The Continuously Improving Safety Program

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Continuously Improving Safety Program

- What is a “Continuously Improving Safety Program”?
- A good safety program is not a few simple tasks
  - Write a safety manual
  - Do a bit of training
  - Hand out PPE
  - Done!
- This will only get you so far in reducing incidents
- Need more to be able to continuously improve safety in your company!

Continuously Improving Safety Program

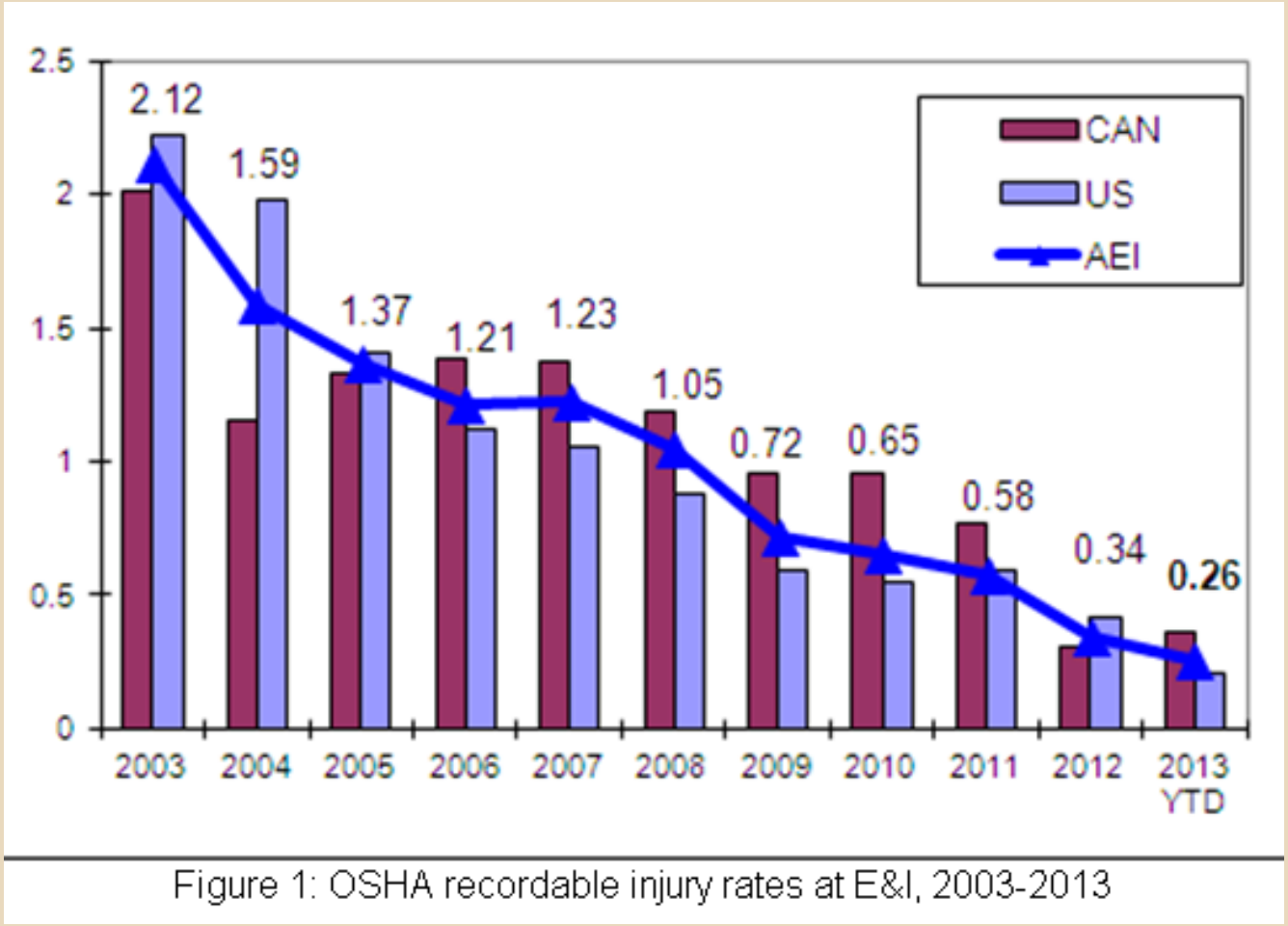


Figure 1: OSHA recordable injury rates at E&I, 2003-2013

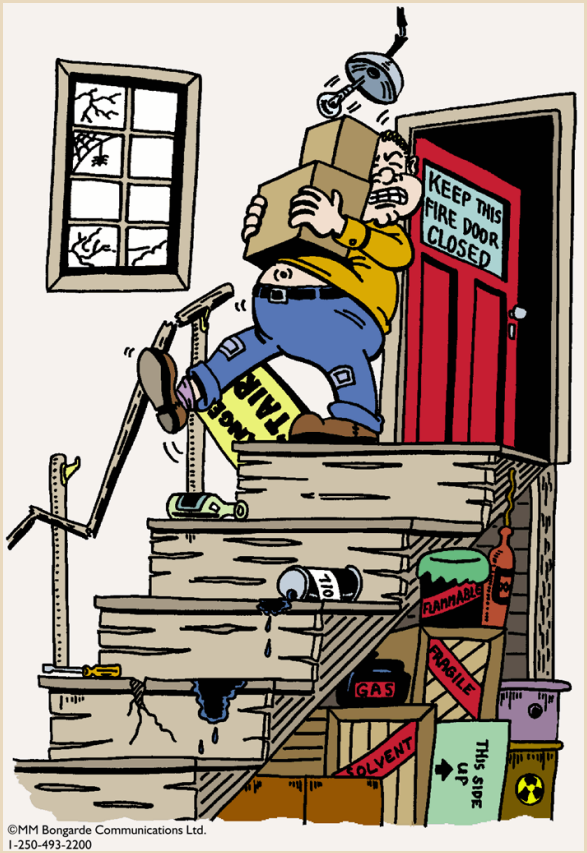
Continuously Improving Safety Program

- Key programs to be discussed:
  - **Behavior Based Safety** – including the pros and cons;
  - **Incident investigation** - how and when to conduct one, and who should investigate
  - **Root Cause Analysis** - determining root causes and applying the lessons learned from incident investigations
  - **Training** – the importance of
  - **Safety Incentive Programs** - including what OSHA has to say about them

