

PART 1 – GENERAL

1.1 REGULATORY REQUIREMENTS

.1 An investigation into the presence of designated substances for the Mechanical System Upgrade Project, scheduled to take place on the sixth floor of 15-25 Rue Eddy Tower, located at the Les Terrasses de la Chaudière Complex, in Gatineau, Québec was performed in order to help meet the requirements of the Province of Québec's *An Act Respecting Occupational Health and Safety* Section 51, as applicable, whereby, "Every employer must take the necessary measures to protect and ensure the safety and physical well-being of his worker. He must, in particular, subsection (5) use methods and techniques intended for the identification, control and elimination of risks to the safety or health of the worker, subsection (8) see that no contaminant emitted or dangerous substance used adversely affects the health or safety of any person at a workplace; and subsection (13) give, to the workers, the health and safety committee, the certified association, the public health director and the Commission, the list of dangerous substances used in the establishment and of the contaminants that may be emitted". In addition, section 300 (a) of the Québec Regulation respecting occupational health and safety also states that before any work or task is carried out in an enclosed area, that the categories of contaminants likely to be present in the area need to be made available in writing. The *Canada Labour Code* also stipulates under Part II, Section 124 that every employer shall ensure that the health and safety at work of every person employed by the employer is protected. By having a DSR conducted, the Departmental Representative will be able to inform his or her employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the duration of the project. The informed Departmental Representative will then be able to impose appropriate health and safety precautions for all applicable personnel as required.

.2 Applicable regulations are as follows. Where there is an absence of applicable legislation and/or guidelines in the Province of Québec, some Ontario regulations/guidelines have been referenced.

- .1 **Acrylonitrile:** "Designated Substance – Acrylonitrile" *O.Reg 835* (as amended by *O.Reg 490/09*)
- .2 **Arsenic:** "Designated Substance – Arsenic" *O.Reg 836* (as amended by *O.Reg 490/09*)
- .3 **Asbestos**
 - .1 s. 3.23.7, 3.23.8, 3.23.9, 3.23.10, 3.23.11, 3.23.13, 3.23.14, 3.23.15, and 3.23.16 of the Québec *Safety*

- Code for the Construction Industry shall be abided.*
- .2 PWGSC Departmental Policy DP 057 – “Asbestos Management”
 - .4 **Benzene:** “Designated Substance – Benzene” O.Reg 839 (as amended by O.Reg 490/09)
 - .5 **Coke Oven Emissions:** “Designated Substance – Coke Oven Emissions” O.Reg 840 (as amended by O.Reg 490/09)
 - .6 **Ethylene Oxide:** “Designated Substance – Ethylene Oxide” O.Reg 841 (as amended by O.Reg 490/09)
 - .7 **Isocyanates:** “Designated Substance – Isocyanates” O.Reg 842 (as amended by O.Reg 490/09)
 - .8 **Lead:**
 - .1 “Designated Substance – Lead” O.Reg 843 (as amended by O.Reg 490/09)
 - .2 Hazardous Products Act’s *Surface Coating Materials Regulations* SOR/2005-109
 - .3 *Regulation Respecting Hazardous Materials* (O.C. 1310-97), under the *Environmental Quality Act*, R.S.Q., c. Q-2 - (21)
 - .4 *Guideline: Lead on Construction Projects as revised, Ontario Ministry of Labour*
 - .9 **Mercury:**
 - .1 “Designated Substance – Mercury” O.Reg 844 (as amended by O.Reg 490/09)
 - .2 *Regulation Respecting Hazardous Materials* (O.C. 1310-97), under the *Environmental Quality Act*, R.S.Q., c. Q-2 - (21)
 - .10 **Silica:**
 - .1 “Designated Substance – Silica” O.Reg 845 (as amended by O.Reg 490/09)
 - .2 *An Act Respecting Occupational Health and Safety* under *Schedule A Permissible Exposure Values for Gases, Dusts, Fumes, Vapours or Mists in the Work Environment*
 - .3 *Guideline: Silica on Construction Projects as revised, Ontario Ministry of Labour*
 - .11 **Vinyl Chloride:** “Designated Substance – Vinyl Chloride” O.Reg 846 (as amended by O.Reg 490/09)

- .3 Québec occupational exposure limits for specific contaminants are listed in *An Act Respecting Occupational Health and Safety* under *Schedule A Permissible Exposure Values for Gases, Dusts, Fumes, Vapours or Mists in the Work Environment*
- .4 All contractors requesting tenders from subcontractors shall furnish this report to subcontractors.

1.2 VALIDITY DATE

- .1 El Houcine Faouzi and Olivier Brazeau from Environmental Services Directorate of the Real Property Branch, PWGSC, conducted the on-site survey for this report on 2013/05/29.
- .2 The work area is located at Les Terraces de La Chaudière Complex in Gatineau Quebec on the 6th floor of 15 and 25 Eddy. The scope of the proposed work consists of upgrading mechanical systems and the related electrical system.
 - .1 The scope of work for this report involved a visual inspection of building materials and contents for the presence of suspected designated substances and hazardous materials in the project area outlined above.
 - .2 Some sections on the 6th floor of 15 and 25 Eddy have been renovated in April 2013. On the basis of this inspection and conversation with the building representative, no sampling was required to complete this DSR.
 - .3 The visual inspection was limited to readily accessible areas in the project area.
 - .4 A reasonable effort was made to capture all potential designated substances, and hazardous materials deemed pertinent. Note, however, that no scope of work, no matter how exhaustive, can identify all potential contaminants. Should any designated substance (or potential hazardous materials) not apparent from the survey be encountered in the course of demolition or renovation work, work shall be stopped, preventative measures taken, and the Departmental Representative notified immediately. Do not proceed until written instructions have been received.
 - .5 Prior to beginning work, it must be confirmed with the Departmental Representative that no additional designated substances have been brought to the project area.
 - .6 In addition, the survey refers to halocarbons, however, it does not refer to other

substances that may be present in the day-to-day usage for specialized equipment or areas in buildings (i.e., lead shields, fume hoods, etc.).

