

## MINI-PENTHOUSES: GOOD THINGS COME IN SMALL PACKAGES

Construction cost savings and long-term energy savings are just a few benefits.



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### About the Cover

The use of mini-penthouses, which house one evaporator each, is a growing trend. Learn more in the cover story on page 10. (Photo courtesy of ARCO Design/Build and ALTA Refrigeration.)



# LEADOFF

## IACSC GROWTH AND PARTNERSHIPS



**A**S THE INTERNATIONAL Association for Cold Storage Construction (IACSC) approaches its 34<sup>th</sup> Conference & Expo from November 6-9, 2014 in Boca Raton, Florida, USA, I want to share with you some of the IACSC accomplishments during the past year and what lies ahead for the organization.

First, I'm pleased to report that IACSC has the largest membership in its history and has grown significantly by 13% during the past year.

This growth demonstrates the commitment of many companies in the cold chain industry—suppliers and PRWs alike—to the continued advancement and innovations in warehouse construction and operations.

The past few years have seen a growing partnership between members of IACSC and members of the International Association of Refrigerated Warehouses (IARW) as we have collaborated on several important projects for our mutual benefit.

Each year, a good portion of the attendees at the IACSC Conference & Expo are warehouse operators from IARW. They recognize the business benefits of attending our education programs and networking with IACSC members.

Conversely, many IACSC members also attend the annual IARW-WFLO Convention & Expo. Just a few months ago at this year's IARW-WFLO Convention in San Diego, IACSC sponsored the unique evening reception aboard the U.S.S. Midway, one of the highlights of the meeting. This offered us unprecedented exposure to IARW members, many of whom sent me emails afterward saying how much they were impressed with this event.

IACSC is continually monitoring and responding to trends in cold storage construction, including the need for improved energy efficiency and other sustainability aspects of new construction. By working closely with our PRW colleagues, we are also gaining a deeper understanding of their operational needs and how cold storage design and construction practices can support them.

We also understand the increasing financial pressures that all cold chain businesses face and we are continually exploring efficient solutions to help ensure that we all operate successful companies.

IACSC goals for the coming year include building our membership even further, and offering more high-quality education programs and networking opportunities. To achieve these goals, we have formed new committees to address each of these areas, including the Marketing, Business Development, and Education committees.

You can see some of these new initiatives in action at the upcoming 34<sup>th</sup> IACSC Conference & Expo from November 6-9, 2014. It will be held at the famed Boca Raton Resort, A Waldorf Astoria Resort, in Boca Raton, Florida, USA. Our theme will be "Shift Your Work Into Higher Gear."

Finally, I want to thank the excellent staff at the Global Cold Chain Alliance (GCCA) for their hard work throughout the year to make IACSC successful. We couldn't do it without you! I also want to bid a fond farewell to former GCCA President & CEO Bill Hudson, who has retired following a long and successful career leading GCCA and its Core Partners. Bill, you are an outstanding leader and we wish you well in your new endeavors. ☺

WADE HUDSON  
Chairman, 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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# CHANGES IMPACTING CHEMICAL FACILITIES RECOMMENDED

*Presidential Working Group proposes changes to PSM and RMP regulations.*

By Lowell Randel

In response to the tragic accident last year in West, Texas, President Obama issued Executive Order (EO) 13650, Improving Chemical Facility Safety and Security. The EO is intended to enhance the safety and security of chemical facilities and reduce risks associated with hazardous chemicals to facility workers and operators, communities, and responders.

The Executive Order directed Federal departments and agencies to:

- Improve operational coordination with, and support to, state and local partners.
- Enhance Federal agency coordination and information sharing.
- Modernize policies, regulations, and standards.
- Work with stakeholders to identify best practices.

Since the signing of the EO, a working group of federal agencies led by the Department of Homeland Security (DHS), Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) has been working to implement the order and identify additional actions to improve chemical safety and security. Some of the potential policy changes could have a significant impact on the cold chain, particularly companies with more than 10,000 pounds of ammonia subject to Process Safety Management (PSM) and the Risk Management Program (RMP).

For example, OSHA released a Request for Information seeking public comment on proposed changes to the PSM standard. GCCA partnered with the International Institute of Ammonia Refrigeration (IIAR), American Frozen Food Institute (AFFI), American Meat Institute (AMI), and the Refrigerating Engi-

neers and Technicians Association (RETA) in communicating concerns about the proposals.

The EO also tasked the working group with providing a report to President Obama by the end of May 2014 highlighting the actions taken to date and future recommended actions. The report entitled *Actions to Improve Chemical Facility Safety and Security—A Shared Commitment* was released on June 6, 2014. The report highlights activities undertaken to improve chemical facility safety and security and provides a consolidated plan of actions to further minimize chemical facility safety and security risks.

The status report includes an analysis of existing regulatory programs to inform immediate actions as well as a consolidated Federal Action Plan of priority actions. The Federal Action Plan is organized by five thematic areas:

- Strengthen community planning and preparedness.
- Enhance federal operational coordination.
- Improve data management.
- Modernize policies and regulation.
- Incorporate stakeholder feedback and develop best practices.

Of the five thematic areas, the one with the greatest potential to impact companies in the cold chain is “Modernize Policies and Regulation.” The report details a series of action



items under this theme to change regulations including PSM and RMP. Here is a list of the actions of most interest and concern.

## **Modernizing OSHA’s PSM Standard to Improve Safety and Enforcement**

Building on the PSM Request for Information, OSHA plans to move forward with developing a proposed rule to modernize the PSM standard. Key actions recommended in the action plan include:

- Clarifying the PSM standard to incorporate lessons learned from enforcement, incident investigation, advancements in industry practices, root cause analysis, process safety metrics, enhanced employee involvement, third-party audits, and emergency response practices.
- Adding substances or classes of substances to the PSM Appendix A List of Highly Hazardous Chemicals and providing more expedient methods for future updates.
- Expanding coverage and requirements for reactive chemical hazards, which have resulted in many incidents.
- Continuing harmonization with EPA’s RMP regulation.
- Requiring analysis of safer technology and alternatives.
- Requiring coordination between chemical facilities and emergency responders to ensure that emergency responders know how to use chemical information to safely respond to accidental releases, possibly including exercises and drills.

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## EPA's Risk Management Program (RMP)

Because of the close connection between PSM and RMP, the action plan proposes modernizing EPA's RMP regulations in a similar fashion to PSM. EPA is expected to issue a Request for Information and begin the regulatory process to change RMP. Some of the likely proposed changes include:

- Issuing a Request for Information and beginning the regulatory process to modernize RMP.
- Revising mechanical integrity requirements of safety-related equipment.
- Adding new requirements for automated detection and monitoring systems, or adding performance measures for facilities already using these systems.
- Establishing an obligation to track and conduct root cause analyses of frequent process events and near misses.
- Requiring employees to implement a stop work authority for employees who witness an activity that creates a threat of danger and providing clearly defined requirements to establish an ultimate authority on the facility for operational safety and decision making.
- Strengthening contractor safety requirements.
- Establishing mechanisms to implement the newest available technologies and methods.
- Requiring compliance audits be done by an independent auditor.
- Establishing new performance measurement and management review requirements.
- Clarifying what is required in order for a process hazard analysis (PHA) to be updated and revalidated, requiring revalidating PHA more frequently than every five years, and requiring certain events such as an incident to trigger PHA revalidations prior to the next scheduled five-year revalidation.
- Clarifying emergency planning requirements to ensure effective coordination with community responders and ensuring facility personnel practice the plans.
- Enhancing disclosure of key elements of a facility's risk management plan and program from facilities to improve community understanding of chemicals.
- Incorporating examination of the use of safer technology alternatives into the PHA.
- Using the Acute Exposure Guideline Levels (AEGs) developed by the NAC for Acute Exposure Guideline Levels for Hazardous Substances (NAC/

AEGL Committee) to recalculate RMP reporting thresholds and toxic endpoints for offsite consequence analyses.

