

occupational hygiene MATTERS

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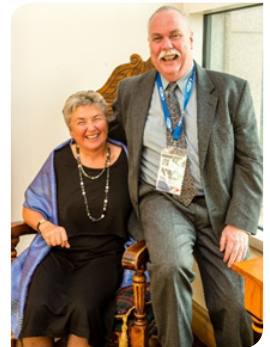
FROM THE PRESIDENT • CAROLINE LANGLEY

Our President-Elect Philip Hibbs and I have just returned from the BOHS conference “OH2016” held in Glasgow and AIHce 2016 held in Baltimore.

BOHS – OH2016

OH2016 was much smaller than joint BOHS/10th IOHA Conference in London but still a very interesting conference with the usual high standard of presentations. The weather was ‘Scottish’ but easily eclipsed by the warm, friendly, and generous hospitality of Glaswegians. If you are interested in the technical presentations, look at PPT slides online at the OH2016 web site <http://www.oh-2016.com/>.

The opening plenary session was the 2016 Warner Lecture delivered by Professor Sir Anthony Newman Taylor and titled ‘**Continuing Challenge of Occupational Lung Disease**’. Whilst this paper was not focussed on coal miners’ pneumoconiosis, the message was eerily familiar; constant vigilance is required to prevent dust diseases whether it be in Australian or UK mines, construction sites, foundries, or quarries.



Queen Caroline and Her Apparent Prince Philip

UPCOMING EVENTS 2016 SEMINARS

Ergonomics

Asbestos in Soil

Leadership & Management

Heat Stress

Visit the [AIOH Events web page](#) for further information



Opening plenary session of OH2016

At the President’s Session, the BOHS had a very interesting viewpoint that there is a market driven ‘**mega trend**’ in occupational health and safety in the UK. This trend is about small special interest groups that form around narrow technical topics, then grow in size and finally formalise their structure to become competitors. This is a familiar

phenomenon in Australia with a range of professional bodies forming over the years, whose members work in and around the margins of occupational hygiene e.g. noise & vibration, radiation, biological safety, ventilation etc. The BOHS has responded in a radical way to this development and are proposing to introduce additional faculties under the BOHS umbrella. Each new faculty will provide a professional home, accreditation, and professional development opportunities for specialists. The first cab of the rank is the ‘Faculty of Asbestos Assessment and Management’ (FAAM). Of course, this makes you think about what’s happening at home and how AIOH handles applications from specialists for membership. Perhaps it’s time to rethink our approach to membership and look to find ways to embrace change without eroding professional standards?

Perdita Dickson, winner of the prestigious Dräger Award gave an inspiring and very well received Ignite presentation at OH2016. You can see all the Ignite presentations on You Tube - [click here](#).

There were few other Aussies in town too, including Noel Tresider and Carol Aylett, Debra Glass, Gary Ryder, Holly Fletcher and even the elusive Hendo.

AIHce 2016

AIHce in Baltimore was another fantastic example of the occupational hygiene coming together on a grand scale; 4,500 delegates, 231 exhibitors, 100s of posters and 700 programmed hours of education on 45 subject areas are just some of the figures.





It was fantastic to see many Aussies in Baltimore and we managed to get together for the famous Kusnetz Aussie Dinner, this year very graciously hosted by John Henshaw as Florence and Howard couldn't be with us.

The AIHA Board acknowledged **Raelene Young** as the Airmet Scientific Award winner in a big surprise at the 'Mark of

Excellence' Breakfast. This breakfast is amazingly well attended since it starts at 6:30 AM. The Mark of Excellence Breakfast is a celebration of the tireless contributions made by members and the volunteer community to the industry and the profession. John Henshaw was recipient of the Lynn O'Donnell Lifetime Achievement Award.



Perdita in full flight at Ignite

The Ignite sessions were very professional and engaging, pulling the audience from tears, to laughter, to astonishment. **Kate Cole** was a star performer with a great pitch for more women in construction.

The 2016 Yant Award Winners were Roger Alesbury and Steve Bailey for their tireless work establishing OHTA. William Wagner very modestly presented 'Fifty Years of Chasing Paracelsus' as the Herbert E Stockinger Awardee, bringing the audience to its feet with a standing ovation for a wonderful career of 50 years of service.

On Local Issues

Council is continuing to focus on investing in our members while maintaining our work behind the scenes to develop a robust business model to ensure the long term success of our Institute. Some of our 2016 priorities are:

- a revitalised seminar series and support for the Leadership Programme;
- pilot a new Mentoring Programme ;
- establish a charitable foundation ;
- enhanced communication with members including improvements to our website; and
- looking outwards to national stakeholders and our occupational hygiene partners in Asia and beyond.

Our **seminar series** is off to a flying start with two very successful seminars off the blocks: Environmental Noise and GHS Implementation for Occupational Hygienists. Make sure you register early or provide an expression of interest; we are doing our best to have seminars made accessible to as many members as possible so the more feedback from you the better.

The AIOH will present a winter **Leadership and Management Programme** in July. This follows the hugely successful Leadership and Management CES conducted by Perry Logan at the 2015 Conference in Perth. There are many skills required to be a persuasive successful professional in the current marketplace, apart from our core discipline, so I urge members to 'back themselves' by investing in attendance at the leadership and professional development programmes.

Deb Glass has provided an update on the pilot **Mentoring Programme**. See this edition of the newsletter for more information.

I am excited to report Council, with specialist legal advice, is close to finalising the constitution of the '**AIOH Foundation Ltd**' and its governing Board. The Foundation will be an independent entity with tax deductible and charity status, governed by an independent Board of Directors. This is great progress and we will advise you as soon as the Foundation is officially established. More information is provided in this edition of the newsletter and will be available on the web shortly.

I am sure that many members will have noticed a number of challenges with our website over the last months. You are not alone. Laura is working tirelessly with our website designer to get it right. Its taking longer than anyone would like and we have had some frustrating glitches. We acknowledge the issues and very much appreciate your patience. You can assist the Institute by making sure your personal /corporate details are correct.

