

RETA Chapter Meeting Schedule

Continued from page 9

MINNESOTA

NORTHERN PLAINS
3rd Thursday; 6 pm

N/S CAROLINA

CAROLINAS
1st Thursday; time varies
No meeting in June, July or August

NEW YORK

WESTERN NEW YORK
3rd Tuesday; 6 pm

OREGON

WILL H. KNOX
1st Monday

OKLAHOMA

TULSA
2nd Tuesday; 6:30 pm

PENNSYLVANIA

NORTHEASTERN (NEPA)
2nd Thursday; 6 pm
SOUTHEASTERN (SEPA)
2nd Tuesday; 6:30 pm
No meeting in June, July or August
PHILADELPHIA
Not scheduled

TEXAS

HIGH PLAINS
3rd Tuesday; 7 pm
DALLAS/FT. WORTH
3rd Thursday; 7 pm
HOUSTON
4th Thursday; 6:30 pm
No meeting in July, November or December

WASHINGTON

CONNELL
Not scheduled
TRI CITIES
Not scheduled
YAKIMA
Not scheduled
PUGET SOUND
2nd Wednesday; 6 pm

WISCONSIN

MADISON
2nd Wednesday; 6 pm
No meeting in June, July or August
MILWAUKEE
2nd Thursday; 6 pm
No meeting in June, July or August

Check out the Chapter News section of the RETA website for additional information on Chapter events and activities: www.reta.com

PSM/RMP Compliance INCIDENT INVESTIGATION

29 CFR 1910.119(m) and 40 CFR 68.81

— Lee Pyle, SCS Tracer Environmental

A significant number of accidents can be eliminated and the potential for a large release of ammonia can be reduced by investigating each incident which resulted in, or could reasonably have resulted in, a catastrophic release in the workplace. Investigation must be prompt and involve a team of participants. The findings of the investigation must be documented along with the resolution of the investigation findings.

Prompt Investigation [29 CFR 1910.119(m)(2)]

Any employee, including management, who is aware of a release, incident, or a **near miss** involving the ammonia system, has the responsibility to report the incident, typically to someone in management and/or maintenance. The assignment of incident investigation team members and the initial investigation must be undertaken as promptly as possible, but no later than **48 hours** following the incident.

Incident Investigation Team [29 CFR 1910.119(m)(3)]

The incident investigation team **must consist of at least one person knowledgeable in the ammonia process**, including a contract employee if the incident involved work performed by the contractor. If necessary, other persons with appropriate knowledge and experience may be included in the team to thoroughly investigate and analyze the situation.

The team's objectives are as follows:

- ▶ Determine the facts surrounding the incident,
- ▶ Determine the cause of the incident, and
- ▶ Recommend corrective or preventive actions.

Determine the Facts Surrounding the Incident

A thorough and complete search for all of the facts surrounding the incident is the first essential step. Without this basic information,

the root cause may never be determined. Investigative members visit the incident scene and collect any information from the physical evidence. This would include broken parts, settings on any valves, and interviews with eyewitnesses or others who may have information describing what occurred. Photographs or diagrams of what occurred will prove helpful in later analysis. If questions arise regarding cause of failure, parts may need to be sent to third parties for analysis. If dismantling of equipment is necessary as part of the investigation, at least one member of the investigation team should be present for observation.

Continued on page 11



North American Headquarters
 Colmac Coil Manufacturing, Inc.
 PO Box 571
 Colville, WA 99114
 509.684.2595
www.colmaccoil.com

Midwest US Manufacturing
 Colmac Coil Midwest
 Paxton, IL 60957

"The Heat Transfer Experts"

INCIDENT INVESTIGATION

Continued from page 10

During this phase of the investigation, several data sources need to be collected or examined. These include but are not limited to:

- ▶ daily operational log sheets,
- ▶ procedures,
- ▶ system diagrams, and
- ▶ maintenance records.

This information will be useful for developing a chronology of events in order to determine the cause of the incident.

It is essential that physical evidence be collected as soon as possible after the incident. Even before investigation team members are assigned, every effort needs to be made to **protect the physical evidence of the conditions** at the time of the incident. Only with good data can an accurate judgment of the cause of the incident be determined. This can be accomplished by securing the area immediately following the incident to preserve the evidence prior to being collected. In addition, employees should be interviewed individually, immediately following the incident so that the facts surrounding the incident are fresh in their memory and there has been no time for collaboration amongst employees.

Once evidence surrounding the incident is collected, the incident investigation team should make every effort to keep the information confidential and not discuss the incident with other facility personnel, except as follow-up questioning, until the investigation is complete and the findings are finalized.

