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About the Cover

Green innovations, LEED certification, and building a safety culture are among the key issues facing cold chain construction. (Photo courtesy of MTC Logistics.)



IACSC on a Strong Growth Curve

A KEY ELEMENT of the cold chain industry is the design, construction, modernization, and maintenance of cold chain facilities.

Members of the International Association for Cold Storage Construction (IACSC) are focused on these areas and continually developing innovations to improve the cold chain for the members of all GCCA organizations.

At the upcoming IACSC 35th Annual Conference & Expo, to be held November 5-7, 2015 in Las Vegas, over 200 temperature-controlled construction and logistics professionals will gather together to gain valuable insight for improving their business. The IACSC Board and IACSC Education Committee in coordination with association staff are planning an event that features top-notch educational programming with peer case studies and presentations by industry thought leaders, and an expo with cutting-edge products and technology. One keynote address will be delivered by Michael Hoffmann, who has 20 years of experience in customer loyalty, sales and leadership. Hoffmann uses his rich background to drive home his message that business is and will always be about "people," and how we approach our customers, both internal and external, will set us apart from all our competition.

In other initiatives, our Executive Committee conducted a training needs analysis survey to determine how we can create programs and services to train the next generation of cold storage construction professionals. The committee will comb through that data at the conference to identify next steps.

Our Business Development Committee remains focused on increasing IACSC visibility with IARW and other GCCA partners by creating new, engaging networking activities at their events.

In marketing, IACSC goals include continuing to grow membership while promoting IACSC contractors and service providers as the best in the industry. Our Marketing & Brand Awareness Committee is focused

on telling the IACSC brand story through a number of promotional efforts.

For the second straight year membership has reached an all-time high. Former Chairman Wade Hudson led the organization to a membership increase of six percent. New member companies include suppliers, cold storage contractors, and design-build companies, all of which are essential to IACSC.

Equally important is our retention. IACSC continues to retain members at a rate well over industry trade association benchmarks. Those who join recognize the value of being a member and encourage others to do so.

We are also looking ahead to 2016 and the evolution of the IARW Expo into the new Global Cold Chain Expo in partnership with United Fresh Produce Association. IACSC is committed to supporting the new format and know it will help our members achieve their business goals.

In closing I'd like to recognize GCCA for its vision and support of IACSC. GCCA has brought together multiple stakeholders in the cold chain to better understand the unique business challenges of each sector and create a forum for sharing solutions and promoting industry growth. 🍷



ERIK GUNDERSON
Chair, IACSC

COLDFACTS

COLD FACTS magazine is published every other month by the **Global Cold Chain Alliance (GCCA)**, an organization that unites partners to be innovative leaders in the temperature-controlled products industry. The GCCA Core Partners are:

The **International Association of Refrigerated Warehouses (IARW)**, which promotes excellence in the global temperature-controlled warehouse and logistics industry.

The **World Food Logistics Organization (WFLO)**, which delivers education and research to the industry and empowers economic development by strengthening the global cold chain.

The **International Refrigerated Transportation Association (IRTA)**, which cultivates, fosters and develops commercial and trade relations between all those engaged in the transportation and logistics of temperature-controlled commodities.

The **International Association for Cold Storage Construction (IACSC)**, which provides a forum for innovative ideas, promotes standards of practice, and sponsors professional education programs for the cold storage construction industry.

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PIONEERING INSULATED METAL PANEL TECHNOLOGY

POLICY CHANGES LIKELY IN CHEMICAL FACILITY REGULATIONS

Implementation of the Improving Chemical Facility Safety and Security Executive Order may have a major impact on the cold chain.

By Lowell Randel

President Obama signed Executive Order 13650 entitled, Improving Chemical Facility Safety and Security on August 1, 2013. The action was driven in response to an explosion at a fertilizer facility in West, Texas.

The focus of the EO is to reduce risks associated with hazardous chemical incidents to owners and operators, workers, and communities by enhancing the safety and security of chemical facilities. In the two years since the signing of the order, agencies including the Department of Homeland Security (DHS), Occupational Safety and Health Administration (OSHA) and the Environmental

Protection Agency (EPA) have been working to address the goals established in the order. The Obama Administration released a status update fact sheet in June 2015, outlining the progress of the agencies.

One of the main areas of agency activity with the potential to have a major impact on the cold chain is modernizing policies and procedures. OSHA, EPA and DHS are all considering

significant policy changes to major regulatory programs including Process Safety Management (PSM), the Risk Management Program (RMP), and the Chemical Facilities Anti-Terrorism Standards (CFATS) program. Each of these agencies has taken steps towards regulatory change, and the issue of chemical facility safety and security will continue to be a high priority for the remainder of the Obama Administration.

OSHA Process Safety Management

In November 2013, OSHA released a Request for Information (RFI) detailing potential changes to the PSM program. GCCA worked closely with the International Institute of Ammonia Refrigeration (IIAR) to develop a coalition of partners to jointly submit comments to EPA. The comments express concern over the additional and unnecessary burdens that would be placed on industry should the regulatory proposals be enacted. The coalition of groups signing on to the comments to DHS and EPA includes: American Frozen Food Institute, American Meat Institute, Global Cold Chain Alliance, International Association of Refrigerated Warehouses, International Institute of Ammonia Refrigeration, Refrigerating Engineers and Technicians Association, and the U.S. Poultry and Egg Association.

The next step in the regulatory process is formation of a Small Business Regulatory Enforcement Fairness Act (SBREFA) panel. These panels are designed to solicit input from small businesses impacted by the regulation. The PSM panel was announced in June 2015 and was scheduled to convene during the summer



Ammonia is one of the chemicals under scrutiny by a product safety management panel that will gather input on new chemical regulations. (Photo courtesy of Sodis Cold Storage.)

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2015; GCCA is represented on the panel, giving the cold chain a voice in the process.

In addition to working on changes to the PSM regulation, OSHA is also exploring non-regulatory issues related to the PSM program. An example of this is OSHA's June 2015 guidance to inspectors related to Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). RAGAGEP plays an important role in how inspectors evaluate a facility's compliance with PSM.

Under the PSM regulation, employers must document that all equipment in PSM-covered processes complies with RAGAGEP. Inspections and tests performed on process equipment are subject to the PSM regulation's mechanical integrity requirements in accordance with RAGAGEP and inspection and test frequency must follow manufacturer's recommendations and good engineering practice.

The OSHA guidance importantly recognizes that PSM does not strictly define RAGAGEP. Employers have the ability to select their own RAGAGEP. The guidance does point to the importance of consensus standards, such as those published by IIAR, as primary sources of RAGAGEP. It goes

further to state that if a facility is properly following consensus standard, then they are likely in compliance. Engineering documents and technical papers can also form the basis of RAGAGEP. Employers may also develop their own RAGAGEP, but only if it meets or exceeds other applicable standards.

The document gives guidance to inspectors on the interpretation of "shall" and "should" contained in consensus standards. The guidance is clear that "shall," "must" or similar language means that the practice is a mandatory minimum requirement. "Shall not," "prohibited" or similar language means that the practice is unacceptable. "Should" or similar language in the RAGAGEP reflects an acceptable and preferred approach.

If an employer adopts "should" practice, it is presumed appropriate. If an employer does not adopt a "should" practice, inspectors are directed that more investigation is required. Inspectors will evaluate whether the employer has determined and documented that the alternate approach is at least as protective, or that the published RAGAGEP is not applicable to the employer's operations. In the absence of such documentation from the employer, the

inspector should examine documents, such as relevant process hazard analyses and management of change procedures, to determine if the employer's approach is as protective. These clarifications are important, as some members have reported inspectors citing facilities because they have not followed "should" language.

