

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
Bid Receiving - PWGSC / Réception des soumissions  
- TPSGC  
11 Laurier St./11 rue Laurier  
Place du Portage, Phase III  
Core 0A1 / Noyau 0A1  
Gatineau, Québec K1A 0S5

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

This document contains a security requirement

**Vendor/Firm Name and Address**

Raison sociale et adresse du  
fournisseur/de l'entrepreneur

**Issuing Office - Bureau de distribution**

Construction Services Division/Division des services de  
construction  
11 Laurier St./11 Rue Laurier  
3C2, Place du Portage  
Phase III  
Gatineau, Québec K1A 0S5

|   |  |
|---|--|
| <b>Title - Sujet</b><br>Workplace 2.0 Fit-Up  |  |
| <b>Solicitation No. - N° de l'invitation</b><br>EP777-151076/A  | <b>Amendment No. - N° modif.</b><br>006      |
| <b>Client Reference No. - N° de référence du client</b><br>20151076   | <b>Date</b><br>2014-11-06                    |
| <b>GETS Reference No. - N° de référence de SEAG</b><br>PW-\$\$\$FG-248-65865  |  |
| <b>File No. - N° de dossier</b><br>fg248.EP777-151076   | <b>CCC No./N° CCC - FMS No./N° VME</b>       |
| <b>Solicitation Closes - L'invitation prend fin</b><br><b>at - à 02:00 PM</b><br><b>on - le 2014-11-13</b>  |  |
| <b>Time Zone</b><br>Fuseau horaire<br>Eastern Standard Time<br>EST  |  |
| <b>F.O.B. - F.A.B.</b><br><b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>                                |  |
| <b>Address Enquiries to: - Adresser toutes questions à:</b><br>Roy, Micheline   | <b>Buyer Id - Id de l'acheteur</b><br>fg248  |
| <b>Telephone No. - N° de téléphone</b><br>(819) 956-0663 ( )  | <b>FAX No. - N° de FAX</b><br>(819) 956-8335 |
| <b>Destination - of Goods, Services, and Construction:</b><br><b>Destination - des biens, services et construction:</b><br>Blackburn Building<br>85 Sparks Street, 3rd Floor<br>Ottawa, Ontario |  |

Instructions: See Herein

Instructions: Voir aux présentes

|  |  |
|--|--|
| <b>Delivery Required - Livraison exigée</b>  | <b>Delivery Offered - Livraison proposée</b> |
| <b>Vendor/Firm Name and Address</b><br>Raison sociale et adresse du fournisseur/de l'entrepreneur  |  |
| <b>Telephone No. - N° de téléphone</b><br><b>Facsimile No. - N° de télécopieur</b>   |  |
| <b>Name and title of person authorized to sign on behalf of Vendor/Firm</b><br><b>(type or print)</b><br><b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b><br><b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b> |  |
| <b>Signature</b>   | <b>Date</b>                                  |

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**THIS AMENDMENT IS BEING RAISED TO ISSUE:**

- A) REVISED BID AND ACCEPTANCE FORM**
- B) REVISED DESIGNATED SUBSTANCE REPORT (DSR)**

**DELETE IN ITS ENTIRETY:**

- Bid and Acceptance Form (BA)

**REPLACE WITH:**

- Revised Bid and Acceptance Form - Appendix 1 - Combined Price Form (2 pages) (attached)

**DELETE IN ITS ENTIRETY:**

- Division 01 14 25 - Designated Substance Report

**REPLACE WITH**

- Division 01 14 25 - Designated Substance Report (attached)

**END OF AMENDMENT**

Solicitation No. - N° de l'invitation

EP777-151076/A

Client Ref. No. - N° de réf. du client

20151076

Amd. No. - N° de la modif.

006

File No. - N° du dossier

fg248EP777-151076

Buyer ID - Id de l'acheteur

fg248

CCC No./N° CCC - FMS No/ N° VME

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## BID AND ACCEPTANCE FORM (BA)

### BA01 IDENTIFICATION

Workplace 2.0 Fit-Up  
Blackburn Building  
85 Sparks Street, 3rd Floor, Ottawa, Ontario

### BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ PBN: \_\_\_\_\_

### BA 03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT INDICATED IN APPENDIX 1.**

### BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of thirty (30) days following the date of solicitation closing.

### BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

### BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the Work within **nineteen (19) weeks** from the date of notification of acceptance of the offer.

### BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

### BA08 SIGNATURE

\_\_\_\_\_  
Name and title of person authorized to sign on behalf of Bidder (Type or print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## APPENDIX 1 COMBINED PRICE FORM (2 pages)

- 1) The prices per unit shall govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
- 2) Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

### LUMP SUM

The Lump Sum Amount designates Work to which a Lump Sum Arrangement applies.

- (a) Work included in the Lump Sum Amount represents all work not included in the unit price table.

|   |
|---|
| <b>LUMP SUM AMOUNT (LSA)</b><br><small>Excluding applicable taxes</small> |
|---|

### UNIT PRICE TABLE

The Unit Price Table designates Work to which a Unit Price Arrangement applies.

- (a) Work included in each item is as described in the referenced specification section.
- (b) The Price per Unit shall not include any amounts for Work that is not included in that unit price Item.

| Item | Specification Reference | Class of Labour, Plant or Material  | Unit of Measurement | Estimated Quantity (EQ) | Price per Unit applicable taxes extra (PU) | Extended amount (EQ x PU) applicable taxes extra |
|------|-------------------------|---|---------------------|-------------------------|--|--|
| 1    | 01 14 25                | <p><b>Existing Plaster Containing Asbestos:</b></p> <p>Removal of grey decorative plaster with the presence of asbestos, located in elevator core lobby and public corridor</p> <p>Also refer to the Designated Substance Report , prepared by PWGSC and dated November 5<sup>th</sup>, 2014, including the Testing reports and Third Floor plan indicating tested areas.</p> <p>(Guiding assumption of 100% of perimeter elevator core corridor wall.)</p> | m2                  | 110 m2                  |  |  |

| Item                               | Specification Reference | Class of Labour, Plant or Material   | Unit of Measurement | Estimated Quantity (EQ) | Price per Unit applicable taxes extra (PU) | Extended amount (EQ x PU) applicable taxes extra |
|------------------------------------|-------------------------|--|---------------------|-------------------------|--|--|
| 2                                  | 09 21 16                | <p><b>New Plaster for Repair:</b></p> <p>New plaster and finishing, ready for paint, for patching and reinstatement of the plaster finish, removed in work noted, above due to demolition work or designated substance removal.</p>  | m2                  | 110 m2                  |  |  |
| 3                                  | 01 14 25                | <p><b>Existing Fireproofing Containing Hazardous Designated Substance Material:</b></p> <p>Removal of existing spray-applied fireproofing to existing structure and floor assembly (ceiling of Third Floor), with the presence of Designated Substances.</p> <p>Also refer to the Designated Substance Report , prepared by PWGSC and dated November 5<sup>th</sup>, 2014.</p> <p>Guiding assumption of 12.5% of ceiling area of perimeter office areas less ADM Office not in scope of work).</p> | m2                  | 80 m2                   |  |  |
| 4                                  | 07 81 00                | <p><b>New Spray-Applied Fireproofing:</b></p> <p>New spray applied fireproofing for patching and reinstatement of the fireproofing, removed in work noted, above due to demolition work or designated substance removal.</p>   | m2                  | 80 m2                   |  |  |
| <b>TOTAL EXTENDED AMOUNT (TEA)</b> |                         |  |                     |                         |  |  |
| Excluding applicable taxes         |                         |  |                     |                         |  |  |

|                                    |  |
|------------------------------------|--|
| <b>TOTAL BID AMOUNT (LSA +TEA)</b> |  |
| Excluding applicable taxes         |  |

## **PART 1 – GENERAL**

### **1.1 REGULATORY REQUIREMENTS**

- .1 An investigation into the presence of designated substances for the 2<sup>nd</sup> and the 3<sup>rd</sup> Floors Fit-Up Project at Blackburn Building, 85 Sparks Street, Ottawa, Ontario, was performed in order to meet the requirements of the *Canada Labour Code* (CLC) 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. Furthermore, Section 125(1) (z.14) of the *Canada Labour Code* stipulates that the employer, to the extent that he controls the activity, will take all reasonable care to ensure that all persons granted access to the work place, other than the employer's employees, are informed of every known or foreseeable health and safety hazard to which they are likely to be exposed in the work place. In addition, it was performed to meet the requirements of Section 30 of the *Ontario Occupational Health and Safety Act, Revised Statutes of Ontario, 1990, Chapter 0.1*. By having a Designated Substances Report (DSR) conducted, the PWGSC 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 The designated substances identified in the *Occupational Health and Safety Act* and its corresponding regulations are:
  - .1 **Acrylonitrile:** “Designated Substances”  
O. Reg 490/09 (as amended)
  - .2 **Arsenic:** “Designated Substances”  
O. Reg 490/09 (as amended)
  - .3 **Asbestos:**
    - .1 “Designated Substances”  
O. Reg 490/09 (as amended)
    - .2 “General – Waste Management”  
O. Reg 347/90 (as amended)
    - .3 “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations”  
O.Reg 278/05 (as amended)
    - .4 PWGSC Departmental Policy  
DP 057 – “Asbestos Management”
  - .4 **Benzene:** “Designated Substances”  
O. Reg 490/09 (as amended)
  - .5 **Coke Oven Emissions:** “Designated Substances” O. Reg 490/09 (as amended)