## Developing Guidance and Outreach Programs to Help Industry Understand Process Safety and Security Requirements and Best Practices

In addition to proposing regulatory changes, the action plan suggests the development of resources to help industry understand regulatory requirements and best practices. This would include guidance on EPA and OSHA process safety terminology, how to conduct root cause analyses, and assistance for small businesses. OSHA would consolidate best practices for process safety and metrics from OSHA Voluntary Protection Program (VPP) facilities.

The order also proposes the development of a comprehensive regulatory fact sheet covering EPA, OSHA, and DHS programs, for state regulators, facilities, stakeholders, and other non-working group Federal agencies as well as a checklist of Federal regulations that stakeholders can use to determine regulations applicable to their facilities.

## Building a Stronger CFATS Program

The action plan also includes items designed to strengthen the Chemical Facilities Anti-Terrorism Standards (CFATS) program. DHS plans to solicit public comment on an ANPRM on potential updates to the list of chemicals of interest (COI) and other aspects of the CFATS regulation. Specific activities include:

- Improve the methodology used to identify and assign risk tiers to high-risk chemical facilities.
- Coordinate chemical facility security activities and explore ways to increase harmonization among chemical facility security regulatory programs.
- Identify facilities that should have submitted a CFATS Top-Screen but failed to do so.
- Work with Congress to seek long-term CFATS authorization to ensure that an authority lapse does not occur and to provide regulated chemical facilities with the certainty they need as they consider making substantial capital investments in CFATS-related security measures.
- Work with Congress to pursue action to streamline the CFATS enforcement process to allow DHS, in extreme circumstances, to immediately issue orders to assess civil penalties or to close down a facility for violations, without having to

first issue an order calling for correction of the violation.

Implementation of the Executive Order continues to be a high priority for the Obama Administration and the working group's report to the President highlights numerous regulatory changes that will be considered.

Many of the changes to programs such as PSM and RMP have the potential to impact companies in the cold chain. GCCA will continue to monitor implementation and actively engage with agencies throughout the process.

## New Demurrage Rules in Effect

Earlier this year, the Surface Transportation Board issued its final rule regarding demurrage liability. The new rule went into effect on July 15, 2014, and has the potential to substantially change a public warehouse operator's liability for demurrage charges.

Demurrage occurs when the receiver of a railcar detains the railcar past the free time allotted by the rail carrier. The rule imposes liability for demurrage charges on the receiver of the rail car without regard to whether the receiver is identified on the bill of lading as the consignee, consignor, the in care of party, or some other designation. The rule clarifies that the receiver must receive actual notice (written or electronic) before the receiver would be liable for demurrage charges.

The rule also eliminates current defenses that public warehouse operators have to avoid liability for demurrage charges. Under current law, the public warehouse operator is not liable for demurrage charges as long as it is not identified on the rail bill of lading as the consignee. Pursuant to the new rule, demurrage charge liability will be based upon the receipt of the rail cars and not upon any designation on the bill of lading.

IARW Warehouse Legal Partner John Horvath has recently developed an analysis of the rule and offers some recommendations, including sending a notice letter to rail carriers articulating all the reasonable operational constraints and other reasonable requirements it has regarding the placement and removal of rail cars.

Members who receive railcars are strongly encouraged to visit the GCCA website and review the report to learn more about the rule and ways to limit potential demurrage liability. ☞

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# MINI-PENTHOUSES: GOOD THINGS COME IN SMALL PACKAGES

*Construction cost savings and long-term energy savings are just a few benefits.*

**C**ost savings during initial construction, potential energy savings, less encroachment into storage space and more efficient zoned control of air temperature are just a few of the benefits attributed to prefabricated mini-penthouses to house air cooling equipment for cold storage facilities.

The use of mini-penthouses, which house one evaporator versus multiple units housed in traditional site-built, centralized penthouses, is a growing trend, says Jake Stefan LEED AP Building Design + Construction, Vice President of ARCO Design/Build in Atlanta, GA. “Their use for cold storage facilities began to increase about five years ago and they are common in food distribution and to some extent, food processing facilities.”

The reason for the growth is the more recent quality improvement of prefabricated penthouses, explains Matt Hirsch, Vice President of Sales for Primus Builders in Woodstock, Georgia. “Initially, the problem with manufacturer-supplied enclosed units was poor construction and vapor leaks that led

to a buildup of ice in the structure,” he says. “Now, the large refrigeration contractors are building the mini-penthouses in their shops, where they can better control quality.”

Quality control for prefabricated mini-penthouses is significantly improved over field-erected structures, says Stefan. “Shops have the tools, lifts, cranes and stands to produce more precise cuts and better welds,” he says. Because the units are constructed indoors, weather also doesn’t delay the schedule or affect the workmanship.

“The most difficult vapor seal in refrigerated structures is the wall of roof juncture,” points out Henry Bonar II, Chief Executive Officer of Bonar Engineering in Jacksonville, Florida. “Shop-built units provide this seal

unlike traditional penthouses constructed in the field because sealing the unit in the field is difficult and vapor leaks are the norm.”

“We have not used mini-penthouses in our facilities yet, but the first one will open in December 2014,” says Michael Lynch, Vice President of Engineering for United States Cold Storage in Voorhees, New Jersey. “Up to this project, we’ve installed centralized penthouses built on-site with two to eight evaporators per penthouse.” The decision to use mini-penthouses was made after the refrigeration contractor presented an alternative design that would represent a two to three percent cost savings for the project. “It made sense to try this approach to see what long-term benefits might be.”

The most significant costs savings was realized in the cost of structural steel required for the building. Centralized penthouses with multiple evaporators require extra support for the weight of the penthouse, explains Lynch. “The extra steel support must go into the footing and foundation of the building.” Because the weight of a mini-penthouse is less and the units are spread across a wider area of

the roof rather than one centralized location, supporting the weight requires less steel.

Another cost savings for owners and contractors is a more predictable schedule for new construction, points out Hirsch. “Installation time in the field is minimized because the units come with the equipment, piping, valves and electrical wiring already in the mini-penthouse,” he says. Scheduling multiple contractors for connections is simpler and weather does not delay construction of the penthouses. “One thing that must be kept in mind is that while we can speed up the schedule because the units are built in a shop, we do have to procure them earlier in the process,” he explains. “Mini-penthouses must be completed and set in place while we are setting steel.”

While more piping may be required, the cost is partially offset by the ability to use smaller diameter pipe, says Stefan. Use of smaller pipes means less support needed for pipes and less insulation required, he adds.

“The weight of a mini-penthouse, about 17,000 pounds, makes it possible to lift it by crane or by helicopter, if needed for some retrofit operations.”

#### Appropriate for Retrofits

New construction is not the only opportunity to use mini-penthouses, in fact, they work well for retrofits, says Marko Dzeletovich, P. Eng. (Professional Engineer), President of Coldbox Builders in Vaughan, Ontario, Canada. “Installation of prefabricated mini-penthouses enables a cold storage facility to continue operating during the retrofit construction,” he says. “The only time access to the freezer is restricted is a few hours while opening the roof prior to placement of the mini-penthouse.”

Because the unit is prefabricated, offsite or onsite in an adjacent building – which is how Dzeletovich handled one project – the complexity of scheduling different trades for construction on the roof and leaving the roof open for multiple days is eliminated. “We have the unit sitting next to the building and when the roof is open, a crane hoists it into place



An aerial photo of the new United States Cold Storage facility in Richland Township, Pennsylvania shows the use of traditional and mini-penthouses. The two mini-penthouses on the left side of the building demonstrate how the use of multiple prefabricated units can provide flexibility in the design of a building's cooling system. (Photo courtesy of Primus Builders.)



Mini-penthouses are constructed with evaporator, fan and all electrical wiring and piping already in place for connection. (Photo courtesy of Republic Refrigeration and Primus Builders.)



Prefabricating mini-penthouses improves quality control efforts and produces a single unit that is easily installed during new construction or renovation. (Photo courtesy of Republic Refrigeration and Primus Builders.)

and we close the roof,” he explains. “Several days of open roof space becomes hours, which eliminates the risk of weather and enables continued use of the space.” In fact, the only time employees cannot enter the space below the site of the penthouse is when the actual opening is made. Once the unit is in place, refrigerant and power are connected and the floor is insulated, he says.