Determine the Cause of the Incident

Establishing the basic cause of all incidents is crucial to the development of recommendations which will prevent future occurrences or correct potential deficiencies in the system or procedures. The following general procedure will be followed in determining the cause.

- ▶ Develop a chronology of events that occurred before, during and after the incident. Write down where people were, what they did and the result of any actions taken. If there are questions or unknowns, indicate such and develop alternatives that could have happened that are consistent with the data available. Interview all employees and contractors who were near the incident scene and record their recollections of the events.
- ▶ List any process or maintenance conditions, circumstances or personnel operations which deviated from normal. All items should be noted no matter how small the deviation, nor how insignificant these deviations may appear.
- ▶ Develop a set of hypotheses of potential causes of the incident based on the listed deviations or other data which is available.
- ▶ Test each hypothesis based on experience with the system, knowledge of the system and the reasonableness of the failures required to make the scenario occur.
- ▶ Select the most likely hypotheses for consideration of changes to prevent recurrence of the situation.
- ▶ Rank the severity of the incident based on the Risk Ranking Criteria included in Section 4 of the Process Hazard Analysis.

Contact-a-Chapter

ALABAMA

BIRMINGHAM
alabama_chpt@reta.com

ARIZONA

PHOENIX
phoenix_chpt@reta.com
YUMA
southwest_chpt@reta.com

CALIFORNIA

BAKERSFIELD
kern_chpt@reta.com
DINUBA
central_valley_chpt@reta.com
LOS ANGELES
california2_chpt@reta.com
SALINAS
monterey_bay@reta.com
SAN JOSE
bay_area_chpt@reta.com
SANTA MARIA
santa_maria_valley@reta.com
STOCKTON
san_joaquin_chpt@reta.com
SOUTHERN CALIFORNIA
inland_empire_chpt@reta.com

DELAWARE

DELMAR
delmarva_chpt@reta.com

FLORIDA

FT. LAUDERDALE
south_florida_chpt@reta.com
JACKSONVILLE
north_florida_chpt@reta.com
LAKE WALES
central_florida_chpt@reta.com

GEORGIA

ATLANTA
atlanta_chpt@reta.com

IDAHO

MERIDIAN
treasure_valley_chpt@reta.com

ILLINOIS

CHICAGO
chicago_chpt@reta.com

INDIANA

FORT WAYNE
ft_wayne_chpt@reta.com

Continued on page 18

Continued on page 12

Industry News

COMPANY NEWS

Colmac Coil Manufacturing Inc. and Baltimore Aircoil recently formed an alliance to provide BAC evaporators to the industrial refrigeration market. Colmac will distribute BAC evaporators along with its existing line of standard and custom industrial refrigeration evaporators and air-cooled condensers exclusively through the BAC representative network. This new relationship doubles the number of manufacturing facilities and provides greater product depth for both companies.

INCIDENT INVESTIGATION

Continued from page 11

By following this formal procedure, it is likely that the cause of the incident will be determined, as well as consideration of other situations which also might lead to incidents. These findings will be reviewed to determine if system changes or operating procedural changes are required to reduce the probability of or prevent the recurrence of the incident.

Recommending Corrective or Preventive Actions [29 CFR 1910.119(m)(6)]

Normally recommendations occur naturally as a portion of the development of the cause of the incident. The recommendations from the investigation team need to be clearly documented and presented to management for implementation. The resulting recommendations should be ranked based on the severity of the incident and the likelihood, as per your Process Hazard Analysis policy.

Management should review the recommendations and direct the implementation. If a recommendation is not followed, then a written rationale for not accomplishing that recommendation and an explanation of the alternative method of eliminating the hazard must be documented in the file. Responsibility for accomplishing the recommendation should be assigned along with a date for completion.

Upon completion of the work or change associated with any recommendation, documentation should be filed with the incident report.

The incident investigation team should review the status of the recommendations on a periodic basis (e.g., monthly) until all of the recommendations are complete. As a backup, consider having your Safety Committee incorporate verification of the implementation of the findings into their monthly safety inspection.

In addition to physical verification that the recommendations have been completed, documentation including, but not limited to the following, should be retained with the incident investigation report: training records, copies of invoices (for parts, repairs, calibrations, analysis, etc.), calibration data, Management of Change forms, Pressure Test Certifications, etc.

If the team deems that the incident was in fact preventable, then the recommendations **must** be implemented or alternative measures to prevent the incident must be proposed.