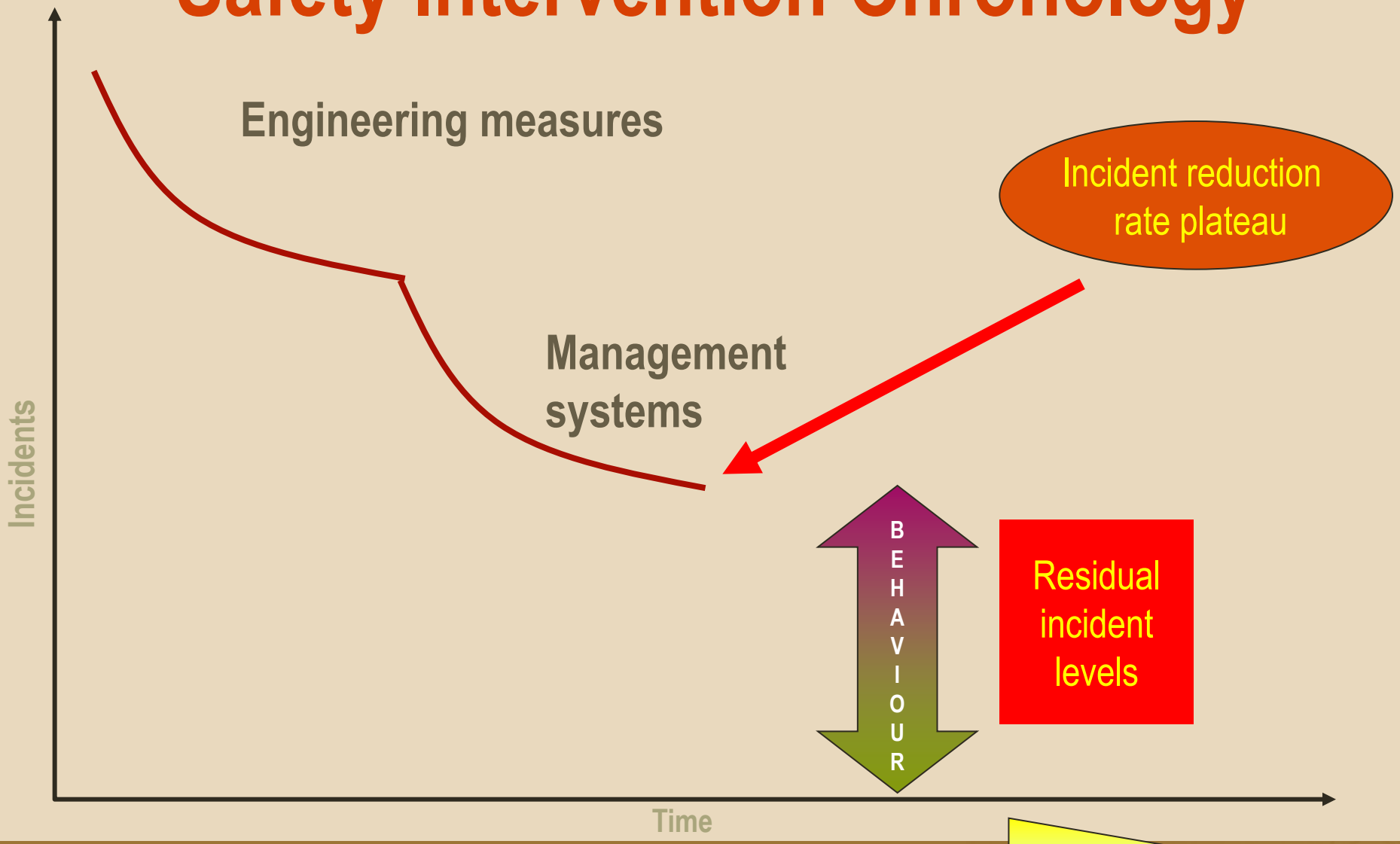
Behavior Based Safety

Behavior Based Safety – What is it?

- 95% of all incidents are due to unsafe work behaviors.
- Uses Safety Watch/Safety Interventions
- Is in addition to, not a substitute for, good safety program
- If employees don't follow the safe requirements, if the employee takes take risks on the job, then eventually they'll be injured.



