# Incident Investigation

## A new way of thinking...?

**Doug Fletcher, CIH, CSP**
**Fletcher Safety Consulting, Inc.**

- 35 years
- ~18 years with OSHA
- 9 years self-employed

- At least three aspects to “working safely” efforts.....
  1. Compliance
  2. Injury reduction (300 logs)
  3. Catastrophe prevention (PMs, PSM, etc.....)

# A “typical” incident investigation....

1. What was happening prior to the incident occurring?

   *“the employee was working.....”*

2. What happened?

   “the employee stuck his head where it didn’t belong...”

3. Corrective action?

   *“instructed the employee not to stick his head there...”*

# The 4 Principles of Safety (Differently) Sidney Dekker

1. ***Safety*** is not defined by the absence of accidents.....but by the presence of “capacity”.
2. Workers are not the problem; they are the problem solvers.
3. We don’t constrain workers in order to create safety, we ask workers what they need to do work safely, reliably, and productively.
4. Safety doesn’t prevent bad things from happening.  Safety ensures good things happen while workers do work in complex and adaptive work environments.

# The 5 Principles of Human Performance Todd Conklin

1. Error is normal.
   ** “the unintentional deviation from the preferred behavior.”
2. Blame fixes nothing.
3. Learning and improving are vital.
4. Context influences behavior.
5. How you respond to failure matters.

# 1. Error is normal!

1. Your best employee and your worst employee make mistakes.
2. When things go wrong, your employees make mistakes.....when things go right, your employees make mistakes!
3. Since error is a normal part of human existence, error is never causal.
4. Errors are not choices.....
5. You cannot remove error, so you must defend against the inevitability of error.
6. Good systems build in error tolerance.
7. Error without significant consequence is the closest thing to “leading indicator” data.

# Error Precursors

- Time pressure
- High workload
- Interruptions
- Distractions
- Fatigue
- Unfamiliarity
- Stress (frustration)
- Mental shortcuts
- Complacency
- Others.....

Planners, managers, and designers make two enormous assumptions:

1. Every day is the same....and process variability will be identified and driven out of the work before the worker starts their tasks.

2. Workers perform consistently and perfectly every time the work is done; the mistaken belief that the worker will exhibit machine reliability.

# “Near Miss”

Success or failure?

Were we good or were we lucky?

Capacity = the ability of a system or process to contain failure without significant consequence.  Controls, resources, etc.

# 2. Blame fixes nothing.....

Blame and punish or learn and improve, but not both!

Blame makes error a choice, in retrospect.

Blame misdirects resources and strategies.....”fix the employee”, not the system.

*“If you disapprove of your daughter’s first boyfriend, you will never get to meet the second boyfriend.”*

# *Incident investigation truth!*

Don’t limit yourself to the quest for worker error or procedural non-compliance.....you will always find both.

# 3. Learning and improving are vital

1. Organizations have two choices when responding to failure: to learn and improve or to blame and punish; learning is a strategic and operational choice toward improvement.

2. Knowing how work is (actually) done is difficult.

3. Defenses are placed in systems, tested in systems, and strengthened in systems by learning how “successful” work is done.

# Aaron Cerrone

1. If we ask “what happened” or “who screwed up”, in response to an incident, we are letting our ego get in the way.....

2. If we ask “is everyone alright” and “how did we fail”, our ego is in check.....

# 4. Context influences behavior

1. **Workers do what they do for a reason.....and the reason makes sense to the worker given the context.**

   ****  one man's short cut is another man's attempt at efficiency.....**

2. Local rationale is information to be discovered, not to be weaponized.

   "Acceptable Exposures Program"

3. Individual behavior is influenced by organizational processes and values.
4. Simplify the structure of tasks.....make it easy to do the job right and difficult to do the job wrong!
5. Design for error.....

# 5. How you respond to failure matters.

1. You have two choices:  getting better or getting even.
2. You can blame and punish or you can learn and improve, but not both.
3. You create the feedback system you have.
4. Every aspect of improvement is contingent upon leadership's deliberate decision to get better.

“We should make learning easy, because what we are going to learn is often messy.”