The guidance also provides a list of "enforcement considerations" for inspectors. It is important for facilities to also understand these considerations, as inspectors will be following these when they evaluate a facility's compliance. A list of the enforcement considerations is provided below:

- Multiple RAGAGEPs may apply to a facility.
- Employers don't need to comply with inapplicable RAGAGEP.
- Using inapplicable RAGAGEP can be dangerous – citations may be warranted.
- Where there is not fully covering RAGAGEP, employer expected to develop standards to address.
- More stringent internal standards are acceptable, but must be consistently followed or the facility will risk citation.
- Selectively applying pieces of consensus



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- standards could be problematic.
- Inspection and testing of equipment must follow RAGAGEP.
 - Employers must document compliance with RAGAGEP.
 - Equipment under Mechanical Integrity that is outside acceptable limits must be corrected before use.
 - » Interim measures may be acceptable, but warrant inspector scrutiny.
 - Employers must ensure that older covered equipment is designed, maintained, inspected, tested, and operating in a safe manner.
 - When evaluating citations for equipment:
 - » Establish age and installation date
 - » Modifications
 - » RAGAGEP selected
 - When organizations update RAGAGEP (IIAR standards, as an example):
 - » When the update is explicitly retroactive, facilities must comply.
 - » When stated proactively – facilities are not mandated to comply, but must demonstrate how new hazards are addressed.
 - » Can use PHA, MOC, corporate monitoring, review of published standards
 - Inspectors are directed to notify OSHA headquarters if they encounter RAGAGEP that is not adequately protective.
 - When writing citations for inspections and testing:
 - » Reference RAGAGEP selected by employer.
 - » If no RAGAGEP selected, reference applicable example(s).
 - When citing for inspections and testing frequency:
 - » Cite frequencies listed in manufacturer's recommendations and GEPs.
 - » Or more frequently, if indicated by prior operating experience.
 - RAGAGEP citations should only reference applicable RAGAGEP.
 - » Cites cases where API is used in ammonia refrigeration facilities.

EPA Risk Management Program

EPA issued a Risk Management Program (RMP) Request for Information (RFI) on July 31, 2014 seeking comment on potential revisions to EPA's RMP regulations and related programs to modernize its regulations, guidance, and policies. The proposed rule seeks to reduce the likelihood of accidental releases of toxic and flammable substances at chemical facilities, and improve emergency response when those releases occur.

GCCA, along with coalition partners, provided detailed comments on the RMP RFI expressing concern with many of the proposed revisions. Similar to OSHA, EPA is also seeking small businesses, governments, and not-for-profit organizations to participate as Small Entity Representatives (SERs) for a Small Business Advocacy Review (SBAR) Panel. This panel will focus on the Agency's development of a rule that proposes to modify the current RMP IARW, whose membership is comprised of a majority of small businesses, has applied to participate on the SBAR panel.

EPA has indicated its desire to issue a proposed rule to amend RMP by the end of calendar year 2015. The rulemaking is a high priority for the Obama Administration, so EPA will be pushing to have a final rule completed before the end of President Obama's second term.

DHS Chemical Facilities Anti-Terrorism Standards Program

As a part of the implementation of the Executive Order, DHS published an Advanced Notice of Proposed Rulemaking (ANPRM) in August 2014 to modify the Chemical Facility Anti-Terrorism Standards (CFATS) program

regulations. GCCA and coalition partners also provided comments on the CFATS rule-making. The coalition's comments centered on the applicability of CFATS to ammonia refrigeration facilities. To date, the number of facilities deemed high risk and given a CFATS tier with ammonia being the only chemical of interest is extremely small. The coalition is urging DHS to remove the Top Screen requirement for facilities only subject to CFATS due to anhydrous ammonia.

DHS is in the process of reviewing the comments received from the ANPRM. DHS has indicated that a formal proposed rule could be published during 2016. A final rule would not likely come until late 2017 or sometime in 2018.

As the Obama Administration and key agencies including OSHA, EPA and DHS continue implementation of Executive Order 13650, GCCA and its partners will continue to actively engage in the process to promote and protect the interests of the cold chain industry. ☞

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GREEN INNOVATIONS IN COLD CHAIN CONSTRUCTION

Eco-friendly design and mechanical elements can be good for everyone as well as the bottom line.

Building a cold chain facility and/or distribution center that is eco-friendly is not only good for the environment; it can save on energy costs. And those savings go straight to a company's bottom line. Cost is the major consideration today, industry experts observe.

Glenn Keeler, Cold Box Design Build Manager – Cold Storage & Logistics for Cold Box Builders in Concord, Ontario, reports how many companies today are replacing systems to be energy efficient and save money.

One example is LED lighting in freezers. “They don’t generate any real heat, so that’s a reduction on the load of the refrigeration system,” Keeler says.

Some customers are also replacing old metal alloy lights with LEDs. “Companies that utilize T5 and/or T8 fluorescent lights find that while these give off better lighting, they do not offer the same return on investment as LED lighting,” Keeler says.

Other eco-friendly materials include white roofs that reflect heat rather than black roofs that absorb it. “But that’s a difficult discussion in Canada, where the climate seems like winter most of the year,” he comments.

Another energy efficient system is vertical dock door levelers used with a dock configuration to allow trailer doors to swing open into the building after the trailer is docked.

“This is an area where there is big energy loss,” Keeler says. “With the new vertical levelers, companies can save money through lower energy bills since they keep the cold air from getting out. They also reduce the chance of pests getting into the building.”

Reclaimed heat from the hot gas of an ammonia system can be used for office heating or heating the loading dock when required. Hot gas from the refrigeration system put through a heat exchanger can be used for other requirements, such as hot water for wash rooms.

Dan Crist, Vice President of Charlotte, North Carolina based design-build firm A M King, states the majority of their clients are focused on the refrigeration system. “They want to ensure the system is designed and installed to achieve maximum efficiency,” he says.

He points to Variable Frequency Drives (VFDs), which are used to control compressor and fan motors on refrigeration equipment. Recently, A M King installed VFDs on all new and existing fan motors on

a 60,000-square-foot cold storage expansion project in Michigan.

“If we expand an existing, older facility, we are retrofitting the refrigeration system with VFDs,” he says. “VFDs help extend the life of equipment because the motors are not running at 100 percent during all times. The efficiency created with VFDs leads to significant energy savings for the client, and paybacks are calculated for each specific project. When clients want the most efficient system, one of the first items we discuss are VFDs.”

Crist also sees the benefits of LED lighting. “LED lights are more efficient, and control systems are capable of maximizing efficiency through scheduling and adjustment of output,” Crist says. “Several hundred light fixtures will likely be required in a large cold storage facility, and by utilizing the most efficient fixtures, the client will see significant energy savings.”

However, LED fixtures require a greater upfront investment for the client. Crist estimates they can cost up to four times the amount of T5 fixtures, depending on the selected manufacturer and options. “The initial sticker shock is there for clients unfamiliar with the cost of LED fixtures. However, when you calculate the energy savings and payback, most of our clients are making the initial investment.”

Mechanical Focus

Matthew Simmons, Marketing Director of ISD Solutions in the United Kingdom, reveals that



Primus upgraded the baseline lighting to LED lighting with motion sensors at the U.S. Cold Storage (USCS) facility in Covington, Tennessee. This increases light efficiency and reduces power. (Photo courtesy of Primus Builders.)



The U.S. Cold Storage facility in Covington, Tennessee, featured landscaping with native plantings. These plants are drought-resistant and require no potable water and very little fertilizing or pest control. Some 20 percent of construction materials including concrete and structural steel, were sourced within a 500-mile radius. (Photo courtesy of Primus Builders.)



Aldi's new cold store and warehouse was built using ISD's single envelope construction to increase energy efficiency. (Photo courtesy of ISD Solutions)

system from Kingspan. Twenty thousand square meters of controlled environment insulated wall panels were installed on the project to ensure controlled temperature levels within the cold facility. Top deck insulated panels were also used for its ambient roof. A press release on the project points out that the 1.5MWp solar PV system of 10,000 square meters covering around 15,000 square meters of roof area consists of 6,000 modules, 250 Wp each. This provides Aldi with 1.2 GWh of electricity per annum, improves the energy performance of the building, and reduces its lifetime running costs.

LEED Certified

Many design/build elements, such as solar panels, have gained popularity because of heightened interest in LEED certification. While interest in solar panels has waned somewhat due to fewer available incentives, companies like Primus Builders, a provider of design-build services, has been involved in a host of LEED certified buildings. In fact, the company has three projects considering LEED certification.

"Many of our clients have made the corporate decision to set an industry standard for sustainable design and construction," says Matt Hirsch, President, Primus Builders. "Key areas of focus include decreasing energy consumption, achieving zero landfill, and pursuing larger quantities of locally sourced materials."

