



Yuma Pacific Southwest Section



SUMMARY OF JANUARY 20-22, 2016 ANNUAL Meeting Yuma Pacific Southwest Section, AIHA (Prepared by Larry Gibbs, Program Chairman)

President Bill Krebs welcomed attendees to the 41st Annual Meeting of the YPSW Section. The conference theme was “*Emerging Trends in Occupational Safety and Health*”. Program Chair, along with Program Committee members Chris Laczsz-Davis and Charles Geraci, provided a diverse, and broad program as evidenced by the positive feedback from attendees.

Thursday Morning, January 21

The program began with a keynote presentation by Dr. John Volckens, Associate Professor and the Director of the Center for Energy Development and Health at Colorado State University. His research interests involve combustion science, occupational health, aerosol technology, and air pollution-related disease. Dr. Volckens provided a very interesting and thought provoking presentation entitled: “Occupational Health in the 21st Century: Romance, Separation, Counseling, and Re-Marriage” which led the group on an interesting journey through introducing the phases using various works of art and discussing research challenges in the field of occupational hygiene along with provocative recommendations on new research directions needed for the 21st century. He challenged the existing paradigm for standard setting and IH practice, encouraging the expansion of the industrial hygienists’ horizon to learn to speak additional languages in risk assessment; embrace total environmental health, including the indoor and outdoor environments, behavior and wellness as part of total health impacts; focus on increasing the amount of data gathered, with simpler instrumentation, even if precision may suffer; and, move from the single material impact to learn and gain information about the impact of multiple variables on human health and understanding. The presentation elicited some outstanding discussion that carried into the morning break.

The remainder of the morning session “Occupational Exposure Limits (OELs) was coordinated and monitored by Chris Laczsz-Davis who started the session with a review of the hierarchy of OELs, where we have been and where do we go from here. Chris described the challenges of setting quantitative occupational exposure levels along with what has been taking place with OELs internationally and finishing with a brief review of the variables involved in a hierarchy of OELs aligned with increasing data and information ranging from hazard banding strategies, to prescriptive, process based OELs (REACH, DNELs, etc.), to company internally developed OEL to full quantitative health based OELs. This set the stage for the following two speakers in the session.

Capt Lauralynn McKernan of NIOSH described the NIOSH Occupational Exposure Banding project. She described the background and process for occupational banding, a mechanism to quickly and accurately assign chemicals into “categories” or “bands” based on their health outcomes and potency considerations. This is anticipated to be a means to qualify chemicals

which don't have specific OELs into occupational exposure bands based on a number of variables and ranking of materials which can then be used for applying appropriate controls. The process has gone through extensive evaluation and testing. Once the project is finalized, it is expected to provide another tool for industrial hygienists and others to apply to support occupational and environmental protection in the absence of full quantitative health information.

This was followed by a presentation on Occupational Hazard Banding applications provided by Donna Heidl of Bureau Veritas. Donna describes hazard banding as a process incorporating the IH hierarchy of controls with the plan, do, check and act steps of the management systems program approach. The integration of the management system steps allows for regular review and, as appropriate based on changes in information and data on the materials, possible increase or decrease in risk and banding categorization.

Thursday Afternoon, Jan 21

The afternoon session began with an informative presentation by Cmd Daniel Hardt, US Navy, who led the group through a very informative review of the IH and safety risks of an aircraft carrier at sea. Described as a 24/7 operational floating city, with significant special hazards, the group was led through a pictorial review myriad unique situations associated with maintaining both the ship and the aircraft fleet in readiness mode for an entire 6-8 month deployment. The photo journey was testament to the tremendous work done by the young men and women on these vessels from the flight decks to the support decks and operations, many of which carry high risk of injury or fatality. We were all impressed with the dedication and work done in support of those defending our country.

Adrienne Eastlake next provided an overview of what it is like as an industrial hygienist detailed to support hospital and other personnel working in an Ebola outbreak region. She described working and providing for safety in this most unique and high risk environment in Sierra Leone, West Africa during the Ebola outbreak. Responders had to work in conditions knowing that healthcare, transportation, and electricity were not anywhere close to US standards. It was important to not only communicate well with locals, but also with other international responders. When communicating with locals, it was important to respect local customs, and also remain aware that there were large differences in knowledge, income, and personal experience. Access to basic materials or safety equipment was lacking in these countries, many hospitals did not have sufficient PPE to protect workers. While a responder, the most important thing for each individual to know was that safety and health was of the highest priority.

