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From: Schulte, Paul A. (CDC/NIOSH/EID)
Sent: Friday, December 05, 2008 12:50 PM
To: Geraci, Charles L. (Chuck) (CDC/NIOSH/EID); Lentz, Thomas J. (CDC/NIOSH/EID)
Cc: Niemeier, Richard W. (CDC/NIOSH/EID); Okun, Andrea H. (CDC/NIOSH/EID); Heidel, Donna S. (CDC/NIOSH/EID)
Subject: FW: Comments on CB Review
Attachments: Notebook.jpg; Comments on NIOSH Draft.doc

Please consider comments-thanks

From:
Sent: Friday, December 05, 2008 12:27 AM
To: Schulte, Paul A. (CDC/NIOSH/EID)
Subject: Comments on CB Review

Here are my comments. Thanks!

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December 5, 2008

Paul Schulte, Ph.D.
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Dear Paul:

Thank you for the opportunity to comment on the Draft NIOSH Document "Qualitative Risk Characterization and Management of Occupational Hazards (Control Banding [CB]): A Literature Review and Critical Analysis. I found it to be a thoughtful, well-written document that presents a thorough discussion of what is currently understood about control banding, its potential uses, its strengths and weaknesses and its limitations. In consideration of the inability of governments to provide effective and sufficient standards of exposure for the thousands of chemical substances currently in use, control banding represents a feasible approach to achieving health protection for people in the workplace in the absence of such OELs.

While the document is well done, there are additional considerations for expansion of the control banding approach and a path forward in its application and adoption as a model on a national scale, as follows:

I would encourage NIOSH to incorporate financial analysis into the process of selecting exposure control methods. A key assumption underlying control banding appears to be that a higher degree of control (e.g., containment, followed by engineering control) is generally expensive and therefore "overprotective" against exposure to substances in the lower risk categories. This assumption has driven the idea that control bands should be rigidly tied to specific risk levels. This assumption may be inaccurate in many cases and may complicate the control banding approach unnecessarily. In addition, for many substances there is less than complete information concerning their long-term human health effects, making R-phrases inadequate to fully describe the risk people in the workplace face if they are exposed. In such situations, a higher level of control would be prudent rather than overprotective.

Development of a strategy to understand and clarify the value of industrial hygiene was completed recently by ORC on behalf of AIHA. A focus of the project was on exploring the financial impact of actual interventions implemented to mitigate or eliminate health hazards in ORC member company operations. A variety of control approaches were included in the evaluation, ranging from respiratory protection to work practices, engineering controls, containment, substitution, and elimination.

While there were far fewer examples than necessary to provide statistically valid conclusions, the data indicated that in many cases the hierarchy of controls was supported by financial justification. In general, a higher level of control tended to be more cost-effective than a lower one, with

elimination, substitution and containment being at the high end of the cost-effectiveness scale. In some cases the cost effectiveness of these controls exceeded that of lower-level controls by at least an order of magnitude. This relationship was not immediately obvious to the ORC members who provided examples for the study; application of the strategy for identifying value was necessary to fully understand the financial impact. Implementation of IH controls often had significant impact on the production or service process in which the health hazard resided, producing a number of benefits including productivity improvements, resource conservation, and process efficiencies that produced value in excess of the cost of implementation.

The prospect of a more complete understanding of the relationship between the hierarchy of controls and their cost effectiveness is exciting. A NIOSH study of the financial impacts of a large number of IH interventions could provide convincing data that would change the way industrial hygienists and business managers alike think about the feasibility of health hazard controls at the top of the hierarchy.

My point is that any approach to selecting a given control method is incomplete without an analysis of its true cost-effectiveness. With this knowledge, businesses should not be afraid of choosing more protective controls because there are likely to be process benefits that make them a preferred choice. Given the financial data regarding the feasibility of applying engineering controls or containment to a hazard, it is possible that control banding could become even more simplified, with only two or three control methods given as options, and the rigidity of the linkage between hazard categories and specific control levels removed. It is possible in many cases to err on the side of caution and reap benefits at the same time.

Again, I thank you, Paul for accepting my comments at this late date. I hope they stimulate discussion and provide further insight into the possibilities for protecting people at work. Please do not hesitate to contact me if you would like to discuss them further.

Best regards,

Senior Consultant