

# Environmental Incident Review

## Carolinas Air Pollution Control Association

Presentation by:  
Rick Kilpatrick



# Purpose and Policy Drivers



## Purpose of Environmental Incident Reviews

Reviews identify root causes and assess controls to prevent recurrence of environmental incidents.

## Regulatory Policy Drivers

Agencies mandate incident reporting and investigations, ensuring compliance with environmental laws.

## Company Policy Emphasis

Company policies promote proactive risk management and continuous environmental improvement beyond regulations.

## Comparison to Injury Reviews

Similar methodologies exist, but environmental reviews include impact assessments and regulatory timelines.



# Common Environmental Events

## Chemical Spills and Releases

Spills and releases of chemicals, oil, or wastewater contaminate natural resources and threaten human health and wildlife.

## Air Emissions Exceedances

Pollutant emissions surpass permitted levels, causing regulatory issues and raising community health concerns.

## Waste Mismanagement

Improper handling or disposal of waste leads to environmental contamination and potential legal penalties.

## Permit Violations

Non-compliance with environmental permits, such as exceeding limits or missing monitoring, risks legal consequences.



# Emergency Actions and Reporting

## Immediate Incident Response

Quickly isolate the affected area and stop the source to minimize environmental damage.

## Notification Procedures

Internal and external notifications must be made promptly to coordinate an effective response.

## Regulatory Reporting

Report incidents exceeding thresholds to agencies like EPA and National Response Center immediately or within 24 hours.

## Training for Preparedness

Regular training ensures EHS professionals respond decisively and comply with protocols during emergencies.



