

## **Developing and implementing operational safety training in the New South Wales Fire Brigades.**

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### **Abstract**

As the New South Wales Fire Brigades (NSWFB) extends its emergency management role in the community and is held more accountable, safety training and safety management must be adapted to reflect these changes. The AIIMS Incident Control System (ICS) is the method used by the NSWFB for managing incidents and includes the appointment of a Safety Officer to manage safety. Even though the position has existed for some time, the Safety Officer's role has been slow to develop to its full potential in the NSWFB.

A comprehensive training needs analysis is recognised as the key to understanding training deficiencies and provides the building blocks that help develop effective training programs. Whilst the NSWFB had a variety of formal qualifications that addressed the basic needs of the Safety Officer role it became evident upon review that a new focus was required to formalise and strengthen the role at all levels.

Position descriptions aligned to individual ranks were not available so it was necessary to consult broadly throughout the training needs analysis (TNA). One of the main objectives was to understand the training needs at various ranks through the NSWFB and to determine the skill set needed to manage safety at incidents. During the Safety Officer (tactical) TNA process it became clear that safety roles and responsibilities at incidents needed to align to three specific levels; task, tactical and strategic. This required additional TNAs to be conducted and expand the operational safety training program to include all firefighting ranks.

Qualitative and quantitative methodologies were used to gather information from a wide variety of sources with findings from various surveys, interviews, related documents and field research was documented then analysed. Although the outcomes from the task, tactical and strategic TNAs differed, there were some overarching similarities related to the dynamic risk assessment process, managing safety systems and reporting and investigating operational injuries.

The goal of the operational safety training program is to increase the capabilities of all NSWFB personnel in managing safety at incidents while meshing into an overarching safety management system. Project planning and consultation are key factors in gaining resources and support from management; however feedback from trainees provides the cornerstone for developing and implementing effective training. This paper is currently a work in progress and a concept that is being progressed across the organisation.

## **Introduction**

Most operational firefighters would agree that the Safety Officer position is important and can impact significantly on frontline operations. Yet many firefighters' attitude towards the Safety Officer role is negative and most feel burdened when appointed to the position. It would be rare to find an officer responding to a large factory fire deliberating over risk assessment strategies and hoping that on arrival they are appointed to the Safety Officer role. Unfortunately, we don't all get to play with the big hoses or take charge of operations but we are generally content to act in other specialists roles such as hazmat technicians or rescue operators. So why is it that everyone wants to be safe but no one wants to talk about safety or rather no one wants the responsibility of safety?

Managing firefighters in hazardous environments is extremely difficult and the emotional burden of a serious injury or death occurring on our watch is not something that we signed up for. We understand that, as firefighters, we have a responsibility to extinguish fires, rescue those that are trapped or render a site safe and are content to act in various roles while we work as a team towards a common goal. Therefore we should adopt the same mindset when managing safety on the fireground and share the responsibility we have for each other. Building a safe work environment should be a team effort and aligned to safety roles and responsibilities at incidents.

## **Command safety**

Typically the burden placed on NSWFB Incident Controllers (IC) becomes a balancing act between the NSW Fire Brigades Act 1989 and the NSW Occupational Health & Safety Act 2000. On one hand the IC must take all practicable measures to extinguish a fire and render any hazardous materials safe whilst ensuring the health and safety of all personnel at the worksite. According to Brunacini, A. & Brunacini, N. p.5 (2004) the IC must integrate safety and command so that both the client and firefighter's needs are met. However under fast and dynamic situations the IC usually does not have the time or attention span to manage these two equally important roles.

## **Safety Officer role**

The Incident Control System (ICS) is the method used by the NSWFB for managing incidents and includes the appointment of a Safety Officer. Incorporated in the ICS Standard Operational Guidelines (SOG) is the Safety Officer SOG 1.6 and NSWFB ICs typically appoint an officer to take on the role and responsibilities of the Safety Officer position at large or complex incidents, training exercises and incidents with four or more pumpers. Although the role is seen as important, it can sometimes be viewed as a hindrance to the overriding objective of extinguishing the fire. In the past the lowest ranking or least experienced officer was appointed to the role as more important positions were filled by senior officers.

