

QUEENSLAND MINING INDUSTRY HEALTH & SAFETY CONFERENCE 2013



The One Constant: HEALTH & SAFETY

valuing our people

18-21 AUGUST 2013: TOWNSVILLE ENTERTAINMENT & CONVENTION CENTRE (TECC) AND JUPITERS TOWNSVILLE



CONFERENCE HANDBOOK



/// SPONSORS

The Queensland Mining Industry Health and Safety Conference Committee wishes to thank the following organisations for their generosity and continuing support of this event.











CFMEU





































MîCOMM

















The above Sponsors were confirmed at the time of printing.

/// DISPLAYS

ADT Security Amare Safety Pty Ltd Ansell Healthcare Anything Earthmoving Attune WORKPLACE **Blackwoods Corporate Bodies International DNRM Simtars Down Under Safety** Ford Health Group GCC Health, Safety and Hygiene **GRC Solutions Gryphon Psychology HES Health Security Education Pty Ltd** Jobfit Systems International **Joncris Sentinel Services Kenelec Scientific** Kinetic Health **KINNECT**

LifeAid Pty Ltd

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Medical Dental Solutions MICOMM MSA (Aust) Pty Ltd **MSS Strategic Medical** North Queensland Therapy Services On the Line **PIMS Group Protective Industrial Products (Aust) Pty Ltd Protector Alsafe** Q-COMP **QML Pathology Resources RTO Association RISKGATE Royal Medical Supplies** SafeStart Safety Equipment Australia SICK Steelblue St John Ambulance (Qld)

Survival Emergency Solutions

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Verifact Health Safety Response Wilson Security WorkSafe Connect

VEHICLE DISPLAYS

DNRM Simtars Health Security Education Pty Ltd HES Queensland Mines Rescue Service SICK St John Ambulance (Qld) Wilson Security WorkSafe Connect

GUEST DISPLAYS

A Miner's Legacy **Bowel Cancer Australia CQ** Rescue **Heart Foundation (Queensland) Mater Foundation Townsville Enterprise**

The above Displays were confirmed at the time of printing.





/// WELCOME

Dear Industry Colleagues

On behalf of the Committee, it is my pleasure to welcome you to the 2013 Queensland Mining Industry Health and Safety Conference.

With our theme this year 'The One Constant Health & Safety; valuing our people' as the focus, over the next few days we will see if we are as they say 'walking the talk' and measuring up as we celebrate the 25th Anniversary of this Conference.

In my Invitation to Attend, I said our industry at this time could best be described as 'dynamic' and those tasked with planning for the future I'm sure are working overtime to keep our industry strong and viable and those of us working within health and safety to protect our workforce regardless. We also need to be especially conscious that in the current economic climate in our industry we don't forget that a Safe Mine is a Productive Mine.

Our Keynote speakers and concurrent presenters will cover a wide range of topics; and we urge you to attend as many of these sessions as possible.

Taking into account the Keynote speakers, all concurrent session presenters, those introducing their innovations and everyone involved in Wednesday's session, we have over 70 presenters who have given their time to share their knowledge with us.

The Innovations are always a highlight of every Conference. Here we have the opportunity of hearing from the 10 finalists as they present their Innovations, many of which could significantly increase the safety levels in our workplace.

One of the most tangible benefits this Conference provides is the opportunity to network. I can tell you from first hand experience that having the chance to talk to others who work under the same conditions and face the same challenges as you is a bonus of being here so I invite you to make the most of it.

Make sure you attend all the Social Functions, this is where the networking happens. This year for the Conference Dinner we have Australia's got Talent finalists 'Soul Mystique' entertaining us and at the Quarry on Monday evening, the legendary John Schumann and his group will be performing.

In closing, I have a special request and that is - what you learn over the next few days from the Keynote Speakers and presenters, you take back to your workplace and share with your workmates. Please don't let that information just sit on a shelf.



The Committee, Conference Staff and I will be wearing red shirts and we are here to help. We will be looking forward to meeting as many of you as possible over the next few days.

Hag Harrison - Organiser Australian Workers' Union

9) a stavison

Chairman - Queensland Mining Industry Health and Safety Conference 2013

/// CONFERENCE COMMITTEE

Chairman

Hag Harrison

Organiser, Australian Workers' Union

Secretary

Shane Hansford

Safety and Health Policy Adviser, Queensland Resources Council

Shane Apps

Safety, Training & Compliance Manager - Open-cut Operations, Peabody Energy Australia

Greg Dalliston

Industry Safety & Health Representative, CFMEU Mining and Energy Division, Queensland District

André De Kock

Acting Director, Simtars Occupational Hygiene, Environment and Chemistry Centre

Rvan Glen

Manager QRC Online, Queensland Resources Council

Phil Goode

Acting Chief Inspector of Mines, Department of Natural Resources and Mines

Paul Harrison

Acting Deputy Director-General, Mines Safety and Health, Department of Natural Resources and Mines

John Kabel

Senior Inspector of Mines (Electrical), Department of Natural Resources and Mines

Grea Lane

Deputy Chief Executive and Chief Operations Officer, Queensland Resources Council

Tilman Rasche

Acting Executive Director, Simtars

Liz Sanderson

Occupational Health Specialist, Anglo American Metallurgical Coal

/// CONFERENCE ORGANISER

Marion Powell and Robert Seaman

ACCLAIM Special Events and Meeting Management

All correspondence to be addressed to:

ACCLAIM Special Events and Meeting Management 23 Deerhurst Road, Brookfield, Qld 4069 Australia

Tel: 61 7 3254 0522 Fax: 61 7 3254 0406 Email: safeconf@acclaimsemm.com.au

/// CONFERENCE VENUES

Business Sessions - Sunday to Wednesday

Townsville Entertainment and Convention Centre (TECC).

Concurrent Sessions - Tuesday

TECC and Jupiters Townsville Hotel.

Welcome Function - Sunday

The Grand Marguee at Jupiters Townsville Hotel.

Informal Dinner - Monday

The Quarry.

Conference Dinner - Tuesday

The Townsville Entertainment and Convention Centre (TECC).

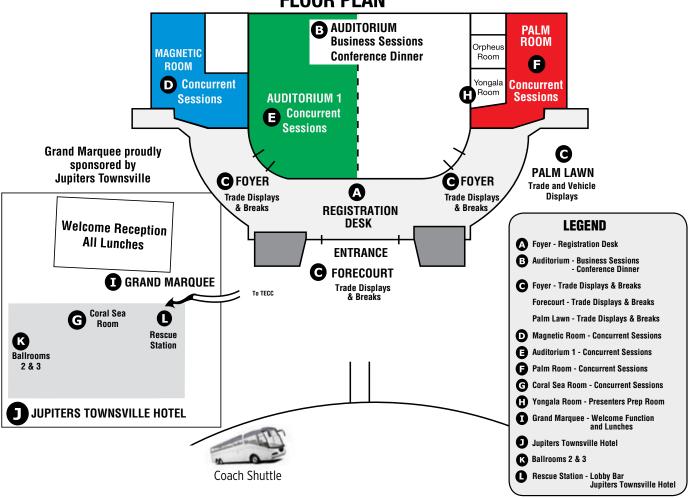
Rescue Station - Sunday to Tuesday

The Lobby Bar at Jupiters Townsville Hotel.

Lunches - Monday to Wednesday

The Grand Marquee at Jupiters Townsville Hotel.

Townsville Entertainment and Convention Centre FLOOR PLAN



DISPLAYS - FOYER. FORECOURT AND PALM LAWN AT TECC

Of special interest each year are the wide range of new products and services which will be on Display for the duration of the Conference.

The Displays will be open each morning before Sessions commence and then again during all the Morning and Afternoon Breaks and at Lunch time on Monday and Tuesday.

We invite you to visit each Display Stand and discuss your requirements with the representatives who will be only to happy to answer your questions and provide assistance as needed.





Registration will be in the Foyer of the Townsville Entertainment and Convention Centre (TECC) during the following times:

2.00pm - 6.00pm Sunday

7.30am - 6.00pm Monday and Tuesday

8.00am - 1.30pm Wednesday

CONFERENCE ITEMS

CONFERENCE HANDBOOK

Each delegate will be given a Conference Handbook containing the Full Program including Abstracts of Paper Presentations.



ISRTO

Proudly Sponsored by Down Under Safety

POCKET PROGRAM

For quick reference a pocket sized Program will be supplied to all delegates.



Proudly Sponsored by Corporate Bodies International

INNOVATION SUBMISSIONS HANDBOOK

This is a compilation of all of the Submissions received for this year's Innovation Awards.

Proudly Sponsored by Resources RTO Association

NAME BADGE

Name badges will be provided at Registration. It is essential they be worn at all times to allow entry to Conference Sessions and all Social Functions.

Proudly Sponsored by MICOMM



CONFERENCE BAG

Proudly Sponsored by CFMEU Mining and **Energy Division, Queensland District**



STUDENT HOST PROGRAM

This Program is designed to promote Health and Safety within the Mining Industry by giving students who are studying relevant courses exposure to the industry via the medium of the Conference. Students are nominated from the Queensland Resources Council Graduate Program, Minerals Industry Safety and Health Centre, Griffith University and The University of Queensland.



Proudly Sponsored by Safety Equipment Australia

CONFERENCE PROCEEDINGS

The following Proceedings will be available post conference on the website at www.qldminingsafety.org.au

- PowerPoint presentations provided by Keynote Presenters
- PowerPoint presentations provided by Concurrent Session Presenters
- Papers provided by Concurrent Session Presenters
- PowerPoint presentations from the Innovation Sessions
- Innovation Finalists Submissions



Conference Proceedings Proudly Sponsored by ADT Security

JUPITERS GRAND MARQUEE

We wish to thank Jupiters Townsville for their generous Sponsorship of the Grand Marquee; the venue for the Welcome Function and all lunches.

Proudly Sponsored by Jupiters Townsville



DRESS CODE

Conference Sessions Smart casual Welcome Function - Sunday evening Smart casual Informal Dinner - Monday evening

Smart Casual - There will be no time to return to your Hotel after the last Business Session, so please dress for the occasion in the morning and

remember to bring a warm jacket.

Conference Dinner - Tuesday evening Lounge Suits or a Dress Shirt and Trousers for Men and Cocktail Attire for Ladies

/// COMPLIMENTARY COACH SERVICE

Coach Shuttle Timetable will be available at the Registration Desk, at your Hotel Reception and in the Conference Bag.

Airport Transfers

Sunday The Coach service will meet all main flights into Townsville Airport and transfer delegates to the *Conference Hotels.

Monday This service will also operate on Monday morning, picking up delegates at the Airport and transferring them to their Hotel

and/or to the Townsville Entertainment & Convention Centre (TECC).

Wednesday At the conclusion of the Conference Coaches will be waiting outside to transfer delegates from the Townsville

Entertainment & Convention Centre (TECC) to the Airport.

Daily Coach Shuttle Service

Business Sessions

Sunday Afternoon

This service will collect delegates from designated points close to the *Conference Hotels and take them to the Townsville Entertainment & Convention Centre (TECC) in time for Registration and the commencement of the Conference.

Monday, Tuesday and Wednesday

This service will operate Monday, Tuesday and Wednesday mornings and Tuesday afternoon between designated points close to the *Conference Hotels and Townsville Entertainment & Convention Centre (TECC).

Social Functions

Sunday Evening

Welcome Reception - Jupiters Townsville Grand Marquee

Coaches will be waiting outside the Convention Centre at the close of the Opening Session to provide transfers for any delegates who wish to go to their *Hotel before attending the Welcome Function. The Coaches will return to transfer delegates to Jupiters Townsville.

Delegates will be transferred back to their *Hotel at the end of the Function.

Monday Evening

Informal Dinner - THE QUARRY

Immediately following the conclusion of the Business Sessions, Coaches will be waiting outside TECC to transfer ALL delegates direct to THE QUARRY for the evenings Function.

PLEASE NOTE: There will be no time to return to your Hotel after the last Business Session, so please dress for the occasion in the morning and remember to bring a warm jacket.

Delegates will be transferred back to their *Hotels at the end of the Function.

Tuesday Evening

Conference Dinner - TECC

Coaches will be waiting outside the Convention Centre at the close of the Business Sessions to provide transfers to the Hotels for delegates to change for the Conference Dinner. The Coaches will return to transfer delegates to Townsville Entertainment & Convention Centre (TECC).

* Those Hotels organised through the Conference Organiser

Coach Transfers Proudly Sponsored by GCC Health, Safety and Hygiene GCG





/// CHARITY AUCTION



In aid of Bowel Cancer Australia

This year's charity auction, which will be held during the Informal Dinner on Monday evening, will support the Education Program being undertaken by Bowel Cancer Australia.

There are more than 14,000 reasons to support Bowel Cancer Australia - one for each person whose life will be changed when they are diagnosed with Bowel Cancer, and that's just in one year.

Unlike many other Cancers, Bowel Cancer is preventable, yet:

- it is the **second** biggest Cancer killer of Australians, after Lung Cancer;
- 77 Australians males and females, young and old lose their lives to this Cancer every week.

And this is where Bowel Cancer Australia comes in. The charity works to reduce the impact of Bowel Cancer in the community through **advocacy**, **awareness**, **education**, **support** and **research**.

Founded in 2000, Bowel Cancer Australia has grown significantly in the scope of its activities. However, it is still driven by a small core team of staff. Bowel Cancer Australia works across a range of activities that help prevent, detect and manage Bowel Cancer. It has earned a leading role in these activities while working with health organisations, government, business and volunteers to further leverage its efforts and results.

We continue to fundraise for our largest research project to date - the establishment of an Endowed Chair in Bowel Cancer research which will be the first of its kind in Australia. We also continue to support annual research projects which add to the body of knowledge about Bowel Cancer and will underpin important advances in its prevention, early detection and treatment.

Bowel Cancer Australia relies entirely upon donations and the support of hard working and enthusiastic fundraisers across the country to continue our work.

Many people support the Mining Industry in Queensland and this is just a small way of assisting those who provide that support.

