The Cost of a HAZMAT Release

By Debra Bennett, Ph.D.

A HAZMAT release can be, and often is, costly. However, when I talk about the cost of a HAZMAT release, I am not simply referring to dollars and cents. Much of the cost of having a release cannot be measured monetarily. This cost goes far deeper than simply opening a checkbook or calling the insurance company.

The first expense, and perhaps the most devastating for your company long term, is the loss of customers due to the inability of producing and/or delivering products to your client. I had a customer that had an explosion in their compressor room and, as a result, were not able to produce the product they made for their clients. Therefore, those clients were forced to find another facility to produce the product for them. When my client was able to produce again, they called their former client. Unfortunately, that former client was not interested because they were happy with the new facility. This can be devastating to your facility. Your reputation is everything in a highly saturated industry. If you lose your reputation, it is difficult to repair.

Another more far-reaching example of this occurred at a facility that had an ammonia release, which resulted in an explosion and then a fire. This client was a very large beef producer that employed thousands. While waiting to rebuild, their other facilities absorbed the volume. When it came time for the plant to reopen, the company decided they no longer needed that facility and could handle the volume without reopening it. Those thousands of employees were out of work, but the effects did not stop there. Many of the people who depended on those employees for their wages suddenly had nothing. These jobs included daycare workers, restaurants, and those companies that supplied products to their facility, just to name a few.

Let’s also discuss the devastating results that occur if your situation becomes newsworthy. With 24-hour news coverage, you could be the talk of the news circuit for quite some time following a HAZMAT release. Even if you don’t make the big news cycle, you can still become front page news for your local newspaper and/or radio station. Once in the news, you have a permanent mark on your company’s reputation that can resurface at any time.

A HAZMAT release can also have a lasting impact on your community. Your chemical can quickly spread to other facilities, housing developments, schools, daycare centers, hospitals and nursing homes. These people often have little or no warning of the chemical release. On April 17, 2013 an ammonium nitrate explosion occurred at a fertilizer distribution facility in Texas. Unfortunately, the first responders for the community arrived on the scene with little knowledge of what chemicals were on site and no knowledge of how much chemical was stored. Fifteen people were killed, over 160 people were injured and more than 150 buildings were damaged or destroyed in the explosion. This incident devastated the small Texas town and will continue to impact this community for decades to come.

A chemical release often reaches far beyond financial ramifications and can impact the very heart of your community. The better prepared you are for chemical releases, the less chance you have of creating a negative and devastating influence on your facility and your community.
Why is the RMP Important for the Plant and Community?

By: David Bennett

T
here are certain plans that a company must have on site at their plant. One of these is the Risk Management Plan (RMP). This plan is covered under the Clean Air Act of 1990 under section 112(r)(1); also known as the General Duty Clause. The General Duty Clause applies to any stationary source producing, processing, handling or storing regulated substances or other extremely hazardous substances. “Other extremely hazardous substances” are any chemicals listed in 40 CFR part 68, or any other chemicals which many be considered extremely hazardous.

There are three main points that should be identified in your Risk Management Plan, and they are as follows:

- Identify the potential effect of a chemical accident.
- Identify steps the facility is taking to prevent an accident.
- Describe Emergency Response Procedures should an accident occur.

The Risk Management Plan helps us not only take care of the environment, but also the community that surrounds you. Most of the plants where I teach are located near rivers, streams, schools, houses, nursing homes, etc. Therefore, it is a great idea to also reach out to your local fire and police departments to review your plan with them, so they understand the consequences of a release as well. Ask them what additional measures they are taking for the surrounding community. The fire department will usually have a reverse 911 for the people in that community. This will give them a “heads up”, and they will be prepared for an alert over their phones. I would also challenge you to reach out to your local hospitals to determine their preparedness in the event of a chemical release in your facility. Finally, I suggest working with your Local Emergency Planning Committee (LEPC). They are a valuable resource that often helps you coordinate with other agencies.

The Risk Management Plan is imperative for a facility to prepare for a chemical release of any kind. The main goal for any company is always life safety. Therefore, you must not only have this plan in place but also be proficient in reading it. It is the company’s job to get everyone home safely at the end of the day. The more we practice and update these programs, the more we will be prepared when an event occurs. Regardless of whether your company’s role is to respond or take a non-intervention approach, it is still vital to know what to do, how to proceed and when to proceed. The choices that you make in the first five to ten minutes will dictate the entire outcome of the event at your facility.

