

Washington Penn Plastic Human & Organizational Performance - H.O.P.



“Our Journey To The New View On Safety”

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What We Do...

- Custom Compounder of Proprietary Filled Polyolefins
 - *Minerals : Talc, Calcium, Mica, Mag Hydroxide*
 - *Thermoplastic PolyOlefins (TPOs)*
 - *Glass-Reinforced Compounds*
 - *Specialty Polyethylene Compounds*
- Producer of Color Concentrates
- Polypropylene & Polyethylene Distributor & Reseller
- Toll Compounder



Markets Served...



Packaging & Film

Rigid, Thermoformed,
Flexible, BOPP,
Closures & Seals



Automotive

HVAC, Exterior, Interior, Under-
the-Hood, Undercar, Electrical
Systems



Appliance

Dishwasher, Laundry,
Refrigerator, Small Appliance



Construction

Shutters, Roofing,
Windows & Doors, Pipe



Consumer Products

Lawn & Garden, Toys, Recreational
Vehicles, Electronics, Power Tools,
Home Products

In order to understand H.O.P.

. . .we must understand that humans are **NOT** a problem to be fixed . . .

. . .behind every **Human Error** there is a story of a failure or weakness that occurred in a system while work was performed.

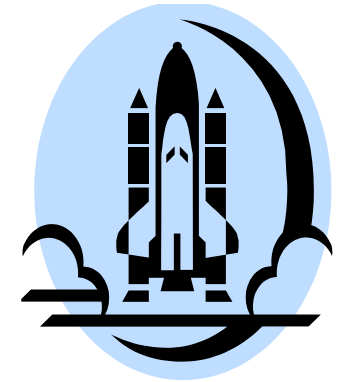


Our **Goal** with **H.O.P.**

. . . is to become **less surprised** by human error and failure . . .

. . . and instead, become a **lot more interested in and a lot better at learning and seeing the big picture!**

Are we too complex?



*The more **complex** our organization or process is, the more **error prone** it is*

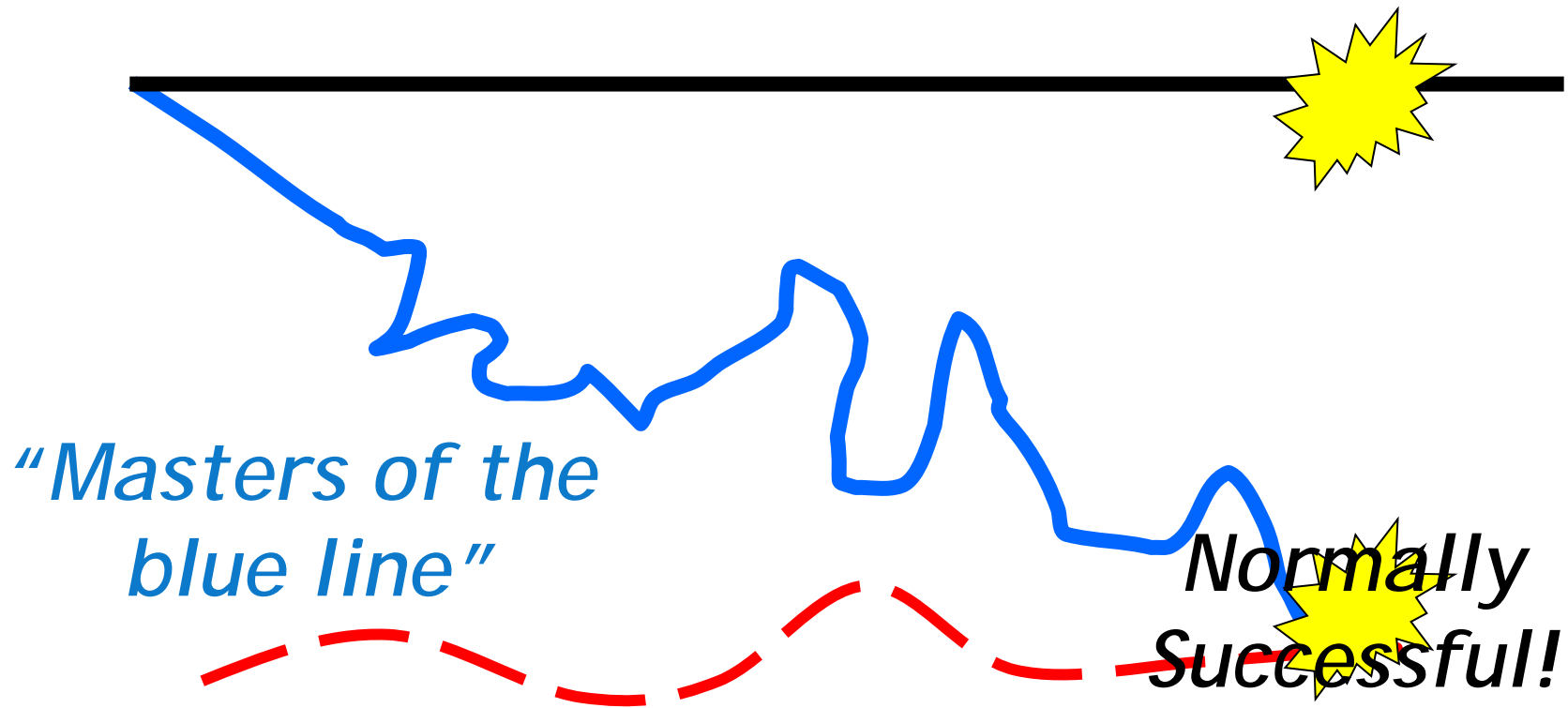
*. . . and the **less tolerant** of error our organization becomes. (Conklin, 2012)*



