

## I. Curriculum Criteria: Process Safety Leadership

Topics	Course Content/Criteria Target Audience – Site Management Team (Senior and Mid-Level Managers)	Evaluation Criteria
<b>Introduction/Course Overview</b>	<p>Clear and positive process safety leadership is vital to ensure that risks are effectively managed. Process safety leadership requires senior management level involvement and competence. Further, management visibility and promotion of process safety leadership is essential to set a positive safety culture throughout the organization</p> <p>Over the past 20 years there have been numerous process safety incidents resulting in significant loss of life, environmental pollution, and property damage. Studies by the refining industry, government agencies, petroleum associations, and independent think tanks determined that leadership is a key issue in managing process safety and preventing incidents at refineries and chemical plants.</p>	
<p><b>Compelling reason for the need for improvement</b></p> <p><b>Purpose and Expectations of this topic:</b> Provide the framework and background for Improving Process Safety Performance</p>	<ol style="list-style-type: none"> <li>1. Review the significant number of Process Safety Incidents in the Refining Industry 2005 to present.</li> <li>2. Review the API/AFPM Advancing Process Safety initiative for improving our collective Process Safety Performance – short overview of how all six processes work together (Process Safety Metrics &amp; Analysis, Event Sharing, Hazard Recognition, Training &amp; Certification, Site Assessments, Regional Networks) .</li> </ol>	<p>Students shall be able to demonstrate an understanding of the compelling reason for the need for improvement.</p> <p>Students shall demonstrate an understanding of how all six Process Safety Performance Processes work together and feed off each other.</p>
<p><b>Leadership is leadership</b></p> <p><b>Purpose and Expectations of this topic:</b> This section will engage the course participants in their first break out session and explore the</p>	<ol style="list-style-type: none"> <li>1. Review the fact that success in any performance variable (personal safety, reliability, environmental performance, profitability, etc.) requires consistent leadership. It also requires that we hold ourselves accountable, and once established, holding others accountable for driving process safety performance improvement.</li> </ol>	<p>Students shall participate in the break-out session to actively share their work experiences with their course peers.</p> <p>This break-out session shall have clear instructions written for the course participants. The break-out session should have 5-6 people per session. Each group should select a lead spokesperson and scribe to</p>

<p>concept “We get what we Lead”.</p>	<ol style="list-style-type: none"> <li>2. Perform a 30 minute break-out session where the course participants discuss areas such as safety, environmental, cost performance, etc. where they have seen their organization reach a level of excellence and list the key leadership characteristics that led to success.</li> <li>3. This Break-out session shall help students recognize that a new leadership “model” is not required to achieve a level of Excellence for Process Safety Performance.</li> </ol>	<p>take notes. The lead spokesperson will report out to the class on their group discussion results.</p>
<p><b>Process Safety Management vs. Process Safety Leadership</b></p> <p><b>Purpose and Expectations of this topic:</b> This section explores the differences between “Management” and “Leadership” and creates a sense of urgency to move toward PS Leadership.</p>	<ol style="list-style-type: none"> <li>1. Review the key activities involved in Managing and Leading &amp; their difference. Leadership - Discuss the importance and criticality of leadership in performance improvement. <ol style="list-style-type: none"> <li>I. Create and Share vision</li> <li>II. Align organizations to achieve vision</li> <li>III. Inspire and motivate</li> <li>IV. Empower <ol style="list-style-type: none"> <li>1. Take risk and allow early failure</li> <li>2. Ensure accountability and consequences</li> </ol> </li> <li>V. Discuss leadership characteristics in organizations</li> </ol> Management - Discuss the importance and criticality of management controls in implementing PSM compliance. <ol style="list-style-type: none"> <li>I. Plan</li> <li>II. Organize</li> <li>III. Direct</li> <li>IV. Control</li> </ol> </li> </ol>	<p>Students shall demonstrate an understanding of difference between Managing and Leading.</p> <p>Students shall demonstrate an understanding of the definition of leadership – both personal and organizational.</p> <p>Students will engage in a discussion to identify the PS Leadership practices that their site will need to focus on in order to move the dial on PS Leadership (PSL).</p> <p>Students shall demonstrate understanding of the importance of management in compliance programs.</p>

**Characteristics of an Organization in the Pursuit of Excellence**

**Purpose and Expectations of this topic:**

This section explores the need for an organization to be “hungry” for excellence and the need for leadership to be good at developing a Vision of Excellence and recognizing the gap between this Vision and their Reality (e.g. Current state vs. future state).

Process safety becomes simply the way business is executed.

1. Review the following Organizational Characteristics:
  - a. Recognizing the “Gap” between what the organization wants to be, “Vision”, and what it is “Reality”
  - b. In small groups, identify & review key organizational values necessary to achieve a level of Process Safety Performance Excellence. Examples include
    - Accept no level of harm as a cost of doing business
    - Measure success against their baseline vs. industry benchmarks
    - Management and non-management are mutually supportive functions
    - People are the source of solutions,
    - No opportunity to improve is “off limits”
    - Program continuous improvement into everything
    - Reinforce/reward deliberate incremental improvement
2. Review leadership practices and their potential impact on process safety, including pros and cons of each of the following: NOTE: Students to discuss and identify Pros & Cons in group
  - a. Be Measurement Minded
    - I. Pros -
      - i. identify and reinforce behaviors necessary for success
      - ii. adopt leading indicators to measure and recognize incremental improvement
    - II. Con -
      1. May feel like added work initially until results are visible

Students shall demonstrate an understanding of the leadership’s role in creating the Vision and measuring the gap between Vision and Reality, and will identify an accountability model that will support/reinforce the PS Leadership behaviors

Students shall demonstrate understanding of key organizational values necessary to achieve a level of Process Safety Performance Excellence. Students shall demonstrate understanding of being measurement minded, collaboration crazy, systems savvy, and performance praising.