If you have questions regarding your Risk Management Plan or need a little guidance on how to make it compliant for your company and the Environmental Protection Agency, we are always here to help you with any of your compliance needs.
This special two-day course is held in conjunction with RETA Chapter Hosted Regional Conferences:

August 26-27
Central FL Ammonia Refrigeration Regional Conference
Embassy Suites Lake Buena Vista South
4955 Kyngs Heath Rd. • Kissimmee, FL
Room Reservations:
$122/night (plus applicable tax)
Click here to be connected to the on-line reservation desk and take advantage of the negotiated group rate.

Who Should Attend
Industrial refrigeration operators • technicians • consultants
end-users • plant managers • plant or process engineers

Registration Investment $395
Successful completion of the class provides attendees with 16 professional development hours (PDH)
Investment includes lecture materials (review textbook) and daily lunch. It is recommended for students to have reviewed and bring the following textbooks: RETA Industrial Refrigeration One and Two (IR1 and IR2) and Basic Electricity 2 (BE2) - available at http://www.reta.com.

Special for attendees — All review course attendees will be enrolled in the Regional Conference associated with the class for which they are enrolled. Regional Conference enrollment provides for (but may not be limited to) receipt of Regional Conference attendees materials as well as participation in Exhibit Hall hours.

Enrollment is limited to 30 students.

REGISTER TODAY!
CALL
918-274-8639

Contact Information
For questions regarding the Refrigeration Review Course, please contact:

Industrial Consultants
PO Box 833 • Owasso OK  74055
www.ammonia.com
Tel: 918-274-8639 • FAX 918-274-8816
Email: info@ammonia.com

RETA CIRO or CARO Certification Exam
Course attendees may elect to sit for a RETA certification exam (CIRO or CARO) following the course. Test candidates must preregister (submitting all paperwork and payment) for the certification exam at least 2 weeks in advance of testing date. For details on how to register and arrange for your RETA certification exam, go to the RETA website at http://www.reta.com. If you have questions regarding the Certification Exam, please contact Dan Reisinger at RETA HQ (email dan@reta.com) or 541-497-2955.
Refrigeration Review
Course Outline
Refrigeration Fundamentals Review

Basic Refrigeration Terms and Principles
• Units of measurement: area, volume, specific volume, rate (CFM, GPM), temperature, pressure (psia, psig) pressure/temperature chart
• Heat: conduction, convection, radiation, BTU, sensible heat, latent heat, specific heat, latent heat of vaporization/conduction, specific heat, subcooling, superheating, saturation, water heat curve
• Ton of refrigeration, heat calculations

Heat Flow in Refrigeration Systems
• Factors that affect conduction of heat: area, temperature difference, thermal conductivity, distance the heat passes through
• Conditions which increase/decrease effect of evaporator performance
• Pressure-enthalpy or Mollier Diagram

The Basic Refrigeration Cycle – Heat Flow
• The flow of heat through the four main components
• Basic P&ID for a system
• Heat of compression, compression ratio, pressure drop, noncondensable gases

Properties of Refrigerants
• Refrigerant selection factors
• Refrigerant operating characteristics: evaporator pressure, condensing pressure, theoretical discharge temperature, refrigerating effect (BTU/lb), Mass flow (lb/min/ton)

Compressors
• Types of compressors:
  - Positive displacement, dynamic displacement
  - Open drive, hermetic
  - Reciprocating, rotary
• Reciprocating compressor: horizontal, VSA, V-W
• Rotary vane compressor
• Rotary screw compressor: compression cycle, oil
• Loading of a compressor
• Two stage compression and booster compressors
• Operation and maintenance: oil, oil heaters, slugging, log sheets

Evaporators/Cooling Units
• Function
• Fluid cooling, air cooling, forced convection, blast freezing, plate freezing
• Secondary coolant

Condensers
• Function and general types
• Shell and tube condenser
  - Causes of elevated head pressure
  - Cleaning, leaking, re-tubing
• Evaporative condenser
  - Basic design components and flow of refrigerant
  - Effect of humidity
  - Scale, corrosion
  - Head pressure control, fans, motors, dampers

Receivers
• Function
• Typical receiver connections and their functions
• King valve
• Overpressure protection

