Value-Driven Safety

MOVE THE RIG
Peer Group Meeting
10-21-10

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Why We Do What We Do

- It's about our value system
- It's about our core values
- Our values are what drives our behavior

Some History

- 95% of the fatalities sustained in the Oil & Gas industry are caused by:
- Struck by equipment
- Fall from height
- Crushed by falling loads
- Get tangled in chains or cables
- Experience a vehicle crash on their way to or from work
- Are burned by fire

Injury Causal Factors

Five out of the six injury causal factors are directly related to – Human-Caused Events based on the lack of the understanding of:

- Risk Identification – Risk Mitigation
- Situational Awareness
- The sixth causal factor is directly related to Technological-Caused Events – mechanical, thermal, process related

Risk Tools

- Risk Assessments – New or major modifications

- Management of Change (MOC) – In the iron – turning to the right

- JSA'a – Boots-on-the-ground – but focused on conditions

- But what about "risky behavior?"

A Word Of Caution

- Fiske & Taylor's study in 1991
- Suggested that individuals: "attribute the cause of action to <u>external factors</u> if they were the ones who performed the action, but to <u>internal factors</u> if they <u>witnessed others</u> performing it (the actor-observer bias."
- So it all depends on your perspective

Human Behavior

- Has multiple causes
- Changing behavior requires changing the whole system – not just the behaviors
- Geller – 2001 – DeJoy – 2005 – Glendon et al – 2006
- Historically, little analysis has been conducted relating to understanding the true causal factors of injury-related behaviors

Behavior

- Behavior is only one factor of sometimes, many interrelated events of incident causation
- Each one connected to the next – creating a "risk chain" that if, unbroken, leads to a serious incident
- So we investigate the incident

Incident Investigations

- Use a "root cause" methodology
- Focus on "systems" such as individual performance and team performance
- Look at – Procedures, Communications, Human Engineering, Training, QC, Management System and Work Direction
- This is the System Improvements, Inc. Tap Root methodology. It's the only one I use

When do we look at risk associated with actions/acts

- We do look at behaviors – but do we have the whole picture?
- Do we know what <u>causes</u> the behavior?
- Do we know <u>why</u> the behavior takes place?
- Are the behaviors "condition-based"
- Are they "scotoma- based?"
- Are they "value-based"

What Value System Takes Over

- When work gets in the way
- When time gets in the way
- When a reduction in force gets in the way
- When the boss gets "antsy"
- When the worker gets apprehensive about his future – making the best impression so he <u>stays</u> on the job

What IS a value system?

- Everyone has one
- We bring it with us to work
- We depend on it to keep us sane
- We know it works – because its worked so far
- Core values are:

Family	Duty
Religion	Honor
Country	Self respect

So our values are what makes up our CORE – Our CENTER

- So how do we usually think of safety?

- As a priority – "Safety is our # 1 priority"

- What are priorities based on?

  - The work has to get done

  - It has to get done on time

  - At or under budget

  - The quality has to be high and consistent

  - If we do those things – the work keeps coming

So where does safety fit in this list if it is a priority?

- If safety is a priority – but there are other priorities that are "real world"

- Does safety as a priority lose in the order of priorities?

- It does – because safety is an "abstract" there COULD be an accident – but until there is an accident, it stays as an abstract

Safety based on a priority

- There is risk in everything we do out there

- With safety as a priority
  - Will we take risks?
  - Will we take as many risks as it takes?
  - Will we know when we have gone from an acceptable level vs. an unacceptable level of risk?
  - Will we accept that unacceptable level?
  - I say YES WE WILL – AND DO – AND GET AWAY WITH IT IN MOST CASES

If Safety is a priority

- With safety being a priority, and an abstract, "I've never been injured so I am under whelmed by the possibility"
- Safety will shift as other priorities take over

A Value – Self Respect – Getting the Job Done

- Will we <u>put our lives on the line</u> to satisfy that value?

  > YES WE WILL – and DO

- We <u>must</u> understand why this is

  - Training doesn't cut it
  - Discipline doesn't cut it
  - Even getting hurt doesn't cut it
  - Safety as the # one priority doesn't cut it

Safety as a VALUE vs. Safety as a priority

- If safety is a <u>value</u> – then no matter what <u>priorities</u> get in the way – it never slides
- Values are absolute – they are our core
- Safety MUST be a core value
- The *value* <u>drives</u> the behavior
- The value is - "I matter – people matter"
- This kind of thinking changes our expectations – changes our behavior

How Do We Train People On Safety?

- We train on the OSHA standard, or the Company rule, or the industry or company best practice

- So now they know the rules

- But why are they still getting hurt or worse?

