environmentally-friendly ammonia would be replaced with a higher cost energy,

environmentally unfriendly refrigerant that is to be banned in 2025, with ten times the number of compressors and condenser fans, as a cost-effective way to run an industrial refrigeration system? We, as the vanguards of our industry, are as much at fault as the OSHA regulations themselves.

****To download a copy of the original article, “Comments Regarding IAR Standard 2,” please click [here](#), or visit our website at www.bonareng.com/news.**