One example is a recent project for Mullica Hill, a member of AGRO Merchants Group, where Primus provided design and

in recent years his firm has seen an increase in clients looking to build large temperature controlled facilities or distribution centers using a "single envelope" design.

"This is where the coldstore is also the external of the building," he explains. "This contrasts to the traditional and still widely used method of construction, which is effectively having two buildings, one inside the other."

The latter configuration requires insulation between the shells and a roof void for a fire prevention sprinkler system. "These are costly, in terms of raw materials, time consuming to build, and not particularly sustainable or energy efficient," Simmons says. "With a single envelope construction, build times are faster and fewer materials are required and that results in cost savings."

Designing a single envelope building

includes selecting appropriate materials such as thicker insulation, which lower the "U value" (the rate of heat transfer through a building element over a given area under standardized conditions), and save on energy costs. The final stage, installation, ensures the required air tightness that maintains the thermal efficiency of the cold facility.

"IACSC recommendation for air leakage is 0.5m³ per hour per m² at 50 Pascal's," Simmons adds. "We aim to achieve 0.2m³ per hour per m² or less and have installed several single envelope projects that have achieved 0.1m³ per hour per m² at 60 Pascals."

An example of such a project is Aldi's new cold warehouse and distribution center at Goldthrope, near Barnsley, England. Here, ISD Solutions incorporated high performance insulated panels and a solar PV

construction services on a 130,000-square-foot cold storage facility in Pedricktown, New Jersey.

“New Jersey provides incentives to firms that incorporate renewable energy components into their businesses,” Hirsch explains. “It was imperative to Mullica Hill that the team focus on reducing energy consumption and earning those incentives.”

Primus proposed several options: The ALTA Expert System (a refrigeration system that does not require an engine room but operates as standalone roof top units with evaporators inside the refrigerated space that provide cool temperatures while taking up less space, using less piping and using less energy); LED lighting outfitted with motion sensors to reduce energy, and VFDs on larger motors, which allows for motor speed control.

“Mullica Hill incorporated all of these suggestions,” Hirsch reports. “Because the savings were more than five percent above the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) established level for lighting, the New Jersey Clean Energy Program awarded Mullica Hill their incentives.”

Another project in which Primus Builders was involved was the U.S. Cold Storage (USCS) facility in Covington, Tennessee. The challenge here was the fact the design-build required the new 315,000-square-foot distribution and warehouse facility to be attached to an existing 815,000-square-foot ice cream production facility operated by Unilever.

“The LEED scorecard was studied, and only points that would maximize USCS and Unilever’s return on investment were



LEED points are being achieved in areas like sustainable sites, water efficiencies, materials and resources, energy and atmosphere, and innovation and design.”

— MATT HIRSCH, *President, Primus Builders*

selected,” Hirsch explains. “LEED points are being achieved in areas like sustainable sites, water efficiencies, materials and resources, energy and atmosphere, and innovation and design.”

Specifically, evaporators were installed with a lower fan horsepower to capacity ratio and control evaporator speed with VFDs to save energy by reducing the motor power and the refrigeration load contribution from the evaporator fan motors. A VFD was installed on the reciprocating booster compressor to save energy by improving part load compressor efficiency. The compressor oil cooling was upgraded from liquid injection to glycol, which increases compressor capacity and reduces compressor shaft power requirements.

“It also requires a condensing pressure of only 90 psig compared to liquid oil cooling, which requires 120 psig,” Hirsch explains. “Primus will also install a VFD on the high stage screw compressor to improve the efficiency of the part load compressor.”

In addition, Primus installed oversized condensers with a higher MBH/horsepower ratio to increase energy efficiency by reducing motor power. VFDs were installed to control condenser fan speed. Lighting was upgraded

to LED lighting with motion sensors, and motion-activated, low-flow fixtures were installed to reduce water waste.

“As a result, this building uses 44 percent less water than a typical building of its size,” he says.

Other elements included using native plantings in the landscaping that are drought-resistant, and sourcing regional materials.

“This regional sourcing approach reduced carbon emissions associated with transporting the materials,” he adds.

Primus installed solar-reflective materials to ensure the building’s roof and paved areas do not create an irregular “heat island” in a rural setting. Light pollution was mitigated with outdoor fixtures that cast light downward and not beyond 15 feet of the property.

In addition, Primus honored USCS’ goal of recycling 75 percent of all related construction waste and demolition debris. “This minimized negative impact on the landfills and diverted reusable materials back to the manufacturing process,” Hirsch explains.

Hirsch emphasizes that with the advent of the International Green Construction Code, owners have a standard for minimum sustainable requirements that is universal around the world. “One area that is receiving more attention today is the focus on *how* a sustainable project is built,” he remarks.

When asked what best practices and standards he sees being introduced today for companies to follow, Hirsch points to the most prevalent as: low charge ammonia refrigeration systems; facilities designed to support future sustainable elements such as reinforced roofs to support future use of solar panels; and water reduction in refrigeration.

“Public refrigerated warehouses require 50 to 100 gallons per minute to operate,” he stresses. “Reductions in refrigeration process water offer a large opportunity for improvement.”



Primus installed solar-reflective materials to the U.S. Cold Storage facility in Covington, Tennessee, to ensure the building’s roof and paved areas do not create an irregular “heat island” in a rural setting. Light pollution was mitigated with outdoor fixtures that cast light downward and not beyond 15 feet of the property. (Photo courtesy of Primus Builders.)

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Refrigeration equipment is one of the key energy-consumption areas addressed in a new guidance document the IACSC-IARW Construction/Codes Committee submitted to the U.S. Green Building Council to help the group create LEED certification standards for refrigerated warehouses.

LEED ENERGY CREDITS FOR COLD FACILITIES

IACSC and IARW have taken the lead in developing guidelines for green design.

By Alexandra Walsh

The IACSC-IARW Construction/Codes Committee expects to hear in October 2015 whether the U.S. Green Building Council (USGBC) has approved the committee's formal guidance document created for designers of cold storage and refrigerated facilities to use to certify buildings under USGBC's LEED rating system. However, some operators and contractors have already succeeded in using the guidance document to earn points for projects.

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve dif-

ferent levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project. LEED version 4.0 is the newest version of the world's premier benchmark for high-performance green buildings.

LEED 4.0 currently references many areas that are not regulated by existing ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) standards, therefore there is no basis for comparison. ASHRAE standards define the minimum energy performance of buildings, but when applied to refrigerated storage facilities (and most industrial buildings), parts of the standard are not relevant. For instance, refrigeration equipment is not addressed.

The purpose of the guidance document the committee created is to add procedures necessary for rating energy performance of refrigerated storage facilities. It presents recommendations for best practice design that could be used and interpreted by designers of refrigerated storage facilities, or any section

of that building, as the minimum baseline building model.

How the Guideline Came to Be

“The potential LEED points are very high for anything energy related,” explains Marcus Wilcox, PE, CEO of Cascade Energy and an author of the guidelines. “And for a LEED project, regardless of the kind of facility, there is an intensive modeling process that occurs.”

Wilcox says that for the vast majority of commercial buildings, the state energy code defines the baseline – the minimum design considerations you would have to accommodate to build a code-compliant building. And the big challenge with cold storage, or any industrial facility, is that LEED did not address those things. Therefore, says Wilcox, when these facilities tried to go after LEED points, there was no consistency or baseline for their modeling.

“There are 110 possible credits when you’re trying to obtain LEED certification and one energy efficiency credit alone is worth 19 points,” Jake Stefan, Vice President of ARCO Design/Build, Inc., and one of the authors of the guidelines. “I know from experience how hard it was to get this credit without a baseline.”

Stefan recalls how seven years ago when there was no baseline to model a future



The purpose of the document is to provide a step-by-step guideline on how to build an energy model for a new build, expansion or renovation of a cold storage facility.”

— JAKE STEFAN, VICE PRESIDENT, ARCO DESIGN/BUILD, INC.

building against, you could get 10 points or no points. “It had the potential to really be more of a political discussion at that point. It would come down to how a given USGBC reviewer might interpret your plan and whether they had any historical experience approving energy credits for cold facilities —

who reviewed your document and how well you could negotiate based on your data — and that’s not what it should be about.”