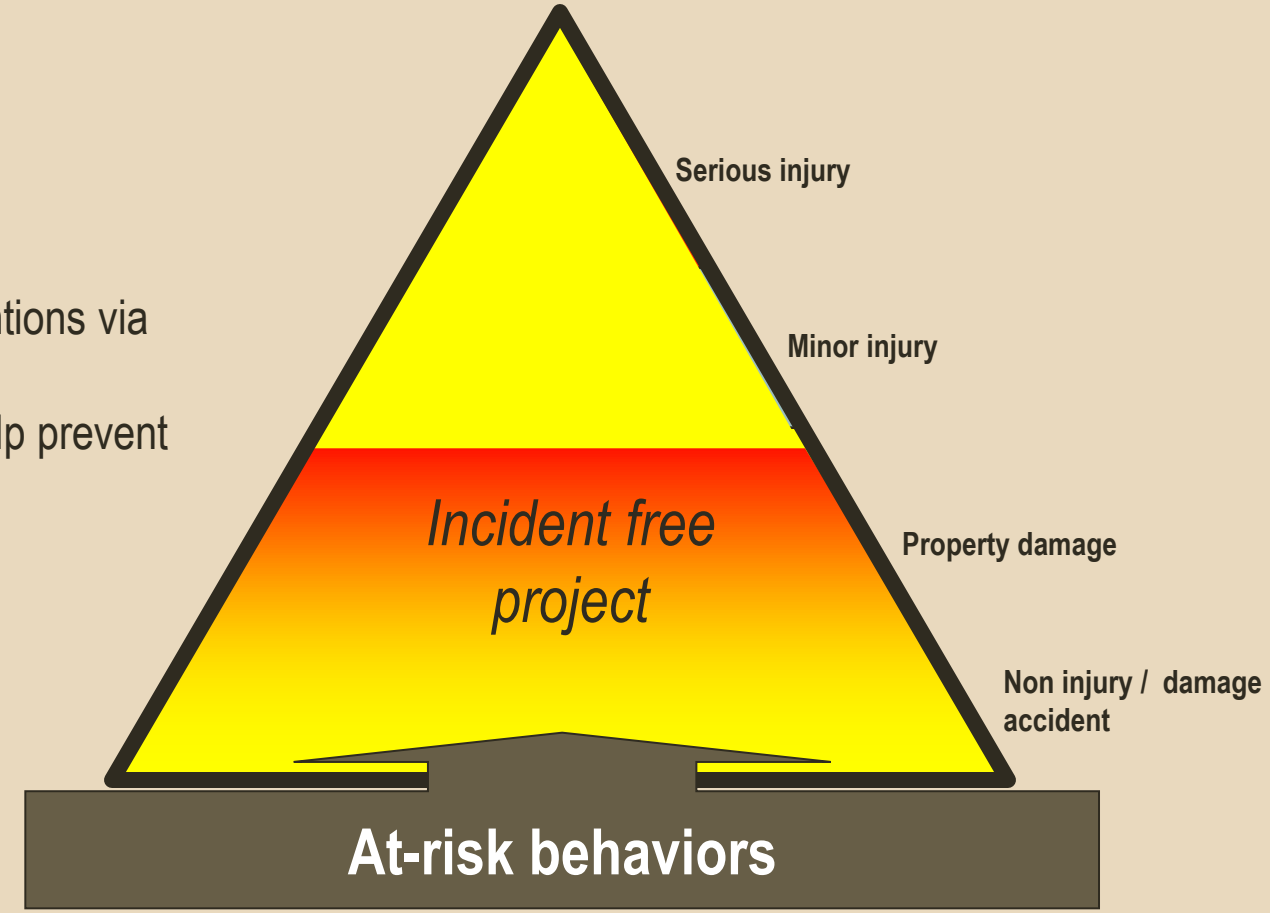
Safety Intervention Chronology



On-going development of health and safety law

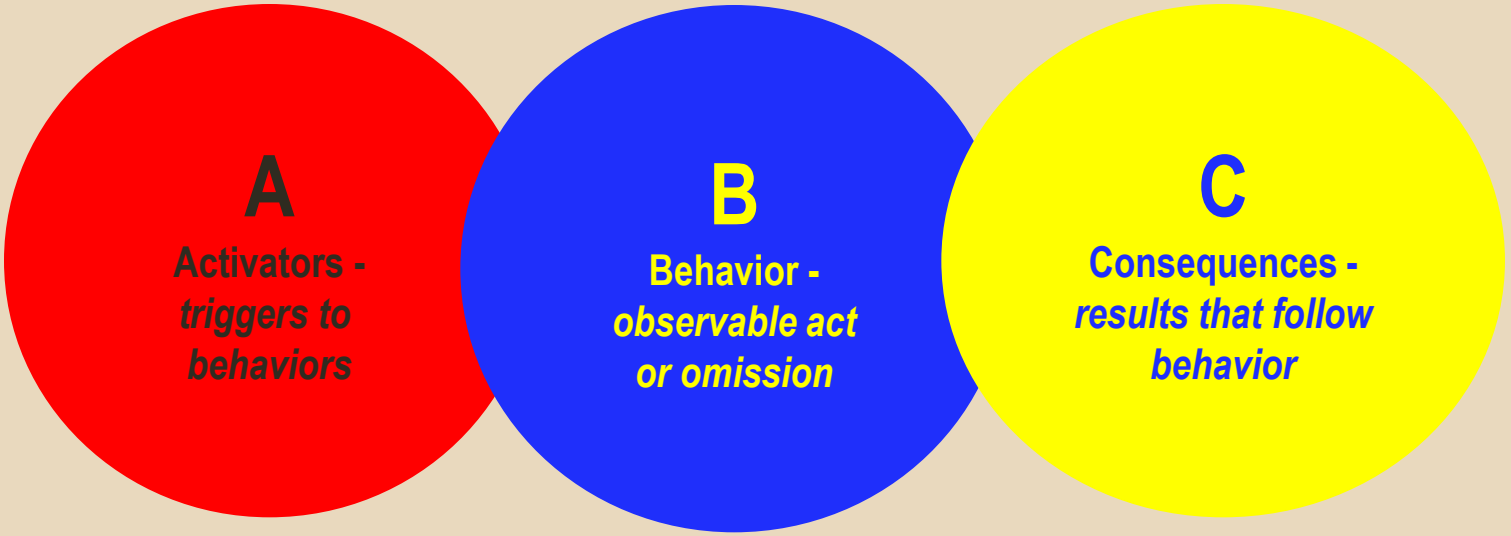
Accident-Incident Ratios

Personal interventions via frequent safety conversations help prevent accidents



The more safety conversations <u>we</u> have, the more opportunity we have to find out and eliminate the activators and consequences driving these at-risk behaviors.

