

June 28, 2007

WorkSafeBC
 Workers' Compensation Board of B.C.
 Prevention Policy & Regulation Review Dept.
 Policy & Research Division
 P.O. Box 5350, Station Terminal
 Vancouver, B.C.
 V6B 5L5
 Email: regquery@worksafebc.com

Dear Sir/Madam:

Re: Proposed Amendments to the Occupational Health & Safety Regulation (OHSR) - Parts 5 & 30

The Canadian Petroleum Products Institute (CPPI) has reviewed the proposed amendments to the British Columbia Occupational Health & Safety Regulation (OHSR) and is pleased to be able to provide suggestions for improvement to achieve clarity for the protection of the health and safety of workers.

The CPPI is a national association of Canadian refiners and marketers of petroleum products. Our purpose is to serve and represent these sectors of the petroleum industry with respect to environment, health & safety and business issues. CPPI - Western Division members include Arco Products Canada Ltd., Chevron Canada Limited, Husky Energy Inc., Imperial Oil Ltd. - Products/Chemicals Division, Parkland Income Fund, Petro-Canada, Shell Canada Products and Suncor Energy Products Inc. This sector includes petroleum refining, product distribution and sales via retail and wholesale markets.

Part 5: Chemical and Biological Substances

While we agree with the intent to improve clarity surrounding an employer's responsibility to protect workers from the risk associated with exposure to biological agents, we do not believe it is the intent of the proposed changes to substantially alter the requirements related to employer management of worker risk from exposure to chemical substances. The proposed amendments to Section 5 Chemical and Biological Substances to require broader identification and management of risk from biological agents will create difficulties for those that must manage chemical exposures under Section 5.2.

The proposed definition for biological agent encompasses chemical and physical agents. The new definition for adverse health effects and its use to exclude common day-to-day infectious illnesses raises questions about the applicability of Section 5.2 to common day-to-day chemical exposure scenarios.

The removal of the route of exposure from the determination as to when written procedures to prevent a risk of exposure must be prepared and implemented is contrary to the philosophy of

occupational exposure limits and the belief of a threshold below which exposure to a chemical will not ordinarily result in adverse health effects.

We recommend any changes to the Regulation clearly acknowledge the differences in identifying, assessing and controlling health risks to workers from exposure to **biological agents** and health risks to workers from **chemical substances**.

Details and examples follow here.

(red italicized text indicates quotes from existing or proposed regulatory documents)

Definition of Biological Agent

5.1 "*biological agent*" means an agent which, by reason of its properties, is hazardous to the health or safety of a person who is exposed to it

This proposed definition for biological agent is meant to emphasize the fact that biological agents are included in the definition of hazardous substance in Section 106 of the Act, which includes *(c) a biological, chemical or physical agent that, by reason of its properties, is hazardous to the health or safety of persons exposed to it.*

However, as written for Section 5.1, the definition of biological agent now includes chemicals and physical agents (such as radiation and noise). We do not believe this is the intent. The *agent* should be clarified as *an agent of biological origin*.

Definition of adverse health effect

5.1 "*adverse health effect*" means an acute or chronic injury, acute or chronic disease, or death

There is nothing wrong with this definition itself. However, the logic of using it to exclude *the common cold, seasonal flu and pollen-induced asthma-like conditions* from inclusion in the requirements of Section 5.2 is flawed. From the Explanatory Note:

Based on feedback from stakeholders, a definition has been added for "adverse health effect" to emphasize that the biological agent, including an infection agent or material and toxin of biological origin is within scope only when they are capable of causing an adverse health effect. This would exclude, for example, the common cold, seasonal flu or a pollen-induced asthma-like condition commonly experienced by the general public during the growing season.

The implication is that consequences from day-to-day exposure to infectious and biological agents are not "adverse". The guidance on how to determine the dividing line between day-to-day infections and symptoms and those that are considered "adverse" is contained in the explanatory note to the proposed changes to Section 6 for Infectious Materials. Without such guidance, this definition in 5.1 does not achieve the desired clarification.

This definition also introduces difficulties in the management of health consequences of chemical exposure. If health effects of common infectious illnesses (eg. common cold, seasonal flu) are not within the definition of "adverse health effect", what are the implications to symptoms from chemical exposure? That is, are certain health effects or symptoms of chemical exposure excluded? And therefore, are certain chemical substances excluded from the requirements of 5.2? For example, are workplace exposures to carbon monoxide from vehicle exhaust or ozone from air pollution no longer included in 5.2 because they are also day-to-day exposures?

