



Mines Rescue ICCS Guide

NSW Coal Mining Industry



Mines Rescue



Incident Command and Control System (ICCS) Guide

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1. Purpose

This guide seeks to assist mines to incorporate an Incident Command and Control System (ICCS) into their Emergency Management System (EMS). The ICCS provides a framework to allow efficient and effective management of all mine site incidents, regardless of their size, type or complexity.

This guide will assist operations in:

- Establishing an effective decision making structure
- Establishing resource and facility requirements
- Identifying key members of the Incident Management Team (IMT)
- Establishing training requirements
- Implementing an ICCS which is able to incorporate the legislated responsibilities of external agencies, such as Police and to accommodate recommendations from the Pike River Royal Commission
- Establishing an EMS which is consistent with the NSW State Emergency Management Plan (EMPLAN) objectives and reflects a 'Prevention, Preparation, Response and Recovery' philosophy

2. Background

EMPLAN, SERM Act and Police responsibilities

The EMPLAN details the state approach to emergency management, covers the allocation of roles, coordination of arrangements and has the objectives of:

- Providing clarity as to command, control, roles and coordination of functions in emergency management, across all levels
- Emphasising risk management across the full spectrum of prevention, preparation, response and recovery
- Emphasising stakeholder engagement in the development and exercise of plans, as well as in their operational employment
- Ensuring the capability and resourcing requirements of these responsibilities are understood

The objectives are consistent with the *State Emergency and Rescue Management Act 1989* (SERM), which also states that the NSW Police Force is responsible for coordinating rescue operations and for determining the priorities of action to be taken in rescue operations, which applies despite anything to the contrary in any other Act (refer section 50). Even though the *Coal Mine Health and Safety Act 2002* (CMHS) requires a mine to have an EMS and the identification of a control structure that is to apply in the event of an emergency, Police retain the responsibility for any rescue.

Incidents on a mine site may involve state interest under the *Coroners' Act*, the SERM Act or other legislated agency responsibilities. Potential impacts on roads, rail lines, waterways or other areas of the environment or state or private infrastructure, may also include state interest.

A system put in place at a mine to manage an incident which attracts state interest should be consistent with established ICCS principles (refer AIIMS 4). This will allow effective interaction between the mine and external agencies.

Pike River Royal Commission report recommendations

The Pike River Royal Commission report identified that the large scale multi agency response to the incident was poor. The difficulties experienced highlighted the need for advance planning for a coal mining emergency, involving all the relevant agencies.

The Royal Commission recommended that the EMS needs to be compatible with a coordinated incident management system used by emergency services and Police. The commission also identified that 'the incident controller at an underground coal mine emergency must have mining expertise and, together with the IMT, must be responsible for coordinating the emergency effort and approving key decisions. This does not prevent a government agency such as the Police from being the lead agency or from maintaining its command structure' (refer recommendations 13 and 14 Pike River Royal Commission report).

NSW mining operations simulated emergency exercises

Whole of mine simulated emergencies conducted at NSW coal mines, which involved external agencies, have identified significant issues with interaction between mine site personnel, responding external agencies and the coordination of incident management. The problems have arisen at various stages throughout the process and specific locations including the site of the incident, the mine control room and the Incident Control Centre (ICC) at the mine. Problems with interaction and coordination have resulted in unnecessary delays and confusion at a time when people are missing or endangered and require rescue.

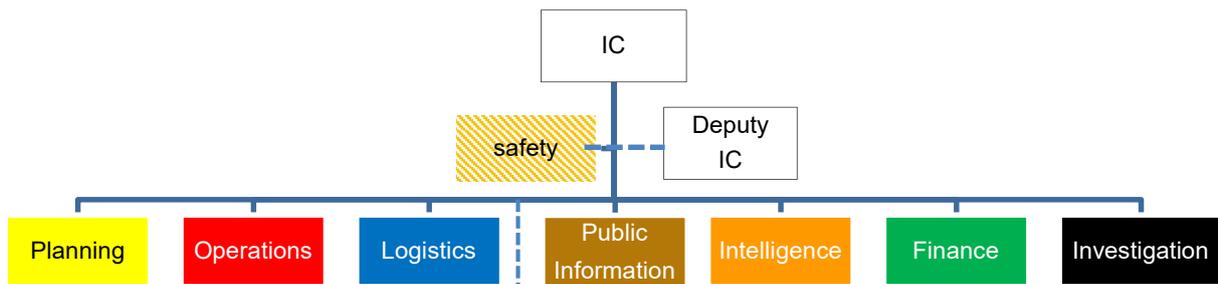
3. Incident Command and Control System (ICCS)

An ICCS is an incident management system that enables the integration of activities and resources of multiple agencies when responding to and resolving any emergency situation and recovery.

ICCS is used by all NSW agencies which may be involved in emergency response to coal mines including the Police Force, Ambulance Service, Fire and Rescue and the Rural Fire Service.

The structure of an ICCS allows flexibility to grow with the size and complexity of the situation. During the initial response phase of an incident, a single person may perform all of the functions. As the incident evolves and its management becomes more demanding, any or all of the functions may be delegated. An ICCS allows for ease of transition from single senior person decision making, which may be at the incident site or in a control room, to a well-supported decision making structure.

ICCS provides a structure and process of delegation to ensure that all management and information functions are adequately performed. ICCS as described by AIIMS 4 has up to seven functional groups reporting to the Incident Control: Planning, Intelligence, Public Information, Operations, Investigation, Logistics and Finance.



Depending on the scale of the incident, a Deputy IC may be appointed to assist the IC.

Public Information for immediate safety advice Intelligence functions may be required if warranted by the scale or complexity of the incident.

Finance should be delegated to a corporate support level (Business Resilience Team).

In a mining context, an investigation functional group would not be required to manage the incident but would be conducted by the inspectorate and potentially the police, depending on the incident.