This is a fun time for all — seeing who bids on what and the proceeds all go to a good cause. There are some great items for you to bid on — so make sure you are in the mood to spend a few dollars. There are also a few excellent Prizes to be won.

Master Auctioneer, Phil Black, is as entertaining as he is sharp, with his great wit and speed with the hammer, he will be doing his best to encourage you to dig deep to raise some much needed funding – the proceeds of which will go to this very important Program.

Please contact the Conference Organiser Acclaim if you would like to donate prizes for the Live and Silent Auctions or offer a cash donation in support of this initiative on 07 3254 0522.

WIMARQ Networking Function - Jupiters Townsville

Monday 19th August 5.00pm - 6.15pm Ballrooms 2 and 3, Jupiters Townsville



or 07 3316 2507

Award winner to speak at Networking Function - Jupiters Townsville. The Queensland Resources Council is proud to host a Women in Mining and Resources Queensland (WIMARQ) networking event on Monday 19 August. Guest speaker will be one of the joint winners of the QRC Resources Award for Women, Gender Diversity Champion, Tash Fee.

Tash is Owner/Trainer/Assessor at Drilling Skills Australia.

The WIMARQ events are well known for providing entertaining networking opportunities for women in the resource sector throughout Queensland. **Men are also encouraged to attend**.

The event is being staged as part of the annual Queensland Mining Industry Health and Safety Conference.

The event is **free**, but places are limited so it's advised to **book early**. Drinks and finger food will be provided. We look forward to seeing you there.

*NOTE: Coaches will be waiting outside Jupiters Townsville to transfer those attending the WIMARQ function to be taken straight to The Quarry for the Informal Dinner.

To book go to: https://www.qrc.org.au/02_cal/index.asp and follow the prompts
Further inquiries contact Caroline Morrissey at carolinem@grc.org.au

Wimarg
Women in Mining & Resources Queensland







SUNDAY 18th AUGUST

2.00pm - 6.00pm REGISTRATION - Townsville Entertainment and Convention Centre Foyer

4.30pm CONFERENCE OPENING

Andrew Klein, Master of Ceremonies

WELCOME

Hag Harrison, Chairman, Queensland Mining Industry Health and Safety Conference 2013

Cr Vern Veitch, Deputy Mayor, City of Townsville

5.15pm – 6.00pm KEYNOTE PRESENTATION - Proudly Sponsored by Anglo American Metallurgical Coal Page 19

Safety as Accountability Up or Responsibility Down

Sidney Dekker, Professor, Safety Science Lab, Griffith University and Honorary Professor,

School of Psychology, The University of Queensland

6.00pm WELCOME FUNCTION – Jupiters Townsville Grand Marquee

Proudly Sponsored by Peabody Energy

9.30pm to late THE RESCUE STATION - Lobby Bar, Jupiters Townsville

MONDAY 19th AUGUST

7.30am - 6.00pm REGISTRATION - Townsville Entertainment and Convention Centre Foyer

9.00am KEYNOTE PRESENTATIONS - Proudly Sponsored by LifeAid Pty Ltd Page 20

9.00am – 9.45am Safety is Everybody's Business

Ian Johnson, Principal Director, Paradox Ignited

9.45am – 10.30am The Mt Lyell Disaster of 1912: What Lessons can Still be Learned from

Australia's Worst Accident in a Metalliferous Mine?Prof. Geoffrey Blainey, One of Australia's best known academics

10.30am - 11.00am MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by Downer EDI Mining

11.00am KEYNOTE PRESENTATIONS - Proudly Sponsored by KINNECT Page 22

11.00am – 11.45am Keeping Focus on the Important Safety Issues

Andrew Faulkner, Chief Executive Officer, Arrow Energy Pty Ltd

11.45am –12.30pm Turning the Light on Inattention

Cristian Sylvestre, Managing Director, SafeStart

12.30pm – 1.30pm LUNCH AND DISPLAYS - Proudly Sponsored by Ansell Healthcare

1.30pm – 3.00pm INNOVATION PRESENTATIONS - Proudly Sponsored by Ernst Henry Mining Page 25

Floor Clip Installation Tool

Presenter: Les Brown, Maintainer Operator, Rio Tinto - Kestrel Coal Mine

No Hassall Magnetic Drill Steel Holder

Presenters: Chris Hassall, Development Engineering Coordinator and John Deacon, Development Superintendent, Peabody Energy

Acid Unloading Arm Sensor System

Presenter: Paul Bode, Instrumentation Officer, Reliability Department, Phosphate Hill,

Incitec Pivot Limited







An Integrated Approach to Reducing Overwatering Events

Presenters: Shane Fleming, Production Efficiency Manager, Leighton Contractors, Mining Division Coal, Jason Brown, Compliance Superintendent Sonoma Mine, Allan White, SHE Manager, Mining Division Coal and Andrew Buckley, Project Manager, Sonoma Mine

Brake Calliper Change Out Tool

Presenters: Evan Greenaway, Maintenance Supervisor and Dan Robertson, Maintenance Fitter, Anglo American, Capcoal Surface Operations

3.00pm - 3.30pm

AFTERNOON BREAK AND TRADE DISPLAYS - Proudly Sponsored by Downer EDI Mining

3.30pm - 5.00pm

INNOVATION PRESENTATIONS - Proudly Sponsored by Ernst Henry Mining Page 31

Thiess Mine Maintenance Engineering Safety Catalogue

Presenters: Graham Cleary, Archerfield Workshop Manager and Matt Sayers, Plant & Asset Engineering Manager, Thiess Pty Ltd

Enhancing Site Emergency Response Capability

Presenter: Steve Hambrecht, Specialist Asset Protection, BHP Billiton Cannington

Underground Carbon Reduction Project

Presenters: Darren Reid, Superintendent Mobile Maintenance, BHP Billiton Cannington, Gordon Bontfot, Product Support Representative Hastings Deering

Manual Task Risk Assessment Tool

Presenter: Joel Edson, Occupational Therapist, Mount Isa Mines

GAG Docking Station

Presenter: Luke Perrin, Ventilation Coordinator, Glencore Coal - Oaky No 1 Colliery

5.00pm

Coaches depart for THE QUARRY direct from TECC at the end of the days sessions.

Immediately following the conclusion of the Business Sessions, Coaches will be waiting outside TECC

to transfer ALL delegates direct to THE QUARRY for the Informal Dinner.

PLEASE NOTE:

There will be no time to return to your Hotel after the last Business Session, so please dress for the occasion in the morning and remember to bring a warm jacket.

5.00pm - 6.15pm

WIMARQ Networking Function - Ballrooms 2 and 3, Jupiters Townsville

Immediately following the conclusion of the WIMARQ Function, Coaches will be waiting outside Jupiters Townsville Hotel to transfer ALL attendees direct to THE QUARRY for the Informal Dinner.

6.00pm - 10.00pm

INFORMAL DINNER and CHARITY AUCTION - The Quarry Charity Auction in aid of Bowel Cancer Australia

Proudly Sponsored by uvex safety Australia







TUESDAY 20th AUGUST

7.30am – 6.00pm REGISTRATION - Townsville Entertainment and Convention Centre Foyer

9.00am KEYNOTE PRESENTATIONS - Proudly Sponsored by Joncris Sentinel Services Page 39

9.00am – 9.45am The Influence of Risk Perception on Safety Behaviour of Young Workers

Rob Duncan, Founder and Chief Executive Officer, BRAKE

9.45am - 10.30am Decisions, Decisions, Decisions - How Resilient Leaders Cope with Demand

Dr Toby Ford, Chief Executive Officer, Medical Director, Ford Health Group

10.30am - 11.00am MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by New Hope Group

11.00am - 12.30pm CONCURRENT PAPERS Page 41

Auditorium 1

THE HUMAN FACTOR

Proudly Sponsored by KINNECT

Chair - Tony Shearman, Health Safety & Security Manager, MMG

11.00 - 11.25am

Humans, The Strongest Link in Your Safety Chain

Lincoln Eldridge, Vice President SAFEMap International

11.30 - 11.55am

The Big Bad Wolf: Using Narrative to Train Safety

Nerida Newton, Senior Instructional Designer, Babblewire

12.00 - 12.30pm

Financial Literacy - Making your Workplace a Much Happier and Safer Place To Be

Adrian Vowles.

Business Relationship Manager and **Des Sutherland**, Service Advice and Education Manager,

AUSCOAL Superannuation Pty Ltd

Magnetic Room MENTAL HEALTH

Proudly Sponsored by Corporate Bodies International

Chair - Vince De Carolis, Head of HSEC, BHP Cannington

11.00 - 11.25am

Working Well: Mental Health and Mining

Professor Brian Kelly, School of Medicine and Public Health, Hunter Institute for Mental Health, The University of Newcastle and Robyn Considine, Director, Consan Consulting

11.30 - 11.55am

Management of Psychosocial Issues in the Workplace

Dr Robert McCartney, Chief Medical Officer, Kinetic Health

12.00 - 12.30pm

Mental Health: Moving Beyond Risk Management

Dr Danica Hooper, State Manager/Psychologist, People Solutions

Palm Room HEALTH RISK MANAGEMENT

Proudly Sponsored by Protector Alsafe

Chair - Brendan Callaghan, Sustainable Development Manager, Ernest Henry Mining

11.00 - 11.25am

Undertaking Evidence Based Health Risk Management: How are We Valuing Our People?

Trudy Tilbury, Advisor - Érgonomics and Human Factors and Inspectorate of Mines (Occupational Health), Department of Natural Resources and Mines

11.30 - 11.55am

Effective Health Surveillance in Mining: Blood Lead Levels in Open and Underground Mines

Dr Josh Munn, Director, OccMed NQ

12.00 - 12.30pm

Health and Safety Regulation of Naturally Occurring Radioactive Materials (NORM)

Dr Ian Ellison, Senior Inspector of Mines (Chemical/Metallurgical/ Radiological), Department of Natural Resources and Mines

Jupiters Coral Sea Room DIESEL PARTICULATES

Proudly Sponsored by BHP Billiton

Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

11.00 - 11.25am

Update - DPM Health Effects and the Exposure Standard

Alan Rogers, Director, Alan Rogers OH&S Ptv Ltd

11.30 - 11.55am

DPM and the Law: How to Navigate the Shifting Sands of Science

Dr Michael Maxwell,Special Counsel, Litigation & Dispute
Resolution, Clayton Utz

12.00 - 12.30pm

Best Practice in Diesel Emissions Management for Mining

Colin Chandler, Advisor, Peak3

/// CONFERENCE PROGRAM



1.30pm – 3.00pm CONCURRENT PAPERS Page 55

Auditorium 1

LEADERSHIP

Proudly Sponsored by Jobfit Systems International

Chair - Greg Chalmers, Chief Executive Officer, Jellinbah Group

1.30 - 1.55pm

Valuing People - Valuing Safety Roger Kahler, Principal Consultant, The InterSafe Group Pty Ltd

2.00 - 2.25pm

A Strategic Approach to On Site OHS Communication

Hugh Shannon, Lecturer, Queensland University of Technology, School of Exercise and Nutrition Sciences, Institute of Health and Biomedical Innovation

2.30 - 3.00pm

The Commercial Implications of Poor Safety as a Driver for Change

Natasha Kendal, Director, Innovation Consultina

Magnetic Room MUSCULO-SKELETAL

Proudly Sponsored by MMG

Chair - Alan Miskin,

Director Safety and Health, Peabody Energy Australia

1.30 - 1.55pm

From Research to Practice: New Approaches to Injury Prevention in Mining

Tony Parker AM, Professor Emeritus, Queensland University of Technology, Faculty of Health, Institute of Health & Biomedical Innovation

2.00 - 2.25pm

An Integrated Approach to Injury Prevention and Improved Safety in Coal Mining

Camille Rains, Senior Physiotherapist, Construct Health

2.30 - 3.00pm

Evaluation of Observational Task Analysis Methods for Use in the Mining Industry

Michael McDonald, Lecturer in Biomechanics, Queensland University of Technology, Faculty of Health, School of Exercise and Nutrition Science, Institute of Health & Biomedical Innovation

Palm Room VEHICLE SAFETY

Proudly Sponsored by Thiess

Chair - Stephen Smythe,
District President, CFMEU Mining and
Energy Queensland District

1.30 - 1.55pm

Reducing the Risk of Uncontrolled Movements for Road Going Vehicles used in Mining Operations

Martin Johnston, General Manager – Mining, Advanced Braking Technology Ltd

2.00 - 2.25pm

Safe Road System: Road Watering Improvement Process Pavid Tullach, Managing Director

David Tulloch, Managing Director, RoadSafety Training Services Pty Ltd

2.30 - 3.00pm

'Fit for Purpose' Tyre
Maintenance Equipment and
Management Practices for
Non-earthmover Mining Vehicles
- an ACARP Study to Improve
Tyre Safety

Dr Tilman Rasche, Acting Executive Director, Simtars

Jupiters Coral Sea Room

DIESEL PARTICULATES

Proudly Sponsored by Kenelec Scientific Ptv Ltd

Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

1.30 - 1.55pm

Calibration of Raw Exhaust Monitoring Equipment

2.00 - 2.25pm

Reduction of DPM Mass Using Ultrasonic Diesel Exhaust Soot Scrubber

Dr Patrick Glynn, Peak3 Pty Ltd

2.30 - 3.00pm

Managing Exposure to DPM in an Underground Mine

Darrel Grant

Mechanical Engineering Manager, Kestrel Mine - Rio Tinto







AFTERNOON BREAK AND DISPLAYS 3.00pm - 3.30pm

Proudly Sponsored by Compass Group (Australia) Pty Ltd

3.30pm - 5.00pm**CONCURRENT PAPERS** Page 69

Auditorium 1 Magnetic Room

LEGAL ISSUES

Proudly Sponsored by Sparke Helmore Lawyers

Chair - Patrick Tyrrel, Geology Manager & SSÉ Resource Development, New Hope Group

3.30 - 3.55pm

Harmless Fun or Serious Safety Breach?

