Process Safety Management: Principles and Industry Applications

Monday, January 29, 2018

Sheet Metal Institute - Portland

7:45-8:00 am  Registration

8:00-9:00  Opening Remarks

*Introduction to Elements of the PSM Standard*
Rick Gleason, University of Washington Environmental and Occupational Health Sciences Continuing Education Programs

9:00-12:30 pm  Introduction to the Elements of PSM Regulations:
- Application
- Definitions
- Employee Participation
- Process Safety Information
- Process Hazard Analysis
- Operating Procedures
- Training
- Contractors
- Pre-startup Safety Review
- Mechanical Integrity
- Hot Work Permit
- Management of Change
- Incident Investigation
- Emergency Planning and Response
- Compliance Audits
- Trade Secrets

12:30-1:15  Lunch Break

1:15-4:00  *PSM & RMP Regulatory Compliance*
Amy Duz, President, iWorkWise
Application of PSM – Case Studies
Interrelationship of PSM with Other OSHA Standards
Risk Management Programs including Offsite Consequence Modeling
EPA Inspection Process

Process Safety Information (PSI)
Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)

4:00-5:00  *OSHA PSM Directives & Enforcement*
Brandi S. Davis MS, CIH, CSP, Senior Health Compliance Officer, Industrial Hygienist, Oregon OSHA
**Process Safety Management: Principles and Industry Applications**

**Tuesday, January 30, 2018**

**PSM & RMP Regulatory Compliance (continued)**

Amy Duz, iWorkWise

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<th>Time</th>
<th>Session</th>
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<tr>
<td>8:00-10:00</td>
<td>Process Safety Information (PSI)/Recognized and Generally Accepted Good Engineering Practices (RAGAGEP), continued</td>
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<td>Including Case Study Examples for Ammonia and Chlorine Use Facilities</td>
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<td>10:00-12:00</td>
<td>Process Hazard Analysis – What-if/Checklist, HAZOP</td>
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<td>12:00-1:00</td>
<td>Lunch Break</td>
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<td>1:00-2:00</td>
<td>Management of Change (MOC)</td>
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<td>Pre-startup Safety Review (PSSRs)</td>
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<td>2:00-3:00</td>
<td>Operator Training</td>
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<td>3:00-4:00</td>
<td>Emergency Planning and Response</td>
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Process Safety Management:
Principles and Industry Applications

Wednesday, January 31, 2018

*Industry Best Practices-Moving Beyond Regulations to a Risk Based Approach to Process Safety and Driving Continual Improvement*
*(includes cases studies from Oil & Gas and Other Chemical Process Industries)*

Jerry L. Jones, PE Chemical Engineering Consultant & Process Safety Instructor

8:00-10:00  **Process Safety Lessons Learned/Re-Learned** the Last 50+ Years and the Rationale for Moving Beyond Regulations
- Some Fundamental Risk Management Concepts (including barrier analysis) and a Risk Management Business Process
- Engaging the Entire Organization in Process Safety--Everyone Should Understand Key Risk Exposures and Be Looking for Areas for Improvement and Incident Warnings Signs

10:00-12:00  **Commit to Process Safety**
- Process Safety Culture
- Looking for Warning Signs Related to Leadership and Safety Culture
- Organizational Self-Assessment for a Committed Process Safety Culture
- Disciplined Adherence to Standards and Organizational Self-Assessment
- Process Safety Competency and Organizational Self-Assessment

12:00-1:00  **Lunch Break**

1:00-1:30  **Commit to Process Safety (completed)**
- Stakeholder Outreach

1:30-3:00  **Understanding Hazards and Risks**
- Process Knowledge Management (use of process information to select safeguards and make design decisions)
- Looking for Incident Warning Signs Concerning Process Safety Knowledge
- Hazard ID and Risk Analysis--Decision Making Based on Consideration of Consequences and Likelihood of Various Scenarios

3:00-5:00  **Manage Risks**
- Procedural Controls from a Risk Perspective and Looking for Incident Warning Signs Related to Both Operating and Maintenance Procedures
- Operational Readiness Reviews for Every Startup
- Asset Integrity & Reliability (moving beyond Mechanical Integrity requirements in the PSM standard) & Looking for Incident Warning Signs
Process Safety Management: Principles and Industry Applications

Thursday, February 30, 2018

*Industry Best Practices-Moving Beyond Regulations to a Risk Based Approach to Process Safety and Driving Continual Improvement*
*Includes cases studies from Oil & Gas and Other Chemical Process Industries*
Jerry L. Jones, PE, Chemical Engineering Consultant & Process Safety Instructor

8:00-10:00
Manage Risk (continued)
- Safe Work Practices (higher hazard activities requiring site work permits)
- Contractor Risk Management and Ensuring Quality of Work on Safety Critical Components/Controls
- Training & Performance Assurance and Looking for Incident Warning Signs
- Management of Change (MOC) and Looking for Incident Warning Signs

10:00-12:00 pm
Manage Risk (continued)
- MOC (completed)
- Conduct of Operations (requires more than just operating discipline)

12:00-1:00
Lunch Break

1:00-4:00
Learn from Experience
- Reporting and Investigating Sub-Standard Conditions/ Incidents, Communicating Lessons Learned and Looking for Incident Warning Signs
- Measures & Metrics to Measure Risk Management System Effectiveness
- Auditing (with scope and frequency based on risk considerations)
- Management Review and Workforce Involvement in Organizational Self-Assessments to Drive Continuous Improvement
- Workshop Discussions to Develop Personal Action Plans to Begin Implementing Some of the Best Practices Discussed in the Course

4:00
Closing Remarks and Evaluation