Purging
• Function
• Sources of noncondensables
• Types: manual, on-line, automatic
• Hansen purger

Refrigeration System Operations

Low Side Feed Valves and Controls (Evaporator Feed)
• Hand expansion valve (HEV)
• Thermostatic valve (TXV):
  - forces that drive the valve
  - nine basic points of operation
  - equalization
• Solenoid valve
• Float switch/level sensor
• Float valve

Direct Expansion System (DX)
• Basic design
• Stop-over/slugs
• Top feed/bottom feed
• Suction line accumulator

Flooded Systems
• Basic design
• Oil accumulation
• Resistance to heat transfer: product side/refrigerant side
• Causes of over-fill
• Consequences of stop-over (slugs)

Pumped Liquid Recirculation Systems (Liquid Overfeed)
• Basic design and recirculation ratio
• Pumps: mechanical and gas operated
• Basic rules for operation of centrifugal pumps
• Gas pumper systems: single, double, constant pressure
• Pump sizing, line sizing
• Refrigerant charge
• Start-up and basic operation, oil removal
• Advantages/disadvantages

Secondary Coolant Circulation System
• Direct vs. indirect
• Common secondary coolants
• 2 pipe/3 pipe system
• Defrost of secondary coils
• Pump types for secondary refrigerant
• Heat exchangers:
  - Open tank
  - Shell and tube
  - Plate and frame and its advantages

Two Stage System
• Basic design of operation
• Horsepower savings
• Compression cycle: booster compressor/high stage compressor
• Intercooler function: shell & coil, flash type
• Noncondensables
• Cascade System

Coil Defrost
• Moisture content, pump down, fan delay, pressure equalization
• Air defrost
• Electric defrost
• Water defrost
• Continuous defrost
• Hot gas defrost operation and guidelines
• Causes for excess of ice buildup

Measuring System Performance
• Measurements: horsepower, BTU, HP/ton, Kilowatt, Kw/ton, Kw demand
• Calculation: compression ratio, cost and efficiency

Electricity
• Fundamentals: Ladder Diagram
  - Rungs of the ladder
  - Symbols
  - Switches
  - Circuits

Industrial Consultants

Your Compliance Connection®

PO Box 833 • Owasso, OK 74055
www.ammonia.com
Tel: 918-274-8639 • FAX: 918-274-8816
Email: info@ammonia.com
<table>
<thead>
<tr>
<th>Training Details</th>
<th>Date(s)</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JULY 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WARRENVILLE, IL</td>
<td>July 23-25</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>July 23-26</td>
<td>32 Hr Level I Ammonia Refrigeration</td>
</tr>
<tr>
<td></td>
<td>July 25</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>July 26</td>
<td>8 Hr Incident Command</td>
</tr>
<tr>
<td></td>
<td>July 26</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td><strong>AUGUST 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KISSIMMEE (ORLANDO), FL</td>
<td>Aug 26-27</td>
<td>16 Hr CARO/CIRO Refrigeration Review</td>
</tr>
<tr>
<td><strong>SEPTEMBER 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLIVE, IA</td>
<td>Sept. 17</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Sept. 18-20</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td>PLYMOUTH, MN</td>
<td>Sept. 24-26</td>
<td>24 Hr Emergency Response*</td>
</tr>
<tr>
<td></td>
<td>Sept. 26</td>
<td>8 Hr ERT Refresher*</td>
</tr>
<tr>
<td></td>
<td>Sept. 27</td>
<td>8 Hr Incident Command*</td>
</tr>
<tr>
<td></td>
<td>Sept. 27</td>
<td>8 Hr ERT Refresher*</td>
</tr>
<tr>
<td><strong>OCTOBER 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YUMA, AZ</td>
<td>Oct. 1</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Oct. 2-4</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td>MECHANICSBURG, PA</td>
<td>Sept. 30-Oct. 2</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Oct. 3</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Oct. 4</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td>LEWISVILLE, TX</td>
<td>Oct. 14-18</td>
<td>40 Hr Level II Refrigeration Operator</td>
</tr>
<tr>
<td>WARRENVILLE, IL</td>
<td>Oct. 22-24</td>
<td>24 Hr PSM/RMP Workshop</td>
</tr>
<tr>
<td></td>
<td>Oct. 22-24</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Oct. 22-25</td>
<td>32 Hr Level I Refrigeration Operator</td>
</tr>
<tr>
<td></td>
<td>Oct. 24</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Oct. 25</td>
<td>8 Hr Incident Command</td>
</tr>
<tr>
<td></td>
<td>Oct. 25</td>
<td>8 Hr ERT Refresher</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Details</th>
<th>Date(s)</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOVEMBER 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIDDLE RIVER, MD</td>
<td>Nov. 5-7</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Nov. 6</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Nov. 7</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td>HILLIARD, OH</td>
<td>Nov. 11-13</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Nov. 14</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Nov. 15</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td><strong>DECEMBER 2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SANTA MARIA, CA</td>
<td>Dec. 2-4</td>
<td>24 Hr Emergency Response*</td>
</tr>
<tr>
<td></td>
<td>Dec. 5</td>
<td>8 Hr ERT Refresher*</td>
</tr>
<tr>
<td></td>
<td>Dec. 6</td>
<td>8 Hr ERT Refresher*</td>
</tr>
<tr>
<td>BRIDGEVILLE, DE</td>
<td>Dec. 10</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td><strong>JANUARY 2020</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WARRENVILLE, IL</td>
<td>Jan. 21-23</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Jan. 21-24</td>
<td>32 Hr Level I Ammonia Refrigeration</td>
</tr>
<tr>
<td></td>
<td>Jan. 23</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Jan. 24</td>
<td>8 Hr Incident Command</td>
</tr>
<tr>
<td></td>
<td>Jan. 24</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td><strong>FEBRUARY 2020</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FORT WAYNE, IN</td>
<td>Feb. 3-5</td>
<td>24 Hr Emergency Response</td>
</tr>
<tr>
<td></td>
<td>Feb. 6</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td></td>
<td>Feb. 7</td>
<td>8 Hr ERT Refresher</td>
</tr>
<tr>
<td>PLYMOUTH, MN</td>
<td>Feb. 11-13</td>
<td>24 Hr Emergency Response*</td>
</tr>
<tr>
<td></td>
<td>February 13</td>
<td>8 Hr ERT Refresher*</td>
</tr>
<tr>
<td></td>
<td>February 14</td>
<td>8 Hr ERT Refresher*</td>
</tr>
</tbody>
</table>

