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(confirmed human carcinogen) by the WCB, must implement an Exposure Control Plan when: exposure monitoring indicates that a worker is or may be exposed to an air contaminant in excess of 50% of the exposure limit (EL), measurement is not possible at 50% of the EL, or otherwise required by the Regulations. *Previous sampling and prevention programs may not meet the requirements for an ECP.*

An ECP must incorporate: statement of purpose and responsibilities, risk identification, assessment, and control, education and training, written work procedures, hygiene facilities and decontamination procedures, health monitoring, and documentation. If measures were taken to control exposure by installing additional local exhaust ventilation, reducing the exposure to a level below 50% of the EL, then hygiene facilities and health monitoring may not be necessary. An established ECP must be reviewed at least annually with the Health & Safety Committee or Representative. For further information, see Part 5:

Chemical and Biological Substances in the new Regs, check out WCB's website at www.wcb.bc.ca, or contact PHH.

RISK ASSESSMENTS

Risk assessments are necessary for any workplace in which a need to rescue or evacuate worker may arise, including:

- work at high angles (over-head cranes, window washing platforms etc.),
- confined spaces or risks of entrapment,
- hazardous substances are present,
- underground work,
- work on or over water, and
- workplaces where there are persons who require physical assistance.

Risk assessments are also required for violence in the workplace, an issue which many employers need to take a closer look at. Ergonomics, which has universal application to all workplaces, also requires a formal risk assessment.

Risk assessments for hazardous substances are required under the heading of Emergency Procedures (Regulation 5.99). Employers must ensure that an assessment is conducted of the risks posed by chemical and biological substances from accidental release, fire, or other such emergency. A qualified person, who has experience, and understands the risks associated with the specific hazardous material, should perform all risk assessments. Using the risk assessment, written procedures must be developed which include worker notification, evacuation plan, and emergency response notifications, including adjacent workplaces (if affected by risk). An assessment and safe work procedure must also be developed for testing prior to re-entry, cleanup, and re-entry, including protective equipment requirements.

LEAD

One of the most significant issues surrounding lead is the requirement to survey a building or structure for lead, prior to demolition (20.112), and ensure that materials are contained or removed.

As discussed above, there is a requirement for an exposure control plan, where airborne levels exceed 50% of the Exposure Level. For construction/demolition projects, there are new requirements for air monitoring to be conducted during the first shift and as necessary throughout the project. Other significant changes to the lead related Regulations include requirements for instruction and training, work practices, personal decontamination, health protection, and record keeping.

CONFINED SPACE ENTRY

The WCB has put in place some very stringent new requirements and Regs related to confined spaces. A new definition of confined spaces is

- air atmosphere or in a tunnel, etc., or
- involves a trench or than 1.2 metres in depth which a worker is required to enter.

A quick read through the above noted list gives the indication that most construction projects could require an NOP. For more details on the above abbreviated list, see Regulation 20.2.

ERGONOMICS

The purpose of the Regulations is to eliminate or minimize the risk of musculoskeletal injury (MSI) to workers. Ergonomics, according to Webster's is, "an applied science concerned with designing and arranging things people use so that the people and things interact most efficiently and safely."

Employers must identify factors in the workplace that may expose workers to a risk of MSI. The most commonly known types of MSI injuries are repetitive strain injuries. Other injuries include conditions from work activities, which stretch the limitations of the human body,

through excessive force (lifting heavy weights).

When factors that may expose workers to a risk of MSI have been identified, the employer must ensure that the risk is assessed, and consider the following:

- physical demands, repetition, duration, etc.,
- layout and condition of the

- workstation – reaches, heights, seating,
- characteristics of objects handled,
- environmental conditions, and
- characteristic of the work – including recovery cycles, task variability, and work rate.

The WCB has an evaluation chart *Applicability of Risk Factors* to assist in determining which of the above factors will apply to a workplace.

ASBESTOS

The WCB has published that the largest single group of worker fatalities in the construction industry between 1993-1997 was asbestos related diseases from workplace exposure! Even though many of those workers probably received most of their exposure in the days before asbestos was publicly recognised as a hazard and regulations were in place, the WCB will continue stringent enforcement of the asbestos related regulations.

Some of the most significant changes to the asbestos regulations include clear requirements for inventory of asbestos in a workplace, including identification such as labelling, assessment and control measures or what we call an asbestos management program.

Another important change, which will affect all workplaces that have asbestos in place, is risk assessment and Exposure Control Plans (ECP). Employers are required to have a qualified person

Industry	Substance	8 hour Exposure Level (EL)	Site Assessment Required	Exposure Control Plan Required
Cabinet Shop	Wood dust – non allergenic softwood	2.5 mg/m ³	Yes – may include air sampling	Yes – If exposure exceeds 50% of EL under working conditions
Pulp Mill	Asbestos	.1 f/ml	Yes – may include air sampling	Yes – If exposure exceeds 50% of EL under working conditions
Power Plant	Ceramic Fibre (insulation)	.5 f/ml	Yes – may include air sampling	Yes – If exposure exceeds 50% of EL under working conditions
Print Shop	Ammonia	25 ppm	Yes – may include air sampling	Yes – If exposure exceeds 50% of EL under working conditions

Table 1 – Examples of Areas Requiring Exposure Control Plan

included with the section. As well, written SITE SPECIFIC procedures must be developed for each unique space. A qualified person, such as a Certified Industrial Hygienist or PEng. with relevant experience, must perform an on-site hazard analysis. The review must be done with the person who has control over the space. Each individual task must be assessed and be given an individual assignment (variations of procedures). For example, the procedure to change a pipe valve (mechanical activity) is drastically different from welding a flange (combustion activity). Workers require a high level of training to perform entry and stand-by duties.

NOTICE OF PROJECT REQUIREMENTS

A new requirement for construction projects is a Notice of Project (NOP) to the WCB 24 hours before initiating a project, which includes the following:

- is worth more than \$100,000, or
- the building is an engineered structure, or
- asbestos or lead abatement is involved, or
- involving a structure more than 2 stories high, or
- a bridge (construction or demolition), or
- earth or water retaining structure more than 3 m in height, or
- a silo or chimney or similar structure more than 20 feet high, or
- workers will be working in a compressed