No Blame Accident Investigations

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TITLE: **NO BLAME ACCIDENT INVESTIGATIONS**
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Synopsis

There has traditionally existed, a fundamental tension between investigating the truth of what really happened in an accident, and getting witnesses to an accident possibly to incriminate themselves by giving evidence which could be used against them in a legal inquiry.

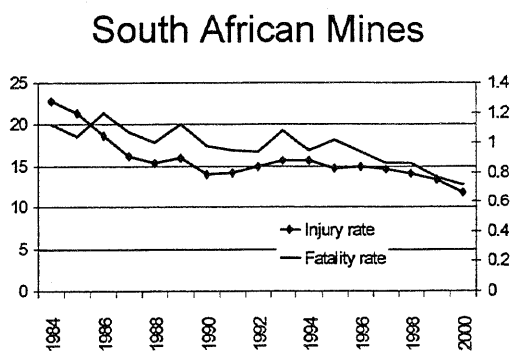
During 2000, the South African Mine Health and Safety Council set up a tripartite team to "recommend amendments to the Mine Health and Safety Act that will enhance the effectiveness of accident investigations as anticipated by Section 63(1)"

The paper discusses problems associated with investigations Vs. inquiries, and highlights these using a case study. The difficulties faced by the team in respect of developing proposals are outlined, and finally, a system implemented at the author's company is presented together with an analysis of performance before and after inception.

Background

During 1996, the South African Mine Health and Safety Act (MHSA) was promulgated, after lengthy consultation between State, Labour and Employer representatives. This piece of Safety and Health legislation is one of the most modern, and arguably one of the most progressive acts of its kind in the world.

There were many reasons for reviewing this legislation, not least of which was to provide a framework in which occupational injuries and illnesses could be significantly reduced. Safety and Health performance in the South African mining industry, whilst it had been steadily improving, had been less than satisfactory when viewed in a global context.



The MHSA has now been in place for approximately 5 years, and during this time, certainly, accident rates have decreased, although remaining at an unacceptable level.

Two broad approaches are advocated to improve this situation. Firstly, a "proactive" approach based on risk management and other accident prevention systems. Secondly, and the subject of this paper, is the ability to learn from accidents which regrettably have already happened, in order to put in place, preventative actions to obviate any recurrence of the accident.

The Mine Health and Safety Council recognised there was scope in the MHSA to facilitate enhancement of accident investigations. Around a year ago, the Council established a tripartite task team in terms of the act, and gave them a remit to "recommend amendments to the MHSA that will enhance the effectiveness of accident investigations as anticipated by Section 63(1)"

The establishment of accident causation

In order to establish the causes of an accident, it is fundamental that a detailed understanding of the causative factors be accurately established. It is here that methods used by the state in respect of investigating accidents vs. holding a legal inquiry, create a deep-seated tension between; on the one

hand, the pursuit of basic causes, and on the other, the establishment of whether the law has been contravened, and most importantly by whom.

There are of course many definitions of both inquiry, and investigation. Some people would have us believe that they are in fact the same thing. Let us consider a somewhat more controversial but pragmatic view, based on perceptions and real life experiences of many people in the South African mining industry .....

Inquiry: This is where, following a serious accident, evidence is gathered with a view to establish whether any laws or regulations have been breached, either through act or omission, and who is responsible for these breaches. Evidence gathered includes statements given under oath, and may be sent to the Attorney General. This seems to indicate that **inquiries into accidents are more aimed at establishing whether any person or persons ought to be prosecuted**. I.e. whether an offence was committed.

Investigation: A system-based approach where the full range of factors, which contributed to the accident, are identified and understood. Because the DME section 60 investigations may be held jointly with the employer investigation in terms of section 11(5) of the MHSA, it appears that the objectives should be similar. Currently these investigations are not sent to the Attorney General, although they are not legally privileged, and information so gathered may be used in evidence against a person or persons, should it be felt that prosecution is warranted. As opposed to inquiries then, it would appear that **investigations are primarily aimed at getting to the bottom of any failures, (mostly managerial, but more about this later) which led to the accident, rather than punish employee / employer infractions**. This allows for effective remedial action to be taken, thereby preventing a recurrence of the accident.

Potential and real tensions

The purpose of identifying the causes and underlying causes of an accident seems to be in tension with (whether perceived or real) at least the following other purposes:

- Establishing whether any act or omission prima facie involving or amounting to an offence was committed during an event.
- The need for trade unions, employees and the public to be aware of, and sometimes involved in investigations or inquiries.
- Establishing whether any civil claims could be founded arising from an event.
- Establishing whether any disciplinary action should be taken arising from an event.

As a result of these real and perceived tensions then, there is a very real likelihood that the true causes of accident are not identified or understood, and therefore, effective remedial action is not taken, and as a result a recurrence of the accident is not prevented.