Then about five years ago, the committee, which had successfully worked with USGBC to come up with solutions for some other problematic LEED credits – the low hanging fruit – increasingly became aware of the importance of having a baseline, and the energy credit became the committee’s focus.

“This was not the low hanging fruit – this was not an easy solution,” recalls Stefan. “We knew USGBC was going to be stressing energy more and more and increasing the value of the energy model, and we knew we had to pay attention to it, and that led to the reality that we would have to build the baseline.”

A diverse team was assembled that included mechanical engineers, industrial refrigeration baseline and modeling experts, energy consultants, contractors, and individuals who brought to the table a knowledge of the expectations of USGBC, ASHRAE, and IIAR (International Institute of Ammonia Refrigeration).

“That started a two and a half year process that appears to be culminating with positive feedback from USGBC,” sums up Stefan. “They like the documentation and our process and they gave us the green light to start referencing the guidelines if we notify them in advance so they could apprise the reviewers.”

Why the Guidelines Are Important

“The purpose of the document is to provide a step-by-step guideline on how to build an energy model for a new build, expansion or renovation of a cold storage facility,” explains Stefan.

“This is not a baseline or a dictation on how you should design and construct a cold storage building,” says Stefan. “It doesn’t make getting LEED certified a certainty. It is a guide to tell you how much energy your new building is going to consume and it does make it easier to



Warehouse doors are a key element of an effective energy efficiency program.

qualify to potentially get 19 points – and that many points can be the difference between barely certified and earning LEED Gold.”

But, Stefan emphasizes you still have to go through the difficult and expensive process of determining what to put in your building to be more efficient above and beyond the baseline.

It's well known that energy is the second largest cost of doing business for refrigerated facilities, and as Stefan points out, mechanical equipment is the biggest part of that energy consumption.

“Now the mechanical, refrigeration or energy consultant – those most knowledgeable about how to build energy models and extract data from the mechanical equipment selections – will have a reference tool they can use to compare energy efficiencies,” says Stefan. “They can work with the owner and show them the system they're designing, how it will operate, and how it can be tweaked to make energy savings become a reality.”

Stefan adds this will allow the owner to look at labor costs, look at the range their energy

costs should be within, and be able to plan accordingly how much they'll have to charge per pallet to make profit points.

“The reason the model is so important is because it was once so difficult to convince your USGBC reviewer that your new building was more efficient, the onus was entirely on you to make your arguments convincing and if they weren't, you didn't get the points,” says Stefan. “The baseline, when accepted, will be black and white – here's the baseline, here's how much power our building will be using, here's how much more efficient it is, do the easy division and agree with it. Now you have a method that won't be questioned.”

Why LEED Certification

“Basically, if a facility has LEED certification, it shows the company agreed to a certain level of energy efficiency and was designed, constructed and operates using a minimal amount of energy,” explains Ron Vallort, PE, of Ron Vallort and Associates, Ltd., and another guidelines author.

“LEED certification might be important for some facilities because working towards sustainability might be a part of a mission statement, the facility's executives might consider it part of being socially responsible and a good corporate citizen within the community, or good for marketing, or it might be important because its important to their clients,” adds Vallort.

“The beauty of LEED elements that help you use less energy and water is they have a very clear Return on Investment (ROI),” points out Wilcox. “I'm a big fan of energy points because an engineer can actually calculate and measure the payback over time.” But for other LEED elements, Wilcox concedes, owners have to be willing to put a softer analysis to the financial return.

Wilcox also recommends trying to leverage a local utility efficiency program that offers incentives for energy efficiency upgrades. “Half to two-thirds of GCCA members are located in an area where the local utility provides incentives – if you're spending money to get LEED points, doing this will help your ROI.”

“At some point, there will be an interest from the owner's standpoint in knowing what LEED ultimately costs per point, and that varies dramatically by project or the LEED point you're pursuing,” cautions Wilcox. “But if you're building a warehouse and want to target what will increase the overall cost of the project, there's a value in our industry helping owners understand that some points are straightforward to get and some are more

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nebulous or very design dependent.”

Wilcox believes the biggest bump in the road ahead for cold storage facilities seeking LEED certification will be the lack of clarity around the cost and ROI for points. “Experience and examples will be helpful, but the technology keeps changing and the cost and savings potential will always vary.”

Last Thoughts on LEED

“We’re taking a baby step in the right direction by creating an energy modeling guideline that’s getting positive response,” concludes Wilcox. “But it’s very important that people have a clear understanding of the tangible value that LEED certification will give them, and that they don’t have false expectations of, for example, the marketing value of LEED.”

“Also,” adds Wilcox, “It’s imperative that you have a design/build contractor that really understands the LEED process and/or has a LEED expert on their team.”

Stefan says there are three important points to know about the LEED energy modeling guidance document. “Don’t read it and think you’re supposed to understand it – that’s the purpose of the energy mod-



It’s imperative that you have a design/build contractor that really understands the LEED process and/or has a LEED expert on their team.”

— MARCUS WILCOX, PE, CEO, CASCADE ENERGY

eling expert you’re hiring. It’s not changing the building minimum code. And, it doesn’t make it easier to get LEED certified, but it makes it doable and predictable.”

EDITOR’S NOTE:

While still under review, USGBC has indicated the industry may start using the guidelines as a reference. IACSC and IARW recommend that designers notify USGBC if they intend to use the guidelines, which are available for complimentary download to members and non-members.

In addition to Stefan, Wilcox and Vallort, IACSC and IARW wish to recognize the fol-

lowing individuals who authored and reviewed the guidelines as well as members of the IACSC-IARW Construction/Codes Committee: Eric Smith, International Institute of Ammonia Refrigeration; Benjamin Skelton, Cyclone Energy Group; Glen Thomas and Rob Travis, Cascade Energy; and Charles Toogood, M&M Refrigeration, Inc.

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BUILDING THE CULTURE OF CONSTRUCTION SAFETY

Implementing an effective health and safety culture is up to each of us.

By Gary Ganson

Protecting an employee from being injured or becoming ill while on the job is a process that continues to evolve. While this effort has been with us long before the Occupational Safety and Health Administration (OSHA), the desire for enhanced workplace safety requires constant improvement based on initiatives that instill within each person affected, the desire to be a participant.

What this means is each of us has a duty and responsibility regarding workplace health and safety.

Programs to enrich the safety culture within a company and workplace seek to improve processes that focus on achieving a balance between risks and injury/illnesses.

This balance is achieved by recognizing that risks are inherent to our daily lives. But, learning to recognize risks, minimize them, or prevent and control them to reduce or eliminate the likelihood of an incident, should always be our objective.

So, how do we improve the safety culture in our organization?

First, we must recognize that construction work is extremely dangerous with hazards surrounding every employee. When reviewing the statistics for fatalities in the construction industry, we find that over the last decade, the number of fatal incidents has

not declined in the construction industry as it has in general industry. The approximate number of construction-related fatalities has steadily increased in percentage from 17 percent of all fatalities in 2002, to about 21 percent in 2012 (National Census of Fatal Occupational Injuries).

Creating a safety culture is an ongoing, never-ending process. Innovative safety advocates contributed to changes in the perception of safety by suggesting the focus should be less on compliance and numbers, and more on the practice of observing and changing behaviors.

There are many companies that can work with employers to assist in the development and implementation of a safety program that improves the safety culture for all employees. Recognizing that this is an expense, each employer must evaluate the cost of an injury compared to the cost of prevention.

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Tuesday, October 27, 2015
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*Presenter: Gary Ganson, CIH, CSP,
National Practice Leader, Director
of Industrial Hygiene Services,
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The threat of accidents and injuries causing catastrophic physical, emotional, and financial damage are always looming over both small and large businesses. Join Gary Ganson to learn more about the different types of accidents and injuries that can happen, and their associated costs. Learn how to build a culture that enables employees to be proactive in preventing accidents and injuries through awareness and protocols. GCCA Members can participate free of charge as a benefit of membership.

*More information can be found
at www.gcca.org.*

Just as an owner wouldn't build a warehouse without a plan, safety also needs a plan. Development of that plan will help prevent the loss of employees and equipment, project delays, and increase the ability to maintain operations.

