

# **Managing Contractors in the Mining and Extractive Industries**

## **On Line Flexible Training for Mine and Quarry Contractor Safety Management**

**Final Report - September 2007**

### **Aim of the Project**

The project aimed to develop and produce a short duration on-line Occupational Health and Safety Management Systems (OHSMS) training program for principals and contractors in the mining and quarrying industries in Australia.

The programme was to be at minimal cost to contractors to enable them to meet the requirements of general duties of care for national OHS legislation and NSW legislation and mining and quarrying companies in particular.

### **Objectives of the Project**

1. Trial the delivery of flexible on-line learning methods in safety management systems and plans to contractors and to those in the extractive industries / mines who supervise them.
2. Trial the use of self-paced learning and feedback to build vital industry knowledge and skills on safety management systems and plans to individual, remote participants.
3. Determine if principals' supervisors and contractors can advance their knowledge about the systematic management of risk and legal obligations, especially new legislation, using on-line learning / flexible delivery.

### **Project Developers**

Jim Knowles	Jim Knowles Group
Graham Terrey	Mine Resilience
John Dugas	The University of Newcastle Research Associates (TUNRA),

### **Project stakeholders / Sponsoring Organisations**

<b>Jim Knowles</b>	Project Leader / Course Presenter
<b>Graham Terrey</b>	Content Specialist / Course Presenter
<b>NSW Minerals Council</b>	Initiator & Supplier of Course Materials
<b>Coal Services Health and Safety Trust</b>	Funding

<b>Institute of Quarrying Australia</b>	Funding
<b>Centennial Coal</b>	Industry Representative / Support
<b>Xstrata Mining</b>	Industry Representative / Support
<b>Hansons</b>	Industry Representative / Support
<b>Rocla</b>	Industry Representative / Support
<b>University of Newcastle</b>	Instructional Design / On-line Learning Platform

## **Background**

NSW has an immediate need for contractor OHS training. In July 2007 new legislation commenced that requires amongst other things:

1. Employers to have a plan to manage contractors, consistent with providing safe systems of work and risk management, and
2. Contractors to provide risk assessments and safe work method statements within safe systems.

The need for quality contractor management is recognised as a critical issue affecting the health and safety performance of the mining and quarrying industries. They and the NSW Minerals Council (NSWMC) had been proactive in introducing contractor OHS management guidelines in 2003 for use by the industries and their contractors.

The Project Leader and the Content Specialist, Jim Knowles and Graham Terrey respectively, have conducted numerous face-to-face educational workshops for more than 1000 attendees in 2005 and 2006 on behalf of the NSWMC.

A major drawback voiced by many attendees at earlier face-to-face workshops was the time taken to travel and attend the workshops while trying to balance other work commitments. A survey conducted at a contractor management workshop in early 2006 indicated that over 30% of participants would have preferred flexible learning (non-attendance mode) if it were available. It is reasonable to suggest that non-attendees would have added to this figure had they been able to participate.

The NSWMC Occupational Health & Safety (OHS) Committee therefore proposed an arrangement for flexible, on-line learning that builds on the experience of on-line learning for deputies which is now in its second year of operation.

At the request of the NSWMC OHS Committee the Project Leader and the Content Specialist developed the program and sought development funding from both the Coal Services Health & Safety Trust (HST), and the Australian Institute of Quarrying Education Foundation (AIQEF).

Since other state jurisdictions are likely to adopt such arrangements either expressly or implicitly, the course material has been developed on a nationally consistent and competency-based approach ready for additional legislative appendices after the introduction of this on-line program in NSW.

Some NSWMC member companies now require contractors' key personnel to

verify that they have successfully completed either a face-to-face or an on-line learning information session. The AIQEF is also currently active in promoting safety management plans in the extractive industries sector.

This is essential for contractors who wish to be on a 'preferred contractor' list with many of the major mining and quarrying companies in NSW.

Employers need to understand what is required of a contractor and vice versa. Many contractors are also employers in their own right.

