Going Forth Safely Into The Field Of Geology

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Learning Objectives

Understand

✓ Basic Safety Concepts
✓ Why Safety?
✓ What Are Safety Metrics?
✓ Various Forms Of Safety Cultures and Approaches
A Lot Has Changed Since Field Camp....
The word "ACCIDENT" is disappearing from use at many companies
Safety Concepts

Near Misses, First Aid Cases
Injuries And Property Damage
Don’t Just Happen:

They are the result of –
UNSAFE ACTS
UNSAFE CONDITIONS
Safety Concepts

“Safety Pyramid”
H.W. Heindrich (1931)

- Fatalities
- Serious
- Minor Injuries / Minor Illnesses
- First Aid Cases
- Near Misses
- Unsafe Acts (90%)
- Unsafe Conditions (10%)
Barriers to Safe Work Environments

- Failure to recognize hazards
- Failure to learn from incident root causes
- Inadequate safety management system
- Inadequate training
- No established safety culture
- Personal choice
Why The Fuss?

- Employers must ensure a safe work place for all employees – a **moral** and **ethical** issue

- Federal regulations require an employer to provide a safe and healthful work environment **OSH Act General Duty**
  
  **Clause (5)(a)(1):**
  
  “Shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees”

  **5(b):**
  
  “Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.”

- Employers & clients **will only hire** safety-focused employees & subcontractors
Performing Work Safely (JHA’s, JSA, AHA, etc.)

- Identifies each hazard associated with a specific task
- Promotes development of a solution for each identified hazard
- Encourages training for safe and efficient procedures
- Helps develop “pre-job” instructions for non-typical jobs
- Aids in review of operational steps for safety and quality
Safety Metrics

**TRIR** = Total Recordable Incident Rate
The number per 100 employees that have been injured or made ill on the job to the extent that their injury or illness is recordable on the OSHA 300 Log.

**DART** = Days Away, Restricted and Transferred
The number per 100 employees that have been injured or made ill on the job to the extent that they:

- Do not return to work the day following the incident;
- Have restrictions on the extent they can perform their normal work; or
- Have to do a different job.
# OSHA 300 Log (MSHA)

You must record information about any work-related injury or illness that results in loss of consciousness, restricted work activity or job transfer, days away from work, or medical treatment beyond first aid. You must also record significant work-related injuries and illnesses that are diagnosed by a physician or other licensed health care provider. You must also record work-related injuries and illnesses that meet any of the specific recording criteria listed in 29 CFR 1904.4. The forms in use ten times for a single case. You must do so. You must complete an injury and illness incident report (OSHA Form 301) or an equivalent form for each injury or illness recorded on this form. If you record any cases where a recordable case occurs, your local OSHA office may be notified.

### Establishment Name

Consolidation of All MACTEC Operations

<table>
<thead>
<tr>
<th>City</th>
<th>Alpharetta</th>
<th>State</th>
<th>Georgia</th>
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</thead>
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## Identify the Person

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Injury</th>
<th>Date of Occurrence</th>
<th>Where (State)</th>
<th>Injury Description</th>
<th>Date of Incident</th>
<th>Work Location</th>
</tr>
</thead>
</table>

### Describe the Case

- **Date of Injury:**
- **Location:**
- **Nature of Injury:**

### Classify the Case

**CHECK ONLY ONE** box for each case based on the most serious outcome for that case.

### Days Away From Work

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
</tr>
</thead>
</table>

### Job Transfer or Restriction

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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### Other Recordable Cases

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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</thead>
</table>

### Date of Injury Onset

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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### Injury Details

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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### Date of Injury

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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</thead>
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### Date of Injury Location

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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### Date of Injury Nature

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<tr>
<th>Case No.</th>
<th>Date</th>
<th>Description</th>
<th>Days</th>
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## Page Totals

<table>
<thead>
<tr>
<th>Days Away From Work</th>
<th>Job Transfer or Restriction</th>
<th>Other Recordable Cases</th>
<th>Date of Injury Onset</th>
<th>Injury Details</th>
<th>Date of Injury</th>
<th>Date of Injury Location</th>
<th>Date of Injury Nature</th>
<th>Total</th>
</tr>
</thead>
</table>
What is a Safety Culture?

“Culture” is traditionally defined as “a shared set of beliefs, norms, and practices, documented and communicated through a common language.”

“...if safety and health values are not consistently (and constantly) shared at all levels of management and among all employees, any gains that result from declaring safety and health excellence a “priority” are likely to be short-lived.”

BP Amoco Texas City Refinery Incident Investigation Report (page 23)
The Results of NO CULTURE

Incidents with Potential for Injury
Unsafe Acts/At Risk Behaviors
- Not Following Rules or Procedures
- Taking Shortcuts
- Hurrying
- Using Poor Judgment
- Not Maintaining Good Housekeeping
- Awkward/Uncomfortable Positions
- Repetitive Motions
- Heavy and Bulky Loads
- Poor Equipment Arrangement
- Poorly Designed/Maintained Equipment
Various Names for Safety Culture

Target Zero

BBS  (Behavior Based Safety)

Beyond Zero

LPS®  (Loss Prevention System)

STEP®  (Safety Through Everyone’s Participation)

ISMS  (Integrated Safety Management System)

START®  (Safety Through Achieving Recognition Together)
Incident Investigation

Drilling For The Root Cause

The ROOT CAUSE(S)
Last Words

 ✓ Always know the scope of work you are to perform
 ✓ Always work to a Job Hazard Analysis (JHA) or Health & Safety Plan (HASP)
 ✓ Always follow procedures
 ✓ Ensure you are trained to perform your designated work
 ✓ Always wear your PPE (personal protective equipment)
 ✓ If you feel conditions are unsafe, stop work and talk to your supervisor
 ✓ How you drive on your personal time can impact your job as it impacts your MVR (motor vehicle report)