The Principles of Human Performance

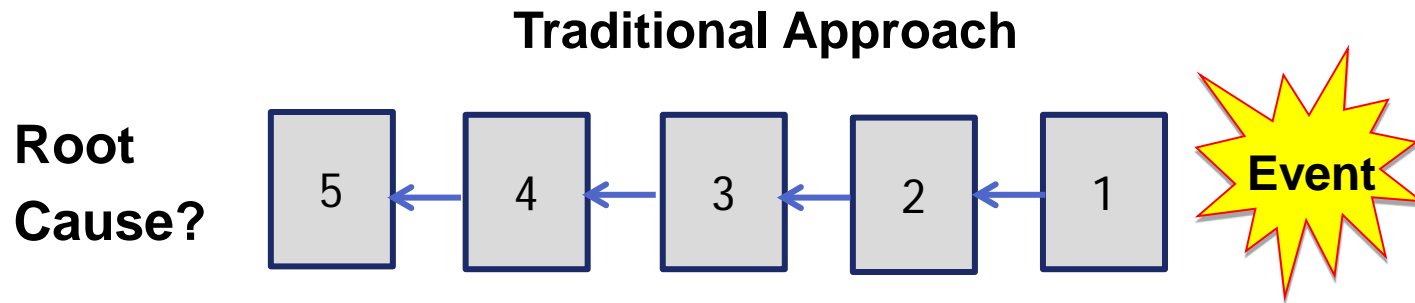
1. People make errors
2. Error-likely situations are predictable
3. Individual behaviors are influenced
4. Upsets can be avoided
5. Our response to failure matters.

Work as Planned (WORK INSTRUCTION) vs. Work as Completed (ACTUALLY DONE)



Our traditional approach . . .