- .6 **Ethylene Oxide:** *“Designated Substances”*  
O. Reg 490/09 (as amended)
  - .7 **Isocyanates:** *“Designated Substances”*  
O. Reg 490/09 (as amended)
  - .8 **Lead:**
    - .1 *“Designated Substances”*  
O. Reg 490/09 (as amended)
    - .2 *“General – Waste Management”*  
O. Reg 347/90 (as amended)
    - .3 *Canada Consumer Product Safety Act’s Surface Coating Materials Regulations SOR/2005-109 (as amended)*
  - .9 **Mercury:**
    - .1 *“Designated Substances”*  
O. Reg 490/09 (as amended)
    - .2 *“General – Waste Management”*  
O. Reg 347/90 (as amended)
  - .10 **Silica:** *“Designated Substances”*  
O. Reg 490/09 (as amended)
  - .11 **Vinyl Chloride:** *“Designated Substances”*  
O. Reg 490/09 (as amended)
- .3 All contractors requesting tenders from subcontractors shall furnish this report to subcontractors. **This report must be read in its entirety, including text and tables.**

## 1.2 VALIDITY DATE

- .1 Cyprien Amani, Environmental Analyst of the Environmental Services Directorate of the Real Property Branch, PWGSC, conducted the on-site survey for this report on 2014/08/14. A second survey was performed on November 4, 2014 by Olivier Brazeau, Health and Safety Officer.
- .2 The work area is located on the 2<sup>nd</sup> and the 3<sup>rd</sup> floors of the Blackburn Building, 85 Sparks Street, Ottawa, Ontario and with sampling locations described as:
  - Corridor floor close to room 305;
  - Corridor ceiling close to room 313; and
  - Corridor wall close to room 313.
  - The decorative ceiling plaster
  - The walls
  - Applications of fireproofing

The scope of the work for the project consists of renovating the 2<sup>nd</sup> and the 3<sup>rd</sup> floors of the Blackburn Building.

.1 The scope of work for this report involved a visual inspection of building materials and contents for the presence of suspected designated substances in the project area on 2014/08/14 and 2014/11/04.

.2 From the visual inspection suspect materials were sampled and analyzed, where appropriate, for the above substances. On the basis of the visual inspection, a total of twenty-six (26) bulk samples of suspected asbestos-containing materials (ACMs), and two (2) bulk samples of suspected lead-containing paint were collected. Bulk ACM samples were collected in order to satisfy the requirements of *O. Reg. 278/05* (as amended).

The samples were then submitted for analysis to the EXOVA Laboratory (accredited by the Canadian Association for Laboratory Accreditation (CALA) and the National Voluntary Laboratory Accreditation Program (NAVLAP)) located at 146 Colonnade Road, Unit 8, Ottawa, Ontario, K2E 7Y1.

The bulk asbestos samples were analyzed using Polarized Light Microscopy (PLM). This analytical method complies with the United States Environmental Protection Agency (U.S. EPA) Method 600/R-93/116.

The lead analysis of the paint samples was completed using Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) in accordance with U.S. EPA Method 6010-C.

.3 The visual inspection and sampling were limited to readily accessible areas. Destructive testing was not included in the investigation, but is recommended prior to any major demolition. Due to the nature of building construction, some inherent limitations exist as to the possible thoroughness of the designated substance survey. No confined space was accessed for the purpose of this report.

.4 It is possible that the designated substances aforementioned are present in non-accessible areas and concealed spaces (i.e., wall and ceiling cavities), or confined spaces. No other areas outside the defined work boundaries have been assessed.