I'm in compliance with the standard and in conformance with the rule

- My training on safety is about staying in compliance or conformance
- "So if I am not in violation – I'm safe
- these standards and rules they teach me are about the conditions I work around"
- there is no risk if I'm in compliance
- And – you know, there are many times I do what I do because there is no other choice – the work has to get done

Recognizing Risk

- Is an At-Risk Behavior the same as an Unsafe Behavior?

- Is an At-Risk Condition the same as an Unsafe Condition?

- Is a Near-Miss the same as a Near-Hit?

- What is Situational Awareness?

I thought you'd never ask!!!

At-Risk Behavior - Defined

- "Doing something that could get you hurt, but is NOT in violation of a standard or rule"

- There is risk in everything we do – and we accept that

- But do we know what – where and when the risk is?

click here

Unsafe Behavior - Defined

- "At-Risk plus in violation of a safety standard or rule"

Click Here

At-Risk Condition - Defined

- "A situation connected with the physical condition of the work place that could get you hurt, but is NOT in violation of a standard or rule"

Click Here

Unsafe Condition - Defined

- "A situation connected with the physical condition of the work place that could get you hurt AND is in violation of a standard or rule"

Click Here

Near-Hit - Defined

- "Any situation, either condition-based or behavior-based, that caused "an unplanned release of energy," which almost, but did not result in personal injury, equipment damage or business interruption"

- But by using the word HIT – we are more apt to investigate the reason – starting with the person who was almost HIT

Click Here

Situational Awareness - Defined

- "You are able to create and maintain an accurate, real-time mental model of your reality"

- In order to accomplish this you have to know what you know – and what you don't know. What you _can_ do and what you _can't_ do – and understand how judgment can be affected by circumstances

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What these things educate on

- At-Risk training educates people on how to recognize both behavior-based and condition-based risk
- How to avoid the risks
- How to mitigate the risks to an acceptable level
- How to use the "ladder of risk" The more risks the higher probability of an incident

The Risk Chain

- This training tool educates people on how to create their own "margin of safety" by observing actions of people and conditions around them
- They know how to recognize "critical behaviors" and "critical conditions"
- They understand the " margin of error" concept
- They have already thought things through and know how much extra time and space they need based on their experience and skill level

The SEE Tool

- A simple and powerful strategy of minimizing risk is:
- SEARCH
- EVALUATE
- EXECUTE

Click Here

SEE Fundamentals

- The <u>S</u> stands for: To search for factors that might lead to risky situations

- The <u>E</u> stands for: To evaluate how the factors might interact to create more risk

- The second <u>E</u> stands for: To execute an action to establish an acceptable level of risk that maintains an acceptable margin of safety
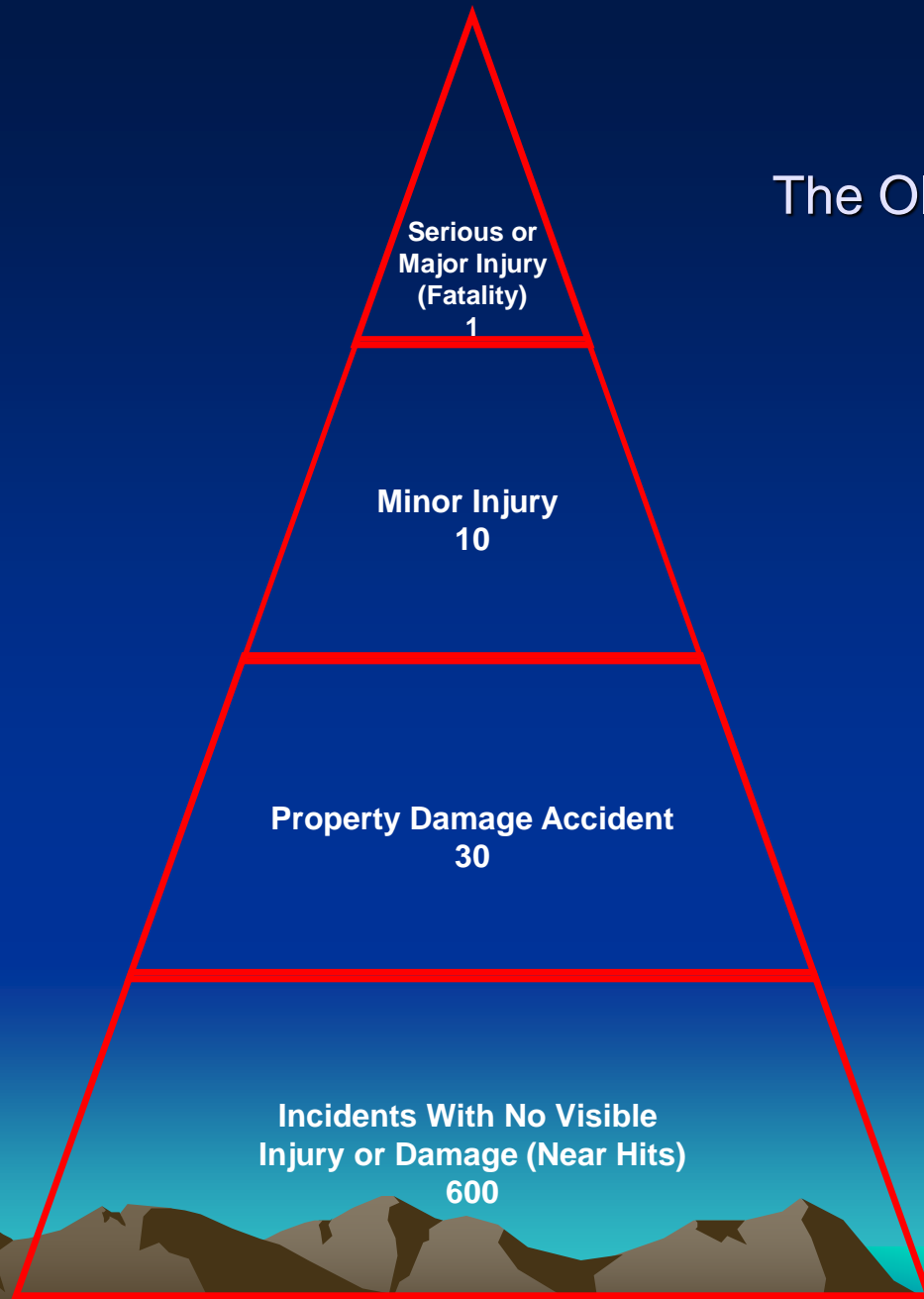
The Safety Pyramid – A Hierarchy Of Events