The weight of a mini-penthouse, about 17,000 pounds, makes it possible to lift it by crane or by helicopter, if needed for some retrofit operations. There are some issues that should be considered for renovations or retrofits, points out Dzeletovich. “The existing roof must be able to support the weight of the unit in the new location and the unit must be braced to maintain rigidity during the hoisting process.” Even if the roof can sustain the weight, if the location is too far from the edge of the building to enable a crane to lift the unit, it may not be the best solution, he adds.

One benefit of mini-penthouses in new construction is the placement flexibility they provide, says Bonar. “If the rooftop



Mini-penthouses are placed on the roof prior to completion of the building – note the exposed joists and lack of roofing on building. At this point, piping and electrical is all that is needed for the units to be complete. (Photo courtesy of ARCO Design/Build and ALTA Refrigeration.)



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unit placement and the slope of the roof are coordinated in the design, the air units can be placed at the middle of the refrigeration load,” he says. Placing units strategically throughout the storage area improves the ability to control temperature zones and to improve air distribution. “The proper place can optimize the operating condition and make the system more efficient.”

While a penthouse with multiple evaporators may have one or two thermostats (TSTATs) associated with different zones, mini-penthouses offer the option of segmenting the facility into more distinct zones. “If an owner commits to six or more TSTATs, there is an increased upfront cost,” admits Stefan. However, the money spent now will improve temperature control and result in long term savings, he adds.

The ability to control units individually for each zone and delivering cool air more directly to the zones that may contain newly stocked, warmer product, represents potential energy savings as well, says Lynch. “Because the units don’t have to force air as great a distance as centralized facilities



*New mini-penthouses with all refrigeration and electrical complete. (Photo courtesy of ARCO Design/Build and ALTA Refrigeration.)*

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do, we can use smaller fans, which require less energy.”

While Lynch is waiting to see how mini-penthouses and other energy efficient equipment in the new facility will reduce costs, Timothy Nguyen, Regional Vice President, ESI Constructors, Inc. says, “Depending on the overall facility size and location, mini-penthouses cost approximately 10 percent less to operate per equivalent evaporator unit than traditional penthouses.” The combination of strategic placement, smaller fans and

ability to control each individually contributes to the savings.

#### Tax Savings Possible

In addition to cost savings on initial construction, some owners may realize tax benefits with the use of prefabricated mini-penthouses, says Stefan. If the penthouse is built onsite, the only items that qualify for tax incentives are the evaporator, fan and pump, a total of \$500,000, for example, he says. However, because the prefabricated unit includes walls, roof, piping

and electrical along with the evaporator, fan and pump, all costs of the unit qualify for tax incentives. Therefore, the total can increase to \$900,000 to include all components of the unit, for example. “Depreciation also applies to the cost of the entire unit versus the air cooling equipment only,” he adds.

The flexibility of mini-penthouse locations means a unit can be more easily located in an area where ductwork won’t interfere with storage space, points out Stefan. “They can be placed above doors or between storage racks,” he says. Owners and contractors can work together to plan locations to minimize encroachment of ductwork.

Installing ductwork is easier with mini-penthouses because there is no need for large steel girders to support the units, as there is with centralized penthouses, says Lynch. It is also easier to install fire protection systems without the steel support structure for central penthouses, he adds.

One unknown for Lynch and United States Cold Storage is how six different locations for evaporators on the new building’s roof will affect the inspection and maintenance workload. “With one central penthouse, employees go to one location to inspect and service all units,” he says. “We just don’t know if traveling between units will add time to the job.”

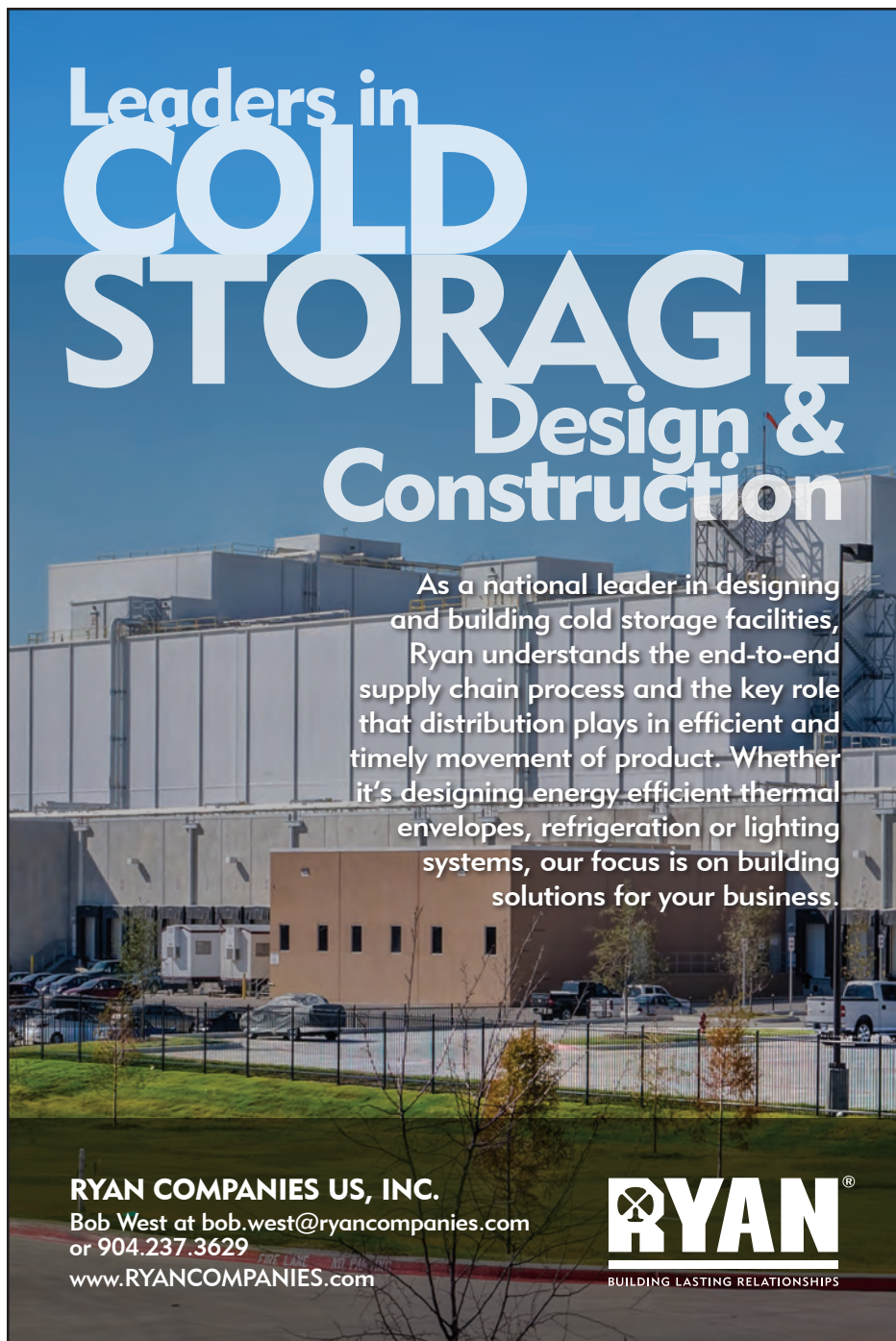
Maintenance and inspection should not add significant amounts of time because even when all equipment is housed in one penthouse, employees usually have to go outside the structure to warm up while servicing the evaporators and other components, points out Stefan. “With separate structures, employees can service or inspect one unit, then warm up as they walk to the next.”

Bonar points out that “maintenance is much easier because all of the air units do not need to be shut down when working on one unit’s fans.”

As the industry gains more experience with mini-penthouses, Hirsch believes the trend toward their use will continue to grow. He adds, “We have overcome the previous concerns about the quality of prefabrication with the refrigeration contractors’ involvement, and we are gaining more experience and more information about cost savings and other benefits.”

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

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# PRE-EMPLOYMENT ASSESSEMENT IS KEY to Effective Recruiting

*Supply Chain Operations Committee develops pre-employment assessment template to help vet candidates.*

By Alexandra Walsh



pre-employment assessment is a useful tool to augment employment applications, interviews, and other pre-employment screening activities.