Belinda Winter, Partner, Cooper Grace Ward Lawyers

4.00 - 4.25pm

But I'm Not the SSE...Mine "Worker" Safety Obligations

Brett Elgar, Special Counsel and Alastair Smith, Lawyer, Ashurst - Australia

4.30 - 5.00pm

How Far Must the Company Go to Protect a Worker's Safety? Matthew Smith, Partner and

Dianne Hollyoak, Special Counsel, Sparke Helmore Lawyers

OCCUPATIONAL HEALTH

Proudly Sponsored by Anglo American Metallurgical Coal

Chair - Rod Dixon,

General Manager, Plant and Asset Management, Thiess Pty Ltd

3.30 - 3.55pm

Application of the Thermal Work Limit Model for Effective Workplace Heat Stress Management

Dr Nicholas Burke, Medical Director/Occupational Physician and Neil Hokins, Paramedic Consultant, 4cRisk Ptv Ltd

4.00 - 4.25pm

Noise Induced Hearing Loss Jenny Stevens, Chief Executive

Officer, Attune Hearing Pty Ltd

4.30 - 5.00pm

Obesity Within the Workplace - Health, Safety and Human **Resource Perspective** Warren Orsmond,

Exercise Physiologist, North Queensland Therapy Services **Palm Room**

RESPONDING TO INCIDENTS

Proudly Sponsored by CFMEU Mining and Energy Queensland District

Chair - Mike Oswell.

Head of Safety and Sustainable Development, Anglo American Metallurgical Coal

3.30 - 3.55pm

Learning from Disaster: A Glimpse into Queensland's Coronials

Natasha Kendall, Director. Innovation Consulting

4.00 - 4.25pm

Scoping Safety Investigations

Harold Downes, Partner, Herbert Smith Freehills

4.30 - 5.00pm

The Evaluation of Laser Guidance Systems for use on a Self Escape Vehicle after an Underground **Mine Explosion**

André De Kock, Acting Director -Mining Research and Development Centre, Simtars

Jupiters Coral Sea Room

DIESEL PARTICULATES

Proudly Sponsored by Peabody Energy Australia

Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

3.30 - 3.55pm

DPM and At-Risk SEGs - What the Monitoring Data Can Tell Us

Greg Manthey, Principal Occupational Health & Hygiene Specialist, Simtars and Fritz Djukic, Inspector of Mines (Occupational Hygiene) Queensland Mines Inspectorate - Central Region. Department of Natural Resources and Mines

4.00 - 4.25pm

Guidance Note for Diesel Engine Exhaust Management

Jack Farry, Senior Inspector of Mines (Occupational Hygienist) Department of Natural Resources and Mines

4.30 - 5.30pm

Discussion

Facilitated by Dr Brian Davies AM, and Alan Rogers

5.00pm - 6.30pm

THE RESCUE STATION - Lobby Bar, Jupiters Townsville

6.45pm - 7.30pm

PRE DINNER DRINKS - Townsville Entertainment and Convention Centre, Forecourt and Palm Lawn

7.30pm

CONFERENCE DINNER AND INNOVATION AND HEALTH PROGRAM AWARDS Townsville Entertainment and Convention Centre Auditorium

Proudly Sponsored by Leighton Contractors



/// CONFERENCE PROGRAM



WEDNESDAY 21st AUGUST

8.00am - 1.30pm

REGISTRATION - Townsville Entertainment and Convention Centre Foyer

9.00am - 10.00am

"So now we're talking" - Part 1 - Proudly Sponsored by Ansell Healthcare Page 81

'The silent killers - at what point do serious problems become major health and safety issues?

Our people are living with these issues everyday – people that you least expect, our workmates, our family members; so the question is..... at what point do we start paying attention?

MC Andrew Klein will lead a team of experts, celebrities and real people who have had close association with these issues to unlock, demystify and open up the can of worms so we all learn how to pay attention......

Our panel of experts; Naomi Rogers, Clay Butler, Tammy Farrell and Naomi Armitage will be joined by two extraordinary Australians, Olympic Gold Medalist and Swimming Legend and Ambassador for the Black Dog Institute and beyondblue - John Konrads and Legendary Rock Icon and humanitarian... Angry Anderson.

10.00am - 10.30am

MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by Australian Workers' Union

10.30am - 12.00pm "So now we're talking" - Part 2 - Proudly Sponsored by Ansell Healthcare Page 81

'The silent killers - at what point do serious problems become major health and safety issues? Now we know what we are dealing with – what are we going to do about it?

MC Andrew Klein will engage our team to explore what can be done to improve how we face up to the thorny issues!

Angry Anderson, John Konrads and our team of experts; Naomi Rogers, Clay Butler, Tammy Farrell and Naomi Armitage and everyone present will have the chance to have their say as we open up and expose what's in the can or worms and work out how to deal with what we find.

A prize will be awarded to the person who poses the most insightful and probing question from the audience.

12.05pm

FORMAL CLOSE OF CONFERENCE

Liz Sanderson, Chairperson, Queensland Mining Industry Health and Safety Conference 2014

12.30pm -1.30pm

FAREWELL LUNCH - Proudly Sponsored by Inova Resources

/// SOCIAL PROGRAM

Social Activities offer a rare and invaluable opportunity for networking and for you to catch up with friends and colleagues and make new contacts within the industry hence we encourage you to arrive early to take part in the Welcome Function on Sunday Evening.

The Informal Dinner is another great chance to catch up with friends and the Conference Dinner is a great event – attracting over 750 people last year.

TICKETS INCLUDED

TICKETS TO ALL LUNCHES AND SOCIAL FUNCTIONS <u>ARE INCLUDED IN THE REGISTRATION PRICE FOR ALL DELEGATES WHO HAVE PURCHASED FULL REGISTRATIONS</u>.

PARTNER AND GUEST TICKETS AVAILABLE.

There will be a limited number of tickets still available for purchase - Just ask the staff at the Registration Desk as soon as you arrive.

SUNDAY 18th August

6.00pm WELCOME FUNCTION – Jupiters Townsville - Proudly Sponsored by Peabody Energy

The Welcome Function this year will be in and around the Grand Marquee and Poolside at Jupiters Townsville

Always one of the most important events at this Conference, the Welcome Function sets the scene for the whole event. This is where we all gather to kick of the Social part of the Conference.

You can be guaranteed a mouth watering menu, great entertainment by Nev Milne and with the chance to catch up with friends and colleagues, many of whom you may not have seen for years. We encourage all to arrive in time for this event. It's easy just follow the signs to the Grand Marquee at Jupiters Townsville.

COACH TRANSFERS – *TECC to Hotels* - At the conclusion of the Business Session coaches will be waiting outside TECC to transfer those delegates who wish to go back to their Hotels prior to returning them to Jupiters Townsville for the Welcome Function.

COACH TRANSFERS – *Back to the Hotels* - At the end of the Function a Coach shuttle will be available to transfer delegates back to their Hotels.

Partner and Guest Tickets \$80.00 per person - If you would like to bring a friend these are for additional tickets **only**. Your tickets are included in your Registration if you are a Full Paying Delegate.

MONDAY 19th August

12.30pm LUNCH – The Grand Marquee, Jupiters Townsville - Proudly Sponsored by Ansell Healthcare

Partner and Guest Tickets \$41.00 per person

5.00pm Coaches depart direct from TECC for THE QUARRY.

6.00pm INFORMAL DINNER AND CHARITY AUCTION – The Quarry - Proudly Sponsored by uvex safety Australia

This year we venture forth to a great location for the Informal Dinner. The Quarry has been the site of several prestigious events including the Queensland Tourism Awards. A Big night for all with a great Aussie Barbecue, great entertainment and great company.

ENTERTAINMENT – Entertaining us this evening will be Mr John Schumann and his group....a must see for everyone.

CHARITY AUCTION – This year's charity auction will support the Education Program being undertaken by Bowel Cancer Australia.

PLEASE NOTE: Coaches will transfer all delegates direct from TECC to THE QUARRY, so don't wander off or you may miss out.

There will be no time to return to your Hotel after the last Business Session, so please dress for the occasion by bringing a warm jacket.

Partner and Guest Tickets \$94.00 per person





TUESDAY 20th August

12.30pm **LUNCH – The Grand Marquee, Jupiters Townsville - Proudly Sponsored by Kinetic Health**

Partner and Guest Tickets \$41.00 per person

6.45pm PRE DINNER DRINKS – Townsville Entertainment and Convention Centre, Forecourt and Palm Lawn

CONFERENCE DINNER – INNOVATION & HEALTH PROGRAM AWARDS – Townsville Entertainment and Convention Centre 7.30pm

Proudly Sponsored by Leighton Contractors

The Conference Dinner is one of the highlights of this event providing an excellent opportunity for all delegates to relax and enjoy each other's company in a Social environment. Dinner and beverages will be served and there will be excellent entertainment for all to enjoy.

Entertaining us this evening will be the amazing 'Soul Mystique', Grand finalists in Australia's Got Talent. They will be supported by the lovely Tracy Osmond from Abbey Road.

Partner and Guest Tickets \$125.00 per person

Presentation of the Queensland Mining Industry Health and Safety Innovation Awards

A feature of this evening - will be the announcement of the winners of the Queensland Mining Industry Health and Safety Innovation Awards for 2013, which this year will attract a grand prize sponsored by uvex safety Australia of a trip to Dusseldorf, Germany for two days between the 5th and 8th November 2013 to participate in activities that *include attendance at the A+A International Trade Show and a visit to uvex's Global Head Office and Training Centre in Fuerth Bavaria.

The winners will be provided a full itinerary.

Presentation of the inaugural 2013 Queensland Mining Industry Health Program Awards

The Awards will include a Corporate Award of a Perpetual Trophy and an Individual Award to the value of over \$5000.00

WEDNESDAY 21st August

12.30pm **LUNCH – The Grand Marquee, Jupiters Townsville -** *Proudly Sponsored by Inova Resources*

Partner and Guest Tickets \$41.00 per person



/// MASTER OF CEREMONIES



Andrew Klein

Andrew is Director of SPIKE Presentations (....helping you get your point across) He is a Professional MC and Presentation Skills trainer. A former corporate lawyer, Andrew brings his casual yet corporate style to proceedings, adding an extra element with his humour and creativity.

He has become well-known on the conference circuit in Australia and Asia, for his ability to involve the audience in proceedings, his revealing speaker introductions, his improvisational skills and ability to adapt to different audiences. Apart from MC'ing, Andrew runs entertaining and highly educational workshops in Presentation Skills and Pitching for Business. His clients include Minter Ellison, MLC, AGL, Ernst & Young, Westpac, Allianz, NSW

Health, Bayer Healthcare, IBM, Aged Care Association Australia, Telstra and his mother-in-law's bridge club.

Andrew's hobbies include coaching basketball, getting his hair cut, reading Dr Seuss books and trying to convince his wife and 3 young kids that he has a real job.

/// KEYNOTE PRESENTERS



Professor Geoffrey Blainey

Geoffrey has a long and distinguished career. For twenty years as Professor of Economic History, then as an Ernest Scott Professor of History at the University of Melbourne. He has also held the Chair of Australian Studies at Harvard University.

He is a member of various federal government committees, has been Chairman of the Australian Council for the Arts, Chairman of the Australia-China Council, and Chairman for the National Council for the Centenary of Federation.

He is the author of 36 books, including "Mines in the Spinifex", "The Tyranny of Distance" and "The Causes of War". A recent title, "A Short History of the World", is an international best-seller. His latest book A Short History of Christianity, told in 600 pages.



Sidney Dekker

Sidney (PhD, The Ohio State University, 1996) is a professor at Griffith University in Australia, where he runs the Safety Science Innovation Lab and he is an Honorary Professor of Psychology at The University of Queensland.

A best-selling author, Sidney has won worldwide acclaim for his ground breaking work on human error and system safety. After becoming professor, he learned to fly the Boeing 737 and flew as an airline pilot on the side. He has worked and lived in New Zealand, the UK, the US, Sweden, Singapore, the Netherlands and Australia. His latest book is "Second Victim: Error, Guilt, Trauma and Resilience".



Rob Duncan

Rob has over 25 years policing experience and is the Chief Executive of BRAKE. Attendance at serious crashes and having to tell parents that their son or daughter had been killed convinced him that action was required.

Together with a core of like-minded volunteers and authoritative researchers a resilience training program was developed. BRAKE was registered as a charity and commenced in six secondary schools in 2007 and is now facilitated in over 60 schools across Queensland.

Andrew Faulkner

Andrew was appointed Chief Executive Officer of Arrow Energy Pty Ltd in August 2010 following the acquisition of Arrow Energy by a Shell and PetroChina JV. Andrew joined Shell in 1982 and has over 30 years experience in the oil and gas industry, spanning five continents. He has worked globally in a variety of technical, commercial and managerial roles on a wide range of upstream oil and gas projects with responsibilities around new business development, project development and execution, production operations and governance.

Prior to the move to Arrow, Andrew worked as Vice President Technical and Production for the Middle East and North Africa, based in Dubai, and Vice President North Asia and Floating LNG, based in Singapore. Andrew also sits on the Board of the Queensland Resources Council. Andrew graduated with a first class degree in Civil Engineering from Auckland University in 1981.



Dr Toby Ford

Toby has been a medical practitioner for 25 years providing corporate health services to the extraction, construction and infrastructure sector. Originally focused on occupational health and statutory compliance medicine, he moved 13 years ago into wellbeing prevention and workforce health asset management.

His company Ford Health, provides health and wellbeing solutions to over 40 organisations operating in this sector across Australia and internationally. Ford Health's longitudinal data on how health effects work and work effects health is unique and forms the basis of understanding performance, stress management, men's health, decision making fatigue and resilience in working aged populations of Australia. Ford Health also provide health

services to other business and government sectors. They also run a philanthropic program called the "Healthy Farmers Program" bridging the health gap for people living and working in rural and remote Australia.



Ian Johnson

lan is an Industrial Accident Survivor and Advocate for OH&S Awareness. As an industrial accident survivor, he speaks to ignite safety awareness in workers' thoughts and save them from suffering an incident in the work place or in the home.