*Special Pricing Applies to these classes

---

**About Us**

Industrial Consultants, LLC is celebrating our third decade of service providing the training needs for companies like yours. Companies that must comply with health and safety regulations enacted by the Occupational Safety and Health Administration and the Environmental Protection Agency.

Industrial Consultants, LLC is focused on the food industry, due to the large number of refrigeration systems using anhydrous ammonia, for which safety and health regulations are very strict. These regulations are ever changing, with nearly every aspect of your business being impacted by OSHA and EPA. Expertise is needed at all levels to ensure compliance. We continue to provide this expert assistance and guidance to help meet all your compliance needs.

We are totally dedicated to assisting you in achieving your compliance goals, taking the mystery out of compliance, and helping you gain control of your safety and training needs.

Let us be your compliance connection.

**Compliance Without Confusion:**
- Emergency Response Training
- Incident Commander Training
- Ammonia Refrigeration Training
- RETA CARO/CIRO/CRES Training
- Process Safety Management (PSM)
- Process Hazard Analysis (PHA)
- Compliance Audits
- EPA Risk Management Programs
- Safety Support Services
- Boiler Operator Training
- Plant Optimization Programs
- Mechanical Integrity Inspections

Each of these widely differing programs must meet specific OSHA and or EPA requirements for training your operating and safety personnel. This is the essence of compliance. However, continuing annual compliance is certainly not simple. Industrial Consultants, LLC can take the mystery out of compliance and help you gain control of your safety and training needs.

We have been training safety and operating personnel for more than 30 years. Thousands have benefitted from our current, comprehensive, complete and accurate training. You may rely on Industrial Consultants, LLC to keep your organization current on the ever changing OSHA and EPA training requirement for your facility.
Central Florida (CF)
Ammonia Refrigeration Regional
August 27-28, 2019 • Orlando, Florida

Embassy Suites Orlando
Lake Buena Vista South
Hotel & Convention Center

Registration - $60 per person
Fee includes:
• 2 full days of programming
• Daily box lunch and breaks
• Monday reception
• Hands-on workshops
• Compressor workshops
• Manufacturer-specific workshops
• 10,202 sq ft exhibit hall
• Technical sessions
• Attendee materials

$60 per person registration fee provides 2 full days of training ...