A colleague once told me that he believed there were only two reasons to punish an employee..... Lying and insubordination.....

OSHA has pushed us to “progressive discipline”.....and while this is a requirement of the Employee Misconduct - Affirmative Defense, it almost forces us to place blame.....

# Cause Analysis - Methodology

- Designed to get to all of the causes of an incident.  There are normally many contributing factors.  Successful Cause Analysis is defined as “Near Certain” prevention of recurrence.

- Fishbone – 5-Why’s – Pareto – Failure Mode & Effects – Other.....

- Cause Analysis can transform a culture from one that is reactive to one that is proactive.

# OSHA

- Find hazards – Fix hazards!
- But “why” are these hazards arising in the first place?
- If we do not go the extra step we are destined to just repeat this process over and over.....

- How the story of the event is told will tilt the scales of opinions in one direction or another.

- Organizations often act as if they are the victims of an accident....

- The organization owns the processes and practices, the systems and the support and ultimately, the entire environment in which the work is being done.....

# Investigations learn; Corrective actions fix

- **Why do investigations?**
  - “prevent re-occurrence”?
- Investigations don’t change work controls, don’t fix broken equipment, don’t fix bad procedures, don’t remove at-risk behaviors.....
- Investigations are NOT corrective actions.....

# Investigations learn; Corrective actions fix

- If you have a problem that is being identified frequently (i.e. PPE not worn or procedure not followed), you need to figure out what you can do to address it.

- Start with the “system”..... perhaps it’s a “capacity” issue or a gap in training.... Identify what role **you** (or management) can play in preventing recurrence.

- **Easy to point fingers or use the “Common Sense” angle. If you look deep enough, there is almost always a system or managerial component to an incident. Ask “why?” one more time!**

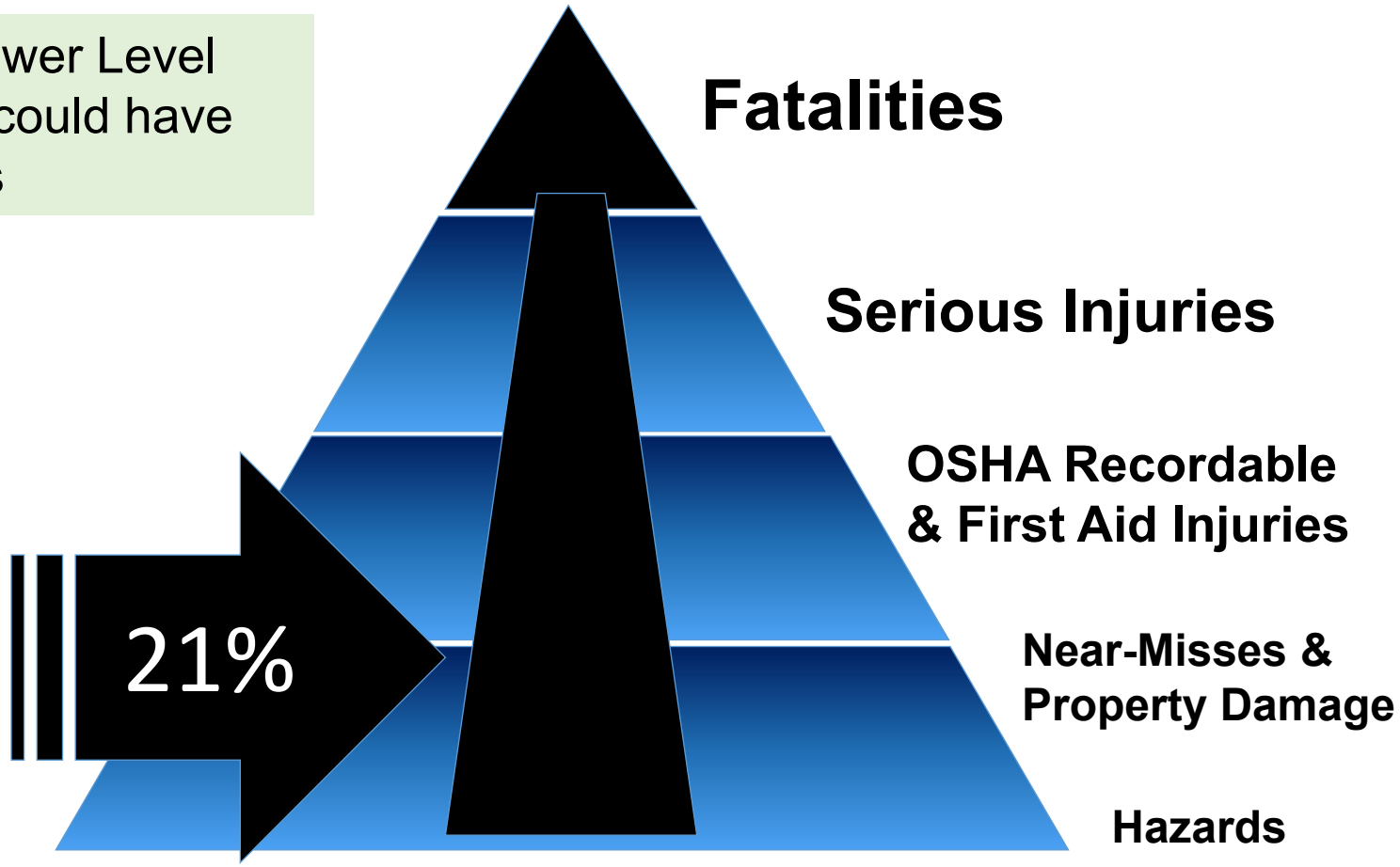
# Root Cause?

