SAFETY: It isn’t Rocket Science …or is it?
Bakersfield ASSE PDC
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Presented By:
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Regional Safety & Health Officer

SAFETY: It isn’t Rocket Science …or is it?

• Safety vs. P-Q-P
• Safety First?
• 1986 Space Shuttle Disaster
• Accident Investigation Weaknesses
• Loss Analysis Shortcomings
• Safety Incentive Programs
Responsibility for Safety?

• Who has the responsibility for safety?

• Who has had that responsibility thrust upon them?
Safety First

- Safety First
- Safety (is never) First
- What really is first?
- P-Q-P
- Profits – Quality - Production
What do Accidents “COST” you and your Organization?

Fatal Work Injuries

Number of fatal work injuries, 1992–2014

The 2014 total of 4,821 fatal work injuries was 5 percent higher than the count of 4,585 fatal work injuries reported for 2013. The count for 2014 was the highest since 2008.
Fatal Work Injuries

Rate of fatal work injuries, 2006–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate (per 100,000 full-time equivalent workers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>4.2</td>
</tr>
<tr>
<td>2007</td>
<td>4.0</td>
</tr>
<tr>
<td>2008</td>
<td>3.7</td>
</tr>
<tr>
<td>2009</td>
<td>3.5</td>
</tr>
<tr>
<td>2010</td>
<td>3.6</td>
</tr>
<tr>
<td>2011</td>
<td>3.5</td>
</tr>
<tr>
<td>2012</td>
<td>3.3</td>
</tr>
<tr>
<td>2013</td>
<td>3.3</td>
</tr>
<tr>
<td>2014</td>
<td>3.4</td>
</tr>
</tbody>
</table>

The 2014 rate of fatal work injuries of 3.4 was slightly higher than the final rate in 2013 of 3.3 fatal work injuries per 100,000 full-time equivalent workers.

Data for all years are revised and final. Note: Fatal work injuries reflect those who died as a result of injuries occurring at work or arising out of or in the course of work. Data for 2014 reflect revised injury and illness rates calculated using 2013 final data. Source: U.S. Bureau of Labor Statistics, 2015.
Hazards and Exposures

- Identifying
- Correcting
- Responsibility

Exposure & Hazard

- Exposure - The state of being subject to loss because of some hazard or contingency
- Hazard - Conditions that increase the probability of loss
  - Example:
    - Scaffolding 25 ft. tall with no guardrail
      - Exposure: ?
      - Hazard: ?
    - Scaffolding 25 ft. tall with adequate guardrail
      - Exposure: ?
      - Hazard: ?
  - What’s the difference? Possibility vs. Probability
Rocket Science

• 1986 Space Shuttle Challenger Disaster

• Circumstances
Normalization Of Deviance

• Natural Human Tendency to Take a Shortcut (especially in pressure situations)
• To Accept a Lower Standard of Performance
  – Nothing Bad Happens
  – Next Time, Tempted to do Again
  – Lose sight of Deviance
    • Bar IS Lowered

Normalization of Deviance

• Accepting something never expected, never understood
• When your life is on the line, you want the best team supporting you
• Not one that takes short cuts
Safety First?

- Safety statements, slogans, incentives
- Warm and fuzzy vs. reality
- Role of:
  - management
  - employees
  - safety department
When Does Safety Become First?

• Only after someone gets hurt

• For short time afterwards

• Business as usual

• Back to Normalization of Deviance
What’s Your Safety Culture

• Safety cultures consist of shared beliefs, practices, and attitudes that exist at an establishment.

• Culture is the atmosphere created by those beliefs, attitudes, etc., which shape our behavior.

