INCIDENT INVESTIGATION

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Today I will try to

- Assist you in understanding why incident investigation is important.
- Improve your skills to enable you to undertake more effective investigations.
- Help you understand some of the problems you may encounter and how to try and overcome them
- I will not be covering in any detail fatal accidents
- **Questions as we go**

Incidents

- For the purposes of this course we are including in the term “incident” to cover:- Work related
  - Injury
  - Ill health
- Dangerous Occurrences
- Near misses
- Some are “reportable” some not - RIDDOR

Legal requirement to investigate

Regulation 5 of the Management of Health and Safety at Work Regulations 1999

Every employer shall make and give effect to such arrangements as are *appropriate, having regard to the nature of his activities and the size of his undertaking, for the effective planning, organisation, control,* ***monitoring*** *and review of the preventive and protective measures.*

Why Investigate?

To enable a “fair” outcome to be achieved
To defend spurious / unreasonable claims / actions
Enable changes to be made to reduce the chance of a reoccurrence
Gather information to notify the enforcement authorities, e.g. HSE/ LA
Gather information for insurance purposes
Establish the losses resulted from the incident
Gather information for senior managers
Comply with the law

Which incidents need investigation

- Be guided by the **significance**
- Consider potential as well as actual
- More serious or greater potential = > effort

Problems with finding out about incidents

- Staff not reporting matters
  - Not important, No one got hurt
  - My mistake – do not want to get blamed
  - Too much paperwork, No time
  - Valued employee / colleague
  - Do not want to get involved / not my problem
  - Sickness – medical records – confidentiality
- Non employees – agency workers and contractors
-

Why might people report after the incident

- Injury more serious than I thought at the time
- I was unsure who's fault it was but thinking about it I realised that it was not my fault
- People told me I should report it to prevent a similar matter happening again
- I think I might get some compensation !!

May report to you or to the HSE / LA who may visit or ask for a copy of your investigation report so a good investigation may prevent / shorten a visit.

Who should investigate

- Those involved in any but low significance investigations should have:-
  - Appropriate **training** in incident investigation
  - **Knowledge** of type of work being undertaken
  - Access to relevant information
    - Internal
    - External

Who should investigate

- Other matters to consider:-
  - Issues of bias – blame culture – protecting self or company
  - Independent of management of system in some cases
  - Involvement of safety reps / employee reps

Timeliness / Document control

- It is important to
  - Carry out necessary investigations without unreasonable delay to establish the facts of the case.
  - Maintain documentation
  - Keep parties up to date with timely communication

Immediate actions

Treat injured – Physical and emotional - employees, public, contractors

Take action to prevent a recurrence

Capture situation – photographs, measurement, samples, equipment

May require reporting – to who? Directors, safety adviser, HSE/LA, IPs employer, employee reps. By who?

Contact relatives

Be careful about what is said to who

Beginning an Investigation

After dealing with the immediate actions consider the scope of the investigation and **make a plan.**

Is the report to be produced legally privilaged?

Identify lines of reasonable enquiry

Consider who you want to interview and what documents you need.

Make notes on progress with investigation as you go

Example of reasonable lines of enquiry

Mr Tilbury was one of eleven students attending a training session for police control room staff.

During one of the demonstrations, PC Micklethwaite – a fire arms instructor - picked up a round of ammunition from a Quality Street tin and informed the class that it was a “dummy” round.

He loaded the round into a Magnum revolver and held the firearm in his right hand, with the weapon pointing slightly downwards and left across the front of his body. He pulled the trigger several times to show how the barrel rotated; on the final pull the weapon fired, hitting Mr Tilbury in the stomach, causing serious injuries.

Example of reasonable lines of enquiry

Storage of ammunition

Use of guns which were not decommissioned

Training and supervision of staff

Planning / assessment of course

Five Step Investigation

- *Step one* -Gathering the information
- *Step two* -Analysing the information
- *Step three* –Identifying suitable risk control measures
- *Step four* –The action plan and its implementation
- *Step five* – Review the investigation

Step one – Gathering the information

- Begin straight away, or as soon as practicable.
- Follow **all reasonable lines of enquiry** – may change as investigation progresses
- Have a very open mind – do not jump to conclusions
- Consider what statements you want to take and in which order and what documents you need
- You may not know what will become important at the beginning of the investigation.