Removal of consideration of route of exposure from requirement for written control procedures

*5.2 If a worker is or may be exposed to a ~~chemical or biological substance~~ chemical substance or biological agent which could cause an adverse health effect, the employer must ensure that. . .
(c) ~~effective~~ written procedures are prepared and implemented to prevent a risk of exposure to a chemical substance or biological agent ~~by any route that could cause an adverse health effect,~~ and to address emergency and cleanup procedures in the event of a spill or release of a ~~the substance~~ chemical substance or biological agent, . . .*

Written procedures are required to prevent "a risk of exposure" independent of the route of exposure which is associated with the symptoms. Even for biological agents this is not always feasible.

For example, tetanus is a *biological agent which could cause an adverse health effect* if introduced into the body through a penetrating wound or puncture. The new wording of Section 5.2 would require written procedures to prevent worker exposure to tetanus through any route of exposure. This would include dermal and inhalation exposure during simple handling of dirty tools, rusted metal or soil even when the risk of experiencing a penetrating wound is negligible.

Another example, non-potable water could cause an adverse health effect when ingested. The proposed wording would require written procedures to prevent any risk of exposure, even dermal exposure during handling to clean tools, wash cars, and water lawns where risk of ingestion is negligible.

Implications for the management of chemical exposures

Introducing the change in wording to require broader identification and management of risk to workers from biological agents has created difficulties to manage chemical exposures under the same Section 5.2. Under the proposed wording, 5.2 as related to chemical substances will become:

*5.2 If a worker is or may be exposed to a chemical substance which could cause an adverse health effect, the employer must ensure that: . . .
(c) written procedures are prepared and implemented to prevent a risk of exposure to a chemical substance, and to address emergency and cleanup procedures in the event of a spill or release of a chemical substance, . . .*

Thus, written procedures would now be required to prevent "a risk of exposure" to chemical substances independent of the route of exposure which is associated with the symptoms. This is contrary to the philosophy of chemical exposure limits and the belief of a threshold below which exposure will not ordinarily result in adverse health effects. We do not believe this is the intent of the proposed change.

Part 30: Laboratory Ventilation

We agree with the introduction of standard practices to evaluate fume hood performance and ensure worker protection.

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However, where an employer can demonstrate an adequate degree of exposure control without the use of engineering controls such as a fume hood or with an existing fume hood meeting the detailed requirements of Sections 30.8 to 30.11, then the employer should be exempt from the requirements of these sections.

The *ANSI/ASHRAE Standard 110-1995, Method of Testing Performance of Laboratory Fume Hoods* calls for 3 separate tests of performance - flow visualization, face velocity measurement, and tracer gas containment. For many applications in industry, the sulphur hexafluoride tracer gas testing is not warranted. Visual observation of the flow using smoke and quantitative measurement of face velocities are adequate to test the effectiveness of most fume hoods used in industry. We recommend limitation of the tracer gas evaluation to particular situations where a fume hood is the only measure of control and its failure to operate properly would result in significant harm to the user, (eg. overexposure to a WHMIS D1A controlled product or repeated overexposure to a D2A controlled product).

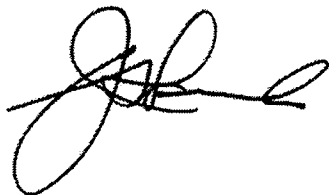
In support of this recommendation, the Forward to *ANSI/ASHRAE Standard 110-1995, Method of Testing Performance of Laboratory Fume Hoods* states:

The flow visualization and face velocity tests should always precede tracer gas testing for a thorough evaluation of hood performance. The flow visualization and face velocity tests can be conducted without the tracer gas test as a combination of a quantitative velocity measurement and a qualitative evaluation of hood performance. This portion of the standard could be used in the testing and balancing of new facilities and periodic tests of many hoods at a large facility. The full test procedure (visualization, face velocity, and tracer gas) is a quantitative measurement of a hood's containment ability and is useful for hood development and rigorous evaluation of hood performance.

Thank you for the opportunity to provide comment.

Yours truly,

CPPI – Western Division



John Skowronski, Director
Environmental Affairs
Email: johnskowronski@cppi.ca

JSS:cfk

cc CPPI NOHS Committee
Ted Stoner, CPPI – Western Division; Email: tedstoner@cppi.ca
Jack Belletrutti, CPPI – National; Email: jackbelletrutti@cppi.ca