Council has been keen to support our occupational hygiene colleagues in Asia. This is a continuation of work commenced by the 2015 Council and recognition that AIOH should focus more attention in our own backyard.

The **Indonesian Industrial Hygiene Society** held its inaugural conference in Jakarta on 31 May 2016. The AIOH was delighted to be invited to participate. Our Secretary, Brian Eva, represented AIOH at this inaugural meeting. See Brian's article in this newsletter for an update on occupational hygiene in Indonesia.

The AIOH has been invited to attend and present at the **Asian Network of Occupational Hygiene (ANOH) conference in Hanoi later this month**. AIOH is delighted to support ANOH and will participate in a concurrent session on 'Training, Education, and Certification of Occupational Hygienists – an Australian Perspective'. We will also participate in an international forum session on 'Developing the Future of Asian Occupational Hygiene'. I am especially grateful to Alan Rogers for his personal commitment to ANOH.

Council has continued to advocate for the occupational hygiene profession and its members. The AIOH provided a formal submission to the Australian Senate Committee into Health Inquiry into the re-Emergence of Coal Workers'

Pneumoconiosis. A copy of the submission can be found at (Submission #203) [http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Health/Health/Submissions]. The AIOH has also successfully lobbied SA Health during their review of Clan Lab Guidelines to include the AIOH as a source of suitably qualified and experienced experts for clan lab assessments.

Registration for the **2016 Conference and Trade Exhibition** at the RACV Royal Pines Resort on the Gold Coast is now open. Look out for this and make sure you register early to take advantage of generous early bird rates.

The AIOH Council remains focussed on our members. We are keen to hear any feedback from you that can assist us to develop further and lift the value of AIOH for members; drop me an email at admin@aioh.org.au or just call me on 0418 841 455 at any time.

AIOH FOUNDATION - WHAT'S IT ALL ABOUT?

For some time Council has been aware that senior members are at a point in their lives where they are looking for ways to give back to the profession.

Some members are fortunate to be in a position to be able to make a financial donation or bequest to promote our profession and its value to the Australian community. But how to do this when the Institute is a not-for-profit professional society, whose structure and purpose is not charitable? While there are loads of worthy charities that are helping fund research into better treatments and cures for disease, none come from an occupational hygiene perspective. Moreover, potential donors will be reluctant to their give hard-earned money to an organisation that isn't 100% focussed and accountable on making donations count.

In response, Council, working with expert Not for Profit lawyers DF Mortimer and Associates, is close to finalising the legal framework for an independent 'not for profit' charity called 'The AIOH Foundation Ltd'.

The AIOH Foundation's principal purpose will be to promote the principles of occupational hygiene and the prevention and control of occupational disease in Australia. There are endless opportunities where the AIOH Foundation can make a difference. So many tools and approaches are now available including educational and promotional materials, train the trainer programs, apps and social media. Every Australian workplace in every industry sector stands to benefit. What Australian community in our cities, remote towns or regional centres, hasn't been touched by a preventable death from workplace disease?

As a completely separate and independent entity from AIOH, the Foundation will be governed by a Board of Directors, and subject to regulations that control the operation of not for profit charities in Australia in accordance with the *Australian Charities and Not For Profit Commission Act 2012*. These laws strictly control how the AIOH Foundation can operate and include the need to ensure funds are used for the principal purpose, accounts are audited, and the Foundation regularly reports to the Charities Commission.

While the Foundation is getting on its feet, the AIOH Council has agreed to provide in kind support such as use of the Institute's mail address, website space, bookkeeping services and accounting fees.

Seed funding for the AIOH Foundation was very generously donated by Alan Rogers and matched by 3M at the 3M night at the 2015 AIOH annual conference. Once the Foundation is launched, its Board will provide more information about activities and how to be a part of this fantastic opportunity.

We look forward to updating members in the months ahead as we complete work on this exciting project.

OUR MEMBERS & ADMIN OUT & ABOUT

As the highlight of his AFL barracking career (apart from the Crows premiership), **Charles Steer** was the official 'coin tosser' at the recent Crows versus Swans match at Adelaide Oval.

The coin toss did not go the way of the Crows but thankfully for Charles, they won the game!



Conference & Events Manager, **Laura Loschiavo** recently completed her 3rd marathon on the Great Ocean Road in Victoria, 44.5km from the start line in Lorne and finishing up in Apollo Bay. It was all rainbows and sunshine for the 1st part with the 2nd a real struggle due to a knee injury, gale force head winds and rain. The amazing scenery and having her family at the finish line made it all worth while!



COMMITTEE UPDATES

CERTIFICATION BOARD • RUSSELL BOND

As all members know, achieving the designation of Certified Occupational Hygienist (COH) recognises that you practice in a competent, independent and ethical manner, and shows you are a leader in your field. It is the highest level of professional occupational hygiene expertise recognised by the AIOH.

The Australian COH status is also recognised by international agencies as part of the International Occupational Hygiene Association, National Accreditation Recognition (NAR) program. International recognition of the certification schemes of the various member countries is meaningful only if certification competencies across international boundaries are comparable. IOHA developed and then formally approved the IOHA Model Certification Program in 2000. Member countries must obtain renewed recognition of their scheme every 5 years.

Renewed recognition under the NAR program is conditional on satisfying seven criteria which include, professional goals consistent with IOHA's, processes to administer a code of ethics, education and experience criteria, competency testing and evaluation processes, competency maintenance systems and systems to integrate evolving knowledge and technology.

After significant work on the part of Gerard Tiernan we are pleased to announce that the IOHA has formally approved the AIOH Certification Scheme renewal application. This recognition entitles the AIOH to include the following phrase in its certification documents and certificates: "IOHA recognised certification scheme". This ensures that the Australian COH is recognised internationally.

COH STAMP GETS A FACELIFT!

In light of our recent trademarking, the Council thought it was time to bring new life to the COH stamp. All certified members can proudly display their stamp on reports and email signatures etc.



For your own personalised stamp, please contact Laura in the admin office via email at laura@aioh.org.au.