In the summer of 2013, at its annual meeting at the GCCA Assembly of Committees, the GCCA Supply Chain Operations Committee began discussing pre-employment assessments. The discussion was initiated by a number of committee members who voiced their concern with the increasing challenges of hiring and keeping good employees and cited turnover rates between 30 to 50 percent in the first 90 days of employment. The committee identified the need to develop a pre-employment assessment template that reflected best practices, including how to validate tests and legal issues related to testing, and would help IARW Warehouse Members understand and design assessments for their own companies.

“You can come up with your own pre-screening process, but you might put yourself at legal risk, and you can buy off-the-shelf kits but they’re pricey and not tailored to our industry,” points out Marie Sullivan with Trenton Cold

Storage, Inc. and a volunteer on the subcommittee tasked with developing the template. “On the other hand, we knew almost everyone was doing their own screening and there were a lot of good ideas out there so if we could just share those ideas, we’d be able to develop a standardized, generic and robust tool.”

Sullivan was joined on the Pre-employment Assessment Template Subcommittee by Ken Johnson, MTC Logistics and Ralph Newton, U.S. Growers Cold Storage, Inc. with assistance from Mike Bolander, Columbia Colstor (Supply Chain Operations Committee Chairman, 2013-2014) and Tammy Wolfe, Lineage Logistics (Supply Chain Operations Committee Vice Chairman, 2013-2014), and GCCA committee staff liaison Tori Miller Liu.

Explaining the process of developing the template, Ken Johnson says, “We got people to send in the assessments they were currently

using, and we said what we liked, didn’t like, what was redundant, and what was probably against the law. Then we worked to create a template that reflected the best practices we identified and sent it out to the entire Supply Chain Operations Committee for approval.” Johnson adds, “This was a group process and the end product is an amalgam of all the people who worked on it and really reflects the best of our industry’s best practices in pre-employment screening.”

## The Templates

The document contains two sample templates. The first assessment is for administrative candidates applying for positions as a checker, clerk, customer service representative, and/

**Editor’s Note:** For additional information on pre-employment screening practices or other employment law issues, contact Jackson Lewis P.C. at +1 703 483 8335. Through a special arrangement with IARW, Jackson Lewis P.C. offers members a 15 percent discount. For more information, visit [www.gcca.org/resources/employment-law-inquiry-service/](http://www.gcca.org/resources/employment-law-inquiry-service/).

or receptionist. It specifically gauges understanding of basic math skills, vocabulary and spelling skills, logic and reasoning skills, and reading comprehension abilities.

The second template is for applicants to entry-level warehouse positions, such as warehouse associates, product checkers, order selectors, and temporary workers. The assessment specifically measures basic math skills and number perception or visual speed accuracy.

Johnson says there are elements of the template that his company has already put to use. "Our math section was pretty simple and the template's math area is far more extensive and we've implemented that." He says what you really want to get down to in the assessment are analytical skills. "When it comes down to it, it's hard to teach common sense to people and that's what we're looking for. They're going to have to think on their feet because we don't want to create robots."

Sullivan agrees. "Now we have assessments that are sufficiently complex for the job."

IARW strongly recommends modifying the templates to fit your company's specific needs and/or the specific position you are seeking to fill.

Johnson says that what the subcommittee and committee strived for was a strong template that would meet the average needs of the industry and work for almost everyone. "It's a template that's meant to be adapted but we're hoping our company can use at least 95, if not 100 percent, once it's been vetted in light of both corporate culture and state and local laws."



Visit [www.gcca.org/resources/human-resource-management/pre-employment-assessment-template-refrigerated-warehousing-logistics-companies/](http://www.gcca.org/resources/human-resource-management/pre-employment-assessment-template-refrigerated-warehousing-logistics-companies/) to download the sample templates.

Johnson notes he's already turned the template over to the company's human resources team because, "We still have to be careful that this is a good fit for our company. They're reviewing it and making notes and then it will be implemented. We already had a professional screening assessment and soon we'll have a much more professional assessment."

### Developing the Right Assessment

Aptitude assessments can be designed to gauge skills like arithmetic, reading, writing, sequence recognition, and/or interpreting diagrams. The level of aptitude needed will vary depending on the position, so it is critical to match the pre-employment assessment to job requirements.

Further, it is also important for employers to be able to explain how an assessment is relevant to a job description. (For sample job descriptions for the refrigerated warehousing and logistics industry, consult Chapter 3 of the *IARW Guide to Effective Warehouse Administration*.)

"One of the big fears in pre-employment screening is that you want an assessment that is relevant to the job that you're hiring for, but you don't want that specificity to be construed as discriminatory," explains Sullivan. "It's essential that the job description for the position accurately capture the skills that you are looking for."

Companies may also want to consider developing alternate assessments for individuals with disabilities. For more information regarding alternate assessments, please consult with your legal counsel.

### Validating Assessments and Defining Passing Scores

Pre-employment screening assessments can help predict good performance. To establish a correlation between assessment scores and performance, companies could validate pre-employment assessments, keeping in mind that assessment validation is dependent on specific operations.

One approach is to develop a baseline score by asking current employees to take the assessment. The scores of current employees could be compared to performance appraisals to establish if there is a correlation between screening scores and performance. Assessment validation can also help establish a minimum required score for job applicants. There are also alternative methods to determining a minimum score, such as assembling a committee of current employees to help determine an appropriate minimum score and design assessments.

"In the pre-employment assessments that were submitted as examples, there were some that allowed discretion on how results would be evaluated," says Sullivan. "That's something we did not want to have on the template, we wanted to be very clear on how the results should be assessed."

"You want to ensure that your pre-employment assessment does not result in 'disparate impact' and that it survives scrutiny under *The Uniform Guidelines on Employee Selection Procedures*," explains Garen Dodge, a shareholder in the Washington DC regional office of Jackson Lewis, GCCA's employment law service partner. These guidelines incorporate a single set of principles that are designed to assist employers to comply with requirements

**OFFICE USE ONLY SCORE SECTION IV:**

Answers to the template are provided below. The points earned for each correct answer are listed next to the answer. There is a possibility of 30-36 per section with a total of 100 points. Tally the subtotal of each section and then add all three subtotals at the end. If the applicant does not answer correctly, write zero (0).

Question	Answer	Possible Score	Applicant Score
<b>Section I</b>			
A.	121	2	
B.	34	2	
C.	\$46.25	2	
D.	\$14.28	2	
E.	10,860	2	
F.	30	2	
G.	\$21.45	2	
H.	\$2,500.00	2	
I.	1,312		
J.	552		
K.	75		
<b>Section II</b>			
A1.	22		
A2.	525		
A3.	300		
A4.	940		
AE.	1,765		

**OFFICE USE ONLY SCORE SECTION IV:**

Answers to the template are provided below. The points earned for each correct answer are listed next to the answer. There is a possibility of 30-36 per section with a total of 100 points. Tally the subtotal of each section and then add all three subtotals at the end. If the applicant does not answer correctly, write zero (0).

Question	Answer	Possible Score	Applicant Score
<b>Section I</b>			
A.	121		
B.	34		
C.	\$46.25		
D.	\$14.28		



of Federal law prohibiting employment practices which discriminate on the grounds of race, color, religion, sex, and national origin.

“This validation process will gauge whether any of the questions that are asked in your assessment are not job-related and that they measure what they purport to measure without disparate impact on certain groups of candidates such as women or minorities,” explains Dodge.

### Legal Concerns for Pre-Employment Practices

There are a number of legal and regulatory issues that should be considered when developing or conducting pre-employment screening assessments. IARW encourages all employers to consult with their legal counsel with regard to employment applications and hiring procedures. Further, IARW highly recommends reviewing any assessment with legal counsel prior to use to help avoid lawsuits resulting from pre-employment practices. The information provided in the pre-employment screening templates is offered as a guide only and should be vetted through legal channels prior to use.