- “Bad things happen in our organizations because many small contextual factors have collectively combined in a complex way that a bad outcome could result in our operations.

- Tell the story of the conditions necessary to have the failure that happened.

# Safety Severity Pyramid

21% of Lower Level Incidents could have been SIFs

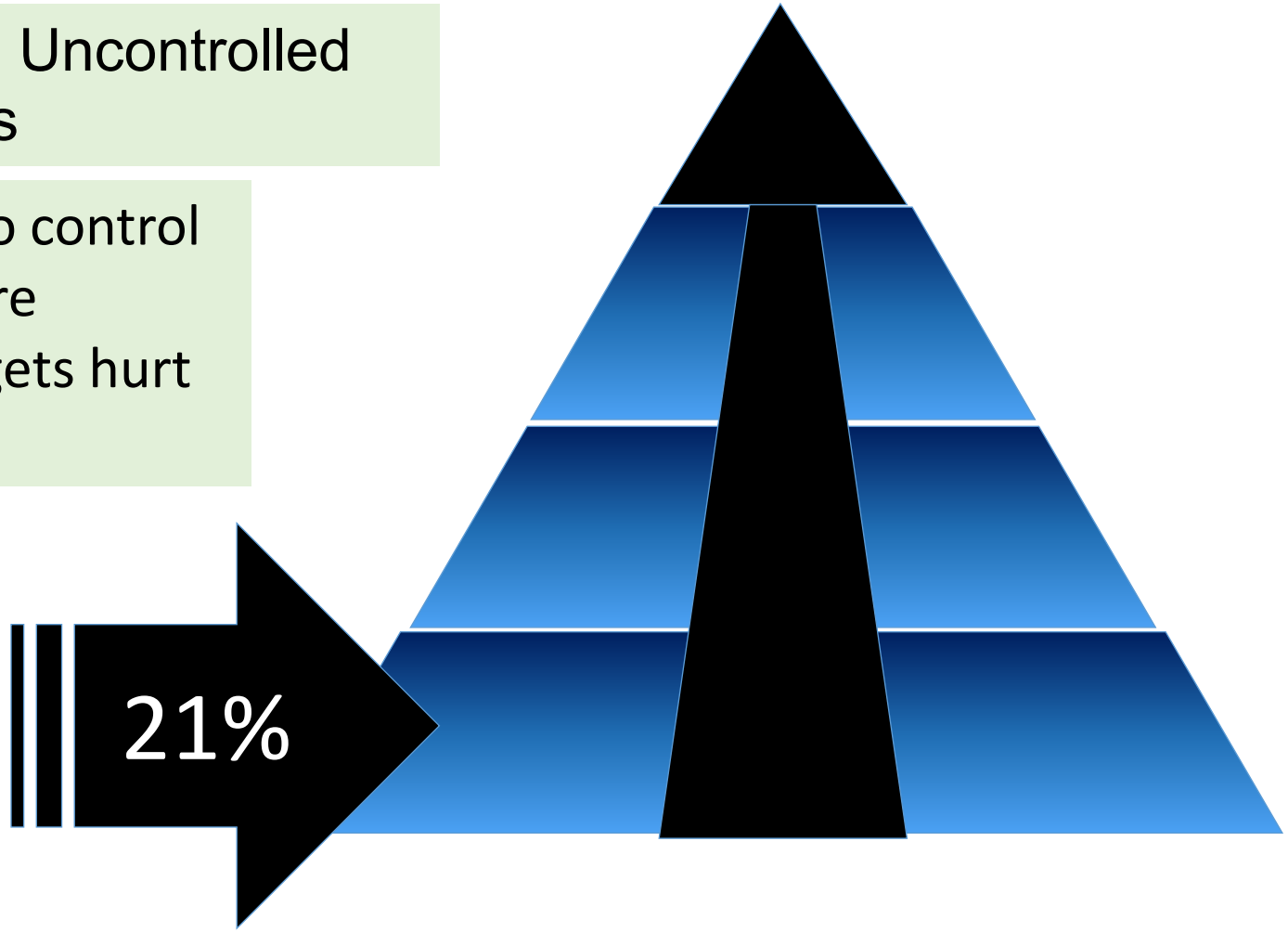



Source: Dekra Insight, 2015

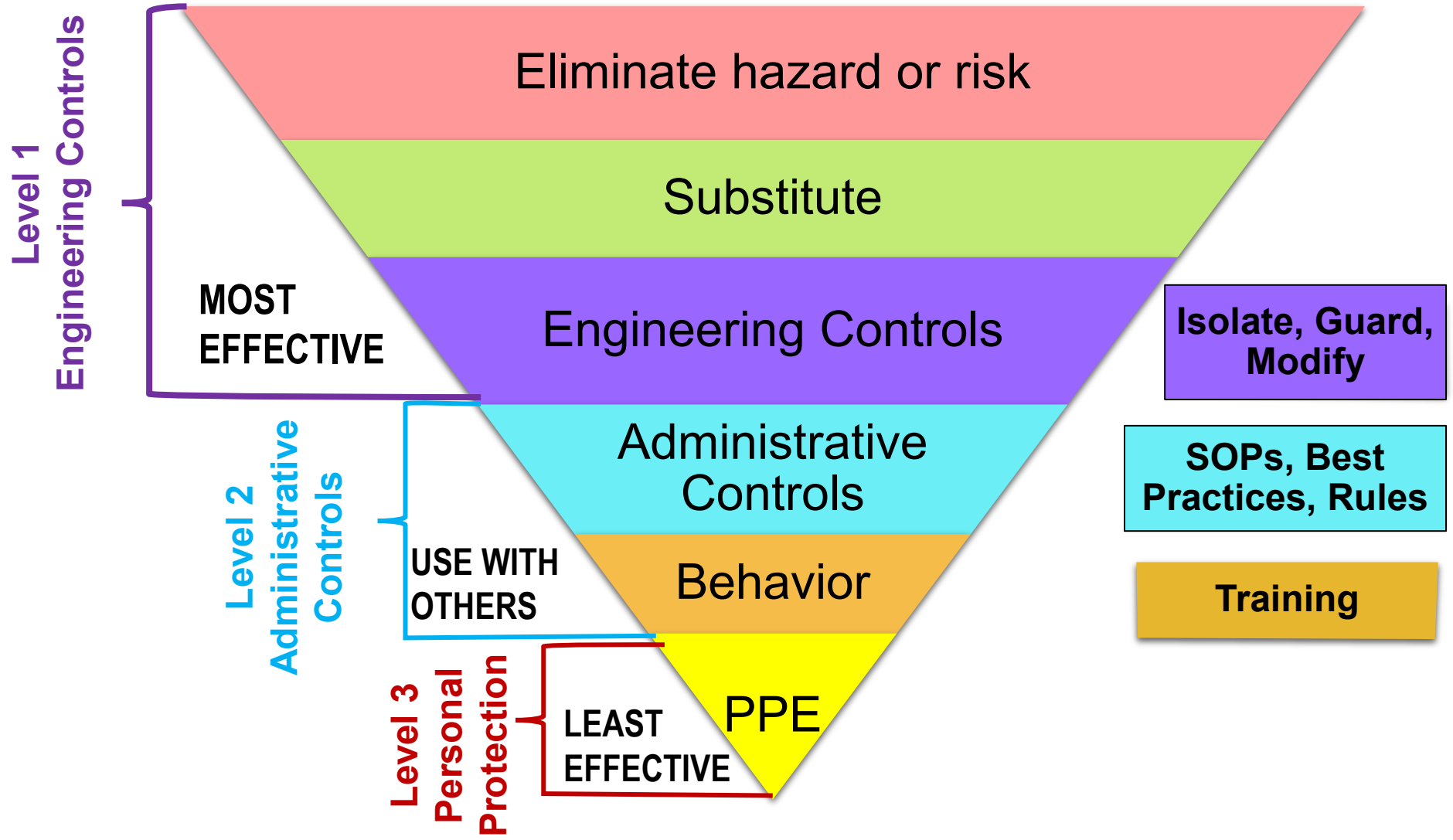
# We Want To Find The 21%

These are Uncontrolled High Risks

We want to control them before someone gets hurt badly




Source: Dekra Insight, 2015


Level 1
Engineering Controls
MOST
EFFECTIVE
Eliminate hazard or risk
Substitute
Engineering Controls
Isolate, Guard, Modify
Level 2
Administrative
Controls
USE WITH
OTHERS
Administrative
Controls
SOPs, Best
Practices, Rules
Behavior
Training
Level 3
Personal
Protection
LEAST