Recordkeeping, Documentation and Review [29 CFR 1910.119(m)(4) & (7)]

All information collected as a part of the investigation should be retained by the designated responsible person along with the following sample set of incident report forms:

- ▶ Ammonia Incident Investigation Report: This report can include the accident date, time, causes and recommendations. It is important to **document the date/time that the incident investigation began**. Additional information should be attached to provide further information as necessary.
- ▶ Incident Investigation - Incident Summary: This form can be used to identify the type of release, equipment source, contributing factors, quantity released, injury/damage information and recommendations.
- ▶ Incident Investigation - Approvals, Follow-up, and Reviews: This form can be used to outline the incident investigation team members, how the recommendations will be tracked (using Management of Change references as applicable), and the personnel that need to be informed of the findings of the report. Remember to include contractor employees as applicable. **This form should not be signed off as com-**

Continued on page 19

INCIDENT INVESTIGATION

Continued from page 18

plete or filed away until some type of corrective action has been taken. This may include temporary changes to prevent a repeat incident until final modifications can be proposed/completed.

The incident report forms and all associated material should be retained in the file for future reference for a period of at least five years following implementation of the recommendations. Completion of these forms, with any additional addendum that are provided for clarification, will provide the detailed record of the incident. Record of implementation of recommendations should be documented and retained with the incident investigation file.

Remember, employees and/or contractors whose job tasks are relevant to the incident findings must be informed of the incident and the results of the investigation. This particular section of the regulation can vary slightly as follows:

- ▶ Be sure to review the **report** "with all affected personnel whose job tasks are relevant to the incident findings" per EPA RMP [40 CFR Part 68.81(f)] and OSHA 1910.119(m)(6).
- ▶ Be sure to review the **report** "with all operating, maintenance, and other personnel whose work assignments are within the facility where the incident occurred" per CalOSHA 8 CCR 5189(m)(5) and note that "The employer shall prepare a report and either provide a copy of the report or communicate the contents of the report to all employees and other personnel whose work assignments are within the facility, where the incident occurred at the time the incident occurred" per CalOSHA 8 CCR 5189(m)(8).

This could be accomplished in the form of a tailgate meeting or a separate presentation by the safety committee/incident investigation team. Regardless, the incident report can NOT be closed until the report has been reviewed with affected employees. Affected employees include those exposed during the incident and/or those who will be affected by any proposed mitigation measures. Affected contract employees will be informed as part of the Contractor Program. Further, the incident investigation findings will be posted in a conspicuous location for review (i.e., with other Labor Law-related postings).

Questions & Answers

Continued from page 17

What I think the USEPA is saying is, it is not the chemical release so much, it is all about the timing of reporting of the release. Thus, when in doubt make your phone calls is still cheaper than not making your phone calls, and as you can see that is the intent of the law.

The fact that we have only 15 minutes to report the release of 100 pounds of ammonia or pay the piper is the intent of the law; the artificially inflated safety records are just something our industry needs to figure out.

Comments???

Question to all RETA Chapters: Do you make the Q and A part of your Chapter meeting or general discussion?

If you have a question or comment for Jim visit our web site or he can be reached at United States Cold Storage, 8424 West 47th Street, Lyons Illinois, 60534.



The RETA Breeze is the official publication of the Refrigerating Engineers & Technicians Association (RETA). RETA is an international not-for-profit association whose mission is to enhance the professional development of industrial refrigeration operating and technical engineers.

Editor in Chief

Julie Mower-Payne

Managing Editor

Susan Brown

Executive Editor

Don Chason

Hansen Technologies Corp.
704-455-3551

dchason@hantech.com

The information in this publication is based on the collective experience of industry engineers and technicians. Although the information is intended to be comprehensive and thorough, it is subject to change based on particular applications, field experience, and technological developments. The Refrigerating Engineers & Technicians Association expressly disclaims any warranty of fitness for a particular application, as well as all claims for compensatory, consequential, or other damages arising out of or related to the uses of this publication. Publication of advertisements in the Breeze, or any other RETA publication does not constitute endorsement of any products, services or advertisers by RETA and shall not be considered or represented by advertiser as such.

Copyright © 2010
Refrigerating Engineers &
Technicians Association

Departments

Don Tragethon • don@reta.com
Executive Director

Jan Tragethon • jan@reta.com
Administration

Julie Mower-Payne • julie@reta.com
Communications & Conference

Scott Henderson • scott@reta.com
Education & Certification

Susan Brown • susan@reta.com
Managing Editor &
Chapter Member Relations



Refrigerating Engineers &
Technicians Association
PO Box 1819
Salinas, CA 93902
Telephone 831.455.8783
Facsimile 831.455.7856
www.RETA.com