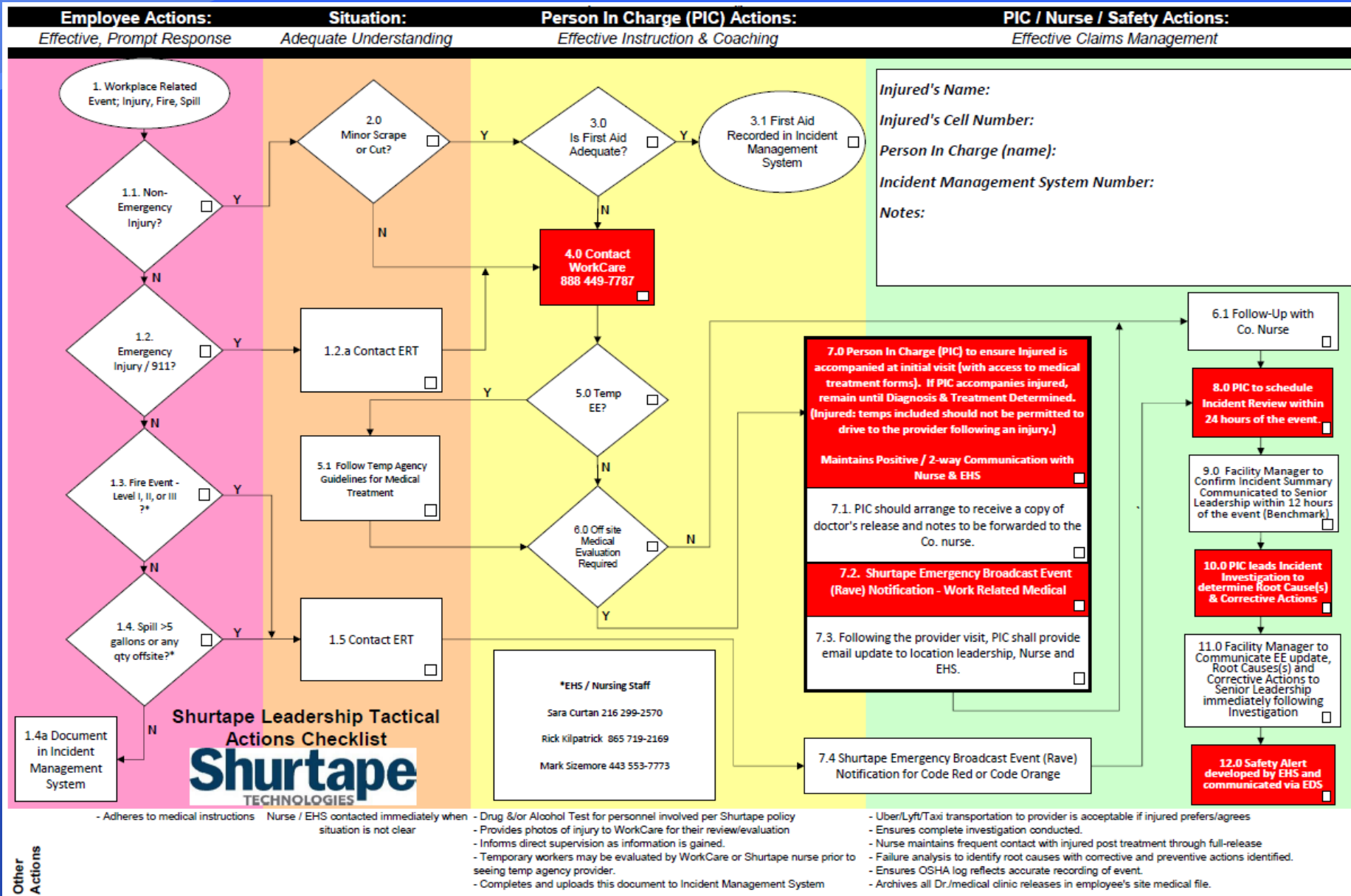
# Steps in an Incident Investigation

1. Respond promptly and positively
2. Collect information
3. Analyze all causes
4. Develop and take actions
5. Report findings and recommendations
6. Follow-through