REGISTER ONLINE TODAY AT https://2019cfammoniaregional.eventbrite.com
Tuesday - August 27, 2019

6:45 am  REGISTRATION OPEN

7 - 8:45 am  CONTINENTAL BREAKFAST Sponsored by Stellar
EXHIBIT HALL OPEN

8:45 - 9:30 am  WELCOME, INTRODUCTION & KEYNOTE (1 PDH)
Hot Stuff - Arlie Farley, CIRO, CARO

9:30 am  BREAK - Sponsored by Marking Services, Inc.

9:45 - 10:35 am  HANDS-ON TRAINING (1 PDH) Limited seating
Semi Welded HEX Design - Danny Hauenstein, Alfa Laval
Relief Valve Replacement - Robert Tobin, Jr. / Arlie Farley, Farley’s Frigeration

9:45 - 10:35 am  TECHNICAL SESSIONS (1 PDH)
Evaporator Maintenance - Corey Groves, Evapco
OSHA PSM Compliance Specialist and Industry Perspective - Ric Hartung, Process Safety Management Services
Oil Still Maintenance - Jeff Sloan, Wagner-Meinert, LLC
OHSA Talk - Rep of Department of Labor

9:45 - 11:35 am  HANDS-ON TRAINING (2 PDH) Limited seating
Screw Compressor Tear-down - Lee Evans, Howden

10:45 - 11:35 am  TECHNICAL SESSIONS (1 PDH)
Freq Out - Jake Farley, CIRO, CARO, Farley’s Frigeration
General Duty Clause (GDC) - Sandy Owens, Geosyntec Consultants
Maintenance on Condensers - Nigel Andrews, Freeze Pro
TBA - Florida Division of Emergency Management

10:45 - 11:35 am  HANDS-ON TRAINING (1 PDH) Limited seating
Plate Heat Exchanger Break-down/Re-assemble Manufacturer-Specific Workshop - Danny Hauenstein, Alfa Laval
Relief Valve Replacement - Robert Tobin, Jr. / Arlie Farley, Farley’s Frigeration

11:35 am - 1 pm  BOX LUNCH & OPPORTUNITY DRAWING - EXHIBIT HALL OPEN
Lunch Sponsored by Howden, & Airgas
Opportunity Drawing Sponsored by

1 - 1:40 pm  GENERAL SESSION (1 PDH)
Hometown Security Starts With You- Bryan McDonald, Department of Homeland Security

1:50 - 2:40 pm  HANDS-ON TRAINING (1 PDH) Limited seating
Field Evap Testing - Richard Butt, Tanner Industries, Inc

1:50 - 3:40 pm  TECHNICAL SESSIONS (1 PDH)
National Codes in place for design and operation of Machinery Rooms - Jack Piho, PE, Piho Engineering
How to Prepare and Survive a PSM / RMP Inspection - Brian Chapin, RC&E
Effective Design and Implementation of Management of Change (MOC) - Tyler Ramos, SCS Engineers
Maintenance Procedures, Operating Procedures, and Maintenance and Operating Logs - Jeff Sloan, Wagner-Meinert, LLC

1:50 - 3:40 pm  HANDS-ON TRAINING (2 PDH) Limited seating
Screw Compressor Tear-down - Lee Evans, Howden

2:40 pm  BREAK- Sponsored by Marking Services, Inc.

2:50 - 3:40 pm  TECHNICAL SESSIONS (1 PDH)
PSM for Operators - Jet Stiffler, JS Compliance
No Pipe Left Behind - Eddie Hadden, Gama Graphics Services
Mechanical Integrity inspections, what is required by OSHA? - Kent Harmon, Industrial Consultants
A designers perspective on current changes of standards and codes effecting design and operations of Ammonia Refrigeration systems - Henry Bonar, Bonar Engineering

3:40 - 5:45 pm  RECEPTION & OPPORTUNITY DRAWING - EXHIBIT HALL OPEN
Reception Sponsored by Bonar
Opportunity Drawing Sponsored by
Wednesday - August 28, 2019

7:25 - 7:55 am  COFFEE Sponsored by Cool Air, Inc.