An IMT comprises those people responsible for the functional groups and is led by the Incident Controller (IC):

What an ICCS is:	What an ICCS is not:
<ul style="list-style-type: none"> • A comprehensive, nationwide, systematic approach to incident management • A set of preparedness concepts and principles for managing all hazards • Essential principles for a common operating picture and information management • Scalable, so it may be used for all incidents (from day-to-day to large-scale) • A dynamic system that promotes ongoing management and maintenance 	<ul style="list-style-type: none"> • A response plan • Only used during large-scale incidents • A communications plan • Only applicable to certain emergency management/incident response personnel

4. Incident classification

ICCS, such as AIIMS 4, identify three levels of incidents and describe them in generic terms to identify potential response requirements to manage the incident.

Incident classification	Description
<p>Level 1</p>	<p>Level 1 incidents are generally characterised by being able to be resolved by first responders. They may only require a Trigger Action Response Plan (TARP) and tactical decision making and would normally be handled at an incident site level with assistance from the CRO or mine officials.</p> <p>They do not usually require the formation of an IMT beyond an IC (supervisor such as deputy or Open Cut Examiner), Control Room Operator (CRO) (if applicable) and first responders</p> <p>No formal Incident Action Plans (IAP) are required other than adherence to existing response protocols</p>
<p>Level 2</p>	<p>Level 2 incidents may be more complex either in size, resources or risk. They may require the delegation of functional responsibilities and hence a small IMT structure. They are characterised by the need for either:</p> <ul style="list-style-type: none"> • Deployment of resources beyond the initial response • Sectorisation of the incident which may involve different mine districts or areas • The establishment of functional groups due to the level of complexity • A combination of the above <p>This may involve the formation of a mine site IMT and may involve resources beyond the first responders (i.e. Mines Rescue or Ambulance). Generally, Level 2 incidents would involve the IC delegating tasks to Safety, Planning, Logistics and Operations with an element of forward command if required via Operations.</p> <p>The structure can also be used for business as usual mine operations where detailed organisation and planning are required.</p>

Level 3	<p>Level 3 incidents are characterised by the size or degree of complexity that may require the establishment of a team for effective management of the situation. These incidents will usually involve delegation of all functions and require a coordinated response from both the mine and external agencies.</p> <p>Level 3 incidents may involve an external agency taking a lead role in the response to the situation, regardless of the incident type. This may involve a full ICCS structure including involvement from external agencies (or multi-agency) within the IMT. Level 3 incident types include:</p> <ul style="list-style-type: none"> • Any emergency (SERM Act section 4 Def.) • Fatalities • Significant fires • HAZMAT • Environmental • Rescue operations
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5. Coordinated Response – ICCS principles

A coordinated response to incident management should be based on the ICCS principles:

- Flexibility
- Management by objectives
- Functional management
- Span of control
- Unity of command

Flexibility

The EMS must be adaptable to any incident that may occur on the mine site and accommodate any external agency that may be required to participate in the incident management. This can be described as an ‘all-hazards, all-agencies’ approach. It must be able to respond to changes in the incident, such as coping with escalation.

Flexibility to accommodate external agencies is underpinned by uniform terminology. Agreed terminology and definitions are required between external agencies and the mine IMT.

Flexibility to respond to changes in the incident means that the size and structure of the IMT should be able to reflect the size or complexity of the incident or recovery.

Management by objectives

The IC, in consultation with the IMT and appropriate supporting agencies, determines and communicates the desired achievable outcomes of the incident.

Once information is gathered to give situational awareness of the incident, the objectives are determined and are communicated to all to give a shared and consistent ‘common operating picture’ of the incident.

Functional management

The structure of the IMT is organised into groups, depending on the type of work that is required. Critical ICCS functions are Planning, Logistics and Operations. These can be further broken down into Intelligence, Public Information, Investigation and Finance, depending on the complexity and requirements of the incident.

Each functional group is led by an officer who reports to the IC.

Span of control

To manage the workload of supervisors such as the IC, span of control relates to the number of groups or individuals that report directly. The optimum span of control is 1:5 and may vary from 1:3 to 1:7 depending on the complexity of the incident.

Unity of command

For each incident there can be only one IC, with the authority to make decisions and authorise action plans.

Each person involved in the incident should report to only one supervisor and have only one set of objectives for the incident. External agencies retain their own command structure but objectives and actions are dictated by the IC through the external agencies' chain of command.

Clearly defined roles, responsibilities and information flows are critical for effective management of an incident.

6. ICCS Structure

The incident will determine the size and nature of the incident management structure. Smaller incidents may only need one or two people directing the response, planning the next steps and calling and organising resources. This can often be achieved with standard operating procedures or duty cards. Larger, more complicated incidents will require a division of work and responsibilities to manage the workload. Functional management should be used.

6.1 Incident Controller (IC)

An IC will be formally delegated to take responsibility for controlling the incident. The appointment will be well communicated to all involved in the incident. The IC shall be competent to perform that role for the size and complexity of the incident.

The IC is responsible for:

- Setting and achieving incident objectives
- Establishing procedures to identify and manage all risks
- Providing a safe work environment
- Keeping all relevant people informed and aware of incident progress. This may include those in any affected communities and others in external organisations.

The IC will approve the incident objectives and the selection of strategies. The incident objectives are the foundation upon which subsequent action planning will be based. It is the IC's responsibility to approve the IAP.

6.2 Safety

If the functional role is delegated, the Safety Officer will report directly to the IC, or the IC may elect to have the Safety Officer report to the Deputy IC. The Safety Officer will support the IC in such measures as:

- Ensuring only trained and competent people participate in incident operations
- Having a risk management and near miss reporting system
- Peer reviewing IAP's and briefings to ensure safe procedures
- Ensuring fatigue management, drug and alcohol and other policies are maintained through the incident

6.3 Planning

A Planning Officer may be appointed by the IC and delegated with the authority to:

- Take responsibility for preparation and delivery of the plans and strategies required to help control the incident
- Maintain a resource management system for all of the resources that have been allocated to the incident
- Assemble, maintain and provide incident information for the formulation and implementation of an IAP
- Establish and manage a planning section, if necessary given the size and complexity of the incident

6.4 Intelligence

The Intelligence function provides information for situational awareness upon which decision making is based, through the:

- Collection of information on the current and projected situation. This may take the form of ventilation and underground atmosphere monitoring, strata monitoring, weather and lightning monitoring, etc.
- Processing the information into accurate, timely and relevant data
- Presenting the data which supports a common operating picture so it can be readily understood

Depending on the size and requirements of the incident, this may form part of the Planning functional group or an Intelligence unit which reports to the Planning Officer.