Through his experience, Ian wishes to evoke," WHY the need for safety training, is crucial to the workforce and their families". Ian has worked in the Construction and Water Industries for the past 27 years, returning to work after his accident and regaining confidence to re-enter Confined Spaces.

lan's has the unique experience of 21 years post incident, to recall on his Recovery, Recuperation, Return to work, Up skilling and his traumatic journey which started in one prolonged second on a normal day.



Cristian Sylvestre

Cristian is a human error prevention specialist. He has applied the theory in more than 100 workplaces with significant success. He is currently assisting a number of organisations develop and implement 'leading edge' human error prevention programs focussed at the individual level.

Cristian has a Chemical Engineering Degree with Honours and a Masters Degree. Cristian has had a long career in safety having held various senior safety and environmental roles in ICI, Shell and other organisations over a 20 year period where he has acquired a different way of thinking about safety. Cristian is a frequent speaker at safety conferences across Australia and New Zealand. He has presented numerous keynote presentations in public and

private events to a varied number of industries.

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INNOVATIONS AWARDS FOR 2013

Queensland Mining Industry Health and Safety Innovations Awards 2013

The Innovation Sessions continue to be a highlight of the Conference with the 10 finalists presenting their Innovations on Monday afternoon. These Innovations continue to be designed to demonstrate the initiative, ingenuity and advances in technology and systems that can and will provide enormous benefit to the health and safety of those in the mining industry in Queensland.

We are proud to announce that this year uvex safety Australia are sponsoring a Prize of a trip for two for the winners to Germany - the *Prize to include visits to:

- A+A International Trade Show in Dusselfdorf, Germany for 2 days between 4 6 November
- uvex's Global Head Office and Training Centre in Feurth, Bavaria, Germany
- * A full itinerary will be made available to the winners.



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INAUGURAL HEALTH AWARDS FOR 2013

We are proud to announce the 2013 Queensland Mining Industry Health Program Awards which are sponsored by the Mine Safety Institute of Australia.

The Awards include a Corporate Award of a Perpetual Trophy and an Individual Award to the value of over \$5000.00.

The Awards will be presented at the Conference Dinner on Tuesday evening.

/// CONFERENCE PROGRAM - KEYNOTE PRESENTATIONS

SUNDAY 18th AUGUST

I.30pm	CONFERENCE OPENING Andrew Klein, Master of Ceremonies
	WELCOME
	Hag Harrison, Chairman, Queensland Mining Industry Health and Safety Conference 2013
	Cr Vern Veitch, Deputy Mayor, City of Townsville
5.15pm – 6.00pm	KEYNOTE PRESENTATION - Proudly Sponsored by Anglo American Metallurgical Coal
	Safety as Accountability Up or Responsibility Down Sidney Dekker, Professor, Safety Science Lab, Griffith University and Honorary Professor, School of Psychology, The University of Queensland
6.00pm	WELCOME FUNCTION - Jupiters Townsville Grand Marquee
•	Proudly Sponsored by Peabody Energy
9.30pm to late	THE RESCUE STATION - Lobby Bar, Jupiters Townsville
-	ability Up or Responsibility Down
Presenter: Slaney De	kker, Professor, Safety Science Lab, Griffith University and Honorary Professor,
_	kker, Professor, Safety Science Lab, Griffith University and Honorary Professor, Psychology, The University of Queensland
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/// CONFERENCE PROGRAM - KEYNOTE PRESENTATIONS

MONDAY 19th AUGUST

7.30am - 6.00pm REGISTRATION - Townsville Entertainment and Convention Centre Foyer

9.00am KEYNOTE PRESENTATIONS - Proudly Sponsored by LifeAid Pty Ltd

9.00am – 9.45am Safety is Everybody's Business

Ian Johnson, Principal Director, Paradox Ignited

9.45am - 10.30am The Mt Lyell Disaster of 1912: What Lessons can Still be Learned from

Australia's Worst Accident in a Metalliferous Mine?Prof. Geoffrey Blainey, One of Australia's best known academics

10.30am - 11.00am MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by Downer EDI Mining

/// NOTES:

Safety is Everybody's Business

Presenter: Ian Johnson, Principal Director, Paradox Ignited				



/// NOTES:

The Mt Lyell Disaster of 1912: What Lessons can Still be Learned from Australia's Worst Accident in a Metalliferous Mine?

Presenter: Prof. Geoffrey Blainey, One of Australia's best known academics					



/// CONFERENCE PROGRAM - KEYNOTE PRESENTATIONS

MONDAY 19th AUGUST

11.00am KEYNOTE PRESENTATIONS - Proudly Sponsored by KINNECT

11.00am - 11.45am Keeping Focus on the Important Safety Issues

Andrew Faulkner, Chief Executive Officer, Arrow Energy Pty Ltd

11.45am –12.30pm Turning the Light on Inattention

Cristian Sylvestre, Managing Director, SafeStart

12.30pm – 1.30pm LUNCH AND DISPLAYS - Proudly Sponsored by Ansell Healthcare

/// NOTES:

Keeping Focus on the Important Safety Issues

Presenter: Andrew Faulkner, Chief Executive Officer, Arrow Energy Pty Ltd				

/// NOTES:

Turning the Light on Inattention Presenter: Cristian Sylvestre, Managing Director, SafeStart					

INNOVATION AWARDS FINALISTS 2013



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GAG Docking Station	Pg 36

Innovation Submissions 2013

This year 18 submissions were received for the Innovation Awards.

With a view to providing a wider circulation throughout the Industry, the Conference Committee has printed a separate publication which includes all the Innovations received for the 2013 Awards.







MONDAY 19th AUGUST

1.30pm - 3.00pm

INNOVATION PRESENTATIONS - Proudly Sponsored by Ernst Henry Mining

Floor Clip Installation Tool

Presenter: Les Brown, Maintainer Operator, Rio Tinto - Kestrel Coal Mine

No Hassall Magnetic Drill Steel Holder

Presenters: Chris Hassall, Development Engineering Coordinator and John Deacon, Development Superintendent, Peabody Energy

Acid Unloading Arm Sensor System

Presenter: Paul Bode, Instrumentation Officer, Reliability Department, Phosphate Hill, Incitec Pivot Limited

An Integrated Approach to Reducing Overwatering Events

Presenters: Shane Fleming, Production Efficiency Manager, Leighton Contractors, Mining Division Coal, Jason Brown, Compliance Superintendent Sonoma Mine, Allan White, SHE Manager, Mining Division Coal and Andrew Buckley, Project Manager, Sonoma Mine

Brake Calliper Change Out Tool

Presenters: Evan Greenaway, Maintenance Supervisor and Dan Robertson, Maintenance Fitter, Anglo American, Capcoal Surface Operations

3.00pm – 3.30pm	AFTERNOON BREAK AND TRADE DISPLAYS - Proudly Sponsored by Downer EDI Mining

/// NOTES:

Floor Clip Installation Tool

Presenter: Les Brown, Maintainer Operator, Rio Tinto - Kestrel Coal Mine

The Problem

The construction of the Kestrel Coal Processing Plant and many similar plants includes many hundreds of square meters of steel tread or walkway mesh. These mesh walkways are retained by fit-for-purpose retaining clips or clamps.

The corrosive nature of the operating environment requires that these retainers require periodic inspection, maintenance and, or, replacement. The vast size of the coal handling and processing system means there are literally thousands of these retaining clips. This was one of the tasks allocated to me shortly after joining the Coal Processing team.

The task essentially involves crouching down on grating with fingers passed through the gap to support a nut on the bottom. A retaining bolt is passed through the clamp, threaded through the nut being held in position and tightened. This job was carried out using rudimentary hand tools; was time consuming, labour intensive and hazardous, with many hours spent in a crouched position.

The general hazards included poor ergonomic design, potential for interaction between pedestrian traffic and dropped objects, as well as finger and soft tissue injuries. Upon realising the limitations, hazards and inefficiencies of the task to be performed, I decided to look for a safer and more efficient way to complete the task.





No Hassall Magnetic Drill Steel Holder

Presenters: Chris Hassall, Development Engineering Coordinator and John Deacon, Development Superintendent, Peabody Energy

The Problem

Risk of operator injury whilst bolting using Continuous Miner.

On the 28th August, 2012 an operator was operating the roof bolter on the continuous miner at the development face of North Goonyella Mine.

The operator rested the drill steel on his foot, he began to lower the timber-jack. The drill steel was caught under the lowering timber jack pushing the steel into the person's foot. Peabody maintains a strict requirement for metatarsal boots to be worn at all sites, however despite this, the force was sufficiently strong enough to crush both the metatarsal-protecting layer and the operator's right foot, causing fractures to the bones in his right foot. The operator was only able to remove this foot by raising the timber jack back up.

The investigation revealed that it was common practice for operators to rest the drill steels on their feet and other underground mines had seen similar injuries resulting from this practice before.

The findings of the incident investigation were shared with the operators to raise awareness and generate discussion about why operators commonly rested the drill steel on their feet and what could be done to prevent a similar incident re-occurring.

The feedback from the operators confirmed it was common industry practice for drillers to rest the drill steel on their boots to stop coal dust and debris blocking up the drill steel water port. The incident confirmed the likelihood that when the timber jack is lowered it can catch the drill steel and press it down onto the operators boot. Post-incident investigations concluded this type of incident had already resulted in several injuries within the industry, and furthermore was highly likely to cause more serious injuries unless something was done about it.

Studies have concluded that roof bolting is the most dangerous job in underground coal mines. (Burgess-Limerick)

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/// NOTES:

Acid Unloading Arm Sensor System

Presenter: Paul Bode, Incitec Pivot Limited

The Problem

At our Phosphate Hill manufacturing plant we decant approximately 900,000 litres of Sulphuric Acid per year. A series of interconnected Gatx rail containers are discharged through an air pressurised system. The transfer system is connected to containers with a Transfer Arm and the transfer itself is controlled via a remote DCS control system.

During the disconnection of the Transfer Arm it is vital that the system is brought to a neutral state to prevent the discharge of Sulphuric Acid or mist. The problem is that there is no way of positively confirming the neutral state of the arm other than control panel indication. This could result in an operator being sprayed with acid or being knocked over by the force of the arm being blown back





An Integrated Approach to Reducing Overwatering Events

Presenters: Shane Fleming, Production Efficiency Manager, Leighton Contractors, Mining Division Coal, Jason Brown, Compliance Superintendent Sonoma Mine, Allan White, SHE Manager, Mining Division Coal and Andrew Buckley, Project Manager, Sonoma Mine

The Problem

Poor or inconsistent watering practices have contributed to a number of truck slides within our business. The consequence of these truck slides has ranged from a minor loss of control to events where a truck was 'uncontrolled' for a considerable distance. During the 2011 and 2012 period, our business experienced an average truck slide frequency rate of 5.2 per million man hours (this excludes truck slide incidents associated with wet weather).					



/// NOTES:

Brake Calliper Change Out Tool

Presenters: Evan Greenaway, Maintenance Supervisor and Dan Robertson, Maintenance Fitter, Anglo American, Capcoal Surface Operations

The	Pr	nh	lem	

The Problem The initial idea for the Brake Calliper Change Out tooling was raised by the crew in their monthly safety meeting. It had been identified that a tool was needed to replace the brake callipers on our new fleet of 830E trucks. The calliper weighs approximately 60kgs and using two people to manoeuvre this was an unacceptable safety risk presenting unacceptable manual handling hazards to the tradesman involved.





MONDAY 19th AUGUST

3.30pm - 5.00pm **INNOVATION PRESENTATIONS - Proudly Sponsored by Ernst Henry Mining**

Thiess Mine Maintenance Engineering Safety Catalogue

Presenters: Graham Cleary, Archerfield Workshop Manager and Matt Sayers, Plant & Asset Engineering Manager, Thiess Ptv Ltd

Enhancing Site Emergency Response Capability

Presenter: Steve Hambrecht, Specialist Asset Protection, BHP Billiton Cannington

Underground Carbon Reduction Project

Presenters: Darren Reid, Superintendent Mobile Maintenance, BHP Billiton Cannington,

Gordon Bontfot, Product Support Representative Hastings Deering

Manual Task Risk Assessment Tool

Presenter: Joel Edson, Occupational Therapist, Mount Isa Mines

GAG Docking Station

Presenter: Luke Perrin, Ventilation Coordinator, Glencore Coal - Oaky No 1 Colliery

5.00pm Coaches depart for THE QUARRY direct from TECC at the end of the days sessions.

Immediately following the conclusion of the Business Sessions, Coaches will be waiting outside TECC

to transfer ALL delegates direct to THE QUARRY for the Informal Dinner.

PLEASE NOTE: There will be no time to return to your Hotel after the last Business Session, so please dress for the

occasion in the morning and remember to bring a warm jacket.

5.00pm - 6.15pm WIMARQ Networking Function - Ballrooms 2 and 3, Jupiters Townsville

> Immediately following the conclusion of the WIMARQ Function, Coaches will be waiting outside Jupiters Townsville Hotel to transfer ALL attendees direct to THE QUARRY for the Informal Dinner.

INFORMAL DINNER and CHARITY AUCTION - The Quarry 6.00pm - 10.00pm

Charity Auction in aid of Bowel Cancer Australia

Proudly Sponsored by uvex safety Australia



/// NOTES:

Thiess Mine Maintenance Engineering Safety Catalogue

Presenters: Graham Cleary, Archerfield Workshop Manager and Matt Sayers, Plant & Asset Engineering Manager, Thiess Pty Ltd

The Problem

The mining industry has witnessed major advances in plant and equipment in recent years particularly with respect to technology and size. These changes have resulted in new challenges for our maintenance personnel who need to continue to develop innovative ways to access and carryout maintenance activities safely.

Some of the core challenges to overcome are:

- Protection from heights as a result of the significant increase in the physical size of our plant.
- The ability to manage the increase in componentry and tooling weight, again a result of the increasing size of equipment.
- Providing ergonomically sound solutions to carryout work, reducing the risk of sprains and strains or hand injuries.
- The removal of slipping and tripping hazards while carrying out maintenance activities.