### **Features of the Project**

- The course material is based on the NSW Minerals Council's Manual 'Establishing and Maintaining Effective Contractor OH&S' compiled by Graham Terrey. The Manual can be used as a reference and is available on-line or can be purchased at-cost from the Jim Knowles Group.
- The training program is conducted through an on-line system run by the University of Newcastle and is delivered to geographically dispersed individuals in a flexible delivery format.
- The course is suitable for both contractors as well as principals' representatives who supervise contractors.
- Participants require standard internet broadband access, preferably without a restrictive 'firewall'.
- Learning material on an accompanying CD is provided for those participants who have difficulties accessing the University of Newcastle's website due to their organisation's or their internet service provider's fire-wall configuration.
- The course is run and administered by the Jim Knowles Group as a nationally accredited Registered Training Organisation (RTO).
- Each Candidate undertakes six on-line assessments covering the material in each of the course's sections and after successful completion (a score of 80% or greater) receives a Certificate of Completion from the Jim Knowles Group.
- The on-line learning system ('Blackboard') addresses 'student integrity' problems by having suitable monitoring arrangements that authenticate identity of participants where necessary.
- To evaluate competency and to ensure integrity there are a few controls. Each of the sessions of learning are broken into separate modules, which the student accesses. If the student has access difficulties due to 'firewalls' they can access the lectures via a posted CD. However, they still need to access the 'blackboard' site to log in and perform other tasks or gain access to other material. The course has software to track when people are on-line, for how long, what effort they put into the course such as accessing the lectures, quiz, additional material, etc, and the University tracks this and reports results to the Jim Knowles Group before they (JKG) can issue a certificate.
- At the end of each of the sessions the person enrolled has to complete an on-line quiz that is randomly selected. They have to answer at least 80% correctly. If they fail to get this score, they must do the quiz

again and answer a different selection of questions.

- ∞ The series of lectures would take no less than four hours to listen to. On top of that the quizzes take about half an hour each, depending on the students level of comprehension, so a student could complete the course in a day. Students are, however, advised to listen to one lecture a day (or night) and answer the quizzes straight away, so they would normally take a week to finish the course.
  
- ∞ In regards the timeframe for completing the course most students will want to finish it as soon as possible because most will be held back from tendering or working for mines until they produce a certificate.
  
- ∞ The 'blackboard' system incorporates a 'chat line' for students who may have a query or difficulty, so they may ask for help to complete the course. Responses may take a couple of days depending on the availability of the course presenters. Again, the 'blackboard' tracks the time taken and reports, and is monitored by University New castle, so anyone having real difficulty can also be contacted by the course presenters. The original concept was to have a student complete the course within a month, so this is the monitoring target.

### **Outcomes of the Project**

1. The first online student enrolled on 18 June 2007. After a slow start (due to a lack of understanding about the new legislation) the enrolments have picked up since early August. Over 100 contracting companies have enrolled since that time. This is a very good response to the program and it is expected that over 200 companies will have enrolled by December 2007.
2. The University of New castle Research Associates (TUNRA), a wholly owned entity of The University of New castle, has provided the necessary technical facilities and educational design expertise in on-line learning to progress this project. Due to the installation of fire walls (computer virus block software) on some contractors' computer systems and / or fire walls on contractor's internet service provider's (ISP) systems, there were initial difficulties with downloading material from the University's website. This was solved by the creation of CD's containing duplicate learning materials to that which was on the website. Current standard practice is for participants to receive a welcome letter, clear illustrated instructions for accessing the website and an accompanying CD of learning materials as part of the Course Pack from the Jim Knowles Group.
3. The Manual is to be posted on the Minerals Council's website shortly and in the interim the Jim Knowles Group has made it available on its' website. The Manual is also available in printed form at cost to those who wish to buy them.
4. Total course enrolments since inception are at 86 persons with 8

successful candidate completions as of 11<sup>th</sup> September 2007. These 7 have successfully finalised assessment requirements and as candidates progress through the various assessment items it is expected that completion figures will rise quickly.

5. Sponsor support was sought successfully from the Coal Services Health and Safety Trust and the AIQEF (via The Institute of Quarrying Australia) for course development, technical set-up (University of Newcastle and Jim Knowles Group IT personnel), pilot testing (free copies and registration in exchange for detailed feedback); promotion (free copies and registration sent to key people in the mining and quarrying industries) and delivery. Sponsors are acknowledged in the delivery (in the program), advertising (on Jim Knowles Group website and the cover of the CD) and on the Certificate of Completion.
  
6. The NSW Department of Primary Industries (Mine Safety Division) have been asked to help promote the course to principals and contractors.

### **Costing of the Project**

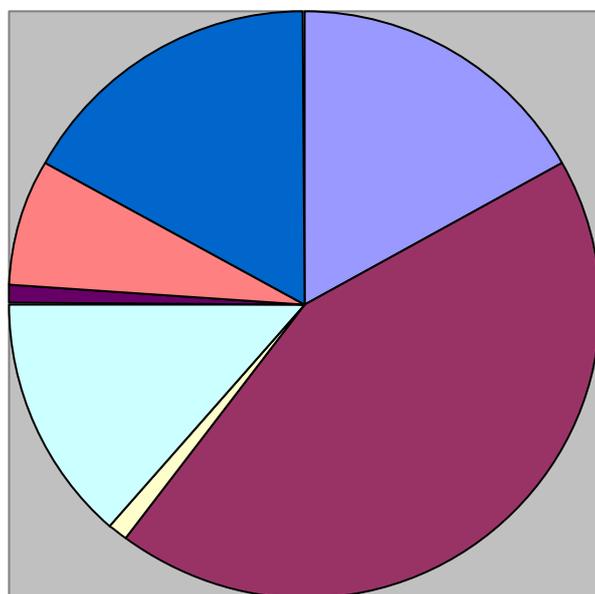
As the course continues to be operated and refined, course fees will fund on-going operational and support costs and the development of further programs for on-line training.

