SAFEX Congress 2005

Workshop theme -- Good Explosives Practice.(GEP)

Plenary presentation

Good Practice

Good Practice is a general term used to describe the way in which a particular activity is performed or end result achieved by the application of accepted methods that have been proven by time. Good practice can be found in industry guidelines, regulatory requirements, company specific procedures or an individual's method.

In the previous plenary presentation Frank Barker likened the health of a companies' safety performance to the medical health of an individual person and introduced the Safety Management System (SMS) or Virtuous Circle as the backbone for effective safety management. The SMS is an example of Good Practice – it provides a tested and accepted model or template for safety management.

How does GEP relate to SMS good practice?

Good Explosives Practice

An SMS is a relatively high level system that provides a backbone on which to hang specific procedures and instructions such as Risk Assessment, Training and Permit to Work etc. For each of these procedures there will be accepted "good practices" that should be considered by anyone who sees a need for the procedures in their particular industry. This is also where "Good Explosives Practice" sits – it is a term used to describe the tested and accepted good practices that have evolved over many years in the explosives industry and many are specific to explosives and explosives operations.

So to answer the question posed earlier -- GEP is additional to an SMS and gives the detailed good practices that address the specific safety issues we have to manage when dealing with explosives.

The basic safety issues that we continuously face are (1) preventing ignition of the explosives that are being handled and (2) minimising the consequences in the event of an ignition.
The SMS will require a number of actions for each operation including perhaps

- hazard study or risk assessment
- preparation of operating instructions
- training

Each of these will be carried out to the requirement set by the SMS and probably to accepted industry practices – all of which are generally well documented and easily accessible.

For a particular operation under review, the hazard study may identify safety issues that require attention by specifying:

- the installation of conductive flooring to prevent static discharge ignition
- the use of soft materials to prevent impact ignition
- the prevention of ingress of foreign materials to prevent friction ignition
- the provision of detonation traps to limit propagation
- the provision of eye protection against derbis/fragments

and so on.

Let us consider the requirement for conductive flooring that has been identified as a requirement. The next stage would be as follows:

Plant engineer(PE) What type of conductive floor do we install?

Technologist(T) One that is conducting.

PE Obviously, but which one?

T You mean there is more than one?

PE Yes. It could be water wetted lead, conductive bitumen, conductive resin, damp sawdust, conductive rubber - - -

T OK. Which is best?

PE Well, it depends on - - - - -

The above are examples of some of the current practices for conductive flooring – but which ones are better than others in specific applications and how do we find out?

Similar discussions could take place on all the specific recommendations from the hazard study.

What detonation trap should we use for 5gm/m detonating cord?

What methods do I use to avoid ingress of foreign bodies?

At this stage people are now looking for very specific guidance, not just general requirements.

Where do they get this guidance?

There are many examples of GEP in our industry today – but they are not fully documented nor readily/widely available. In many cases they are not even perceived by those who adopt them as GEP – they are merely regarded as "Well, it is not special. This is just how we have always done it." It may not be special to them, but it could be just what someone else needs to prevent an incident. It is not good to hear someone say when a serious incident is being reviewed "If only you had done - - - "

Workshop objectives

The objective of this workshop is to encourage the participants to share and discuss current specific practices. Several members have very kindly agreed to present their incident reports in a workshop environment and for these to be probed to identify what good practices could have prevented each of the incidents and/or prevent a recurrence.

The anticipated outcomes will be for those present to share their own views on GEP and for SAFEX to prepare an initial list of GEP's for issue to all members. It is hoped that this will then encourage others to share their good practices within SAFEX.

Good versus Best Explosives Practice

Finally, I have chosen the term Good Explosives Practice and not Best Explosives Practice for one very good reason, namely – what is deemed to be best practice in one situation may not be the best in another similar

but not identical situation. There will always be some local differences that may significantly impact on the choice of practice adopted e.g capital constraints, cultural issues and availability of resources/materials etc. What is important is that local personnel are aware of the relevant GEP's and select the most appropriate for their operation.