ASSP Region VI Webinar Series

1 - Managing Your Risk Assessment Data - March 6th

2 – Surviving a Deposition – April 3rd

3 – W, X, Y & Z. Opening Communication and Mentorship Through Generational Differences – May 1st
Welcome!

★ Each Webinar will be 50 min in length, with 10 Q&A. Submit your question on the Chat.
★ Attend all Three Webinars, receive 0.3 CEUs (Sorry, no CEUs for attending just 1 or 2)
★ We will send a survey after the webinar. Please let us know what you liked and what may need to improve.
★ Copies of the slides will be placed on the Region VI ASSP Web site.

Thank you for participating!
Managing Your Risk Assessment Data

Presented by: Paul Esposito, CIH, CSP
President, STAR Consultants
Paul.esposito@starconsultants.net

Presented at: ASSP Region VI
Friday, March 6th, 2020
Learning

📌 Know how to measure your Risk Assessment Inputs and Outputs

📌 Develop an implementation strategy by examining some common pitfalls

📌 Translate these Risk Assessment metrics into Practice for Management Accountability and Worker Recognition
STAR
> Overview

🌟 STAR has been in business since 1997
  🌟 Safety Through Accountability and Recognition

🌟 STAR specialized is
  🌟 Culture
  🌟 Management Systems
  🌟 Risk Assessments
  🌟 Leading Metrics
  🌟 Strategic Planning
  🌟 HSE Coaching

🌟 Paul Esposito is a CIH and CSP, with over 40 years of experience.

🌟 Mr. Esposito has been a VP with ESIS, a global leader in HSE Consulting worldwide, leading their Management Systems and Assessments Practice.

What Is Risk?

Factors

- Severity \times Likelihood
  
  (Consequence) \times (Probability)

Uncertainty of objectives (ISO - 31000)

Residual Risk

- Severity \times Likelihood \times Control Effectiveness
  
  (Reliability)

Control Reliability = Risk Factor Reduction + Escalation Factor
Is There a Risk?
Is the Risk Acceptable?
Risk Management

- ISO 31000 (2018)
  - Risk Management – Guidelines

- ISO 31010
  - Risk Assessment
    - Identification
      - Consequence
    - Analysis
      - Likelihood
      - Control Effectiveness
    - Evaluation
      - Risk “Acceptable”
      - Prioritize for Additional Controls
Are Companies Getting Smarter?

☆ OSHA finds improperly equipped furnace led to deadly explosion at TIMET's Morgantown, Pennsylvania, manufacturing plant - $42K

☆ AmeriGas Propane LP flouts safety standards designed to prevent catastrophe = $135K

"The employer clearly knew the potential for serious harm existed, but chose NOT to control."
Fatal Injuries Up in Since 2014

BLS Data: 2014 - 2017

- **28%** in Mining, Quarrying and Oil and Gas Extraction
- **14%** in agriculture, forestry, fishing and hunting
- **9%** in Manufacturing
- **6%** in Construction
Workers Are Also Part of the Equation!

Winner of the "Not My Job" Award - ADOT
Litchfield Park, AZ 85
Transformative approaches move us towards a risk-based paradigm shift
Remedial Action may not be necessary
These risks may rely more on warnings, administrative, PPE and other devices that may require operator intervention.

Remedial Action at an Appropriate time
Controls such as elimination, substitution, isolation and barriers are still preferable. These risks may rely more multiple Administrative and PPE controls.

Remedial Action on a Priority Basis
Controls such as elimination substitution and engineering controls are preferable. If reliance on warnings and administrative, these should be redundant to additional controls, or additional barriers, guards and other protective devices. (Also, monitor controls based on severity levels)

Immediate Remedial Action is Expected
Use controls or multiples of controls (defense in depth), such as elimination, substitution or engineering controls, controls with built in redundancies, physical devices that do not require adjustment or operator intervention, or provide positive, ongoing indicators of operation. (monitor controls)
Risk Management Process

Plan

Risk Assessment
- Risk ID
- Analysis
- Evaluation

Act

MC and EI

Do
- Consult
- Implement
- Competency

Check

Validate

Measure

Root Cause

Priority → Review → Target

MC and EI

Act

Risk ID → Analysis → Evaluation
“Plan” Inputs, Process and Outputs

**Inputs**
- Hazards
- Activities
- Equipment
- Controls
- Loss History
- Stakeholders

**Process**

1. **Risk ID**
   - Prioritized list for JHA
   - Pareto of Hazards

2. **Analysis**
   - Risk Register or Heat Map
   - Pareto of Risk Levels
   - Controls to Inspect
   - Critical to Safety Controls

3. **Evaluation**
   - Treatment (Priority) Plan
   - Continual Improvement
   - Objectives for each Department

**Outputs**
- Acceptable Tolerable New Controls
A risk register (or risk profile) is often used to:

- Collect & summarize risk assessment data by organization

<table>
<thead>
<tr>
<th>Department/Task</th>
<th>Hazard Aspect</th>
<th>Residual Risk Score</th>
<th>Target for reduction?</th>
<th>Target achieved</th>
<th>Revised Residual Risk Score</th>
<th>Critical to Safety?</th>
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</thead>
<tbody>
<tr>
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<td>11.4</td>
<td>Y</td>
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<tr>
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<td>Y</td>
<td>Completed</td>
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<td>Y</td>
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Learning

★ Know how to measure your Risk Assessment Inputs and Outputs

★ Develop an implementation strategy by examining some common pitfalls

★ Translate these Risk Assessment metrics into Practice for Management Accountability and Worker Recognition
What Can We Do?