MENTORING • DR DEBBIE GLASS

The AIOH is piloting a mentoring programme in response to demand from members, particularly from those hoping to move to full membership or to gain COH status. A new Mentoring Committee has been established, chaired by Debbie Glass. It includes Tracey Bence, Gerard Tiernan, Terry Gorman, and Dustin Bennett. A full-scale programme will be launched in December.

The mentoring programme is aligned with the key objectives of the Institute: which are to promote the profession of occupational (or industrial) hygiene; and to improve the practice of occupational hygiene and the knowledge, competence and standing of its practitioners.

The Mentoring Committee has developed an information package and introductory materials for mentors and mentees. This sets out the expectations, principles, and expected commitment for mentors and mentees.

The skills that can be developed include: professional knowledge and judgment, problem appreciation/solving/critical thinking and the ability to analyse information, oral communication and ethics.

If you would like to register in the pilot programme as a mentor or mentee, there are still some places available. Please contact the AIOH Office who will supply you with a registration form, which gathers a few details so that we can best match you with a mentor/mentee.



Are you GHS ready?

New labelling of workplace hazardous chemicals from 1 Jan 2017

Information on the GHS for manufacturers, importers, suppliers and users of workplace hazardous chemicals

If you are a manufacturer, importer, supplier, or end user of workplace hazardous chemicals – are you ready for the new classification and labelling system?

Manufacturers, importers, suppliers and users of hazardous chemicals have duties to manage risks associated with hazard-

ous chemicals in the workplace. This includes ensuring the safe use, handling and storage of chemicals as well as ensuring chemicals are classified and labelled correctly under the model work health and safety laws.

The Globally Harmonized System of classification and labelling of chemicals (GHS) will become mandatory under the model work health and safety laws from 1 January 2017.

For more information see: <http://www.safeworkaustralia.gov.au/sites/swa/news/pages/th-25052016>.





EXPOSURE STANDARDS • IAN FIRTH

The AIOH Exposure Standards Committee's mission statement is to provide expert guidance and comment to the exposure standards setting process at the State and National level, and internationally where appropriate. This is achieved through the development of AIOH Position Papers (PP's), AIOH guidance publications or comment on relevant Standards, Regulations and Codes of Practice. The Committee's remit is to confirm that the workplace exposure standards numbers, Standards and Codes of Practice, are reviewed, and where required changed for valid occupational hygiene and scientific reasons.

Over the past couple of years there has been a focussed effort to develop PP's for Priority Hazardous Substances; to provide relevant information on substances of interest where there is uncertainty about existing Australian workplace exposure standards. As the AIOH is not a standards setting body, it was felt necessary to develop a statement of position regarding AIOH PP's. This has been done and a large part of the Committee's efforts more recently has been

directed at updating past PP's to ensure they:

- Include sections on the "Mission Statement" and "Statement of Position Regarding AIOH Position Papers";
- Include a "Key Messages" section in addition to the "Summary" section; and
- Are updated to reflect current key research/publications.

For some past PP's, there has been no substantive change in the "AIOH recommendation", hence we have essentially only 'reformatted' these papers (see the accompanying table). Other past papers will require a more substantive update hence we are looking for volunteers for their update (some have already put up their hands). You may have noticed that the Asbestos PP was most recently updated.

The Nickel and PAH PP's are the most recent new papers produced and should appear on our website soon. We are looking to produce a PP on "Biological Monitoring" next.

The table below provides details of both current and draft Position Papers, as well as those that are proposed as of May 2016.

Paper Topic	Published (yes/no)	Proposed Work	Current Status (May 2016)
Asbestos	Yes - 2016	None	The 2008 version was updated and added to the AIOH website February 2016
Respirable Crystalline Silica (RCS)	Yes - 2009	Update	Initial draft in new format distributed to committee members – Rob Golec and Linda Apthorpe volunteered to update
Inorganic lead	Yes - 2009	Update	Initial draft in new format distributed to committee members – Rob Golec and Kevin Hedges volunteered to update
Synthetic mineral fibres (SMF)	Yes - 2011	Reformat only	Initial draft in new format distributed to committee members – feedback received and incorporated – awaiting Council approval
Occupational noise	Yes - 2016	None	2012 version reformatted after author and committee review – approved by Council and now on website
Adjustment of Workplace Exposure Standards for Extended Work Shifts	Yes - 2013	Reformat only	Initial draft in new format distributed to committee members – awaiting all feedback
Diesel Particulate Matter (DPM)	Yes - 2013	Update	Initial draft in new format distributed to committee members – Brian Davies & Alan Rogers updated – awaiting all feedback
Dusts Not Otherwise Specified (DUST NOS)	Yes - 2016	None	2013 version reformatted after author and committee review – approved by Council and now on website
Sulphuric acid mist	Yes - 2015	None	Approved by Council after incorporation of AIOH member input – now published
Nickel and its compounds	No	To complete	No comments from AIOH members after review period – comments were due early March – ready for publication
Polycyclic Aromatic Hydrocarbon (PAH)	No	To complete	Final draft prepared by Ross Di Corleto incorporating received AIOH member's comments – awaiting Council approval
Biological monitoring	No	Prepare	Being drafted by Greg O'Donnell

If you have any suggestions for further PP's the Committee would like to hear of them. Better still if you can contribute to the development of a PP. However, please note that the subject of the PP should be considered a Priority Hazardous Substance and will require a review of the existing published, peer-reviewed scientific literature. The PP should attempt to recommend a health-based workplace exposure standard that can be measured and it shall be technically feasible to assess workplace exposures against the derived exposure standard. It should not consider economic or engineering feasibility. As far as reasonably possible, the AIOH formulates a workplace exposure standard recommendation on the level of exposure that a typical worker can experience without adverse health effects.

ACROSS THE COUNTRY

WA CHAPTER • JANINE MCCLEMENTS

The WA Chapter's Sundowner for quarter two was held on May 23rd at the Chemistry Centre's seminar room in Bentley. It was well attended and pleasing to see a number of first-timers mixing with the rest of the crowd as everyone enjoyed drinks and a tasty range of finger food prior to the formal session.