6.5 Logistics

A Logistics Officer may be appointed by the IC and delegated to take responsibility for stores procurement activities and resourcing necessary to provide logistical support during the incident.

The Logistics Officer's role is to obtain and maintain human and physical resources, facilities, services and materials.

6.6 Operations

An Operations Officer may be appointed by the IC and delegated with the authority to:

- Manage all of the resources that have been allocated by the IC to resolve the incident
- Establish and manage an Operations section, if necessary, for large and complex incidents

The Operations Officer will command all field operations. The Operations Officer may command the operations from an Operations point for Level 1 or 2 incidents and will usually be located in the ICC for a Level 3 incident.

6.7 Public information

The Public Information function is to provide information important to the safety of stakeholders outside of the IMT who may be impacted by the incident. The Public Information function is focused on gathering, assembling and disseminating timely, tailored and relevant information for this purpose only.

The Public Information function provides support to the IMT through:

- Provision of warnings and information to threatened communities, other stakeholders and the general public
- Consultation and liaison with affected communities

Examples may be liaising with Police to close a road adjacent to a fan shaft due to potentially explosive underground atmosphere, or notifying landholders downstream of an environmental incident affecting a watercourse.

To avoid unnecessary distraction of the IMT, media, corporate, shareholder and other stakeholders not directly impacted by the incident are to be dealt with by a Corporate Liaison Officer reporting to the Business Resilience Team. This will include dealing with non-affected employees and families of the people involved. The Business Resilience Team will be separate from the incident. It will concentrate on the wider concerns of the company without being part of the incident management process.

6.8 Identification of people in roles

People performing IC or functional officer roles are identified with colour coded tabards with their role clearly printed on the front and back.

People performing other roles in the ICCS, such as acting as members of functional groups, are identified by a colour coded tabard, brassard or arm band. The colour coding must be in line with accepted ICCS standards:

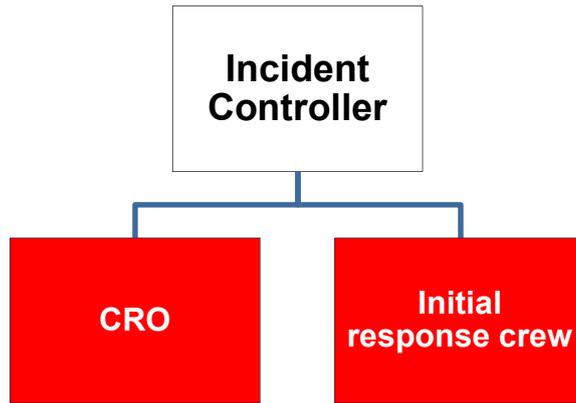
Incident Controller	White
Planning	Yellow
Intelligence	Orange

Public Information	Brown
Operations	Red
Logistics	Blue

Investigation (black) and Finance (green) are also functional groups used by some external agencies but will probably not be required in an IMT on a mine site. Finance is usually handled by the Business Resilience Team.

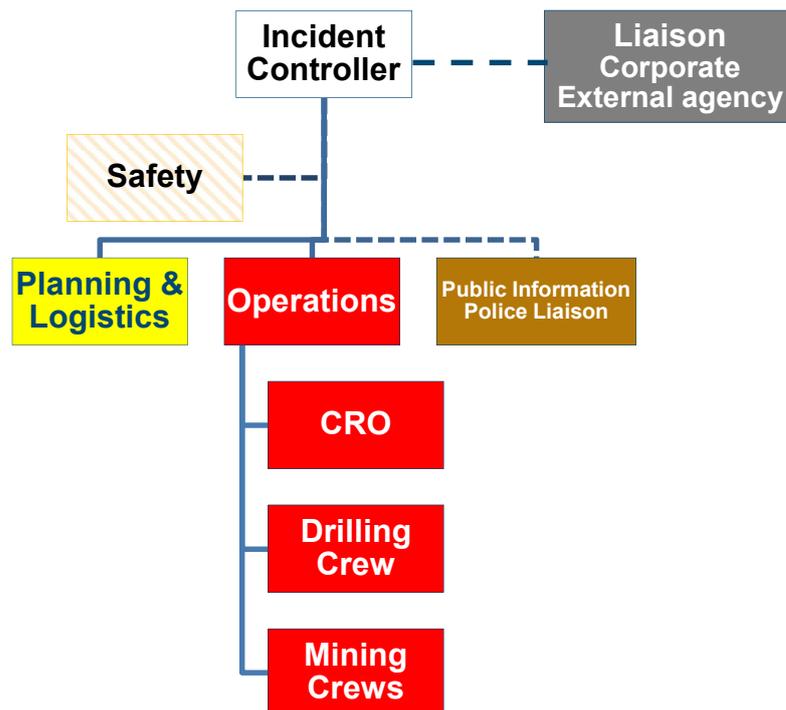
Other colours and groups should not be part of the IMT.

Level 1 structure



At a small incident or during the early stages of what may become a larger incident, one person may conduct all of the activities. As an incident develops, the IC may delegate roles to other people.

