

MINING INDUSTRY OCCUPATIONAL **SAFETY & HEALTH**





"As long as managers believe that their workers are the problem, they will either discard the prerequisites for conformance or make half-hearted attempts to achieving them."

Failure to recognise and address the prerequisites for conformance, will perpetuate the failure to complete tasks correctly and ultimately, yield the same poor results.

Achieving conformance requires an enabling operating environment. It is management's responsibility to establish such an environment. It is only within this environment that workers can be expected to conform to safe operating procedures and standards.

PREREQUISITES

Prerequisites for achieving operational discipline and conformance

CONCLUSION

The ten prerequisites are practical elements of any mine's enabling operating environment. It is evident that conformance is predominantly a management challenge and responsibility. Workers' responsibility plays a smaller, yet challenging role and can only be achieved once the enabling environment is in place and fully functional.





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PREREQUISITES

Prerequisites for achieving operational discipline and conformance



The mining industry has a vision of Zero Harm with clearly defined milestones. Unfortunately, industry is not achieving these targets and so leaders are looking for practical tools to help get mines on track. The Minesafe conference therefore chose Driving Excellence through compliance as the theme.

Most accidents in the mining industry are attributed to inappropriate human behaviour and non-conformance to procedure. Effective root cause analysis of accidents revealed that the "conformance challenge" is primarily an organisational one and not only an individual worker one.

CONFORMANCE AND OPERATIONAL DISCIPLINE?

Conformance is the result of operational discipline, a key element of operation excellence. Du Pont defines operational discipline as, "the deeply rooted dedication and commitment by every member of an organisation to carry out each task the right way, every time."

The mining industry will not achieve Zero Harm, or the milestones, without sustained operational discipline/conformance to safe operating procedures.

THE TEN PREREQUISITES FOR A CONFORMANCE ENABLING **OPERATING ENVIRONMENT:**

ONE

Practical safe operating procedures and standards

TWO

Only competent team members to execute work

THREE

Availability of materials

FOUR

Availability of functional tools and equipment

FIVE

No direct and indirect conflicting demands and messages

SIX

Supervisors must be exceptional examples of conformance

SEVEN Workers must fully understand the risks in the workplace and the tasks to be done



Management must completing a task

understands:

a specific way.

The first step to a conformance enabling environment is that every task, step and process needs to be defined and designed to be safe. Safe operating procedures, as a minimum, must include:

- the task and sequence in which the tasks and steps must be executed
- the specific harm associated with the tasks and steps
- the specific controls that prevent or mitigate against a specific harm
- the number of employees of different job roles (team completement)
- the competence requirements of job roles
- special and general tools needed
- special and general materials needed
- all physical verifications required. prior to and after, executing the work, including minimum requirements for a team to proceed

Safe operating procedures must be physically verified and validated to be practically executable by competent team members and with the needed materials and tools.



provide input

be satisfied with the practicality of the procedure

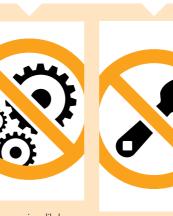
The Mine Health and Safety Act requires mines to establish a safe operating environment, yet very few mines have independently and practically verified procedures that address the minimum requirements defined above. Despite procedures being reviewed on a regular basis, they are often not practical and this is only discovered when incidents and accidents occur.

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Management must ensure that teams and workers do not start a shift if the

- team is:
- / not complete (required staff complement)
- All members are not competent (certified to be able to execute work)

Management must not transfer the responsibility to the team to make the decision to work or not and only when arriving at the workplace.



Conformance is unlikely when the required material to complete the task are not available when needed The probability of teams taking risks or trying to "make a plan" is very high in these instances, especially when production output is financially incentivised.

Managers must ensure that: / all materials needed at

- a specific place of work are available well in advance
- all materials are confirmed to be available and according to specification

The correct and fully functional (special and general) tools are essential for enabling conformance to safe operating procedures.

ensure safe operation.

The availability of

(special and general)

tools and equipment must

be **confirmed** prior to

starting of a shift.

of them in terms of the organisation's values. "Management and Management must ensure supervisors must

that maintenance and communicate the same message, namely that asset management systems conformance to safe include the requirements and specifications of special operating procedures are tools and equipment that not negotiable." must be maintained to

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When management sends mixed messages, workers are subconsciously unsure of what is really important and will be inclined to take decisions that benefit themselves financially.

Workers must be 100%

sure what is required

Team leaders' and supervisors' conduct is **key** to achieving conformance. Leaders and supervisors influence their team's culture by establishing the unwritten rules and norms of the work place. Supervisory conduct is the real acid test for management's true priorities and the organisation's true values. Supervisors have to lead by example without exception.

EIGHT

Workers must fully understand expected behaviour and consequences

NINE

Management must measure and act

TEN

Practical leadership

make sure that everybody

- all the risks and hazards associated with a task
- the specific controls that are part of the safe operating procedure
- Ensuring this will require reshaping existing training, communication and other organisational systems. Understanding the risks and controls provide the team members with the rationale (why) for executing tasks in

Management must ensure that team members know exactly what behaviour is expected to work safely. Therefore, as part of the enabling environment, expected behaviours must be defined for every task in clear and simple work ways.

It is also important that appropriate and consistent consequence management is applied to observed behaviour. Despite having a negative connotation, consequence management could be both:

- actions to discourage at-risk behaviour
- positive reinforcement of ideal behaviour



Management's role is to

- provide direction
- create the enabling environment
- measure conformance
- act on deficiencies

Management execute their responsibilities through internal audit and assurance of conformance to the safe operating procedures. Independent verification and monitoring remains critical to sustain the enabling environment.



The **mine manager** leads the mine's conformance by establishing the enabling environment. Their leadership is demonstrated by the **budgets** and resources provided to ensure that the nine other aspects of the enabling environment are well established and fully operational and effective They further demonstrate leadership by ensuring that conformance forms part of the business strategy and establishes leading indicators to monitor all the aspects of the enabling environment.