Some problems with investigations and inquiries as currently practiced

- These processes often don't find the real causes or underlying causes of an event.
- Over the last 20 years there have been very few prosecutions and even less successful prosecutions.
- There is a lack of training and resources within the DME Inspectorate.
- The Attorney General won't agree to indemnification in terms of section 63(1) of the MHSA, unless he has a report regarding the incident, which gives rise to a "chicken and egg" situation regarding indemnification. In the result no indemnifications have been given to date.
- There is a potential duplication between investigations and inquiries.

- Inquiries are relatively long, drawn out proceedings, particularly where legal representation is involved. This consumes vast resources from all stakeholders involved. In many instances they take on a particularly legal nature.
- Currently it is obligatory to hold investigations and inquiries in respect of many events where this might not be justified.
- Prosecutions usually happen only long after an event. In some instances this is partly because the relevant inquiry has taken a long time to conclude.

An example – Underground locomotive accident.

This accident, which happened at a mine in South Africa resulted in the death of a newly recruited fitter, who was struck by a moving train. It is used as an example to highlight the difficulties detailed above. Two very different conclusions were made. One as a result of an inquiry held by the state, and one as a result of a investigation carried out by an independent investigation team, under the guise of legal privilege:

The Inquiry:

The locomotive driver and guard were 2 key witnesses to the accident. No-one else was in the haulage at the time.

The locomotive was pushing a man-carriage. This is against company procedure.

The guard stated that he was sat in the man-carriage, diligently looking forward, shining his cap lamp in front of the train. When the train approached the cubby, the witnesses stated that the guard blew his pea-whistle as a precaution, but neither of them saw the deceased in the cubby.

During the inquiry, the locomotive driver stated that he did not see the deceased at all, until he appeared from a small cubby and walked straight into the path of the moving train (Too late for the driver to stop before striking the deceased). Tests and simulations showed that the loco was travelling relatively slowly, as was stated by the driver.

Physical inspection of the site revealed poor footwall conditions either side of the rail tracks. It was suggested that this was the prime reason that caused the deceased to stumble in front of the moving train, after exiting the sidewall cubby.

The deceased had only been working on the mine for approximately 2 weeks, and had limited underground experience.

The main conclusion drawn at the end of the inquiry process, was that the deceased, unfamiliar with underground operations, was unaware of the hazards of moving rolling stock, and as a result had inadvertently stumbled in front of the moving train. Poor footwall conditions had contributed to the accident. It was found that the loco driver and guard, whilst in breach of company procedure, had acted reasonably, and had taken reasonable precautions under the circumstances. Disciplinary action was taken against the loco crew by the mine involved.

Recommendations were made which largely concentrated on improving the mine's workplace induction procedures for new employees, and the improvement of conditions underfoot in this area

The Investigation:

The picture painted following a comprehensive investigation was quite different. The inquiry process had been focussed on discovering breaches, and had missed some pertinent facts. When given indemnity from having their statements used in evidence against them, the witnesses told quite a different story:

It seems that the loco guard was simply travelling in the man-carriage, and was not "diligently looking forward, shining his cap lamp in front of the train". The view of the driver was almost totally obscured

by the leading man-carriage. The fitter was simply walking away from the oncoming train, along the railway sleepers, as a lot of us have done many times. He was simply run over by the train.

Investigations showed that the cooling unit in the cubby was un-silenced, and at the time of the accident was operating at noise levels of 108dB+. It seems that even if the guard had blown his pea-whistle (he hadn't!), no-one could've heard it, let alone the deceased having any audible warning of the locomotive's presence. The light on the front of the train was measured at 2 Lux at 10 metres, thereby negating any visual warning. This was due to intermittent problems with the charging of loco lamps in the lamp room.

The investigation concluded that the accident had occurred as a result of a number of key factors, including conditions in respect of the occupational environment. Recommendations were made about issues such as: Fan silencing, improvements to the planned maintenance system in the lamp room, signaling systems in haulages where pedestrian and locomotive traffic co-exist, Etc.

Importantly, and in conflict with the Inquiry, a thorough investigation did not find that the workplace induction program was deficient, and **most importantly, it did not seek to apportion blame, or recommend disciplinary action**. In terms of the recommendations however, it does seek to assign accountabilities for remedial measures.

How many inspectors have been told by potential witnesses, during in-loco inspections, that they did not see what happened? That they heard something, but weren't looking in that direction? That the injured was working alone? That he was not acting on instructions? Of course, these statements are sometimes true, but the chances are that if there is even a small chance that the person giving information (evidence) may in fact incriminate himself, then there is a good chance you'll get nothing or something other than the truth. So this causes a basic tension between the getting to the bottom of accident causation vs. finding out whether the regulations have been breached.

The tripartite task group

A team was established in June of 2000 to recommend amendments to the MHSA, which would enhance the effectiveness of accident investigations. The team consisted of a legal representative, and an "expert" in accident investigation, from each of employers, the state, and employees.