Statements

A statement document recording the information that a person that has been spoken to which gives you information which is relevant to your investigation

Employees are under an implied duty to give you a statement under Section 7 of the HSWA which requires employees to co-operate with their employer to enable that employer to comply with the requirements of the Act.

With employees of other employers or MOP there may be more difficulties.

Statements

- Statements should not be self incriminating
- Think about the order in which you
- ask questions and interview people.
- Other employers may be reluctant to provide you with copies of statements they have taken.
- Statements may be disclosable to regulators.
- Consider wellbeing of witnesses
- **Do not lead** when interviewing – factual information
- Record in their words
- Consider when and how to challenge

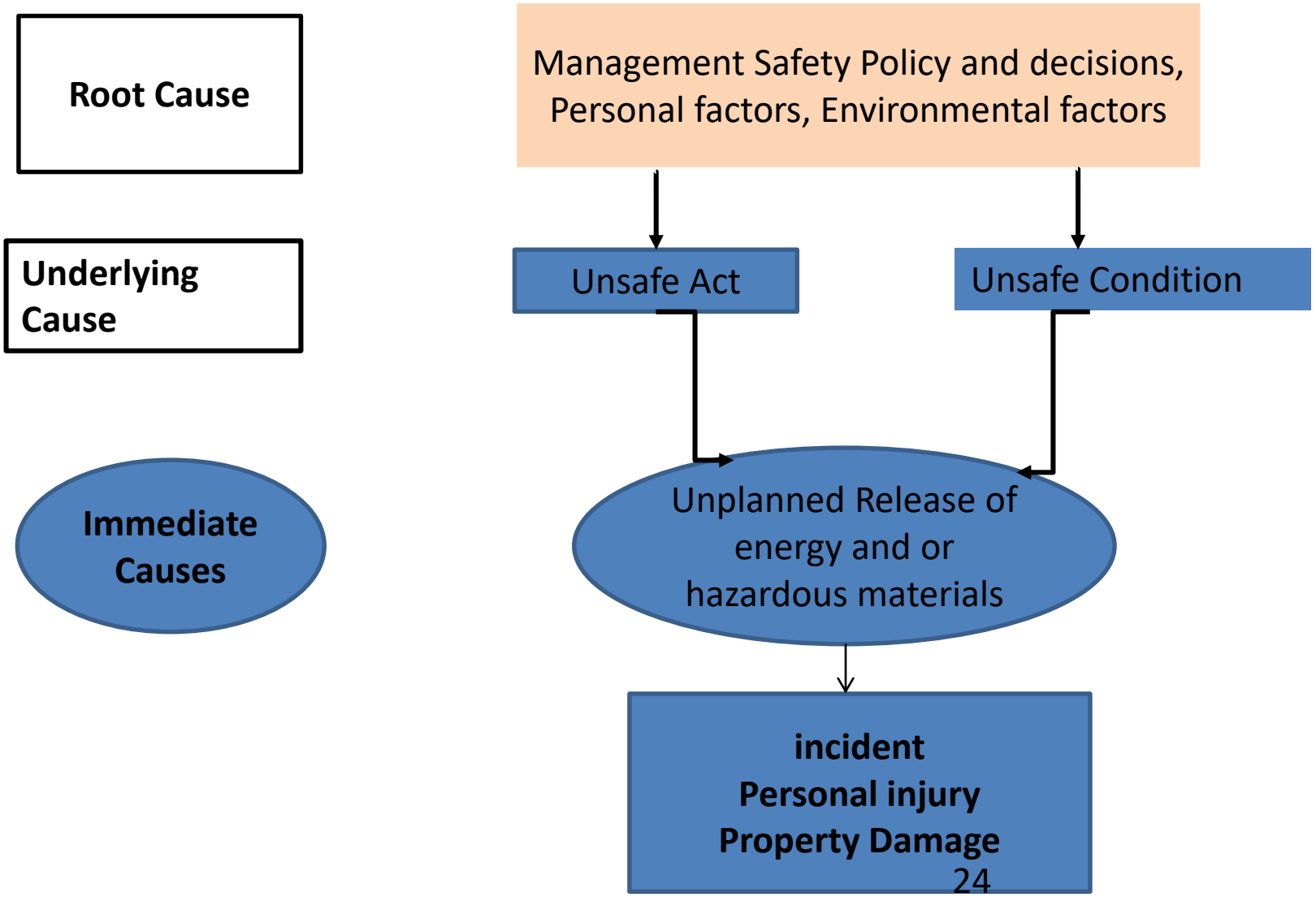
Step Two – Analysing the information

- What happened and why - Keep asking why until it is no longer meaningful (often 5 times)
- Consider all the relevant issues including Place, Plant, Procedures and People
- A checklist can help – refer to plan you made at the beginning

Cause of incidents

- Immediate
  - Agent or substance involved
- Underlying
  - Unsafe acts or conditions
- Root
  - Failure from which other failures grow often remote in time and space

Causes of incidents



Step Two –
Analysing the Information

- Job Factors –
  - some jobs are high risk

- Organisational Factors – That's the way it is done, pressure to meet deadlines, motivation
- Plant & Equipment Factors – design,

Human Factors

- Skill based errors – a slip or lapse of memory
- Mistake – error of judgement
- Violation – rule braking – speeding on motorway
  - routine,
  - situational,
  - exceptional

Attitude

Motivation

Perception

Step Three–Identify Suitable Risk Control Measures

- What risk control measures are needed/recommended?
- What worked, what failed
- Do similar risks exist elsewhere? If so, what and where?
- Have similar adverse events happened before? Give details. - Wilco

Step Four–The Action Plan and its Implementation

- Which risk control measures should be implemented in the short and long term?