Many of our maintenance personnel have great ideas about how to overcome safety challenges while completing maintenance tasks. After all, these are the people who are doing the job day in and day out and who will experience the dangers firsthand if the proper measures aren't implemented.

The problem in the past has been:

The absence of a consistent and dedicated process and resources to bring our people's ideas to fruition, and

Thiess places great importance on ensuring our projects are interlinked, particularly with regard to safety and innovation. When

• Providing a sustainable method to communicate and promote the use of our ideas across our sites.

pockets of excellence at individual projects were being discussed at weekly company-wide meetings, it became obvious that we needed a process and resource to enable the development and sharing of our solutions across the business. As a result, the concept of developing a Thiess internal catalogue of access systems, working platforms, fit for purpose barricades and safety devices access was born.





Enhancing Site Emergency Response Capability

Presenter: Steve Hambrecht, Specialist Asset Protection, BHP Billiton Cannington

The Problem

Mining by its very nature is a high risk profession and emergencies (both natural or man-made) can occur. Mine site personnel must always be ready to respond to an emergency situation in a coordinated, timely and effective manner to protect lives (as a first priority), prevent injuries and minimise losses to property, operations and the environment.

Cannington has always maintained the capacity of an emergency response team by embedding the responsibility for its coordination into the existing onsite roles of personnel. Cannington also utilised the services of multiple training providers to deliver training across various rescue disciplines.

Cannington soon decided involvement from a specialised team of workers in the coordination of emergency response would improve response time and achieve its goal of safety being a first priority for its workers.

Using emergency events across the mining industry as a learning tool and the variation of potential incidents on its mine site, Cannington developed a strategy to enhance its emergency response capability by improving the skills of its emergency response team members.

Cannington focused on transitioning from skills-based training to an all-encompassing approach, by:

- improving membership stability despite having a fly-in-fly-out workforce;
- changing culture with regard to the perception and value of the Emergency Response Team (ERT);
- · up-skilling team members; and
- embracing an experiential-based training approach.



/// NOTES:

Underground Carbon Reduction Project

Presenters: Darren Reid, Superintendent Mobile Maintenance, BHP Billiton Cannington, Gordon Bontfot, Product Support Representative Hastings Deering,

The Problem

Diesel particulate matter (DPM) has been identified as a level one carcinogen by the World Health Organisation.

DPM refers to the fine carbon particles or "soot" in diesel exhaust that can penetrate deep into the lungs and pose serious health risks, not dissimilar to those caused by asbestos. It is particularly relevant for workers operating diesel-powered equipment in confined spaces, and poses health risks like irritation and respiratory and cardiovascular problems. Evidence is growing about a causal link between DPM and lung cancer.

At BHP Billiton's Cannington mine in North West Queensland, DPM is a known occupational hazard due to the operation of diesel equipment in the underground environment.

Concerned about employee exposure to DPM, Cannington resolved to take positive steps to clean up the air for its operators.		



/// NOTES:

Manual Task Risk Assessment Tool

Presenter: Joel Edson, Occupational Therapist, Mount Isa Mines

The Problem

Workplace injuries sustained while undertaking everyday manual tasks are statistically over-represented in our business. These injuries have a significant impact on the wellbeing of our workers, as well as the productivity and sustainability of our operations. For this reason, raising awareness of the causes and addressing the occurrence of manual task related injury has been identified as a key focus area for injury prevention initiatives across our north Queensland operations.

Strategies used in the past were considered too complex to be effective in the daily task risk assessments conducted by our workforce. Despite significant and ongoing effort, statistics indicate the risk remains, and a more simplistic, accessible solution was required to proactively and creatively address the occurrence of manual task related injury.		



/// NOTES:

GAG Docking Station

Presenter: Luke Perrin, Ventilation Coordinator, Glencore Coal - Oaky No 1 Colliery

The Fludien of initiative
Through past experiences and emergency exercises, difficulties in docking the GAG to different docking sites across multiple
coal mines was identified by the QMRS. An industry forum was held to convey this message and identify requirements for
standardisation.

Queensland Mining Industry Health and Safety Conference 2013

/// Peoples Choice Award /// Ballot Paper

Please cast your vote below and tear out for collection at the end of the Session.

li li	nnovation	Please tick only one box
1	. Floor Clip Installation Tool Rio Tinto - Kestrel Coal Mine	
2	. No Hassall Magnetic Drill Steel Holder Peabody Energy North Goonyella Coal Mine	
3	. Acid Unloading Arm Sensor System Incited Pivot Limited	
4	. An Integrated Approach to Reducing Overwater Leighton Contractors	ring Events
5	. Brake Calliper Change Out Tool Anglo American - Capcoal Surface Operations	
6	. Thiess Mine Maintenance Engineering Safety C	Catalogue
7	. Enhancing Site Emergency Response Capability BHP Billiton Cannington	у
8	. Underground Carbon Reduction Project BHP Billiton Cannington	
9	. Manual Task Risk Assessment Tool Mount Isa Mines	
1	O. GAG Docking Station Glencore Coal - Oaky No 1 Colliery	









/// CONFERENCE PROGRAM - KEYNOTE PRESENTATIONS

TUESDAY 20th AUGUST

7.30am – 6.00pm	REGISTRATION - Townsville Entertainment and Convention Centre Foyer
9.00am	KEYNOTE PRESENTATIONS - Proudly Sponsored by Jonaris Sentinel Services
9.00am – 9.45am	The Influence of Risk Perception on Safety Behaviour of Young Workers Rob Duncan, Founder and Chief Executive Officer, BRAKE
9.45am – 10.30am	Decisions, Decisions - How Resilient Leaders Cope with Demand Dr Toby Ford, Chief Executive Officer, Medical Director, Ford Health Group
10.30am – 11.00am	MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by New Hope Group
<mark>//</mark> NOTES:	
The Influence of	Risk Perception on Safety Behaviour of Young Workers can, Founder and Chief Executive Officer, BRAKE

/// NOTES:

Decisions, Decisions, Decisions - How Resilient Leaders Cope with Demand Presenter: Dr Toby Ford, Chief Executive Officer, Medical Director, Ford Health Group				

/// CONFERENCE PROGRAM - CONCURRENT SESSIONS



TUESDAY 20th AUGUST

11.00am - 12.30pm CONCURRENT PAPERS

Auditorium 1

Magnetic Room

Palm Room

Jupiters Coral Sea Room

THE HUMAN FACTOR

Proudly Sponsored by KINNECT

Chair - Tony Shearman, Health Safety & Security Manager, MMG

11.00 - 11.25am

Humans, The Strongest Link in Your Safety Chain

Lincoln Eldridge, Vice President SAFEMap International

Working Well: Mental Health

Professor Brian Kelly,

11.30 - 11.55am

The Big Bad Wolf: Using **Narrative to Train Safety**

Nerida Newton, Senior Instructional Designer, Babblewire

12.00 - 12.30pm

Financial Literacy - Making your Workplace a Much Happier and Safer Place To Be

Adrian Vowles,

Business Relationship Manager and Des Sutherland, Service Advice and Education Manager.

AUSCOAL Superannuation Pty Ltd

MENTAL HEALTH

Proudly Sponsored by Corporate Bodies International

Chair - Vince De Carolis. Head of HSEC, BHP Cannington

11.00 - 11.25am

and Mining

School of Medicine and Public Health, Hunter Institute for Mental Health, The University of Newcastle and Robyn Considine. Director. Consan Consulting

11.30 - 11.55am

Management of Psychosocial Issues in the Workplace

Dr Robert McCartney, Chief Medical Officer, Kinetic Health

12.00 - 12.30pm

Mental Health: Moving Beyond Risk Management

Dr Danica Hooper, State Manager/Psychologist, People Solutions

HEALTH RISK MANAGEMENT

Proudly Sponsored by Protector Alsafe

Chair - Brendan Callaghan, Sustainable Development Manager, **Ernest Henry Mining**

11.00 - 11.25am

Undertaking Evidence Based Health Risk Management: How are We Valuing Our People?

Trudy Tilbury, Advisor - Ergonomics and Human Factors and Inspectorate of Mines (Occupational Health), Department of Natural Resources and Mines

11.30 - 11.55am

Effective Health Surveillance in Mining: Blood Lead Levels in **Open and Underground Mines**

Dr .losh Munn Director, OccMed NQ

12.00 - 12.30pm

Health and Safety Regulation of Naturally Occurring Radioactive Materials (NORM)

Dr lan Ellison, Senior Inspector of Mines (Chemical/Metallurgical/ Radiological), Department of Natural Resources and Mines

DIESEL PARTICULATES

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Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

11.00 - 11.25am

Update - DPM Health Effects and the Exposure Standard

Alan Rogers, Director, Alan Rogers OH&S Ptv Ltd

11.30 - 11.55am

DPM and the Law: How to **Navigate the Shifting Sands** of Science

r Michael Maxwell. Special Counsel, Litigation & Dispute Resolution, Clayton Utz

12.00 - 12.30pm

Best Practice in Diesel Emissions Management for Mining Colin Chandler, Advisor, Peak3

12.30pm – 1.30pm	LUNCH AND DISPLAYS - Proudly Sponsored by Kinetic Health

THE HUMAN FACTOR

/// CONCURRENT PAPER

Humans, The Strongest Link in Your Safety Chain

Presenter: Lincoln Eldridge

Authors: Corrie Pitzer and Lincoln Eldridge

Organisation: SAFEmap International

The typical focus in safety is that the human being is our weakest link in safety. But they are indeed the strongest: naturally equipped to deal with risks dynamically, and with incredible risk skills. We just need to unleash that capability.

The traditional focus on the human, in the context of safety, is that the human being is the weak link, the hazard, the 'error maker'.

A safety conference where the human being is not pointed out as the key problem in safety is an unlikely event. Titles such as: 'Preventing human error' or "Preventing complacency" and "Eliminate at-risk behaviours" abound. Not only is it a popular topic at conferences, it has also been the central tenet of the safety industry in the last 2 decades. Behaviour-based safety is probably both the single most noticeable 'approach' to safety improvement and the single most widely acclaimed of success in attaining these improvements in recent times. Its singular goal is to eliminate risk-taking behaviour and increase safe behaviours. However, that is simply wrong!



THE HUMAN FACTOR

/// CONCURRENT PAPER

The Big Bad Wolf: Using Narrative to Train Safety

Presenter: Nerida Newton Author: Nerida Newton Organisation: Babblewire

In traditional eLearning delivery, safety practices are commonly presented as lists of rules and procedures that are rarely effectively recalled on site, when learners are faced with the situations to which the training applies. This is due to a lack of context in traditional eLearning: the 'click next', content-dumping and then 'do a quiz' approach is flawed because learners disengage with the material, as it is perceived as having little relevance to their own situations. The ability to recall the information they just read when guizzed does not demonstrate that they will change their behaviour or know how to apply rules on site or understand why they are important.

This paper will demonstrate how eLearning that is based on real incidents and designed using narratives, problem-based learning, online games and 'choose your own adventure' type scenarios can improve the engagement of learners around safety practices. When learners are able to apply this knowledge and also contextualise it and test for consequences in the safety of a simulated. online environment, the depth of understanding around the 'why' of the training increases. This will have a greater effect on impacting behaviour, which leads to increased safety awareness on site.

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THE HUMAN FACTOR

/// CONCURRENT PAPER

Financial Literacy - Making your Workplace a Much Happier and Safer Place To Be

Presenters: Adrian Vowles and Des Sutherland **Authors: Adrian Vowles and Des Sutherland Organisation: AUSCOAL Superannuation**

One of the largest causes of depression and domestic violence in Australia is due to money issues. How does this relate to the employees of your company you ask? Think back to the days when you went to work happy, all your cards had lined up perfectly and the bank account balance looked healthy. Now think back to the days when things weren't so rosy - bills are piling up and there have been nonstop arguments with your partner about finances. Two very different mindsets to go to work with.

When happy, you're alert and ready to take the world on, when stressed, your mind is anywhere but work and this is where the problems can arise. Money issues can lead to a number of problems, including depression, accidents at the workplace, alcohol and drug abuse, dietary problems, lack of sleep, domestic violence etc. All of these have an impact on what happens at the workplace. The One Constant that needs to be thought of here is Health & Safety.

This paper will discuss the relationship between financial literacy and happiness at the workplace and at home and what you can do to help.				
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MENTAL HEALTH

/// CONCURRENT PAPER

Working Well: Mental Health and Mining

Presenters: Brian Kelly and Robyn Considine

Authors: Brian Kelly, Robyn Considine and Jaelea Skehan

Organisation: University of Newcastle Hunter Institute for Mental Health

Coal mining is a high profile industry with a demonstrated commitment to the health and safety of its employees. Mental health problems and their impact on workplace health, safety and productivity is a growing issue for the mining industry. Such problems affect the individual, their family, and workplace. There is growing recognition that workplaces provide important opportunities for promoting good mental health and wellbeing, and responding early and effectively to any emerging health problems for employees. This has been well demonstrated in other industries, and similar strategies are being tailored and applied to the coal mining industry.

This paper aims to explore what we know now about mental health and mental ill-health in mining. It also provides an overview

of a program of research being undertaken to address mental health in the coal mining industry. This research aims to improve knowledge about the scope of the problem, and evaluate strategies in the industry to improve mental health, as a critical part of the industry's overall focus on the general health of its employees.



MENTAL HEALTH

/// CONCURRENT PAPER

Management of Psychosocial Issues in the Workplace

Presenter: Robert McCartney Author: Robert McCartney Organisation: Kinetic Health

The one constant health and safety issue facing employees at home and in the workplace is psychosocial issues.

Psychosocial issues, such as mental health, have the potential to escalate into serious problems. For example depression, anxiety or stress may lead to increased drug use or binge drinking. Psychosocial issues can also be the cause of insomnia, which means you have sleep-deprived individuals operating heavy machinery and carrying out safety critical tasks.

Psychosocial factors affect all aspects of an employee's life at work and at home. These issues may include work performance, increased absenteeism, conflict, anxiety, an increased risk of accidents and injuries and an increased risk of problems with return to work after injury.