Our WA SLO, Dr Barry Chesson, opened proceedings and provided an update of council activities and planned seminar topics to look forward to later in the year. Likely focus areas include communication, gloves, marketing/management and asbestos in soils. He also reminded attendees of the chapter's additional sundowner dates for 2016 as follows:

- 22nd August – **Innovation, Science and Occupational Hygiene** with WA Chief Scientist, Professor Peter Klincken, and a representative from Quiet Acoustics
- 21st November – TBA

Barry then introduced the evening's presenter, Ryan Milne to share his presentation "The Changing Landscape of Water Management – A Look at the future". The founder and Principal Consultant of Ecosafe International, Ryan has extensive experience in the water risk management sector and is an accredited Lead Drinking Water Auditor.

Ryan introduced his topic by highlighting that the management of water quality tends to involve various stakeholders and it is important to apply a holistic risk-based approach that captures all relevant exposures routes and systems. For example, where raw water is used, his experience is that the risks are often poorly understood.

He noted that incidents related to water quality - some with severe consequences - continue to rear their head in the media. Examples included recent cases of legionnaire's disease in Sydney, a 2015 Victorian incident where a school drinking water fountain had been connected to a recycled water system and also the Flint water crisis in the US, where criminal charges have recently been filed against three people.

Drawing from practical experience, Ryan shared and

expanded upon his "top five" risks for industry in meeting the challenge of supplying safe water. These were:

- Complacency
- Lack of awareness/understanding of raw water hazards
- Inadequate management of disinfection residuals
- Insufficient preparedness for adverse water quality incidents
- Inadequate updated management plans and supporting procedures – that reflect what is actually happening

Ryan then went onto explain some likely changes in the requirements associated with the management and supply of safe water. He mentioned both the possible introduction of health based targets into the Australian Drinking Water Guidelines for microbial risks and the potential impact of the Public Health Bill 2014 currently being debated in WA state parliament. The clear message was that businesses that have implemented and maintain an effective and auditable risk based strategy for their water systems will be in the best position to demonstrate due diligence and compliance to address such changes.

Demonstrating due diligence however, will always present challenges and

Ryan again stressed a holistic approach is required. Programmes must obviously include the practical elements involved in managing and supplying safe water, such as having a thorough understanding of source water characteristics and effective multiple barrier systems in place. However, it is important to extend this to having valid roles and responsibilities, trained operators and a formalised audit/review program as well as ongoing monitoring of critical control point performance and compliance with commitments made to planned tasks.



Ryan Milne with WA SLO Dr Barry Chesson

The good news for the audience was to hear that, in response to such challenges and looking to the future, Ryan has been involved with the development of a compliance tool. It incorporates a method to establish proof of presence for inspections/checks etc., real time data presentation on a live dashboard and automated reporting functions. It was pleasing to see this type of consideration given to a technological solution to assist industry in meeting its requirements. The evening then concluded with Ryan responding to questions from the audience and another opportunity for attendees to mingle.

The WA Chapter of the AIOH acknowledges and thanks WA SLO Barry



Chesson for organising this event and especially extends its gratitude to Ryan Milne for presenting and sharing his insight and practical experience with attendees. Thanks also to Sarit Kanabar, Greg Payne and Di Allen for setting up and manning the registration desk. Finally, particular thanks goes to the ChemCentre for their continuing support for these Sundowner events – including providing the venue, on-going financial contributions and staff to assist with set-up and AV matters.

NSW CHAPTER • LINDA APTHORPE

The old saying, “It’s not what you know, it’s who you know” is still relevant even in 2016. Creating a community of people who support each other is an important aspect of developing your professional career, in addition to giving back to the profession of up and coming hygienists. Most would agree that there is no better network than a hygiene network and one guaranteed way of getting an instant step-up in your career is through an AIOH award! So, the recent NSW chapter meeting held on 21 April 2016 at the University of Wollongong was run on the theme of ‘Realising your true potential!’



A major part of the AIOH strategic plan is a commitment to develop the technical and business knowledge and skills of our members, and therefore providing opportunities for our members to further their professional careers is a big part of that. The meeting heard an update of information from Council, and from Awards and Sponsorship Committee Chair Alan Rogers on the AIOH Awards Scheme. The AIOH has a diverse range of awards available through the generous support of our Sponsors and they have all been designed to develop your professional career.

Alan explained the awards and application process, and provided a good description of each of the awards available. We heard from 10 previous award winners in every category of awards as they shared their tips on the application process and on what receiving the



award meant for them in terms of professional development and further accomplishments.

The meeting saw a range of AIOH members and some student non-members attend to enjoy the networking and information provided. The audio and power points of the presentations were recorded and it is hoped these will be available via the AIOH website shortly. The event was a great success and AIOH is grateful to the University of Wollongong for providing the venue. Thanks also to Kate Cole, Jane Whitelaw and Linda Apthorpe for making all of the necessary arrangements.

QLD CHAPTER • MARK RUSSELL

Dr Ross Di Corleto hosted and presented a 1 hour interactive overview on heat stress in Brisbane on 23rd March. He provided a brief overview of heat stress theory, worked examples of real-life case studies, estimation exercises, heat stress myth-busting and rounded the evening off with a Q&A session.



Of the 26 registered attendees, 17 attended in person. This was the first Webex session with two virtual attendees logging in.

VIC CHAPTER • SIMON THOMAS

The next Victorian Chapter Meeting will be held on Monday 25th July on the topic of **Pain, Property Renovation and Occupational Hygiene**.

Coatings have been used to protect and decorate surfaces for hundreds of years. Through changes in technology and legislative requirements the formulations have changed to keep up with the times and reduce their hazardous nature as new information is received. So what should we be aware of? Some of these hazards are well documented, others are not. This session hopes to give the background of coatings and what the hazards are both in the manufacture but also when renovating older properties, which may be of interest to the Occupational Hygienist.