- Which risk assessments and safe working procedures need to be reviewed and updated?
- Have the details of adverse event and the investigation findings been recorded and analysed?
- Are there any trends or common causes which suggest the need for further investigation?
- What did the adverse event cost?

Step Five

Investigation Review

- Do we know how and why things went wrong
- Have we exhausted all reasonable lines of enquiry
- Have we identified the immediate, underlying and root causes of the adverse event
- Do we have an action plan to implement any improvements or additional control measures required
- Do not forget -have we praised what went well
- Can we learn anything new about the investigation process or our procedures

Analytical methods

There are several methods which can be used for investigating more serious accidents.

One method used by HSE and others

Events and Causal Factors Analysis – ECFA.

This is a **brief** overview of process

Events and Causal Factors Analysis

ECFA chart depicts the necessary and sufficient events and causal factors for incident occurrence in a logical sequence.

It helps investigators visualise their thought process

Incidents rarely result from a single cause.

Investigators need to look at events and relevant conditions

Events write on Yellow Postits

Conditions write on Pink Postits

Queries write on Green Postits

Dotted lines are when evidence is presumptive

Arrange boxes in chronically order from left to right

Event

Is a single occurrence described by a short sustenance with **one** subject and **one** active verb

Event should describe precisely what happened.

e.g. “Operator turned light switch to on position”

not “Operator turned lights on”

Each **event** should be quantified when possible; i.e., “plane descended 350 feet”, **not** “plane lost altitude”.

Condition

Differs from events insofar as they:-

Describe states or circumstances rather than happenings or occurrences and

Are passive rather than active.

As far as practical, conditions should be precisely described, quantified when possible, posted with time and date when possible.

Queries

Are where you do not know the answer.

In some cases they will open up a new line of enquiry needs to be followed.