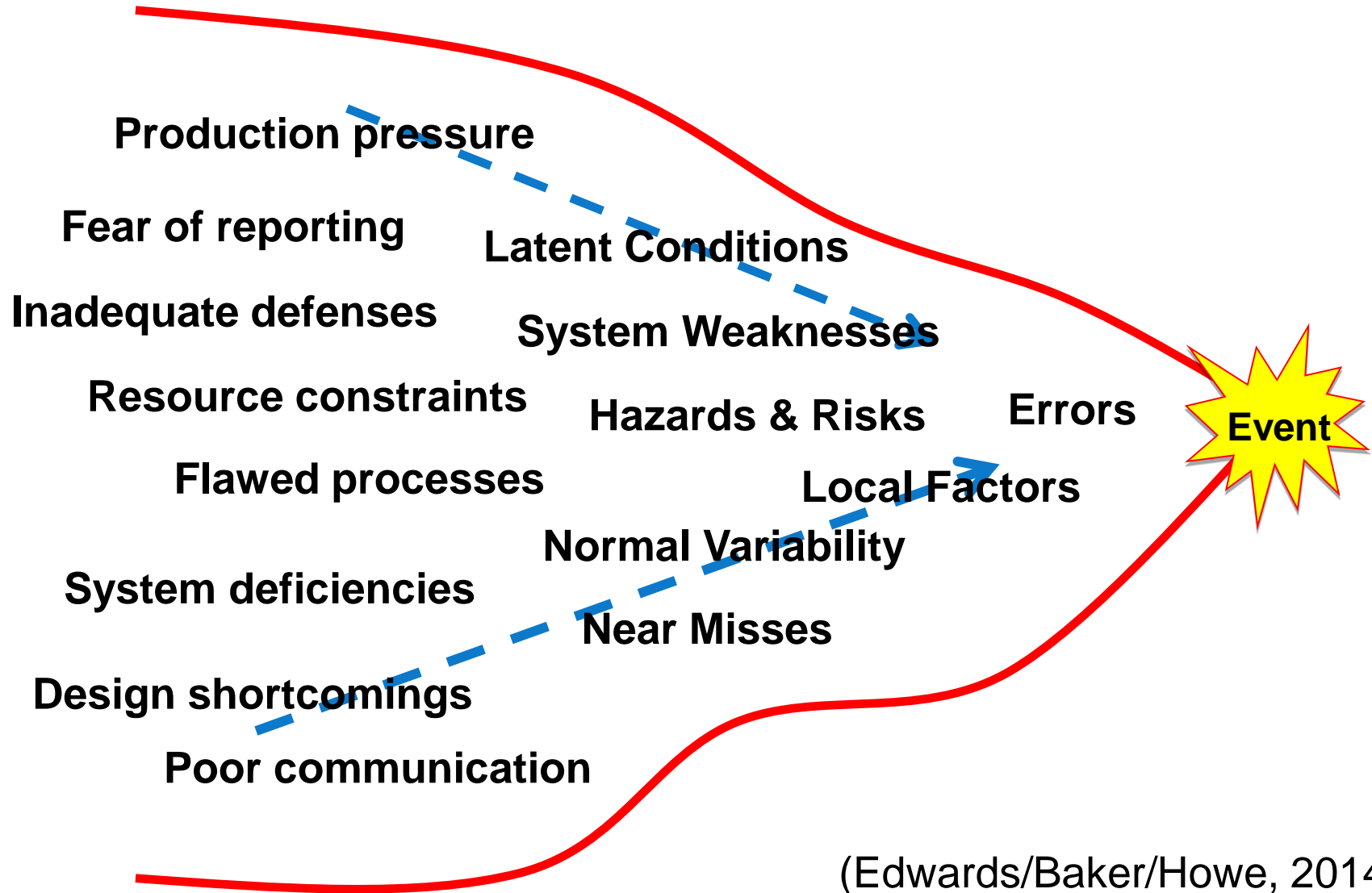
. . . looked for root cause



The problem is, the failure was **not linear** . . .

. . . and there is almost **NEVER** one root cause.

Start back in process move towards the event.



(Edwards/Baker/Howe, 2014)



Deviation Types

- **Intentional Deviation (Rule Breaking)**
 - We still believe that this can exist.
- **Unintentional Deviation (Error)**
 - Completing a task they are unfamiliar with resulting in an error.
- **Normalized Deviation (Common)**
 - Inaccuracy of Work Instruction or employee is unaware a WI exists.



**When we believe we know the
answer . . .**

- . . . we stop asking questions**
- . . . we stop listening**
- . . . we stop learning!**

A very big challenge to overcome!



The power to ask the right questions

. . .

**. . . comes from acknowledging that
you don't have all of the answers.**

Listening and Learning is critical!

Traditional Problem Solving Methods

- 5 Why, Fishbone, A3, etc...

Many traditional approaches turn into an investigation where employees may be reluctant to provide the true story.

New Problem Solving Method

- Operational Learning Teams!

What is a HOP Learning Team?

Not an investigation

Not focused on the "one true story"

Not focused on the one "root cause?"

Not focused on blame

Tells the story as each person saw the event

Tells the story of complexity

Tells the story of how work gets done.



What is the goal of a HOP Learning Team?

... you want to understand why it made sense for people to do what they did ... in their context (not yours!) ...