Level 2 structure

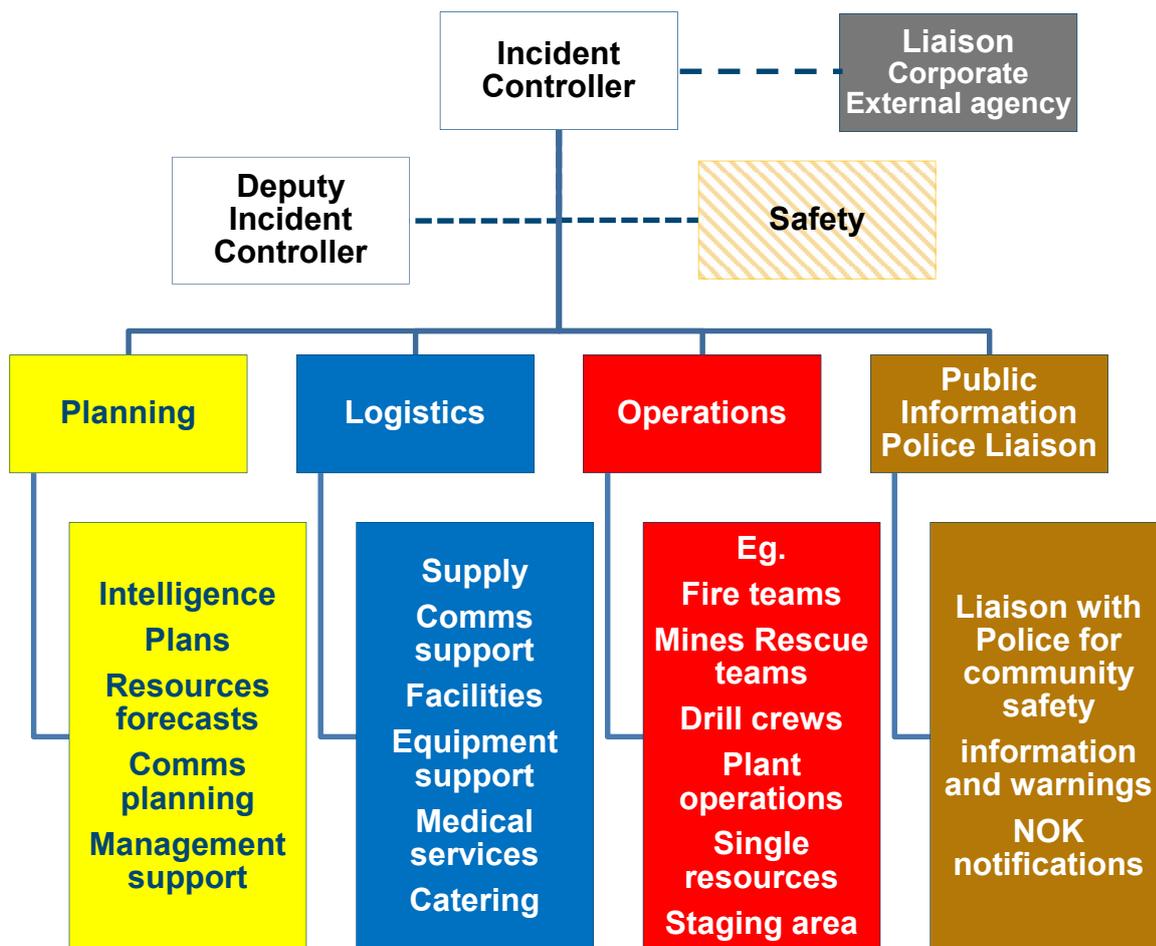


Once the complexity increases or more resources are deployed beyond the initial response, the functional areas can be increased. Public Information function may be required if public safety warnings are required, otherwise media briefing is done as a corporate function.

External agency liaison will include DTI Mine Safety and the Industry Check Inspectorate.

Next of Kin notifications will be done by the Police with corporate liaison and possible representation. This function is done separately from IMT.

Level 3 structure



As the size or complexity increases, external agencies become involved or more resources are deployed, an ICCS structure is required.

6.9 Selecting people for functional roles

The incident management structure above is only one part of successful management of an incident. Critical to how the structure facilitates good decision making is the technical and non-technical competence of the people within the structure.

Traditionally, the selection of people to perform particular roles has been based on their day to day role at the mine.

Operating as the Senior Mining Official or Mine Manager in day to day business has usually dictated automatic appointment as IC. During Level 1 or 2 incidents this would be appropriate, as the Senior Mining Official has the authority and responsibility to make decisions and deal with the incident.

During a Level 3 incident where external agencies are involved, particularly if there have been fatalities, suspected fatalities or there is an on-going threat to the safety of people, the Senior Mining Official may not be the appropriate person for the role, due to the:

- Increased emotional stress of a large scale incident in which the Senior Mining Official may feel in part responsible.

- Legislated responsibilities of Police under the SERM Act if there are people missing, implying a rescue may be required
- The increased stress of the potential for investigation and litigation against the Senior Mining Official
- The stress of being emotionally engaged with the people who have been harmed or have the potential for harm.

Having the PCBU of a private business as the IC can be a cause for concern for external investigating agencies as there may be evidence or crime scenes contaminated or destroyed due to bias of the decisions made or not made by the PCBU. Bias on the decision making process of a PCBU who is the IC may be conscious or unconscious. The bias may be as simple as the body language that may be displayed or the tone of a conversation that may influence a subordinate's actions or opinions, often without the subordinate aware of the influence being accepted. The General Manager of the operation may also carry some liability.

In accordance with Recommendation 14 from the Pike River Royal Commission, an IC must have mining knowledge. An appropriate alternative to the Senior Mining Official may be the Mine Manager of a sister operation or a DTI Inspector. There will be a requirement for DTI Inspector to approve IAP's once a section 198 non-disturbance notice has been issued.

As the Senior Mining Official or Mine Manager will have intimate knowledge of the operation and be able to exert authority easily, that person may still be an excellent resource if they are physically and emotionally capable. The Deputy IC role may be the ideal position for that person to fill. The IC maintains complete oversight of the incident and objectives and maintains responsibility for safety and liaison with those beyond the IMT. The Deputy IC may assume an IMT supervisory and a technical advisory role as well as providing relief for the IC. Under the principles of Unity of Command, the Deputy IC should not amend incident objectives unless there is a compelling reason to do so without the approval of the IC.

The IC should be a person trained in the role who also possesses the appropriate knowledge, experience, technical and non-technical skills.

7. Managing the incident

7.1 Duty cards

Duty cards should be used as a TARP for initial actions to be taken. These may be for positions such as the CRO and Senior Official on the surface to initiate a first response. Duty cards should not be relied upon as prompts for decision making, particularly if there are more duty cards that require attention than there are people to issue them to. In these circumstances some duty cards are not issued so whatever responsibilities they contained usually are not fulfilled.

Under an ICCS, functional group officers have responsibilities in which they must be trained and familiar. Checklists should be provided so that they can confirm that their duties are being discharged fully.