- Use of Language
- Emphasize Hierarchy of Controls
- Change our Goals
  - Reduce Energy, and thus, Severity

Move away from Zero Based Goals to Risk Based Goals
New Language of Safety

Consequences
Design
Harm
Frequency
Threat
Probability
Risk Sources
Likelihood
Exposure
Critical to Safety (CTS)
Trigger Event
Prevention through
Hazard
Level of Risk
Use of Language

- Severity and Energy vs. Injuries
- Severity and Risk vs. Zero’s
- Continual Improvement vs. Compliance
- Discretionary Effort vs. Behavior Observations
- Recognition vs. Reward
Hierarchy of Controls

- **Avoidance or elimination**
- **Substitution**
- **Engineering**
- **Administrative**
- **Personal Protective Equipment (PPE)**

Level of health and safety protection:
- HIGHEST
- LOWEST

Reliability of control measures:
- MOST
- LEAST
Acceptable Risk: It's About the Controls

- Frequency/likelihood (population, exposure, events) and Severity (consequence)
- ANSI B11.0 Table

<table>
<thead>
<tr>
<th>Hierarchy of Controls</th>
<th>Likelihood</th>
<th>Severity</th>
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<tbody>
<tr>
<td>Elimination</td>
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<td>X</td>
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<tr>
<td>Substitution</td>
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<td>X</td>
</tr>
<tr>
<td>Engineering</td>
<td>X</td>
<td>-</td>
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<tr>
<td>Admin/warnings/training</td>
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<td>-</td>
</tr>
<tr>
<td>PPE</td>
<td>x</td>
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It is about the "Energy"
How Do You Measure Safe?

★ In the US, the OSH Act says

“Provide a safe and healthful workplace”

★ So this means:
  ★ Amount and degree of risk vs # of injuries
  ★ Conformance to controls, standards and procedures
  ★ % age of higher level controls!

Accountability to Prevention efforts.
Learning

Know how to measure your Risk Assessment Inputs and Outputs

Develop an implementation strategy by examining some common pitfalls

Translate these Risk Assessment metrics into Practice for Management Accountability and Worker Recognition
## Risk Assessment Scorecard

<table>
<thead>
<tr>
<th>Organization Name</th>
<th>Validate Site Level Risk Assessment</th>
<th>ID Risk Reduction Targets</th>
<th>Business Concurrency on Targets</th>
<th>Status of Action Plans</th>
<th>Critical Control Verification Rate</th>
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<tr>
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<td>1</td>
<td>0%</td>
<td>N/A</td>
<td></td>
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<tr>
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<tr>
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<td>50%</td>
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<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td><strong>14</strong></td>
<td><strong>88%</strong></td>
<td><strong>96%</strong></td>
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</table>
Risk Assessment Metrics

- ANSI Z 10 suggests three goals for safety based on the policy of creating a “safe and healthful workplace”
  - Program specific continual improvements (e.g., Risk Assessment)
  - Culture
  - Risk Reduction

- Key Risk Reduction Metrics can include:
  - Risk Reduction
  - Conformance Rates (esp. Critical to Safety = CTS)
  - Number of New Engineering Controls / less PPE
Additional Metrics

★ Culture
  ★ Perception survey scores
  ★ Action plan completions
  ★ Employee engagement

★ Incidents
  ★ Hazardous energies
  ★ Control level failure

★ Continuous Program Improvement
  ★ Program element scores - SMS Assessments
  ★ Action Plan Completions
When to Do Risk Assessment?

- Setting Goals
  - Does management know the top three risks?
- Determining Operating Guidelines and Safe Work Procedures
- Design Review
- Inspections / Observations
- Investigations
- Others?
The Biggest Myth?

- You can transfer the risk at no cost!

- Major companies have proven 60-80% reduction in Worker’s Compensation with
  - Management Systems
    - Risk Management
  - Risk Focus
    - Metrics,
    - Accountability
    - Recognition for new and better control suggestions
  - Cultural Integration
    - Part of Every Organization’s Strategic Plan
Just because we say it, does that take away the risk?

"You weren't listening. I said, 'Don't fall.'"
Remember

3

Survey:
Excellent: ✔
Good:
Fair:
Poor:
Thank You For Your Interest!

Questions?
Please get in touch with me at
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410-218-8451

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