As many contractors recognize, there is a benefit to a good safety program when bidding on new projects. One measurement when construction companies bid on projects is their safety performance and programs. A company with an Experience Modification Rate (EMR) greater than 1.0 is usually considered an at risk company and the same evaluation occurs when the OSHA loss ratios are included in the evaluation. Typically, companies with poor records are excluded from the bidding process.

One construction safety concern that has received considerable attention is that most construction sites are multi-employer work sites. With numerous contractors on a work-site, there is a greater chance that workplace safety responsibilities become decentralized with no direct understanding of safety management and oversight. Given that the activities at most construction project will include numerous ongoing projects, each with many inherent hazards, having a broad-based approach that includes all employees looking out for themselves and each other is a critical part of the project safety program.

A healthy and safe work environment

begins with commitment and a program tailored to fit the company, to blend with its unique operations and culture and to help employers maintain a system that continually focuses on prevention of workplace injuries and illnesses. Every effective program should include management commitment and leadership, employee involvement, work-place analysis, hazard prevention and control, safety and health training and performance goals and measurement.

The injuries most likely to occur on the construction site of a warehouse or distribution center are pretty typical and include slips, trips and falls, electrical injuries and being struck by objects. Not surprising considering the amount of equipment moving around the project, elevated work platforms, electrical installations, high-voltage systems and frequent lifting of heavy items. How effective the company is in preventing injuries from these high risk hazards depends on the ability of employees to both recognize the nature of the hazards and what steps they can take collectively and personally to prevent them from causing an injury or contributing to an illness.

Here are some tips to developing and maintaining a safe and healthy construction workplace.

Establish a Team Environment

The larger the company, the easier it is to

designate a health and safety officer. The smaller the company and the fewer the employees, the easier it can be to collectively implement a safety culture with all the employees. The safest companies are those where employers and employees work together to make safety and health a priority and a responsibility equal to that of production and quality.

This collaborative safety environment can be established by following a few key steps.

- Safety begins at the top and must involve everyone at the facility in health and safety including in policymaking, employee committees and other safety related activities. Every employee needs to know his or her input is critical and important and valued when they focus on their own safety and the safety of their co-workers.
- Post the company's written safety and health policy or other safety slogans as regular reminders of the company's commitment to health and safety.
- Invest the company's time, effort and money in the safety and health program. Show that it is an important piece of the company's operating expenses and procedures.
- Abide by all safety and health rules — this applies to all staff, no exclusions.
- Hold regular meetings and training that focus on employee health and safety.



It's vital that everyone in the workplace be properly trained in safety procedures including supervisors and managers.



Workers must understand how safety procedures and rules benefit them.

Analyze Potential Problems

In order to establish an effective health and safety program, management and employees must perform scheduled evaluations of all worksite conditions to identify and eliminate existing or potential hazards. A few important steps will ensure a successful workplace analysis.

- Involve all employees in the hazard analysis process and include their knowledge of the job and tasks in the development of the prevention strategies. It will help minimize oversights, ensure a quality hazard analysis and get workers to “buy-in” to the solutions.
- Review the worksite’s history of accidents and occupational illnesses that needed treatment, resulted in losses that required repair or replacement, and any “near-misses” in which an accident did not occur, but could have. These are indicators that the existing hazard controls may not be adequate.
- Discuss the hazards employees observe in their current work and surroundings. Brainstorm with them for ideas to eliminate or control those hazards. Don’t wait



Recording and analyzing near-misses is essential in determining whether hazard controls are adequate.

until the job hazard analysis is complete or an incident occurs to fix any problems that can be corrected easily.

Practice Prevention

The work environment and work practices should be continually reviewed to control or prevent workplace hazards. Implement a pro-

grammed approach to prevention strategies.

- Begin by regularly and thoroughly maintaining all equipment.
- Ensure that hazard correction procedures are in place and that all employees understand and follow safe work procedures.
- Always make sure all employees that need Personal Protective Equipment

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(PPE) know how to use and maintain their equipment. Proper care of this equipment ensures worker safety. This is critical when it comes to arc-flash prevention, hearing protection devices, eye protection and, if necessary, respiratory protection.

- Develop a safety checklist. Cover recognized hazards daily.
- Reinforce safe and healthful work activities by employees, again daily.

Train Thoroughly

It is vital that everyone in the workplace be properly trained including supervisors, managers, part-time and temporary workers.

- Hold emergency preparedness drills.
- Train supervisors and managers to recognize hazards and understand their responsibilities – they are the front line in worker health and safety
- Allow only properly authorized and instructed employees to do any job.
- Pay particular attention to employees learning new operations to make sure they have the proper job skills, tools and hazard awareness.

A health and safety plan is only as good as the company's compliance with that plan. Compliance with the health and safety program is an essential management tool, a good business practice and a moral obligation.

How do you know if your safety culture is effective in preventing injuries or illnesses?

- The best way to gauge your safety culture is to observe and stay engaged with your employees. Company owners and supervisors need to visit project sites at different times to observe whether workers are following the safety rules or properly using their personal protective equipment.
- A simple questionnaire is a good tool to get feedback from employees without the employees feeling threatened. You may learn that employees are not following safety rules, or they feel the rules are too restrictive, or they don't make sense.

Another tool to determine if your safety program is safe enough is to examine accident reports. Remember, though, that they only give you historical information about accidents that are actually reported. Consider including information from near-miss reporting. There are solid statistics that indicate how the number of near-misses directly correlates to increased lost-time accidents. Again, near-miss reporting depends on employee feedback. Workers

should be encouraged to reflect about the near-misses they might encounter every day, and be assured that when reporting these near-misses, there will be no negative consequences.

Once a company has collected data that reflects how well workers are adhering to the company's safety culture or whether there are shortcomings in cultural attitude, the data will hopefully be used to enhance the safety program, and the outcome will result in no injured workers.

So often, all paths to safety lead back to effective communication. Workers must understand the intent behind the rules and procedures they are asked to follow, how it benefits them, and why it is important. @

GARY GANSON is a certified industrial hygienist and a certified safety professional with Nova Consulting Group, Inc., in Kansas City, Missouri.

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Agricultural exports in Latin America increase by about 8 percent annually and represent almost a quarter of the region's total exports.

LATIN AMERICAN COLD CHAIN CONFRONTS FSMA

Exporters encouraged to upgrade food safety plans to meet compliance rules.

By Sheryl S. Jackson

Fruit and vegetable sections of U.S. grocery stores look more like farmers' markets these days as an abundance of fresh produce is available year-round, regardless of the growing season or produce native to the area.

Consumer demand for fresh fruits and vegetables, as well as trade agreements that open the door for exports, has increased Latin America's impact on global agricultural production and trade.

Although there are differences among countries in Latin America, the region is a significant food exporter, according to a report by the World Bank. Agricultural exports have grown at about 8 percent annually since the mid-90s and represent

almost a quarter of the region's total exports – more than Latin America's share of any other sector in world trade. Latin America is also a bigger player at a global level – representing 13 percent of agricultural trade, up from 8 percent in the mid-90s, according to the 2013 World Bank report titled "Agricultural exports from Latin America and the Caribbean: harnessing trade to feed the world and promote development."

As members of the Latin America cold chain work to meet the demand for exports, new food safety guidelines for agricultural products entering the United States will add additional documentation and temperature monitoring requirements as a result of the Food and Drug Administration (FDA) Food Safety Modernization Act (FSMA).

Although FSMA was signed into law in 2011, many of the regulations are just now reaching the final rule stage, explains Lowell Randel, Vice President of Government and Legal Affairs for the Global Cold Chain Alliance. "The law requires about 50 rules, but the recently released Final Rule on Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food rule comprises the core requirements of the regulation."

The good news is that members of the Latin America and U.S. cold chain will have some time to implement processes required to meet FSMA regulations. “Larger businesses will have one year to comply and smaller businesses will likely have between two and three years,” says Randel. Even though cold chain members have some time to attain compliance, it is important to take steps now to prepare, he suggests. The first step for any business shipping food into the U.S. is to register with the Food and Drug Administration (FDA), which is not a burdensome process, he says.