This was followed by Chuck Geraci of NIOSH who addressed [how advances in nanotechnology and manufacturing technology are changing the work environment](#). He described how nanomaterials science has given rise to advanced materials sciences, which [integrates nanomaterials, nano-bio materials and synthetic biology with all moving into advanced manufacturing technology](#). Although the US moving from the industrial age to the information age, we still need to make things. And, how things get made is evolving from mechanical processes (traditional manufacturing) to information and technology based processes (advanced manufacturing). Chuck provided a number of examples of how these new systems and materials are already moving in areas of semiconductors, advanced nanomaterials, additive manufacturing and synthetic biology. The US government has many

agencies involved with supporting the commercial development and growth of the industry. All of these areas will create new opportunities and possibly different and evolving risks for workers in these industries.

The final presentation of the afternoon was on “Mindfulness: Promoting Total Worker Health and Safety by Being in the Moment. Jessica Drew de la Paz, a psychologist by training and practice, became interested in the intersection of safety and psychology when working in the EH&S program at UC Irvine, where she is currently employed. She discussed results from research at UC Irvine suggesting that cultivating mindfulness is an effective and efficient technique for improving cognitive function, with wide-reaching consequences. She stated that research supports that Mindfulness improves physical health, improves emotional health and overall wellbeing, improves attention and performance and changes the brain. Currently, the group is reviewing whether practicing mindfulness can reduce workplace injuries and workplace errors.

A lively demonstration and discussion ensued after which the attendees directed themselves to the hospitality suite for further enrichment and discussion.

Friday Morning, January 22

The Friday morning session consisted of updates from leaders of our professional societies. Those providing an update of activities were:

Aaron Trippler, Regulatory and Legislative Updates – Aaron, who had announced his pending retirement from AIHA was provided a small token of appreciation from the YPSW membership for his many years of work on behalf of the association and its members. Upon his retirement, we do expect to see him at future YPSW meetings.

Dan Anna, AIHA Update

Nancy Green, AIHA Interim Executive Director was introduced to the group.

J. Torey Nalbene – ACGIH Update

Ulric Chung – ABIH Update (Ulric assumed the Chief Executive Officer role at ABIH and this was his first visit to the YPSW meeting. He provided an informative update and was heartily welcomed.)

Stephen Hemperly – AIHA Local Sections Regional Representative

After a short break the morning session continued with a presentation on *Social Media and Technology – How It is Shaping the Profession* by Michael Rosenow of Argonne National Labs. Michael demonstrated many of today’s social media tools and applications of how they can be applied to different work environments. Use of social media represents opportunities to speak directly to individuals, engage, discuss ideas, ask opinions, answer questions. It can be an effective tool professionally for networking, professional education, sharing knowledge and direct engagement with clients and peers. Michael then gave examples of a variety of social media systems and capabilities/limitations. He also indicated AIHA is actively looking at the value of use of social meeting for supporting and maintaining contact with members.

The Friday morning session concluded with a good overview of Emerging Trends in Sensor Technology, by Mark Hoover of NIOSH. Mark discussed the future of sensors in application areas such as wearable technology, embedded sensors, smartphone apps, sensor arrays and self-powered arrays. He discussed the evolution of sensors that are much more sensitive and also

precise. A major advance has been the application of nano-technology in the sensor arena, providing for much smaller and more mobile devices. Mark then described one of the major focuses of the federal nanotechnology initiatives has been on development of sensors and sensor technologies for application in the safety and health arenas. He then finished the presentation describing the areas of focus for the NIOSH Sensor Center as being: coordinate a national agenda for direct-reading methods and sensor technologies; develop guidance documents pertinent to direct-reading methods and sensors, including validation and performance characteristics; develop training protocols; and, establish partnerships to collaborate in the Center's activities,