- From bottom to top – usually with near-hits
- Then first aid cases
- Then medical treatment cases
- Then restricted duty cases
- Then lost time cases
- Then – at the top – a fatality

Hierarchy of Events
The Old Safety Pyramid

Serious or Major Injury (Fatality)
1

Minor Injury
10

Property Damage Accident
30

Incidents With No Visible Injury or Damage (Near Hits)
600

The Structure is misleading

- The hierarchy of events suggest there is a correlation between the number of events, and if the numbers are not reduced – there will be a fatality

- The problem is – there seldom is a direct correlation of how many near-hits, and first aid, etc., and where they come from in order to experience a fatality

A Different Dynamic Of The Hierarchy Of Events – Turning The Pyramid On It's Head

- In our business we are constantly working with volume, weight and space

- So lets use that for our pyramid

- At the top are the things that happen the most and therefore have the most volume and weight – the At-risk Behaviors/Conditions

- Next we add the near-hits, first aids, etc.

Hierarchy of Events

At-Risk Behavior

Near Hits

First Aid Cases

Medical Treatment Cases

Restricted Duty Cases

Lost Time Cases
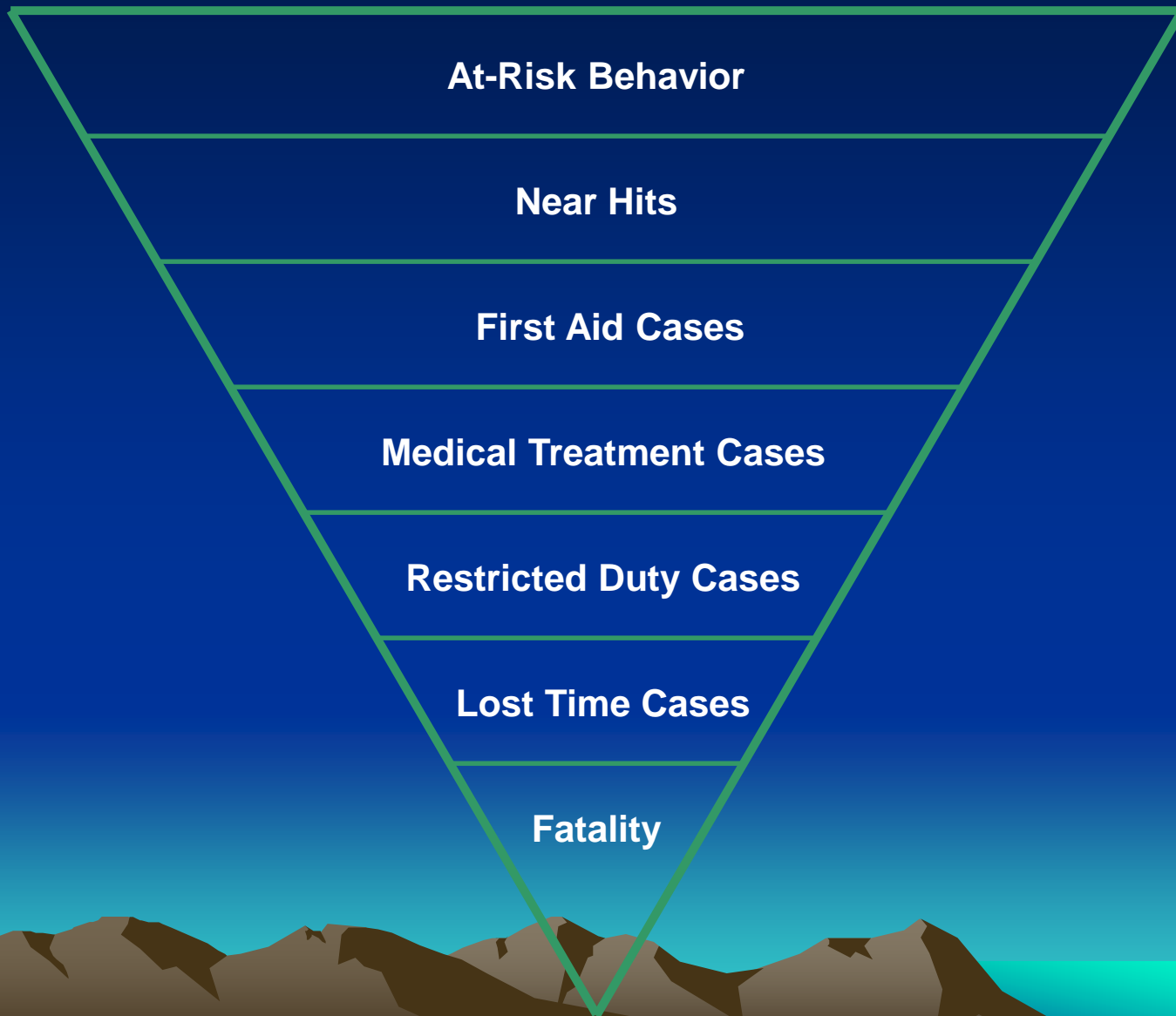
Fatality

Pyramid On It's Head

- The sheer volume and weight of these events just about guarantee, through the rule of statistics and probability that there will be a fatality, given enough time – if there is no reduction in the volume of the events or the weight of their possible consequences

- With this kind of model it is clear where our resources need to be concentrated

- AT-RISK BEHAVIORS/CONDITIONS

Systems must be in place and working

- A strong, proactive engineering system

- A viable, well understood consistently applied and accountable EHS Management System with at least 10 elements

- A training system that encompasses EHS needs as well as operational/technical skill-set needs

Four Training Matrices

1. A matrix for employees – per job family
2. A matrix for EHS practitioners – per job family
3. A matrix for supervisors – per job family
4. A skill-set matrix for ops/tech- per job family

Using individual training needs checklists

PLUS

A Competency/Proficiency Expectation and Evaluation System For Our Contractors

Educate vs. Train or Teach

