KEY FINDINGS
from PSM/RMP Compliance Audits

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As you probably know, facilities that comply with the Process Safety Management (PSM) and Risk Management Program (RMP) regulations are required to conduct a compliance audit on the programs at least every three years. Herein, we will examine not only what the required elements are for compliance audits, but we will also investigate some common key audit findings at ammonia refrigeration facilities.

WHAT IS A COMPLIANCE AUDIT?

A compliance audit is an internal self-evaluation of a facility's PSM and RMP programs including the written policies and procedures, as well as the degree of implementation of those programs.

Internal self-evaluation means an employee or third party (consultant) acting on behalf of the facility conducts the audit. There is sometimes confusion whether a regulatory inspection from OSHA or EPA satisfies the compliance audit requirement, and the generally accepted interpretation is that they do not.

Written policies and procedures are the details that outline how the facility complies with each of the elements of the regulatory requirements. The written PSM plan must address the specific criteria in the regulations, or it won't do any good to implement them!

The **degree of implementation** is evaluated primarily by reviewing documentation and records kept by the facility in its ongoing implementation of the programs. This would include records such as: employee training records, preventative maintenance records, contractor safety acknowledgements and training records, operating procedures certifications, management of change packages, etc.

WHAT ARE THE RESULTS OF A COMPLIANCE AUDIT?

When conducted thoroughly, compliance audits result in findings that lead to recommendations for improvements. These findings and recommendations are very important for facilities to address and resolve, as they become a prime target for any future regulatory inspectors. In fact, the findings and recommendations from internal compliance audits can serve as a checklist of deficiencies on a platter for an inspector!

WHAT ARE SOME KEY FINDINGS FROM COMPLIANCE AUDITS?

The following sections detail findings and pitfalls that are commonly observed by auditors at ammonia refrigeration facilities.

Employee Participation:

- operating employees not included in process hazard analysis (PHA) studies;
- not including operating employees in ongoing PSM-related meetings such as PSM committee meetings where policy decisions are made, and where recommendations from PHA studies and compliance Audits are discussed.

Process Safety Information:

- not adequately addressing Recognized and Generally Accepted Good Engineering Practices (RAGAGEP);
- inaccurate or outdated Piping & Instrumentation Diagrams (P&IDs);
- insufficient and/or inaccurate descriptions of safety systems such as ammonia detection systems;
- lacking a detailed engineering calculation for the maximum intended ammonia inventory;
- insufficient and/or lacking details regarding the pressure relief design basis (how were the sizes of pressure relief valves (PRV) and headers determined?);

Process Hazard Analysis:

- PHA recommendations not completed or resolved in a timely manner and/or no documentation to indicate status;
- potential hazards with the ammonia system not fully evaluated by an appropriate team including an expert in the specific ammonia system, and an expert in the PHA methodology;
- PHA study not updated and revalidated at least every five years;
- PHA reports and documented resolutions to recommendations not kept on file for the life of the ammonia system.

Operating Procedures:

- procedures not reviewed adequately or certified annually by an appropriate team;
- details such as valve numbers, equipment naming identifiers (ID#), safety systems and their functions not in agreement with Process Safety Information;
- safe work practices such as confined space entry, lockout/tagout and test (LOTO & T), respiratory protection, and line breaks not implemented/ documented appropriately.

Training:

- employees not trained on the written standard operating procedures (SOP), with documentation;
- training records do not match written training policy;
- refresher training not provided at least every three years;

Contractors:

- contractors failed to provide proper documentation of training and/ or qualifications;
- facility did not request or obtain contractor acknowledgements of facility safety rules such as emergency action plan, LOTO & T, hot work permits, fall protection, etc.;
- contractors were not provided a written copy of the SOPs;
- evaluations of contractor performance were not documented by the facility.

Pre-Startup Safety Review (PSSR):

- PSSRs not documented when Process Safety Information was modified or updated.

Mechanical Integrity:

- records of preventative maintenance not in accordance with either: the written policy, industry standards, or manufacturer's recommendations;
- written policy does not consider recognized industry standard recommendations such as conducting five year mechanical integrity (MI) inspections and/or conducting annual system safety checks;
- MI policy does not consider such publications as IIAR Bulletins 109, 110, 114, and IIAR-2, etc.

Hot Work Permit:

- designated fire watcher failed to sign off on the hot work permit following completion of the hot work job.

Management of Change (MOC):

- PSM and RMP elements identified in MOC paperwork are not fully updated, such as Process Safety Information, MI policy, SOPs;
- MOC team failed to adequately evaluate the potential impacts of the change on safety and health;
- appropriate authorization is not given or documented prior to physically making the changes.

Incident Investigation:

- investigations failed to properly determine the root cause of an incident or near miss;
- incident investigation reports did not document appropriate corrective actions to prevent the incident from happening again;
- corrective action items were not fully addressed, resolved, or documented.

Emergency Planning & Response:

- employees were not properly trained in the evacuation plan and/or their responsibilities associated with the plan such as: accounting for personnel, making notification phone calls, communicating with outside emergency responders, etc.;
- outside agency notification phone calls were not made, or the calls were not made in a timely manner in case of an actual ammonia release event

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or related injury;

- facility failed to coordinate ammonia response actions without outside responders such as Fire Department, HazMat Teams, etc.

Compliance Audits:

- audit recommendations not addressed in a timely manner;
- facility failed to maintain a documented response to each audit finding;

RMP Management Systems:

- an RMP organization chart was not prepared that detailed the personnel responsible for the implementation and upkeep of the various components in the RMP program.

RMP Hazard Assessment:

- worst case scenario was modeled considering active mitigation measures such as active control of ventilation systems by leak detection system;
- the topography surrounding the facility was improperly classified either urban or rural;
- a report documenting the parameters, assumptions, conditions, and calculations for the worst case scenario and the alternate release scenario was not prepared.

By highlighting some key deficiencies noted in compliance audits at typical ammonia refrigeration facilities in this article, hopefully you can take actions to avoid being cited for some of these problems at your facilities!

Call for Nominations

As an association run by volunteers at both the local and national level, it gives us a lot of pleasure to honor those who choose to serve RETA in a variety of ways. Being a volunteer comes with its own personal rewards, but paying homage to those who serve allows us to publically validate these contributions and acknowledge the enormous gift their time has given to the organization.

So, this is the time of year when we ask you to think about who, in your RETA world, merits consideration for one of our annual awards.

It could be someone who always raises their hand at the Chapter meetings when a call for help goes out; or that person who approaches every situation as a teaching opportunity, furthering the understanding for those in our industry through training; or someone you just can't imagine not having around at every RETA function, event or activity

The following awards will be given out at the annual Conference in Hershey, Pennsylvania this September. They are named in honor of past RETA members who exemplified a specific strength that benefitted the RETA membership and our industry either through teaching, leadership or service.

Guy R. King Memorial Award

Recognizes outstanding job performances in education and training of members nationally and locally.

Elliott R. Hallowell Award

Honors the member whose record of service to RETA for the current year merits special recognition and reward.

Venneman Award

Recognizes an outstanding RETA member for a career marked by leadership and service to the profession and the organization.

Felix Anderson Award

Recognizes two individuals who have worked behind the scenes at the Chapter level and who are not on the national Board.

Here's what we'd like you to do … identify who that special RETA person is in your area and jot down some reasons you think they should be honored.

Send this nomination and the supporting documentation to the Executive Director Jim Barron either by email to jim@reta.com or online at www.reta.com/nominations. Nominations must be received by July 31, 2017 in order to give the awards committee adequate time to consider the nominations.