EFFECTIVE
PPE

# Make Corrective Actions Impactful

- The Hierarchy of Controls is important – But don’t forget the cultural component.
- Unless you can eliminate the hazard you will probably use more than one control.....
- Eliminate “choice” to the extent possible.....
  - Guard rails or PFAS?
- Make the right choice, the easy choice.

# Remember……

Incident investigation is not just that mandatory thing you do when bad things happen.

It can be a very valuable tool if you make it one!

# OSHA

- Four weeks of incident investigation at OSHA Training Institute.
- Mock interviews, case studies.....
- Charts, timelines, sticky notes, multiple techniques.....
- Area Office – invariably you would get a few hours to conduct an investigation!
- Usually ended up using the “5 Why?” technique.....which often assigns blame.

# OSHA's Rapid Response Investigations

- Fatalities, amputations, hospitalizations, loss of eye.....
- RRI allow for Area Director's discretionary utilization of resources
- Triage reports..... Cat 1, 2, and 3
- Nebraska Consultation RRI Transfer Program Pilot (CRT)

U.S. Department of Labor

Occupational Safety and Health Administration
Lake Regency Building, Suite 303
444 Regency Parkway Drive
Omaha, Nebraska 68114
402-553-0171 or 1-800-642-8963 Nebr. Only
Complaints.f164@dol.gov

Reply to the Attention: Duty Officer

**Date:**

**To:**

**Establishment:**

**Inquiry Number: 1890937**

**Abatement Due Date:**

This letter is to follow up the conversation we had on _____ in reference to the employee injury that occurred on at your worksite located at:

I wanted to remind you that there are some important steps you should now be taking to ensure the safety of your workers and avoid the need for an OSHA inspection.

