## **Accident Investigation**

**Breaking the Chain** 





## The Principles

What is an accident

Three cause levels

What accidents should be investigated

Why should they be investigated

What are the initial "Do's"



#### What Is and Is Not an Accident

#### WHAT IS...

- An unplanned event that results in personal injury or in property damage.
- The failure of people, equipment, supplies, or surrounding to behave or react as expected.

#### WHAT IS NOT...

- Personnel or property damage caused deliberately.
- Requiring personnel to use the wrong equipment, not training personnel, allowing an unsafe condition to continue, tolerating safety rule violations, breaking safety rules, not maintaining equipment per manufacturers requirements.



#### Cause Levels of an Accident

- Basic Causes
  - Management safety policies & decisions
- Indirect Causes (sometimes called symptoms)
  - Unsafe employee actions
  - Unsafe workplace condition
- Direct Causes
  - Unplanned release of energy or hazardous material or both

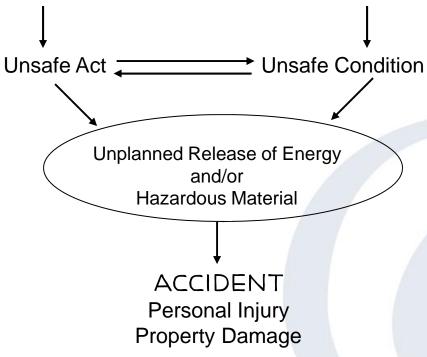


BASIC **CAUSES** 

**Environmental Factors** 

**INDIRECT CAUSES** (SYMPTONS)

> DIRECT **CAUSES**



Management Safety Policy & Decisions Personal Factors

A detailed analysis of an accident will normally reveal three causes levels; basic, indirect, and direct.



#### Causes

#### **Basic Causes**

Poor Training
No Supervisor Training
Inadequate Supervision

Rules not enforced No Safety Policy Purchasing policy Poor Equipment Design No Safety Follow-up

#### **Indirect Causes**

No MSDS
Didn't Follow Rules
Misusing Equipment

Defective Equipment
Wrong Tools
Didn't Know How

Poor Housekeeping Health Hazards Poor lighting



## **Kinds of Energy**

- Kinetic: Energy associated with motion
- Static energy: Compressed coil/spring, overhead storage
- Chemical: Corrosive, carcinogenic
- Thermal: Hot/Cold
- Electrical: Burn, shock, electrocution
- Ionizing & non-ionizing radiation: Welding/radioactive material
- Acoustic: Noise
- Biological: Numerous
  - Exclusion/limited oxygen
  - Exposure to elements
  - Inhibit immune system



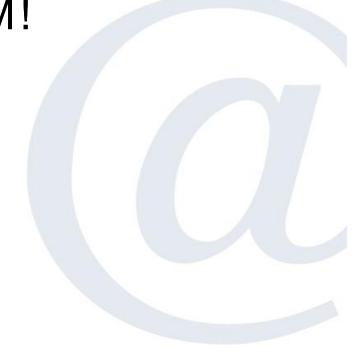
# Examples of Energy Resulting in Workplace Accidents

- Falls on same level, different levels, and falling objects
- Humans: Striking against, lifting, pushing/pulling/reaching
- Vehicle motion
- Projectiles, moving parts, shearing, cutting
- Rotating nip points, crushing, tearing
- Compressed air
- Flammable fires or explosions
- General moving parts
- Loud continuous or intermittent noise