.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 polychlorinated biphenyls (PCBs) and 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, precautionary 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: Identified**

Asbestos is a naturally occurring material. In general, it has historically been intentionally added to many building materials in the construction industry to increase thermal or chemical resistance properties. More common uses are thermal insulation for pipes and boilers, structural steelwork fireproofing, floor tiles and in-wall and ceiling plasters. There are two classes of asbestos-containing materials: friable and non-friable. Friable asbestos-containing materials are loose in composition or can be easily crumbled using hand pressure. Non-friable asbestos-containing materials are more durable and are held together by a binder such as cement, vinyl or asphalt.

Representative bulk samples, collected on 2014/08/14 and 2014/11/04 from materials located within the project area have been analyzed for asbestos. Analytical results indicate that the grey decorative ceiling plaster layer in the project area contains Chrysotile asbestos. The results are shown in Table 1 below.

**Table 1: Asbestos Sample Results by Polarized Light Microscopy (PLM)**

| Sample ID     | Material                                    | Location  | Asbestos Type               | Asbestos content (%) |
|---------------|---|---|-----------------------------|----------------------|
| BLB3F-AS-1A   | Floor Mastic                                | Corridor Floor, close to Room 305                         | n/a                         | n/d                  |
| BLB3F-AS-1B   |   |   | n/a                         | n/d                  |
| BLB3F-AS-1C   |   |   | n/a                         | n/d                  |
| BLB3F-AS-2A   | Ceiling Plaster                             | Corridor Ceiling, close to Room 313                       | n/a                         | n/d                  |
| BLB3F-AS-2B   |   |   | n/a                         | n/d                  |
| BLB3F-AS-2C   |   |   | n/a                         | n/d                  |
| BLB3F-AS-3A   | Wall Plaster                                | Corridor Wall close to Room 313                           | n/a                         | n/d                  |
| BLB3F-AS-3B   |   |   | n/a                         | n/d                  |
| BLB3F-AS-3C   |   |   | n/a                         | n/d                  |
| BB-Plaster-1A | White decorative plaster                    | Elevator lobby  | n/a                         | n/d                  |
| BB-Plaster-2A |   | Upper ceiling, room 305                                   | n/a                         | n/d                  |
| BB-Plaster-3A |   | Corridor wall, exterior of women's washroom               | n/a                         | n/d                  |
| BB-Plaster-4  |   | Upper ceiling, room 313                                   | n/a                         | n/d                  |
| BB-Plaster-5  |   | Upper ceiling, office 320A                                | n/a                         | n/d                  |
| BB-Plaster-1B |   | Grey decorative plaster, under white plaster              | Elevator lobby              | Chrysotile           |
| BB-Plaster-2B | Upper ceiling, room 305                     |   | Not analyzed, positive stop |                      |
| BB-Plaster-3B | Corridor wall, exterior of women's washroom |   | Not analyzed, positive stop |                      |
| BB-DJC-1      | Drywall Joint Compound                      | Perimeter column, office 308                              | n/a                         | n/d                  |
| BB-DJC-2      |   | Interior column, room 305                                 | n/a                         | n/d                  |
| BB-DJC-3      |   | Window column, office 319                                 | n/a                         | n/d                  |
| BB-DJC-4      |   | Perimeter wall, office 313C                               | n/a                         | n/d                  |
| BB-DJC-5      |   | Core wall, near east staircase, under decorative appliqué | n/a                         | n/d                  |
| BB-FP-1       | Fireproofing                                | Elevator lobby, above air handling unit                   | n/a                         | n/d                  |
| BB-FP-2       |   |   | n/a                         | n/d                  |
| BB-FP-3       |   |   | n/a                         | n/d                  |
| BB-FP-4       |   | Upper ceiling, room 305                                   | n/a                         | n/d                  |

n/d = none detected, n/a = not applicable

- .4 **BENZENE:** Not Identified
- .5 **COKE OVEN EMISSIONS:** Not Identified
- .6 **ETHYLENE OXIDE:** Not Identified
- .7 **ISOCYANATES:** Not Identified
- .8 **LEAD: Trace Amounts Identified**

Lead is a naturally occurring metal. It was used primarily in paint prior to the 1980's to speed up drying, increase durability, maintain a fresh appearance, and resist moisture that causes corrosion. Lead in paint becomes a danger when it is old or damaged, as it creates lead dust and chips. Lead can also be found in soldered joints installed on piping up to the mid 1990s and in older cast iron bell and spigot joints.