What’s Your Safety Culture

• An organization’s safety culture is the result of a number of factors such as:
  – Management and employee norms, assumptions and beliefs;
  – Management and employee attitudes;
  – Values, myths, stories;
  – Policies and procedures;
  – Supervisor priorities, responsibilities and accountability;
  – Production and bottom line pressures vs. quality issues;
  – Actions or lack of action to correct unsafe behaviors;
  – Employee training and motivation; and
  – Employee involvement or "buy-in."
What’s Your Safety Culture

- In a strong safety culture;
- Everyone
- Feels responsible for safety on a daily basis;
- Goes beyond the “call of duty”
- Challenge the CEO?
- Few at-risk behaviors
- Company is extremely successful

What’s Your Safety Culture

- Creating a safety culture
- Takes time
- Maybe years
- A series of continuous process improvement steps
- Normalization of Deviance will DESTROY your culture
What’s Your Safety Culture

- You have the best orientation program

- Your new employee goes on the floor to an “anti-culture” atmosphere

- How long before your training has a Normalization of Deviance experience?

- How long before that new employee is following what everyone else is doing?
Do You See It?

- Conformity
- Good & Bad
- Watch for it and recognize

What’s your Safety Culture

- Recognizes something is wrong
- Tries not to be affected
- Slowly caves in to conformity
What’s your Safety Culture

• Recognizes something is wrong
• Evaluates
• Quickly caves in to conformity

What’s your Safety Culture

• Recognizes something is wrong
• Fights it, conforms, fights back
• Finally caves in to conformity
What’s your Safety Culture

- Recognizes something is different
- Immediately caves in to conformity

Do You See It?

- Conformity
- Good & Bad
- Watch for it and recognize
- Normalization of Deviance
Conformity

• Look at it the opposite way

Normalization of Deviance

Applied to Accidents and Incidents
What is an Accident?

• An undesirable event that results in harm to persons, damage to property, or both, usually occurring suddenly and unexpectedly; sometimes having taken significant time to reach the point of occurrence.
• Accidents can be major job hindrances.

What is an Incident?

• Like an accident, an undesired event, usually occurring suddenly and unexpectedly, but without the resulting harm to persons or damage to property.
• Referred to as a:
What is an Incident?

• Like an accident, an undesired event, usually occurring suddenly and unexpectedly, but without the resulting harm to persons or damage to property.

• Referred to as a: Near-Miss.

Luck Factors

• Factor #1
  – Accident or incident

• Factor #2
  – Business interruption
  – Property damage
  – Injury

• Factor #3
  – Severity
Why Conduct Investigations?

- **Objectives**
  - Improve supervisory skills by presenting a method - a formal approach - for conducting effective accident investigations.
  - Instill the importance of investigating accidents to identify true operational inefficiencies.
  - Eliminate a **Normalization of Deviance** mindset

Accident Investigation Failures

- Poorly completed
- Fault-finding
- Wrong people
- Miss the true operational issue
Responsible Condition

• The condition(s) that, if eliminated, should result in no further repetition of the particular loss, accident, incident, or other operational problem…under the same set of circumstances.
<table>
<thead>
<tr>
<th>What Happened</th>
<th>Describe what occurred in specific detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why Did It Happen</td>
<td>Get all the facts. Look for the root cause of the accident. Ask the 6 W’s?</td>
</tr>
<tr>
<td>What Should be Done to Prevent a Reoccurrence</td>
<td>Describe methods or action taken to eliminate the root cause. What factors require attention?</td>
</tr>
<tr>
<td>What Has Been / Should Be Done</td>
<td>Take or recommend corrective action</td>
</tr>
<tr>
<td>How Will This improve Operations</td>
<td>Eliminate job hindrances</td>
</tr>
</tbody>
</table>

Completed By: | Date: |
Company: | Title: |

**Loss Analysis**
What should I work on?

Forklift Safety
Confined Spaces
Material Handling
Lockout/Tagout
Chemical Safety
Hearing Conservation
Repetitive Motion
Fall Prevention
Motor Vehicle Safety
Heat Illness

What should I do?

Supervisor Training
Ergonomic Evaluation
Safety Committee
Special Service Tools
Employee Training
Field Site Visits
JSAs
RTW
Safety Inspections
Injury & Illness Prevention Program
Zenith Training Resources
Safety Meetings
Clue?