- .7 There is a possibility that materials, which could not be reasonably identified within the scope of this assessment or which were not apparent during previous site visits may exist. Should any designated substance be encountered in the course of demolition, work must be stopped, preventative measures taken, and the Departmental Representative must be notified immediately. **Do not proceed until written instructions have been received.**

PART 2 - DESIGNATED SUBSTANCES

2.1 SURVEY RESULTS

- .1 **ACRYLONITRILE:** Not Identified
- .2 **ARSENIC:** Not Identified
- .3 **ASBESTOS:** Not Identified
- .4 **BENZENE:** Not Identified
- .5 **COKE OVEN EMISSIONS:** Not Identified
- .6 **ETHYLENE OXIDE:** Not Identified
- .7 **ISOCYANATES:** Not Identified
- .8 **LEAD:** Not Identified
- .9 **MERCURY: Identified**
Mercury vapour is assumed present within several fluorescent light tubes within the project area.
- .10 **SILICA: Identified**
Free crystalline silica is present in concrete and drywall throughout the project area.
- .11 **VINYL CHLORIDE MONOMER:** Not Identified
- .12 **POLYCHLORINATED BIPHENYLS (PCBs): Suspected**
PCBs may be present in the fluorescent light ballasts associated with light fixtures throughout the project area.

.13 **HALOCARBONS:** Not Identified

2.2 RECOMMENDATIONS

1. MERCURY

.1 The Québec Regulation respecting Hazardous Materials (O.C. 1310-97), under the Environmental Quality Act, R.S.Q., c. Q-2 - (21) stipulates that fluorescent light tubes, in quantities where it is anticipated that a leachable extract could have a concentration higher than 0.1 mg/L or ppm, is considered hazardous waste and should be treated as such. Environment Canada states that a 2-8 foot lamp can contain between 10 and 50 ppm of mercury. Since the number of fluorescent light tubes required to exceed the hazardous materials threshold for mercury leachate content is so low, as stipulated in this regulation, it is recommended that the regulation and its requirements be applied in all cases of fluorescent tube disposal.

.2 Fluorescent lamp tubes are considered hazardous material in the Province of Québec and should be recycled if removed from service. For information regarding the collection of fluorescent lamp tubes, please consult the Departmental Representative.

2. SILICA

The Québec *Regulation Respecting Occupational Health and Safety* defines crystalline silica in the form of respirable dust as a suspected carcinogen.

.1 Silica dust can be generated through such processes as blasting, grinding, crushing, and sandblasting silica-containing material. Since silica is presumed present in concrete block and mortar, and textured wall finish within the project area, appropriate respiratory protection and ventilation must be donned during the demolition and modifications of these structures, as per the "*Guide des appareils de protection respiratoire utilisés au Québec*", published by the *Institut de recherche Robert-Sauvé en santé et en sécurité du travail*. Personal protective equipment shall be selected, adjusted, used and cared for in accordance with the *CSA Standard Z94.4-93* entitled "*Selection, Use and Care of Respirators*".

.2 The exposure of workers to silica should be reduced to a minimum as defined under Schedule 1 of the Québec *Regulation Respecting Occupational Health and Safety*.

3. POLYCHLORINATED BIPHENYLS (PCBs) (NOT RECOGNIZED AS A DESIGNATED SUBSTANCE)

.1 If any fluorescent light ballast is removed during this project, refer to the Environmental Canada, *"Identification of Lamp Ballasts Containing PCBs"*, August 1991 report in order to identify the ballast type. Ballasts for a typical 1.2 metre fluorescent light fixture made with PCBs contain approximately 23.6 grams of PCB.

.2 Any fluorescent light ballast removed during this project should be sorted by a licensed electrician.

.3 PCB-containing equipment must be disposed of in accordance with:

- Canadian Environmental Protection Act's (CEPA) *PCB Regulations*
- Canadian Council of Ministers of the Environment's *"Guidelines for the Management of Wastes Containing Polychlorinated Biphenyls"*

4. CONTRACTORS DUTIES

The contractor must review the designated substance report and take the necessary precautions to protect the health and safety of the workers and the environment. As per the Province of Québec's *An Act Respecting Occupational Health and Safety* Section 51 whereby, "Every employer must take the necessary measures to protect and ensure the safety and physical well-being of his worker. He must, in particular, (5) use methods and techniques intended for the identification, control and elimination of risks to the safety or health of the worker, (8) see that no contaminant emitted or dangerous substance used adversely affects the health or safety of any person at a workplace; and (13) give, to the workers, the health and safety committee, the certified association, the public health director and the Commission, the list of dangerous substances used in the establishment and of the contaminants that may be emitted." In addition, section 300 (a) of the Québec Regulation respecting occupational health and safety, also states that before any work or task is carried out in an enclosed area, that the categories of contaminants likely to be present in the area need to be made available in writing. The party hiring the contractor (i.e., The Departmental Representative) shall ensure that the contractor and subcontractor (if any) for the project has received a copy of the designated substance report prior to entering a binding contract for the supply of work on the project. If you have any questions about the

designated substance report, please contact the
Departmental Representative.

END OF SECTION