



**PERFORMANCE TRAINING**

*Registered Training Organisation*

# Underground Mine Ventilation Management Course 2021

## Course information



NATIONALLY RECOGNISED  
TRAINING

### **RIIUND601E**

Establish and maintain ventilation management systems

### **RIIUND603D**

Manage, operate and maintain the mine ventilation system

Statements of Attainment issued by  
Performance Training  
Registered Training Organisation number: 1718

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Photo credit (cover): Clemcorp Australia

Photo credit: Morvent Mining

# Learn from Industry Leaders

Originally written by internationally recognised expert, Dr. Mike Howes (deceased), this course was updated by Dr. Roy Moreby for delivery as nationally recognised units of competency.

Having been regularly reviewed and updated on the basis of extensive industry consultation, this course reflects the most recent industry trends. As such, it sets the benchmark for vocationally-based ventilation management training in Australia.



*The international mining community will be forever indebted to Dr. Mike Howes, who originally developed this course as non-accredited ventilation management training which he delivered all over the world, for some 30 years.*

*Dr. Howes focused on the fundamentals of ventilation, and people the world over relate stories about the success of his approach.*

*It is a such honour to have been asked by my friend and mentor to build upon his legacy by updating and developing the second-generation of this ventilation management course, for delivery as nationally recognised units of competency.*

**- Dr. Roy Moreby**



Upon enrolling in this course, you will be trained by a pair of industry leaders who between them have over 70 years' of experience, namely Dr. Roy Moreby and Jakes Raubenheimer.

Assessment will be conducted by Dr. Roy Moreby.

Photo credit: Clemcorp Australia

## **Dr. Roy Moreby**

### **Training and Assessment**

With over 40 years' underground mine ventilation experience in mines across the world, Dr. Moreby is highly respected in the field. He was awarded a Consolidated Gold Fields Scholarship in 1978 and completed his undergraduate Mining Engineering degree at Camborne School of Mines in 1982, finishing with First Class Honours. In 1987, Dr. Moreby was awarded a PhD for his thesis, Planning and Control of the Environment in Multi-Level Narrow Lode Mines and he also holds a NSW Underground Mine Manager's certificate. In addition to being a Fellow of the Mine Ventilation Society of South Africa, Dr. Moreby has also been an Associate Professor at the University of New South Wales (UNSW) for 20 years. He developed the UNSW Graduate Diploma in Mine Ventilation, and has been delivering that course since its inception.



## **Jakes Raubenheimer**

### **Training**

Jakes has over 32 years' experience in mine ventilation and refrigeration in mines across Australia, South Africa, India, PNG, and Indonesia. Jakes gained his ventilation qualification (Advanced Certificate in Mine Environmental Control) from the Chamber of Mines in South Africa. He also holds an occupational hygiene qualification (BEBOH) from the British Examination Board. Jakes is a Fellow of the Mine Ventilation Society of South Africa and a member of the Australasian Institute for Mining and Metallurgy (AusIMM). He was also the first (inaugural) President and member of the the Mine Ventilation Society of Australia.

# About the course

## Training products

- RIIUND601E - Establish and maintain ventilation management systems
- RIIUND603D - Manage, operate and maintain the mine ventilation system

## Usage recommendation

- Current

## Certification documentation

- Certification documentation is issued by Performance Training, Registered Training Organisation number: 1718

## Modes of delivery

- Pre-readings (self paced) delivered electronically
- Face-to-face training (2 workshops)
- On-the-job mentoring in your workplace

## Estimated duration

- 202 hours of training (total)
- 68 hours of assessment

## Location of training

- Face-to-face training workshops in Perth
- On-the-job mentoring at your underground mine site

## Third-Party Provider details

Company: Morvent Mining Ltd

Tel: +44 (07) 7562 384 930

Email: [roy.moreby@btinternet.com](mailto:roy.moreby@btinternet.com)

Services provided:

- Training and assessment
- Providing learner support
- Managing complaints
- Marketing and recruitment
- Enrolment



Photo credit: Clemcorp Australia

# Training arrangements

## Training structure

Designed so that you can build skills and knowledge over time, this course uses three methods of delivery:



Set out below are some details about each of these methods of delivery.

## Pre-readings

You will be provided with online access to pre-course readings which you are expected to work through at your own pace, prior to coming to the workshops.

You will be issued with your pre-readings in advance of the face-to-face training. You should start them straight away so you get the most out of your face-to-face training.

## On-the-job mentor program

You will be provided with a mentor handbook, containing issues to discuss and/or activities to carry out with the following mentors from your mine site:

- Ventilation officer
- Maintenance supervisor
- Development supervisor
- Production supervisor

Note that the mentor handbook is not assessment. Rather, the mentor handbook is designed to:

- Reinforce classroom learnings
- Let you practice your skills over time in a real (not simulated) environment
- Develop / improve reflective listening and communication skills that are required by Ventilation Officers

### Face-to-face workshops

Face-to-face workshops will be held at Hilton Perth Northbridge, as follows:

- **Induction & orientation:** Saturday 23 October 2021 (2 hours - Microsoft TEAMS)
- **Workshop 1:** Sunday 24 October - Friday 29 October 2021 (6 days)
- **Workshop 2:** Monday 31 January - Friday 4 February 2022 (5 days)

The workshops will be comprised of face-to-face training sessions and regular breaks. Lunch and morning tea are provided. Note that accommodation and travel are not included in the course fee.