	<ul style="list-style-type: none"> <li>b. Collaboration-Crazy <ul style="list-style-type: none"> <li>i. Pros - <ul style="list-style-type: none"> <li>i. it's not just about management being committed</li> <li>ii. it's not just about employees being involved</li> <li>iii. it's about management and employees sitting down together to solve organizational problems or exploit that opportunity</li> <li>iv. This is where creative tension pays off</li> </ul> </li> <li>v. Con - <ul style="list-style-type: none"> <li>1. May be viewed as "simply another program"</li> <li>2. Could be viewed as having an ulterior motive.</li> </ul> </li> </ul> </li> <li>c. System savvy <ul style="list-style-type: none"> <li>i. Pros - <ul style="list-style-type: none"> <li>i. recognize that all problems are products of systems that are not optimized</li> <li>ii. program continuous improvement into everything</li> <li>iii. create a process orientation for making changes/improvements</li> </ul> </li> <li>iv. Con - <ul style="list-style-type: none"> <li>1. Message may not be received well if the site has other systems that are not optimized</li> </ul> </li> </ul> </li> <li>d. Performance Praising - Plant Senior Managers <ul style="list-style-type: none"> <li>i. Pros - <ul style="list-style-type: none"> <li>i. performance management that links individual contribution to</li> </ul> </li> </ul> </li> </ul>	
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	<p>organizational success</p> <ul style="list-style-type: none"> <li>ii. goal setting that supports incremental performance improvement</li> <li>iii. specification and measurement of behaviors necessary to drive results</li> <li>iv. adoption of more process measures than outcome measures</li> <li>v. consequences contingent upon sustained improvement in program or result measures</li> <li>vi. Con – <ul style="list-style-type: none"> <li>1. May be difficult for students to differentiate from their individual performance management process</li> </ul> </li> </ul> <p>e. Performance Praising - Supervisors</p> <ul style="list-style-type: none"> <li>l. Pros - <ul style="list-style-type: none"> <li>i. reinforce/recognize deliberate incremental improvement</li> <li>ii. provide frequent, ongoing feedback on performance at the individual, team, department, manager, location and company level</li> <li>iii. recognize high performing individuals and business units</li> </ul> </li> <li>vii. Con – <ul style="list-style-type: none"> <li>1. May be difficult for students to differentiate from their individual performance management process</li> </ul> </li> </ul>	
<p><b>Key Organizational Leadership characteristics –</b></p>	<p>1. The group will create (or review/update existing) Vision of Process Safety Leadership – write it</p>	<p>Students shall demonstrate an understanding of how to implement the course contents at their sites.</p>

<p><b>putting them in practice</b></p> <p><b>Purpose and Expectations of this topic:</b> This section ties the course together by giving the participants some examples of Process Safety Leadership they can implement at their sites.</p>	<p>down.</p> <ol style="list-style-type: none"> <li>2. The group will describe how Process Safety is currently integrated into daily operations (instructor to capture the group’s consensus). Ensure Process Safety Responsibilities are cascaded through the organization.</li> <li>3. Perform a high level analysis to identify process improvement opportunities (include a template) – using [reference specific section of 754 that relates to leadership] Process Safety Leadership Criteria to measure performance. <b>[NOTE : include [reference specific section of 754 that relates to leadership] AFPM/API Process Safety Leadership Assessment Criteria documents to be provided by the training provider (material to be provided in advance).</b></li> <li>4. Course activity – students to develop action plan for improvement strategies to close the gaps. Share actions plan with group.</li> </ol>	<p><b>COURSE TAKE-AWAYS</b></p> <ol style="list-style-type: none"> <li>a. CCPS Guideline for Risk based Process Safety</li> <li>b. API RP-754 Measuring Process Safety in the Refining &amp; Petrochemical Industries</li> <li>c. API GIS Safety Site Assessment (guidance document &amp; assessment protocol)</li> </ol>
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## II. Definitions

Creative Tension – A situation encountered when people with different backgrounds and perspectives fully participate in a team environment. Potential conflicts and disagreements, when worked through, enables teams to overcome barriers and exceed expectations.

## III. Course Structure

1. The course will be led by an instructor.
2. Minimum 6 hours of instruction
3. Maximum attendee to instructor/facilitator ratio – 20-25
4. Materials to be provided by Training Provider
  - CCPS Guideline for Risk based Process Safety
  - API RP-754 Measuring Process Safety in the Refining & Petrochemical Industries [reference the specific section related to leadership]
  - API GIS Process Safety Site Assessment (guidance document & assessment protocol)
5. Materials recommended in preparation for the course (to be provided by participants, if available)
  - Process Safety Vision of Excellence
  - Process Safety Goals Strategies & Tactics
  - Process Safety Leadership roles & responsibilities

#### **IV. Student Evaluations**

Method of student evaluations:

- Cannot include True/False questions
- Must use one of the following formats: single answer; multiple answer; “fill in the blank” and/or matching
- Shall include 12-18 questions weighted equally from the four sections
- Attendees must score 100% (with remediation allowed)