7.2 Objective setting – what is to be achieved?

Management by objectives is critical for the effective management of an incident. Objectives should be able to clearly communicate to all those involved what is to be achieved. A well worded objective has meaning and provides direction for every person at an incident.

As the IC has responsibility for the control of the incident, this officer sets the objective. It will state what the IC wants done, when and why. The objective may change with circumstances; there may be a different objective for each shift under escalating circumstances, and a static but relevant objective for a stable or deescalating incident.

A good objective will include:

- An intent (**what**)
- A time parameter (**when**)
- A space parameter (**where**)

A SMART objective is:



At the end of each shift, it is desirable that the IC and IMT review progress against their stated objectives and evaluate the effectiveness of the strategies implemented during the shift. This information can assist an incoming shift in reviewing/implementing the new IAP and strategies they may adopt.

For example:

Objective: (Fire on conveyor belt)
Extinguish fire at 29 C/T drive head within 2 hours to stop spread of fire

Objective: (Contamination of intake airways with smoke)
Account for all personnel in by 29 C/T within the duration of self-escape apparatus

7.3 Strategies

A strategy outlines what approach is to be taken in working towards achievement of an objective - this is what is going to be done. In an ICCS, the Operations Officer, in conjunction with the Planning Officer, determines the strategies for each part of the mine affected by the incident. Generally only incident objectives and strategies are included in an IAP.

7.4 Tactics

Tactics are the detailed activities describing how a strategic outcome will be achieved - This is how it is going to be done.

This is most often determined by Operations, it may fall to groups tasked with the activity to employ the tactics required.

7.5 Incident Action Plan (IAP)

Incident Action Planning is a process supporting the incident management system. After consideration of all factors affecting an incident, an IAP is developed to manage the incident and as a tool to communicate the incident objectives. The function of an IAP is to:

- Describe the overall incident objectives and strategies
- Identifies key risk exposures (including the impact on the community and the environment)
- Ensure continuity of control operations
- Provide effective use of resources
- Identify total anticipated resources

It contains incident objectives and strategies with specific time frames, which will be reviewed at subsequent planning meetings and, when adopted by the IC, is distributed to the required level of the control structure and to supporting organisations. It is possible that the equivalent of such a plan may have been prepared prior to the incident and exists as a pre-incident plan, major hazard plan or similar document.

The IAP provides information describing the incident and how it will be managed for a specific period of time, called the operational period, and usually (but not always) based on a shift.

At a small incident, the IC may develop a mental IAP. This mental IAP would be based on an initial assessment upon arrival and knowledge of pre-existing plans and standard operating procedures. Should an incident develop beyond that catered for in a pre-incident plan and standard operating procedures, so should the IAP. For incidents that have a potential for extended involvement, the IAP should be documented. However, during rapidly escalating incidents it can be extremely difficult for a written plan to be prepared in the initial stages. Nevertheless, an assessment of the situation should still occur and an objective determined. As soon as practicable, a written plan should be prepared, in case the incident increases in complexity and to record the information for subsequent incident analysis and debriefs.

A well-designed IAP will include:

- A statement of the current situation and predictions of the incident's likely development, including key risk exposures
- Incident objectives to be achieved
- Strategies to be adopted to achieve the defined incidents objectives
- Provide information on alternative and/or fall back strategies
- Management arrangements that are to apply
- Identification of the resources to be allocated
- Maps and/or site plans of the incident's location and the area affected
- A Medical Plan and/or consideration of occupational health and safety issues
- A Communications Plan including information on all agencies involved and appropriate contact details
- Timings of meetings and changeovers
- Accommodation and welfare arrangements
- Information regarding necessary logistical arrangements
- A traffic management plan, if required, showing direction of travel around the incident
- Information plan for dissemination of information to all stakeholders

Whether or not the IAP is in written form, it must be approved by the IC.

It is also essential that the IAP is communicated effectively throughout all levels of structure that is in place to manage the incident.

A written IAP consists of parts which may stand alone. Only appropriate parts of the plan need to be circulated to the people responsible for its implementation and for internal and external communications.

Given that the purpose of the IAP is to effectively communicate information, an effective plan will exhibit the following characteristics:

Accuracy	In a rapidly changing incident environment, it is important to base the decision making process on as accurate information as possible without compromising the timeliness of the development of the IAP. Regular situation reports, ready access to technical advice and pre-incident planning documents and tools (such as databases) can facilitate accurate decision making.
Timeliness	It is important that an IAP is developed and distributed in a timely manner. Development of an IAP can be time consuming. Therefore, it is important to plan its development with identified time frames for task completion to ensure the IAP is produced on time. Distribution of the IAP should be supported by a briefing. If briefings are being held in a number of locations, production of the IAP will need to take into account how and when it will be delivered to support changeovers at remote locations.
Relevance and Conciseness	An IAP is designed to assist incident management for a particular operational period. It should be concise and easily read. It should summarise relevant incident information. Cumbersome or unnecessarily lengthy documents may hinder information flow and decision making rather than assist it.
Completeness	An IAP should provide critical information to users to enable them to do their job. Lack of information may, at worst, compromise safety and, at best, hinder efficiency.

7.6 Common operating picture

The common operating picture is the shared and consistent understanding of the situation. The IAP and regular briefings ensure all stakeholders, including the IMT, maintain a common operating picture to support good decision making.

7.7 Briefing cycle

Regular briefing both up and down the chain of command is important to maintain a common operating picture.

Regular IMT meetings should be held, chaired by the IC and attended by the functional group officers. The timing of the cycle should be set to match the incident. Dynamic incidents which are rapidly changing will need a shorter cycle than more stable static situations.

The IMT meetings serve to:

- Ensure all functional officers have a common operating picture
- Determine or confirm the objectives

- Inform the IC of the situation from the field through Situation Reports (SitReps) and have the IAP approved

Briefings for functional groups and operational crews should detail the cover IAP in the Situation, Mission, Execution, Administration, Command and Communication, Safety (SMEACS) format, (Appendix 6).