# Incident Management

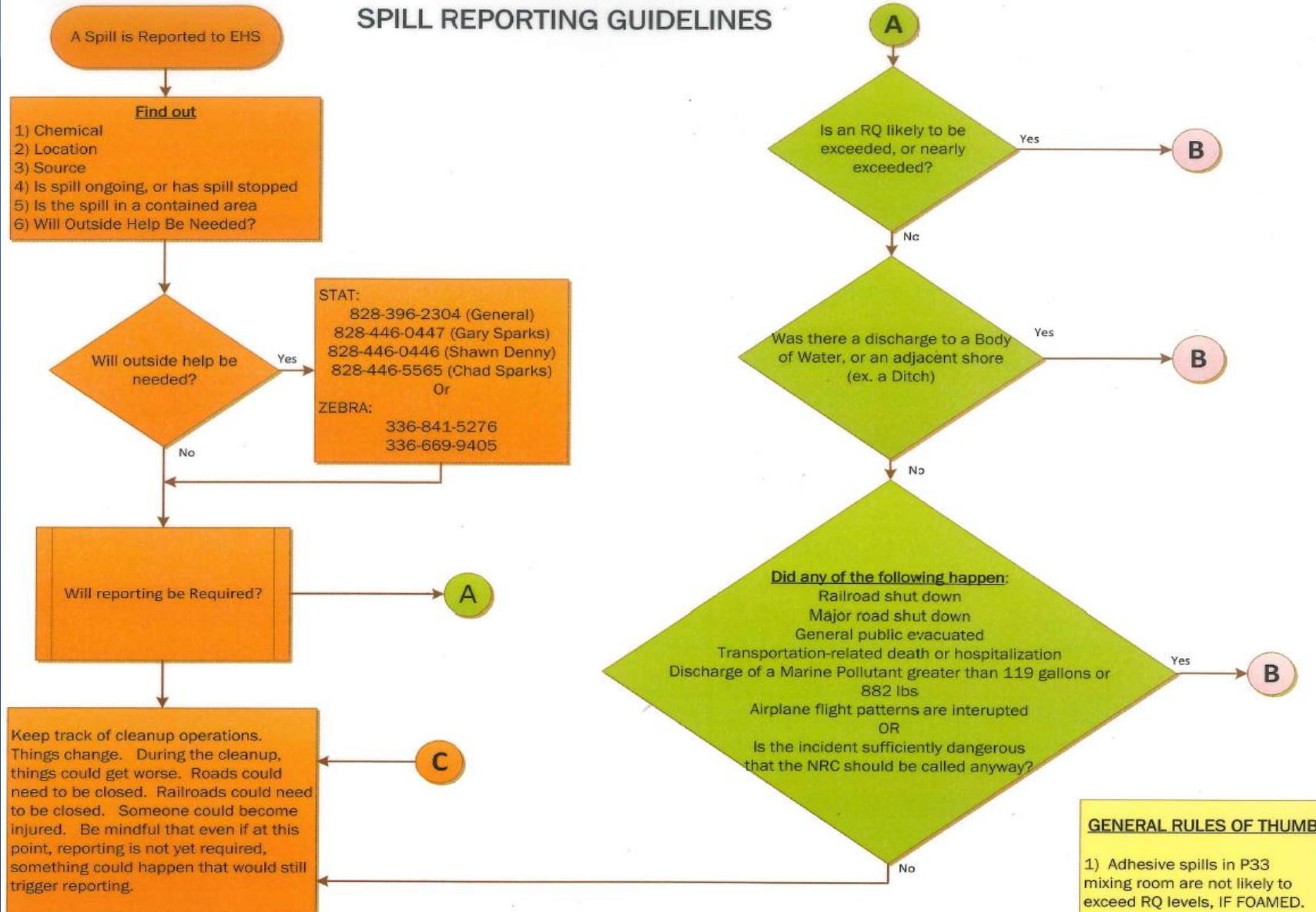


## Incident Management



# Spill Reporting Guidelines

## SPILL REPORTING GUIDELINES





## Incident Review

IN ALL CASES, CALL 911 IF NOT ALREADY CALLED

Catawba County LEPC:  
911 = Primary  
LEPC: 828-465-8230

Alexander County LEPC:  
Main: 828-632-1160

Caldwell County LEPC:  
911 = Primary

B

Call the NRC  
1-800-424-8802

Call the LEPC  
(Phone numbers at left)

Call the State of NC  
(Phone numbers are at right)

Call Laura Pierce at:

KEEP YOUR PHONE WITH YOU AND  
WHERE YOU CAN HEAR IT AT ALL  
TIMES. YOU WILL GET RETURN  
PHONE CALLS!

C

Remember the  
phrase, "In an  
abundance of  
caution..."

2) Spills in the P24 Mixing room are usually under-estimated. Double or Triple the estimates that plant personnel provide for a first estimate of spill quantities – The hot solvent evaporates quickly. WonderWare data can usually detail exactly how much was spilled in P24 Mixing Room.

3) Water-based spills are not likely to be reportable, unless they get offsite.

### Spill Reporting:

After Hrs and weekend  
800-858-0368

Mooresville Reg. Office  
704-663-1699

Asheville Reg. Office  
828-296-4500



## Other Triggers

### AIR:

If the issue may result in an Air Quality violation, contact the Regional Office DAQ staff immediately but in all circumstances before 9AM the next day.

### WATER:

If the issue may result in a slug load to a Wastewater Treatment Plant, contact the Wastewater Authority immediately:

City of Hickory NE WWTP: 828-322-5075  
Lab: 828-322-4821 ext 204  
After Hours: 828-323-7500

NOTE: Wastewater flow meter failure at P33 requires reporting within 24 hrs.

Taylorsville WWTP: 828-632-2218  
828-409-3311  
828-217-1805

### GROUNDWATER / SOIL:

If the spill reaches soil and/or Groundwater, contact the Regional office immediately. After hours use 800-858-0368.

### Plant Addresses

F33: 1620 Highland Avenue, NE, Hickory, NC 28601  
F36: 1540 B Main Ave, SE, Hickory, NC 28602  
F24: 220 Pleasant Hill Road, Hudson, NC 28638  
P31: 8510 Hwy 90 East, Stony Point, NC 28678  
DC: 3389 Catawba Industrial Place, Catawba, NC 28609





# Fact-Finding and Evidence Collection

## Systematic Incident Review

Investigate what happened, when, where, and how by reviewing logs, data, and monitoring results.

