

Highlights--YPSW Conference Risk Assessment Roundtable

By Chris Laszcz-Davis, Roundtable Facilitator

ROUNDTABLE PARTICIPANTS:

The full conference program and speakers are provided towards the end of this summary.

Roundtable participants included:

- Chris Laszcz-Davis, MS, CIH, Roundtable Facilitator, The Environmental Quality Organization, LLC, & Aluminium Consulting Engineers (ACE), Lafayette, CA
- Fred Boelter, CIH, PE, BCEE, ENVIRON International Corp., Chicago, IL.
- Adam Finkel, ScD, UMDNJ School of Public Health, University of Pennsylvania Law School, Philadelphia, PA
- Susan Ripple, MPH, CIH, The Dow Chemical Company, Midland, MI
- Pamela Williams, ScD, E Risk Sciences, Boulder, CO
- Cristina McLaughlin, FDA, College Park, MD
- Scott Dotson, PhD, CIH, NIOSH, Cincinnati, OH
- Jim Rock, PhD, CIH, PE, TUPE, Inc, Bryan, TX
- Perry Logan, PhD, CIH, 3M, St. Paul, Minnesota

GENERAL THOUGHTS:

- A. The day's risk assessment (RA) presentations were outstanding! Some discussed RA as a broader, more general competency and practice, whereas a couple of the speakers focused on exposure limit setting.
- B. While RA has been in use for centuries by many civilizations, its more formal technical competency began to take shape in the 60s timeframe, maturing through the 70s and 80's. The mid 1980s evidenced RA's formal scientific profiling within the federal government's dialogue.
- C. Our profession was first introduced to RA (in a broader professional group dialogue) in the early 1990s at the Vancouver, British Columbia PCIH. In fact, the concept of effective risk communication was a companion piece to the dialogue. By today's standards, the PCIH dialogue was very preliminary, but a starting point to operationalize the concepts.
- D. AIHA has sponsored (through the Risk Assessment Committee) superb 2-day symposia on this subject for several years now, all with great acclaim. Their evolution now includes a discussion of cost-benefit and cumulative RAs. Also, the conference PDCs are generally a sell-out.

E. Several years back (2008), a presentation was made at the PCIH (accompanied by a preliminary needs assessment poll) which gathered responses to the subject and the profession's development of the tools necessary to conduct value added and practical RA's. The 2008 responses (some 300) indicated that:

1. Responses:

- 75 % of the responders had formal RA processes within their organizations.
- Many employed internally developed RA processes, with probability & severity of consequence risk level rankings.
- RA tools generally used included—65% quantitative; 64% professional judgment; 51% professional judgment comparison against pre-determined risk matrices; 45% computer models; and 28% EPA and OSHA risk numbers.
- Varied models/standards drive today's RA efforts.
- 72% cited the following reasons for using RA tools—minimize risk; company policy; economic; regulatory; and litigation.
- The RA tools addressed the following risks—90 % safety; 62 % environmental; followed by social, financial, federal agency and corporate risks.
- 68 % employed RA for combined EH &S risks.
- The basic EH &S information used by varying models differed.
- 45 % were familiar with the governmental models.
- 57 % were satisfied with existing RA tools and resources.
- 32 % used RA comprehensively and proactively at all levels of an organization.
- Smaller firms did not use formal RA tools. This varied, but Job Safety Analyses often dominated here.
- 40% of the risk related decisions were made by senior management; rarely at workers level.
- Once a risk related decision was made, 66 % felt it directly or heavily impacted decision making and risk management control.
- 88 % thought risk communication was critical.
- Only 20 % thought the ANSI/AIHA Z 10-2005 Management Standard would impact what is being done on the RA front.

2. General Agreement:

- RA was considered a critical management process with qualitative and quantitative features.
- RA was not new, was not a numbers game, but simply systemized identification, evaluation and control.
- Various valid RA approaches existed, but were generally not well understood
- There was no clear professional voice on RA.
- Access to RA tools was inadequate
- RA was most useful when prioritizing and managing interlinked risks—with EH&S, operational, product, community and financial criteria.
- Fiction—that RA is well understood, widely used and transparent.

- RA tools were most useful if able to be used at various levels within an organization.
- Fiction—that RA is well understood, widely used and transparent.