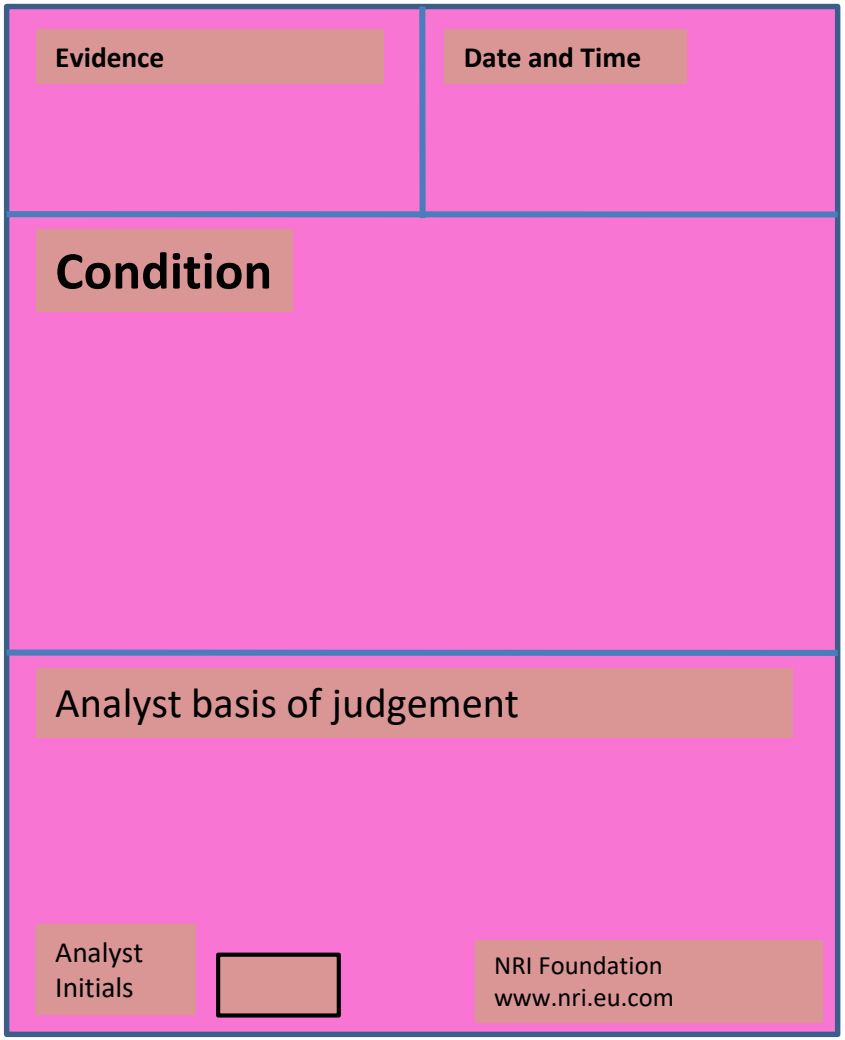
In other cases you can just make a note of them and may return to them later.