... to understand the conditions that were present at the time of the event ...

What is the structure of a HOP Learning Team?

First Learning Session

- Start back in the process, not at the event
- Go to site of event if possible
- Stay in “LEARNING MODE!!!”

Soak Time

- At least overnight (if at all possible)
- Allows time to process learnings.

Second Learning Session

- Review prior session, ask what else!
- Continue in Learning Mode
- Have the team develop a solution that they own and implement.

Build a Wall of Discovery...

DAY 1

Upgrade Big Blow to XZ outlet

PPD 4 inch lines
 Lights, more flex
 Reduce to 4 inch line
 Use a 90° to make horizontal part of

He-Thin (WI)

Try 6 inch Sweet or 90°
 to make it easier to hook up Tank

Bull-valve to bleed air while placing cast on

Re-orientation Action

AREA (4th fl. hall)

* Separate Big + Small Blows

(Outside??) (near office) (also put)

Less 1/2 inch hoses
 More Room in General

Hard P/let manifold
 Side Plate

Valves

Lafayette???

Day 1

DAY 2

F/S line... (low water)
 Hold tank adds to return line
 manifold system on HT

CAm locks
 Hard to connect
 lifting up
 Kicking stuck adds
 Regardless of man-arms
 Lines are not flexible
 LINE they have from Danner (frames)
 Plastic lines NOT flexible in color
 - but work
 - worked in tank

Area

Tight - 20' Drop down line for copy
 - Bumping other line
 - Tilt through
 - 2 Blows
 - Height of hook-up

Other Area

F/S lines
 HT line
 BK line

Pinch end line
 Flex liner

SAT 4 PM

Change Big Blow for 3" - 2"
 Busy NOT Rushing 4 to 2 up

Can lock was half-way on
 pulled line forward, air
 pulled off - hit 20
 - 7 slides

6 inch steel flex line
 Always been same way

PPD INSURES
 2-man job

Any size line w/ canlock
 has credit INSURES

Jan 3
 Robbie
 Ben
 Senath
 Dustin
 Emily

Jan 4
 John A
 Midy
 Mike

(WI)

When do we use HOP Learning Team?

- Not for everything (resources!!)
- Based on severity (or potential)
- Post-event (Injury/Quality/Operations)
- **Near Miss** or Close Call
- Good Catch
- Interesting Successes
- **High Risk Operations**
- Challenging Design Problems
- Anytime you can't explain something.

Who should be on a HOP Learning Team?

- Team of 4 to 6
- HOP Coach (Leads The HOP Session)
- Those close to the event or issue
- The person(s) directly involved in the event or issue
- Someone who is unfamiliar with the process
- Support members as needed

Learning Team Example # 1



HEAD LACERATION

- NORMAL DAY (START AT SHIP)
- * OPERATOR COMMUNICATION / WALKAROUND ONLY TRACK
- 2-3 LAB CHECKS PERK TO EVENT
- 90,000 LBS OF BULK TRUCKS
- SCHEDULED CHANGED 9:30 AM
- BY 6:00 BOY LOAD → RANBY RUN 6,400 LBS (A DON)
- TRANKING PAPER & BULKING ADDITIVES
- DIGGING OUT PACTIAL BUCKS 4-100 LBS
- FULL BUCKS IDENTIFIED APPROXIMATE (TYPICAL FULL BOX)
- NO PRE-PLANNING OF STAGING / COMPILING OF RATS
- 6 BUCKS OF ADDITIVES USED
- NORMAL PLACEMENT IS WITH 2 SPITTEL (POSSIBLE OPERATOR)
- 3 OF WHICH WERE SPITTED (CONGESTION, DISTURBED POWER)
- NORMAL ADDITIVE USAGE IS WITH ADDITIVE WHEEL
- THEN SPITTED 200 TUCKERDOT IS EMPTY IN AREA / PERK FULL TRUCK PLACE
- OPERATOR GATHERING BUCKS & PAKETS (A DON)
- THOROUGH OUT OF NORMAL (CORRECTED IN SPEC)
- WALK AROUND FROM LAB CHECK & NOTICED CHANGING OF WOOD (PART NOT PAID)
- GATE WAS NOT NOTICED BY OPERATOR (PART NOT PAID)
- COMING AROUND SHELLOTTER PRIOR TO PICKING UP WOOD
- GATE WAS OPEN AT STOP; NOTICED WHEN CURTAIN WAS
- FULL BOX WAS ON BENCH; THEN PROCEEDED TO GET EMPTY BUCK
- NO POSITION IN AREA EXISTS TO STOP PARALLEL
- AFTER FINISHING WALK FROM BENCH
- HEAD CONTACT WITH END OF BOTTOM GATE
- GATE CURTAIN WAS WHIPPY HIT BY GATE