- .1 According to the *Canada Consumer Product Safety Act's Surface Coating Materials Regulations SOR/2005-109* (as amended) allowable concentration of lead in surface coatings is 90mg/kg which is equivalent to 90 parts per million (ppm).
- .2 Even at very low concentrations, there may be potential for exposure to very high levels of lead depending on the activities performed that disturb the lead-containing materials. At low lead concentrations, conducting a risk assessment to assess the potential for exposure is required to determine the need to follow precautionary measures.
- .3 Representative white paint sample (BLB3F-Pb-1) collected from the corridor ceiling close to room 313 and the gold paint (BLB3F-Pb-2) sample collected from the corridor wall close to room 313, taken on 2014/08/14 from the project area, have been analyzed for lead content. Analytical results indicate that the white and the gold paints in the project area have lead traces amounts content below the 90ppm threshold outlined in the *Canada Consumer Product Safety Act's Surface Coating Materials Regulations SOR/2005-109* (as amended). The results are shown in Table 2 below.

**Table 2: Lead Sample Results by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)**

| Sample ID  | Description | Location                            | Lead Content (ppm) |
|------------|-------------|-------------------------------------|--------------------|
| BLB3F-Pb-1 | White Paint | Corridor Ceiling, close to room 313 | <30                |
| BLB3F-Pb-2 | Gold Paint  | Corridor Wall, close to room 313    | 50                 |

.9 **MERCURY:** Identified

During the site investigation several fluorescent light tubes which contain mercury were observed in the project area.

.10 **SILICA:** Identified

Free crystalline silica is present in concrete and plaster within the project area.

.11 **VINYL CHLORIDE MONOMER:** Not Identified

.12 **POLYCHLORINATED BIPHENYLS (PCBs):**  
Suspected

During the site investigation several fluorescent light fixtures were observed within the project area. PCBs may be present in the fluorescent light ballasts.

.13 **HALOCARBONS:** Not Identified

## 2.2 RECOMMENDATIONS

### 1. **ASBESTOS**

.1 PWGSC's *DP 057, Asbestos Management*, sets policy, establishes roles and responsibilities and provides a code of practice for the management of and working with asbestos-containing materials. All work must be done in accordance with this directive, as well as all other applicable legislation. Disturbance of all asbestos (whether friable or non-friable) is regulated in Ontario by "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations" *O.Reg 278/05* (as amended) which outlines the precautions required when performing work involving asbestos-containing materials. The regulation stipulates appropriate respiratory protection, work procedures and ventilation requirements that must be utilized during the disturbance of any asbestos-containing materials, or materials suspected to contain asbestos.

.2 The following criteria shall be utilized in determining the classification of asbestos work as indicated in *PWGSC DP 057, Annex C, Appendix 5* and *Ontario Regulation 278/05* (as amended). These criteria are not exhaustive. When classification of the work is uncertain, refer to the Ontario Regulation:

**Type 1** work generally includes installation or removal of a wetted non-friable ACM with a hand tool; disturbance of wetted non-friable ACM with a powered tool equipped with a High Efficiency Particulate Aerosol (HEPA) dust

collection device; removal of less than one square metre of wetted drywall materials where joint filling materials contain asbestos; removal or replacement of less than 7.5 square metres asbestos-containing compressed mineral fibre-type ceiling tiles; collecting wetted samples of suspected friable asbestos material, and working close to friable sprayed asbestos, where the material may be affected by the work activities.

**Type 2** work generally includes the removal or replacement of more than 7.5 square metres asbestos-containing compressed mineral fibre-type ceiling tiles; entry into ceiling space, crawl spaces, pipe tunnels etc., where friable asbestos debris is present; minor removal of friable ACM; Type 2 removal is limited to a maximum per work period of one square metre of surface area; the repair of asbestos mechanical insulation (no limit is imposed as to the amount of repair permitted under Type 2 conditions); and any disturbance not classified as either Type 1 or 3.

**Type 3** work generally includes more than minor removal or disturbance of friable ACM; the use of a power tool on non-friable ACM without a HEPA exhausted dust collection; the spray application of an encapsulate or sealer to friable asbestos surfacing materials; the disturbance of the ductwork and air handling equipment serving or passing through areas of buildings with sprayed asbestos fireproofing or insulation, and the repair, alteration or demolition of a boiler, furnace, kiln or similar equipment with asbestos-containing refractory.

- .3 In the event of conflict between DP-057 and “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations” *O.Reg 278/05* (as amended), the more stringent shall apply.