On-going operational costs include software licensing fees; IT support; hardware provision; and administration costs.

Support costs include Internet and computer server access by participants to trainers for 4- hours a week; revision of course material; and redesign of content, presentations and assessment instruments based on Participant, Instructor, Assessor, Instructional Designer and Technical Support Staff feedback.

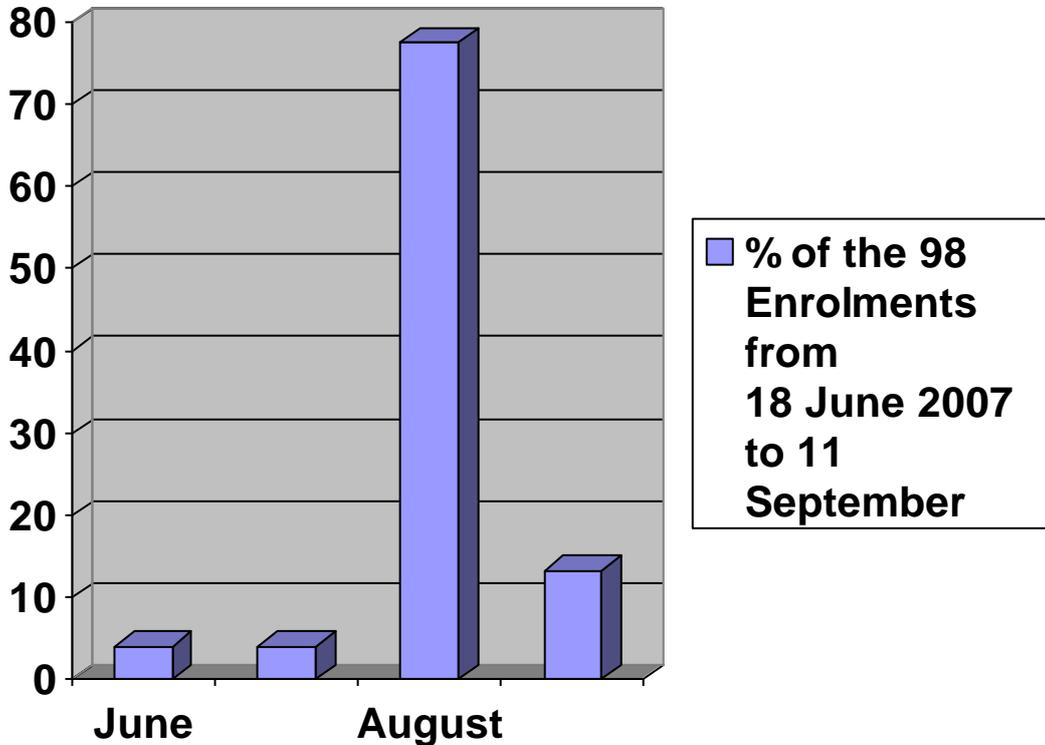
The course fee per participant is \$200 + GST and due to financial and material support from the sponsors this is likely to be cost-neutral for the Jim Knowles Group although a modest profit would be welcome!

**Online Contractor Safety Management Enrolments  
By work Groups  
14 June 2007 to 5 September 2007**



	<b>Mining</b>	<b>17.04545455%</b>
	<b>Maintenance/ Supply</b>	<b>43.18181818%</b>
	<b>Transport</b>	<b>1.136363636%</b>
	<b>Engineering</b>	<b>13.63636364%</b>
	<b>Cleaning</b>	<b>1.136363636%</b>
	<b>Training</b>	<b>6.818181818%</b>
	<b>Miscellaneous</b>	<b>17.04545455%</b>

# Online Contractor Safety Management Training Enrolments 14 June 2007 to 11 September 2007



## Conclusions

The course has presented no insurmountable technical difficulties in establishment. The initial User and Internet Service Provider firewall matter was quickly resolved with a CD alternative workaround. The existence of a CD also meant that course study could be done 'off-line'; that is, all presentations could be viewed without the necessity of being connected on-line. A stand-alone laptop or computer was sufficient for learning to be available. The assessment remains 'on-line' and has presented no firewall issues over many iterations.

The evidence thus far suggests that this type of course is successful in attracting time constrained and geographically dispersed people who enrol in the course and who, in increasing numbers, complete it successfully.

**Jim Knowles**

**Principal**

**Jim Knowles Group**