AUSTRALIAN INSTITUTE OF OCCUPATIONAL HYGIENISTS INC

occupational hygiene

MATTERS

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PRESIDENT • DR SUE REED



It does not seem like six months since the current council took office. It has been very busy with the development and/or review of many of the AIOH policies and procedures as discussed in the March newsletter.

It was hoped that by now the results of the member's survey would be available so we could share with you the outcomes but we have been refining what the questions should look like and hope to have the survey sent to all members soon.

One area that I know many members are interested in is how we can increase the membership services, in addition to the conference, seminars and our various publications. Council has been investigation a number of possibilities and we hope to have some of these rolled out the in the second halve of the year once they are finalised.

Much of the other news has been covered in previous emails or in articles in other areas of the newsletter so please take time to read the newsletter and the many emails that come from the AIOH. If you have any questions of me as President or the council please do not hesitate to ask them by emailing via the AIOH office at admin@aioh.org.au.



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UPDATE ON AIOH POLICIES, PROCEDURES & TERMS OF REFERENCE

BARRY WESTHORPE • EXECUTIVE DIRECTOR



What are Policies, Procedures and Terms of Reference?

A "Policy' is a statement of agreed intent that clearly sets AIOH's views with respect to a particular matter.

It is a set of principles or rules that provide a definite direction for AIOH and assists in defining what must be done.

A "Procedure" / Practice is a clear step-by-step method for implementing AIOH's policy or responsibility.

For every Policy we establish we need to create supporting procedures.

"Terms of Reference" are the guidelines in which a committee or group, such as the new Risk, Audit, Finance, Quality Committee, refers to in order to ensure it carries out its duties for the purpose that they were established.

What are the objectives for Policies, Procedures and Terms of Reference at AIOH?

Written Policies, Procedures and Terms of Reference provide the framework for AIOH's entire operation.

They provide clear direction for all stakeholders as well as insights into our organisations philosophies, values and ethical standards.

The objective of Policies and Procedures is to document various aspects of AIOH's operation and the procedures necessary to fulfil that policy.

How are Policies and Procedures developed at AIOH?

Council and I consider five basic concepts when developing policies and procedures:

- · Compliance, such as legal and regulatory requirements
- · Operational needs, both current and in the future
- Efficiency i.e. so one thought out decision can be applied to many similar cases, in a consistent manner
- · Risk Management, for good governance
- Improvement, to strive for "best practice" in what we do

As we develop of policies and procedures we try to keep in mind:

- · Streamlining the procedures in a simple but effective way
- Involve all relevant council, committee members and other interested parties
- Ensure the documents are reader friendly and easily located on our system
- Promote the procedures so everyone knows they exist, how they work and why they are needed – which is one of the reasons for this article!

The following 'POLICY & PROCEDURE REGISTER' provides a summary of recently approved Policies, Procedures and Terms of Reference.

A number of additional areas are currently being reviewed for formalisation.

POLICY & PROCEDURE REGISTER					
Policy #	Title	Outline	Author	Approved	Review
AIOH01	Travel Policy - Generic conditions for approved travel associated with AIOH business or professional activities	To ensure that travel & representation is undertaken in a professional & transparent manner with an approval process in place.	Alan Rogers & Sue Reed	23.05.14	23.05.15
AIOH02	Conflict of Interest Policy	To provide a framework for all Council members in declaring conflicts of interest.	Barry Westhorpe	23.05.14	23.05.15
AIOH03	Policy & Procedure Development Policy	A framework that outlines the process, instruction, practice and standard operating procedure for AIOH.	Barry Westhorpe	23.05.14	23.05.15
AIOH04	Code of Ethics	Formalizing of an existing policy.	Barry Westhorpe	23.05.14	23.05.15
TERMS OF REFERENCE REGISTER					
Version #	Title	Outline	Author	Approved	Review
01	Risk, Audit, Finance, Quality Committee	The role of the RAFQ Committee is to assist Council to fulfil governance requirements and oversee the responsibilities such as financial reporting and risk management systems.	Barry Westhorpe, Dianne Allen & Alan Rogers	23.05.14	23.05.15

member news

THIS IS YOUR LIFE • CAROLYN TOPPING



NAME: Carolyn Topping

CURRENT EMPLOYER: Workplace Health and Safety Queensland (Department of Justice and Attorney-General) the state regulator for OHS (excluding mining)

POSITION: Principal Advisor (Health and Hygiene)

JOB ROLE: Provide advice on occupaverse range of stakeholders including workers,

tional hygiene issues to a diverse range of stakeholders including workers, employers, WHS inspectors, Safe Work Australia to name a few.

WHAT GOT YOU INTO OCCUPATIONAL HYGIENE: As a typical late bloomer I spent many years in jobs that didn't hold my interest for long. I fell into a job with WHSQ in the 1990s and loved the work that they did in improving health outcomes for workers. After spending some time there I saw the work of the very talented occupational hygienists in the department and decided to pursue occupational hygiene as a profession. So I started my tertiary education as a mature aged student, and loved it. The combination of science and being able to influence positive change in workplaces is very exciting.

FIRST HYGIENE POSITION AND YEAR: My first full-time hygiene job was as a Health Safety and Environmental Scientist with Simtars in 2007.

MOST INTERESTING JOB: Working with Simtars was a great experience as I got to carry out exposure monitoring at workplaces all over Queensland. I don't miss getting up at 4 am though.

MOST CHALLENGING JOB: My current job is very challenging as I get involved in a broad range of topics at a strategic level as well as a practical field level. I have to be flexible and prepared to get involved in issues I may not know a lot about at the outset. I learn something new everyday which is a bonus.

BEST ADVICE THAT YOU HAVE HAD: I can't teach you but you can learn from me (and I try to learn something new everyday).

WHAT ADVICE DO YOU HAVE FOR PEOPLE STARTING A CAREER IN OCCUPATIONAL HYGIENE: Don't be afraid to try new things

WHAT DO YOU SEE AS THE NEW OPPORTUNITIES IN OCCUPATIONAL HYGIENE: The design and use of apps for mobile devices in assisting workplaces with identifying hygiene risks and when they need to get help from a hygienist.

