

HOW TO EFFECTIVELY MANAGE CHANGE!

By Marjorie Buyson and Jennifer Green, SCS Tracer Environmental

RETA Chapter Meeting Schedule

ARIZONA

PHOENIX
4th Thursday; 6 pm
SOUTHWEST
2nd Wednesday; 6 pm

ARKANSAS

NORTHWEST ARKANSAS
2nd Thursday; 6 pm

CALIFORNIA

BAY AREA
3rd Wednesday; bi-monthly;
6:30 pm
CALIFORNIA CHAPTER #2
3rd Wednesday; 6 pm
No meeting in December
CENTRAL VALLEY
3rd Thursday; 6:30 pm
INLAND EMPIRE
3rd Tuesday; 6 pm
KERN
Last Wednesday; 7 pm
MONTEREY BAY
3rd Wednesday; 6 pm
SAN JOAQUIN
2nd Tuesday; 6 pm
SANTA MARIA
Not scheduled

DELAWARE

DELMARVA
3rd Tuesday; 6:30 pm

FLORIDA

CENTRAL FLORIDA
3rd Thursday; 6:30 pm
NORTH FLORIDA
2nd Thursday; 6:30 pm
No meeting in July or October
SOUTH FLORIDA
2nd Thursday

GEORGIA

ATLANTA
2nd Thursday; 6:30 pm
No meeting in June or July

IDAHO

TREASURE VALLEY
3rd Tuesday

ILLINOIS

CHICAGO
2nd Wednesday; 5:30 pm

INDIANA

FT. WAYNE
2nd Thursday; 5:30 pm

KANSAS

GOLDEN PLAINS
To be determined

MINNESOTA

NORTHERN PLAINS
3rd Thursday; 6 pm

Developing and implementing Management of Change (MOC) procedures, as required by the OSHA Process Safety Management (PSM, 29 CFR 1910.119) and EPA Risk Management Program (RMP, 40 CFR Part 68) regulations, can be a very difficult task. Regulators can be very particular when it comes to this element, from defining what constitutes a “change” to ensuring that the documentation is initiated and completed in a timely manner. Below are a couple of key points and real life industry examples to remember when implementing your MOC procedure.

Is it a change?

Recognizing whether a proposed action constitutes a “change” is key to determining whether a proposed action should be subject to the MOC rule. Sometimes, the change is obvious, for example, the installation of new evaporators. However, there are many times when this task can be quite challenging. As an example, a refrigerated warehouse was in the process of completing some roof upgrades to their building. During the upgrade, the facility had to re-route the ammonia equalizing line to accommodate the removal and installation of the new roof. The facility initiated an MOC for this modification, but through their MOC procedure deemed it a replacement in kind since the new piping will be made of the same material and will be of the same diameter size as the old piping. In addition, the change would not affect the safety systems in place for the ammonia system, the operating and maintenance procedures for the condensers and piping, the maximum intended inventory, and the operating parameters associated with the equipment. A regulator later reviewed the MOC paperwork that the facility initiated and thought that the facility should have followed through and completed the MOC process as a system change rather than a replacement in kind. So why do you think this is? Well, upon review of the modifica-

tion and the MOC paperwork, the regulator reasoned that the re-routing of the piping resulted in an increase in the pipe’s “linear footage”. Therefore, the modification should not have been considered a replacement in kind.

Another example is from a facility that lowered the location of the ammonia sensors, per the manufacturer’s recommendations, to allow for enhanced detection of an ammonia leak. The facility reviewed the MOC rule and determined that an MOC was not required as they were not making any changes to the ammonia system itself. The sensor manufacturer, setting, actions, and room location would remain the same. An MOC has been traditionally thought to be required if a change is made to the system that affects the Process Safety Information (PSI) or operating procedures. This change did not affect the PSI and would not require updated procedures or training for employees. While auditing the facility a regulator questioned the facility’s rationale for not completing an MOC. Why? Recently regulators have defined a system as not only including the mechanical components of the system itself but also the controls and the safety system protecting it. Therefore, the ammonia sensors would be considered a part of the system (per EPA’s assessment). In addition, although the manufacturer, setpoints, triggered actions, and associated maintenance procedures remained the same, the exact sensor location was lowered on the wall. Therefore, the facility, according to the EPA inspector, should have initiated the MOC procedures.