The Behavioral Chain



Discomfort in hot weather → Not wearing high visibility vest → Feel more comfortable

Risk amnesty

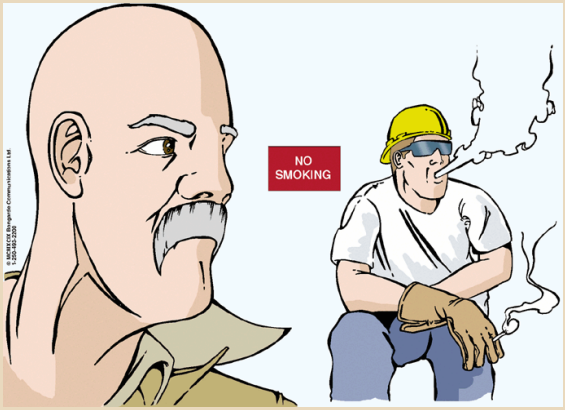
- Think of a safety violation that you have committed - either at work or at home.
- Think of why

Factors That Affect Consequence

	Time frame: Sooner / later	Consequence: Certain / uncertain	Significance: Positive and negative
Large impact on behavior	Soon S	Certain C	Important to individual +ve
Limited impact on behavior	Long term L	Uncertain U	Unimportant to individual -ve

Components of BBS

- Observation of workers at work
- Identification of critical/at-risk behaviors
- Interventions (soon-certain)
- Positive feedback
- Takes upper management support
- Goal: Employees embrace safety 24/7



Behavior Based Safety – What is it?

- Engineering controls/safe work practices vs. BBS

BBS Cons

- Not a stand alone program – many use as such
- Underlying cause of injuries is the hazard.
  - Easier to correct a hazard than change human behavior.
- May cause fear among employees
  - Inhibit reporting
  - Fear of being blamed for causing hazard
- Takes management commitment
  - People will do what their boss tells them to do!
- Hard to implement if high turnover rate (e.g. construction).

You cannot not influence.
The question is - which direction will you choose to influence people?

Incident Investigation and Root Cause Analysis

Incident Investigation – Why?

- Incidents can happen when:
  - Hazards escape detection
  - Hazards not obvious
  - Combination of events/circumstances that were difficult to foresee
  - If you don't investigate, the hazard won't be identified and controlled and others will be injured

Incident Statistics

- 95% of incidents are determined to be the result of unsafe work behaviors
- 3% of incidents are due to hazardous conditions
- 2% “Acts of God”
- Therefore, management system weaknesses account for 98% of all workplace incidents!
- Effective investigation and root cause analysis helps identify and eliminate management system weaknesses.

The Incident

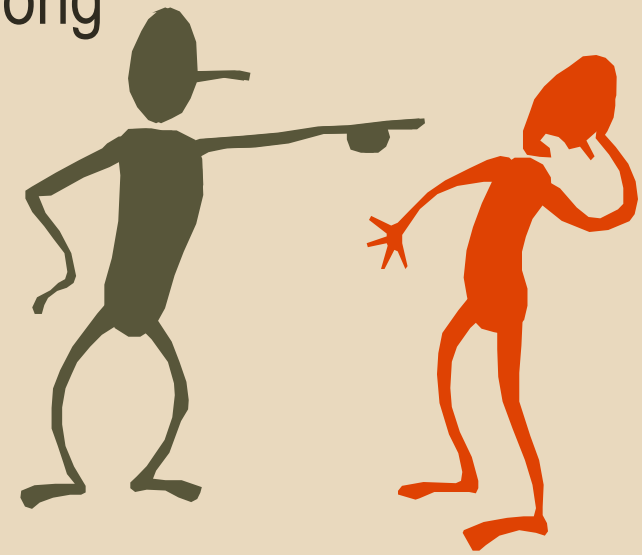
- An unplanned, unexpected event that interferes with or interrupts normal activity & potentially leads to personal injury or dollar loss (equipment damage).
  - Not to be confused with injury!

When Investigating - Primary Focus

- Determine the facts
- Identify causal factors
- Identify root causes
- Lessons that can be learned to prevent reoccurrence

Focus Should Not Be

- To assign blame!
- To find easy answer!
- Many investigations are closed too soon
  - An individual has done something wrong
  - Piece of equipment has failed.
- Lose opportunity to find true system failures (root causes)