3. Suggested Path Forward:

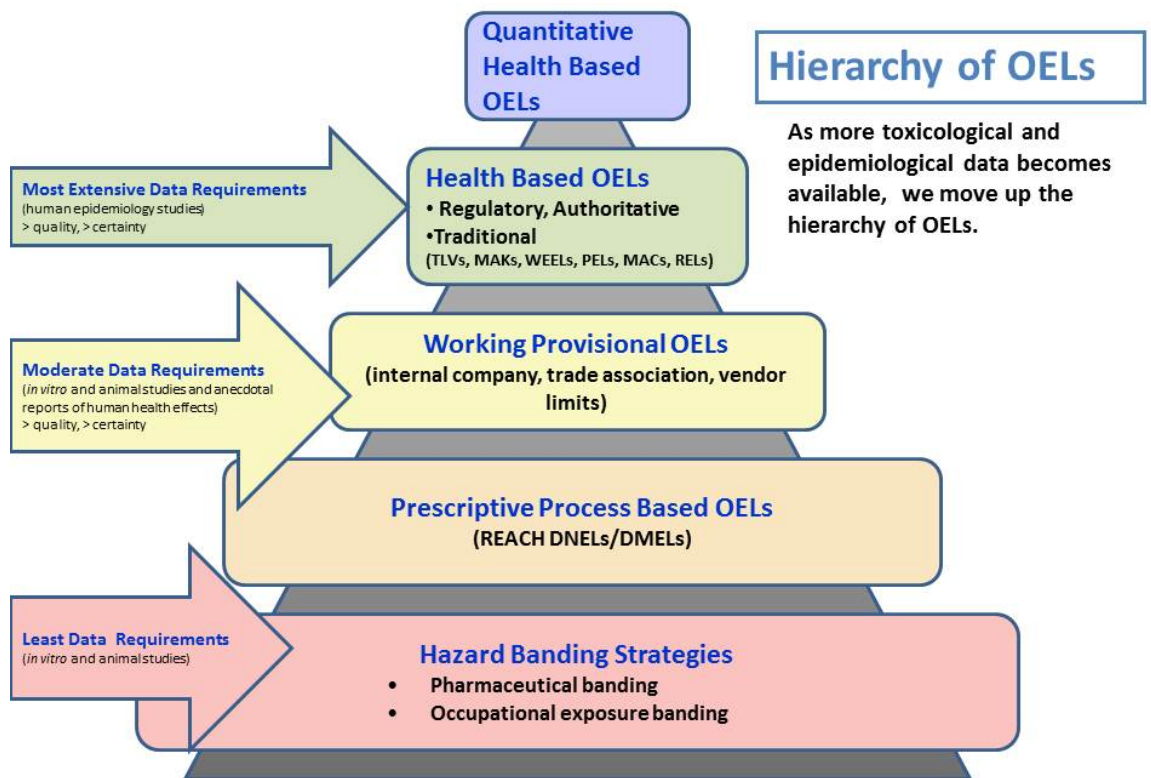
- Simpler, more cost effective “user friendly” tools.
- Standardized methodologies.
- Better understanding of existing tools, where to get them, how to use them and when to use them.
- Critical analysis of existing tools (their individual strengths and weaknesses).

F. The first time Patty’s Industrial Hygiene & Toxicology included a chapter on RA was the 6th edition, some two years ago. What does this suggest? Not a best practice or not well conceived?

2013 YPSW ROUNDTABLE DISCUSSION HIGHLIGHTS:

- A. Our profession does not truly embrace a culture of RA. We are still in the “design” vs. “implementation” phases. We need to define “acceptable risk”. We need to develop a process for growing in depth knowledge (not 4 hour overviews, but a step wise, competency building approach).
- B. As a profession, we are generally aware of its need and importance.
- C. While the 2008 PCIH presentation on the profession’s preliminary needs assessment poll survey results (see *GENERAL THOUGHTS, E.*), suggested that there was “no clear professional voice on RA”, discussions at YPSW indicated that the Society for Risk Analysis (SRA) has a very clear “voice” on this topic and is well recognized worldwide. However, this “voice” does not appear to include the IH profession. It is worth noting, though, that a recently launched effort within the AIHA Risk Assessment Committee (RAC) endeavors to consolidate RA tools, both occupational and environmental in nature, for use by a variety of stakeholders.
- D. The 2008 PCIH presentation (and companion survey results, see *GENERAL THOUGHTS, E*) also suggested that “access to RA tools is inadequate”. The YPSW discussions indicated that many RA tools are available which are publicly available and used by professionals in allied fields; it goes without saying that the IH profession needs to more affirmatively cross fertilize its efforts to strengthen its ability to adopt and or modify existing tools with allied fields.
- E. ABIH does not include RA questions on the certification exam because RA is not considered a professional best practice at this time.

