Accident Causes

Types of Adverse Event

Accident / Incident

- Injury accident – Unplanned, unwanted event that leads to personal injury
- Damage-only accident – Unplanned, unwanted event leads to equipment or property damage or loss of materials
- They can of course be a combination of both!

Ill Health

Industrial diseases and medical conditions relevant to the working environment

Near Miss

An event that, while not causing harm, has the potential to cause injury or ill health

Dangerous Occurrence

One of a number of specific, reportable adverse events that cause damage or improper operation of plant and equipment

Do we apply the same level of investigation to each incident?

Remember that in relation to MAH focus is on those incidents that relate to Loss of Containment or other major incident.

Why Investigate

Purpose is to learn why the accident occurred and to find ways of preventing a reoccurrence, should not be used to lay blame and should look at all causes – not just the immediate (and probably most obvious) ones! Key areas are:

Identify immediate causes	Identify corrective actions	Insurance claims
Identify underlying causes	Record facts	Staff morale
Identify root causes	Legal requirements	Data Gathering

Costings show that for every £1 a business spends on insurance, it can be losing between £8 and £36 in uninsured costs.

Immediate, Underlying Causes and Root Causes

When investigating incidents, we need to establish three types of cause so that when we implement corrective actions we do this across all the elements that have failed.

Immediate Cause

The most obvious reason why an adverse event happens, e.g. the tank was overfilled; the drain was open etc. There may be several immediate causes identified in any one adverse event.

Underlying Cause

The less obvious 'system' or 'organisational' reason for an adverse event happening, eg pre-start-up machinery checks are not carried out by supervisors; the hazard has not been adequately considered via a suitable and sufficient risk assessment; production pressures are too great etc.

These can also be attributable to unsafe acts and unsafe conditions.

Root Causes

The HSE define root cause as:

> An initiating event or failing from which all other causes or failings spring. Root causes are generally management, planning or organisational failings. Often remote in time and space from the adverse event (E.G. failure to identify training needs and assess competence, low priority given to risk assessment).

The CCPS define root cause as:

> A fundamental, underlying system related reason why an incident occurred that identifies a correctable failure in management systems.

Investigations which identify root causes allow organisations to take actions that will strengthen their underlying management system