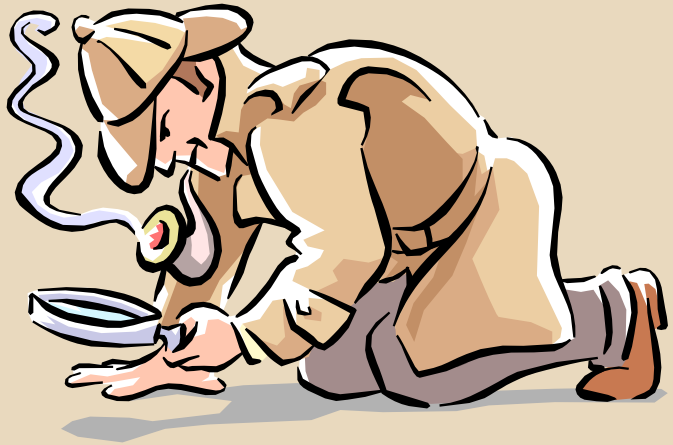


Inadequate Investigations

- Can lead to another incident with similar system failures

Goals of Investigation Needs to Be

- Identify the cause(s).
- Develop and implement corrective actions.
- Prevent recurrences.
- Foster a safe workplace.
- Improve morale.
- Demonstrate leadership.
- Improve a work process.



Traditional Problem Solving

- Gather data that is easy to get
- Causes of incident are blamed on wrong or incomplete data
- Recommendations focus on "fixing" people
- Recommendations focus on correcting wrong or unrelated event causes.

Better Problem Solving

- Gather all data relevant to the incident
- Identify causal factors using a systematic method based on complete data
- Recommendations focus on correcting management systems/business processes
- Recommendation directly relate to the causal factors and event sequences.

Example

- Company has policy – no standing on the top two steps of ladder
- Employees received documented training
- Employee injured when he fell after standing on top of ladder
- Root cause - employee misconduct?
- Corrective Action – disciplinary action?

Example – What About?

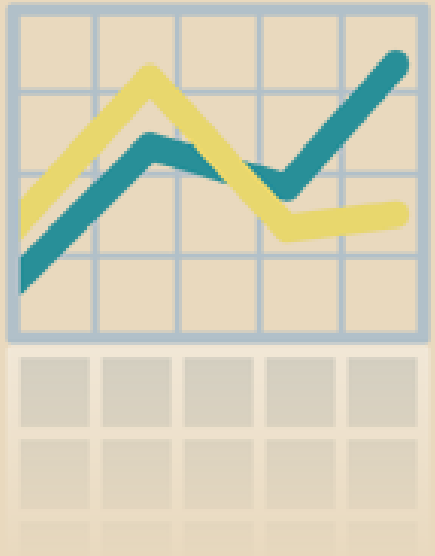
- Does company have taller ladder available?
- Is there a better way to do the task (e.g., scissor lift)
- Were there some time constraints?
- Is this a common practice – policy not enforced?
- Is the written policy clear and unambiguous?

Which Incidents to Investigate?

- All, but…
  - May have to pick and choose - limited resources
  - Estimated that 80% of losses due to 20% of events - focus on the 20%
- Investigate:
  - Incidents with large losses
  - Near misses with potential for large losses

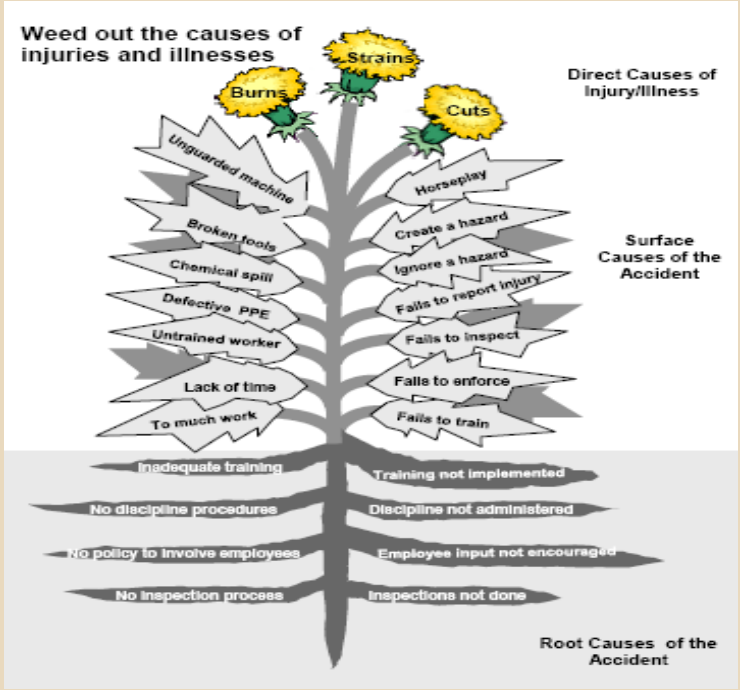
Which Incidents to Investigate?