- F. We need well- conceived, understandable and transparent RA tools for use by many at various levels of an organization (as opposed to many tools for use by a few discrete set of users, as has been the case). At this time, RA tools which are well understood, widely used and transparent are relegated to a very small core group within the IH profession. This needs revisiting for broader appreciation, understanding and application.
- G. The more mature RA approaches today generally address environmental issues and not occupational issues.
- H. The discussions surrounding occupational exposure limits referenced a suite of tools, a Hierarchy of OELs concept, which is gaining popularity in presenting exposure limit setting processes across a spectrum of maturity (i.e. Hazard Bands to Risk Based OELs). The Hierarchy concept was developed by a group of international professionals. The following slide best depicts the concept. A number of presentations and telewebs have been scheduled around the U.S and in other countries to share this suite of tools concept over the past couple years. This is particularly critical today given the few exposure limits available against a backdrop of close to 1,000,000 chemicals in use worldwide.



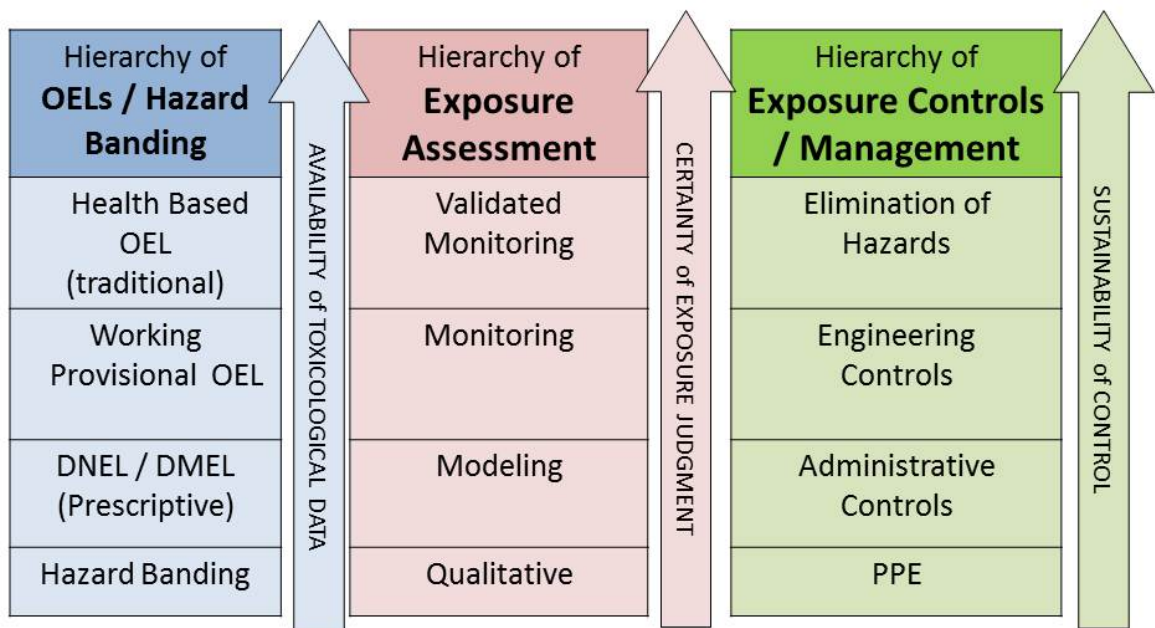
Control Banding = Hazard Bands + Exposure Risk Assessment + Exposure Measurement

11.08.12

Task force: M. Guillemin, D. Heidel, M. Jayjock, C. Laszcz-Davis, P. Logan, A. Maier, J. Mulhausen, K. Niven, D. O'Malley, J. Perkins, S. Ripple

- I. This discussion also pointed to the need for Management & Control features that work hand-in-hand with the application of Risk Assessment.

Effective and Efficient Protection of Workers & Communities



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- J. It may take a generation of training new IH professionals as they enter the field to gain a true shift change in the mental model approach toward RA from the OEL/Hazard Index paradigm that dominates IH practice use today.
- K. Not all RA techniques used today in Environmental Health, e.g. *benchmark dose* and arbitrary *uncertainty factors*, are necessarily meritorious – some approaches may not be good to adopt for IH practice.
- L. Consider having AIHA develop a Professional Registry to grow and sustain this core competency. Integrate with academic curricula and robust technology transfer.