Complicating the management of these issues for employs is a workforce isolated from family, friends and health advisors; as well as a lack of support networks. When issues such as this arise in the workplace, it is critical early intervention takes place. Dr Robert McCartney will discuss how to identify, manage and mitigate psychosocial issues in the workplace.

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MENTAL HEALTH

/// CONCURRENT PAPER

Mental Health: Moving Beyond Risk Management

Presenter: Danica Hooper
Author: Danica Hooper

Organisation: People Solutions Australasia

The attention given to mental health issues in the mining sector has been steadily growing of recent years, thanks to public awareness campaigns, new work health and safety legislation, and industry research initiatives. Not surprisingly, businesses have begun to adopt familiar risk management frameworks to address mental health concerns; focusing their attention on minimising psychological harm and injury.

Within these frameworks, interventions have tended to centre heavily on individual-level issues such as providing employees with access to employee assistance programs as well as personal resilience training. Less emphasis has been placed on the organisational factors that affect and promote mental health. The next stage of maturity for organisations is moving beyond simple risk management frameworks and individual-level determinants of mental health, to incorporate a multi-level health promotion strategy.

This presentation provides practical advice for integrating both risk management and health promotion strategies; thereby assisting organisations to genuinely value their people and achieve legitimate workforce sustainability.



HEALTH RISK MANAGEMENT

/// CONCURRENT PAPER

Undertaking Evidence Based Health Risk Management: How are We Valuing People?

Presenter: Trudy Tilbury Author: Trudy Tilbury

Organisation: Department of Natural Resources and Mines

Risk assessment and risk management are terms that are embedded in all processes undertaken in Queensland mining. The aim of the presentation is to explore the underlying context of safety-based, business/financial-based, and health-based risk assessments. The COMBI approach to undertaking effective health-based risk assessments will be introduced.

COMBI stands for Context, Organisational, Multifactorial, Blind spots, Integration.

Some key issues covered in this presentation:

- · Developing the context for risk assessments that have health impacts
- Incorporating people in the risk assessment process
- Considering multifactorial risks and controls in the health or fitness risk assessment processes, for example:
 - o fatique
 - o musculoskeletal disorders and
 - o whole body vibration
- The need for considering exposure information when undertaking occupational hygiene risk assessments

 Balancing the AS/NZ:31000 Risk assessment processes and terminology with the approaches that embed monitoring and revie for health. 	;W
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HEALTH RISK MANAGEMENT

/// CONCURRENT PAPER

Effective Health Surveillance in Mining: Blood Lead Levels in Open and **Underground Mines**

Presenter: Josh Munn Author: Josh Munn

Organisation: OccMed NQ

Background:

Using a study of trends in blood lead levels in miners from open and underground mines as an example, the role of effective and organised health surveillance within health risk management will be reviewed.

Objective:

To determine whether there is evidence of lead accumulation in lead mine workers and if there is a significant difference in accumulation between open and underground mines.

Methodology:

During a calendar month all blood lead samples from each of the mines were compared with the workers' baseline levels. The level of absolute change from baseline was used as the primary outcome measure.

Results:

The mean change in lead level was -0.0104 µmol/L for the open mine and 0.0032 µmol/L. Neither was statistically or clinically significant. There was statistically significant evidence of no rise in lead levels in open-cut lead miners and no evidence of rise in underground miners.

Discussion:

There is evidence of no rise in blood lead levels in lead miners. This is an example of effective controls combined with vigilant surveillance. The presentation will introduce the study, and discuss the role of effective health surveillance in risk management for the mining industry.

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HEALTH RISK MANAGEMENT

/// CONCURRENT PAPER

Health and Safety Regulation of Naturally Occurring Radioactive Materials (NORM)

Presenter: Ian James Ellison Author: Ian James Ellison

Organisation: Department of Natural Resources and Mine

An overview of the planned regulatory regime to be used to ensure acceptable occupational hygiene and safety standards are achieved in the future uranium mining and processing sector in Queensland will be presented.

This will be compared and contrasted to the regime and standards currently being used in both uranium exploration and to explore for, mine and process mineral sands, rare earth metals and any other minerals occurring naturally with radioactive materials.
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DIESEL PARTICULATES

/// CONCURRENT PAPER

Update - DPM Health Effects and the Exposure Standard

Presenter: Alan Rogers Author: Alan Rogers

Organisation: Alan Rogers OH&S Pty Ltd

The recent 2012 change in carcinogenic classification by IARC of whole diesel particulate emissions has raised considerable concern across the industry. However this outcome is simply a progression of toxicological and epidemiological information that has been accumulating in the literature over the last 30 years. Previous reviews of the data has found that about half the studies indicated an increase in lung cancer (SMR 1.2 to 1.5) and the remainder found no increase in lung cancer risk. Specific for miners where we could expect higher than normal exposures, the studies showed no detectable increase in lung cancer. All studies were compromised since most did not control for confounders such as tobacco smoking and for all studies there was no actual measured DPM exposure data and hence any attempts at a dose response outcome were reliant on 'guestimates' of past exposures. The new NCI epidemiological study relied on by IARC in the 2012 review also has similar deficiencies to the previous studies.

Due to a range of factors, the epidemiological outcomes of cancer associated with exposure to DPM is likely to remain unclear, however there is no doubt as to the noxious and irritant nature of DPM in confined atmospheres including that found in underground mines. Some long term exposure studies (six of which relate to miners) suggest a slight decrease in lung function, but overall they do not provide consistent evidence of increased mortality from non-malignant respiratory disease.

The mining sector has been steadily introducing guidelines with an associated recommended exposure standard so as to control workplace exposures. The regulatory method of monitoring is based on capture of the submicron aerosol fraction and subsequent analysis for elemental carbon, with the allowable level of exposure being set at 0.1 mg/m3 (submicron EC, 8 hr TWA). This value is based on a balance of factors such as minimising URT irritation, minimising potential for risk of lung cancer, and providing a level that is achievable as best practice by industry and government.

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DIESEL PARTICULATES

/// CONCURRENT PAPER

DPM and the Law: How to Navigate the Shifting Sands of Science

Presenter: Michael Maxwell Author: Michael Maxwell Organisation: Clayton Utz

The duty to protect safety and health is paramount, but how much is enough and how to prove you've done the right thing, particularly years later when 20:20 hindsight muddies the waters.

Strong regulatory obligations, coupled with increasingly onerous directors' duties, the shifting sands of science on diesel health risks and advances in PPE keeps everyone on their toes.

Diesel's links to complex diseases and "no safe level" arguments increases the likelihood of regulatory scrutiny, particularly for exposure hotspots or monitoring blind spots.

It is common to rely heavily on regulatory compliance, but this can provide false comfort. The obligation for many companies is to stay ahead of the curve.

Reasonable steps will be influenced by the nature of operations and available resources. It is critical to focus on legitimate risks, with judicious reliance on independent expertise (consultant and legal) to advise on recommended action or endorse decisions.

Prudent risk management includes strong and tailored OSH systems and independent support for key decisions. Systems must proactively address PPE advances, the changing science and regulatory changes in other jurisdictions.

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DIESEL PARTICULATES

/// CONCURRENT PAPER

Best Practice in Diesel Emissions Management for Mining

Presenter: Colin Chandler
Author: Colin Chandler
Organisation: Peak3 Pty Ltd

Diesel Emissions are a regulatory, legislative and legal risk in mining, as well as being a health and safety risk. Many things have changed in recent years regarding knowledge of the problem, vehicle, data, monitoring, treatment systems, ventilation and data management systems.

These changes are positive but could result in a mountain of information but no real beneficial outcomes. The application of new - technologies has significantly reduced the costs and delays in vehicle and vehicular monitoring, enabled an integrated emissions "picture" including emissions forecasting, and reduced maintenance costs.

Best practice is the adoption of a sound and fully documented engineering process that is easily managed and measured, enables the best possible emissions outcomes, continuous improvement in emissions levels, is cost effective and has the potential to reduce overall mine operating costs through reduced maintenance and fuel costs, and possibly reduced ventilation costs. The process should be automated and easy to follow, vehicles should be self-monitoring and data should be remotely accessible. The system must operate in near real time and be applicable to mine owners and contractors alike.

Best practice means a system is able to adjust seamlessly to new regulations, information, system's or legislative requirements, new fleet, or new mine design without change.

Best practice ensures minimal legal, financial, operational, production of health and safety risk at a site.

Best practice can and is being achieved today. Like any complex topic the best approach is to break the problem down into small parts, get the right data, measure it properly and treat it logically. The key is to understand the reasons for proper documentation, a stepped and well measured process, more dynamic use of vehicle data and implementation of a well formulated plan that takes the unique attributes of your operation into account.

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/// CONFERENCE PROGRAM - CONCURRENT SESSIONS



TUESDAY 20th AUGUST

1.30pm - 3.00pm **CONCURRENT PAPERS**

Auditorium 1

LEADERSHIP

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Chair - Greg Chalmers,

Chief Executive Officer, Jellinbah Group

1.30 - 1.55pm

Valuing People - Valuing Safety Roger Kahler, Principal Consultant, The InterSafe Group Pty Ltd

2.00 - 2.25pm

A Strategic Approach to On Site **OHS Communication**

Hugh Shannon, Lecturer, Queensland University of Technology, School of Exercise and Nutrition Sciences, Institute of Health and Biomedical Innovation

2.30 - 3.00pm

The Commercial Implications of Poor Safety as a Driver for Change

Natasha Kendal, Director, Innovation Consulting

2.00 nm - 2.20 nm

Magnetic Room MUSCULO-SKELETAL

Proudly Sponsored by MMG

Chair - Alan Miskin,

Director Safety and Health, Peabody Energy Australia

1.30 - 1.55pm

From Research to Practice: **New Approaches to Injury Prevention in Mining**

Tony Parker AM, Professor Emeritus, Queensland University of Technology, Faculty of Health, Institute of Health & Biomedical Innovation

2.00 - 2.25pm

An Integrated Approach to **Injury Prevention and Improved** Safety in Coal Mining

Camille Rains, Senior Physiotherapist. Construct Health

2.30 - 3.00pm

Evaluation of Observational Task Analysis Methods for Use in the Mining Industry

Michael McDonald, Lecturer in Biomechanics, Queensland University of Technology, Faculty of Health, School of Exercise and Nutrition Science. Institute of Health & Biomedical Innovation

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Palm Room VEHICLE SAFETY

Proudly Sponsored by Thiess

Chair - Stephen Smythe, District President, CFMEU Mining and **Energy Queensland District**

1.30 - 1.55pm

Reducing the Risk of **Uncontrolled Movements for Road Going Vehicles used in Mining Operations**

Martin Johnston,

General Manager – Mining. Advanced Braking Technology Ltd

2.00 - 2.25pm

Safe Road System: Road **Watering Improvement Process**

David Tulloch, Managing Director. RoadSafety Training Services Pty Ltd

2.30 - 3.00pm

'Fit for Purpose' Tyre **Maintenance Equipment and Management Practices for Non-earthmover Mining Vehicles** - an ACARP Study to Improve **Tyre Safety**

Dr Tilman Rasche, Acting Executive Director, Simtars

Jupiters Coral Sea Room

DIESEL PARTICULATES

Proudly Sponsored by Kenelec Scientific Pty Ltd

Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

1.30 - 1.55pm

Calibration of Raw Exhaust Monitoring Equipment

2.00 - 2.25pm

Reduction of DPM Mass Using Ultrasonic Diesel Exhaust Soot Scrubber

Dr Patrick Glynn, Peak3 Pty Ltd

2.30 - 3.00pm

Managing Exposure to DPM in an Underground Mine

Darrel Gran

Mechanical Engineering Manager, Kestrel Mine - Rio Tinto

3.00pm - 3.30pm	AI TENNOON BILAN AND DISPERTS
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LEADERSHIP

/// CONCURRENT PAPER

Valuing People - Valuing Safety

Presenter: Roger Kahler Author: Roger Kahler Organisation: InterSafe

A value can be defined as "something of worth" to a person or group. Worth can be attributed to objects or artefacts. Worth can also be attributed to that which is important to us, such as other people, or attributed to that which we admire and strive for, e.g. respect, fairness, honesty. When values are expressed in these terms of respect, fairness and honesty, they are intrinsic to all social groups and people rapidly judge leaders against these values. People will observe all leaders in their organisation and very quickly determine whether the leaders care about them (people are being valued) and whether leaders are committed to the safety and wellbeing of all, leaders and team members alike (safety is valued). For leaders to genuinely value people, it requires that the leader genuinely values safety. These two values go hand in hand.

This paper will explore the difference between safety as a consideration or priority in task planning versus safety as a core value of the leader (a personal value) and the organisation (a shared value). The paper will explore the theme that for leaders to walk the talk they have to have a "talk". Leaders desirably should talk about the shared values of the company and talk with conviction.

This, in turn, requires that the documented shared values of the organisation need to include "the caring for and the safety of our people". In order to articulate these shared values, the leader should be able to articulate his/her own personal values and find the linkages and gaps to the organisational values and close the gaps. The leader will then have a chance of talking about the shared values of "caring for the health and wellbeing of" our people. But more is required of the leader if the "values" are to "live".

Firstly, the leader has to be very knowledgeable and very informed about how people are damaged and what damages them at work.

Secondly, the leader has to then appropriately strategise the successful implementation of relevant critical controls. If these two things do not occur, then expressions of care and concern for people will be shown to be hollow in the longer terms. For example, when a person is seriously injured falling from a poorly designed access system that is known to be poor, the leadership will rapidly be judged as hypocritical (and justifiably so).

Thirdly, when damage occurs there is a unique opportunity to treat people involved in the situation with respect, dignity and care and not judge them inappropriately. In essence, leaders need to understand their own personal values, be genuine in their concern

for people and their welfare and be knowledgeable of what and how people are damaged so that management activity is relevant and achieves the value. Damaging occurrences are unique opportunities to demonstrate the value of caring.				activity is relevant and
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LEADERSHIP

/// CONCURRENT PAPER

A Strategic Approach to On Site OHS Communication

Presenter: Hugh Shannon

Authors: Hugh Shannon and Tony Parker

Organisation: Queensland University of Technology, Institute of Health and Biomedical

Innovation

In many occupational settings, communication planning typically focuses on what we want to deliver with considerably less thought given to how we should do it. There can be a range of reasons why this might occur.