- Trend:
  - Small losses – No reasonable potential for a large loss
  - Near misses with small potential for large losses
- No investigation:
  - Routine human errors and minor equipment failures that occur as a part of daily work activities



Identifying Root Causes

- Ultimate goal of process
- Cannot be started until all causal factors identified
- Need to identify the “What” and the “How” before identifying the “Why”



Root Cause

- Example of determining root cause:
  - Employee fell down (why?)
  - There was water on the floor (why?)
  - There was a leaking pipe (why?)
  - Regular maintenance not done (why?)
  - Maintenance is down a person (why?)
  - Person quit and wasn't replaced...

Why Address Root Causes?

- Prevents reoccurrence of the same or similar incidents
- Promotes more cost-effective solutions to problems because the proper solutions are implemented
- Prevents reoccurrence of even seemingly unrelated incidents involving the same root causes
- Supports trending analysis to identify issues symptomatic of larger management, organizational or cultural problems
- Improves compliance with regulations, industry standards, and company requirements.

Example – EE Closed Wrong Valve

- EE closed valve B instead of A
  - Easy to say employee error that may lead to the following corrective actions:
    - EE needs re-training
    - Remind operators to close correct valve
    - Personnel should pay attention at all times.

Example – EE Closed Wrong Valve

- EE closed valve B instead of A
  - But why did wrong valve get closed?
    - Was procedure confusing?
    - Was valve clearly labeled?
    - Was the operator familiar with the specific task?
  - Corrective Actions may be:
    - Revise the procedure so that references to valves match the valve labels found in field
    - Require operator training to have training procedures in hand when manipulating valves

Lessons Learned

- Learn from your incidents!
- May be an issue at other locations!
- Communicate to employees
  - Safety Flash
  - First Alert
  - Lessons Learned Database
  - Emails
  - Tailgate meetings

Training

Why Train?

- People don't know what they don't know
- Common sense isn't always common
- Workers are not always aware of hazards and how they can be hurt.
- Workers can't held responsible for working safely if they haven't been trained

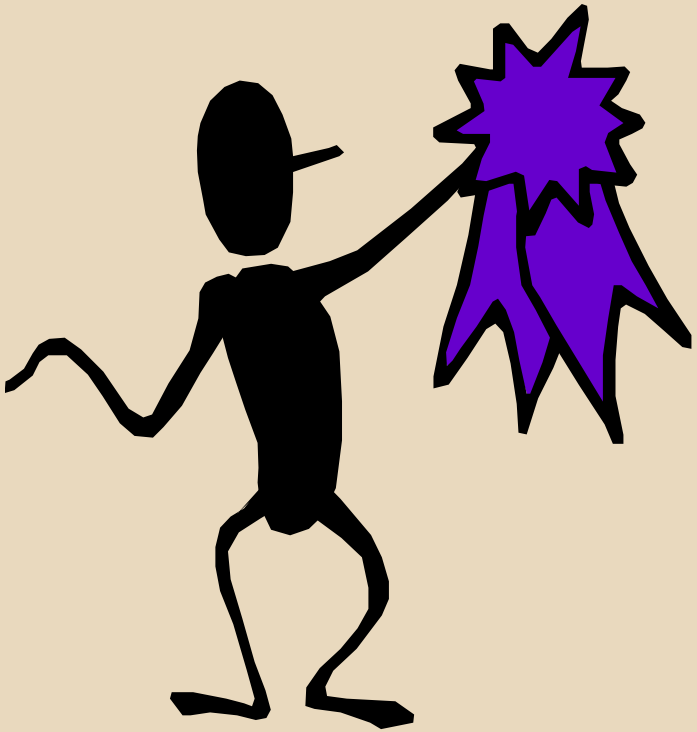
Training

- Need to identify what training each employee needs
  - Training matrix
- Need to provide the training
  - Classroom
  - Online
- Need to verify training was effective
  - Quiz
  - Demonstrate skills
- Need to have method to be able to verify training, prior to assigning tasks

Incentive Programs

Incentive Programs

- What's in it for me?
- Helps employees become engaged in the safety program
- A well run incentive program can be effective.
- But need to be careful!



Incentive or Disincentive?