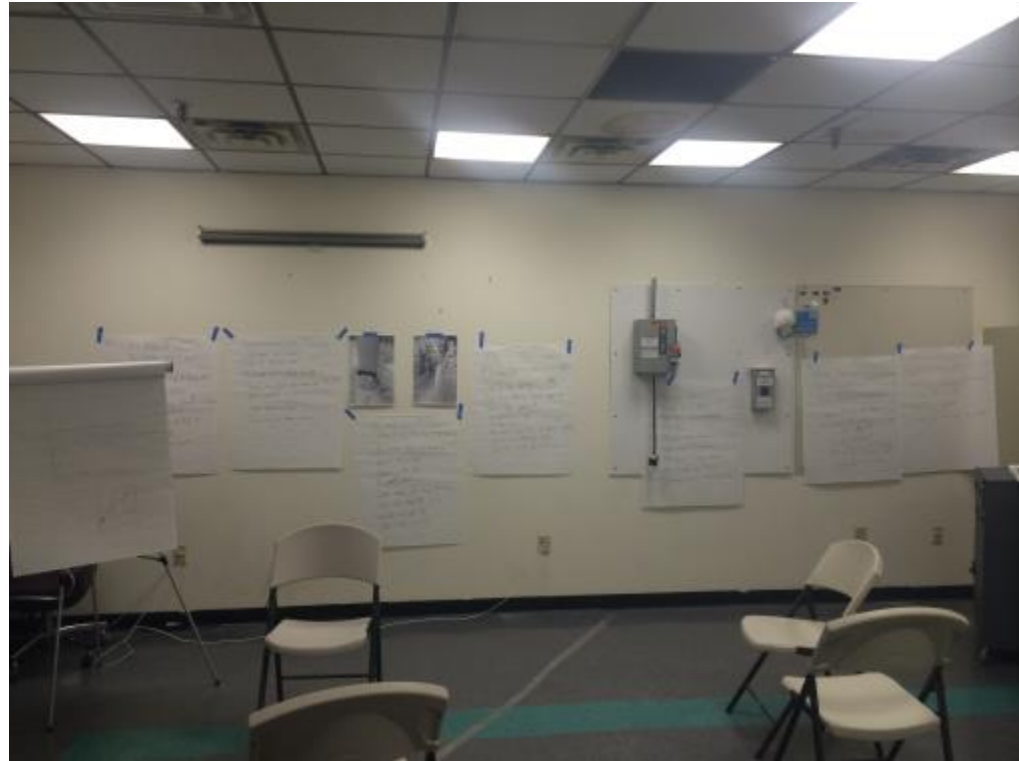
Learning Team Example # 2



Learning Team Example # 2

Learnings From The Forklift Event:

- Issue with additive feeder-rushing
- Issues with Filler 1-rushing
- Material was being placed at the back of the warehouse-rushing
- End of shift
- Water leak on machine
- Tight area (driveways)
- Unnecessary poles
- Material stored in aisle
- Scanner issues

