

Dust control and Air quality management systems and technology for industrial minerals mining and processing

LIVE ONLINE TRAINING | 13 – 14 APRIL 2023

OVERVIEW

During mineral mining and processing, the ore undergoes crushing, grinding, cleaning, drying and sizing operations. These processes have potential to generate large amounts of dust and should there be inadequate control systems; hazardous levels of respirable dust may be liberated into the work environment, potentially exposing workers. Regulations and standards therefore have been put in place as a way of limiting the respirable dust exposure of mine workers and the public. It is also of paramount significance for mines to implement engineering controls in their operations to ensure reduced dust generation and air pollution.

This training workshop aims at discussing health and environmental effects of air pollution. It will further uncover different pollutants, their sources as well as how they are dispersed or transported from one point to the other. Advancements in monitoring and sampling tools and technology will also be part of this workshop. Delegates will gain insight into the legalities associated with poor dust control and air quality management; understanding in detail the penalties of not complying with the regulations and standards. The workshop will further discuss data collection, as well as results interpretation mechanisms. Delegates will also be involved in hands on training, working with the dust monitoring devices and laboratory equipment used in filtering samples.

Who should attend this workshop?

- Air Quality Practitioners
- Ventilation Technicians/ Officers/ Managers
- Environmental Managers
- Environmental Scientists
- Mine Environmental Consultants
- Mining Site Managers/ Engineers
- Mine Managers/ Supervisors/ Foreman
- Regulatory Personnel or anyone responsible for NEM implementation
- Industrial Hygienists
- Project Managers/ Coordinators
- Operations and Production Managers/ Supervisors/ Advisors and Superintendents

Benefits of attending

- Practical and hands-on sessions where delegates will operate dust and air quality management tools/devices
- Discussing applicable regulations governing dust control in the mining sector
- Gaining insight into respirable crystalline silica exposure
- Applying different tactics for controlling mine worker dust exposure
- Gaining an understanding on different air flow and dust control systems
- Discussing advancements in dust collection, suppression and sampling technology
- Analysing Micro Scanning and Fibre Watch techniques
- Understanding dust control for different mineral processing procedures

DUST CONTROL AND AIR QUALITY MANAGEMENT SYSTEMS

Gaining insight into dust and applicable regulations and standards

- Discussing applicable regulations governing dust control in the mining sector
- Implementing the current MSHA dust standards
- Understanding the role played by dust sampling
- Gaining insight into respirable crystalline silica exposure
- Pin-pointing different software tools for exposure analysis
- Applying different tactics for controlling mine worker dust exposure
 - Elimination and substitution
- Engineering controls
- Administrative controls
- Personal Protective Equipment

Dust collection and air cleaning systems and technology

- Gaining an understanding on different air flow and dust control systems
- Understanding the significance of exhaust systems design
- Elaborating on ductwork and air velocities
 - High velocity systems
 - Low velocity systems
 - Modified Low-Velocity (MLV) systems
- Selecting and applying the best suitable air cleaning devices
- Differentiating amongst available collector discharge devices
- Applying and maintaining wet spray systems

Data collection, sampling and results interpretation

- Identifying and applying effective dust sampling instruments and mechanisms
- Evaluating sampling methods for fixed and mobile dust source
- Discussing advancements in dust sampling technology
- Performing fallout dust calculations and results interpretation
- Including weather station data into the interpretation of fallout dust data
- Applying real-time data to quantify multiple dust sources

Identifying factors contributing to high volumes of dust

- Gaining insight into Trace Element Analysis and Fingerprinting
- A holistic approach to PM10
- Marrying PM10 to dust fallout
- Analysing Micro Scanning and Fibre Watch techniques
- Carrying out dust testing

Dust control for different mineral processing procedures

- Discussing dust control mechanisms applicable in surface drilling
 - Wet drilling
 - Dry drilling
- Underground drilling dust control systems applicable
- Applying the most effective respirable dust control systems for blasting
- Dust prevention and suppression applications for crushing, milling and screening
- Dust control systems and technology in stockpiles and exposed areas
 - Wetting
 - Chemical applications
 - Enclosures and wind fences
 - Physical stabilisation

A holistic approach to different air pollutants and applicable control technology

- Recognizing major pollutants, their characteristics and their impact on the environment and human health
- Identifying and controlling sources of air pollution
- A holistic approach to air pollution modelling
- Gaining insight into air pollution meteorology
- A technical discussion on the dispersion and transportation of air pollutants
- Discussing pollution control strategies and available technology
- Pin-pointing small to large scale tools for pollution quantifying and qualifying
- Identifying different techniques, methods and strategies for controlling and removing air pollutants
- Gaining insight into particulate matter and gas phase pollutant and chemistry
- Evaluating the design considerations for gas phase emission reduction systems
- Discussing the nature of toxic air pollutants
- Elaborating on the health and environmental effect of the toxic pollutants

Gaining insight into legalities surrounding air quality management

- A holistic approach to the legal framework
- Implementing South African legislation and requirements
- Elaborating on air quality management and policy
- Applying the ASTM A1739 standard
- Gaining insight into the relevance of being ISO 17025 accredited
- Discussing licensing issues on air quality management
- Gaining insight into continuous compliance assurance monitoring

Dust control and Air quality management systems and technology for industrial minerals mining and processing

LIVE ONLINE TRAINING | 13 – 14 APRIL 2023



Booking Contact (Approving Official) Mr/Mrs/Ms

Full Names: _____

Company name: _____

Direct Tel No: _____ E-mail: _____ Fax: _____

VAT No: _____

Address: _____

Signature _____

Person Responsible for Finance: _____ Direct Tel No: _____ Date of Payment: _____

BANKING DETAILS:

THIS INVESTMENT INCLUDES:

Independent Training Management Pty Ltd
Bank: FNB South Africa
Account Number: 62685879276
Branch Code: 251650
Branch: Randburg

THE FOLLOWING HEREBY CONFIRM ATTENDANCE TO THE WORKSHOP

Delegate1: Names _____

Position: _____ E-Mail: _____

Delegate 2: Names _____

Position: _____ E-Mail: _____

Delegate 3: Names _____

Position: _____ E-Mail: _____

Delegate 4: Names _____

Position: _____ E-Mail: _____

Delegate 5: Names _____

Position: _____ E-Mail: _____

All fees are current at the time of going to print; however, we reserve the right to change them.

2. Additional Delegate Rates:

Additional delegate rates apply when bookings are made at the same time on the same course.

3. Confirmation Instructions:

On receipt of this submitted booking form and payment or purchase order you will receive a confirmation letter by email confirming your participation in the training event. This includes a location map with directions and venue details and starting times.

4. Attendance:

Please note that no learner will be permitted to attend any training course without proof of payment or an order no.

5. Delegate Substitution:

Substitutes can be made at any time without incurring a penalty. Please inform us in writing so we can make the necessary arrangements for the new learner.

6. Payment:

Payment can be made by cheque or by electronic transfer, and must be received 5 working days prior to the commencement of the course.

Please quote the reference number from your invoice and organisation name so that payments can be tracked. All cancellations must be done in writing and emailed directly to Independent Training. Management Inform us immediately if you have to re-schedule or cancel the booking so that we can inform the caterers and conference venue.

The following charges apply if you cancel:

- 11 - 30 days before a course = 10% of the course fee
- 6 – 10 days before a course = 20% of the course fee
- 4 – 6 days before a course = 30% of the course fee
- 1-3 days before a course = 50% of the course fee