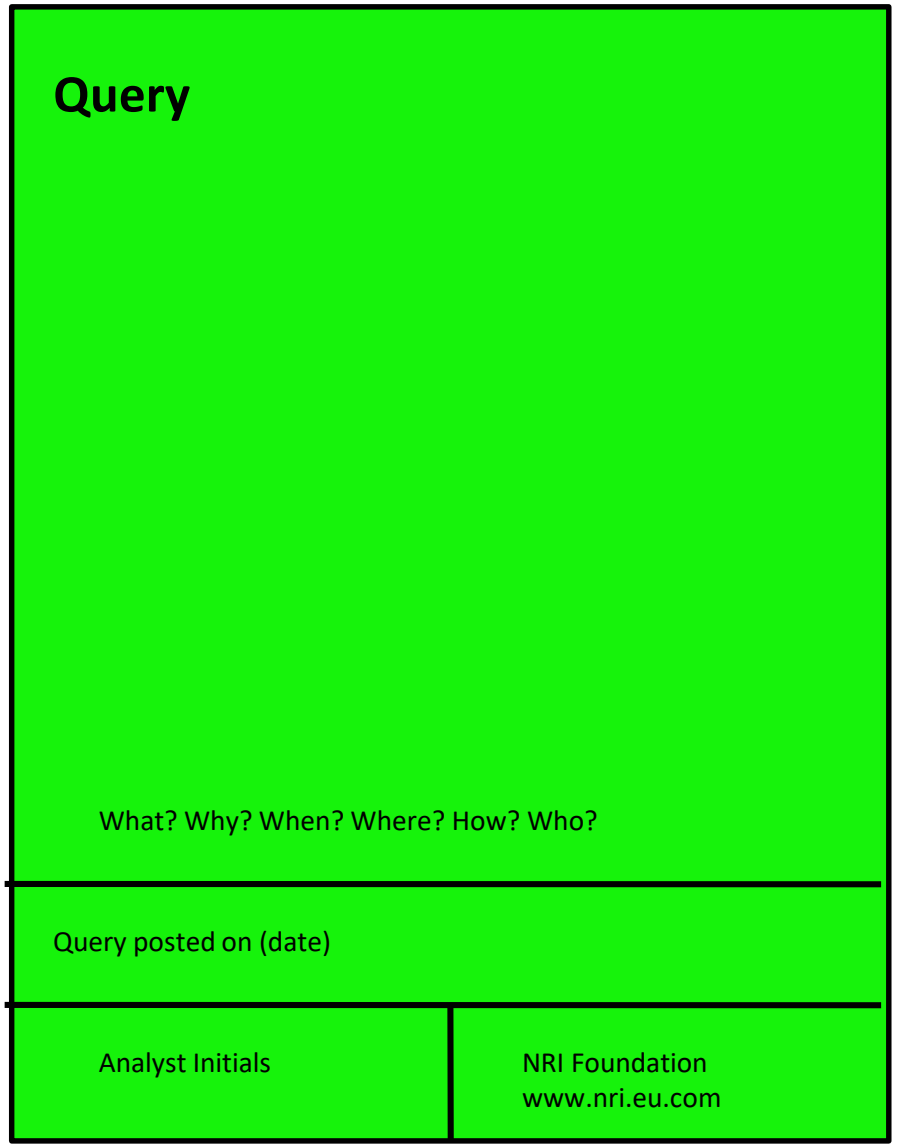
Each Postit is completed and then stuck on the time line that leads to the accident

They should contain the :-

- **Time of the event or condition,**
- **The evidence on which the judgment is being made**
- **Who made the analysis.**

Evidence	Date and Time
Event Use present tense, one actor, action and object	
Comments Analyst Initials	NRI Foundation www.nri.eu.com


Evidence
Date and Time
Condition
Analyst basis of judgement
Analyst Initials
NRI Foundation
www.nri.eu.com


Query
What? Why? When? Where? How? Who?
Query posted on (date)
Analyst Initials
NRI Foundation
www.nri.eu.com

Example - visitor slipped on wet floor - broke wrist

Look at script

Time line

ECFA diagram

Exercise

Boy injured on construction site

Working in teams use the information given to construct an ECFA chart

Occupational Safety + Health
Consultancy Services Ltd

Investigation Tips

Limit scope of investigation in plan

- Try and establish what was it like before it went wrong
- Follow the sequence of events to incident – often in reverse
- Consider how to deal with solicitors, insurance companies, enforcing authority, police
- Check timelines

Investigation Tips

- Record in their words
- When and how to challenge
- **Do not string e mails**
- If human failings are found
  - Do not ignore them
  - Remember the aim to learn lessons & act to reduce chance of a recurrence
  - Discuss with those involved

Accident report

- Summary
- Details of incident with immediate, underlying and root causes with reference to relevant documents etc.
- Have a logical order – remember the reader may not have any background knowledge
- Legal requirements
- Recommendations
- Action plan

Who may investigate - have policies for dealing with them

Enforcing authorities – HSE / LA

Insurance companies

Other employers

Suppliers

Police – Fatal accidents – Joint investigation with the HSE/LA

Guidance

Occupational Safety + Health Consultancy Services Ltd

Investigating accidents and incidents – HSG245

INDG453 – Reporting accidents and incidents at work – a brief guide to RIDDOR

Accident record, Accidents, Yellow accident book B1510

Involving your workforce in health and safety HSG263

ECFA

https://www.frcc.com/Educational/Shared%20Documents/2014%20Cause%20Analysis%20Training/Reference%20Material/E%20and%20CF%20Charting.pdf

Any questions on what I have covered today?