ICS was established in the NSWFB in 1997 and when ICS training was implemented, particularly on promotional courses, it focused heavily on incident command and operations. Due to the lack of understanding and training the Safety Officer role become under utilised, poorly valued and burdensome to those appointed to the task. Therefore, in order to improve status and desirability of the Safety Officer position, a cultural change had to take place.

## **Training needs analysis**

Designing a comprehensive training needs analysis was the key to determining training deficiencies and understanding the negative attitudes towards the role. The main goals of the TNA were to:

- determine the skill set required to manage operational safety
- align training to roles and responsibilities
- outline literacy skill level
- define target group
- conduct a gap analysis.

During the TNA process it became clear that safety roles and responsibilities at incidents had to align to three specific levels; task, tactical and strategic. This discovery led to three separate TNAs which formed the foundation of an operational safety training program that included all ranks.

The *task level safety TNA* was conducted through consultation with the Quality Educational Support Unit, Recruit Training Section and operational personnel. As the recruit program was already under review, the training was developed to be integrated into the new safety cluster for the recruit training program. The *tactical level safety TNA* focused on firefighters/officers who would be appointed to the Safety Officer role and the *strategic level safety TNA* targeted senior officers' roles and responsibilities in relation to managing safety at large or complex incidents.

Although methodologies varied in gathering information the common theme was to consult broadly and document all research findings. Once analysed, the outcomes from the task, tactical and strategic TNAs showed the following similarities:

- safety at incidents is determined by a person's individual competency and experience
- management of safety systems at incidents is ad hoc and inconsistent
- reporting, investigating and managing injuries showed a lack of knowledge related to health and safety policies and legislation
- limited understanding of the dynamic risk assessment process
- limited knowledge of how to implement the Safety Officer SOG 1.6
- reporting, recording, analysing and communicating safety information was generally inconsistent at incidents
- rehab of firefighters at incidents tended to be poorly managed.

To complete the TNA process, quantitative data was gathered from firefighter injuries and on-duty deaths that occurred during 2000–2006. Combining the results allowed for a true understanding of where the NSWFB was positioned and what changes needed to be made. Between 2000—2006 the NSWFB had six on-duty deaths and 13,070 notifications of injury, illness, exposure and near miss (NIENMS).

In 2005–2006 operational injuries accounted for 1256 notifications (NIENMS) and 227 WC claims which cost on average of \$11,250 per claim. WC claims have significantly increased in the last six years which has created a cost blow-out for the NSWFB in terms of WC premiums, lost time and other related costs (Human Resources Division Health and Safety Status Report 2007).

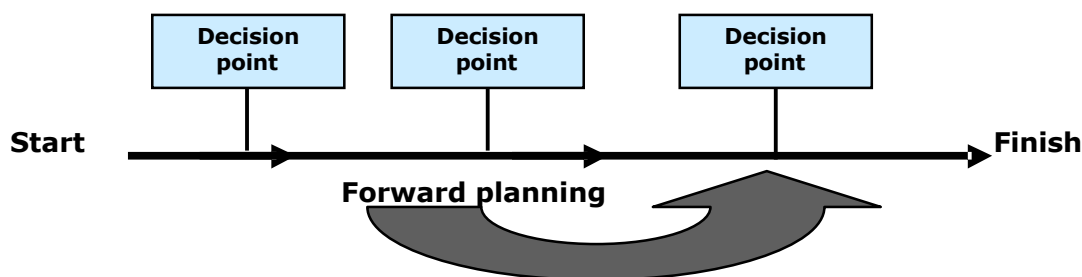
### Building blocks of operational safety training

Safety at incidents is determined by strong command and individual competency and therefore the objectives of the training were to increase individual competencies whilst building an operational safety management system that strengthened command. Safety roles and responsibilities assigned at each level, task, tactical and strategic, must perform their assigned function, support each other and connect closely across the three levels (Adapted from Brunacini, A. & Brunacini, N. p.16–17 2004).

