Crestwood™

Connections for America's Energy™

Compliance On A Small Budget

Managing ARP Elements With Limited Resources

March 20, 2014

Compliance On A Small Budget

Introduction

- Debra (Debbie) Sovay
  - Bachelor of Science, Chemistry
  - Worked in heavy industry since 1997
  - Worked as a field inspector for a local regulatory agency 2002 to 2006
  - Worked with PSM/RMP Program 3/CalARP Program 2 and 3 Facilities since 2006
    - Refineries
    - Gas Processing Plants
    - Upstream Oil
    - Midstream Oil and Gas
    - Chemical Manufacturing
    - DOT Pipelines
    - DOT Rail Facilities
    - Small to Medium sized facilities, program development and implementation
    - LA, Ventura, Central Valley, New Jersey, New York, Indiana

Compliance On A Small Budget

What is the cost of non-compliance?

- Fines
- More Fines
- Employee Lost Time
- Increased Insurance Rates
- Severe Injuries
- Catastrophic Releases/Events
- Lawsuits
- Operating Injunctions

Compliance On A Small Budget

Compliance with all elements of an integrated safety program is expensive.

True, but not prohibitively.

Not complying with the elements of an integrated safety program is more expensive than the cost of compliance.

True, especially in terms of risk.

Investment into a good safety program gives returns to the business only in the areas of safety.

False. Managing compliance programs efficiently IS managing your business efficiently.

Compliance On A Small Budget

Elements of an Integrated Safety Program

Process Safety Information

Process Hazard Analysis

Operating Procedures

Training

Mechanical Integrity

Management of Change

Pre-Startup Review

Compliance Audits

Incident Investigation

Employee Participation

Hot Work Permit

Contractors

Emergency Response Plans

Process Safety Information

- Something is always better than nothing.
- Perfect is the enemy of good.
- In other words:
  –*Embrace red-line mark-ups*

Process Safety Information

- Always make changes as soon as you notice a difference requiring it.

- *Don't worry about format to the exclusion of content.*

PHAs

- For small facilities, this is an element that will have you doing a cost-benefit analysis of In House vs. 3rd Party

- In House Pros and Cons:
  - Pro: freedom of schedule, familiarity of process, one-time cost (for training)
  - Con: 100% assumption of risk, loss of trained personnel, familiarity of facility
- 3rd Party Pros and Cons:
  - Pro: No specialized training or software required, collaboration with new personnel, reporting burden isn't yours
  - Con: Expensive, time consuming

Operating Procedures

General Fredrick Wilhelm von Steuben was the father of the American Continental Army in the Revolutionary War. He once noted about the American character in following orders:

"You say to your soldier, 'Do this' and he doeth it; but I am obliged to say 'This is the reason why you ought to do that,' and then he does it."

Our American character is to understand *why* we do things before we do them, hence consequences of deviation.

Operating Procedures

Done well, this is the best tool in your program.

- Must be easy to follow
- Should include drawings
- Must include the "reasons why" procedures should be followed
- Don't forget to include all modes of operation

- *This will be the basis of your training program*

Operating Procedures

- A picture is worth a thousand words.
- Seasoned operators are your best resource. Use them.

Operating Procedures

- Procedures must be certified annually. Use this as a time to verify the content of your program.

Training

- Train on your operating procedures
- Tracking can be as simple as an Excel spreadsheet

Compliance On A Small Budget

		- Op#2	- Op#1
Inlet Systems	1.1 Vac Receiving		
	1.2 LP Receiving		
	1.3 RHP Receiving		
	1.4 Receiving Drip		
Gas Compression	2.1 Vac Compression		
	2.2 LP Compression		
	2.3 RHP Compression		
	2.4 Compressor Operations		
	2.5 8D HP Receiving		
Conditioning	3.1 Cooling		
	3.2 Amine Treatment		
	3.3 Chilling		
	3.4 Refrigeration		

Training

- Use computer-based training where possible

- Trained = retain and apply information. Testing and certification is necessary

Contractors

- ISNetWorld and similar programs…great, but $$$$$
- Gathering data on your own is possible, but time consuming

Mechanical Integrity

Computerized Maintenance Management Systems (CMMS) are the best practice for managing this element.

Maximo, Bigfoot, and similar systems are worth the return on investment if you have a large number of mechanical assets to maintain.

However, Outlook based systems can be devised for locations with small asset lists.

Mechanical Integrity

To build any MI program:

1. Make an asset list, taking time to identify critical assets
2. Gather all manufacturer's data and recommendations for maintenance
3. Set a calendar appointment at the intervals specified
4. Use the manufacturer's procedures or develop your own if there aren't any
5. Save all records
6. Review records annually for trends

Questions?

I know I didn't discuss MOC, PSSR, Audits or Investigations, but I can answer questions about my experience with these, or any of the other element's we've touched on.

Final Thought…

None of these elements work, either on their own, or in combination, unless there is a CULTURE that supports and upholds compliance.

Your employees will deliver what you reward them for. What are you rewarding?