### Workshop 1 schedule

- Day 1 - Fluid flow and Fans
- Day 2 - Network Analysis
- Day 3 - Heat and Refrigeration
- Day 4 - Gases, Gas Laws and Gas Management
- Day 5 - Gas Monitoring and Emergency Preparedness
- Day 6 - Respirable and Flammable Dust

### Workshop 2 schedule

- Day 7 - Revision of Tutorial 1 with further instruction
- Day 8 - Ventsim Training - Ventilation
- Day 9 - Ventsim Training - Heat, refrigeration and emergency preparedness
- Day 10 - Case studies
- Day 11 - Case studies



Photo credit: DoubleTree by Hilton Perth Northbridge

### **Note about COVID-related disruptions**

Information given herein is accurate at the date of publication and aligns with the training and assessment strategy.

You are required to make your own travel arrangements. We suggest that you invest in appropriate travel insurance that meets your needs. In the event there is a lockdown due to coronavirus (or other COVID-related disruption such as the hotel being seconded for quarantine etc.), then arrangements for delivery of the face-to-face workshops may need to be changed to either adapt to delivery via video-conferencing, change delivery to another hotel in Perth, and/or to delay delivery until a later date. In the event this occurs, Morvent Mining Ltd will make every effort to advise you as soon as possible. In the event that face-to-face delivery is changed due to the coronavirus, neither Performance Training and/or Morvent Mining Ltd are able to refund monies you have paid in advance for accommodation / flights.



Photo credit: Clemcorp Australia

# Assessment arrangements

The assessment arrangements below are for learners who wish to be assessed against the nationally recognised units (Option 1 - see page 10).

## Written assessments

These assessments are designed to assess underpinning knowledge and some practical skills.

The written assessments will consist of questions for you to answer, based on the learning materials you have been provided in the course.

You will have multiple attempts at assessment and your assessor will give you feedback after each attempt.

You will be required to complete these assessments and then submit by the due date.

## Workplace project assessments

These assessments are designed to assess practical skills and will involve you completing projects (e.g. ventilation and respirable dust surveys).

A workplace supervisor verification will be required for each workplace project, to confirm that the tasks were undertaken in accordance with your mine safety health management system, and were in fact completed by you.

You will have multiple attempts at assessment and your assessor will give you feedback after each attempt.

You will be required to complete these assessments in the workplace and then submit by the due date.



Photo credit: Clemcorp Australia

# Fees

## Option 1: Assessable

### Fee payable

Both workshops & assessment:  
\$18,000

### Inclusions:

#### Training you will receive

Pre-readings, textbook, mentoring handbook, and both workshops

#### Assessment

You will be assessed against the nationally recognised units. You will have 12 months (from when training commences) to submit your assessments. If you wish to be assessed after 12 months, an enrolment reinstatement fee will apply.

#### Accredited outcome

Upon successful completion of all assessments, you will be issued with a Statement of Attainment for the nationally recognised units.

## Option 2: Non-assessable

### Fee payable

Both workshops: \$12,500  
Workshop 1 only: \$7,500  
Workshop 2 only: \$5,000

### Inclusions:

#### Training you will receive

Pre-readings, textbook, mentoring handbook, and one or both workshops

#### No assessment

You will not be assessed against the nationally recognised units.

#### Non-accredited outcome

Upon completion of training, you will not be issued with a Statement of Attainment for the nationally recognised units. You will instead enrol as a 'non-assessable' learner and be issued with a non-accredited Certificate of Completion.

No government funding and/or student loans are available for this training course.

# Course requirements (All learners)

## Materials and equipment you must provide

You must provide the following materials and equipment:

- Access to internet (to download your pre-readings)
- Laptop to bring to workshops, with ability to connect to the training room wi-fi
- Licenced copies of Ventsim and Microsoft Excel installed on your laptop before the start of your workshop.
  - Microsoft Excel can be purchased at [office.com](https://office.com)
  - Ventsim can be purchased at [ventsim.com](https://ventsim.com)
- Scientific calculator
- Travel to face-to-face workshops
- Accommodation close to the Perth CBD such that fitness for work (fatigue) requirements are complied with during each day of training



Photo credit: Clemcorp Australia

# **Additional course requirements (Assessable learners)**

## **Learners who wish to be assessed**

The additional requirements below are for learners who wish to be assessed against the nationally recognised units (Option 1 - see page 10):

### **Current employment requirements**

You must demonstrate that you are permitted access to:

- The working underground mine area and SMS / SHMS of a currently operating Australian underground mine where you can complete your on-the-job mentoring and your project assessments
- A workplace supervisor at your mine site who can verify your workplace project assessments
- Access to the following workplace mentors:
  - Ventilation officer
  - Maintenance supervisor
  - Development supervisor
  - Production supervisor

### **Relevant underground operational experience requirement**

This course is designed to build on existing skills and knowledge. Accordingly, you must have at least two (2) years' recent operational experience in an underground mine (can have been in Australia and/or overseas).