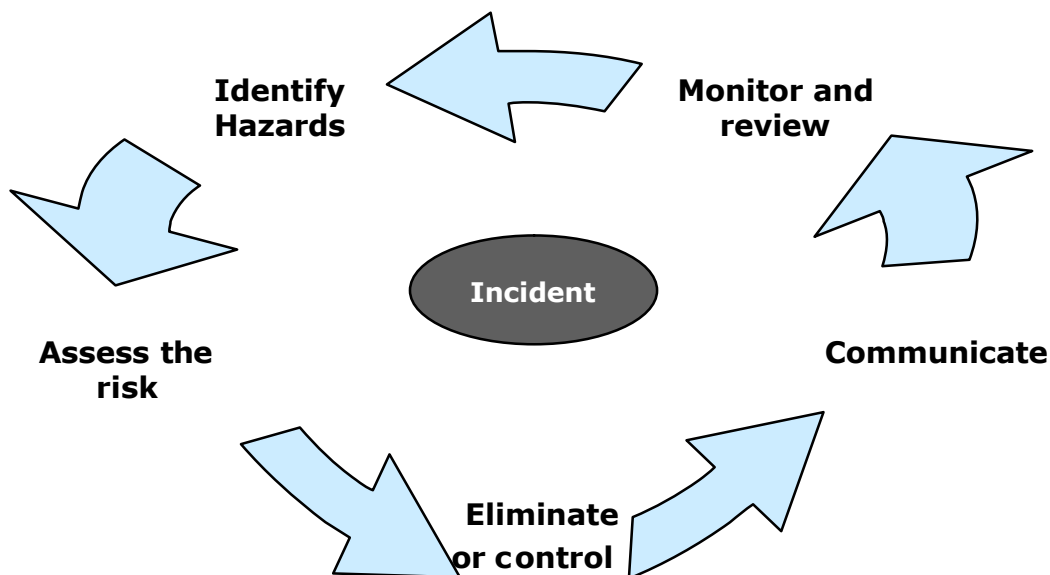
Level	Role	Safety responsibility	Considerations
Strategic	Safety Controller	Entire incident, Area the incident impacts on	Incident area, Future impact on firefighter health and safety
Tactical	Safety Officer/Sector Commander	Geographical area, Special function	Impact on firefighter health and safety in sector
Task	Station or Strike team	Individual or Strike team member—direct supervision	Immediate, local area

The training had to empower officers and firefighters to challenge current safety issues and give them the skills and knowledge to develop more robust safety plans. According to Rubin, Peterson & Phillips (2001), firefighter safety over the past 25 years has focused mainly on improving personal protective equipment (PPE) and standard operational procedures (SOP). These changes have significantly reduced injuries and impacted on firefighting strategies. In some cases this has produced a heavy reliance on PPE and created an imbalance when using control measures to manage risk. To create a cultural shift in firefighter safety, the training had to focus on developing firefighters' safety management and risk assessment skills. Emery's (2006), use of the concept of an invisible chain linking operations from task to tactical and tactical to strategic can be adapted to build strong safety links from the strategic decision maker down to the firefighter on the hoseline.

Traditional decision making by firefighters is generally conducted along a linear timeline.



Managing operational safety should be based on the Australian Risk Assessment Standard AS/NZ4260 (Risk management guidelines 2004). Firefighters make decisions at critical points during an incident and continue monitoring and reviewing safety throughout the cycle.



### Task safety training

During the review of the existing recruit training program, Recruit Training Instructors and professional educationists from QES validated the newly developed session plans over the existing training. This produced a robust safety cluster that covered evidence requirements for the following Public Safety Training Package (PSTP) competencies:

- PUAFIR201A Prevent injury
- PUAOHS001B Follow defined OH&S policies and procedures
- PUAOHS002A Maintain safety at an incident scene.

The cluster consists of seven activities:

1. Home assignment
2. Training college site induction, morning duties roster and OH&S arrangements
3. Introductory training session: Hazards and risks
4. Hazards and risks project
5. Practical drills identifying, controlling, monitoring and reporting risks using common drills
6. Training session: Safety during emergency response
7. Practical scenarios for assessment of competency- safety during emergency response.