This presentation will give you an opportunity to think about current Occupational Health and Safety (OHS) communication practices occurring at the site level. Examples of effective methods within the mining industry will be provided as well as the prominent barriers that are evident. You will then be given a chance to consider how to build or strengthen a strategic approach to OHS communication. This will involve a close look at methods that can be used to prime for, deliver and reinforce information at the site level.

This presentation will draw on experience gained since 2008 through research projects, site visits and interaction between the Queensland University of Technology Workforce Health Innovation (WHI) research group and the mining industry. The WHI research

group is based within the Institute of Health and Biomedical Innovation, located on the QUT Kelvin Grove campus in Brisbane.



LEADERSHIP

/// CONCURRENT PAPER

The Commercial Implications of Poor Safety as a Driver for Change

Presenter: Natasha Kendall Author: Natasha Kendall

Organisation: Innovation Consulting

Historically, safety has been seen as a compliance-heavy necessity of mining organisations. Health and Safety departments of mines are often portrayed as a cost or cost-neutral component of the business. What is not often seen in mining organisations are the financial benefits of applying good safety practices.

Understanding the commercial side of safety can act as a driver for change. It can determine:

- The current state of your safety initiatives and standards
- · How much poor safety is costing the organisation in revenue as well as loss of valuable resources

Understanding the financial impacts of poor safety can drive business-wide change of perspective towards a more aware,

- How best to drive improvements to plant and practices through scenario planning
- · Delivery of safety solutions that are commercially attractive to management

ccountable and engaged workforce both on-site and in corporate environments.	
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MUSCULO-SKELETAL

/// CONCURRENT PAPER

From Research to Practice: New Approaches to Injury Prevention in Mining

Presenter: Tony Parker AM

Author: Tony Parker

Organisation: Queensland University of Technology, Institute of Health and Biomedical

Innovation

Many strategies have been used to prevent M/S injury and disorder in the mining industry, however high injury levels of acute and chronic injury remain and continue to present significant industry and personal costs. Reducing exposure to risk factors is a major goal of injury prevention strategies including ergonomic interventions, enhancement of fitness and education changes in work organisation and training in manual handling. While these strategies have been partly successful in reducing the number of musculoskeletal injuries, their incidence remains high and represents significant cost to industry, the community and individual workers. This problem is exacerbated by the demographic diversity, poor lifestyle behaviours and the proportion of older workers in the workforce.

A major preventive strategy is to reduce risk factors to injury and to identify appropriate levels of physical and mental exposure to these risk factors with sensitivity to individual variability in coping with the demands of the work. This presentation will discuss the

relative merits of new systems and technologies that may be used to quantify exposure patterns with the potential to objectively detect or predict musculoskeletal injury and disorder. The outcomes of this approach may be used to effectively complement or even supplant some organisational or regulatory approaches.



MUSCULO-SKELETAL

/// CONCURRENT PAPER

An Integrated Approach to Injury Prevention and Improved Safety in Coal Mining

Presenter: Camille Rains

Authors: Camille Rains and John Williamson

Organisation: Construct Health

In the lead-up to engaging Construct Health, Peabody's Coppabella mine (the Client) was experiencing a number of recordable musculoskeletal injuries. Inconsistent off site acute clinical management was resulting in some injuries becoming recordable whilst others of a similar nature were not. This was having a negative effect on both the workforce health and the Client's Workers Compensation premiums.

Construct Health began implementation of a three-pronged approach to (i) prevent musculoskeletal injuries and (ii) decreased injury frequency and severity rates and worker insurance premium costs.

Firstly, a multi-level injury prevention program targeted jointly at the health and safety of the workforce was executed. Secondly, a consistent integrated clinical management process and onsite physiotherapy service was introduced for both work related and nonwork related injuries. Thirdly, the on-going rehabilitation process was refined in collaboration with the Client.

This three-pronged approach has been running for 12 months and is on-going. At the time of publication, no recordable musculoskeletal injury has occurred at Coppabella mine during that period. This approach acknowledges the upfront importance of health and safety initiatives in preventing injury. It ensures paramount clinical care for workers when injury does occur, whilst being mindful of site injury classification definitions.

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MUSCULO-SKELETAL

/// CONCURRENT PAPER

Evaluation of Observational Task Analysis Methods for Use in the Mining Industry

Presenter: Michael McDonald Author: Michael McDonald

Organisation: Queensland University of Technology

Task analysis is a systematic procedure to identify the demands of a particular job. It breaks the job into major tasks. Then, it analyses the physical, sensory/perceptual and environmental demands, interactions with equipment and administrative practices related to each task.

Observational task analysis methods are one of the most often used approaches to evaluate physical workload in order to identify hazards at work, monitor the effects of changes to work tasks, and conduct research on related work issues. The number of available methods is large, but no single method is suitable for all purposes, different methods are needed for specific goals.

Due to differences in methods and diversity in user needs, the selection of an appropriate tool is very challenging. This presentation will discuss the merits of a number of the more commonly used task analysis methods for assessing physical workload and to evaluate these methods from a number of different perspectives. Case studies encompassing two unique worker job categories within the mining industry will be used to illustrate the usefulness of observational task analysis methods.

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VEHICLE SAFETY

/// CONCURRENT PAPER

Reducing the Risk of Uncontrolled Movements for Road Going Vehicle used in Mining Operations

Presenter: Martin Johnston Author: Martin Johnston

Organisation: Advanced Braking Pty Ltd

- The One Constant Health and Safety and valuing our people by the implementation of a fit for purpose brake solution for road going vehicle used in mining operations.
- Statistical information published by the Queensland Mines and Quarries, annual safety performance and health report, details the severity of this problem.
- Identifying the shortcomings of OEM supplied brakes in mining operations.
- Reviewing the requirements of a brake solution to meet the operational and safety requirements.
- Implementation of controls to eliminate the need for human involvement to ensure a vehicle is fundamentally safe when-ever and where-ever it is parked.
- Testing and validation to ensure compliance with Government and Industry standards.
- Case studies from underground and open cut mines around Australia will be presented demonstrating the operational improvements to mine safety.

• Conclusion.		
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VEHICLE SAFETY

/// CONCURRENT PAPER

Safe Road System: Road Watering Improvement Process

Presenter: David Tulloch

Authors: David Tulloch and David Stocker

Organisation: RoadSafety Training Services Pty Ltd

Watering of Mine Roads is the conundrum of managing risk on the road network; it reduces one hazard and increases another. This paper is an examination of that procedure and the development of an improved and safer operational process.

Road Material Audit

Determine appropriate water application rates for high risk road materials

Water Truck Audit

- Can the water truck deliver required water application rate and appropriate watering method at relevant speeds?
- · Water delivery system features:
 - Adjustments and modifications
 - · Spray settings, pump settings and automated pulse values

Road Watering Audit

- Can the operator deliver the required water application rate & appropriate watering method on high risk road materials?
- · Operator training and awareness of:
 - Water delivery system and water application rates
 - · Watering methods and road materials

Safe Road System

- Is the road network maintaining a safe level of friction supply through appropriate water application rate and watering method?
- · Regular monitoring and continual improvement risk management triggers:
 - · New road materials
 - New water trucks
 - New operators
 - Repairs and modifications to the water truck fleet

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VEHICLE SAFETY

/// CONCURRENT PAPER

'Fit for Purpose' Tyre Maintenance Equipment and Management Practises for Non-earthmover Mining Vehicles - an ACARP Study to Improve Tyre Safety

Presenter: Tilman Rasche Author: Tilman Rasche Organisation: Simtars

Tyres, rims and wheel assemblies are safety critical items which must be maintained and used correctly to achieve a level of acceptable risk.

Inadequate tyre and rim maintenance on non-earthmoving equipment carries considerable inherent risks of personal injury and death. This has again been tragically confirmed through a tyre related fatality at a Queensland coal mine in December 2010.

This presentation reports on tyre maintenance safety issues around non-earthmoving vehicles and mobile equipment, and discusses effective solutions such as better tooling, improved maintenance equipment, improved safe work practises, and other recommendations for safer work.

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DIESEL PARTICULATES

/// CONCURRENT PAPER

Calibration of Raw Exhaust Monitoring Equipment

Presenter: Brian Davies
Author: Brian Davies

Organisation: University of Wollongong

A range of instruments capable of measuring diesel particulate (DP) in the raw exhaust of diesel engines in the mining industry are available, however there is significant variability in results obtained from different types of instruments or in some cases the same type of instrument. This variability leads to confusion amongst mine engineers when interpreting results and thus the use of emissions based maintenance programmes are not being implemented at the level they should be so as to control worker exposure to DP at its source.

A means of calibrating all instruments to the one international standard (NIOSH 5040) has been investigated using a small diesel particulate generator which can be placed under different loads to produce varying concentrations of DP in the raw exhaust. Using this approach comparisons have been undertaken using two commercially available direct reading instruments and also a new approach for the collection of raw exhaust DP samples on quartz filters for subsequent analysis.

The ultimate outcome of these investigations should be a standard approach to calibration of all direct reading raw exhaust instrumentation and a uniform approach to sampling DP in the raw exhaust.



DIESEL PARTICULATES

/// CONCURRENT PAPER

Reduction of DPM Mass using Ultrasonic Diesel Exhaust Soot Scrubber

Presenter: Patrick Glynn Author: Patrick Glynn

Organisation: Peak3 Pty Ltd

Ultrasonic agglomeration of itself does not affect the DPM mass but conditions the DPM particulates for efficient removal by other means. The purpose of acoustic agglomeration is to increase the size of exhaust DPM particles to a size range that can be extracted from exhaust flows by other means such as microcyclones or filters. The main findings from the computer modelling, laboratory testing and operation on a mine vehicle show triple-frequency acoustic agglomeration technology reduces DPM mass by up to 77% compared to untreated exhaust flows and the technology operates efficiently when fitted to a working mine vehicle. It produces very little backpressure on diesel engines and is able to operate over a wide range of operating loads.

Testing of a pre-production acoustic agglomerator on an operational TORO LHD proved very successful with an 82% reduction in DPM at 75% loading. At 100% loading, it is anticipated this figure will rise to above 90% due to the decreasing efficiency of diesel engine combustion at rated load. Moreover, large DPM reductions were achieved over all operating condition of the TORO machine.

The dynamometer testing of a newly-reconditioned BHP Caterpillar 10.3 litre common rail turbocharged diesel engine gave a >34%

reduction in DPM mass and showed a reduction across all engine loading. This is a better than expected result for this engine which is as new, very efficient and produces very little DPM.



DIESEL PARTICULATES

/// CONCURRENT PAPER

Managing Exposure to DPM in an Underground Mine

Presenter: Darrell Grant Author: Darrell Grant

Organisation: Kestrel Mine - Rio Tinto

Exhaust emission in vehicles operating in underground coal mines has been an on-going problem ever since a NIOSH study proclaimed that Diesel Particulate Matter had gone from a "possible" to a "probable" carcinogen. Then, in June 2012 the International Agency for Research on Cancer classified diesel engine exhaust as carcinogenic, further reinforcing the need to seriously manage exposure.

In 2004, in an effort to raise awareness around diesel particulates the Queensland underground coal mining community formed a Tripartite Diesel Particulate Steering Committee. Rio Tinto was a founding member and has been at the forefront in managing diesel exhaust emissions through its involvement and participation with this Steering Committee since that time.

Kestrel Mine proactively continues to increase its knowledge and improve its management of diesel particulate matter through workforce awareness training, improved maintenance and operating practices, and encouraging and tasking key personal to actively research and manage issues. By partnering with industry and sharing learnings from within Australia and internationally, it has availed itself of best practice and engineered solutions. This approach enables Kestrel Mine to manage the level of diesel exhaust emission in its underground operation to a level accepted and expected by its work force to be industry leading.

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/// CONFERENCE PROGRAM - CONCURRENT SESSIONS



TUESDAY 20th AUGUST

3.30pm - 5.00pm

CONCURRENT PAPERS

Auditorium 1

Magnetic Room

Palm Room

Jupiters Coral Sea Room

LEGAL ISSUES

Proudly Sponsored by Sparke Helmore Lawyers

Chair - Patrick Tyrrel.

Geology Manager & SSE Resource Development, New Hope Group

3.30 - 3.55pm

Harmless Fun or Serious Safety Breach?

Belinda Winter, Partner, Cooper Grace Ward Lawyers

4.00 - 4.25pm

But I'm Not the SSE...Mine "Worker" Safety Obligations

Brett Elgar, Special Counsel and Alastair Smith, Lawyer, Ashurst - Australia

4.30 - 5.00pm

How Far Must the Company Go to Protect a Worker's Safety?

Matthew Smith, Partner and Dianne Hollyoak, Special Counsel, Sparke Helmore Lawyers

OCCUPATIONAL HEALTH

Proudly Sponsored by Anglo American Metallurgical Coal

Chair - Rod Dixon.

General Manager, Plant and Asset Management, Thiess Pty Ltd

3.30 - 3.55pm

Application of the Thermal Work Limit Model for Effective Workplace Heat Stress Management

Dr Nicholas Burke, Medical Director/Occupational Physician and Neil Hokins, Paramedic Consultant, 4cRisk Pty Ltd

4.00 - 4.25pm

Noise Induced Hearing Loss

Jenny Stevens, Chief Executive Officer, Attune Hearing Pty Ltd

4.30 - 5.00pm

Obesity Within the Workplace - Health. Safety and Human **Resource Perspective** Warren Orsmond.