Professor Plum...
In the Library...
With the Dagger

Loss Data Analysis
Pattern Search

- Accident Location
- Accident Time
- Attorney Involvement
- Claim Cost
- Employee Dept.
- Employee Position
- Injury Type
- Lost Work Days
- Report Date
- Shift
- Tool/Equipment Involved
- Work Tasks
- Accident Date & Day
- Accident Type
- Body Part
- Employee Age & Gender
- Employee Name
- Full/Part Time
- Length of Employment
- Medical Provider
- Return to Work Date
- Supervisor
- Litigated
- Location Code
Nature of Injury

<table>
<thead>
<tr>
<th>Nature of Injury Description</th>
<th>Claim</th>
<th>Total Incurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Other</td>
<td>3</td>
<td>$4,710</td>
</tr>
<tr>
<td>All Other Cumulative</td>
<td>2</td>
<td>$53,493</td>
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<tr>
<td>Burn</td>
<td>1</td>
<td>$370</td>
</tr>
<tr>
<td>Concussion</td>
<td>1</td>
<td>$46,755</td>
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<tr>
<td>Contusion</td>
<td>8</td>
<td>$3,142</td>
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<tr>
<td>Crushing</td>
<td>2</td>
<td>$24,970</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>1</td>
<td>$232</td>
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<tr>
<td>Foreign Body</td>
<td>7</td>
<td>$2,828</td>
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<tr>
<td>Fracture</td>
<td>3</td>
<td>$105,587</td>
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<tr>
<td>Inflammation</td>
<td>1</td>
<td>$202</td>
</tr>
<tr>
<td>Laceration</td>
<td>7</td>
<td>$9,913</td>
</tr>
<tr>
<td>Loss of Hearing</td>
<td>1</td>
<td>$825</td>
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<tr>
<td>Multiple Physical Injuries</td>
<td>7</td>
<td>$5,355</td>
</tr>
<tr>
<td>No Physical Injury</td>
<td>1</td>
<td>$214</td>
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<tr>
<td>Poisoning, Chemical</td>
<td>1</td>
<td>$447</td>
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<tr>
<td>Respiratory Disorders</td>
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<td>$0</td>
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<tr>
<td>Sprain</td>
<td>7</td>
<td>$15,985</td>
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<tr>
<td>Strain</td>
<td>26</td>
<td>$286,081</td>
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<tr>
<td>Syncope</td>
<td>1</td>
<td>$1,841</td>
</tr>
<tr>
<td>Grand Total</td>
<td>81</td>
<td>$562,952</td>
</tr>
</tbody>
</table>

Strains 2011-2014

Frequency & Severity
What should I work on?

What should I do?

Is Your Safety Incentive Program Discriminatory?

• Rate-based programs

• Behavior-based programs
Is Your Safety Incentive Program Discriminatory?

• Rate-based programs may be discriminatory because…
  – Incentives are tied to low rate of accidents and injuries
  – Awards may include…
    • Cash, Prizes……PIZZA!

Is Your Safety Incentive Program Discriminatory?

• Behavior-based programs are effective
  – Reinforce safe behavior
  – Provide incentives to employees or teams who demonstrate safe behavior

• Behavior-based programs are not tied to incident rates
  – The goal is safe behavior, not a low incident rate
  – Employees are encouraged to be active participants in the safety program
What’s the Problem with Rate-Based Programs?
Conclusions

• Profits keep you in business

• Management must be involved safety

Conclusions

• Recognize areas for improvement
Conclusions

- Recognize Normalization of Deviance
  - Natural Human Tendency to Take a Shortcut (especially in pressure situations)
  - To Accept a Lower Standard of Performance

Conclusions

- Accident Investigations
  - Not a fault-finding mission
  - Identify responsible conditions
  - Correct operational inefficiencies

- Loss Analysis
  - Get good data
  - Multi level approach
  - Remember:
Countdown to Teamwork DVD

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