8 - 9:50 am  REGIONAL RUNAMUCKUS (2 PDH)
- Industrial Refrigeration Presentation & Trivia Contest
- Sponsored by Farley’s Frigeration & Piho Engineering
- John (Jack) Piho, PE, Piho Engineering and Arlie Farley, CIRO, CARO, Farley’s Frigeration

9:50 am  BREAK Sponsored by Cool Air, Inc.

10 - 10:50 am  HANDS-ON TRAINING (1 PDH) Limited seating
- Plate Heat Exchanger Break-down/Re-assemble Manufacturer-specific Workshop - Danny Hauenstein, Alfa Laval
- Relief Valve Replacement - Robert Tobin, Jr. / Arlie Farley, Farley’s Frigeration

10 - 10:50 am  TECHNICAL SESSIONS (1 PDH)
- No Pipe Left Behind - Eddie Hadden, Gama Graphics Services
- Mechanical Integrity inspections, what is required by OSHA? - Kent Harmon, Industrial Consultants
- Freq Out - Jake Farley, CIRO, CARO, Farley’s Frigeration
- MIRO Hot Point
- OHSA Talk - Rep of Department of Labor

10 - 11:50 am  HANDS-ON TRAINING (2 PDH) Limited seating
- Compressor Tear-down - Lee Evans, Howden
- Field Evap Testing - Richard Butt, Tanner Industries, Inc

11 - 11:50 am  TECHNICAL SESSIONS (1 PDH)
- PSM for Operators - Jet Stiffler, JS Compliance
- Effective Design and Implementation of Management of Change (MOC) - Tyler Ramos, SCS Engineers
- Maintenance on Condensers - Nigel Andrews, Freeze Pro
- Farley’s Frigeration Hot Point - Rep of Farley’s Frigeration
- TBA - Florida Division of Emergency Management

11:35 am - 1 pm  BOX LUNCH & OPPORTUNITY DRAWING - EXHIBIT HALL OPEN
- Lunch Sponsored by Mayekawa, & Delta Tee
- Second Chance Opportunity Drawing Sponsored by Calibration Technologies, Inc.

1:10 - 2 pm  HANDS-ON TRAINING (1 PDH) Limited seating
- Semi Welded HEX Design -Danny Hauenstein, Alfa Laval
- Relief Valve Replacement - Robert Tobin, Jr. / Arlie Farley, Farley’s Frigeration

1:10 - 2 pm  TECHNICAL SESSIONS (1 PDH)
- OSHA PSM Top 10- Ric Hartung, Process Safety Management Services
- Oil Still Maintenance - Jeff Sloan, Wagner-Meinert, LLC
- How to Prepare and Survive a PSM / RMP Inspection - Brian Chapin, RC&E
- Kelly Refrigeration Hot Point

1:10 - 3 pm  HANDS-ON TRAINING (2 PDH) Limited seating
- Compressor Tear-down - Lee Evans, Howden

2:10 - 3 pm  TECHNICAL SESSIONS (1 PDH)
- Oh No You Didn’t! - Jack Piho, PE, Piho Engineering
- Evaporator Maintenance - Corey Groves, Evapco
- General Duty Clause (GDC) - Sandy Owens, Geosyntec Consultants

3 pm  BREAK Sponsored by Cool Air, Inc.

3:10 - 4 pm  GENERAL SESSION (1 PDH)
- Preparing for a Hazmat Inspection - Chief Jon Hasket, Fire Department

**Program may be subject to change**

---

**Review and Register**

- Please take a few moments to review the program, noting items of particular interest to you and which classes or events specify limited seating. These will fill up quickly. Plan to have an alternate choice just in case.

- Register online click on the link below:
  [https://2019cfammoniaregional.eventbrite.com](https://2019cfammoniaregional.eventbrite.com)
  Or, use the registration form on page 4 of this brochure – your payment of $60 per registrant (or $170 per 3 registrants) is required at time of registration.

- Pick up your attendee materials on site.
  All attendees must stop by the Registration Desk at the Embassy Suites Convention Center to pick up their badge and attendee materials.

**Registration Desk Hours:**
- Monday, August 26: 1 - 6 pm (exhibitors)
- Tuesday, August 27: 7 am - 5 pm
- Wednesday, August 28: 7 am - 2 pm

**Professional Development Hours (PDH)**

Earn up to 13 PDH by attending sessions during the Educational Conference. Be sure to sign in at each session attended. Certificates of attendance will be emailed to all attendees following the event.

