

# Managing an Emergency

## NSW, Australia Perspective

Seamus Devlin & Paul Healey



# Stages



- Pre Emergency
- Response
- Post Emergency

# Pre Emergency

- Legislation

OHSA, 2000

workplace free from risk

CMHSA, 2002

Achieve objects of OHSA, 2000

Health & Safety Management Plans

Major Hazard Management Plans

Emergency Management Plan



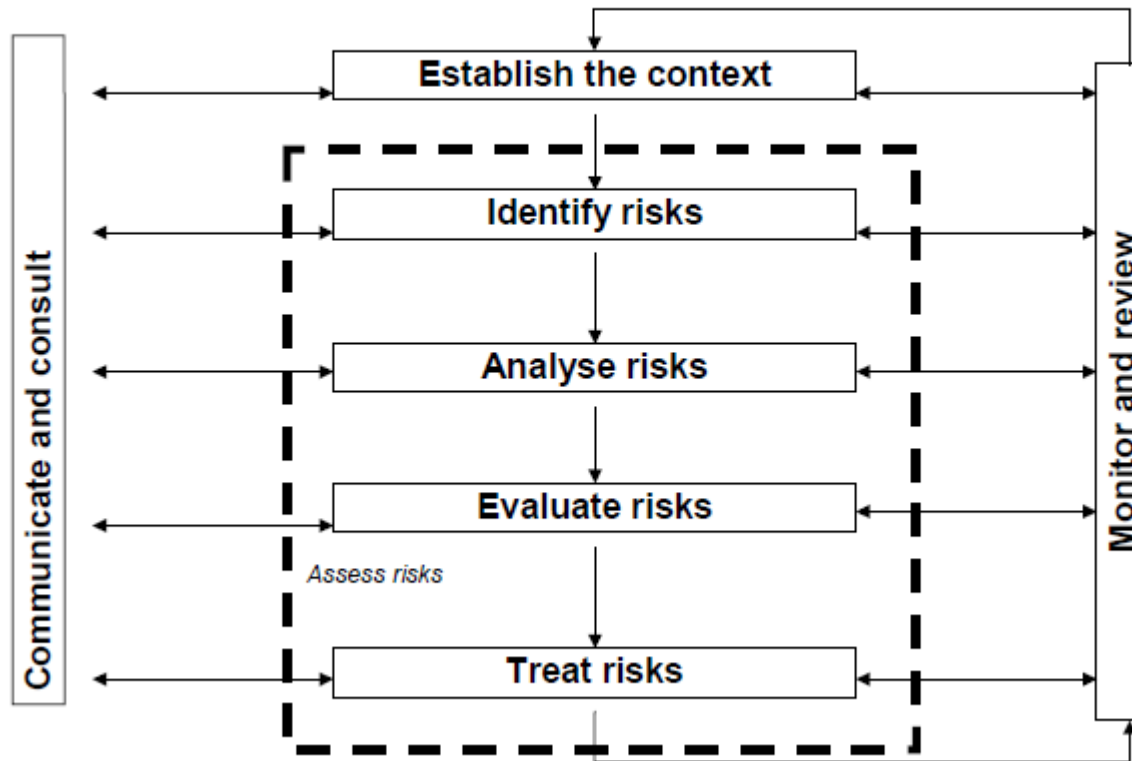
# Pre Emergency

- Hazard Control & Risk Management

## Step 1

- Identification
- Assessment
- Control

## Risk Management Process Model (AS/NZ 4360)



# Pre Emergency continued

## Step 2

- Training
  - Simulations
  - Review & Improve
- 





# 2009

**Incident Management Team**

**EMERGENCY  
PREPAREDNESS  
& MINES RESCUE  
GUIDELINES**



# Response

- Control is dependent on:
  1. Monitoring
  2. Trigger Actions
  3. Communications
  4. Resources
  5. Inter Agency Cooperation

# 1. Monitoring

- Essential to establish what is “normal” for the mine to allow comparison to changes that occur during an incident.
- Methods for gathering information include:
  - Fixed electronic
  - Tube Bundle
  - Gas Chromatographs
  - Hand held
  - Machine mounted



## 2.Trigger Actions

- Simple “Event = Action” system.
- Removes doubt in taking action.
- Predetermined in “peace time”.
- Allows appropriate level of management to implement controls.

### 3. Communication

- Critical link between affected personnel and the Incident Management Team.
- Survivability of current Australian systems is questionable.

# Communication continued

- Some National Mining Association (US) recommendations are:
  - “Harden” UG systems.
  - Produce a guideline for “best practice”
  - Adopt “breadcrumb” technology for mines rescue teams.

*The above points are being integrated into a proposed Mining Guideline in Australia.*



## 4. Resources

- “Duty Card” systems for rapid allocation of personnel to essential and identified roles.
- Volunteer Mines Rescue Brigades become employees of the Mines Rescue Service.
- Pre-identification of services and suppliers that may be required. (By mine site)
- Service supply list kept by Mines Rescue.
- Essential services by Local Area Command (Police).

# Inter-Agency Cooperation

- Essential that agencies that need to interact have a working knowledge of each others limitations and requirements.
- Emergency Management systems should be formed in consultation with responding agencies.
- Training and simulations should involve these agencies.

# Response Example

Time	Event	Actions
0530	In –rush occurrence at mine.	Notification to surface. Activation of Emergency Management System including notification of required personnel and services.
0605	Mines Rescue, and others, notified.	
0620	Mines Rescue arrive on site	Commence data gathering. <i>Preliminary</i> Incident Management Team formed. Risk assessment conducted. Scope of actions considered. Plan and procedures documented and agreed upon. Approval gained.
0645	Two teams dispatched from surface to affected area.	
0645 - 0715	Incident Management Team consolidated.	Incident Management Team (IMT)formed with input from: Mines Rescue Mine Management Police Ambulance Mines Inspectors Site Inspector Risk assessment reviewed, plans and procedures checked for validity.

Time	Event	Actions
0715	FAB established and first team activated.	IMT in direct contact with underground rescue teams to convey and confirm requirements.
0755	Second Team deployed from FAB	Teams activated to search as per IMT plan.
0815	Missing personnel located.	Personnel identified as deceased.
0840	All underground personnel return to the surface.	Body recovery plan established by IMT.
0945	Body recovery teams dispatched.	Teams formed with appropriate forensic equipment and assistance.
1245	Bodies brought to mine entries and transferred to ambulances.	
1310	Mines Rescue vehicles return to station.	
1410	Staff and responders debriefed and counselled.	
		<p><i>Subsequent actions included:</i></p> <p>Notes, records and documents gathered and reviewed.</p> <p>Mines Rescue action and response plan and implementation reviewed.</p> <p>Mine Emergency Management System reviewed.</p> <p>Improvements to both systems identified and implemented.</p>

# Contact Details

- Mines Rescue

<http://www.minesrescueservices.com/>

- Virtual Reality Training

<http://virtualrealitytrainingsystem.com/>

- Coal Services Pty Ltd

<http://www.coalservices.com.au/>