ACTIVITIES WITH THE AIOH: Currently Qld State Liaison Officer

HOBBIES: Reading is my first love. I am also teaching myself the piano (electric so the rest of the household doesn't' have to suffer).

FOOTBALL TEAM: None (but South Sydney Rabbitohs if my husband is listening).

FAVOURITE MOVIE: As a proud and certified nerd, I would have to say Star Trek II The Wrath of Khan (classic trek).

FAVOURITE BAND: I have an eclectic taste in music and enjoy anything from Nick Cave and the Bad Seeds to my newest favourite Ludovico Einaudi.

FAVOURITE RESTAURANT: New favourite, French Martini at Southbank

NEW MEMBERS & UPGRADES

UPGADE TO FULL

Maggie Davidson - Colorador State University, USA Simon Thomas - ExxonMobil, Vic

FULI

Ritesh Patel - Hibbs & Associates, NSW

PROVISIONAL

Ann Bayly - Associated Measurement and Safety, VIC Vivian Fung, NSW

Samantha Ling - HSE Australia, WA Edwina Beeston - Melbourne Health, VIC

ASSOCIATE

Ian Crew - AEC Environmental, SA

Dean Crouch - Dept of Mines & Petroleum, WA

Herman Ebersohn - Ausdrill, WA

Elaine Feeney - Identifibre Pty Ltd, VIC

Adam Fewster - Pentagon Freight Service, WA Mingkui Gao - Brightwater Marangaroo, WA Jennifer Granville - IPM Safety, TAS

Graham Heilig - Aust Diesel Particulate Services, QLD
Hannah Highfield, WA

Claire Howard - Coffey, WA

Sonja Jovovic - BHP Billiton Iron Ore, WA Rune Knoph - Safe Work & Environments, Sandra McFadden - Newcrest Mining, NSW

Darryl Povey, VIC Nehal Rajani - Baxter Healthcare, NSW

Benjamin Regan - JBS&G (NSW & WA) Pty Ltd, NSW John Rochford - HAZCON Pty Ltd, Vic

Kaina Salivaji - Chamber of Commerce & Industry, WA Craig Salter - Action OHS Consulting Pty Ltd, Vic Farhan Shahzad - Sonic Health Plus, WA

Alan Threlfall - AEC Environmental, NT Helen Truscott - NSW Fire and Rescue, NSW Benjamin Wackett - Cavvanba Consulting, NSW

STUDENT

Anita Bonnici - Melbourne Water, VIC Daniel Crossingham, NSW

Mohammad Farooq, NSW Charlie George, WA

Ashleigh Griffiths, WA

Dilraj Singh Litt, WA

Thomas Lorrimar - CITIC Pacific Mining, WA Athena Madams - Shellharbour Physiotherapy, NSW

Tendai Mapondera - RMT, WA

Stephen Parlevliet - Rous Water, NSW

Brett Stratton - Defence Material Organisation, ACT

CONGRATULATIONS SIMON

Congratulations to our Victorian State Liaison Officer, Simon Thomas who recently completed the Graduate Diploma of Occupational Hygiene at Deakin University (pictured right). Simon is the occupational hygiene advisor at the Mobil Altona Refinery and since graduating is continuing his studies by enrolling to do his Master of Applied Science degree. Simon also recently became a Full Member of the Institute.



professional development



EDUCATION COORDINATOR • KERRIE BURTON

BASIC PRINCIPLES COURSE

The second half of 2014 promises to be an interesting one with a Basic Principles Courses planned as follows:

- Perth July 14 to 18
- Brisbane Sept 29 to Oct 3
- · Sydney October 20 to 24
- Melbourne November 26 to 30

If you are interested in courses in other states or want to be notified of these please register your interest at <u>conference@aioh.org.au</u>.

SEMINARS

Planning for the Diesel Maintenance seminar and workshop, facilitated by Sean McGinn – an international Diesel Maintenance expert and our very own Jennifer Hines, is well underway. The seminar is focussed on how as occupational hygienists and safety professionals we can work with engineering colleagues to achieve a healthier workplace by focussing on engine maintenance and will also expand on the hygiene monitoring requirements for evaluating workplace exposure. The workshop element will allow these techniques to be demonstrated.

August sees our New Zealand colleague, Brad Prezant, conducting a workshop on mould. The seminar is based on the workshop he ran at the Sydney 2013 conference, with some modifications based on your feedback. This seminar will be held in Perth, Darwin, Melbourne, Brisbane, Adelaide & Sydney.

To finish off the year we have the nanotechnology seminar being held in late September, being presented by Pete McGarry from Workplace Health and Safety Queensland and Howard Morris from SafeWork Australia. Details will be coming soon for these upcoming events.

Information on how to register and other details can be found at www.aioh.org.au under events.

OHTA - BIG OAKS FROM LITTLE ACORNS • FUTURE GOVERNANCE AND PLANS FOR THE INTERNATIONAL TRAINING AND QUALIFICATIONS SCHEME IN OCCUPATIONAL HYGIENE • ROGER ALESBURY

A series of informal discussions between senior occupational hygienists nearly a decade ago has now evolved into an international training and qualifications scheme. Those early discussions in 2005 led to the authoring of a range of courses and the development of a website (www.OHlearning.com) from which the training materials can be downloaded free of charge. To date, there have been nearly 300 training courses run in 35 countries, with over 3,600 candidates sitting an internationally recognized exam. Full details of the scheme can be found on OHlearning and an article published in the Annals of Occupational Hygiene describes the background at this link: http://tinyurl.com/ncbfz2b.

OHTA is currently managed by a small team of volunteers, including

some of the founders. This model has served us well in the development phase but the workload has outgrown the capabilities of an entirely voluntary organisation. To enable the programme to continue to grow and prosper, a more sustainable form of governance and support is needed.

Plans are now well advanced to transfer governance to a new board and establish a contract for services to support the maintenance and development of courses and facilitate future growth of the scheme. In this article, we describe the changes that are underway.

Why change a successful model?

