

Fact sheet – Investigation Basics

Introduction

Accident and incidents regardless of cause bear a heavy cost, both financial and importantly in personal terms. Even where an incident does not have high human cost, it can still leave psychological challenges; all of which are contra to good leadership....and ultimately, they hurt your bottom line too.

An investigation is the best structured way to ‘deep dive’ and find the root cause and any underlying issues to prevent recurrence. In engineering we might have to investigate for three principle reasons:

- ◆ Technical reasons, such as a derailment
- ◆ Health and Safety, such as slips trips and falls
- ◆ Performance or misconduct

The outline principles are identical

Why investigate

There are hazards in all workplaces; risk control measures are put in place to reduce the risks to an acceptable level to prevent accidents and cases of ill health. The fact that an adverse event has occurred suggests that the existing risk control measures were inadequate.

Learning lessons from near misses can prevent costly accidents. (The Clapham Junction rail crash and the Herald of Free Enterprise ferry capsize were both examples of situations where management had failed to recognise, and act on, previous failings in the system.) You need to investigate adverse events for a number of reasons.



Legal reasons for investigating:

- ◆ To ensure you are operating your organisation within the law.
- ◆ The Management of Health and Safety at Work Regulations 1999, regulation 5, requires employers to plan, organise, control, monitor and review their health and safety arrangements. Health and safety investigations form an essential part of this process.
- ◆ Following the Woolf Report on civil action¹, you are expected to make full disclosure of the circumstances of an accident to the injured parties considering legal action. Your investigation findings will also provide essential information for your insurers in the event of a claim.

There are several statutory instruments that require transport organisations to report accidents and methods they are adopting to prevent recurrence. There is the reporting of injuries diseases and dangerous occurrence regulations RIDDOR 2013; the railways Accident Investigation and reporting

¹ In 1994, the Lord Chancellor instructed the then Master of the Rolls, Lord Woolf, to report on options to consolidate the existing rules of civil procedure. On 26 July 1996, Lord Woolf published his Access to Justice Report 1996 in which he "...identified a number of principles the civil justice system should meet to ensure access to justice.

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regulations of 2005; and there are regulations concerning the international carriage of dangerous goods by rail. All of these have reporting requirements that place a legal responsibility on the transport operator to report the accident and their response to the accident in a timely manner.

Statutory Body	Reason for reporting and investigation	Within
RAIB	The RAIB leads the technical investigation into the causes and consequences and makes recommendations to improve safety.	ASAP
ORR	The ORR investigates potential breaches of health and safety legislation in relation to operation of the railways.	ASAP
HSE	For accidents away from the operational railway report to HSE/local enforcing authority. – reportable incidents and other causing over 7 days absence	15 days
RID	Any serious accident or incident during the loading, filling, carriage or unloading of dangerous goods be reported to the competent authority of the RID contracting state concerned within one month of the occurrence.	1 month
Environment agencies	For potential damage to the water environment and to protected species and habitats.	48 hours
BTP	The police investigate to find out if there has been a breach of law and any deaths on behalf of HM Coroner	ASAP

So there are many legal reasons why an investigation will be required, there are also many commercial reasons as accidents and incidents inevitably will damage the bottom line and in all probability affect reputation. Information and insights gained from an investigation:

- ❖ An understanding of how and why things went wrong
- ❖ An understanding of the ways people can be exposed to substances or conditions that may affect their health.
- ❖ A true snapshot of what really happens and how work is really done. (Workers may find short cuts to make their work easier or quicker and may ignore rules. You need to be aware of this.)
- ❖ Identifying deficiencies in your risk control management, which will enable you to improve your management of risk in the future and to learn lessons which will be applicable to other parts of your organisation.

Benefits arising from an investigation:

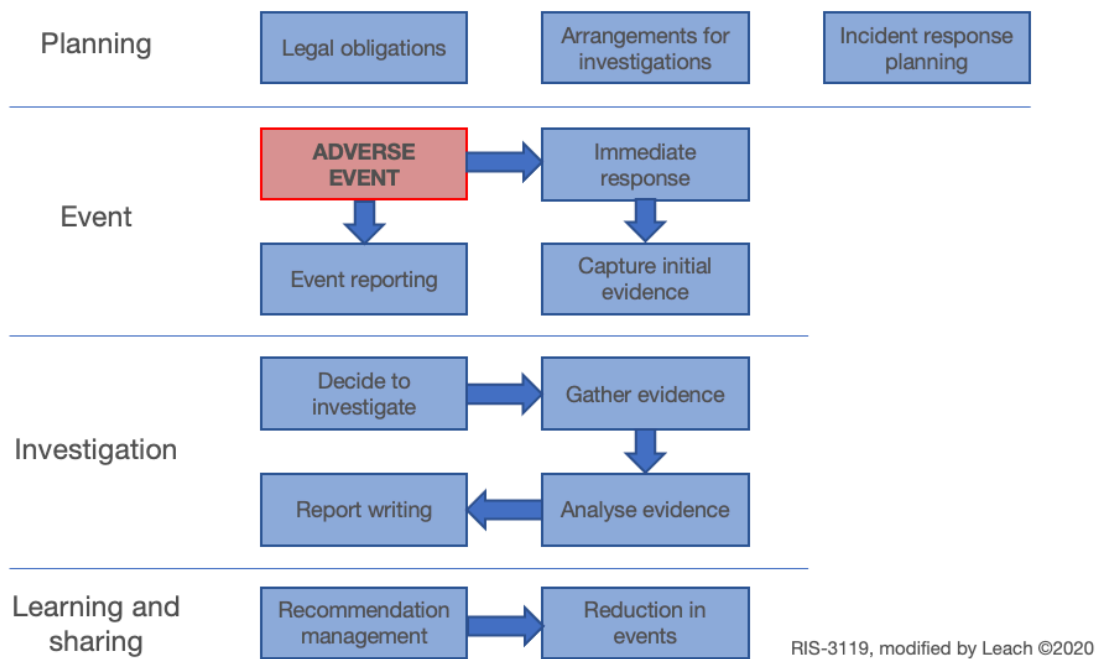
- ❖ The prevention of further similar adverse events. If there is a serious accident, the regulatory authorities will take a firm line if you have ignored previous warnings.
- ❖ The prevention of business losses due to disruption, stoppage, lost orders and the costs of criminal and civil legal actions.

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- ❖ An improvement in employee morale and attitude towards health and safety. Employees will be more cooperative in implementing new safety precautions if they were involved in the decision and they can see that problems are dealt with
- ❖ The development of managerial skills which can be readily applied to other areas of the organisation.

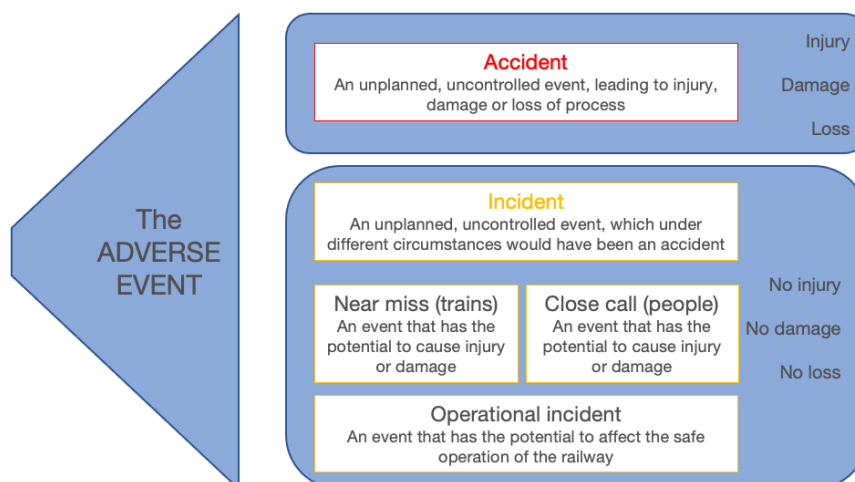
Investigation organisation and planning

The investigation flowchart is described:



Adverse event

Throughout these fact sheets and the training course itself we talk of accidents and incidents and we also talk of near misses close calls and other such terms. This can get confusing so to simplify things we refer to all of these as adverse events.



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Initial assessment

As can be seen on the flow chart the decision to investigate can take anywhere between 24 and 72 hours to make. It is important therefore, but initial evidence is collected both to make sure that perishable evidence is not lost and that a good initial assessment is provided to the management teams to allow them to make the right decision about the depth of the future investigation.

The initial evidence collection aims to capture the following points:

- ◆ Description of the event based on known information.
- ◆ Assimilation of evidence.
- ◆ Timelining the event.
- ◆ Assessment of any known sub-standard acts and conditions.
- ◆ Potential causes – immediate and underlying.
- ◆ Review of related risk assessments.
- ◆ Action already taken and planned to be taken.
- ◆ Comparison of time of day between event and visit and any differences.

Some examples of perishable evidence might include:

- ◆ Brake and wheel temperatures
- ◆ Positions of driving controls, switches etc.
- ◆ Brake pressure and other instrument and gauge readings
- ◆ Signalling equipment positions and indications
- ◆ Photographs of the site and equipment, including any pollution
- ◆ Condition of location prior to rescue and recovery operations
- ◆ Weather conditions
- ◆ Results of alcohol and drugs tests
- ◆ Eye-witness accounts
- ◆ Verbal or written recollection and testimony of the events from the person(s) involved in the adverse event
- ◆ Details of any personal injuries and treatment afforded
- ◆ Names, addresses and statements from witnesses.