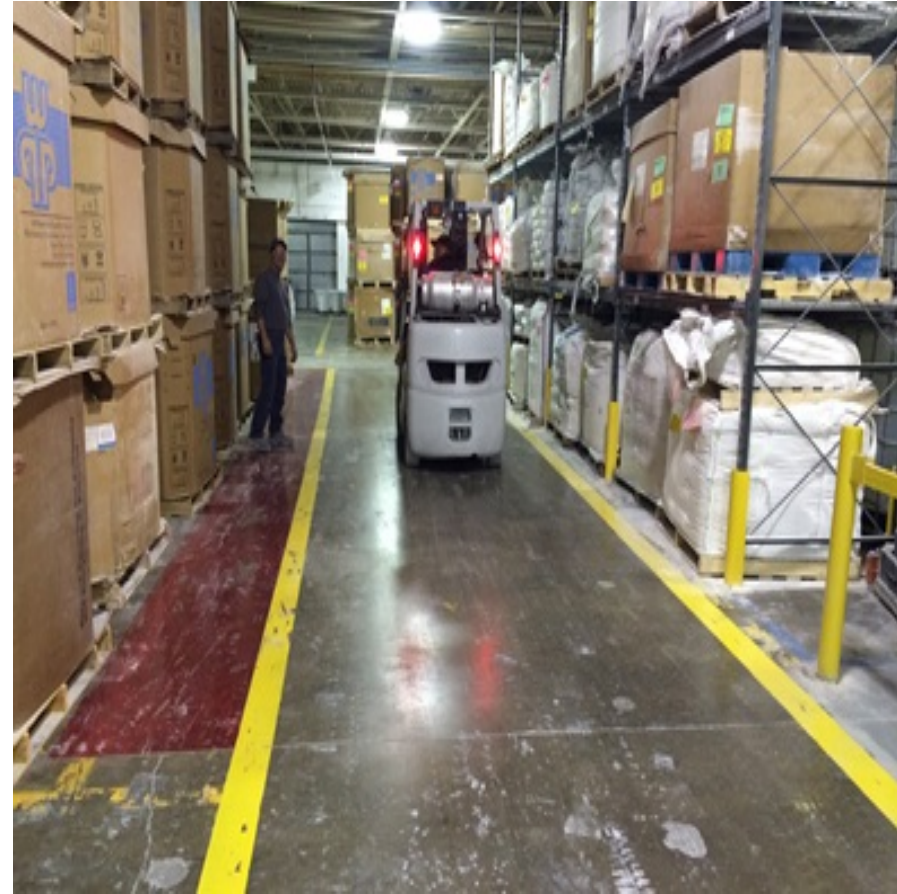


Learning Team Example # 2...

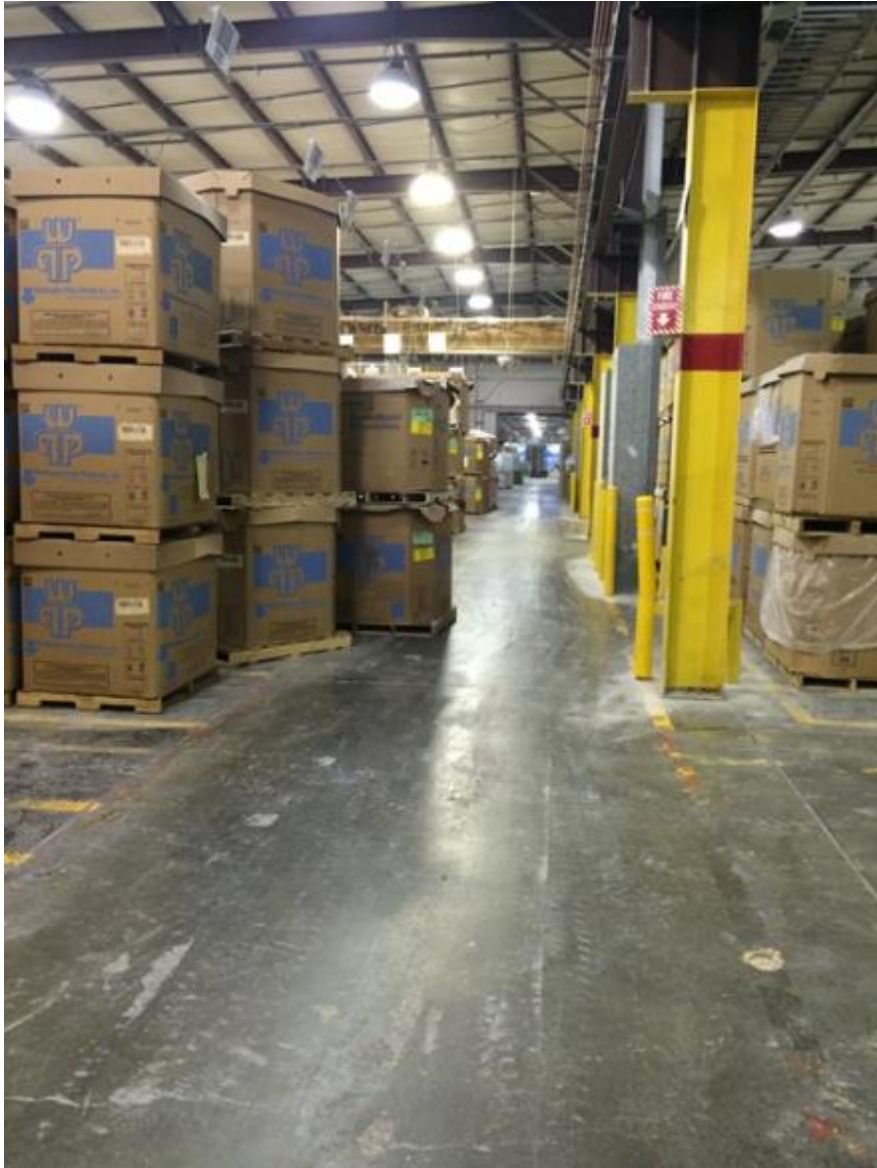
Countermeasures...