**Opportunity Drawings**

The hosting Chapter (Central Florida) has amassed an assortment of drawing prizes to bestow upon a few lucky attendees. All registrants will be eligible to win. Details available on site.

**Weather**

Weather in Orlando during this time of year features temperatures in the low 90s during the day and mid 70s in the evening. Chance of rain averages 27%. We recommend layered attire.

**Entertainment**

Disney World, Universal Studios, Gatorland and Sea World all call Orlando home! Each park is just minutes away from the Embassy Suites. And shuttle service is available to several attractions. Consider bringing your family for a break and extend your stay.

The reduced hotel rates for RETA are available Friday, August 23 through Friday, August 30 (based upon room availability)
For more information on things to do in and around Orlando log on to Visit Orlando at: [http://visitorlando.com](http://visitorlando.com)
Central Florida (CF)
Ammonia Refrigeration Regional Conference
August 27-28, 2019
Orlando, Florida

REGISTRATION INFORMATION

Register online: https://2019cfammoniaregional.eventbrite.com

Complete Attendee Information (print clearly and legibly and provide one form per registrant)

Please indicate one:
☐ Attendee  ☐ Exhibitor Booth Staff  ☐ Government Regulator  ☐ First Responder  ☐ Contractor  ☐ Manufacturer

FIRST NAME (REQUIRED)  LAST NAME (REQUIRED)  NICKNAME FOR BADGE (REQUIRED)

COMPANY NAME (REQUIRED)  JOB TITLE (REQUIRED)

MAILING ADDRESS (REQUIRED)

CITY (REQUIRED)  STATE (REQUIRED)  ZIP (REQUIRED)  COUNTRY

PHONE (REQUIRED)  CELL PHONE  EMAIL (REQUIRED)

PAYMENT DETAILS  AMOUNT ENCLOSED ($60 per registrant or $170 for 3 registrants)

Payment by check (payable in US Funds) — Payable to Central Florida Chapter of RETA
Mail registration form and payment to:
Ernest Leavell • CF Chapter of RETA • 3895 Sam Keene Road • Lake Wells, FL 33898
or Bring completed form along with check and register on-site.

The event is held at the Embassy Suites located at 4955 Kyngs Heath Road • Kissimmee, Florida, 34746
The Registration Desk is located in the foyer of the Magnolia Ballroom

ATTENDEE WAIVER

BY REGISTERING FOR AND PARTICIPATING IN THE CF AMMONIA REFRIGERATION REGIONAL CONFERENCE YOU AGREE TO UPHOLD THE ASSOCIATION’S CODE OF CONDUCT; ABIDE BY THE RULES OF THE EVENT, INCLUDING BUT NOT LIMITED TO, CF AMMONIA REFRIGERATION REGIONAL CONFERENCE 2019 EXHIBITOR RULES & REGULATIONS; AND GRANT THE CENTRAL FLORIDA (CF) CHAPTER OF RETA PERMISSION TO USE PHOTOGRAPHS (OR VIDEOS) TAKEN AT THIS EVENT IN ANY AND ALL PUBLICATIONS, MARKETING MATERIALS AND ON THE WEBSITE. REGISTRANT WAIVES ANY RIGHT TO INSPECT OR APPROVE THE AFOREMENTIONED USE OF THE IMAGE NOW OR IN THE FUTURE. REGISTRANT AGREES TO RELEASE AND HOLD HARMLESS CF CHAPTER OF RETA, AND SHOW MANAGEMENT (SHARLON WILDT CONSULTING) FROM AND AGAINST ANY CLAIMS, DAMAGES OR LIABILITY ARISING FROM OR RELATED TO THE USE OF THE IMAGES, INCLUDING BUT NOT LIMITED TO ANY DISTORTION, BLURRING, ALTERATION, OPTICAL ILLUSION OR USE IN COMPOSITE FORM, EITHER INTENTIONALLY OR OTHERWISE, THAT MAY OCCUR OR BE PRODUCED IN PRODUCTION OF THE FINISHED PRODUCT. REGISTRANT IS 18 YEARS OF AGE AND COMPETENT TO CONTRACT IN OWN NAME OR THAT OF MINOR CHILD. REGISTRATION FOR THIS 2019 CF CHAPTER OF RETA CHAPTER EVENT INDICATES THE ATTENDEE/REGISTRANT HAS READ THIS RELEASE BEFORE REGISTERING FOR THIS CONFERENCE AND FULLY UNDERSTANDS THE CONTENTS, MEANING AND IMPACT OF THIS RELEASE. I UNDERSTAND THAT I AM FREE TO ADDRESS ANY SPECIFIC QUESTIONS REGARDING THIS RELEASE BY SUBMITTING THOSE QUESTIONS IN WRITING PRIOR TO REGISTERING FOR THE EVENT, AND I AGREE THAT MY FAILURE TO DO SO WILL BE INTERPRETED AS A FREE AND KNOWLEDGEABLE ACCEPTANCE OF THE TERMS OF THIS RELEASE. THE ASSOCIATION’S CODE OF CONDUCT AND ARE AVAILABLE ON RETA’S WEBSITE AT WWW.RETA.COM.

