



**Warning Signs – How They May be Ignored
Module**

Warning Signs

Sample Only - Not For Training

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Safety Talks

Warning Signs – How They May be Ignored Module Warning Signs Support Material

Script

The basic findings of almost all major accident research, is that prior to the accident there are always warning signs which, had they been responded to, would have averted the accident. But they weren't, they were ignored. Mindful organisations are ones, which attend to these warning signs. It is this, which enables them to function with such high reliability.

Unfortunately there are many examples where organisations have failed to act on such warning signs. I want to give you a few examples of that just to make the point in a dramatic way. In 1996 the Gretley Coal Mine in NSW suffered an accident in which four men drowned.

They had been mining towards old abandoned flooded workings. And water was seeping out of the mine face, which should have been an indication that they may have been dangerously close to old flooded workings. They ignored those warnings and continued mining and broke through into the old workings and a vast amount of water came in and four miners were killed.

Another example concerns the explosion at the Esso Longford plant in Victoria that killed two men and cut off gas supplies to the city of Melbourne. The explosion occurred after operators had lost control of the process. A high-pressure vessel became dangerously brittle with cold and shattered when operators tried to warm it up. A month before there was a similar cold temperature incident, which was a very clear warning that the process was out of control.

Fortunately there was no explosion on that occasion, but no further action was taken. Had that incident been responded to, had that warning been responded to, the accident a month later would not have occurred.

This is unfortunately a very typical story; there are always such warnings, which are missed for a variety of reasons. Mindful organisations don't miss these signs.

Some organisations operating in high-risk environments do so without anything going wrong. These organisations have been described as high reliability organisations.

Being a high reliability organisation is associated with the concept of mindfulness – collective mindfulness

Organisations that are collectively mindful are very successful in avoiding disaster, but ironically:

- They are wary of success,
- They worry about the fact that success may breed complacency. So they worry about the possibility of complacency setting in.
- They are very alert to any kind of warnings of danger. Any kind of warnings that things might be going wrong.
- They use audits as an opportunity to worry about failure rather than as an opportunity to celebrate success, which is the way so many corporate audits function.

Gretley and Longford are two striking examples where warning signs were ignored. These organisations were not certainly operating mindfully.

Prior to any major accident there are always warning signs which, had they been responded to, would have averted the accident. But they weren't, they were ignored.

Note for facilitators

Gretley and Longford are the names of two disasters in Australia.

Gretley is a coal mine in the State of New South Wales that flooded.

Longford is in the State of Victoria where Esso operates an oil and gas processing plant.

Suggested Discussion Questions and Answers

1. What are typical warning signs you believe are likely to lead to an incident in the organisation?
 - Warnings sign may be certain kinds of **leaks**. An example may include – oil from gearbox of roller conveyor drive.
 - Certain kinds of **alarms that** maybe we want people to report. An example may include over temperature – hot spots leading to collapse of furnace roof.
 - If we know that **maintenance work is not being done**, that should have been done, that is maybe something we want to get reported into our incident reporting system as **machinery could be in a dangerous condition**. An example may include - guard missing/not replaced from a head end conveyor
 - **Corrosion** is such a problem in so many contexts. An example would be a Natural gas line shut off valve spindle exposed to sea air, seized and inoperable for emergency or maintenance work

- Another warning sign may be **inappropriate procedures**. How often do workers find that the procedures, which they are required to use are not actually appropriate for the job? An example may include shift cleaning crew for conveyors uses standard operating procedure (SOP) which does not reflect changes to equipment
2. Which activities and processes can you use to source Warning signs?
- Consultation/Records
 - Committees – safety & health, risk review
 - Tool Box Meetings
 - Query your industry group
 - Review insurance history/ records
 - Review emergencies reported
 - Formally Structured Model Processes
 - Failure Mode Analysis (FMA)
 - Safety Case
 - Hazard Operability Studies (HAZOP)
 - Risk Assessment
 - Inspections
 - Management System Processes
 - Design
 - Training
 - Auditing
 - Reporting
 - Incident Investigations
 - Risk management
 - Recruitment
 - Change management
 - Damaging energy classifications including:
 - Potential
 - Kinetic
 - Electrical
 - Chemical
 - Pressure – pneumatic/hydraulic
 - Other additional warning signs
 - Certain kinds of leaks
 - Recurring Alarms
 - Inappropriate procedures
 - Machinery in a dangerous condition
 - Corrosion
 - Maintenance work not being done or completed