The AIOH is delighted to have Catie Redshaw from DuluxGroup presenting on the challenges and impacts businesses face during this transition, and the opportunities for a change in approach to chemical safety in areas of key concern to Occupational Hygienists. Catie has been working in the areas of Occupational Hygiene and Workplace Health and Safety for 15 years. She became involved with occupational hygiene related to coatings manufacture when she moved to New Zealand in 2006, and has an interest in how the use of coatings over the ages may leave residual hazards when renovating properties.

More information coming soon.

RESEARCH BITES

FROM THE UNIVERSITY OF WOLLONGONG • JANE WHITELAW

In 2013, Kerrie Burton was successful in being awarded the **Safety Equipment Australia Scholarship** to research the “**Efficiency of Respirator Filter Media against Diesel Particulate Matter**” and complete a Master of Philosophy at the University of Wollongong. Since then, Kerrie has successfully completed her degree and presented at Australian (AIOH) and International (ISRP & AIHce) Conferences on this topic. Our paper has just been published in the [Annals of Occupational Hygiene](#) and the abstract is included below:

Diesel engines have been a mainstay within many industries since the early 1900s. Exposure to diesel particulate matter (DPM) is a major issue in many industrial workplaces given the potential for serious health impacts to exposed workers; including the potential for lung cancer and adverse irritant and cardiovascular effects. Personal respiratory protective devices are an accepted safety measure to mitigate worker exposure against the potentially damaging health impacts of DPM. To be protective, they need to act as effective filters against carbon and other particulates. In Australia, the filtering efficiency of respiratory protective devices is determined by challenging test filter media with aerosolised sodium chloride to determine penetration at designated flow rates. The methodology outlined in AS/NZS1716 (Standards Australia International Ltd and Standards New Zealand 2012. Respiratory protective devices) does not account for the differences between characteristics of workplace contaminants like DPM and sodium chloride such as structure, composition, and particle size. This study examined filtering efficiency for three commonly used AS/NZS certified respirator filter models, challenging them with two types of diesel emissions; those from a diesel generator and a diesel engine. Penetration through the filter media of elemental carbon (EC), total carbon (TC), and total suspended particulate (TSP) was calculated. Results indicate that filtering efficiency assumed by P2 certification in Australia was achieved for two of the three respirator models for DPM generated using the small diesel generator, whilst when the larger diesel engine was used, filtering efficiency requirements were met for all three filter models. These results suggest that the testing methodology specified for certification of personal respiratory protective devices by Standards Australia may not ensure adequate protection for respirator users against DPM under all circumstances of diesel generated particles.

This research has been so well received that we were awarded grants totalling \$88,070 to further investigate this issue on an industrial scale and to evaluate the penetration of ultrafine particles through respirator filter medium. An update on this will be given at AIOHQLD 2016.

SEA have generously offered another scholarship so if you are interested, please contact Jane Whitelaw at jwhitela@uow.edu.au.

FROM EDITH COWAN UNIVERSITY • DR SUE REED

ECU is proud to announce that Sally North has won the 3M prize for top graduating student in the Masters of Occupational Hygiene and Toxicology at the School of Medical and Health Sciences prize giving on 14 April 2016. Sally's research was on “The relationship between dermal lead levels and blood lead levels in fire assay workers”, which was presented as a poster at the AIOH 2015 conference in Perth.

RECENT RESEARCH IN THE LITERATURE • DR DEBBIE GLASS

NIOSH eNews - May, 2016 (View as a webpage [here](#)).

This is worth subscribing to, if you haven't already niosheneeds@cdc.gov. It presents recent happenings at NIOSH and comes out several times per year.

In the latest Issue, May 2016, Issue 14 vol 1, there is information on Climate Change with links to the US Global change research program, including a specific link to human risk related to temperature-related death and illness; air quality impacts; extreme events such as droughts, floods, and wildfires; vector-borne disease; water-related illnesses etc.

It also has a link to the latest version (5th) Edition of NIOSH Manual of Analytical Methods (NMAM) at <http://www.cdc.gov/niosh/nmam/>

Among other articles, there are links to a Cochrane review of the personal protective equipment recommended for use by healthcare staff when dealing with Ebola and highlights from the Nanotechnology Research Centre Meeting.

Annals of Occupational Hygiene 60(1) 2016

This issue included an article by Driscoll et al on lead exposure and short communications on polycyclic aromatic hydrocarbon (PAH) and formaldehyde exposure in Australia. The papers drew on data from the AWES study lead by Lin Fritschi (Geza Benke and I were involved in the exposure assessment work).

It also presents a meta-analysis from the USA which shows no increased risk of mesothelioma for motor vehicle mechanics including those who handled brakes.

Annals of Occupational Hygiene 60(2) 2016

Interesting article on the use of hair manganese as a biomarker for exposure amongst welders, Another on TIG welding exposure experienced by apprentice welders. Apprentice welders who “burned” the work had significantly





more exposure. This demonstrates the need for training.

A couple of articles on diesel engine emissions, one looking at exposure during tunnelling in London and another looking at the use of an iron-based fuel additive and a sintered metal filtration system to reduce emissions.

Annals of Occupational Hygiene 60(3) 2016

Article on field trials of a high flow rate sampler for airborne respirable silica in various sites. The sampler was compared side by side with various respirable dust samples in the field. There were differences between the samplers depending on the head used. The high flow sampler collected more respirable dust and quartz than the low flow samplers so precision was improved but the air concentrations were similar.

Article on reduction of biomechanical loading and welding fume exposures in stud welding looked useful. Posture can be a problem and solutions are presented in the paper.

SPECIAL ISSUE ON WORKPLACE NOISE AND VIBRATION ACOUSTICS AUSTRALIA • MARION BURGESS & PAM GUNN

Noise and vibration in the workplace have been known health hazards for many, many years and most countries have had regulations or guidance material for decades. However, sadly, we have not yet succeeded in defeating these problems. The World Health Organisation (WHO) estimates that over 360 million people in the world live with disabling hearing loss with about 16% being due to noise. In Australia, the latest NIHL claims data from Safe Work Australia (SWA) show a significant downward trend from 2012. Unfortunately, on closer investigation, nearly all of the reduction was due to NSW where there had been a change in the eligibility criterion for most workers from 6% percentage hearing loss to 21.5%.