OHTA has developed only because of support from key occupational hygiene organisations around the world. IOHA, AIOH, AIHA

and BOHS in particular have been instrumental in shaping the way the scheme operates. These four bodies, together with commercial businesses that funded development of materials, corporate sponsors and individual supporters have provided all the funding prior to 2014. The current model has worked well in the development stages but the growing organisation now needs a funding model that is not entirely dependent on donations and sponsorship and a governance model that ensures continuing transparency to the occupational hygiene community.

Governance

New Articles of Association are being developed to make provision for IOHA and national occupational hygiene associations to take a higher profile role in the governance of OHTA. To ensure continuity and the expertise required to manage a complex international organization, the Board will be built around the chief executives or executive directors of national associations, plus a nominee from the IOHA Board. It is proposed that initially the new Board will comprise Steve Perkins, Chief Executive of BOHS; Peter O'Neil, Executive Director of AIHA; Barry Westhorpe, Executive Director of AIOH and an IOHA Board member. Other directors will be appointed as needed to provide continuity and address the needs for specific skills. Organisations that have signed agreements with OHTA will be invited to become members of the new company, as will other national associations. Member organisations will be entitled to a vote at general meetings and in the appointment of Board members. To become members, national associations are being invited to sign a simple membership agreement. The draft Articles will be posted as a project entitled 'Governance 2014' in the Community section of OHlearning. com where comments and observations can also be recorded.

Funding

Until now, OHTA has made no charges and received no income from the use of its materials, whether from the running of courses or examinations. The only income has been as described above – donations and sponsorship. To provide a sustainable source of revenue that will enable the scheme to grow, a levy on exam candidates

was introduced in 2014. This fee is collected by BOHS on behalf of OHTA when examination charges are invoiced.

Administration

The income from the course levy will be used to pay for professional administrative support for OHTA. A contract has been signed with BOHS who will now provide the support, including the recruitment of a part-time OHTA Development Manager. The services will include support for the OHTA Board and activities such as course development, updating and translation.

Timelines

The contract for services has been agreed and is likely to come into effect in late 2014. The new Articles are being finalised and application will then be made for charitable status in the UK. There will be a handover period and management of change with the new Board anticipated to be fully operational in 2015. The formal launch of the revised OHTA will take place at the IOHA 2015 Conference in London.

The future

The new Chief Editor, Bob Nocco, and his Editorial Board are in the process of reviewing the current 8 course modules with a view to updating them. Work is also well advanced on the development of a new module on silica by WHWB and specialist modules on the pharmaceuticals and oil & gas industries. Further courses are under consideration.

A number of translations are also underway, including a Mandarin version of W501 that has been generously funded by AIHA International Affairs Committee. The numbers of Approved Training Providers and courses delivered continue to increase year on year. We are confident that the changes outlined will enable this rate of growth to be sustained to the benefit of workers' health worldwide.



DRAGER YOUNG HYGIENIST AWARD REPORT • KATE COLE

You might think it's a bit depressing to be on the other side of a three-week European bonanza, but I've been having a great time busily putting everything I learnt from my trip in to practice. Over the course of three weeks I travelled to the Dräger headquarters in Lubeck, Germany, the UK's Health and Safety Laboratory in Buxton, and managed to fit in a few side trips to the Battersea Power Station and Crossrail construction projects in London. I then rounded the trip out by attending the BOHS Conference in Nottingham, UK. It's difficult to choose a single adjective to describe the trip, as it provided both an amazing learning and networking opportunity...but I'm going to go with #amazing!

I spent what free time I had whilst in Europe writing my experiences, interviews, and thoughts on my blog. The idea of "blogging" about my trip came to me when I started to get into the nitty gritty of planning the journey. Based on feedback from previous award winners who told me that it will be, "the best time in your entire professional career", I had a hunch it was going to be good. Our mission as occupational hygienists is to prevent ill health in the workforce and we can't do this to the best of our ability if we keep all this fantastic knowledge to ourselves and don't share it with anyone. So blogging about the trip was my way of sharing this information to basically anyone that was interested. A big thank you goes to the many people who "liked", commented, or re-tweeted the various posts that put up (special mention goes to Jane Whitelaw being my most engaged follower!).



WHAT ADVICE DO YOU HAVE FOR OTHER EMERGING YOUNG HYGIENISTS?

Be forceful and understand your limits. You need to get your message across about how important it is. You also need to understand how and why certain BOELs were developed. For example, some countries are much lower than in the UK. The HSL provides advice as to what is reasonably achievable in the UK, therefore if you are using a lower limit, which may be based on 90% of the population, you should expect to see some exceedances.

Kate Jones

The BOEL is not a health based tool. Remember that.

Helen Chambers

Take time and think for yourself to find out the answer.

Nick Vaughan

Keep any instructions you provide simple and to the point. Get out there and speak to the workers. That is your prime opportunity to affect change.

Martin Roff

The best thing you can do is to engage with people in the work-place where you have the ability to affect change, rather than always going to the sampling pump first. You need to get people enthused about health and getting them to take health and safety seriously, which you can do by communicating openly and honestly. The more you do it, the more you will forge a partnership with your workers.

Lawrence Waterman

Rather than re-iterate the information I've already blogged about, I want to share with you some of the more technical aspects of what I learnt as an occupational hygienist from both meeting with other professionals in our field, and from attending the incredible BOHS conference.

Firstly, the Dräger Headquarters is even better than you think it is. It's a mammoth sized manufacturing mecca placed in one of the most beautiful cities I have ever seen. Upon entering Lübeck, Dräger treated me like royalty. I received a personalised tour of the city and surrounds, amazing meals, and a trip back to the airport in a Mercedes on the Autobahn. I was provided a guided tour where I found the level of attention to detail simply amazing. It sure was a great way to kick off the trip!