7.8 Changeovers

A changeover is a process of handing over control of the incident to the next shift. It involves:

- The physical replacement of resources at any or all levels of the structure
- Debriefing outgoing personnel
- Briefing incoming personnel
- Distribution of necessary documents, supplies and equipment
- The provision of any necessary crew welfare services and equipment, maintenance and resupply

That is, a changeover involves the changing of personnel and equipment and the relaying of information. It is important that the information be handed over before personnel are changed and that 'the old must brief the new'. How the IC decides to do this is up to the individual.

Crews should be changed over before functional groups and the IC to ensure relevant info is passed on.

Shift lengths of those in the IMT should be monitored, as changeover briefings at the start and end of the shift add considerable time that is often not considered. A shift length of 12 hours with a half to one hour changeover at the start and end of shift can take 13-14 hours. 15 hours should be the maximum anyone spends on duty.

7.9 Achieving efficient changeover

The IC is responsible for an efficient changeover, but its planning and management will be usually delegated to a specified officer in the Planning section.

Some guidelines to achieve better changeovers are:

- It is preferable to changeover personnel in daylight hours. This also provides personnel with the ability to become familiar with the territory in the daylight and improves safety
- Plan and prepare for the changeover
- Ensure changeover planning includes consideration at all levels
- Briefings specific to each level are developed
- Crews changeover at a suitably safe location
- Transport personnel in groups relating to their destination
- Feed the incoming shift before changeover and feed the outgoing shift after changeover
- Schedule changeovers to avoid times critical to incident management

7.10 Uniformity of changeovers

To maintain a common operating picture, all terminology in relation to the structure and function of the IMT must remain consistent. This is particularly important if external agencies are involved.

7.11 Record and log keeping

To maintain an accurate common operating picture, accurate records of the progress of the situation must be kept and be available for review during and after the incident.

Incident time stamped logs must be kept detailing the situation, objectives, strategies and tactics, locations of people and resources. Battle boards are a recommended way of tracking people and resources and log boards are a good way of displaying the details of the current situation. They are only useful if kept up to date with timely, accurate and verified information by people with the technical knowledge to filter superfluous information.

Personal time stamped logs should be kept by all involved in the IMT detailing discussions, actions, decisions and the reasons for decisions. Copies should be taken once the incident is closed or when an individual's duty cycle has concluded. If the situation dictates and manning allows, the IC, Deputy IC and other functional officers may consider appointing personal log keepers to allow them to manage their workloads.

8. Facilities

8.1 Incident Control Centre (ICC)

Mine sites should identify one location as the place from where an incident is controlled, regardless of the size and structure. This will become the Incident Control Centre (ICC).

An ICC is a facility set up and used to control larger or more complex incidents when an incident management structure is established.

The location and set up of the ICC should be predetermined as should the infrastructure and resources necessary to manage any foreseeably sized incident.

Once functional responsibilities in the ICCS structure have been delegated, the ICC should be activated. This is the trigger to go from TARP and initial response decision making to a supported decision making structure.

Planning and Operations can operate more efficiently if there are positioned near each other in the ICC as communication is more direct and immediate.

8.2 ICC resources

- Auxiliary power and communications
- Mine plans including ventilation and rescue plans
- Secretarial supplies
- Whiteboards with pre-printed templates for logging and displaying information that can easily be seen and referenced

Whiteboards	
Objectives and situations board	A board displaying the current objective(s) to maintain focus on a common operating picture. It gives the most up-to-date detailed information on the state of the incident and actions being taken with time frames for completion or update.
Battle board	Plan showing the location of all people and resources.

Casualty board	Logs details of injuries and fatalities including name, nature of injury, current status, location and further actions to be completed.
IMT structure board	List names and contact details of all people on shift holding positions within the incident management structure.
Event log board	A time line log of events.

8.3 Other facilities

- Briefing/debriefing room – near the ICC
- Mines Rescue area – preferably undercover space for vehicles, equipment and teams to prepare with 15A power and lighting
- First aid facilities – access to ambulance/underground vehicles
- IC office and functional group breakout rooms if required – sufficient room and facilities for tasks
- External liaison room with external phone
- Technical centre – near control room and mobile laboratory
- Welfare facilities – can be off site
- Temporary mortuary – workshop/demountable
- Public relations – can be off site

When locating these facilities, consideration should be given to the line of blast of a secondary explosion and possible contamination by toxic gases.

The location of functional groups is important for good communication and information transfer. Particular consideration should be given to locating Planning and Operations in the same room in close proximity to each other. Isolating these groups has been shown to impede good information flow and slow down the processes.

9. Training

9.1 Personnel qualifications

The IC, IMT members and anyone who will be performing a role during management of an incident must be trained in the specific role they will be performing and have the appropriate technical skills. They must have the appropriate knowledge, skills and experience to perform those roles. This is consistent with section 51 of the *CMHS Act 2002*.

It is not appropriate to rely on a duty card or other list of responsibilities to ensure that people will know what to do, how to do it and how to successfully interact with others in the structure.

9.2 Associated Non-Technical Skills (ANTS)

Any ICCS is simply a structure and will only function if the people within it have the appropriate non-technical skills, as well as the required technical skills, and are able to function in the system when under emotional strain. Mines should provide ANTS training to all people who may be involved in incident management.

10. Simulated exercises

The system must be tested regularly and include all people who may have responsibilities during an incident.

The exercises should test all parts of the EMS at all levels. These should include:

- IMT desk tops
- Control Room exercises to test duty card use and notifications
- Large scale simulations which include the formation of an IMT with the inclusion of external agencies including:
 - NSW Police Force
 - DTI Mine Safety Operations
 - Mines Rescue
 - NSW Ambulance Service
 - Industry Check Inspectors
 - Rural Fire Service, where appropriate

11. Mine recovery

Once the IC has terminated the response and any orders have been lifted, recovery of the mine can begin under the mine's Health and Safety Management System.

The ICCS structure can be useful in the planning and coordination of the recovery.

12. Review

Under S52 of the *CMHS Act*, the Emergency Management System must be reviewed as soon as practicable after any emergency has occurred at the coal operation, and whenever the health and safety management system for the coal operation is reviewed.