On the vibration front a 2010 SWA report identified that about 24% of Australian workers reported they were exposed to vibration at work, but they had a low awareness of adverse effects and little use of controls.

It was in this environment that Pam Gunn, Department of Commerce, Western Australia, agreed to take on the task as special editor for the April, 2016 issue of Acoustics Australia on Workplace Noise and Vibration. Pam has used her network of contacts built up over 35 years, to provide a 'bumper' edition of the journal on the topic with contributors from Australia as well as from the UK and USA to provide an international perspective. The result is 14 papers, three forum articles plus relevant items in the news and notes.

Starting with control of noise at source (as one should!), Peter Wilson of the UK INVC gives an update of his well-known "Top 10" noise control solutions some of which can be shown to be self-financing, thus dispelling the myth that all noise control is too difficult and expensive. For some of the trickier low-frequency noise situations in large vehicle cabins, Jie Pan of University of Western Australia presents the successes he has had with Active Noise Control. Important 'Buy Quiet' initiatives in both USA and UK are discussed by Bryan Beamer from NIOSH and Paul Brereton and Jacqueline Patel from HSE respectively. Thais Morata, also of NIOSH, shows how an Awards Scheme can uncover case studies on effective hearing loss prevention. Elizabeth Brueck from the UK HSL gives us tips from her many years of experience in accurately measuring the risk of high impulsive noise, including the latest advances in hearing protector assessment in such situations. Initiatives to prevent hearing loss in the USA Construction Industry are summarised by Scott Schneider of the Laborers' Health and Safety Fund of North America, and noise exposure and education among Fitness Instructors in NSW is presented by Valerie Nie and Elizabeth Beach from University of Newcastle and Macquarie University. To round off the noise section, Marion Burgess and Brett Molesworth, from University of NSW, investigate the noise reduction of in-use aviation headsets, including those with active noise-cancelling features.

The vibration section is opened by Daniel Arquero and Paul Taylor from SWA giving the background to recently published guidance material on management of both hand-arm and whole-body vibration. A success story in promoting hand-arm vibration (HAV) awareness and encouraging controls in management, workers and contractors of a Queensland aluminium company is relayed by Rebecca Devine. Paul Pitts and Paul Brereton of the UK HSL and HSE have generously shared their latest development of simple tools to support HAV exposure evaluation drawn from years of gathering real-world vibration measurements. The table of typical vibration magnitudes should prove particularly useful as it is an update on the one in the present Australian guidance. Also from the UK HSL, Susan Hewitt, in collaboration with colleagues from the USA NIOSH, gives us the latest research on the efficacy (or otherwise) of 'anti-vibration' gloves. To conclude the section, a review of measuring and managing workplace whole-body vibration is presented by Robin Burgess-Limerick from the University of Queensland, including his recent work on monitoring using an iOS application.

Complementing these papers and technical notes in the formal section of the issue are three contributions to the 'Acoustic Forum' section of this issue. One is by Luciana Macedo from 3M discussing developments in individual fit-testing for personal hearing protectors. Kate Lewkowski from Curtin University summarises the program for the noise part of the Australian Workplace Exposure Survey (AWES). Richard Glover, from LimitEar in the UK, provides an overview of the options for managing the personal hearing exposure for those wearing headsets.

In the 'Notes' section there is a summary of current and recent Australian research work on workplace noise control and hearing conservation education, as well as information on progress with the international standardisation of using Otoacoustic Emissions to monitor hearing in workers.

The issue, Acoustics Australia Vol44 No1 April 2016 is available from the Springer site (<http://www.springer.com/engineering/journal/40857>). The "News Item" that includes the abstracts of all the papers, forum articles plus the news and notes is open access. The papers by the UK HSE authors are also open access. Access to the full text of the other articles is via Springer subscription or individual articles can be purchased from Springer.

INTERNATIONAL AFFAIRS

INDONESIAN INDUSTRIAL HYGIENE ASSOCIATION (IIHA) INTERNATIONAL SEMINAR • BRIAN EVA

The “Grand Launching” of the Indonesian Industrial Hygiene Association (IIHA) took place on 31st May 2016 in Jakarta in conjunction with the inaugural IIHA International Seminar program.



We need one of those to open AIOH2016!

I was fortunate to have been present for both the launch and seminar, representing the AIOH and as a key note speaker. Other Australian representatives included Dr Dino Pisaniello and Ms Kim Ng.

Indonesia has a population of 260,268,145 with a land area of 1,812,108km². Approximately 53.4% of the population live within urban areas. A significant challenge is delivering IH services to small (home based) industries in rural areas.



Elyse As Safira launches the IIHA

The IIHA is 5 months old and already has in excess of 300 financial members. It was also recently accepted as a member of IOHA. The Foundation President of the IIHA is Ms Elsy As Safira, a graduate of the Wollongong Course and the first Indonesian CIH!

Unlike Australia, the role and competencies of Industrial Hygienists are enshrined into Indonesian legislation. There are three competency levels of Industrial Hygienists, and since 2008, approximately 700 Industrial Hygienists have completed the Government’s baseline competency practitioner assessments which are; Junior, Middle and Senior.

The IIHA are currently working with the Government to revise and finalise the competency requirements for each level in line with Certification requirements. There are 12 core competency areas which include:

- Chemical hazards
- Physical hazards
- Biological hazards
- Ergonomic hazards
- Air sampling and instrumental techniques
- Toxicology
- Biostatistics and epidemiology
- Health risk analysis and hazard communication
- Engineering control and ventilation
- Non engineering controls
- Management
- Community expectations.

For each of these elements there are core competencies that must be met at either of the three levels. For Senior, there are a number of competencies required that would not be expected of Full Members or COH members!!! (ie

design and supervise installation of a ventilation system including cleaning components).

The IIHA have also embraced specific certification based on job function related to Industrial Hygiene.

- Certified Industrial Hygiene Manager (CIH-Manager)
- Certified Industrial Hygiene Laboratory (CIH-Laboratory)
- Certified Industrial Hygiene for Health Worker (CIH – Health Worker) etc.