After leaving Germany, I travelled to Buxton in the UK to meet with a team of scientists at the Health and Safety Laboratory (HSL). I admit that I was a bit nervous as it's really hard to judge what someone is going to be like when you only know them from reading their papers in the Annals of Occupational Hygiene, but I was warmly welcomed. I spent the day with numerous hygiene gods plying them with my various questions. I learnt that the team at the HSL are currently working on many things of interest including continuing research into isocyanates investigating a specific metabolite with fewer confounding factors, studying exposure to pesticides in a residential setting and focussing their attention on more "exotic" metals found in items like solar cells and mobile phones. The issue with such includes newly recognised exposure scenarios to those exotic metals due to the associated recycling activities of such devices. Research efforts to date have included the collection of exposure data, however they continue to recognise the limited number of scientific studies available to determine an acceptable exposure standard, therefore as a start, the HSL are working to characterise the background concentrations of those metals for the general population for purposes of data comparison.

Having read many of her papers, I was very excited to meet with Kate Jones (Principal Scientist at the HSL), particularly to hear her advice for occupational hygienists who are faced with the situation of telling a worker that their biological sample result has exceeded the BOEL (Biological Occupational Exposure Limit), having been in such a situation (thanks to the need to test for 1-hydroxypyrene), and so I was intrigued. Kate explained that one of the most important things was to make sure that your exposure assessment program is suitably designed from the start which includes making sure that the worker understands why you are performing the sampling, and the fact that biological monitoring does not measure the workers health, but rather assess the risk of emerging ill health issues. Kate articulated that the worker needs to be aware that sampling activities are not intended to assess their current health, which is a common misinterpretation of the purpose of biological monitoring, reporting that it is really no different than collecting an air sample, as such sampling is also performed to assess the risk of ill health and not measure the workers actual health at that time. Kate then went on to point out that biological monitoring tends to be a more powerful communication tool than air monitoring particularly to demonstrate to a worker what is actually happening, and in circumstances when results are not ideal, then it is a more likely method of persuading the worker to comply with the implementation of controls.

Nick Vaughan has been researching the use of PPE for longer than I have been alive, so I thought he'd be the best person to speak to about some specific PPE questions. Nick told me to remember that whenever you have a worker in chemical protective clothing, that you actually can make them more susceptible to vapour permeation through the skin due to the fact that they typically get hot and sweaty. The skin proves to be in a more receptive state when hot and will absorb the vapour more easily. Therefore it's even more important to make sure that the suit being worn is sealed correctly. Nick performed a study recently where workers were involved in cleaning up clandestine laboratories. He found the chemical protective clothing to have a very low protection factor (less than 10), due to the air escaping/entering just below the respirator where the zip ends underneath the neck. When the suits were replaced with those that zipped up at the back, and a neoprene rubber mask was inserted around the respirator, the suit (made of the same material) recorded protection factors in excess of 100. Nick used that case to highlight the fact that manufactures permeation and penetration data can't be blindly used and assumed it will provide the same results if the suit isn't sealed correctly.

I also met with Helen Chambers, the Principal Occupational Hygienist at the HSL. One of the items we discussed was the fact that the UK's limits for some chemicals are much higher than the limits set by other international organisations (eg: the ACGIH). Part of what the HSL does is to

WHAT'S YOUR BIGGEST GRIPE AND THE ONE THING YOU WANT TO CHANGE?

That the need to perform biological monitoring is currently not a legislative requirement (with the exception of Lead).

Kate Jones

Health is not taken as seriously as Safety. The term 'Occupational Health' seems to relate more to paramedics, not occupational hygienists.

Helen Chambers

Some occupational hygienists have a tendency to not want to make it simple as I think that they worry that if they give others too much knowledge, then they won't need them anymore. I'll use the example of the car to explain this: If one of our tyres goes down, then most of us can pull over and pump up our own tyre. However, when something goes wrong with the gearbox, we happily take the car to the mechanic. I feel as though sometimes occupational hygienist's are trying to stop people filling up their tyres.

Lawrence Waterman

TOP TIPS FOR PUBLIC SPEAKING?

Slow down; do not be afraid to take a pause. We in the audience will wait for you, we are not going anywhere.

Martin Roff

Don't use abbreviations and don't talk too fast like I do.

Helen Chambers

Take time to look at people in the eye...and be prepared!

Perry Logan

study various industries and sample different sectors to determine if lower limits that are proposed are actually feasible. Sometimes, enforcing a limit below what occurs in day-to-day work is just not practicable, especially if you have already overloaded the workplace with controls. However, it means that compliance with that limit does not mean that cases of occupational illness will not occur, and goes to further highlight the importance of understanding the documentation behind the way that the limit was established.

I met Lawrence Waterman at the Battersea Power Station in London the next day after nervously driving a hire car over for over 3-hours along very windy streets. I have blogged a lot about Lawrence, but what I haven't shared is some of the juicy stuff. Lucky for you, I wrote it down at the time so I wouldn't forget. When Lawrence presented at the 2013 AIOH Conference he said that, "For too long occupational hygiene has been biased strongly towards that scientific and precise defining of the quantum of risk, making use of complex modelling, extensive monitoring and measurement and the technical defining of control measures and this focus has been at the expense of the art of occupational hygiene". I sat in the auditorium and thought, "maybe...but how do you assess the risk from the inhalation of carcinogenic substances if you don't measure it?". So that's what I asked Lawrence, which then lead to a discussion on hazard banding and the level of effort and detail required within each hazard level. Lawrence discussed using green, amber, and red hazard bands which represented different thresholds that each required different amounts of focus and effort. For example:

- Green might represent a typical construction site where the dirt being moved is not contaminated (but you don't want the workers to eat it either!). You expect a certain amount of good hygiene practices to apply, so your controls might be simple such as washing hands before eating etc to prevent ingestion along with worker training. Your chances of significant airborne exposures are low, and you might try to minimise tracking of material onto roads etc.
- Amber represents areas with low-level contamination. You look to provide better controls, enhanced training and greater PPE, but in Lawrence's opinion, too much focus is placed on the scientific assessment process within this band.
- Red represents the area where occupational hygienists are really needed to both inform controls and to measure their effectiveness through the use of ongoing assessment. This level deserves rigorous attention.