The next step to prepare is to become familiar with the regulations and determine if the business is subject to preventive controls. “Businesses that handle only packaged products that require temperature-control will be subject to modified requirements that will likely have minimal impact on the business. Under the modified requirements, the focus is squarely on temperature control and documentation,” says Randel. However, he adds that companies that process food or handle raw foods, such as fresh produce, that are exposed to the elements, do have to comply with more stringent requirements.

FSMA Requires Enhanced Food Safety Plan

Because temperature-controlled storage and transport of materials is the “bread and butter” of GCCA members, Randel says the documentation required to prove foods have



All Latin American businesses that handle or transport food into the United States should begin developing updated food safety prevention plans earlier rather than later.

been kept at safe temperatures will not be out of line with what U.S. companies and many international companies are already doing.

The challenge for companies handling products exposed to the environment will be implementing the process and tools to enable compliance with FSMA if the company currently has no food safety plan that would help meet the key elements of a food safety plan required under the preventive controls rule. A FSMA-compliant food safety plan includes all of the following:

- **Hazard analysis** that identifies and evaluates hazards for each type of food manufactured, processed, packed, or held at the facility.

- **Preventive controls** that significantly minimize or prevent hazards identified in the hazard analysis. Preventive controls include process controls, food allergen controls, sanitation controls and a recall plan.
- **Monitoring procedures** that are documented to ensure that preventive controls are consistently performed.
- **Corrective actions** that are taken if preventive controls are not adequately implemented, to minimize the likelihood of problems reoccurring, to evaluate the food for safety and to block problem food from entering commerce.
- **Verification of implementation and effectiveness** that establishes measures that include product testing and environmental monitoring, as appropriate to the facility, the food and the nature of the preventive control.

In addition to preventive control rules, the FDA has also proposed two rules related to imports that will impact Latin American countries. The Foreign Supplier Verification Program (FSVP) requires importers to take steps to help ensure that imported human and animal food are as safe as that which is produced domestically. The second rule is a program for the accreditation of third-party auditors, also known as certification bodies, to conduct food safety audits and issue certifications of foreign facilities and the foods for humans and animals they produce. Communication between Latin American companies and importers in the United States will be critical for efficiency and compliance under the FSVP, points out Randel.



Companies that process fresh produce for export that is exposed to the elements do have to comply with more stringent requirements under the FSMA.



New food safety guidelines for agricultural products entering the United States will add additional documentation and temperature monitoring requirements.

Importers will not generally be required to obtain certifications, but in certain circumstances the FDA may use certifications from accredited auditors to determine whether to admit certain imported food into the United States that the FDA has determined poses a food safety risk.

The FDA has also created a fee-based Voluntary Quality Importer Program (VQIP) for the expedited review and importation of foods from importers who achieve and maintain a high level of control over the safety and security of their supply chains.

Similar to the Transportation Security Administration's pre-check service at U.S. airports, the VQIP will provide a number of benefits including expedited entry and reduced sampling by the FDA, says Randel. "Latin American companies should take a look at this program once it is finalized," he suggests. "Even with fees to participate, the investment might be a marketing differentiator for businesses that want to promote more predictable deliveries as delays at the border are minimized."

The FDA-Mexico Food Safety Partnership

In 2014, the FDA and Mexico's National Service for Agro-Alimentary Public Health, Safety and Quality (SENASICA) and COFEPRIS (Comisión Federal para la Protección contra Riesgos Sanitarios: Federal Commission for Protection against Sanitary Risks) signed a statement of intent to form a partnership to promote the safety of fresh and minimally processed agricultural products.

The partnership focuses on preventive practices and verification measures and includes the exchange of information on each country's safety systems, culturally specific education and outreach materials to support compliance with FSMA requirements, identification of common approaches to train auditors, and enhanced communication on laboratory activities, outbreak responses and trace-back activities.

Although in its infancy in implementation, the U.S.-Mexico partnership is positive for the cold supply chain and can serve as a template for other Latin American countries, says José Manuel Samperio, M Sc. Latin America

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technical consultant for USA Poultry and Egg Export Council (USAPEEC). “The most important lesson to be learned is that from the beginning, planning included the U.S. government, the Mexican government and industry representatives.”

Even with positives, there are challenges, he points out. “Although the FDA has provided training seminars to the food industry, COFEPRIS has not been involved in the total coverage training program and third-party certification companies have not yet been certified by the FDA,” says Manuel Samperio. Even with these challenges, the availability of resources to help Mexican cold chain members prepare for FSMA compliance is valuable.

All Latin American businesses that handle or transport food into the United States should begin developing updated food safety prevention plans earlier rather than later once the final rule is approved, suggests Manuel Samperio. “Businesses should also obtain special training and certification from the Custom-Trade Partnership against Terrorism (C-TPAT),” he

recommends. “At this time, only one plant in Mexico and Central America is certified.” While not focused on food safety, C-TPAT certification can provide benefits including reduced inspection fees, customs fees, cargo fees, increased speed to market and an immediate positive effect on a company’s bottom line.

Even after final rules are published there will be a need for clarification of some points. For example, during the comment period, there were questions about the handling of food that has clearly been mis-handled. “As third-party logistics providers, many in the cold supply chain do not own the product so they have no standing to destroy it, but they also have no control over what happens to the product if the owner takes it back,” says Randel. Even as this and other points are clarified, Randel stresses the importance of investing time and resources in learning about FSMA preventive controls and implementing processes that bring the company into compliance.

Although penalties associated with non-compliance with FSMA regulations won’t

be identified until the final rule is issued, Randel points out that a Latin American company’s non-compliance can be serious. “The U.S. FDA cannot close a Latin American food processor or transporter, but it can take the company off the list of businesses allowed to bring food into the country,” he points out. “GCCA will help members of the cold chain stay up to date on FSMA requirements by continuously updating its online resources.”

Manuel Samperio recommends working with experts to gain a better overview of FSMA. He adds, “Focus on the areas of preventive controls, inspection and compliance, imported food safety, response to outbreaks and enhanced partnerships.” @

SHERYL S. JACKSON is a freelance writer based in Alpharetta, Georgia, United States, who specializes in industry issues and trends.

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MEMBER NEWS

NEWS FROM MEMBERS OF GCCA CORE PARTNERS

AGRO MERCHANTS GROUP began the expansion of Gestion Frio Algeciras (GFA), located inside the Port of Algeciras, Spain. The additional 10,000 pallet positions will increase capacity to support existing customers and allow the company to diversify further its services for temperature-controlled food products. GFA specializes in the fresh and frozen logistics sector and provides a range of services including transport, inspections, warehousing, picking, and other value-added services.



A M KING hired Joe Day as Project Engineer. His duties include submittal review, RFI management, contract administration, document management and assisting with project manager responsibilities.



AMERICOLD launched the next generation of its temperature-controlled supply chain visibility and reporting tool, i-3PL. The company's i-3PL application offers customers a portal view to track inventory throughout more than 145 Americold facilities across the United States.



ARCO DESIGN/BUILD participated in National Fall Prevention Stand-Down 2015. The event raised awareness of preventing fall hazards in construction. In other news, company Vice President Jake Stefan, an IACSC Board Member, was awarded the Young Alumnus of the Year Award by Marquette University's Opus College of Engineering.



BALTIMORE AIRCOIL COMPANY introduced the PF_i Closed Circuit Cooling Tower featuring the patent-pending OptiCoil System.



CRYSTAL LOGISTIC COOL CHAIN LIMITED began construction of a new temperature-controlled cold storage at Bhiwandi (Mumbai), which is near Vadape. The facility will include freezer, chiller, controlled ambient, and ambient space. The first phase of the

project will be completed by January 2016, and adds 10,000 pallet positions to the company's capacity. The location will be further expanded to up to 20,000 pallets at a later date.



DEARMAN released a report that previews the booming global cold chain in the coming years and the environmental impact it will have using current technologies. Dearman is a clean cold and power technology company that is developing and demonstrating a portfolio of proprietary technologies that harness liquid air to provide zero-emission power and cooling for applications such as transport refrigeration and warehouses. The Dearman transport refrigeration system, an alternative to today's transport refrigeration units, is currently undergoing on-vehicle testing and is performing well. Commercial field trials are set to begin later this year. A copy of the report is available at www.dearmanengine.com under "Reports & Guides" on the home page.