Dodge believes that the biggest challenge at the pre-employment stage is to accurately and thoroughly communicate to the candidate what they’re getting into—the complexity of the job, the nature of shift work, and perhaps of most importance in the cold chain, the type of work environment they can expect. “Show them a video, give them a tour, let them talk to other employees doing the job, explain to them what the acclimation to the cold will be like,” recommends Dodge.

Johnson says when he is interviewing a potential warehouse employee, he makes sure he describes the job in great detail—in the freezer. “The most important part of the review process is when I take them into the freezer and explain the job process in detail for 15 to 20 minutes. It gives you an opportunity to gauge their demeanor and focus and whether they’ll be able to handle the most intense cold they’ve probably ever experienced.”

“Even though it might seem like employment laws set up a maze of legalities, it’s important to do due diligence and make sure you’re hiring people consistent with your company’s goals—that’s the most important thing you have control over,” sums up Dodge. “Be smart about it, keep it legal and don’t hesitate to ask relevant questions that make the most sense for the position you’re seeking to fill and the most sense for your company.”

In summing up the value of the pre-employment screening template he helped to

develop, Johnson says, “At the end of the day, our employees are our most vital asset as well as our largest expense, and I think the templates will help us lower our costs by lowering our turnover, hire better people, increase their longevity at the company, and ultimately run a more efficient operation.”

“This is a well-vetted and well composed assessment that turned out better than I had ever hoped and is a much more robust tool than our company was using before,” concludes Sullivan. “I’m really happy for all of

us because we have the means now to reduce the number of people that are not a good fit, even though they might interview extremely well, and don’t have the skills, even though they might have the desire. It will help us make fewer mistakes.”

**ALEXANDRA WALSH** is Vice President of Association Vision and a contributor to *COLD FACTS*.

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# PORT OF CARTAGENA

## Plans Expansion of Cold Chain Capabilities

*Technology and strategic Caribbean location ensure future growth.*

By Sheryl S. Jackson

**T**ravel publisher Lonely Planet describes Cartagena, Columbia as a “fairy-tale city of romance, legends and sheer beauty.” Cartagena is also the epicenter of Colombian industrial activity, due to its strategic location offering access to global markets.

Attendees at the 2014 Latin America Cold Chain Congress on October 6-7, 2014 will have an opportunity to learn more about the city, as well as the efficient logistics and modern port infrastructure that supports it (or its development). During the Congress, cold chain industry leaders will join more than 200 food industry leaders and international speakers to learn more about challenges and solutions to success in the global cold chain.

Cartagena is an ideal location for the upcoming conference because it serves as a major logistics center linking the Caribbean to more than 432 ports in 114 countries. The Port of Cartagena was classified a Level I port among 59 port structures in the Greater Caribbean, according to a study by the consulting firm Maritime & Transport Business Solutions. The report notes that Cartagena is a mature port in terms of accessibility, capacity, structures, equipment, and efficiency.

The port recently reached a record high of 2,018,389 containers moved at the end of 2012—an unprecedented achievement in Colombia. It is the fourth largest cargo handling port in Latin America, following the port of Balboa and Colon, both in Panama, and Santos, Brazil.

### **Perishable Shipments Increasing**

Refrigerated containers have always been a challenge, according to Erick Valencia, a member of the business and marketing department of the Cartagena Port Authority (SPRC). “Our reefer station started with only 170 plugs, which meant the main risk the terminal faced was a possible energy interruption.” Today, with 3,000 existing plugs between SPRC and the operator of the main terminal, Company Container Terminal Cartagena SA (CONTECAR), the major concerns are the energy, handling of perishable products, and general management and control of the cold chain. The additional capacity of the port has resulted in an increase



in reefer cargo, with exports increasing 66 percent between January and May of 2014, as compared to the same period in 2013.

“In order to avoid cold chain interruption, the terminal has invested in modern technology and well-trained human resources. For us, client satisfaction and a reliable perishable operation is the key for success in this specialized market,” explains Valencia. To maintain control of the cold chain, only the terminal operator is allowed to handle perishables and reefer containers, he points out.

There are plans for the port to enhance its position as a cold logistics distribution center, says Valencia. The port’s strategic location in the Caribbean, reputation as a port of call for key global container carriers and



## LATIN AMERICA COLD CHAIN CONGRESS

### Cartagena, Columbia 2014

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- Technology
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A vendor expo will give participants a chance to meet with vendors and learn about new products and services—a great opportunity for customers and providers. Attendees will have many other opportunities to meet colleagues, share ideas and learn from pioneers in the industry.

**When:** October 6-7, 2014

**Where:** Hilton Hotel Cartagena

**Registration and fees:**

USD \$ 300.00 GCCA members  
 USD \$ 350.00 General audience

**For more information contact:**

Debbie Corado, dcorado@gcca.org,  
 Daniel Galindo, dgalindo@gcca.org  
 or Elizabeth Guamuch, eguamuch@gcca.org

strength as a transshipment hub, position it to further increase its volume of perishable cargo. Valencia also mentions that “New cold storage facilities will be developed to face new challenges in this growing market.”

Currently, the Port of Cartagena does not have cold storage capacity and relies on plugs for containers, but Broom Columbia, a shipping and logistics company, is working with SPRC to develop a market assessment that will guide the development of a cold infrastructure at the port. The addition of cold storage facilities will allow logistics providers to integrate the cold chain from the port to the end user.

Technology is one of the port’s major strengths. Technology based on real-time information, RTG [rubber tired gantries] guidance systems based on global positioning system (GPS) technology, automatic gates and an online protocol that enables centralization of communications related to international trade activity positions the port as a technology leader, points out Valencia.

The movement of all equipment in the port – trucks, cranes and containers – is controlled to increase efficiency, explains Paulo Biazotti, CLS CLCOM. The ability to determine and assign functions based on cargo location and requirements has not only reduced operating costs by approximately 30 percent but has improved handling of perishables, he says. “In the case of reefers, the maximum time a container is disconnected from power is 25 minutes when loading.”

SPROnline is the website service that provides access for customers, port or governmental authorities and third parties to connect to the terminal in real time, says Valencia. “The site was developed to ensure and accelerate documental procedures, which has created a faster and paperless process throughout the terminal,” he says. “More than 2,000 registered online users logon daily.”

The port is positioned to continue growing in capacity and in importance to the region, says Valencia. “The port’s strategic location in the Caribbean, high productivity, information technology systems, high-tech equipment and human capital have been its keys to success in the strong and highly competitive market.”

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

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# GLOBAL DEMAND DRIVING REEFER SHIPPING

*Worldwide consumer demand for convenient perishable food products bodes well for continuing growth in reefer shipping volume.*

By William DiBenedetto

**D**rewry's *Reefer Shipping Market Annual Review and Forecast*, issued in September 2013, noted the worldwide perishable reefer trade increased by 52.1 million tons between 2002 and 2012, which represents by a compound annual growth rate (CAGR) of 3.6 percent.

The Drewry report said the highest percentage growth continues to reside in the exotic fruit category – pineapples, kiwifruit and avocados. “Despite its relatively small volume of 4.5 million tons in 2012, this sector has grown by a CAGR of 9.1 percent since 2002.” In terms of tonnage, the highest growth has been in the meat category (comprising poultry, pork, beef/veal, offal and sheep

meat), the report continued. This grew from 22.8 million tons in 2002 to 36.3 million tons in 2012, a CAGR of 4.8 percent. Seaborne trade in the meat category has grown by 8.3 million tons for a CAGR of 4.6 percent.

A recent report from *Research and Markets* forecast that the global chilled and deli food

*Editor's Note: This article is excerpted from “The Chill Factor” column, which ran in the May 2014 issue of Cargo Business News.*



Increased demand from a growing urban middle class in Asia is reopening markets for U.S. exporters, at a time when refrigerated equipment has migrated to other trades and is more costly to purchase and lease.”

— TSA

market will grow at a compound annual growth rate of 2.71 percent over the period 2012-2016.

“One of the key factors contributing to this market growth is the increase in demand for convenience in food products,” the report said. This market is also witnessing an increase in private label brands, according to the report, but adds the “highly fragmented market could pose a challenge to the growth of this market.”

