#### **POWERED BY 7710 INSURANCE COMPANY**

WC Specialists for Emergency Services

# Investigating Accidents HOW TO FIND OUT WHAT REALLY HAPPENED

SHIELD



7710 is the premiere provider of Workers' Compensation Insurance for Firefighters and EMS. Built by first responders, for first responders.

# **Course Objectives**

- Recognize the need for an investigation
- Investigate the scene of the accident
- Interview victims & witnesses
- Distinguish fact from fiction
- Determine root causes
- Compile data and prepare reports
- Make recommendations



An unplanned, unexpected event that interferes with or interrupts normal activity and potentially leads to personal injury or dollar loss (equipment damage.)



# **BASIC** TYPES OF ACCIDENTS



#### MINOR ACCIDENTS:

 Such as paper cuts to fingers or dropping a box of materials.



- More serious accidents that cause injury or damage to equipment or property:
- Such as a forklift dropping a load or someone falling off a ladder



- Accidents that occur over an extended time frame:
  - Such as hearing loss or an illness resulting from exposure to chemicals



# The Accident - Near-Miss

• Also know as a "Near Hit"

• An accident that does not quite result in injury or damage (but could have).

• Remember, a near-miss is just as serious as an accident!





# Accidents have TWO things in common



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#### They all have outcomes from the accident





# They all have contributory factors that cause the accident





# **Outcomes of Accidents**

- NEGATIVE ASPECTS
  - Injury & possible death
  - Disease
  - Damage to equipment & property
  - Litigation costs, possible citations
  - Lost productivity
  - Morale



# **Outcomes of Accidents**

- POSITIVE ASPECTS
  - Accident investigation
  - Prevent recurrence
  - Change to safety programs
  - Change to procedures
  - Change to equipment design



# Outcomes of Accidents

- The key result should be to prevent a recurrence of the same accident.
- Fact finding:
  - What happened?
  - What was the root cause?
  - What should be done to prevent recurrence?





# The Aim of the Investigation

#### **INVESTIGATIONS ARE NOT DESIGNED TO:**

- Exonerate individuals or management.
- Satisfy insurance requirements.
- Defend a position for legal argument.
- Or, to assign blame.



# Tabletop Exercise

- Review incident provided
- Determine contributing factors
- Determine root causes
- Instructor will answer questions



# Types of Accidents

- FALL TO
  - same level
  - lower level
- CAUGHT
  - in
  - on
  - between



- CONTACT WITH
  - chemicals
  - electricity
  - heat/cold
  - radiation
- BODILY REACTION FROM
  - voluntary motion
  - involuntary motion

# Types of Accidents (cont.)

- STRUCK
  - Against
    - stationary or moving object
    - protruding object
    - sharp or jagged edge
  - By
    - moving or flying object
    - falling object

- RUBBED OR ABRADED BY
  - friction
  - pressure
  - vibration



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# The Investigation A STEP-BY-STEP PROCESS (ALMOST)

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# **Investigation Strategy**

- Gather information
- Search for & establish facts
- Isolate essential contributing factors
- Find root causes
- Determine corrective actions
- Implement corrective actions



# Secure the Scene

- Eliminate the hazards:
  - Control chemicals
  - De-energize
  - De-pressurize
  - Light it up
  - Shore it up
  - Ventilate





# Provide Care to the Injured

• Ensure that medical care is provided to injured people before proceeding with the investigation.







# **Isolate the Scene**

- Barricade the area of the accident, and keep everyone out!
- The only persons allowed inside the barricade should be Rescue/EMS, law enforcement, and investigators
- Protect the evidence until investigation is complete



- Get a brief overview of the situation from witnesses and victims.
- Not a detailed report, yet, just enough to understand the basics of what happened.

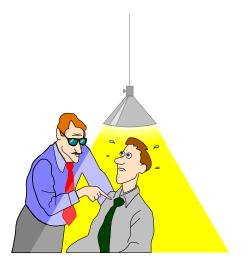


# **Interview Victims & Witnesses**

- Interview as soon as possible after the incident
  - Do not interrupt medical care to interview
- Interview each person separately
- Do not allow witnesses to confer prior to interview



- Put the person at ease.
  - People may be reluctant to discuss the incident, particularly if they think someone will get in trouble
- Reassure them that this is a factfinding process only.
  - Remind them that these facts will be used to prevent a recurrence of the incident





- Take Notes!
- Ask open-ended questions
  - "What did you see?"
  - "What happened?"
- Do not make suggestions
  - If the person is stumbling over a word or concept, do not help them out



- Use closed-ended questions later to gain more detail.
- After the person has provided their explanation, these type of questions can be used to clarify
  - "Where were you standing?"
  - "What time did it happen?"



- Don't ask leading questions
  - Bad: "Why was the forklift operator driving recklessly?"
  - Good: "How was the forklift operator driving?"
- If the witness begins to offer reasons, excuses, or explanations, politely decline that knowledge and remind them to stick with the facts



- Summarize what you have been told.
  - Correct misunderstandings of the events between you and the witness
- Ask the witness/victim for recommendations to prevent recurrence
  - These people will often have the best solutions to the problem



- Get a written, signed statement from the witness
  - It is best if the witness writes their own statement; interview notes signed by the witness may be used if the witness refuses to write a statement



- Read the scenario handout
- Team up in pairs
- One person plays the investigator
- One person plays the witness



# **Gather Evidence**

- Examine the accident scene. Look for things that will help you understand what happened:
  - Dents, cracks, scrapes, splits, etc. in equipment
  - Tire tracks, footprints, etc.
  - Spills or leaks
  - Scattered or broken parts
  - Etc.