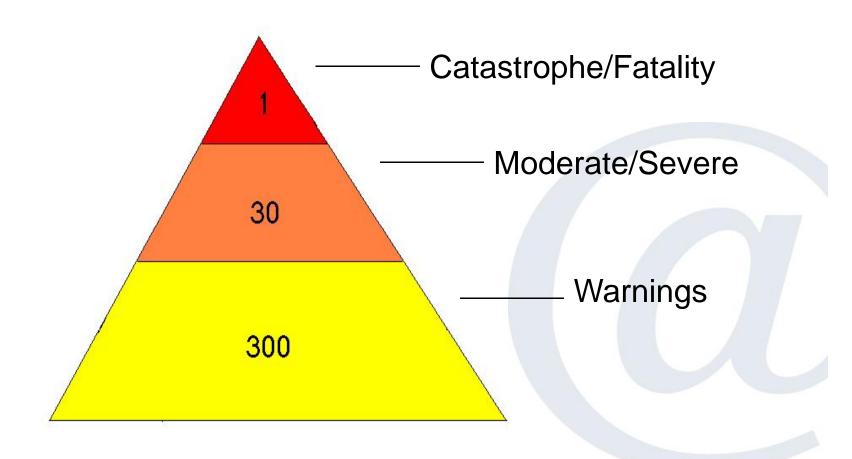
# What Types of Accidents Should be Investigated?

ALL OF THEM!





## **Pyramid of Chance**





#### What to Do

- Make the situation better
  - Prevent additional accidents
  - Provide appropriate medical services
  - Public relations
    - Notify family
    - Contact OSHA (fatality/catastrophe)
  - Subrogation actions
    - Secure evidence





#### What to Do

- Begin investigation immediately
- Collect accident information
  - Interview witnesses
  - Gather facts about employees, equipment, environment
  - Training records, orientation, authorizations
  - Additional factors relating to the accident
  - Time, staffing level, changes in processes
- Complete the accident report



## **Accident Analysis**

**Root Causes** 





## What Makes Up A Root Cause

#### **Actions**

- Failing to comply with safety rules
- Using unsafe methods
- Taking short cuts
- Allowing unsafe behaviors
- Failing to train
- Failing to correct a hazard

#### Conditions

- Damaged machinery
- Unlabelled chemical container
- Safety glasses on-top of worker's head
- Poor housekeeping in work environment
- Poorly designed work process



### **Unsafe Actions**











### **Unsafe Conditions**











## **Ask Why & How**

Why was the unsafe action performed

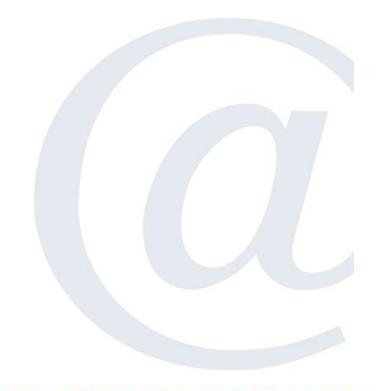
 How can we assure the unsafe action doesn't recur

- Why did the unsafe condition exist
- How can the condition be prevented from exist



## **Analysis – Key Factors**

- People
- Equipment
- Material
- Environment





#### **Corrective Action**

- Determine specific actions/corrections
- Assign correction responsibilities
- Assign a date for completion
- Check to assure specific actions/corrections are completed by due date
- Check to make sure actions/corrections eliminate or control the root causes



#### The Law

- OSHA Standards
  - General duty clause
- New Mexico Workers' Compensation Administration (WCA)
  - First report of injury (E-1)
  - Notice of accident



## **General Duty Clause**

Section 5(a) (1) of the OSH Act, requires employers to furnish to each employee, 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 employees.

Note: Anything more severe than First Aid



## **Legal Requirements**

- OSHA Notification
  - Three or more hospitalized workers from a single accident 24 hours
  - Fatality 8 hours
- OSHA Recordkeeping
  - Forms 300 and 301





## **Compliance Clause**

Section 5(a)(2) - Requires employers to comply with an Occupational Safety and Health Standards (OSHA) promulgated under this Act.

Without investigation how will you know if you are compliant?



## Risk & Safety Management Contact

If you have any questions or would like Risk and Safety assistance with your policy, please contact us:

Albuquerque area: (505) 345-7260

Toll Free: (800) 788-8851

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