An analyst from the report’s team said: “A large proportion of the private label growth is due to the consolidation and expansion of the retail food industry. More-

over, many retailers are entering this market by increasing their investment in the perishable department. The reason for this is the increased popularity of chilled and deli foods that are easy to cook...Even the developing countries are being increasingly exposed to private labels through retail expansion, which is leading to increased awareness of their benefits. Hence, the increasing number of private label brands could influence the market in both a positive and a negative manner during the forecast period.”

Earlier this month the 15-member Transpacific Stabilization Agreement westbound

section announced that rates for refrigerated containers carrying U.S. beef, pork and poultry to Asia will increase \$700 per Forty Foot Equivalent Unit (FEU) on July 1. TSA said “increased demand from a growing urban middle class in Asia is reopening markets for U.S. exporters, at a time when refrigerated equipment has migrated to other trades and is more costly to purchase and lease, and when freight rates do not fully cover acquisition, maintenance and operating costs.” At the same time, most refrigerated rates for so-called “protein” cargos are at their lowest levels in more than five years.

“We’re seeing a perfect storm develop in the westbound transpacific refrigerated segment,” said TSA-Westbound executive administrator Brian Conrad. “On top of expected organic demand growth in Asia and normal competition for equipment from other seasonal cargos such as summer fruits, a shortage of refrigerated rail cars in the U.S. is driving inland intermodal demand for containers and generator sets. Premature scrapping of specialty refrigerated ships is drawing equipment to north-south trades, particularly Central and South America.

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Sustainable rates are critical to equipment availability in this environment.”

Hamburg Süd is the most specialized carrier in Latin America, where a significant part of its revenue comes from the reefer market. It's also a market that has not been subject to the rate fluctuations seen on the Asia-Europe trades. The carrier is expected to face increasing challenges from rivals such as Maersk Line, which has a global reefer market share of around 25 percent and thus holds a considerable market share in South America. Add to the mix the new merger between Hapag-Lloyd and Chilean CSAV, and North-South competition is getting fierce.

“For us, the reefer market is a real market for the future. We are already one of the top five carriers in the reefer segment,” said Peter Frederiksen, member of Hamburg Süd's executive board, in a recent *ShippingWatch* interview. “Our new ships in the ‘Cap San’ class are intended to further improve this position,” he said. “At 9,600 Twenty-Foot Equivalent Units (TEUs), they are not only the largest ships ever built for Hamburg Süd, but they are also equipped with 2,100 reefer slots.

These are vessels that have the largest reefer capacity in the world, and Frederiksen said that from the first quarter 2014, Hamburg Süd is adding 6,500 new reefer containers that not only allow for a precise regulation of temperature, but—in compliance with our sustainable environmental philosophy—also have the lowest energy requirements on the [market].”

He said the line, which has more than 103 containerships and 458,000 containers, reviews its strategy on a regular basis and is pleased with its current partnerships: “We are not considering any other cooperation at the moment,” he said.

Barbara Pratt, Maersk Line director of reefer management technology and operations, said Maersk is not planning to add to its fleet of more than 250,000 reefer containers, except to replace older units with new ones as the need arises. “At the moment we don't anticipate a need to acquire additional reefers, but if the market is there we would,” she said. She added that, globally, there is no shortage of reefers: “Today there are plenty of reefer containers in the market.”

While there is enough reefer equipment on

an international basis, “it depends on certain markets,” Pratt said. Capacity issues could occur at times on a seasonal basis as demand in certain regions fluctuate, or if somebody decides to move cargo in reefer containers rather than use reefer ships. “The trick is to forecast and plan properly, anticipate where the demand is, when it starts, and then optimize the use of the equipment,” she said.

The food market continues to grow fairly consistently, Pratt said, especially as more people demand fresh fruit and vegetables year-round.

“The cold chain needs to be precisely timed and maintained from the point of pickup to the point of delivery, as any slight deviation in the process could cause serious losses in product, business and customer satisfaction,” said Steve Taylor, perishable station manager for AIT Worldwide Logistics, Inc. ☞

**WILLIAM DIBENEDETTO** is a Contributing Editor to *Cargo Business News*.

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# MEMBER NEWS

## NEWS FROM MEMBERS OF GCCA CORE PARTNERS

**ACCELLOS** and **HIGHJUMP SOFTWARE** have agreed to merge, creating a company with 11,000 customers in 23 countries with operations in North America, Asia and Europe. The combination of the two companies creates a product portfolio uniquely positioned to meet the advancing needs of retailers, distributors, manufacturers, and logistics service providers to manage complex order fulfillment cycles and collaborate with supply chain partners. **ACCELLOS** also released a video case study focusing on the positive benefits of industry partnership. This video case study was completed jointly with West Monroe Partners, a North American business and technology firm and Hopewell Logistics, a third party logistics provider in Brampton, Canada.



**AGRO MERCHANTS GROUP** and its founders partnered with funds managed by Oaktree Capital Management, L.P. to invest in the cold chain industry on a global basis. AGRO will focus on helping high-quality, family-operated companies grow to support their customers across broader geographies. AGRO's initial investments include Mullica Hill Group (Pedricktown, New Jersey, USA), Harthoorn Logistics (Barneveld, Netherlands), Europe Total Logistics (Rotterdam, Netherlands), Gestion Frio Algeciras (Algeciras, Spain), Wiener Kuehlhaus GmbH (Vienna, Austria), Lucca Cold (Vineland, New Jersey, USA.), Castlecool (Castleblayney, Ireland), and a new "Greenfield" location in Charleston, South Carolina, USA.



**AMERICOLD** promoted Fred W. Boehler, the Company's Chief Operating Officer, to President. Jeffrey M. Gault, President and Chief Executive Officer, is retiring and will continue to serve on the Americold Board of Trustees.



**BALTIMORE AIRCOIL COMPANY** promoted Don Fetzer to President in July 2014. Fetzer joined the company in 2011 as Managing Director – BAC Europe. The company was also featured for its Evaporative Cooling

Towers on the popular Science Channel television show "How It's Made." The BAC portion detailed the steps it takes to make a closed circuit cooling tower and was filmed at its manufacturing plant in Milford, Delaware, USA. The show aired Thursday, June 26, 2014.



**BITZER** is expanding its footprint in Malaysia to support the cold chain in the country. Construction and development is pushing Malaysia's HVACR growth.



**CLOVERLEAF COLD STORAGE** reopened its processing and warehouse complex in Napoleon, Ohio, USA following a collapsed roof caused by a blizzard in early 2014. A loading dock that services the Farmers Pro-

duce facility was completely destroyed and refrigeration to the production room was impaired. The incident caused no injuries and the warehouse was back in operation within days, but boxing, tempering, and processing operations at Farmers Produce were shut down and an expedited construction project was instituted.



**DATEX CORPORATION** introduced a special warehouse management software edition for cold storage and refrigerated warehouses. The Cold Storage Edition of Dutex Foot-Print WMS includes functionality specifically developed for temperature controlled environments including temperature capture, the ability to restrict inventory to specific temperature zones and handle inventory holds, inspections and quarantines.



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# MEMBER NEWS

## NEWS FROM MEMBERS OF GCCA CORE PARTNERS

**DEMATIC** opened a new engineering center in Seattle, Washington, USA and added more engineering staff to the Western Region of North America. In doing so, the company expanded its ability to support companies in California, Oregon, Washington, Nevada, Arizona, Idaho, and Montana.



**ESI CONSTRUCTORS, INC** was awarded The Associated Builders & Contractors of Wisconsin's 2013 Platinum Award of Honor. This honorary acknowledgement was presented to qualified ABC Members to mark their Zero Lost Time & Zero Recordable Accident Records.



**INTERSTATE WAREHOUSING** achieved a Level 2 Safe Quality Foods Certification for its India-

napolis (Franklin), Indiana, USA warehouse.



**LINEAGE LOGISTICS** acquired two cold storage facilities in Santa Cruz County, California, USA from Dreisbach Enterprises. With the addition of these two operations, Lineage now operates four warehouses in the region. Lineage's national footprint now comprises more than 550 million cubic feet across 104 facilities in 21 states. The company also broke ground on a state-of-the-art 340,000-square-foot cold storage distribution facility in Charleston County, South Carolina, USA in July 2014.