DEMATIC introduced an order fulfillment solution, AMCAP, which automates the palletizing of mixed cases. AMCAP stands for Automated Mixed Case Palletizing. The solution is ideal for grocery retailers, beverage distributors and producers of consumable products. The company also introduced a suite of new solutions for retailers and wholesalers looking to optimize their e-Commerce order fulfillment capabilities, as well as the Dematic Managed Services program, a new service designed for proactively protecting customer investments. With Managed Services, customers outsource to Dematic the day-to-day IT functions of their system to improve operations (maximize uptime) and reduce expenses (minimize costs).



DIVERSIFIED TRANSFER & STORAGE (DTS) earned the Safe Quality Food (SQF) Certification. SQF is administered by the Food Marketing Institute and is recognized by the Global Food Safety Initiative benchmark. DTS is the first public cold storage warehouse in Utah to earn SQF Level 2 Certification.

FOODCAREPLUS launched a new deep-frozen reefer consolidation service from Halifax to Antwerp, allowing the Canadian seafood industry to more easily reach the European market. The launch of the weekly reefer service follows discussions during and after a tour organized by the Canadian Mission to the European Union, the Port of Antwerp and Foodcareplus during the Global Seafood show in Brussels in 2014.



ESI GROUP USA designed and built a 272,000-square-foot distribution center for U.S. Foods in Flowood, Mississippi that will service 4,000 chefs, restaurants and food-service operators in Mississippi and Louisiana. The company also added Michael Kopp to its mechanical engineering department. Kopp comes to ESI from HGA in Milwaukee and is a registered P.E. and certified Commissioning Process Management Professional (CPMP). Jeff Fallos also joined the company as a licensed designer of electrical systems. This certification allows him to take direct responsibility for the electrical design of his projects.



HANSON LOGISTICS added 12,000 pallet positions of deep frozen storage in the recently completed fourth phase of the Hanson Logistics Chicago Consolidation Center.



KINGSPAN INSULATED PANELS launched its new BENCHMARK by Kingspan CORE Alliance Partner Program. The partnership-based program promotes closer, more symbiotic relationships with customers who exclusively market and install the BENCHMARK by Kingspan line of products. BENCHMARK also announced the Designwall line of insulated metal panels now feature an added built-in benefit: a high-performance joint. The new joints offer superior performance in air and water penetration resistance.

Continued on page 27

ASSOCIATION NEWS

NEWS ABOUT GCCA CORE PARTNERS

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GCCA members have a new tool to track and take action on important industry legislation – the GCCA Advocacy Portal. This legislative tracking resource includes a full list of topics supported and opposed by GCCA and details on both federal and state legislation. In minutes, members can take action by completing a, prewritten draft letter that automatically fills in the necessary contact details. The tool also locates relevant members of congress by location. The new portal is located under the Resources tab on the GCCA website.

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GCCA hosted a Cold Chain Executive Connection in Canada that attracted 15 senior level cold chain professionals representing more than 90 percent of the cold storage space in the Ontario region. The education and networking luncheon took place on June 11, 2015, in Toronto and featured Ontario MPP, Michael Harris, who spoke on key tax, transportation, and infrastructure issues.

LINEAGE LOGISTICS, LLC named logistics and transportation veteran W. Gregory “Greg” Lehmkuhl as Chief Executive Officer. Current CEO Bill Hendricksen transitioned into the role of Vice Chairman.

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POLYGUARD PRODUCTS’ MECHANICAL DIVISION introduced Alumaguard Lite White to its family of flexible cladding membranes. It is a peel-and-stick membrane primarily designed to be used indoors for mechanical rooms, food production areas or other indoor applications where a glossy white appearance is desired, and outdoors to weatherproof exterior-insulated ductwork, piping or other insulated tanks, vessels and equipment. It can also be used indoors on pipe systems and ductwork where a true zero perm vapor barrier is preferred.

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PRIMUS DESIGN SERVICES, LLC, the architecture and engineering division within Primus Builders, Inc., was ranked #90 in the *ENR Southeast* list of the Southeast’s Top Design Firms, up 25 spots from last year.

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IARW European October Warehouse Council Meeting, slotted for October 1, 2015, in Copenhagen, will bring together members for strategic dialogue around industry trends, challenges and opportunities

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The 35th **IACSC** Annual Conference & Expo will be held November 5-7, 2015, at the Cosmopolitan Hotel in Las Vegas. This event is the only one in the world dedicated to cold storage construction, design, and maintenance. Attracting over 200 warehouse operators, contractors, and suppliers, the event features opportunities to discuss and learn about the latest trends, regulations, and technologies impacting cold storage construction, along with a world-class Expo.

THE RAYMOND CORPORATION received the Manufacturing Leadership Award in the Operational Excellence Leadership category from The Frost & Sullivan Manufacturing Leadership Council. The company was also honored with both an Excellence in Practice Award and Citation for its Course Manager Training and Development Program by the Association for Talent Development.



Executives of The Raymond Corporation display their two awards from the Association for Talent Development.

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IRTA has established a special relationship with Scopelitis Garvin Light Hanson & Feary (Scopelitis), a law firm specializing in transportation legal issues. Through this special relationship, Scopelitis lawyers will aid IRTA members in understanding if they need legal assistance with their transportation challenges at no cost. If it is determined that legal assistance is needed, IRTA members will receive a 10 percent discount on Scopelitis rates if they decide to use them as their legal representation. ☎

SWIRE COLD STORAGE appointed Andrew (Andy) Sanderson as Service and Operations Director. He will also serve as an Executive Director on the company’s board.

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U.S. COLD STORAGE OF CALIFORNIA earned certification through the British Retail Consortium (BRC) under the Global Food Safety Initiative (GFSI) for three additional California facilities; two in Tulare and one in Fresno.

● ● ●

VERSACOLD LOGISTICS SERVICES appointed Mark Dienesch to its executive team and named him leader of its sales and marketing customer solutions team. Mark joins the company from iMD Health, where he was COO. The company also named Jim MacIntosh to its executive team and appointed him leader of its warehousing solutions business unit. ☎

NEW MEMBERS

NEW MEMBER COMPANIES OF GCCA CORE PARTNERS



IARW-WFLO WAREHOUSES

BSL Group

Karachi, Pakistan

Canneberges Becancour Management

St-Louis de Blandford, Quebec, Canada

Konoike-Pacific (KPAC)

Wilmington, California, United States

IARW ASSOCIATES

Climate Changers Technology Solutions Pvt Ltd.

Bangalore, Karnataka, India

Industrias Refridcol S.A.

Valle del Cauca, Colombia

J&C International Ltd

Guelph, Ontario, Canada

Keen-Summit Capital Partners LLC

Melville, New York, United States

SunDanzer Refrigeration

Tucson, Arizona, United States



WFLO MEMBERS

Chelsea International Cold Storage and Logistics, LLC

Bradenton, Florida, United States

ColdHubs

Owerri, Nigeria

SunDanzer Refrigeration

Tucson, Arizona, United States



IRTA

PLM Trailer Leasing

Daytona Beach, Florida, United States

FreshDirect

Long Island, New York, United States

IACSC SUPPLIERS

Industrias Refridcol S.A. Supplier

Valle del Cauca, Colombia



IACSC CONTRACTORS

J&C International Ltd

Guelph, Ontario, Canada

2015-2016 CALENDAR

SEPTEMBER 14-17, 2015
ABIAF-GCCA Cold Chain Symposium & Movimat Brazil
Sao Paulo, Brazil

SEPTEMBER 16-18, 2015
IARW North Pacific Fall Chapter Meeting
Stevenson, Washington, United States

SEPTEMBER 20-22, 2015
IANA Intermodal Expo 2015
Fort Lauderdale, Florida, United States

SEPTEMBER 27-29, 2015
IARW Southeastern Chapter Meeting
Fort Lauderdale, Florida, United States

SEPTEMBER 28-29, 2015
Latin America Cold Chain Congress
Guadalajara, Mexico

SEPTEMBER 30-OCTOBER 1, 2015
IARW Heartland Chapter Meeting
Kansas City, Missouri, United States