A strategic plan has been developed with objectives and goals through to 2019. A key goal is to network and collaborate with other professional associations, including the AIOH, particularly in new and emerging IH issues.

Emerging issues that were discussed include:

- The downsizing of industrial hygiene in large organisations ie petrochemical, mining and gas;
- A perceived “closed shop” in gaining employment or experience with the larger companies; and finally
- A lack of experienced hygienists in smaller manufacturing sectors ie take petrochemical / mining experience into a shoe factory etc and there is no mentoring for young hygienists working in this area. Sounds familiar!



Dino has a rock star moment

Thank you to the Council for allowing me to represent you.

OCCUPATIONAL HYGIENE TRAINING ASSOCIATION (OHTA) • NOEL TRESIDER

There has been a lot of activity with OHTA in the last few months.

- Roger Alesbury and Steve Bailey were awarded the AIHA 2016 Yant Award and presented an update of OHTA at AIHce 2016 in Baltimore. “Stronger Together – Working Together to Grow Industrial Hygiene and Tackle the Global Burden of Occupational Illness”. They listed some of the highlights since OHTA started:
 - 5,600 exam candidates
 - 600 course in 50 countries
 - 110,000 users form 208 countries
 - 22 OHTA member associations from IOHA.
- The second OHTA AGM was also held in Baltimore and the significant outcomes were:
 - OHTA articles were revised in order to meet the requirements of the UK Charities Commission with the view to OHTA becoming a charitable organisation in the UK.
 - New OHTA Directors were elected: Mark Milroy (AIHA, replacing Peter O’Neill) and David O’Malley (BOHS Past President)
 - The OHTA Board has been increased to a maximum of 12 to provide for further development.
- OHTA Foundation has awarded its first award to a student in Tanzania.

I will have more news for you all in the next AIOH newsletter.

SPECIAL FEATURE • 2015 DRÄGER AWARD REPORT • PERDITA DICKSON



I can't believe that I've already slipped back into normal life after an amazing two week trip through Europe. The journey really started last year in September when I handed in my submission with my wish list of places I'd like to visit. Realising that I then need to organise this amazing trip was a little daunting, but all the places I visited were so happy and willing to share their knowledge and skills.

My trip started (after a very long flight) in Lübeck which is a quick 30 minute trip on the Autobahn from Hamburg. Dräger is a diverse company and with my recent change to the healthcare industry my trip was organised with a mix between safety and medical. My visit started with a tour of the factory on a chilly Monday morning. It was amazing to see how so many different Dräger products are made from respirator cartridges to chemical protective suits to the sensors in the gas detection equipment. The thing that impressed me the most was how every employee understands that whatever they are making must be perfect as someone's life may depend on it. I also enjoyed seeing an organisation using and living lean manufacturing principals. That night I went for a fascinating tour of Lübeck and learnt about the city's extensive history. Most importantly Lübeck is believed to be the birthplace of marzipan!!!! The following day I went to the head office and was lucky enough to meet Mr Toni Schrofner the board member for Africa, Asia and Australia.

It was a great opportunity to talk to him about the award that Dräger so generously supports for young occupational hygienists in Australia. From there I went through the company tour which is as much informative as it is spiritual with your journey beginning by putting your trust in Dräger and lying under a suspended rock. One of the displays is a neonatal intensive care unit with a SoundEar sound level meter installed. As part of my new role I've learnt that noise levels above 45 dBA may have an impact on a vulnerable baby's development and growth. The use of 'safety' technology in the patient setting works brilliantly in this setting allowing employees and family members to manage their own noise levels. The final part of the time at Dräger was around research and development of new technology. We toured the Dräger test centre which tests equipment on a range of specifications such as what the operating temperature range is. Again this building has been designed with lean manufacturing principals in mind as all offices and meeting rooms have floor to ceiling windows to encourage a collaborative workforce.

By this stage I was starting to feel part of Dräger family so it was sad to leave, but I was excited about the next stage of my trip. After a quick plane trip I was in Holland and heading to the Dutch National Institute for Public Health and Environment which is based in a small town just outside of Utrecht. Nanotechnology is one of the many research areas they provide expertise and direction to the government. I met with Cindy Bekker who is an occupational hygienist by background and is now working for KIR Nano which is the national body providing information and knowledge on nanotechnology. She explained what this group is currently doing and what they are aiming for in the future. We also spoke about the current and future state of play in regards to Europe managing nanotechnology. One of the things that impressed me the most was how this group is focused on providing information to the end user of the materials. They have a helpline that people can call if they have any concerns and are writing flowcharts that simply spellout the risk to end users.

From Holland I had another quick plane trip to England which was slightly extended due to Barack Obama flying in at the same time as me. My trip in the UK started with a visit to NHS Protect. You may be wondering who are they and why did I go there? Occupational violence and aggression is the number one injury type in the hospital network I'm part of and the NHS predicts 186 healthcare workers are attacked every day. The physical and mental impact of these incidents are significant and can lead to severe health outcomes. This is obviously not a mechanism of injury I have previously had to work with so to further my knowledge I took the opportunity to meet with this group. The team at NHS Protect were very welcoming and shared with me their strategies and how they use data to ensure they are focusing on the key issues. The biggest takeaway for me was how successful they have been in implementing strategies across the whole of the UK. This has been through the inclusion of Occupational Violence and Aggression in the NHS standards which impact on a facility's approval for providing services. This reinforced my belief that health and safety must be part of



everyday business for organisations, for it truly to make an impact and be sustainable.