**MTC LOGISTICS** earned certification through the British Retail Consortium (BRC)

under the Global Food Safety Initiative (GFSI) for its distribution centers in the Port of Baltimore, Maryland, USA and the Port of Wilmington, Delaware, USA.



**NEW ORLEANS COLD STORAGE** will more than double the size of its existing storage space at the Port of Charleston, South Carolina, USA. The company also received an Award of Excellence from the International Freight Forwarders and Customs Brokers Association of New Orleans.



**NORPAC FOODS, INC.** and **HENNINGSEN COLD STORAGE CO.** celebrated the completion of their new 225,000-square-foot frozen food storage and distribution facility in Oregon with an open house for its farmer-owners, employees, partners and civic officials on June 30, 2014.



**POWER AUTOMATION SYSTEMS** was named by Food Logistics magazine, as a "Top Green Provider" in recognition of the energy efficient benefits received by customers of the company. The company also appointed Mark Schmidt, an executive manager with an extensive background in material handling systems and supply chain solutions, to serve customers with their warehouse management needs in account management.



**PREFERRED FREEZER SERVICES** announced the newest addition to its continually expanding footprint in San Leandro, California, USA. The San Leandro facility is the company's seventh cold storage facility in California and the thirty-third worldwide. The company also built a new facility in the Miami, Florida, USA area facility, which is the company's fourth cold storage facility in Florida and the thirtieth in the United States.



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**SEANUS** announced that Ronald Calloway is the new President of the company effective June 2014.



**STELLAR** acquired Industrial Refrigeration Services and Engineering (IRSE), a 25-person refrigeration services firm in Pottstown, Pennsylvania, USA. The company also launched an updated version of its Digital Process Safety Management software. The system features an updated look, enhanced functionality and more scalable infrastructure.

**THE KROGER COMPANY** selected Primus Builders to provide design-build services on a new, 1 million-square-foot cold storage distribution facility to be located on the old Fort Gillem Army Base in Forest Park, Georgia, USA.

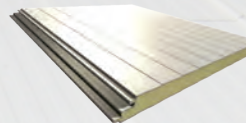


**THE RAYMOND CORPORATION** received the CNY BEST Learning and Performance Organization Diamond Award for its Course Manager Training and Development Program, awarded by the Central New York Chapter of the American Society of Training & Development. 📧



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DM40

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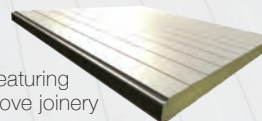
DM45

45" Mesa Wall Panel



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# ASSOCIATION NEWS

## NEWS ABOUT GCCA CORE PARTNERS

The 34th **IACSC** Conference & Expo is the only event in the world dedicated to cold storage construction, design, and maintenance. Attracting over 200 warehouse operators, contractors, and suppliers, this annual event features opportunities to discuss and learn about the latest trends, regulations, and technologies impacting cold storage construction, along with a world-class expo. Registration is open for the event to be held on November 6-9, 2014 at Boca Raton Resort in Boca Raton, FL. More information can be found here: [www.gcca.org/34th-iacsc-conference-expo/](http://www.gcca.org/34th-iacsc-conference-expo/).



**IARW** partnered with the *Refrigerated & Frozen Foods* magazine to publish its annual North American Refrigerated & Frozen Foods Warehouse Guide. This valuable resource lists North American cold storage logistics providers serving the refrigerated and frozen food markets and highlights IARW members' facilities.

It reaches over 15,000 individuals and is available in the July 2014 issue of *Refrigerated & Frozen Foods* magazine and online at [digital.bnppmedia.com/publication/?i=216568](http://digital.bnppmedia.com/publication/?i=216568).



**GCCA** and **ABIAF** are partnering to provide a keynote presentation and two education sessions at Movimat Brazil Supply Chain Logistics Expo, as well as a Cold Chain Pavilion located on the exhibit hall show floor. This 150 square meter pavilion will feature a collection of exhibitors focused solely on the global cold chain, including 3PL providers, materials handling companies, refrigeration equipment suppliers, and more. The event will be held on September 15, 2014 in Sao Paulo, Brazil.



Indonesia Cold Chain Association (ARPI) is hosting the International Indonesia Seafood &

Meat (IISM) Conference and Expo, supported by **GCCA**, in Jakarta from October 2-4, 2014. IISM is attended by buyers from retail, food service and cold connection industries as well as wholesalers, distributors, importers and exporters. GCCA is a proud supporting partner of this event, which is the region's leading seafood and meat trade show where new technologies and products are introduced to the global market.



The 1st **WFLO** Institute: Latin America was successfully launched in Panama City, Panama. This program provided Spanish-language education in critical areas including food science, facilities management, logistics, safety, leadership development, transportation; mirroring the curriculum of the North American WFLO Institute. With more than 25 students representing Central and South America, attendees received comprehensive educational content in the refrigerated third-party logistics industry. 🌐



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ENGINEERS OF FLOW



INTRALOGISTICS

# NEW MEMBERS

NEW MEMBERS COMPANY OF GCCA CORE PARTNERS



## IARW-WFLO WAREHOUSE

**Big Blue Logistics Corporation**  
Mandaue, Philippines

**Columbia Ice and Cold Storage**  
Hudson, NY, US

**Crystal Cold Storage**  
Navotas, Philippines

**Dalian Mingfeng International Logistics Co., Ltd**  
Dalian, China

**Frio Dock S.A.**  
Tortuguitas, Argentina

**Hussain Trading Agencies (Pvt) Ltd**  
Karachi, Pakistan

**South Texas Cold Storage, LLC**  
Corpus Christi, TX, US

## IARW ASSOCIATES

**Simpson Gumpertz & Heger Inc.**  
Waltham, MA, US



## WFLO MEMBERS

**Danone de Mexico**  
Cuajimalpa, Mexico



## IRTA

**Dalian Mingfeng International Logistics Co., Ltd**  
Dalian, China

**Hussain Trading Agencies (Pvt) Ltd**  
Karachi, Pakistan

**Ray Seafoods**  
Somerset, United Kingdom

**Refrigeracion Starr, S.A. DE. C.V.**  
Distrito Federal, DF, Mexico



## IACSC MEMBERS

**Dalian Mingfeng International Logistics Co., Ltd**  
Dalian, China

**Simpson Gumpertz & Heger Inc.**  
Waltham, MA, US

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## GCCA ONLINE LEARNING

This all-in-one learning management system offers critical courses for professionals in all sectors of the cold chain.

Example Courses:

- Food Safety
- CSA: Know the BASICS
- Health Hazards in Construction
- Compliance & Human Resources

Learn more at [www.gcca.org/learn](http://www.gcca.org/learn)



# 2014 CALENDAR UPCOMING EVENTS

**SEPTEMBER 15, 2014**

**ABIAAF-GCCA Cold Chain Symposium & Expo**

Sao Paulo, Brazil  
[www.gcca.org/abiaf-gcca-cold-chain-symposium/](http://www.gcca.org/abiaf-gcca-cold-chain-symposium/)

**SEPTEMBER 17-19, 2014**

**IARW North Pacific Fall Chapter Meeting**

Cle Elum, Washington, United States  
[www.gcca.org/events/iarw-north-pacific-fall-chapter-meeting/](http://www.gcca.org/events/iarw-north-pacific-fall-chapter-meeting/)

**SEPTEMBER 21-23, 2014**

**IARW Southeastern Chapter Meeting**

Charleston, South Carolina, United States  
[www.gcca.org/2014-iarw-southeastern-chapter-meeting/](http://www.gcca.org/2014-iarw-southeastern-chapter-meeting/)

**SEPTEMBER 29 - OCTOBER 1, 2014**

**IARW North Atlantic Chapter Meeting**

Newport, Rhode Island, United States  
[www.gcca.org/2014-iarw-north-atlantic-chapter-meeting/](http://www.gcca.org/2014-iarw-north-atlantic-chapter-meeting/)