A training session plan for Activity 6 *Safety during emergency response* was developed from the task safety TNA and was piloted in February 2007. The new safety cluster including Activity 6 will be piloted to Recruit firefighters before the end of 2007, and once finalised it will form part of the Recruit Training Program. *Safety during emergency response* will be the first level of operational safety training that Recruit firefighters have on entry into NSWFB.

### **Tactical safety training session plan**

Designing training at the tactical level proved to be a complex issue due to previous misconceptions and lack of desirability of the Safety Officer role. There was also a need to acknowledge that firefighters work in dangerous situations and managing risk must not be seen to become too defensive or disproportional to the task (McGregor, 2007). The training needed to be dynamic and interesting whilst catering for different levels of competency and firefighting experience. To encourage group participation and promote critical thinking, the training session plan was built around workshop scenarios and visual aids such as photos and DVDs of incidents. The training objective was to develop understanding and skills to maintain tactical safety at an incident and therefore had to include the following criteria:

- overview of health and safety policies and OHS legislation
- dynamic risk assessment process
- roles and responsibilities of a Safety Officer
- managing safety as a Sector Commander
- reporting and managing operational injuries.

### **Piloting the training**

The first tactical safety training session was piloted to 20 participants on the Station Officers Promotional Program (SOPP) in 2006. Feedback was gathered from educational specialists, course participants and instructors from the Professional Development Unit (PDU). The session plan was adjusted and piloted to participants on the Inspectors Promotional Program (IPP) in 2006. Feedback was again analysed and although IPP participants gained some benefit from the training, strategic level safety training was considered more suitable for the IPP target group.

### **Delivering the training**

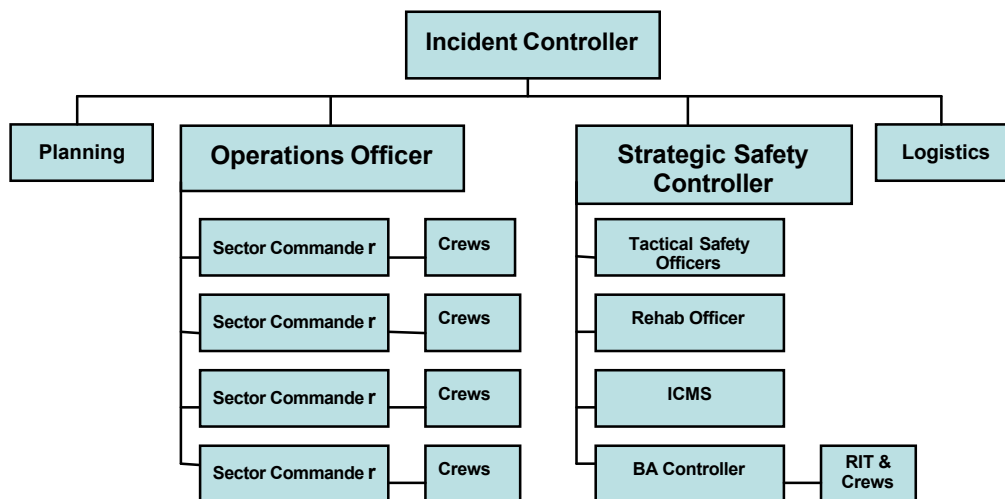
Between 2006 and 2007 tactical safety training was delivered to five SOPP classes and four fire stations in the Sydney Metropolitan West Region. Consultation with operational personnel was ongoing throughout the training and feedback resulted in minor adjustments to the program. Anecdotal feedback indicates that the tactical safety training has been very beneficial to frontline officers tasked as Safety Officers at incidents.

An important feature of the proposed tactical safety training is that it allows other facilitators to deliver the program easily. This was achieved through a well designed session plan and facilitators' resource kit. During one SOPP course, a PDU facilitator using the resource kit and following the session plan, delivered the training easily.

Due to the complexity of providing tactical safety training to all operational NSWFB personnel in the state, a project plan was developed to gain support and funding from senior management. The aim was to ensure that the safety message was not distorted, diluted or compromised. The project plan included various training models, timelines and budgets for task, tactical and strategic safety training.