In my line of work, I typically work in the Red hazard band. Lawrence's point to me was that the Red hazard band is where occupational hygienists can exert the best impact and really demonstrate their value. His point was really, why spend a large amount of time, energy, and consultant dollars on assessing the finite risk within the Amber hazard band? He would rather see us get better at implementing appropriate controls so that our focus is better spent where it needs to be.

Lawrence's advice made sense to me, which led us to discuss tips for developing a solid occupational health program. The most valuable piece of advice that Lawrence provided was about making the program visible to the worker at the start. This might involve looking at the interface between everyday health and workplace health. For example, through offering support for the worker to get healthy or stay healthy and in doing so creates an opportunity to exchange information relating to the hazards in their work environment (eg: communicating health effects from smoking and exposure to crystalline silica).

All of this was reinforced by Melodie Gilbert who developed the occupational health program for the multi-billion pound Crossrail project (which I was also able to see!). We discussed some of the challenges surrounding the general awareness of occupational hygiene and I asked for her advice on how to effectively communicate occupational health risks in the workplace. In addition to what I have already written previously, Melodie stressed the importance of two main things. The first is to provide visible and effective leadership, always leading by example. The second is to engage with the workforce using through a multitude of methods, whether that be through presentations, training, or being a champion for health.

After all of the touring, I headed over to Nottingham for my very first BOHS Conference. After accidentally bumping into Sue Reed and Steve Perkins in the bistro (and subsequently inviting myself to dinner), the conference was off to a flying start.

I attended a PDC facilitated by Dr Perry Logan and Dr Paul Hewett on the practical applications for bayesian statistics and decision making. One of the first things we were asked to do was to

interpret a series of exposure data against an exposure standard. There were around 12 of us in the room and after we completed the task, Perry posed the question, "Why don't you all have the same answer?" Great point....why don't we? One of the outcomes of this PDC was learning some valuable rules of thumb that can be applied to categorise exposures (when you don't have your laptop on hand) and the use of Bayesian statistics to interpret and make decisions on exposure data. We also stepped through the process of using the IH Data Analyst (IHDA) tool, which has become my new favourite piece of software. This was by far the best short-course I have attended, it was like my world exploded and I could see sunlight again it was that good. If we are lucky enough to have a similar CES presented at AIOH2014, I strongly recommend that you make time to go.



The first day of the BOHS Conference kicked off with the Warner Lecture provided by Major Phil Ashby, a royal marine who has won a Green Beret and a Commando medal for bravery. He gave an incredibly moving story of his fight for survival deep in the heart of Sierra Leone and almost being killed several times. It was very comforting though when he started his talk and told us that out of all he has been through, that he was still terrified of public speaking! As part of my visit to the BOHS Conference, I presented at an Ignite session which was aimed to ignite attendees to use social media to promote the profession. In preparation for my big 5-minute talk, I asked some experts for public speaking tips that I did my best to incorporate (see previous page). The Ignite session was fantastic and provided some comic relief amongst some very serious topics. Although it only lasts for 5-minutes, I realised fairly quickly, that there is an art in timing your words with some degree of accuracy to match a power point presentation where each slide auto-advances every 15-seconds.

One of my favourite parts of BOHS14 was attending the various workshops that focused on promoting the engagement of the BOHS with its members, which strengthens the support that the BOHS provides its members, but also ultimately provides the best support back to industry as feedback is through a collaborative and consolidated approach.

I met some great people at conference including my counterpart, Alex Wilson, who won the Young Hygienist Award at the BOHS14. Alex facilitated a workshop on professional skills for occupational hygienists, and a session on IOHA London 2015. The theme for IOHA is "Building on Occupational Hygiene Together" which was fitting as that session was used to reach out to attendees to obtain their ideas, suggestions, and feedback to deliver one the largest occupational hygiene conferences in the world (over 1000 delegates!). One of the key take away items that I had is that collaboration and member engagement are key strengths of the BOHS.

I sat in on some amazing sessions and I was fortunate enough to meet some remarkable people. I was surrounded by so many hygiene gods that at times I had to pinch myself at how lucky I was to be in hygiene heaven. I am very grateful to the AIOH and Dräger for continuing to provide this opportunity to young hygienists in Australia. It is impossible to put a price on the knowledge I have gained and the new connections and friends I have made, which has reinforced my passion that I have for continuing to do my utmost to safeguard the health of our workers.



From left; AIOH President, Dr Sue Reed, Dr Perry Logan and Kate Cole



VALE CHRIS WINDER

Professor Chris Winder, whom is known to many passed away on the morning of 21 May 2015 after a long battle with a brain tumour.

Chris was known to many occupational hygienists as one of the authors of the textbook "Occupational Toxicology". Some Australian occupational hygienists may have also been taught by Chris when undertaking OHS studies at the University of New South Wales or the Australian Catholic University.

We know Chris will be missed by many of the OHS academics in Australia.

across the country

VICTORIAN CHAPTER • SIMON THOMAS

SUNDOWNER - STATISTICS



On Monday the 14th of April 2014, the Victorian Chapter of the AIOH held its first Sundowner meeting for the year. The meeting was held at the Alfred Centre with approximately 30 members in attendance. The evening began at 5pm



with a chance for all attendees to catch up with colleagues and network over drinks and finger food. The formal part of the evening commenced at 6pm with a ten minute AIOH Council update which was presented by newly appointed SLO Simon Thomas. The update included information on the new office which opened in March and the new AIOH administrative structure that is now in operation. The update also looked at the current and long term strategies for the AIOH over the next five years.



Following on was the feature topic of the evening presented by AIOH members Russell Bond and Greg Oldfield on the application of compliance statistics in relation to occupational hygiene data. This was an interactive presentation and opened with a range of questions posed to the audience on the theme of how we apply statistics to determine compliance. Questions included, do we use the maximum value i.e. no sample above the exposure standard? Do we use the 95th percentile? Do we use the upper 95% confidence limit of the mean? Do we use the mean? Can we determine compliance with just one sample? This triggered a fascinating discussion on the statistical tools and techniques we use as hygienists, and the challenges we face with them.

A very big thank you to both presenters for their time, to attendees and also to the AIOH for supporting this event.