## Evidence Collection Techniques

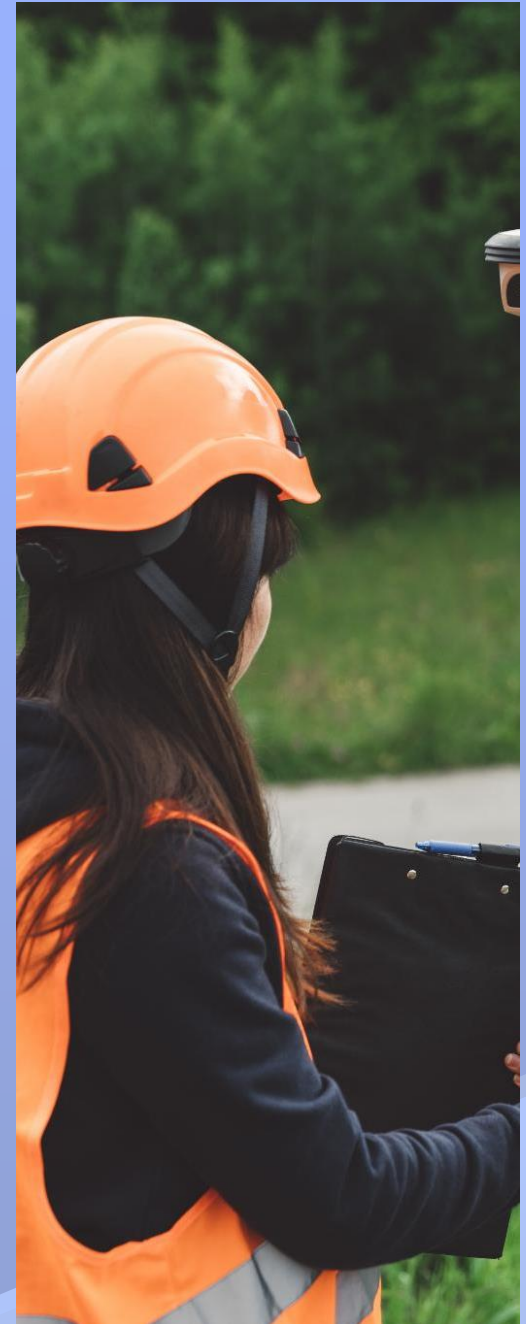
Collect photographs, environmental samples, and sensor data to reconstruct the incident accurately.

## Interviews for Insights

Gather information from operators, witnesses, and responders to understand conditions and errors.

## Training and Documentation

Proper training in evidence handling and documentation improves investigation credibility and outcomes.



# POSITION EXAMINATION

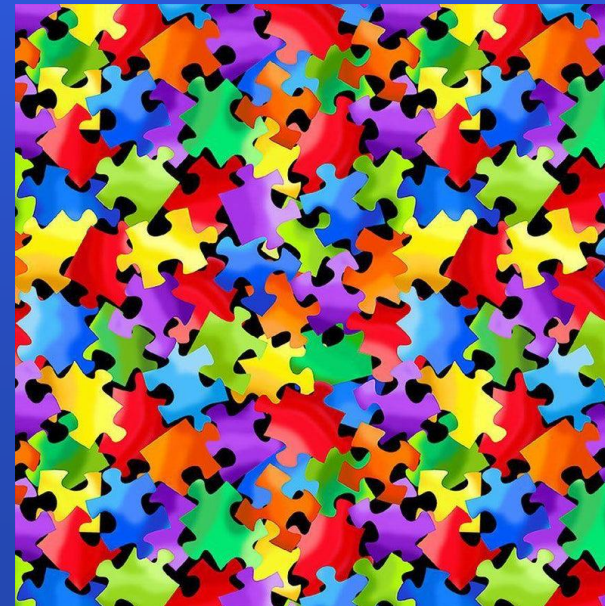
- ❖ Where was equipment at time of incident?
- ❖ Where were employees at time of incident?
- ❖ Where was material at time of incident?
- ❖ Where were co-workers, contractors, etc. at time of incident?