### Strategic safety training

At complex incidents or those that cover large geographical areas, it is very difficult for a single Safety Officer to manage safety and participate in the development of an incident action plan (Morris, p.58. 2001). The aim of strategic safety training is to give NSWFB senior officers ie. Inspectors, Superintendents and Chief Superintendents the skills and knowledge to establish and manage a safety division at large scale incidents. Officers at this rank should be able to implement and manage several tactical Safety Officers, Rehab, BA control, Rapid Intervention Teams and the Incident Crew Management System. The diagram below shows how the ICS structure could be amended to reflect these changes.



The proposed session plan is based primarily on the strategic safety TNA and elements of PUAOHS004A—*Establish and maintain the occupational health and safety system*. An overview of the task and tactical training is included in the session plan to build participants' skills and provide understanding of the levels of training for firefighters. Case studies, workshops and practical scenarios of complex incidents are the main teaching forums. The focus is on lessons learned, good management practices and examples of practical safety systems that strategic Safety Controllers can implement at incidents. According to FDSOA (2006), leadership is measured in influence and quality leadership will set the tone for compliance with safe work practices. Officers acting in the role of Safety Controller will need to be able to influence the IC as well as set the safety tone for the incident.

Participants on the strategic safety training should be able to demonstrate the following:

- conduct a risk/benefit analysis
- manage firefighter health and wellbeing
- demonstrate ability to manage a safety sector and act in the role of Safety Controller within the ICS structure
- implement and manage safety systems (ICMS, RIT, Rehab, BA control, tactical Safety Officers)
- record and document health, safety and risk management information
- correct unsafe practices through the chain of command or by direct intervention
- develop an incident safety analysis by reviewing the incident action plan and risk assessment
- prepare and conduct a safety briefing
- correctly manage a serious firefighter injury, quarantine faulty equipment and implement on-site corrective actions

- liaise with Ambulance, Workcover, NSWFB Health & Safety Branch and Operational Safety Coordinator
- ensure appropriate control measures are implemented, reviewed and monitored
- demonstrate knowledge of OHS legislation, hierarchy of controls, and NSWFB safety policies.

### Conclusion

Although the objective of operational safety training is to increase the capabilities of NSWFB personnel in managing safety at incidents, it is by no means complete. Continuous development, improvement and consultation are essential to ensure that all safety training meshes into the over arching safety management system.

### References

Brunacini, A. & Brunacini, N. (2004). *Command safety: the IC's role in protecting firefighters*. Phoenix, AZ, Across the Street Productions.

Emery, M. (2006). 13 Fireground indiscretions. *Firehouse*, April, pp.84-9

FDSOA. (2006). Leadership the key to Safety Officer Performance. *FDSOA Safety Gram*, Vol. 14, Issue 6, June, p.1

Morris, G. (2001). Many faces of safety. *Fire chief*, April, p.58

McGregor, M. (2007). On the defensive. *Fire Engineers Journal & Fire Protection*, February, p.58

New South Wales Fire Brigades. (2007). *Human Resources Division Health and Safety Status Report*, February, 2007

*New South Wales Occupational Health & Safety Act 2000 No 40 (NSW)*

*New South Wales Occupational Health & Safety Regulations 2001*

*New South Wales Fire Brigades Act 1989 No 192 (NSW)*

New South Wales Fire Brigades Standard Operational Guidelines (1997). *SOG 1.1 Incident Control System, SOG 1.6 Safety Officer*.

*Public Safety Training Package*. (2003). PUA00 Ver 2, Australian National Training Authority.

<<http://www.ntis.gov.au/Default.aspx?/trainingpackage/PUA00>>

Risk management guidelines (2004). *Companion to AS/NZS 4360:2004*. 2<sup>nd</sup> ed, SAI global

Rubin, D.L., Peterson, W. & Phillips, T. (2001). Part 2: Human factors of fireground injuries and fatalities: Breaking the error chain. *Firehouse*, June, p.47