# **Gather Evidence**

- Diagram the scene
  - Use blank paper or graph paper. Mark the location of all pertinent items; equipment, parts, spills, persons, etc.
  - Note distances and sizes, pressures and temperatures
  - Note direction (mark north on the map)





# **Gather Evidence**

- Take photographs
  - Photograph any items or scenes which may provide an understanding - to anyone who was not there - of what happened.
  - Photograph any items which will not remain, or which will be cleaned up (spills, tire tracks, footprints, etc.)
  - 35mm cameras, Polaroids, and video cameras are all acceptable.
    - Digital cameras are not recommended digital images can be easily altered





#### **Review Records**

- Check training records
  - Was appropriate training provided?
  - When was training provided?
- Check equipment maintenance records
  - Is regular PM or service provided?
  - Is there a recurring type of failure?
- Check accident records
  - Have there been similar incidents or injuries involving other employees?



#### **Isolate Fact From Fiction**

- Use NORMS-based analysis of information
  - Not an interpretation
  - Observable
  - Reliable
  - Measurable
  - Specific
- If an item meets all five of above, it is a fact.



#### Investigation Traps

- Put your emotions aside!
  - Don't let your feelings interfere stick to the facts! (<u>The Eyes Glazed Over</u>)
- Do not pre-judge.
  - Find out the what really happened.
  - Do not let your beliefs cloud the facts.
- Never assume anything.
- Do not make any judgements.





- ENVIRONMENTAL
- DESIGN
- SYSTEMS & PROCEDURES
- HUMAN BEHAVIOR





- HUMAN BEHAVIOR
  - Common to all accidents
  - Not limited to the person involved in the accident





- ENVIRONMENTAL
  - Noise
  - Vapors, fumes, dust
  - Light
  - Heat
  - Critters





- DESIGN
  - Workplace layout
  - Design of tools & equipment
  - Maintenance





- SYSTEMS & PROCEDURES
  - Lack of systems & procedures
  - Inappropriate systems & procedures
  - Training in procedures
  - Housekeeping





#### Contributing Factors - Investigation Strategy

- ISOLATE ESSENTIAL CONTRIBUTORY FACTORS
  - INVESTIGATION TEAM
    - EVALUATES ALL FACTORS CONCERNED



#### **Contributing Factors - Investigation Strategy**

- ISOLATE ESSENTIAL CONTRIBUTORY FACTORS
  - INVESTIGATION TEAM
    - ISOLATES THE KEY FACTOR(S) BY ASKING THE FOLLOWING QUESTION...



#### **Contributing Factors - Investigation Strategy**

# Would the accident have happened if this particular factor were not present?



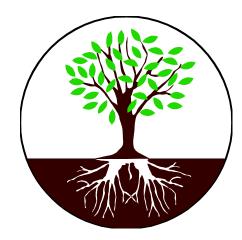
#### **Determine Causes**

- Employee actions
  - Safe behavior, at-risk behavior
- Environmental conditions
  - Lighting, heat/cold, moisture/humidity, dust, vapors, etc.
- Equipment condition
  - Defective/operational, guards, leaks, broken parts, etc.
- Procedures
  - Existing (or not), followed (or not), appropriate (or not)
- Training
  - Was employee trained when, by whom, documentation



#### **Find Root Causes**

- When you have determined the contributing factors, dig deeper!
  - If employee error, what caused that behavior?
  - If defective machine, why wasn't it fixed?
  - If poor lighting, why not corrected?
  - If no training, why not?





#### **Prepare A Report**

- Accident Reports should contain the following:
  - Description of incident and injuries
  - Sequence of events
  - Pertinent facts discovered during investigation
  - Conclusions of the investigator(s)
  - Recommendations for correcting problems

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#### **Prepare A Report**

- Be objective!
  - State facts.
  - Assign cause(s), not blame.
  - If referring to an individuals actions, don't use names in the recommendation.
    - Good: All employees should......
    - Bad: George should......



#### Make Recommendations

#### DETERMINE CORRECTIVE ACTIONS

- INVESTIGATION TEAM
  - Interprets & draws conclusion
  - Distinction between intermediate & underlying causes
  - Recommendations based on key contributory factors and underlying/root causes



#### Make Recommendations

- IMPLEMENT CORRECTIVE ACTIONS
  - INVESTIGATION TEAM
    - Recommendation(s) must be communicated clearly and **objectively**.
    - Strict time table established
    - Follow up conducted



### **Company Accident Forms**

- Must be filled out completely by the employee and employee's immediate supervisor (this includes foremen).
- Must be turned in to Safety within 24 hours of incident.



#### **Benefits of Accident Investigation**

- PREVENTING RECURRENCE
- IDENTIFYING OUT-MODED PROCEDURES
- IMPROVEMENTS TO WORK ENVIRONMENT



#### **Benefits of Accident Investigation**

- INCREASED PRODUCTIVITY
- IMPROVEMENT OF OPERATIONAL & SAFETY PROCEDURES
- RAISES SAFETY AWARENESS LEVEL



#### WHEN AN ORGANIZATION REACTS SWIFTLY AND POSITIVELY TO ACCIDENTS AND INJURIES, ITS ACTIONS REAFFIRM ITS COMMITMENT TO THE SAFETY AND WELL-BEING OF ITS EMPLOYEES.





## Thank you.

PLEASE CONTACT US WITH ANY QUESTIONS.

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