13. References and related documents

- AIIMS 4[®]
- Coal Mine Health and Safety Act 2002
- Coal Mine Health and Safety Regulation 2006
- Coal Industry Act 2001
- SERM Act 1989
- Coroners Act 2009
- Mine Health and Safety Act & Regulation
- Work Health Safety Act 2011
- Work Health Safety regulation 2011
- MDG 1020, 1022, 1032, 1029
- Royal Commission on the Pike River Coal Mine Tragedy Report
- Emergency Preparedness and Mines Rescue

14. Legislation/codes

There is not a legislated requirement to format an EMS in a particular way. Integration with external stakeholders dictates that it needs to be similar to and compatible with recognised emergency agency standards. Part of recommendation 13 from the Pike River Royal Commission report indicated the EMS at a mine needs to be compatible with the coordinated IMS used by Police and external agencies. The report also stated that the EMS should be regularly audited and tested by regular practical exercises.

Legislation requirements on mine operators specific to emergency planning

- Work Health and Safety Act 2011
 - General obligations throughout
 - Section 46 – Duty to consult with other duty holders

- Work Health and Safety Regulation 2011
 - Clause 43 – Duty to prepare, maintain and implement emergency plan
 - Clause 48 – Remote or isolated work
- Work Health and Safety (Mines) Act 2013
- Work Health and Safety (Mines) Regulation – TBA
 - Various planning and consultation requirements – pending legislation
- Mining Design Guidelines
 - MDG 1029 – Guidelines for agency coordination during emergencies and body recovery at NSW mines
- Code of Practice (pending release)
 - Emergency Planning in Mines – Outline of planning models and minimum requirements
- Australian Standards: (guideline material)
- AS4801 – Emergency Planning requirements
- AS/NZS ISO 14001:2004 – Environmental Management Systems
- State Emergency and Rescue Management Act
 - Part 2 – State Emergency Management
 - Establishment of EMPLAN
 - Various other roles and responsibilities outlined
 - Part 3 – State Rescue Management
 - Section 50 – Police to coordinate rescue operation
 - Section 62B – Obstruction of rescue units
- NSW State Emergency Management Plan (EMPLAN)
 - Various roles and responsibilities/duties
 - Various sub plans and support plans
- Coal Industry Act 2001
 - Establishment of Coal Services Pty Limited and Mines Rescue Pty Limited
- Emergency Service and other specific
 - Protection of the Environment Operations Act
 - Police Act
 - Law Enforcement (powers & responsibilities) Act
 - Fire Brigades Act
 - Rural Fire Service Act
 - Coroners Act (role and jurisdiction for fatalities and fires/explosions)

15. Definitions and abbreviations

AIIMS4	Australasian Inter-service Incident Management System, 4 th Edition. The 4 th Edition includes functional areas of Intelligence, Investigation and Finance
Business Resilience Team	Corporate support for the incident that deals with media, financing, HR and other periphery issues. The team allows the IMT to focus solely on the dealing with the incident
Command	Direct supervision and authority over personnel

Control	Direction of actions and activities
Coordination	The organisation and management of resources
CRO	Control Room Operator
Emergency	<p>State Emergency and Rescue Act 1989 (SERM)</p> <p>(1) In this Act:</p> <p>Emergency means an emergency due to an actual or imminent occurrence (such as fire, flood, storm, earthquake, explosion, terrorist act, accident, epidemic or warlike action) which:</p> <ul style="list-style-type: none"> (a) Endangers, or threatens to endanger, the safety or health of persons or animals in the state, or (b) Destroys or damages, or threatens to destroy or damage, property in the state, being an emergency which requires a significant and coordinated response. <p>(2) For the purposes of the definition of emergency, property in the state includes any part of the environment of the state. Accordingly, a reference in this Act to:</p> <ul style="list-style-type: none"> (a) Threats or danger to property includes a reference to threats or danger to the environment, and (b) The protection of property includes a reference to the protection of the environment <p>Coal Mine Health and Safety Act 2002 (CMHS Act)</p> <p>An emergency exists at a coal operation when a situation is not controlled by a health and safety management system for the coal operation and there is a threat to the life or physical well-being of people at or outside the coal operation.</p>
EMPLAN	NSW State Emergency Management Plan
EMS	Emergency Management System as required by the <i>Coal Mine Health and Safety Act 2002</i>
IAP	Incident Action Plan
IC	Incident Controller
ICC	Incident Control Centre
ICCS	Incident Command and Control System
Incident Control Point (ICP)	A location from where all field operations are commanded in smaller incidents. This may be the Control Room, muster area or other convenient location
IMT	Incident Management Team
SERM Act	<i>State Emergency and Rescue Act 1989</i>
SMEACS	Briefing format: Situation, Mission, Execution, Administration, Command and Communication, Safety
TARP	Trigger Action Response Plan

Appendices

Appendix 1: Incident Controller responsibilities

The overarching responsibilities of the IC are to:

- Control of the incident by managing all activities
- Approve plans and strategies (IAP)
- Establish effective liaison and cooperation with all relevant persons, including the affected community, external to the incident
- Manage the incident as effectively and efficiently as the circumstances allow
- Establish systems and procedures for the safety and welfare of all persons working at the incident

Incident Controller responsibilities checklist:

- Establish a control facility
- Establish and maintain a management structure
- Establish procedures to permit control to be exercised
- Assess the situation, identify risks and determining priorities by setting objectives
- Monitor and review safety and welfare
- Facilitate media management
- Approve the IAP
- Ensure communication within the control structure
- Communicate progress and key risks to delegating authority and affected parties
- Conclude and review emergency activities

Appendix 2: Planning Officer responsibilities

The roles and responsibilities of the Planning Officer are to:

- Obtain a briefing from the IC
- Provide a safe working environment for all Planning personnel
- Collect information on the current and projected incident situation
- Provide weather and other necessary specialist information and incident behaviour predictions
- Identify key risk exposures relating to the incident
- Disseminate information relevant to controlling the incident and potential safety issues
- Develop alternative incident objectives and strategies and identify the risks and likely outcomes associated with each
- Identify the preferred incident objectives and strategies, including justification, for discussion by the IMT and approval of the IC
- Conduct planning meetings
- Document the IAP for the subsequent operations period
- Develop, and review as necessary, an appropriate Communications Plan
- Prepare mapping information as appropriate
- Develop information sharing and transitional arrangements with recovery organisation(s)
- Provide incident information services as appropriate to incident personnel, the media and the public

