

### **Business Safety Leadership**

Part 2: Incident and Root Cause Analysis





### **Outline**

- Importance of investigation process
- Incident reporting best practices
- 7 key steps of incident investigation
- Effective root cause analysis and corrective action
- Completing an incident report





### Importance of Incident Investigation

- Determine multiple root causes
- Identify corrective actions
- Prevent recurrence and maintain awareness among workers – they are your lifeline
- Control costs





### Reporting

- Investigate all incidents (including minor/first aid)
- Initiate investigation immediately
- Investigation to be completed by a trained person
- Facility manager should be involved if incident at station
- Utilize your Accident/Injury Report





### **Incident Investigation Procedures**

- Step 1 Manage the incident scene
- **Step 2** Gather facts
- **Step 3** Interview
- **Step 4** Determine the sequence of events
- Step 5 Determine root causes
- **Step 6** Develop prevention activities
- **Step 7** Complete Incident Report





## Step 1 – Manage the Incident Scene

- Ensure care and treatment of injured person(s)
- Secure the area for the duration of the investigation when possible
- Preserve the scene of the incident
- Eliminate any remaining hazards (e.g. clean up spill, secure electrical)





### **Step 2 – Gather Facts**

- Identify key people
- Observe control settings
- Observe weather and environmental conditions
- Take pictures of location and equipment
- Review documents





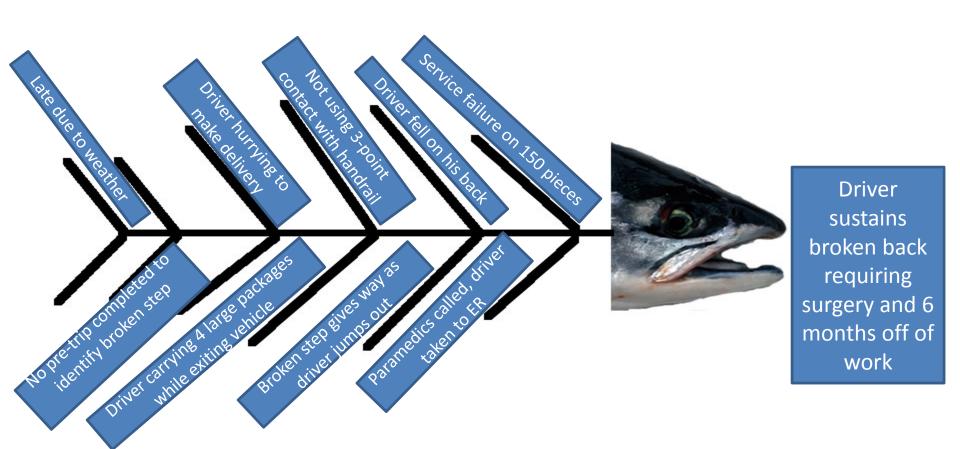
### Step 3 – Interview

- Conduct the interview as soon as possible
- Keep the interview as private as possible
- Let worker/witness know purpose is not to find blame
- Put the person at ease
- Ask for worker/witness version of the incident
- Ask only necessary questions
- Repeat the worker/witness account when finished
- Close the interview on a positive note





### **Step 4 - Determine Sequence of Events**







### **Step 5 - Determine Root Causes**

#### Direct cause

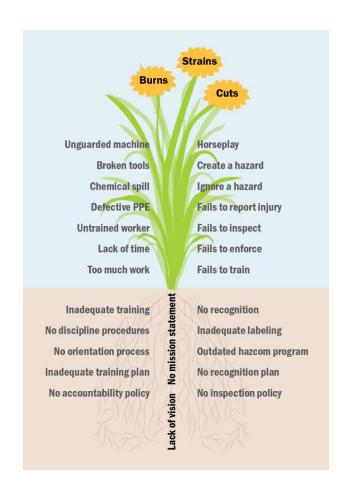
 An event that produces injury or illness

#### Surface cause

 Specific unsafe behaviors or hazardous conditions that result in an accident

#### Root cause

 Common behaviors and conditions that ultimately result in an accident







# **Root Cause Analysis Categories**

Environment	People	Materials	Methods	Machines
Weather	Prior observations, history	Improper packaging	Correct Procedures	Vehicle / Equipment failure
Lighting	Job Function Steps	Cargo placement and securement	Training	Adequate Maintenance, inspection, records
Walking surface, Housekeeping	Tenure	Inadequate labeling	Enforcement	Proper equipment / tools
Distractions	Procedure adherence	Damaged / Defective	Lack of oversight	Lack of needed equipment / tools
General Public / Animals	Hiring & qualifications	Pallets	Trends, Recurrence	Proper use





### **Step 6 – Develop Corrective Action**

- Treat the cause not the symptom
- Determine and implement corrective actions that eliminate or reduce root causes
- Engineer the hazard out or reduce the risk
- Change work practices

- Implement behavior-based safety process:
  - Observations
  - Feedback
- Use administrative controls: enforce the rules, hold both employees and management accountable
- Education and training
- Use appropriate Personal Protective Equipment if necessary