- Incentive programs may unintentionally (or intentionally) provide employees an incentive to not report injuries.
  - All employees who have not been injured are entered in a drawing to win a prize,
  - A team is awarded a bonus if no one from the team is injured over some period of time
  - http://www.youtube.com/watch?v=rK8UIGkzsf8

David Michaels - OSHA

- DAVID MICHAELS, Assistant Secretary of Labor (OSHA) - April 2011
- *"A positive incentive program encourages or rewards workers for reporting injuries, illnesses, near-misses, or hazards; and/or recognizes, rewards, and thereby encourages worker involvement in the safety and health management system. Such an incentive program can be a good thing and an acceptable part of a (VPP) quality safety and health system."*

Incentive or Disincentive?

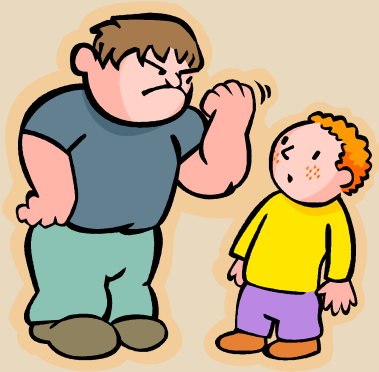
- Employer Safety Incentive and Disincentive Policies and Practices - MAR 12 2012
- https://www.osha.gov/as/opa/whistleblowermemo.html
- 29 CFR 1904.36 prohibits an employer from discriminating against an employee because the employee reports an injury or illness.
- Reporting a work-related injury or illness is a core employee right
- Retaliating against a worker for reporting an injury or illness is illegal discrimination under section 11(c)

Incentive or Disincentive?

- Employees may not feel free to report injuries or illnesses
  - Puts the employer's entire workforce at risk.
- Employers do not learn of and correct dangerous conditions
- Injured employees may not receive the proper medical attention, or the workers' compensation benefits.

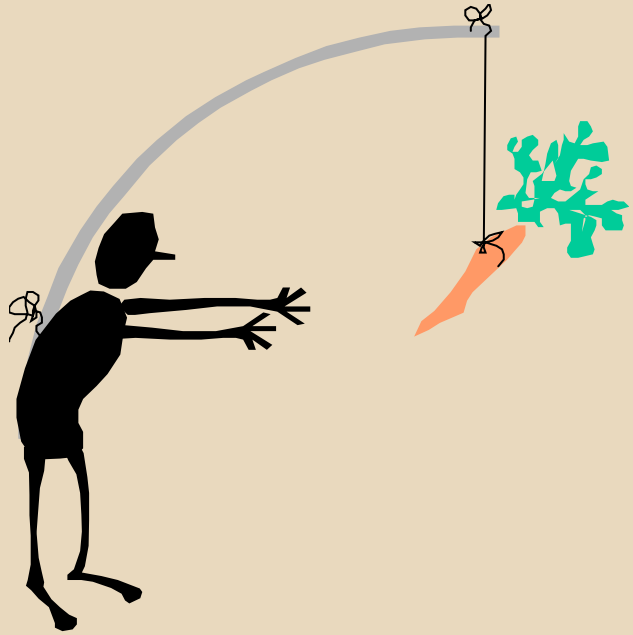
Incentive or Disincentive?

- If program discourages reporting
  - Could be considered discrimination
- May also violate OSHA's recordkeeping regulations
- Remember, reporting an injury is always a protected activity!



Incentive or Disincentive?

- Ok, does this mean my company can't have a safety incentive program?
- No! – just need well designed incentive program.



Incentive or Disincentive?

- Have an Active vs. Passive Incentive Program
- Use Leading Safety Indicators vs. Lagging Safety Indicators
  - Lagging Safety Indicators
    - Injuries
    - Incident Rates
  - Leading Safety Indicators
    - Training
    - Safety committee meetings
    - Inspections
    - Near miss reporting

Summary

To Continuously Improve Safety

- Behavior Based Safety program
  - Goal: employees treat safety as a 24/7, not just while at work
- Investigate incidents and learn the true root cause
  - Often the true root cause points to management system deficiencies.
- Share the results of the investigations, company-wide, so that all can learn

To Continuously Improve Safety

- Conduct training!
  - Employees need to know how to work safely!
- Have an incentive program, but be careful! Reward workers for:
  - Reporting near misses
  - Going “above and beyond” in regards to safety
  - Participating on safety committees, doing inspections, taking positive/active steps in improving safety
  - Avoid “disincentive” programs!

Questions?