In most cases, a serious injury indicates the presence of workplace hazards that threaten the health and safety of other workers. OSHA is very concerned that additional employees at your worksite are at risk of being injured. While this letter is not a citation, and we do not intend to conduct an inspection at this time, **we ask that you immediately conduct your own investigation into the incident and make any necessary changes to avoid further incidents.**

**Please complete each of the following by:**

- Conduct an incident investigation (see Attachment A) [ ]
- Document findings and send corrective actions to complaints.f164@dol.gov [ ]
- Post a copy of this letter where employees can readily review it [ ]
- Email a copy of the signed Certificate of Posting (Attachment B) to Complaints.f164@dol.gov [ ]

**If we do not receive a response from you by _____ indicating the actions you have taken, your worksite may be considered for an immediate on-site inspection.**

OSHA Occupational Safety and Health Administration
www.osha.gov

THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 affords workers the right to a safe workplace. OSHA requires employers to provide a workplace that is free of serious recognized hazards and in compliance with OSHA standards. Workers have the right to FILE A COMPLAINT WITH OSHA if they believe that there are either violations of OSHA standards or serious

The goal of your incident investigation will be to identify both the immediate and the underlying causes of the incident. To assist you in conducting an effective investigation, I have attached a guide you can use in identifying the root causes of the incident and taking the necessary steps to ensure your employees are protected from future injuries. Additional resources are available at www.osha.gov.

Please note that it is against the law for employers to retaliate or discriminate in any way against an employee for raising safety and health issues or for exercising their rights under the OSHA law. This includes the right to repot a work-related injury or illness to their employer, or to contact OSHA.

After correcting any immediate hazards, small and medium-sized businesses may be interested in requesting free, confidential assistance from the On-Site Consultation Program. Consultants from Nebraska Department of Labor will work with you to identify workplace hazards, provide advice on compliance with OSHA standards, and assist you in establishing a safety and health management program. These services are separate from enforcement and do not result in penalties or citations. Please visit the Nebraska OSHA Consultation Website or call them at 402-471-4717. The consultation pamphlet is also available at www.osha.gov/Publications/3357consultation-sm.pdf.

If you have any questions please call the Omaha Area Office at 402-553-0171 and speak with the duty officer or email the office at complaints.f164@dol.gov. Your support and interest in the safety and health of your employees is appreciated.

Sincerely,

Matt Thurlby
Area Director

Attachment A

**NON-MANDATORY INVESTIGATIVE TOOL**

**A. NAME OF INVESTIGATOR:** _____ **TITLE:**_____

**B. INCIDENT DESCRIPTION/INJURY INFORMATION**

1) Information about injured employee*
   - Name of injured worker: Age:
   - Usual job title:
   - Job at time of incident:
   - Type of employment (check all that apply): Full Time Part Time Seasonal __Temporary __Other (please specify):_____
   - Amount of time with the company:
   - Amount of time in current position at time of incident: _____
   - Description and severity of the injury:
2) Date and time of the incident: _____
3) Location of incident:
4) Detailed description of incident (include relevant events leading up to, during and after the incident), preferably with information provided by the injured worker:

5)
6) Description of incident from eye-witnesses, including relevant events leading up to, during, and after the incident. Include names of persons interviewed, usual occupations and date/time of interviews.

7) Description of incident from additional employees with knowledge, including relevant events leading up to, during and after the incident. Include names of persons interviewed, usual occupations and date/time of interviews.

*If more than one worker was injured in the incident, fill out a new form for each injured worker.

**C. IDENTIFY THE ROOT CAUSES: WHAT CAUSED OR ALLOWED THIS**

*The Root Causes are the underlying reasons the incident occurred – and are the factors that need to be addressed to prevent future incidents. If safety procedures were not followed, why were they not being followed? If a machine was faulty or a safety devise failed, why did it fail? It is common to find factors that contributed to the incident in several of these areas: equipment/machinery, tools, procedures and policies, training or lack of training, work environment. If you identify these factors, try to determine why these factors were not addressed before the incident.*

**D. RECOMMENDED CORRECTIVE ACTIONS TO PREVENT FUTURE INJURIES**

**E. CORRECTIVE ACTIONS TAKEN/ROOT CAUSES ADDRESSED (include date and name of persons making correction)**

# “What’s the Hazard?”

- LinkedIN
- www.fletchersafety.com
- YouTube
- Spotify, iTunes, Google podcast, etc.....