**OCTOBER 2-3, 2014**

**ECSLA Fall Cold Chain Logistics Conference**

Athens, Greece  
[www.gcca.org/events/2014-ecsla-fall-cold-chain-logistics-conference/](http://www.gcca.org/events/2014-ecsla-fall-cold-chain-logistics-conference/)

**OCTOBER 2-3, 2014**

**IARW Heartland Chapter Meeting**

Indianapolis, Indiana, United States  
[www.gcca.org/events/2014-iarw-heartland-chapter-meeting/](http://www.gcca.org/events/2014-iarw-heartland-chapter-meeting/)

**OCTOBER 2-3, 2014**

**IARW Southwestern Chapter Meeting**

Grapevine, Texas, United States  
[www.gcca.org/events/2014-iarw-southwestern-chapter-meeting/](http://www.gcca.org/events/2014-iarw-southwestern-chapter-meeting/)

**OCTOBER 2-4, 2014**

**International Indonesia Seafood & Meat (IISM) Conference and Expo**

Jakarta, Indonesia

[www.gcca.org/events/international-indonesia-seafood-meat-iism-conference-expo-2014/](http://www.gcca.org/events/international-indonesia-seafood-meat-iism-conference-expo-2014/)

**OCTOBER 6-7, 2014**

**Latin American Cold Chain Congress**

Cartagena, Colombia  
[www.gcca.org/latin-america-cold-chain-congress-colombia/](http://www.gcca.org/latin-america-cold-chain-congress-colombia/)

**NOVEMBER 6-9, 2014**

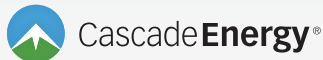
**34th IACSC Conference & Expo**

Boca Raton, Florida, United States  
[www.gcca.org/events/34th-iacsc-conference-expo-2/](http://www.gcca.org/events/34th-iacsc-conference-expo-2/)

**NOVEMBER 21-22, 2014**

**Indian Cold Chain Expo (ICE)**

Ahmedabad, Gujarat India  
[www.gcca.org/events/2014-indian-cold-chain-expo-ice/](http://www.gcca.org/events/2014-indian-cold-chain-expo-ice/)



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# COOL PEOPLE

PROFILING INFLUENTIAL PEOPLE CONNECTED TO THE COLD CHAIN INDUSTRY



**WALTER MAVES**

CEO

Maves International Software

Walter Maves is the CEO of Maves International Software, which has been an IARW Trade Associate for nearly 40 years. He has developed software solutions for the 3PL cold chain industry since 1973, and pioneered new concepts, automation and other aspects of software capabilities used in solutions today.

**CF:** (COLD FACTS) How did you get started in the industry?

**WALTER MAVES:** In 1973, I was asked to design software for Associated Freezers, an IARW member. That was solely because I was one of the very few people who knew how to program computers in those early days. As chance would have it, however, I also had five years prior experience managing Catalog Warehousing Operations (think Amazon without the technology).

**CF:** You have been involved with IARW for a long time, what has made your connection so special?

**WM:** Our company has been continuously supporting IARW member companies for more than 40 years, and have been exhibiting and participating in IARW events and education programs for almost as many. It's a special industry with uniquely challenging requirements beyond and different from conventional warehousing. I have always enjoyed meeting those challenges. Along the way,



Value-added services is a trend that will just keep increasing as suppliers of goods move associated services closer to their customers and overhead off their books.” — WALTER MAVES

the IARW has brought special friends and business associations. All those things are gratifying and of great importance to me.

**CF:** You have been developing software solutions for the cold chain industry for decades. Which technological advances do you think have made the biggest impact on the industry and why?

**WM:** Clearly, the biggest impact on the cold chain is the advent of the Internet and its Web technology. 3PLs, 3PL clients and trading partners of all kinds can now use common tools to simultaneously and directly access and share the same up-to-the minute information. Decisions by these distributed stakeholders no longer require communication through multiple intermediaries (CSRs, fax, phone) before they take effect and are known to all other stakeholders within and beyond the 3PL.

Information's new visibility and accessibility has made IARW 3PL cold chain services much more practical and attractive to potential users. And this is not just for the storage and redistribution of finished goods, but even more importantly for the contracting of value-added services such as packaging and direct to consumer fulfillment. Value-added services is a trend that will just keep increasing as suppliers of goods move associated services closer to their customers and overhead off their books.

Before the Internet, the two most valuable software advances were EDI and Mobile RF Devices on the warehouse floor. Again, like the Internet, their value was in moving information to where it was needed, directly and without human intervention to slow it down or delay its use.

**CF:** What are the biggest changes that you've seen in the industry over the past three decades?

**WM:** The graduation of cold chain 3PL from primarily overflow facilities ancillary to mainstream private warehousing operations into a full-service, mainstream, essential component of the supply chain is a product of the IARW's dedication to education and the professionalization of its members.

Concurrent with the transition to an ever more essential component has come the dramatic increase in food safety regulations governing all links of the supply chain. 3PLs are now held accountable by both clients and regulators for safe food procedures to an extent not imagined 30 years ago.

The drive for a more perfect supply chain has brought demands for perfect orders, perfect inventory accounting, perfect communications, and all manner of operational demands from clients that they might not even expect from their own operations. But of course, services are often outsourced for that very reason. So it has come to pass that the expectation of virtual perfection is now often accompanied by fines for even small transgressions. Those are huge changes from earlier days and have created a highly professional and efficient 3PL cold supply chain.

**CF:** You have mentored a lot of people in this industry, and they are now spread across many businesses. What legacy do you feel you have passed on to people?

**WM:** If there is any, it is to consider unconventional solutions to challenges. ☺

# JAMISON: INDEPENDENT THIRD-PARTY TEST LAB RESULTS

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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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HCR demonstrates the greatest energy efficiency for doorways with over 10% DOT (door-open time), and can represent considerable and even dramatic energy savings in the right application. In addition to energy savings, HCR significantly reduces moisture from entering the cold room, and prevents icing and condensation on floors, walls, and products. Reduced frosting of the refrigeration cooling coils will result in fewer defrost cycles.

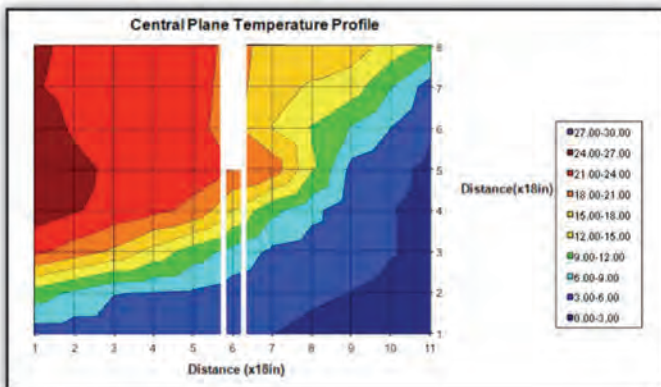
For more details about the CTS test results, visit [www.hcrairdoors.com](http://www.hcrairdoors.com)

**JAMISON** | HCR Air Doors

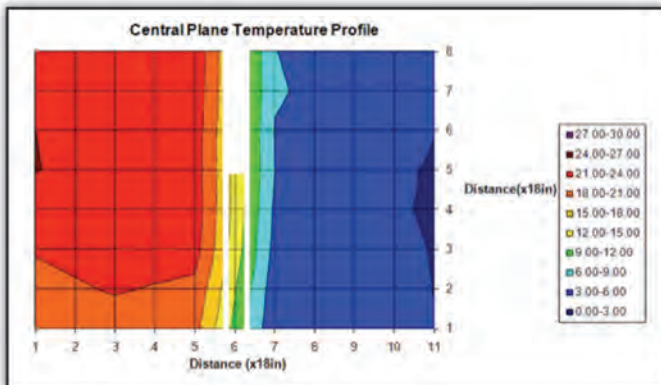
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\*For details and the lab performance report visit [www.hcrairdoors.com](http://www.hcrairdoors.com), contact your Jamison or HCR representative, or call 800-326-7700. Request the White Paper on the Evaluation of Horizontal Recirculatory Air Curtain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



Temp profile: air door off



Temp profile: air door on

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