THE 2019 EXHIBITOR RULES & REGULATIONS AND ARE AVAILABLE BY CONTACTING SHOW MANAGEMENT AT SWCONSULTING71@GMAIL.COM. I AGREE AND ACKNOWLEDGE THAT I AM PARTICIPATING IN THE CF CHAPTER OF THE REFRIGERATING ENGINEERS TECHNICIANS ASSOCIATION (RETA) HOSTED 2019 CF AMMONIA REFRIGERATION REGIONAL CONFERENCE ON MY OWN ACCORD. I GIVE THIS ACKNOWLEDGEMENT FREELY AND KNOWINGLY AND I REPRESENT AND WARRANT THAT I AM PHYSICALLY AND MENTALLY FIT AND ABLE TO PARTICIPATE, AND I DO HEREBY ASSUME RESPONSIBILITY FOR MY OWN WELL-BEING. I AM FULLY AWARE THAT POSSIBLE PHYSICAL INJURY MIGHT OCCUR TO ME AS A RESULT OF MY PARTICIPATION, INCLUDING BUT NOT LIMITED TO INJURY WHICH MAY OCCUR AS A RESULT OF MY TRAINING ON REFRIGERATION EQUIPMENT. I AGREE TO ASSUME THE FULL RISK, INCLUDING RISK WHICH IS NOT SPECIFICALLY FORESEEABLE, OF ANY INJURIES, INCLUDING DEATH, DAMAGES OR LOSS REGARDLESS OF SEVERITY WHICH I MAY SUSTAIN AS A RESULT OF PARTICIPATING IN ANY AND ALL ACTIVITIES CONNECTED WITH OR ASSOCIATED WITH THE COURSE. IN CONSIDERATION OF THE RIGHT TO PARTICIPATE IN THE COURSE, I HEREBY WAIVE ANY AND ALL RIGHTS OR CLAIMS I MAY HAVE AS A RESULT OF PARTICIPATION IN THE COURSE AGAINST THE CF CHAPTER OF RETA A FLORIDA NOT-FOR-PROFIT CORPORATION THAT REPRESENT REFRIGERATING ENGINEERS AND TECHNICIANS ASSOCIATION, (RETA), THE SHOW MANAGEMENT (SHARLON WILDT CONSULTING), EMBASSY SUITES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, MEMBERS, STAFF, AND ALL INDIVIDUALS ASSISTING IN INSTRUCTING AND CONDUCTING THESE ACTIVITIES, AND I HEREBY FULLY RELEASE AND DISCHARGE THEM FROM ANY AND ALL CLAIMS RESULTING FROM INJURIES, INCLUDING DEATH, DAMAGES, OR LOSS, WHICH MAY ACCRUE TO ME OR MY HEIRS ARISING OUT OF OR IN ANY WAY CONNECTED WITH MY PARTICIPATION IN THE REGIONAL CONFERENCE. I FURTHER AGREE TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CF CHAPTER OF RETA, RETA, THE SHOW MANAGEMENT (SHARLON WILDT CONSULTING) AND THE EMBASSY SUITES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, MEMBERS, STAFF, AND ALL INDIVIDUALS ASSISTING IN INSTRUCTING AND CONDUCTING THESE ACTIVITIES, FROM ANY AND ALL CLAIMS RESULTING FROM INJURIES, INCLUDING DEATH, DAMAGES, OR LOSS, WHICH MAY ACCRUE TO ME OR MY HEIRS ARISING OUT OF OR IN ANY WAY CONNECTED WITH MY PARTICIPATION IN THE COURSE.