On my way to the BOHS conference in Glasgow I made a slight detour to Buxton to visit the Health & Safety Laboratory (HSL). It was a very bleak day and I think this added to the beauty of the peak district where the HSL is situated on a 550 acre site. It seems that every year the Dräger Young Hygienist of the Year winner visits the HSL and a comment was made on the slight height difference between myself and Mitchell Thompson!! First of all I was met by the occupational hygiene team who gave me an overview of the work they are doing and some future strategies for the team. We then went for a quick tour of the building and met the biological monitoring team who took me through what work they do and some of their new research. From there we met the ventilation team and I was shown their laboratory which includes a simulation electroplating line to test effectiveness of different control strategies. This was really fascinating to me as one of the reports that I submitted for the award was around electroplating. Interestingly I experienced the same reaction in the simulation line as I did in the real one i.e. a metal taste in my mouth (this is important and I will get to the reason later). The final group that I met was the slips and trips research area. You may be wondering what this group does. Well they scientifically test different footwear soles and floor surfaces for 'slippiness'. The main equipment they have is basically a walking surface that tilts and contaminates the surface with either water or glycol. The guinea pig (a man in a harness) then keeps inclining the surface until he slips, this angle is then recorded. The anticipation of waiting for someone to slip was intense and I couldn't help putting my hand over my eyes as it got steeper and steeper. Slips and trips is still a major cause for injury in Australia and some sound science behind strategies would assist with minimising this risk.



Finally I made it to Glasgow for the BOHS conference and was greeted by some familiar faces. There was quite a crowd from Australia including Caroline Langley, Phil Hibbs, Holly Fletcher, Gary Rhyder, Deb Glass, Noel Tresider, Carol Aylett and a quick visit from John Henshaw. The first session for the conference was from Professor Sir Anthony Newman Taylor around the continuing challenge of occupational lung disease. This informative but sobering presentation highlights the importance of the BOHS Breathe Freely Project. There was actually a number of presentations related to the healthcare industry and one of those topics is employee exposure to hazardous cytotoxic medicine. Tom Greens presented a study which revealed the extent of low level contamination on surfaces in pharmacies. It highlighted that even with well-established controls for a well-known hazard there are issues with compliance and ongoing education is important. Another interesting presentation was around exposure to magnetic

fields from magnetic resonance imaging (MRI) and vertigo in MRI workers presented by Hans Kromhout. This was really fascinating not only due to my current workplace but also on a personal level. Did you know that some people experience a metal taste when exposed to magnetic fields? I take you back to my experience of a metal taste around electroplating lines and it highlights a hazard I hadn't really considered. The new ISO standard for respirators was also spoken about and I was glad I'd had a quick run down from Dräger about this as well so I could understand this very technical subject. I was lucky enough (or silly enough) to have the opportunity to give an Ignite presentation. The topic was around my recent change of job from the manufacturing industry to the healthcare industry. The aim of this presentation was for young hygienists in particular to think about their future career in context of the ever changing employment landscape. Taking on a non-occupational hygiene role in a typical non-occupational hygiene sector has led to a role in which there are lots of occupational hygiene hazards. This concept was spoken of by other presenters as well including Karen Niven the IOHA president and Danny Marland from BAE Systems. On a social front the networking at the BOHS conference was excellent and the opportunity to meet key people from across the world was invaluable. At the gala dinner we were invited to participate in some Scottish highland dancing which I thoroughly enjoyed even if the Australian contingent wasn't that great at staying in line.

From Glasgow I drove through the snow to Aberdeen to meet with the engineering manager for Marathon Oil to discuss the health, safety and environment risks and plans for decommissioning oil rigs. This is a complex project with many hazards to consider but following risk management strategies allows them to plan and ultimately control any concerns.

My trip was now at its end and over the next 26 hours I had time to reflect on what a great opportunity it had been. **I encourage all young hygienists to enter this award.** It does take a lot of planning to get a successful submission in so start thinking now as September will be here before you know it. That's right! The 2016 AIOH Conference Organising Committee are excited to announce that early registration is now open for the 34th Annual Conference & Exhibition of the Australian Institute of Occupational Hygienists, Inc., at the beautiful RACV Royal Pines Resort on the Gold Coast from 3 to 7 December 2016.



That's right! The 2016 AIOH Conference Organising Committee are excited to announce that early registration is now open for the 34th Annual Conference & Exhibition of the Australian Institute of Occupational Hygienists, Inc., at the beautiful RACV Royal Pines Resort on the Gold Coast from 3 to 7 December 2016.

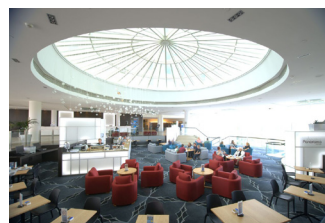
We are even more excited to announce the amazing round up of international and local presenters who will be presenting keynote, plenary and Continuing Education Sessions including the **AIHce's highest rating PDC presenter over many years, Dennis Driscoll of Associates in Acoustics, Inc., USA!** Dennis will be the conference's only Keynote Speaker, sponsored by **Safety Equipment Australia**, he will be discussing a Practical Approach to Hearing Loss and presenting a CES on Noise Control Engineering.

Other presenters include:

- Dr Phil Jauncy – Performance Psychologist
- Dr Ian Gardner – Australian Defence Force Occupational Physician
- Kate Jones – Health & Safety Executive, UK
- Dr Emily Haas – NIOSH, USA
- Andrew Cecala – NIOSH, USA
- Jakob Naerheim – Statoil, Norway
- Victoria Arrandale – University of Toronto
- Dr Rob McDonald – BHP Billiton
- Terry Elms – RMIT
- Dr Laurie Glossop – Glossop Consultancy Services
- Debbie Dietrich – SKC, USA
- Ian Firth – IC Firth OHs Solutions
- Glenn Johnson – The Hearing Company
- Carter Ficklen III – Mission Technologies, Inc., USA



**AIOHQLD
2016**
HYGIENE THAT WORKS



In addition to the professional interactivity of the conference, a full trade exhibition will be held as well as our ever popular social functions lending a friendly atmosphere to network and facilitate exchange.

So don't delay, register today and take advantage of the Earlybird period which will end on 1st August 2016.

For further information and to register, visit <https://aioh.cvent.com/AIOH2016C>

NEXT EDITION

The next edition of Occupational Hygiene Matters is due out on 15th September 2016 with copy due to the administration office by 1st September 2016.

All copy should be sent to Laura Loschiavo via email at laura@aioh.org.au.

We look forward to your contributions.

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