- Provide management support services (radio/telephone/computer operators and administrative support)
- Collect, collate and store incident records

Planning Officer responsibilities checklist:

- Provide a safe working environment for all Planning personnel and conduct planning meetings
- Obtain briefing from IC
- Analyse information on the current and projected situation
- Identify new and emerging risks
- Develop strategies and document an IAP
- Develop alternate objectives and strategies for current and future states
- Disseminate relevant information for controlling the incident and potential safety within the management structure and to the Public Information group (where established)
- Plan for any contingency in the implementation of the IAP
- Develop change over plans

Appendix 3: Logistics Officer responsibilities

The roles and responsibilities of the Logistics Officer are to:

- Support control of the incident through the procurement and maintenance of human and physical resources, facilities, services and materials
- Facilitate effective liaison and cooperation with relevant persons
- Provide progress reports on logistical support for the incident to the IC
- Estimate future service and support requirements
- Establish and maintain staging areas if required

Logistics Officer responsibilities checklist:

- Provide a safe working environment for all Logistics personnel
 - Obtain briefing from IC
 - Plan organisation of Logistics section
 - Allocate tasks to Logistics personnel
 - Develop Logistics section of IAP
 - Organise resources
 - Estimate future service and support requirements
 - Provide progress reports on logistical support to the IC
 - Provide technical advice to the Planning section in preparation and implementation of IAP
- The Logistics Officer is appointed by the IC
 - Units within the Logistics section are utilised only as necessary; with additional positions and duties being added, as required

- The Logistics Officer must be prepared to delegate responsibility for key functions when it is clear there is a demand for additional resources. The expansion of this section into functional units requires the placement of additional personnel (some with specialist skills), who are delegated responsibility and supervised by the Logistics Officer
- The Logistics Officer needs to interact with all other sections. A key element in the effective Logistics management is the Logistics Officers ability to anticipate, plan and cope with the inevitable sudden changes in the incident and its management

Appendix 4: Operations Officer responsibilities

The responsibilities of the Operations Officer are to:

- Establish an operational structure and allocate resources to enable safe work practices to be implemented by personnel on the incident ground
- Implement procedures for the welfare of Operations personnel
- Contribute to the development of the IAP's
- Establish effective liaison arrangements and cooperation with all relevant persons
- Effectively and efficiently implement IAP's at the incident
- Implement process for briefing personnel prior to deployment at the incident
- Ensure personnel are properly equipped for the tasks given to them
- Ensure personnel are only tasked to undertake the activities for which they are qualified
- Keep personnel informed of the situation at the incident; in particular in relation to any issues that could affect their safety or welfare
- Implement process for debriefing of personnel before being released from the incident or shift concerned
- Provide regular progress reports to the IC
- Identify new and emerging risks at the incident (including political, economic, social, public safety or environmental) and ensure these are either managed effectively and/or communicated to the IC, as appropriate

Operations Officer responsibilities checklist:

- Obtain briefing
 - Develop operations portion of the IAP
 - Brief and allocate operations personnel
 - Manage, supervise and monitor operations
 - Advise Planning section and IC of incident situation, control progress and emerging risks
 - Report special incidents/accidents
 - Maintain a log of activities
- The Operations Officer is appointed by the IC
 - The actions of the Operations Officer, when appointed, support those of the IC
 - The functions of Planning and Logistics support the Operations section and provide information and advice throughout the incident
 - Operations will be conducted as outlined in the IAP
 - Any changes to the plan must be approved by the IC and relayed to other members of the IMT
 - Operations Officers needs to interact with all other sections

Appendix 5: Intelligence Officer responsibilities

Intelligence Officer responsibilities checklist:

- Obtain a briefing from the IC
- Directing the Intelligence team to ensure that information requirements are met
- Coordinating information gathering
- Analysing information on the current situation and predicted states
- Organising, presenting and disseminating information in a timely manner so it can be easily understood
- Coordinating specialist assistance for information analysis and prediction

Appendix 6: Example form (SMEACS briefing checklist)

Authorising Officer Name:		
Item	Details	Initials
Situation		
1.	Response overview	<input type="checkbox"/>
2.	Current state of mine (e.g. atmosphere etc.)	<input type="checkbox"/>
3.	Life at risk	<input type="checkbox"/>
4.	Areas of the mine at risk	<input type="checkbox"/>
5.	Summary of resources deployed	<input type="checkbox"/>
Mission		
6.	Objectives and intent	<input type="checkbox"/>
7.	Timeframe	<input type="checkbox"/>
Execution		
8.	Strategies	<input type="checkbox"/>
9.	Current tactics	<input type="checkbox"/>
10.	Immediate tasks	<input type="checkbox"/>

11.	Resource allocation	<input type="checkbox"/>
12.	Timeframe (shift length)	<input type="checkbox"/>
Administration and logistics		
13.	Key support locations and roles	<input type="checkbox"/>
14.	Staging areas for operations, external agencies and other companies	<input type="checkbox"/>
15.	Meals, accommodation, medical facilities	<input type="checkbox"/>
16.	Transport, equipment, supplies	<input type="checkbox"/>
17.	Entry and exit procedures, clean and disinfect requirements	<input type="checkbox"/>
18.	Forms, documentation and filing requirements	<input type="checkbox"/>
Command and communication		
19.	Identify key IMT and other response personnel	<input type="checkbox"/>
20.	Indicate team leaders and lines of command	<input type="checkbox"/>

21.	Explain communication systems e.g. briefing, debriefing, mobile phones, etc.	<input type="checkbox"/>
22.	Explain MAF policy on release of information and the procedure for dealing with the media and public relations	<input type="checkbox"/>
Safety		
23.	Known or likely hazards	<input type="checkbox"/>
24.	Alerts or safety incidents	<input type="checkbox"/>
25.	Welfare – hydration, first aid, fatigue, PPE requirements, etc.	<input type="checkbox"/>
26.	Others issues	<input type="checkbox"/>