Congratulations to *Frank Fleer* from Golder Associates who won the inaugural door prize on the evening.

NEXT SUNDOWNER - GAS DETECTION @ DRAEGER

The topic for the next Victorian Chapter Meeting will be Gas Detection. The meeting will held at Draeger Safety in Notting HIII on July 14 and will include a tour of Draeger's facilities. For further information or to register, visit http://aioh.cvent.com/AIOHVicChapterJuly2014.

If anyone has any suggestions for topics for forthcoming Chapter meetings or would like to help organise future meetings please contact Simon Thomas at hazkem32@gmail.com













WEST AUSTRALIAN CHAPTER • WAYNE POWYS

WATER RISK MANAGEMENT

The WA Chapter of the AIOH held its second Sundowner meeting for the year on Monday 19th May, 2014 at the ChemCentre Seminar Room. The topic of the Sundowner was Water Risk Management', which attracted forty-five attendees who networked whilst enjoying food and drinks before the commencement of the formal proceedings.

Dr Barry Chesson (WA SLO) opened the formal session and welcomed attendees. He gave an update on the AIOH Council activities, including the recent developments regarding AIOH administration, a refresh on the AIOH vision and strategy, upcoming courses and events, in particular the 2014 Conference. Barry finished by advising the topics of the remaining two WA Chapter Sundowners for 2014, namely: Noise/Hearing - 'Return of the Mythbusters' on Monday 25 August, and; the third of Dr Laurie Glossop's trilogy on asbestos management, dealing with control,

on Monday 10th November.

Barry then introduced Ryan Milne, founder and Principal Consultant of Ecosafe International, which is a specialist consultancy focusing on the interface between water and health. He is a keen advocate for holistic, practical and effective management of on-site potable, waste and process water systems.

Ryan initially refreshed attendees' understanding of what constitutes 'drinking water' and emphasised that its use extends from consumption to the supply of eye wash stations, emergency and domestic showers, and to food (e.g. ice). He went on to discuss drinking water quality risks, stating that the greatest acute risk to consumers are pathogenic microorganisms and pointing out that most waterborne diseases occur worldwide and that Australia is not immune. He presented a number of outbreaks that have occurred in Australia, in which common risk factors included: delay in action to address identified risks; lack of appropriate training and awareness; delay in and inability to interpret water quality results; lack of management commitment, accountability and performance review, and; failures in barriers that were not detected until contamination occurred. He pointed out that whilst the main concern is pathogenic microorgan-



From left; Ryan Milne and WA SLO, Dr Barry Chesson

isms, chemical and radiological hazards present a chronic risk and need to be managed, as do aesthetic factors (e.g. taste, odour and turbidity), which can often give rise to a perception of risk.

Ryan next presented a regulatory overview and highlighted the importance of the Australian Drinking Water Guidelines (ADWG, Reference 1) in providing a framework for drinking water quality management. He remarked that the Western Australia (WA) Minister of Health has endorsed the ADWG, which are regarded as a 'whole of State' policy. Indeed, from 2008 all WA mine sites and exploration camps are required to comply with the ADWG and provide their drinking water quality monitoring results to the WA Department of Health.

Ryan continued by advocating intensely for taking a holistic, risk based approach to managing a drinking water system and this starts with understanding it, highlighting the ADWG statement, 'the degree of risk management is determined by source water, size and complexity of distribution network and number of consumers'. He then covered tools and techniques that can be used for understanding the system and, using a diverse selection of case studies he engaged attendees in identifying the hazards and risks presented.

Next, Ryan covered drinking water quality monitoring, the various types and their place within the DWQMP. He outlined the key considerations for a water sampling programme as set out in AS/NZS 5667 (Reference 2), namely: it must reflect the number of people and associated potential for exposure (include fixed & sentinel points); water quality can change within a system and so may require multiple monitoring points within the larger reticulation system; all sampling locations should be clearly identifiable (e.g. using site codes); it must be representative of the system, and; the need to define the objective of the monitoring programme, e.g. operational versus compliance. Finally, he emphasised the criticality of having a robust process for interpreting water quality results and for monitoring trends.

Ryan proceeded to discuss the ADWG approach to drinking water quality management, which is based on the Hazard Analysis Critical

Control Point (HACCP) model, and is aligned with other quality management systems. The ADWG approach consists of three main steps: (a) developing the drinking water quality policy and management standard(s) (b) conducting site-based risk assessments of the system, involving evaluations and a HACCP approach, and (c) developing the site DWQMP and associated manual. As a conclusion to his presentation, Ryan dealt with future developments and advised that health-based targets described in the WHO Guidelines for Drinking Water Quality (Reference 3) are expected to be introduced in the next addition of the ADWG scheduled for 2017.

A Q&A session then followed Ryan's presentation and Barry Chesson then thanked Ryan, and presented him with a token of the WA Chapter's appreciation.

The WA Chapter of the AIOH acknowledges and thanks WA SLO Barry Chesson for organizing the event and the ChemCentre for graciously allowing the use of the Seminar Room.

References

- 1. National Health and Medical Research Council, Australian Drinking Water Guidelines, 2011 (Updated December 2013)
- 2. Standards Australia, AS/NZS 5667, Water quality Sampling
- 3. World Health Organisation, Guidelines for drinking water quality, 4th Edition (2011)

standards • guides • reports

SNIPPETS FROM GAVIN IRVING

RADIATION DOSE UNDERESTIMATED FOR FUKUSHIMA WORKERS

It has been reported that the internal radiation doses for 142 Fukushima workers was underestimated by the Tokyo Electric Power Co. (TEPCO). Doses were revised upwards by an average of 5.86 millisieverts, but in one exceptional case by an additional 90 millisieverts. See more at: http://ajw.asahi.com/article/0311disaster/fukushima/AJ201403260046

E-CIGARETTES. A SAFER ALTERNATIVE?