The decision to investigate

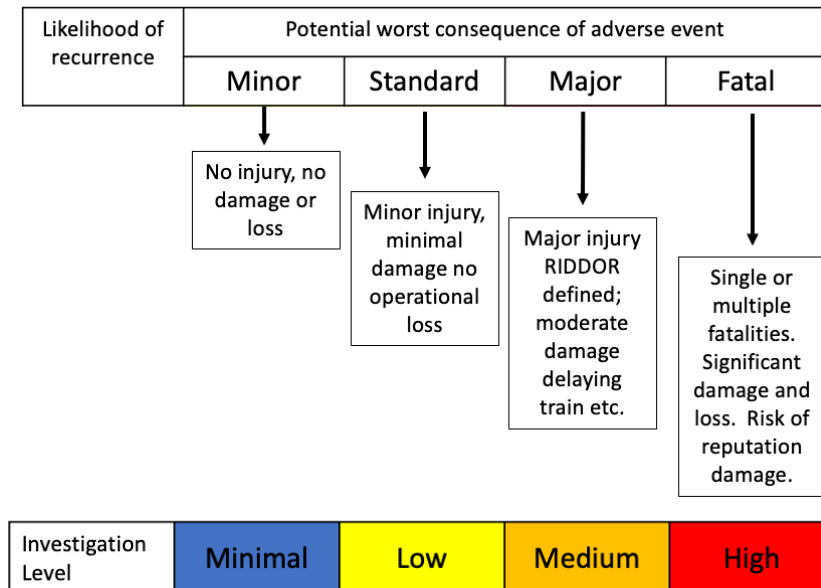
The decision to investigate is normally a more senior management decision in the business. It should be fairly obvious to most people that some form of investigation is generally always required and as such the collection of that vital perishable data is important.

There are a number of ways of categorising the level of investigation to undertake, clearly where there has been a fatality a significant investigation will be required particularly as it is likely that such an accident would end up in court at some stage. The key thing in determining the level is proportionality. This is not an easy thing to define but if you imagine on the one end there's a simple slip and somebody has injured themselves in a minor way, an organisation will not throw a full investigation team into tracking down every single root cause. However, at the other end of the continuum there is multiple fatalities, where a number of investigation organisations will be involved from different perspectives.

RIS3119 gives a number of different ways of charging this level including something called the proportionate response model, which is quite a complex method of determining the level. The health and safety executive in their guidance book HSG245 have a simpler method which is displayed below.

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Over years of experience of investigating I have only ever used the health and safety executive version and it is proved adequate in each case.



Lead organisations and co-ordination

ROGS Places a duty of Corporation on all transport operators which gives a requirement to coordinate and cooperate in any accident investigations. Typically the owner of the asset is the lead investigator although this is not always the case. Despite what some documentation will tell you in the initial phase of an investigation it is likely the police will be in charge, and they will remain in charge until criminal activity or terrorist interference has been ruled out. (As an example in the Lockerbie air disaster the police are still the lead investigation organisation).

Clearly the police will not have the required technical expertise to perform the investigation and so it is likely they will either use the transport operator's team of experts or if the accident is of a sufficient size the rail Accident Investigation branch (RAIB) will probably be the primary investigation experts. It is important during the decision phase to discuss who is the lead investigation organisation and also talk through how data and findings will be shared between organisations.

Even when the police and other investigation bodies are in charge of the investigation the company who owns the asset will most likely want to perform an investigation themselves to assure themselves of the causes and look at it from a particular reputational perspective. What is important in these larger investigations with multiple agencies involved is to ensure that there is good coordination otherwise one can end up in the situation where we are interviewing witnesses many times causing distress unnecessarily.

In our fact sheet on incident response planning we discuss these sort of things as often it is better to have made these decisions before an event or accident happens. Usually when high profile events happen organisation's senior management very quickly get consumed in managing media perspective.

Another consideration during the planning phase is that of trade union attendance at the interviews and to be involved in the investigation itself. There is no legal requirement for an organisation to allow a trade union access to an investigation, although there may be some benefit from having an independent perspective. During an interview the witness that is being interviewed is not to be assisted

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or represented by anybody , but they can have somebody present for support only. Again , it is worth considering all these questions in advance to avoid having to make rapid decisions after an accident. This is covered in full detail in the fact sheet on incident response planning.

Investigators

The choice of who investigates from an internal perspective is sometimes dependent on the type of investigation being undertaken. In a performance and conduct investigation it is not uncommon for the line manager of the person concerned to carry out the investigation as they understand the person and the circumstances best. For health and safety or a technical investigation depending on the level of investigation will determine whether it is undertaken by local management or a more central investigation team. Generally the more significant the accident the more likely it is to have an independent investigator.

All investigators have the following attributes:

- ◆ Experienced, credible and respected (need to build trust)
- ◆ Perceptive and good at information gathering
- ◆ Engaging stakeholders
- ◆ Interviewing skilled
- ◆ Strong analysts
- ◆ Unbiased
- ◆ Detailed and determined
- ◆ Deep probing
- ◆ Patient and honest