OCTOBER 1-2, 2015
IARW Southwestern Chapter Meeting
Austin, Texas, United States

OCTOBER 15-17, 2015
International Indonesia Seafood & Meat (IISM) Conference and Expo 2015
Jakarta, Indonesia

OCTOBER 18-19, 2015
GCCA South Africa Cold Chain Summit
Cape Town, South Africa

NOVEMBER 5-7, 2015
35th IACSC Conference & Expo
Las Vegas, Nevada, United States

NOVEMBER 17-18, 2015
India Cold Chain Exp (ICE)
Chandigarh, India

DECEMBER 3, 2015
IRTA Cold Chain Executive Connection
(in conjunction with Cargo Logistics America)
San Diego, California, United States

JANUARY 30-FEBRUARY 2, 2016
52nd WFLO Institute
Atlanta, Georgia, United States

MARCH 7-8, 2016
GCCA European Cold Chain Conference & Expo
Amsterdam, The Netherlands

APRIL 16-20, 2016
125th IARW-WFLO Convention
Las Vegas, Nevada, United States

JUNE 18-20, 2016
3rd WFLO Graduate Institute
Chicago, Illinois, United States

*For more details go to www.gcca.org/events



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Cold Chain Industry Mourns Loss of Fred Walker

FRED WALKER, Americold's Vice President of Engineering Support, passed away on Monday, August 10, 2015.

"Fred was a dynamic team leader with Americold for over 41 years before retiring in July," reflects Fred Boehler, Americold President and COO. "He was admired for his leadership throughout the organization. He had a way of assessing what a person needed, meeting those needs, and helping them to achieve their full potential."

He served in the United States Air Force after graduating from high school in 1964. He joined Americold in 1974 as Chief Engineer of the Oklahoma City facility. In 1980, he was promoted to Special Projects Engineer, and after three years, was promoted to Midwest Division Engineer. He moved to Atlanta in 1987 as Manager of the Corporate Engineering Department, and was named Vice President of Engineering in 1988.

He earned an Associate Degree in Mechanical Engineering Technology from Rose State College in Midwest City, Oklahoma, in 1980, completed Frick Factory Service School in 1983, completed a three-year Refrigeration Research Foundation Course at the University of Oklahoma in 1985, and completed a Refrigeration Design Course at the University of Illinois in 1988.

He was a member of RETA (Refrigerating Engineers & Technicians Association) since 1987. A member of the IIAR (International Institute of Ammonia Refrigeration) since 1985, he served two terms on their Board of Directors (1991-94 and 1994-97), was named IIAR's Member of the Year in 1999, served as Chairman of the IIAR Safety Committee, served on the Executive Committee 1998-2001, and served as IIAR's Chairman of the Board for one year (2000-2001). He served on the WFLO faculty for the 2009 session teaching a basics refrigeration class to first-year students. He was elected in 2009 to a three-year term on the Board of Governors for the WFLO (World Food Logistics



Whether he was attending one of his grandsons' baseball games, planning a cruise to the Caribbean, or teaching an engineering class to new leaders, Fred was full of zest and charisma."

— FRED BOEHLER, AMERICOLD PRESIDENT AND COO

Organization). He also served on the Lanier Tech Advisory Board.

Fred was involved with 40 construction projects over the four decades he was at Americold. Although he has a multitude of outstanding accomplishments, Fred always felt that one of his greatest achievements was being a major part of the Americold Engineering Department's growth from a single-management department to a multi-management department over the years.

"Fred was a special person that we will hold dear to our hearts," adds Boehler. "Whether he was attending one of his grandsons' baseball games, planning a cruise to the Caribbean, or teaching an engineering class to new leaders, Fred was full of zest and charisma. We'll remember Fred as a humble and gentle person."

"From my perspective, Fred's biggest impact was on the people who worked with and for him. He not only cared for you as an associate or employee, but cared for you as a person," remembers Jim Romine, Senior Director of Engineering, Lineage Logistics. "He was not only a great leader that set direction and focus, but a real teacher at heart."

"Professionally, Fred Walker was an accomplished and successful man," said Fitzgerald (Fitz) Speare, Senior Director, Facilities & Maintenance, Americold. "He will always be respected and admired by all who worked for and with him."

WFLO board member Neal Rider said on behalf of the team at AGRO Merchants Group, "Fred will be deeply missed by those in our industry who relied upon him for his knowledge and advice. Mostly though, we have all lost a great friend and special man."

"Fred had the ability to take any negative and turn it into a positive or a solution," reflected Hank Bonar, CEO, Bonar Engineering. "Fred could relate to everyone on an equal bases. I saw it over and over again as we taught classes together at many industry events."

"Fred was a giant among men, not only to his family but also to the cold storage industry," remembers Angelo Antoci, IARW Chairman and President, US Growers Cold Storage. "IARW and its affiliate organizations will greatly miss him. Fred was truly one of God's gentlemen."

"I learned more about the power of dedication to a task or an assignment from Fred than anyone else professionally. His stick-to-it-ness is legendary. He was dogged in his pursuit to resolve issues," echoed Erik Gunderson, Executive Vice President, Primus Builders. "The only thing that may have rivaled his work ethic is his love for his grandchildren, whom he always loved to share stories about."

Fred's GCCA family holds his wife, Maxine, his two children, Rodney and Tina, and six grandchildren, in our thoughts. ☺

JAMISON: INDEPENDENT THIRD-PARTY TEST LAB RESULTS

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The HCR calorimetric environmental test chamber at CTS Labs in Urbana, IL

HCR pioneered the air door market 37 years ago and now has over 4000 worldwide installations. Until recently there was no authoritative, independent third-party test lab data that documented the efficiency of the unique HCR air door. A three-month evaluation was recently completed, and those results are now available to the marketplace.

Creative Thermal Solutions (CTS) is a leading test lab for products in the HVAC and refrigeration industries. They test products that claim to offer increased energy efficiency, reduced energy consumption, and environmental sustainability. CTS labs recently conducted an extensive thermal performance analysis on HCR air doors. **The results verified that the HCR Model AC (Single Air Door) is 80% energy efficient* when stopping air infiltration and energy transfer between rooms with different temperatures.**

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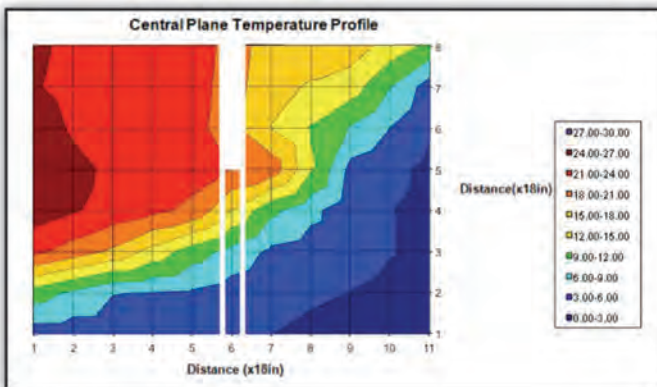
For more details about the CTS test results, visit www.hcrairdoors.com

JAMISON | HCR Air Doors

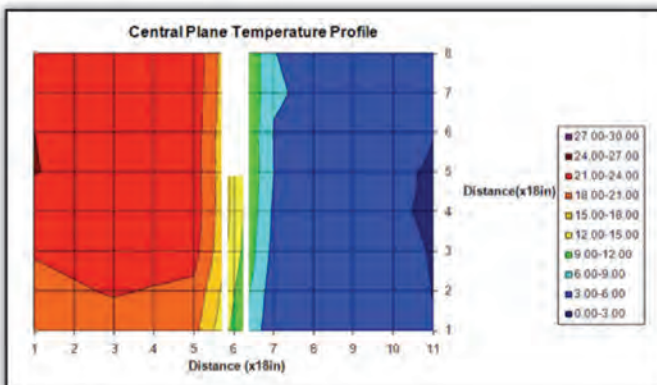
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*For details and the lab performance report visit www.hcrairdoors.com, contact your Jamison or HCR representative, or call 800-326-7700. Request the White Paper on the Evaluation of Horizontal Recirculatory Air Curtain Efficiencies – Cooler to Conditioned Space, D. Rhyner, HCR, Inc.



Temp profile: air door off



Temp profile: air door on

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