Team developed several countermeasures including:

- Widen aisle way, and paint area red to prevent box storage.
- Remove unnecessary poles.
- Develop plan for aisle monitoring.
- Develop line badges for assistants to use when scanners time out.



Employee Owned Quick Wins...



Learning Team Example # 3

Injury To Lip While Connecting Flex Line...



Learning Team Example # 3

Employee Driven Countermeasures...



HOP Pre-Job Safety Plan

Pre-Job Safety Plan for: _____

STATES of MIND Does this task have the possibility of involving any of the following?
 Rushing Frustration Complacency Fatigue

Questions from Previous Job Completion or Similar Tasks

What happened the way you thought it would happen?	What surprised you?	What hazards did we identify and what hazards did we miss?	Where did you have to "make-do," improvise or adapt?

Job Steps
Describe each job step & list the control measures that will assist with reducing the likelihood of an employee making an error. 4 most common errors to consider are: Line of Fire; Mind not on Task; Eyes not on Task; Lifting/Balance/Traction/Grip

Task/Step	Layers of Defense & Control Measure
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Things to consider:
 Do I have the right tool. Is there a written document that I could reference? Do I need help performing any step?

This plan has been prepared by: _____ Date: _____

This plan has been reviewed by: _____ Date: _____

Please Circle: This plan has been initiated by... Leadership or Coworker

- *What happened the way you thought it would happen?*
- *What surprised you?*
- *What hazards did we identify and what hazards did we miss?*
- *Where did you have "make-do," improvise or adapt?*

Company Wide HOP Sub-Committee

2016 Goals:

- Develop content for leadership training and employee awareness training
- Build the confidence of HOP Coaches
- Grow the existing number of HOP Coaches
- Increase employee initiated HOP sessions
- Main contact for the location

Summary

- Must accept Human Error...
- Less complex systems are successful!
- HOP Learning Teams will help us understand the outcome of events.
- Pre-Planning helps us better understand the gaps between the blue line and black line.

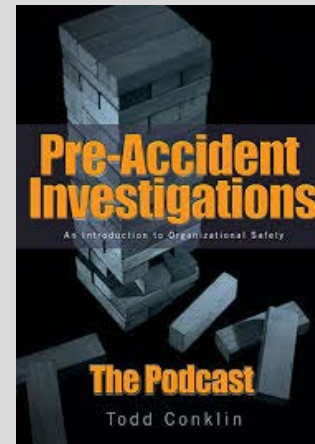
References

➤ Bob Edwards “The H.O.P. Coach”

- www.hopcoach.net

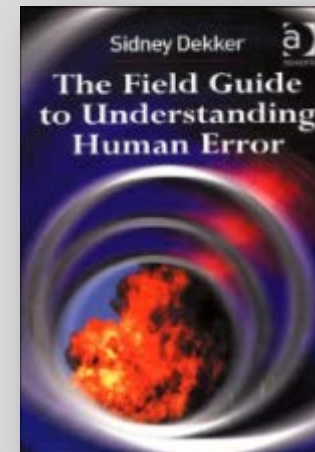
➤ Todd Conklin, PhD

- Pre-Accident Investigations
- Pre-Accident Investigation Podcast



➤ Sidney Dekker

- The Field Guide to Understanding Human Error



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