Friday Afternoon, January 23

Eric Esswein, of NIOSH Western States Division, led the afternoon presentations with a very good case study entitled: *The Next Step After Detection: What's Required to Remove Lead and other Toxic Metals from Skin and Surfaces, and Why Soap and Water is Not Enough*. This was a case study of development of a method to measure and decontaminate/remove lead from skin. Hand washing with soap and water remains the standard recommendation for workers (as well as the public) to clean skin known or believed to be contaminated with toxic metals, such as lead. Despite longstanding recommendations for workers to "wash hands with soap and water," no efficacy studies show this to be a completely effective removal method for lead. Removal of toxic metals such as lead from skin constitutes a decontamination procedure; it is not, in fact, a hand-washing step. NIOSH scientists conceived and developed a highly effective (nearly 100 %) method for removal of lead from skin. A systems approach was devised incorporating four components deemed necessary for effective metal removal: Surfaction, pH control, chelation, and mechanical effects. The handwipe removal method evolved from a previous NIOSH invention, the handwipe disclosing method for the presence of lead, in the interests of providing complementary techniques for dermal lead detection and decontamination. The method is a patented, award-winning, commercialized technology that has significant potential to prevent occupational and public exposures to lead. The full results of this research have also been published in the Journal of ASTM International, Vol. 8, No. 5.

D. Wayne Berman next presented on *Making Sense of Epidemiological Data*. Many researchers have recently noted, that a high proportion of published scientific studies cannot be replicated or validated, undermining the trustworthiness and value of science. This concern is as relevant for the epidemiological literature as for other fields. As reported in two of our recent publications and follow-on letters, epidemiological studies with spatial ecological designs (i.e., studies in which proximities to sources of toxic emissions are used as surrogates for exposure) typically produce invalid conclusions if regression models, rather than appropriate methods of spatial statistics, are used to interpret exposure-response associations. Such studies involve proximity to a broad range of toxins and/or industrial activities that potentially generate toxins (e.g., asbestos, fracking, coal-fired power plants, urban air, etc.) and new ones continue to be published. It is therefore important to understand the mechanisms by which such studies can produce misleading conclusions and to develop criteria that can be used to screen for them. A simple and concise demonstration of the issues and problems associated with these studies will be presented and a set of criteria identified, which can be used both to judge whether such studies are worthy of publication going forward and to evaluate the validity of previously published work. References

to published literature defining alternate, valid procedures for conducting these kinds of studies will also be provided.

The sessions closed with a very good presentation and discussion by Fred Boelter who discussed the *Unintended Consequences of Risk Management*. Fred built upon the keynote opening address and challenged the attendees to think about risk outside the normal boxes. Significant risk is not solely a quantitative analysis, but has many factors. What is significant to some, may not be significant to others. Fred reviewed some of the presentations on acceptable risk from the recent SRA meeting in December, building on those comments. Pursue the need to learn new languages around risk and risk communication to effect changes in laws, behaviors and awareness, and improve wellness. Pursuing risk in the workplace in isolation of other non-workplace exposures omits the overall pursuit of protecting health. Reflecting on the keynote address, he emphasizes the need to consider new ways of addressing risk. A lively discussion of the topic ensued.

The meeting concluded with installation of new officers, recognition of outgoing board members and presentation of the Clayton Award.

Del Malzahn finished his term as Past President and was presented with a certificate of appreciation for his service by President Krebs. Bob Lieckfield, moved from outgoing Director to President-elect and Tom Slavin was elected to fill the vacant Director position.

YPSW Officers and Directors for 2016

Larry Gibbs, President
Bob Lieckfield, President-Elect
W. H. Krebs, Past President
Anna Davis, Secretary/Treasurer
Frank Renshaw, Director
Marc Kolanz, Director
Tom Slavin, Director

This year's George & Florence Clayton Award was presented by Bill Krebs to Robert Glenn. Although Bob was not in attendance due to a family member illness, he was in communication via telephone and able to provide his heartfelt gratitude and appreciation for the award, recognizing the many who contributed to his development and progress over these many years. We all were glad Bob was able to connect via phone, and hear his acceptance, although he was very much missed at the meeting.

After the passing of the gavel, the meeting adjourned for social hour in the hospitality suite, so ably organized and hosted by Anna Davis, and later meeting participants gathered one last time for the banquet. A special thank you from banquet attendees for Chris Lacysz-Davis, founder and president of the Environmental Quality Organization, who provided wine for the banquet in honor of Bob Glenn, longstanding and dear friend to both Steven C. and Chris Laszcz-Davis.

A note of special thanks and gratitude to Anna Davis for all she has done to support YPSW throughout the year and for the annual meeting, from organizing arrangements with the hotel, assuring the hospitality suite is suitably stocked with goodies, to making the event go so smoothly.