### **Excel and Ventsim requirements**

You must be proficient in the basic functions of Microsoft Excel and Ventsim before starting your training.

### **Literacy and numeracy requirements**

You must demonstrate that you are at (or can achieve with support) ACSF Level 5 in literacy and numeracy on the foundation skills test.

# Apply: Assessable learner

## Your details:

Your name

Your contact email address

## Tick which of the following you are applying for:

☐

Full training and assessment

## Tick to indicate how you intend to pay your fees to Performance Training:

☐

Purchase order

☐

Credit card payment

### Current employment requirement:

You must demonstrate that you are permitted access to the working underground mine area and SHMS of an Australian underground mine, workplace mentors at the underground mine, and a workplace supervisor at the underground mine.

## Tick to confirm:

☐

You are currently employed in / permitted access to the underground working area and SHMS of an Australian underground mine, workplace mentor at the the mine, and a workplace supervisor at the underground mine

## Details of the mine:

Name of mine site

Your supervisor's email address

### Underground operational experience requirement:

You must have a minimum of 2 years' recent operational experience in an underground mine

## Tick to confirm:

☐

You have attached your current CV showing your operational experience working underground (in Australia or overseas)

### Literacy and numeracy requirement:

You must demonstrate that you are working at (or can achieve with support) ACSF level 5 in literacy and numeracy on the foundation skills assessment

## Tick to confirm:

☐

You have completed the foundation skills assessment and it is attached with your application

**Excel and Ventsim requirement:**

You must be proficient in the use of basic functions in Microsoft Excel and Ventsim before starting training.

**Tick which of the following you applies to you:**

- ☐ You are proficient in the use of basic functions in Microsoft Excel
- ☐ You will participate in free tutorials ([link](#)) before you commence face-to-face training

**Tick which of the following you applies to you:**

- ☐ You are proficient in the use of basic functions in Ventsim
- ☐ You will participate in a non-accredited Ventsim course at your own cost before you commence your face-to-face training

**Tick to confirm:**

- ☐ I have read this course information document
- ☐ I have read the Performance Training Pre-Enrolment Student Handbook
- ☐ I have answered all questions on this form and in the application for enrolment form
- ☐ All information I have provided is true and correct

Your signature

Date

**Submit the following by email:**

1. Pages 13 - 14 of this information document
2. Enrolment application form
3. Your current CV or resume
4. Foundation skills test



roy.moreby@btinternet.com

**After you apply:**

*Your application will be reviewed by Dr. Moreby. He may contact you to discuss your application and/or to organise a support plan etc. Upon being offered a place in the course, you will be required to provide Performance Training with a purchase order prior to starting your first workshop.*

**Privacy notice:** Personal information is collected on this form in order to assess your application for enrolment. Personal information will be disclosed to Morvent Mining Ltd, its approved sub-contractors (if any), and Performance Training. Personal information may also be disclosed to third parties with your consent or as permitted or required under a law and/or as set out in the National VET Data Privacy Policy Notice on the Enrolment Application Form. Personal information will be stored securely. If you wish to access or correct any of your personal information, discuss how it has been managed, or have a concern about the way your personal information has been collected, used, stored, or disclosed, please contact Performance Training (07) 5445 2435.

**Note:** the face-to-face workshops are to be conducted in training rooms at Hilton Perth Northbridge (pictured on page 7). On-the-job mentoring and project assessments are to be undertaken at learners' own mine sites. Since the ventilation equipment used at each mine site will vary, the photos of ventilation equipment shown in this information booklet are for illustrative purposes only and do not represent the exact brands and/or configurations of ventilation equipment that will be used at every mine during workplace mentoring and/or assessment.

# Apply: Non-assessable learner

## Your details:

Your name

Your contact email address

## Tick which of the following you are applying for:

☐

Non-assessable - Both workshops

☐

Non-assessable - Workshop 1 only

☐

Non-assessable - Workshop 2 only

## Tick to indicate how you intend to pay your fees to Performance Training:

☐

Purchase order

☐

Credit card payment

## Tick to confirm:

☐

I agree that I will be enrolled as a non-assessable learner and so I will not be assessed against - or receive a Statement of Attainment for - the nationally recognised units

☐

I have read this course information document

☐

I have read the Performance Training Pre-Enrolment Student Handbook

☐

I have answered all questions on this form and in the application for enrolment form

☐

All information I have provided is true and correct

Your signature

Date

## Submit the following by email:

1. Page 15 of this information document

2. Enrolment application form



roy.moreby@btinternet.com

## After you apply:

*Your application will be reviewed by Dr. Moreby. He may contact you to discuss your application and/or to organise a support plan etc. Upon being offered a place in the course, you will be required to provide Performance Training with a purchase order prior to starting your first workshop.*

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**BBE**  
**CONSULTING**

Global mine ventilation  
consultancy

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