# Step 7 – Complete Internal Incident Report

	-			
SUPERVISOR'S VEHICULAR ACCIDENT REPORT ACCIDENT DESCRIPTION				
ACCIDENT DESCRIPTION				
PLANT DATE OF ACCIDENT DATE OF REPORT	PERVISOR'S VEHICULAR ACCIDENT REPORT	1		
NAME OF EMPLOYEE DRIVER CLOCK NO SHIFT	INFORMATION PAGE			
DESCRIPTION OF HOW COLLISION OCCURRED:	CLOCK NOSHIFT			
	NGTH OF TIME DRIVING LENGTH OF EMPLOYMENT			-
	R .	SUPERVISOR'S VEHICULAR ACCIDENT REPORT ACCIDENT PROFILE		
	N DATE OF COLLISION?WAS CO. DRIVER WEARING SEAT BELT?			
MAKE DIAGRAM OF COLLISION IN SPACE BELOW:	RVISOR TIME OF COLLISION AM / PM	POTENTIAL CAU		
INDICATE POINTS OF COLLISION			DRIVING TASK z FOLLOWING TOO GLOSELY	R'S VEHICULAR ACCIDENT REPORT CONCLUSION
		RVISION	z FOLLOWING TOO CLOSELY" z INATTENTION OR DROWSINESS z MISJUDGING SPEED OR ONCOMING TRAFFIC	DATE OF ACC SHIFT
	CO. VEH. I.D. NUMBER	QUALIFICATIONS	z MISJUDGING SPEED AND CLOSENESS OF VEHICLES z WANDERING OVER LANE DIVIDERS	
	JMBERS		z FAILURE TO ANTICIPATE LANE MERGERS z FAILURE TO SIGNAL z MISJUDGING TIME FOR VEHICLE TO CLEAR INTERSECTION	SURROUNDING THE ACCIDENT, IT IS DETERMINED THAT TH
		OBLEMS BLEMS	z FAILURE TO OBEY TRAFFIC CONTROL DEVICE z POOR MIRROR ADJUSTMENT	NTABLE z UNABLE TO DETERMINE
	YES, EXTENT OF INJURY WHERE TREATED	TIGUE TIONAL STATE	z FAILURE TO USE MIRRORS z FAILURE TO SCAN SPACE TO THE SIDES z FAILURE TO BLOCK AREA TO THE RIGHT	
	IF YES, WHERE DAMAGED AND SEVERITY ESTIMATE	WITH PROPER GEAR RATIO	z FAILURE TO USE TURN SIGNALS ZTURNING FROM WRONG LANE z FAILURE TO GIVE RIGHT-OF-WAY TO PASSING TRAFFIC	
		INFLUENCE OF TOP HEAVY CARGO	z ASSUMING OTHER DRIVER WILL SEE AND AVOID z ADVERSE CONDITIONS z UNABLE TO JUDGE SAFE SPEED FOR ROAD VISIBILITY/CONDITIONS	
DIRECTION TO	E OF AUTHORITY (POLICE, SHERIFF, STATE TROOPER, F.D.)	ENTIVE MAINTENANCE MAINTENANCE	z AGGRESSIVE BRAKING ON SLIPPERY ROAD z FAILURE TO ANTICIPATE OBJECTS ON ROAD/BAD ROAD SURFACE	
NORTH	RPT#WERE CITATIONS ISSUE?TO WHOM?	NSPECTIONS	z FAILURE TO USE HEADLIGHTS AND RUNNING LIGHTS z SUDDEN STOPPING IN TRAVEL LANE z PARKING IN TRAVEL LANE WITHOUT USE OF EMERGENCY	
		EPLACE BADLY WORN PARTS	EQUIPMENT z EXCESSIVE SPEED FOR CURVE z INATTENTIVE TO PEDESTRIAN TRAFFIC	
SHOW YOUR ARROW EDUCATES	ilcte	EPLACE WORN OR DAMAGED TIRES ORQUE WHEEL NUTS PROPERLY	z FAILURE TO ANTICIPATE A PEDESTRIAN ERROR z RUNNING ON TO CURVE	
VEH. AS 1 DIRECTION OF TRAVEL		EPLACE WORN OUT STEERING JOINTS HECK POWER STEERING FLUID LEVEL	z OVERUSE OF BRAKES ON DOWNGRADE z OVERUSE OF TRAILER ONLY BRAKES z FAILURE TO RESPOND TO SYMPTOMS DURING DRIVING	
	D.L.#FROM WHAT STATE	HECK U-BOLTS	z FAILURE TO START UP SLOWLY z FAILURE TO CHECK ALL AROUND VEHICLE FOR CLEARANCE z FAILURE TO BEGIN BACKING UP IMMEDIATELY	
DRIVER'S RECOMMENDATIONS TO PREVENT REOCCURRENCE:	DESCRIPTION (LIC PLATE NO., MAKE, YEAR, COLOR)	ASSENGERS ROPERLY SECURED	AFTER CHECKING AROUND VEHICLE z FAILURE TO SECURE VEHICLE AFTER PARKING	
		VEHICLE NSURE CLEARANCE		
	WERE THEY INJURED? EXPLAIN		PRE-TRIP INSPECTION z FAILURE TO CHECK BRAKE ADJUSTMENT	SAFETY COORDINATOR SIGNATURE
OTHERT EROONO INDURED!	TOTAL NO. OF INJUREDNAMES OF INJURED	ASSENGERS TO MOVE TO OR FROM SEAT	z IMPROPER COUPLING z DAMAGED HITCH	
		RWAY ASSENGERS TO TALK TO DRIVER WHILE UNDERWAY	z PINTLE HOOK NOT LATCHED z SAFETY CHAINS NOT USED	
		RECOMMENDED ACTION TO PREVI	ENT REOCCURRENCE	DATE
	SUPERVISOR'S RECOMMENDATION	16:		
				FOLLOW UP
			COMMENTS:	





### **Questions & Comments?**

### Thank you!

#### **Protective Insurance Company**

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