After a year of analysis and deliberation, the group has not made any recommendations, which are agreeable, any of the other parties. The situation currently can be summarised as follows:

The team representing employers have suggested that:

- Provision should be made to "ring fence" investigations and their findings under both section 11(5) (employers) and section 60 (DME) so that the information so found cannot be used to the detriment of any person.
- There is not a need for inquiries in the MHSA for the following reasons:
  - there are numerous other ways of obtaining evidence in order to substantiate criminal prosecutions (or administrative fines) where these are warranted;
  - there are certain state organs that are specifically geared to institute criminal proceedings and these should be used to initiate criminal proceedings – with the assistance of the Inspectorate where necessary;
  - inquiries tend to be long, drawn out legal proceedings that achieve little positive (except make lawyers wealthy);
  - inquiries into deaths can be dealt with in terms of the Inquests Act. Amendments can be made to the Inquests Act to ensure the involvement of mine inspectors;
  - where, due to public pressure or the nature of an event, a need is felt that a public inquiry be held, a commission of inquiry can be appointed by the State President, as recently happened during the soccer disaster at Ellis Park rugby stadium.

The team representing the state has suggested a model where investigations carried out by the Regional DME inspectors "could" be ring-fenced, and where a separate team (also part of the DME Inspectorate) carries out inquiries. A diagram is attached as Annexure "A"

Labour representatives currently maintain that the MHSA as it stands, has adequate provision in terms of section 63(1)

> *"For the purposes of enhancing the effectiveness of an investigation in terms of section 60 the Chief Inspector of Mines, in consultation with the appropriate Attorney-General, may issue a certificate that no prosecution may be instituted in respect of any contravention of, or failure to comply with, a provision of this act related to the event being investigated. If a certificate is issued, no fine in terms of section 55D or disciplinary action related to the event investigated may thereafter be imposed on or taken against any person."*

This provision has never been utilised, and as mentioned earlier in this paper, there are some valid reasons for this. Further, labour representatives have taken the stance that the main problem is in fact poor training within the Inspectorate. It is pointed out that the possibility of prosecution, whilst it may make true accident causation more difficult, would not deter a skilled investigator from discovering the truth, as is the case with other criminal investigations, like those carried out by the police for example.

The tripartite task team has reported this position(s) to the Council, who remain extremely keen to de-link accident investigations from criminal prosecutions.

An Alternative

Anglogold was established during 1998, based largely on what was then Anglo American's Gold division, consisting of 13 deep level South African Gold mines. Over the last 3 or 4 years, Gold assets have been added to Anglogold's portfolio, which include 2 mines in North America, 2 in Brazil, 1 in Argentina, 1 in Tanzania, 3 in Mali, and of course 4 mines in Australia.

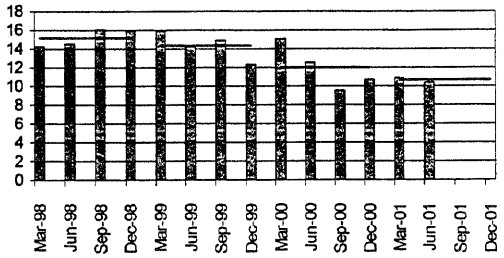
It is worth pointing out that the Safety performance of Anglogold on establishment, was far from satisfactory with an annual average on it's South African mines of 146 fatalities, and approximately 4500 lost-time injuries occurring each year (based on the previous 10 years).

As part of a comprehensive strategy to improve this situation, Anglogold established a fully resourced investigative unit at its corporate office, initially to fully investigate all fatal accidents. These investigations are carried out in preparation, and in contemplation of inquiry and legal proceedings and furnishing of legal advice. A confidential and privileged report is produced for external legal counsel. Whilst early feedback is given to the mine, much care is exercised that the information resultant from the investigation is not used by mine management as a basis for disciplinary action.

In this way, witnesses can feel free to give a detailed, accurate account of what they saw, or did, or did not do Etc. without fear of disciplinary action being taken against them or other types of recrimination. **Most importantly, accurate accident causation is facilitated, enabling effective remedial action, thus avoiding accident recurrence.**

The company believes that this approach has played a significant role in improving accident rates in the company. Lost-time Injury Frequency rates have improved from 15,2 to 10,7 per million hours worked over the last 2½ years. (-30%). Last year, regrettably, 49 fatalities occurred in Anglogold's South African mines and one in Brazil. Whilst any fatality is regarded as totally unacceptable, and further initiatives are being vigorously pursued, there is little doubt that the ability to speedily get to the basic causes of accidents through "no blame" investigations, has contributed enormously to improving on the 146 deaths per year occurring in the company prior to 1998.

Anglogold South Africa
Injury Rate/million Hrs



No blame accident investigations may seem like an oxymoron, but unlike "safe sex without a condom" and "English first-class cricket", they clearly have a great deal of merit.

Acknowledgements

The assistance of the other members of the tripartite task team established by the South African Mine Health and Safety Council, was invaluable in the preparation of this document.

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