The common theme conveyed by these examples - if you are not leaving the chemical, equipment, facility, system (including safety systems and controls), and procedure in exactly the same way it was before starting the work, then the work is to be considered a change and an MOC

Continued on page 17

Continued from page 8

should be implemented (this includes safety systems). If in doubt whether a specific issue constitutes a change, it is recommended that it be considered a change and subject to the provisions of the MOC program. If you decide that the modification is a replacement in kind, document the reasons why you elected to consider the modification as such, so that you have a rationale to provide in case you are audited by a regulator.

Timeliness in Initiating and Completing an MOC

During an inspection, an inspector reviewed the MOC paperwork for a refrigerated facility. The inspector was pleased that the facility followed the procedure even though, the paperwork was documented as being completed after the change “for recordkeeping purposes”. While the MOC process is required to be completed prior to making the change, if a modification is discovered during an internal audit to be applicable to the MOC process, it is recommended by EPA to complete the paperwork and label it as “for recordkeeping purposes”.

Another refrigerated facility informed the regulator that they are considering making some upgrades to their ammonia system. The regulator advised the facility to ensure that an MOC is completed prior to making the system change. The key word here is “PRIOR.” Once you have determined that the work to be done is considered a change:

❑ Initiate the MOC paperwork PRIOR to authorizing the change: Review the MOC procedure with appropriate operators and management personnel and begin filling out the MOC forms. Document the reasons, technical basis, and duration for the change. Review the design specifications and drawings and conduct a health and safety review to address any impacts that the modification has on health and safety. Finally, obtain the proper authorization requirements. You should not be “touching” the system until these tasks have been addressed and/or completed.

❑ Complete the MOC paperwork PRIOR to starting up or implementing the change: Update and/or implement the affected PSM and RMP prevention programs while the change is taking place. If necessary, perform a Process Hazard Analysis (PHA). Address and/or complete any recommendations resulting from the PHA and Health and Safety Review. Train employees who will be involved in operating the modified process, as well as maintenance and contract employees whose job tasks will be affected by the change in the process. Startup of the modified process can be performed when these have been completed.

Remember that the main purpose of the MOC regulation is to ensure that system changes are managed safely, so that we reduce the risk of an ammonia release or injury during and after the change is implemented. If we don't initiate and complete the paperwork prior to the change, then the purpose of the program is defeated. Changes to your refrigeration system will inevitably occur during its lifetime, whether they be minor replacements or a major system modification. The key is to remember that regardless of the type of proposed action, it must be evaluated to determine if it is a change. In order to identify and mitigate the risks before the change is implemented; the MOC procedure must be initiated and completed prior to the change. If in doubt, it is always safe to implement the MOC procedure to ensure that the modification is reviewed and documented.

REFERENCES

1. 29 CFR, § 1910.119 *Process Safety Management of Highly Hazardous Chemicals, Explosives, and Blasting Agents, paragraphs (l) and (i).*
2. *Management of Process Hazards, API Recommended Practice 750, American Petroleum Institute, 1990, pages 4-5.*
3. *Code of Federal Regulations, Title 40 Part 68, Clean Air Act 112(r), Risk Management Program Rule.*
4. *Bulletin No. 109, Start-Up, Inspection, and Maintenance of Ammonia Mechanical Refrigerating Systems, International Institute of Ammonia Refrigeration, 1993.*

2012 Sponsors

Continued from page 16

Danfoss Inc.

Ammonia Process Safety Management

Midwest Ammonia Training Center LLC

SILVER SPONSORS

Draeger Safety, Inc.

Carolinas Chapter

Greater Raleigh Chapter

Dallas/Ft. Worth Chapter of RETA

Nikkiso Pumps America

Will H. Knox Chapter

Refrigeration Systems Construction and Service Inc

Isotherm, Inc.

ARTS Academy

Baltimore Aircoil Company

San Joaquin Valley Chapter

Dehart Construction Services Inc.

Hilmar Cheese Company

Chicago Chapter

Farley's S.R.P. Inc.

Puget Sound Chapter

Houston Chapter

Central Florida Chapter

BRONZE

Cascade Energy, Inc.

Petrochem Insulation Inc.

Hill Brothers Chemical Company

Ammonia Safety Management, Inc.

Inland Empire

Fort Wayne Chapter