Their manufacturer's claim they are a much safer way to get your nicotine fix than smoking a conventional cigarette, but there have been increasing concerns from various agencies around the world following a significant increase in the number of reported poisonings, especially in children. E-cigarettes use a concentrated solution to produce a vapour that is inhaled by the user. The key ingredients in e-cigarettes, are powerful neurotoxins. Tiny amounts, whether ingested or absorbed through the skin, can cause vomiting and seizures and even be lethal. A teaspoon of even highly diluted e-liquid can kill a small child. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6313a4.htm?scid=mm6313a4 w

http://www.nytimes.com/2014/03/24/business/selling-a-poison-by-the-barrel-liquid-nicotine-for-e-cigarettes.html?hpw&rref=business&r=2

CAPPING CHERNOBYL

Almost 3 decades on, extensive work is still underway to contain the release of radiation from Chernobyl. http://www.nytimes.com/interactive/2014/04/27/science/chernobyl-capping-a-catastrophe.html? r=0

FIRST REPORTED CASE OF ILLNESS DUE TO NANOPARTICLE EXPOSURE

It has been reported that a worker in the United States recently suffered adverse health effects after handling nickel nanoparticles. The chemist developed throat congestion with postnasal drip, flushing

of the face and skin sensitivity to metals within a week of exposure to nickel nanoparticles, according to a case study published May 8 in the online version of the American Journal of Industrial Medicine.

http://www.bna.com/worker-illness-nanomaterial-n17179890489/http://blogs.cdc.gov/niosh-science-blog/2014/05/28/nickel-nano/

SNIPPETS FROM PAM GUNN

AS/NZS 1269.4 OCCUPATIONAL NOISE MANAGEMENT PART 4: AUDITORY ASSESSMENT

Standards Australia published a revised edition of AS/NZS 1269.4 Occupational noise management Part 4: Auditory assessment on 24 April 2014. The main change from the 2005 edition is the replacement of the table of "maximum acceptable background noise levels" required for audiometric testing using **particular** makes and models of audiometer earphones/enclosures, with a **method** to calculate what is now called "maximum permissible ambient noise levels" for **any** earphone/enclosure combination for which valid attenuation data is available. This allows new makes and models of earphones to be considered for use, whilst an informative appendix still lists the ambient noise levels required for existing makes and models.

Another change is the deletion of the rather complicated (informative) appendix on Otoacoustic Emissions (OAE) due to research on the application of this testing technique to workplace programs not progressing as quickly as anticipated when the 2005 edition of the standard was written. However, a note in Clause 10 alerts readers to the work on standardisation of OAE procedures now being undertaken internationally, led by the HSE in UK. So hopefully, future editions of AS/NZS 1269.4 will to include these.

XXXII WORLD CONGRESS OF AUDIOLOGY

The XXXII World Congress of Audiology was held 3-7 May 2014 in Brisbane. Several sessions related to Hearing Loss Prevention and included papers on noise and ototoxic chemicals. The program can be viewed at: http://www.wca2014.com/

NAL NOISE DATABASE

The National Acoustic Laboratories' new on-line NOISE database of leisure noise exposure measurements was launched at the Congress: http://www.wca2014.com/index.html?download=DOWNLOAD1 by Dr Elizabeth Beach. She hopes the database will support policy makers, the entertainment industry and venue patrons in their efforts to promote healthy hearing in leisure environments. The database itself can be found at: http://noisedb.nal.gov.au/. If you have similar data of your own, you can add it to the NOISE database.

ICBEN 2014 CONGRESS

The ICBEN 2014 Congress will be held in Nara, Japan 1-5 June This 3-yearly international conference reports on progress made in research into all the different effects of noise on both people and animals, as well as policy development to control environmental and workplace noise. The program can be viewed on the website: http://www.icben2014.com and anyone interested in particular papers can contact Pam Gunn at pam.gunn@commerce.wa.gov.au.

SOUND IN HEALTHCARE FACILITIES

A report on a Swedish Symposium on Sound in Healthcare Facilities can be found at http://www.careforsound.com/Publications/ Careforsound-publication.pdf.

EXCELLENCE IN HEARING LOSS PREVENTION AWARDS

The winners of the US The 2014 Safe-in-Sound - Excellence in Hearing Loss Prevention Awards were announced in March and can be viewed at: http://www.safeinsound.us/winners.html

EVALUATION OF SMARTPHONE MEASUREMENT APPLICATIONS

Researchers at the US NIOSH have published a paper "Evaluation of smartphone measurement applications". See http://blogs.cdc.gov/niosh-science-blog/2014/04/09/sound-apps/. Their results showed that, for A-weighted sound level measurements, three of the ten iOS apps tested had mean differences within ± 2dB(A) of the reference measurements and so could potentially be used for preliminary surveys in workplaces. Note though that performance in variable noise and impulsive noise has not been tested yet.

THREE WORKERS WERE DIAGNOSED WITH HAND ARM VIBRATION SYNDROME AND/OR CARPAL TUNNEL SYNDROME

A company responsible for maintaining the grounds of a naval base in Cornwall UK has been fined £10,000 and ordered to pay £10,000 in costs after three workers were diagnosed with Hand Arm Vibration Syndrome and/or Carpal Tunnel Syndrome, debilitating conditions that left them with permanent nerve damage. They had been exposed to high levels of hand-arm vibration caused by using tools such as hedge cutters and trimmers for long periods.

See: http://press.hse.gov.uk/2014/company-in-court-after-workers-suffer-nerve-damage/?eban=govdel-vibration&cr=07-May-2014.

OCCUPATIONAL NOISE EXPOSURE AND NOISE-INDUCED HEARING LOSS ARE ASSOCIATED WITH WORK-RELATED INJURIES LEADING TO ADMISSION TO HOSPITAL

This found that for each dB of hearing loss, a statistically significant risk of increased hospital admission for injury was observed. A sta-

tistically significant association was also found between working in an occupational ambient noise ≥100 dB(A) and the risk of injury. See abstract at: http://www.ncbi.nlm.nih.gov/pubmed/24639292.

FALLS RISK AND HOSPITALIZATION AMONG RETIRED WORK-ERS WITH OCCUPATIONAL NOISE-INDUCED HEARING LOSS

Results showed a relationship between severe NIHL (≥ 52.5 dB HL) and the occurrence of a fall. See abstract at: http://www.ncbi.nlm.nih.gov/pubmed/24345605.