## 2. LEAD

- .1 If lead-containing materials are disturbed (i.e. during dry sanding, grinding, polishing and sawing operations), then proper precautions, as outlined under *Regulation 490/09* (as amended) of the *Ontario Occupational Health and Safety Act*, must be followed.
- .2 Under *Regulation 490/09* (as amended), regulatory limits have been established for occupational exposure limits to airborne lead that may be present in a workplace. The Time Weighted Average Exposure Values (TWAEV) to airborne lead dust or fumes should not

exceed the Ministry of Labour's 0.05 milligram per cubic metre ( $\text{mg}/\text{m}^3$ ) limit during the removal of paints and products containing any concentration of lead. The TWAEV represents the time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse health effects.

- .3 Contractors performing work that requires disturbance of lead-containing materials are responsible to ensure that the workers are not exposed to airborne lead dust levels in excess of the time-weighted average Exposure Concentration for lead-containing paints. It should be noted that the use of mechanically-powered tools or torches on lead-containing materials increases the concentration of airborne lead dust or fumes and thereby requiring more stringent respiratory protection and controlled work procedures.
- .4 Ontario Ministry of Labour (MoL) has published the document entitled "*Guideline: Lead on Construction Projects*". This document classifies all disturbances of lead-containing materials as Type 1, Type 2a, Type 2b, Type 3a or Type 3b work, based on presumed airborne concentrations of lead generated during the work each of which will have defined work practices. Although this document is not a regulation, Ministry of Labour Inspectors use it as guidance during site inspections.
- .5 The disposal of construction waste containing lead is controlled by "General – Waste Management" *O.Reg 347/90 (as amended)* under the *Ontario Environmental Protection Act*. The classification of the waste is dependent upon the result(s) of leachate test(s). The waste can be classified as "hazardous", "non-hazardous" or "registerable solid waste", depending on the results of the leachate test.

Before the disposition, the lead concentration in the leachate must be determined for waste with high lead concentration by following the procedure detailed in the document entitled "Toxicity Characteristic Leaching Procedure" (TCLP).

### 3. MERCURY

- .1 Mercury is governed by the *Regulation 490/09* (as amended) under the *Ontario Occupational Health and Safety Act*. The regulation provides requirements for allowable exposure levels.
- .2 Should the disturbance or removal of fluorescent light tubes be required, the Ontario Ministry of Labour (MoL) publication '*The Safe Handling of Mercury: A Guide for the Construction Industry*', should be followed.
- .3 Mercury waste is considered a hazardous waste under "*General – Waste Management*" *O.Reg 347/90 (as amended)* of the *Ontario Environmental Protection Act*. Fluorescent light tubes are considered hazardous material and should be recycled if removed from service. For more information, please contact the Departmental Representative.

#### 4. SILICA

- .1 Silica is governed by the *Regulation 490/09* (as amended) under the *Ontario Occupational Health and Safety Act*. The regulation provides requirements for allowable exposure levels.
- .2 Silica dust can be generated through such processes as blasting, grinding, crushing, and sandblasting silica-containing material. Since silica is present in concrete and plaster within the project area, appropriate respiratory protection and ventilation must be done during the demolition and modifications of these structures.
- .3 The Occupational Health and Safety Branch of the Ontario Ministry of Labour (MoL) has published the document entitled "*Guideline: Silica on Construction Projects*". This document classifies the disturbance of materials containing silica as Type 1, Type 2 or Type 3 work, and assigns different levels of respiratory protection and work procedures for each classification. These work procedures should be followed when performing work involving the disturbance of silica-containing materials.

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

- .1 PCBs are not recognized as Designated Substances. However, a survey of the project area was completed for this substance due to its risks to both human health and environment. It was not feasible during the survey to determine whether light fixtures in the project area were free of PCBs. Therefore, if any fluorescent light fixtures are removed during

this project, please 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 If any fluorescent light ballasts are removed during any future works, they must be sorted by a competent person.

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*" - Ontario Environmental Protection Act's *O. Reg 362/90 "Waste Management – PCB's"* as amended (*O. Reg 33/07*).

- .3 Any PCB-containing equipment that is removed from the site or placed into storage shall be appropriately reported in accordance with the requirements of the *CEPA PCB Regulations*.

## 6. 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 Section 30(4) of the *Ontario Occupational Health and Safety Act*, the party hiring the contractor (i.e. 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. As per Section 27(2) (a, b, and c) of the *Ontario Occupational Health and Safety Act*, while onsite, the contractor supervisor shall exercise every reasonable precaution for the protection of a worker. If you have any questions about the designated substance report, please contact the Departmental Representative.

**END OF SECTION**