Definitions:

- "to teach is to give lectures and test on the results"

- "to educate is to bring light to dark places"

So Now We Come To A SCOTOMA

- Scotoma is a real word
- It means – A "blind spot"
- We just don't see what is right in front of us – but someone else might see what we are not seeing
- They are caused from things like how we learned to read
- How we have been conditioned by others

SCOTOMA

- How we have conditioned ourselves to ignore smells, sounds, lots of movement around us

- We don't recognize the signals anymore – if we ever did

- Having a scotoma can be a blessing or a curse – if we don't know *what* to let in and *what* to leave out.

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Critical Skills In Safety

- Training on the standards and rules is important
- Training on the industry and company Best Practices is also important
- But educating on at-risk behavior/conditions is critical
- Educating on situational awareness is critical
- Educating on scotoma recognition is critical
- Educating on Near-Hit dynamics is critical

The Expectations For Industry

- By adding the at-risk, situational awareness, near-hit, and scotoma elements to our education process, we will see a paradigm shift in not only the level of risk recognition and avoidance within our work force, but a step-change in the number of injuries and other negative impact events now being experienced by our workers and contractors

A New Kind of Training

- We need to be "interactive" – with the trainee at the joy stick kind of training module
- Where he or she is THERE – experiencing the action – where he or she has the ability to see the risk – make a decision – do something about it – and experience the result of that decision by the impact and the score he receives
- We are working on this approach with risk and situational awareness scenarios
- The "interactivity complexity level will be II" – which means they are INVOLVED in the training, control the training & have a stake in the training

Questions?

If you want a copy of the accompanying paper that covers these elements in detail, I've got some with me – and you are welcome to take one. There are also "Culture Cards", At-Risk Behavior cards, Critical At-Risk Behavior Inventory cards, and "Scotoma" stickers

Thank you very much