CARDIOVASCULAR DISEASE MORTALITY AMONG RETIRED WORKERS CHRONICALLY EXPOSED TO INTENSE OCCUPATIONAL NOISE

Results indicated that prolonged duration of noise exposure (≥36.5 years) was associated with an increased risk of CVD death, as compared with shorter duration (<27 years), and that moderate and severe NIHL were also associated with an increase in risk of CVD death. See abstract at: http://www.ncbi.nlm.nih.gov/pubmed/24792922.

HEARING IMPAIRMENT ASSOCIATED WITH DEPRESSION IN US ADULTS

Researchers Li et al from the US National Institutes of Health have also recently published a paper connecting hearing impairment and depression, 'Hearing Impairment Associated With Depression in US Adults, National Health and Nutrition Examination Survey 2005-2010'. See abstract at: http://www.ncbi.nlm.nih.gov/pubmed/24604103.

THERMAL RISK ASSESSMENT APP

SNIPPET FROM GARY RHYDER



Available: iPhone and iPad, Android and windows phone.

The Basic Thermal Risk Assessment is a first level qualitative risk assessment tool that does not require specific technical skills in its administration, application or interpretation.

It is designed to be used by employers,

employees or technicians to provide guidance and also as a training tool to illustrate the many factors that impact heat stress and working in hot environments. It is derived out of "A Guide to Managing Heat Stress: Developed for Use in the Australian Environment" by Ross Di Corleto, Ian Firth & Joseph Mate.

Android (Google play)

Apple (iTunes store)

https://itunes.apple.com/us/app/thermal-risk/id867920824?ls=1&mt=8

Windows Phone store

http://www.windowsphone.com/en-us/store/app/thermal-risk/6f3ffccf-fcca-4588-9f3c-b7bdea119662

Please send your feedback to vg915@uowmail.edu.au or vinodkum@uow.edu.au

special features

HEALTHIER WORKPLACES • MARCUS CATTANI

I recently attended a thought provoking healthy workplaces conference. The Australian government has provided funding to the States and Territories to improve fitness at and for work. In WA, WorkSafe has developed a series of well thought out initiatives, including self-help tools such as an online Return On Investment calculator, and grants to employers to improve employee fitness for work. The Healthier Workplaces WA conference updated the audience on progress over the last year, presented research, and showcased a few of the organisations that have made the most of their grant.

There were interesting sessions all day! If you would like some names of people to look up I suggest Prof. Phil Morgan from University of Newcastle who presented on the theme of getting males involved. He's an entertaining speaker and his talk was full of how to get this difficult group of people involved! Also look up Prof. David Dunstan, from the Baker IDI Heart and Diabetes Foundation, who gave a talk which he said could be titled "Sitting is the new smoking"! His energetic talk was full of technical research and information about the negative impact on health of sitting down. It is certainly worth getting up every few minutes and talking a walk!

The standing ovation initiative ran from the beginning to the end of the conference. The HWWA Chairman, Mr. Trevor Shilton, asked that the audience standup up each time they were to give someone a round of applause, both to make

the speaker feel good and to make sure we didn't sit down for too long at a time. It was a huge success! Almost every speaker commented that it did make them feel special and energised the room. I agree, it made a big difference to the audience participation and energy in the room!

I will quickly mention one of the panel sessions hosted by Karen Tighe (ABC). On the panel were Dr. Michael Rosenberg (Health Promotions academic - UWA), Kerry Darvill (Safety Manager - Steele Blue), Lyndel Quinn-Schofield (Safety Manager - Transmin) and Ian Munns (Policy Manager – WorkSafe WA). Each gave a short presentation on the theme of "Activities and Culture - Engaging Workers", followed by a question and answer session.

Steele Blue and Transmin were each awarded a grant. I do not know how much but suspect it was in the order of around \$5,000, the

maximum being \$10,000. Each of the Safety Managers prepared a grant application, which was compiled after asking the workforce what they wanted, or, what they needed to get involved in a healthy workplace. The results of these 'surveys' were included the proposal to the Director/CEO and grant application.

The reason the grants were a fairly small amount of money, is that not much money was needed! The grants were used to provide a series of initiatives, initially to increase participation and then sustain involvement. I was surprised about how little was needed to

get success! One site of 70 people got everyone involved, starting with providing a bowl of fruit, daily, in the tea room. They reported that "some people who had never eaten fruit, liked it" and got involved. Once participation improved initiatives such as sponsoring a fun run, providing bike racks and other low cost facilities, a fitness instructor and even handing out healthy recipes were used and made a big difference.

It is interesting that not only the behaviour of the general workforce changed. The Management Team saw personal improvements and organisational benefits such as to productivity, morale and a reduction in absenteeism. This justified their support to consider sustaining the initiatives after the grants had been used.

Prof Rosenberg and Mr Munns spoke about change and the importance of measuring change, but the difficulty of

doing so. Measuring the complexities of cultural change so learnings can be transferred between organisations is hugely important but was beyond the initiatives presented. There is still some work for the academics to do there.

So whilst the academics are working out just how effective an engaged team of people can be as the result of taking an apple a day, I suggest we get on and do it!



Healthier Workplaces website includes links to their conference information and videos of some of the information mentioned above (http://healthierworkplacewa.com.au/)



editor's note

JUNE EDITION • ROBERT SUTHERLAND & GAVIN IRVING

Robert and Gavin wish to thank contributors to the June edition of the Newsletter.

What is particularity gratifying to see within this edition is the career development of our young hygienists and the role that award sponsors, such as Draegar, have played and continue to play in their development.

As always thanks must go to our Newsletter designer and Production editor Laura Loschiavo for the highly professional end result.











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NEXT EDITION

The next issue of Occupational Hygiene matters is due out on 15th September 2014 with copy due to the office by 1st Septemer 2014.

All copy should be sent to the AIOH Administration Manager via email at laura@aioh.org.au.

We look forward to your contributions.

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