# PARTS EXAMINATION

- ❖ Proper items for task
- ❖ Damage
- ❖ Previous damage
- ❖ Wear
- ❖ Safeguards
- ❖ Labels, signs and markings

# PAPER EVIDENCE

- ❖ Training records
- ❖ Maintenance logs
- ❖ Schedules (PM, Work, etc.)
- ❖ Job procedures
- ❖ Inspection reports
- ❖ Monitoring records and data



Shurtape

Technologies

Shurtape Technologies EHS

Scope: [Plant 33 \(Hickory\)\\_| Shur...](#)

Ask Genny...

Show me!

17

My Home

Incidents...

Homepage

Incidents & Measurements

Record Incident

Reports

OSHA Reports

Manage

Applic

Record Incident

I would like to report a/an...

☐ Event

Listed Event or defined incident type

Inspection Conducted by an external agency or third-party contracted/internal

Notice of Non-Compliance's (NONs) from a regulatory authority

Penalty Monetary fine issued by a regulatory authority for Non-Compliance

☐ Injury or Illness

Recordable Case

Non-Recordable Case

CAROLINAS AIR POLLUTION CONTROL ASSOCIATION

DEDICATED TO CLEAN AIR

CAPCA

ORGANIZED 1969

11



## Record Incident

I would like to report a/an...

### ☒ Event

#### ☒ Listed Event or defined incident type

Select an Event type to log your Event:

Air Exceedance

Air Investigation

Wastewater Exceedance

Wastewater Investigation

Spill/Release

Fire

Property Damage

Request for Information

Near Miss

Severe Weather

Notice of Inspection

Regulatory Notice

Non-cited violation

Environmental Complaint

IH OEL Exceedance

Vehicle Accident

Environmental Permit Modification

External Award/Recognition

Celebration

Emergency Drill

ICAR - Audit

ICAR - Product Nonconformance

SCAR



Event (General)

Event Type ? \*

Spill/Release

Event Date \*

Today

Reported Date\* ?

Today

Reported Time ?

Double-click to input time or click to scroll

Now

Dept \*

Building

Manage

Manage

Initiator \* ?

Search by name or SSO ID

Select 'Add New User' if not in active users search results.

Responder\* ?

Search by name or SSO ID

Select 'Add New User' if not in active users search results.

Multiple Email CC ?

Search by name or SSO ID or Add an External User Email /

Select 'Add New User' if not in active users search results.

Event Category\*

Event Time

Double-click to input time or click to scroll

Now

Shift

Workstation \*

All

Manage

Initiator Job Title(s)

Responder Job Title(s)



Spill/Release

Chemical Details 1



Chemical Name\*

CAS #

[Lookup Chemical](#)

Amount of Spill/Release\*

Input the total amount of material spilled



Spill/Release  
Units

Reportable Quantity\*



Input the amount of material spilled that you are  
required to report to your governing agencies

Reportable  
Quantity Units

Add Another Chemical

Did this spill/release  
reach a water body (e.g.,  
stream, river, lake,  
stormwater, sea, ocean)?  
\*



Spill/Release to

Air  
Bund Area  
Concrete





Event Causes ☐ Check to skip Event Cause, Immediate Cause, Root Cause, and Management Systems. ?

Core Activity \* ?

Select principal work process (Core Activity) being performed at the time of the Event

Incident Investigation Tools

Root Cause Analysis  
Resources/Tools ?

+ Launch 5-Why Analysis

Offline Root Cause  
Analysis Tools ?

- Fishbone Analysis
- 5 Why Analysis
- E&CF (Events and Causal Factors Charting)

Immediate Cause ?

Unsafe Condition \*

Select the principal *workplace condition* that directly preceded and resulted in the Event, if applicable

☐ Not Applicable

Unsafe Act \*

Select the principal *action of person(s) involved* which directly preceded and resulted in the Event, if applicable

☐ Not Applicable

Root Cause ?



# Effective Investigations Can Help Us:

1. Better understand and describe what happened
2. Determine the real causes
3. Evaluate the risks
4. Develop controls
5. Define Trends
6. Communicate the event system wide for prevention in all facilities