Exercise Physiologist, North Queensland Therapy Services

RESPONDING TO INCIDENTS

Proudly Sponsored by CFMEU Mining and Energy Queensland District

Chair - Mike Oswell,

Head of Safety and Sustainable Development, Anglo American Metallurgical Coal

3.30 - 3.55pm

Learning from Disaster: A Glimpse into Queensland's Coronials

Natasha Kendall, Director. Innovation Consulting

4.00 - 4.25pm

Scoping Safety Investigations

Harold Downes, Partner, Herbert Smith Freehills

4.30 - 5.00pm

The Evaluation of Laser Guidance Systems for use on a Self Escape Vehicle after an Underground **Mine Explosion**

André De Kock, Acting Director -Mining Research and Development Centre. Simtars

DIESEL PARTICULATES

Proudly Sponsored by Peabody Energy Australia

Chair - Brian Davies AM,

Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong

3.30 - 3.55pm

DPM and At-Risk SEGs - What the Monitoring Data Can Tell Us

Greg Manthey, Principal Occupational Health & Hygiene Specialist, Simtars and Fritz Djukic. Inspector of Mines (Occupational Hygiene) Queensland Mines Inspectorate - Central Region, Department of Natural Resources and Mines

4.00 - 4.25pm

Guidance Note for Diesel Engine Exhaust Management

Jack Farry, Senior Inspector of Mines (Occupational Hygienist) Department of Natural Resources and Mines

4.30 - 5.30pm

Discussion

Facilitated by Dr Brian Davies AM. and Alan Rogers

THE RESCUE STATION - Lobby Bar, Jupiters Townsville 5.00pm - 6.30pm

PRE DINNER DRINKS - Townsville Entertainment and Convention Centre, 6.45pm - 7.30pm Forecourt and Palm Lawn

7.30pm CONFERENCE DINNER AND INNOVATION AND HEALTH PROGRAM AWARDS

LEGAL ISSUES

/// CONCURRENT PAPER

Harmless Fun or Serious Safety Breach?

Presenter: Belinda Winter Author: Belinda Winter

Organisation: Cooper Grace Ward Lawyers

Maintaining high standards of safety is vital in any organisation, not only from a legal compliance perspective but, more importantly, to protect the health and safety of its most valuable asset – its people.

At times, maintaining a culture of safety has required organisations to take a 'tough love' approach towards its employees and discipline them when they are found to have engaged in (or in some cases failed to prevent) unsafe work practices.

There are many cases that have considered the fairness of termination decisions for safety breaches and perhaps some of the more notable ones are those involving what the employees describe as 'harmless fun'. The highly publicised activity 'planking' saw the exit of two mining employees in 2011 and many others in other industries. More recently, the 'harlem shake' has had serious consequences for employees resulting in termination decisions.

This paper will discuss recent case law and provide guidance to the audience as to how to balance competing interests of exercising fairness and reasonableness whilst ensuring the highest standards of safety compliance.



LEGAL ISSUES

/// CONCURRENT PAPER

But I'm Not the SSE... Mine "Worker" Safety Obligations

Presenters: Brett Elgar and Alastair Smith Authors: Brett Elgar and Alastair Smith

Organisation: Ashurst Australia

Much of the commentary about personal safety obligations under Queensland mine safety laws centres on the obligations of SSEs and the other statutory position holders. What is sometimes underappreciated is the critical safety obligations that apply to mine "workers" more generally, whether they are 'on the tools' or in management positions at a mine.

There have been a number of prosecutions of mine workers in Queensland and in other States. It is essential that all mine workers understand their safety obligations, and how to discharge them.

This presentation provides guidance about the scope of mine worker safety obligations and the steps that can be taken by mine workers to meet them.

We also discuss some key cases and identify what the workers involved could have done to avoid ending up in those situations.

LEGAL ISSUES

/// CONCURRENT PAPER

How Far Must the Company Go to Protect a Worker's Safety?

Presenters: Matthew Smith and Dianne Hollyoak Authors: Matthew Smith and Dianne Hollyoak

Organisation: Sparke Helmore Lawyers

In November 2007, a worker was directed to attend a regional office in country NSW. In a motel arranged and paid for by her employer, the female worker engaged in intercourse with a male friend, during which a glass light fitting above the bed was pulled from its mount and fell on her, causing injuries to her nose and mouth.

In 2012, the full Federal Court found that the worker was injured in the course of her employment, and therefore, she could claim workers' compensation. The matter has been appealed to the High Court of Australia.

The underlying issues of this case are of paramount importance to the mining industry given a large portion of the industry is based on FIFO arrangements, in which workers are placed in wet and dry camps in remote areas. But how far must the company go in protecting a workers safety when they are engaged in behaviours of a seemingly private nature?

This presentation will explore how far employers should go to maintain the safety of workers, looking at legislative obligations to protect workers, and focus on practical tools to address this ever increasing problem.

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OCCUPATIONAL HEALTH

/// CONCURRENT PAPER

Application of the Thermal Work Limit Model for Effective Workplace Heat Stress Management

Presenters: Dr Nicholas Burke and Mr Neil Hokins **Authors: Dr Nicholas Burke and Mr Neil Hokins**

Organisation: 4cRisk Pty Ltd

Application of the Thermal Work Limit Model for Effective Workplace Heat Stress Management.

The Thermal Work Limit Model used in the management of high-risk elevated temperature work environments and associated work activities has greatly improved prevention of the heat related illnesses where these Heat Stress Management plans have been introduced.

The Thermal Work Limit Model is a newer heat stress index that provides a single physiological measure of heat stress – in this case the allowable metabolic rate of work (measured in Watts per metre square of energy) for a given environment and clothing.

Utilising Thermal Work Limit (TWL) – measured with a portable heat stress monitor in conjunction with physiological monitoring, adequately hydrated and acclimatized workers performing self-paced work, were protected from any heat related events in a variety of extreme thermal environments.

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Magnetic Room

OCCUPATIONAL HEALTH

/// CONCURRENT PAPER

Noise Induced Hearing Loss

Presenter: Jenny Stevens Author: Jenny Stevens

Organisation: Attune Hearing Pty Ltd

Occupational noise-induced hearing loss is a major compensable industrial disease in Australia and entails substantial economic and social costs including: compensation costs, increased employee absenteeism, worker turnover, lowered work performance, workplace injuries and accidents, fatigue, depression, social and relationship effects on the family and friends.

Noise exposure is one of the most common causes of hearing loss in Australia and 37 per cent of all hearing loss in Australia is attributed to noise. One in six Australians is affected by hearing loss at sometime during their life.

As 60 per cent of Australian adults with hearing loss are male, gender differences have been attributed to workplace noise exposure.

The effect of noise exposure on an employees' hearing depends on the type, duration and level of noise exposure received by the auditory system.

Legislation changes in December 2012 have several subtle differences, summarised they include:

Previously, the obligation to consult with the workforce about workplace health and safety matter was a **suggested method** of managing workplace health and safety risks.

Now, it is a **requirement** that the employer consult with the workforce.

Noise induced hearing loss is permanent, measurable, preventable	o ana oosay.
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OCCUPATIONAL HEALTH

/// CONCURRENT PAPER

Obesity Within the Workplace – Health, Safety and Human Resource Perspective

Presenter: Warren Orsmond Author: Warren Orsmond

Organisation: North Queensland Therapy Services

Obesity is an ever increasing concern within the Australian workplace and a contentious issue to manage involving undefined variables regarding health, workplace safety and human resource policies and procedures.

From a HEALTH perspective the ability to perform the inherent tasks of a job is not specific to obesity, however relates to associated risk factors/medical conditions. These factors will be taken into account when assessing SAFETY within the workplace. Safety systems will require evaluation and documenting of limitations imposed by an obese employee in the workplace.

HUMAN RESOURCES may obtain a Functional Job Task Analyses to ascertain the physical requirements for a position. Weight management programs to reduce "risk factors" may be provided, however there is no specific legislation which results in termination of employment. Organisational policies and procedures may negatively impact on future employee recruitment, however if policies and procedures are not adhered to it sets up a precedent for past and future job applicants. Anti-discrimination legal precedence will also be explored for this particular issue.

This presentation will provide practical	steps and information on	managing obesity and t	ne undefined variables ir	i the workplace.
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Palm Room

RESPONDING TO INCIDENTS

/// CONCURRENT PAPER

Learning from Disaster: A Glimpse into Queensland's Coronials

Presenter: Natasha Kendall Author: Natasha Kendall

Organisation: Innovation Consulting

Coronial recommendations have been responsible for driving safety initiatives in recent years and have are presumably been responsible for saving many lives. Looking respectfully at the coronials of recent years and summarising the learnings, we are able to see a strong correlation between recommendations and safety initiatives in place. But do we have implementation of the recommendations correct?

Turning the recommendations of coronials into action is a task that Health and Safety departments are left to interpret. How is the best way to do this? How do we prevent these incidents from reoccurring? How do we deliver tangible outcomes?

A look into these will determine the policy development is not enough and implementation	on of actionable plans is needed.
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Palm Room

RESPONDING TO INCIDENTS

/// CONCURRENT PAPER

Scoping Safety Investigations

Presenter: Harold Downes

Authors: Harold Downes and Fiona Austin

Organisation: Herbert Smith Freehills

Who investigates what? This is one of the most important questions for an organisation involved in a mining incident. The answer to this question will be crucial in determining the outcome of the investigation and in turn, the exposure of that organisation to legal action, including personal injury claims and regulatory prosecutions.

For example, if a sub-contractor on a mine is involved in an incident, should the contractor (if it is not mine operator) be investigating the direct cause of the incident, the adequacy of the controls for the particular task, compliance with the site safety and health management system, the process of engaging the sub-contractor or a combination of the above?

Additionally, the type of investigation should also be relevant to the needs of its audience. If an incident has occurred and the direct cause needs to be identified so that changes can be made at an operational level, such an investigation does not need to consider root causes. However, if a company officer is to be advised on their liability for prosecution, identifying the root causes will be important.

Organisations need to investigate the right issues using the right method.	
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RESPONDING TO INCIDENTS

/// CONCURRENT PAPER

The Evaluation of Laser Guidance Systems for Use on a Self Escape Vehicle After an Underground Mine Explosion

Presenter: André De Kock Author: André De Kock Organisation: Simtars

In the aftermath of an underground explosion there will be vast amounts of smoke and dust in the air. Such conditions make it very difficult for the driver of a vehicle to "see" where to drive. In order to assist the driver to drive the vehicle out of the mine safely a navigation system needs to be fitted to the vehicle.

This paper presents the test methods and results of the evaluation of laser systems for use as a navigation system in the harsh environment after an explosion.
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Jupiters Coral Sea Room

DIESEL PARTICULATES

/// CONCURRENT PAPER

DPM and At-Risk SEGs – What the Monitoring Data Can Tell Us

Presenters: Greg Manthey and Fritz Djukic

Authors: Greg Manthey, Fritz Djukic and Craig Tayler

Organisation: Simtars and Department of Natural Resources and Mines

The IARC classification in June of 2012 of diesel exhaust emissions as carcinogenic to humans (Group 1) has well and truly thrown the spot-light onto worker exposure, particularly in the context of underground mining. Whilst the components of diesel exhaust that potentiate lung cancer have not yet been identified, it is clear that this is a hazard that should be rigorously and carefully controlled.

This presentation will look at the measurement of personal exposure, Similar Exposure Groups (SEGs) and comparison of results against the shift-adjusted accepted best-practice exposure standard.

Collation and statistical analysis is to be undertaken of de-identified measurement data including over 2,500 personal samples collected from 14 Queensland mines over a number of years.

This data will be presented and discussion will include:

- results, confidence limits and data trends,
- identification of 'at-risk' SEGs,
- potential sampling program gaps,
- observations on levels of compliance,
- possible focus areas for effective diesel emission control,
 questions on the possible future direction/s of this emerging issue.

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DIESEL PARTICULATES

/// CONCURRENT PAPER

Guidance Note for Diesel Engine Exhaust Management

Presenter: Jack Farry Author: Jack Farry

Organisation: Safety and Health, Department of Natural Resources and Mines

One of the functions of the Mines Inspectorate is to provide advice and information on how the objects of the Act are to be achieved. This paper examines the rationale and intended outcomes of the Guidance Note for Management of Diesel Engine Exhaust in Metalliferous Mines.

It also provides insight into the expectations that the Mining Inspectorate has regarding how obligations, relacould be discharged if no regulation or guideline is made in order to demonstrate that reasonable precautions been taken by persons with obligations for safety and health.	ating to health hazards, s and due diligence have
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/// CONFERENCE PROGRAM



WEDNESDAY 21st AUGUST

8.00am - 1.30pm

REGISTRATION - Townsville Entertainment and Convention Centre Foyer

9.00am - 10.00am

"So now we're talking" - Part 1 - Proudly Sponsored by Ansell Healthcare

'The silent killers - at what point do serious problems become major health and safety issues?

Our people are living with these issues everyday - people that you least expect, our workmates, our family members; so the question is..... at what point do we start paying attention?

MC Andrew Klein will lead a team of experts, celebrities and real people who have had close association with these issues to unlock, demystify and open up the can of worms so we all learn how to pay attention......

Our panel of experts; Naomi Rogers, Clay Butler, Tammy Farrell and Naomi Armitage will be joined by two extraordinary Australians, Olympic Gold Medalist and Swimming Legend and Ambassador for the Black Dog Institute and beyondblue - John Konrads and Legendary Rock Icon and humanitarian... Angry Anderson.

10.00am - 10.30am

MORNING BREAK AND TRADE DISPLAYS - Proudly Sponsored by Australian Workers' Union

10.30am - 12.00pm "So now we're talking" - Part 2 - Proudly Sponsored by Ansell Healthcare

'The silent killers - at what point do serious problems become major health and safety issues? Now we know what we are dealing with – what are we going to do about it?

MC Andrew Klein will engage our team to explore what can be done to improve how we face up to the thorny issues!

Angry Anderson, John Konrads and our team of experts; Naomi Rogers, Clay Butler, Tammy Farrell and Naomi Armitage and everyone present will have the chance to have their say as we open up and expose what's in the can or worms and work out how to deal with what we find.

A prize will be awarded to the person who poses the most insightful and probing question from the audience.

12.05pm

FORMAL CLOSE OF CONFERENCE

Liz Sanderson, Chairperson, Queensland Mining Industry Health and Safety Conference 2014

12.30pm -1.30pm

FAREWELL LUNCH - Proudly Sponsored by Inova Resources

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For Further Information Contact:

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