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**K1A 0S5**

**Bid Fax: (819) 997-9776**

**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**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Centre Block Rehabilitation Project/Projet de  
réhabilitation de l'édifice du Centre  
185 Sparks Street  
185, rue Sparks  
3rd Floor - 313/3ème étage - 313  
Ottawa  
Ontario  
K1A 0S5

<b>Title - Sujet</b> Emergency Power Modernization	
<b>Solicitation No. - N° de l'invitation</b> EP754-161586/A	<b>Amendment No. - N° modif.</b> 001
<b>Client Reference No. - N° de référence du client</b> 20161586	<b>Date</b> 2015-11-10
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$\$FP-004-68288	
<b>File No. - N° de dossier</b> fp004.EP754-161586	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-11-26</b>	<b>Time Zone</b> Fuseau horaire Eastern Standard Time EST
<b>F.O.B. - F.A.B.</b> <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> Burns, Heather	<b>Buyer Id - Id de l'acheteur</b> fp004
<b>Telephone No. - N° de téléphone</b> (819) 775-5575 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

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

**PARLIAMENT HILL  
EMERGENCY POWER UPGRADE (PHEP)**

PROJECT NO. R.011801.165

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DATE: November 9, 2015

The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents.

**SPECIFICATIONS**

**1. SECTION 01 14 25 - DESIGNATED SUBSTANCES**

- .1 Delete Section 01 14 25 – Designated Substances.
- .2 Add attached Section 01 14 25 – Designated Substances.

**2. SECTION 01 56 00 - TEMPORARY BARRIERS AND ENCLOSURES**

- .1 Delete item 1.3.3 and add new item 1.3.3 to read:  
“Temporary Exterior Construction Fence: purpose made self supporting interlocking welded wire mesh panels and posts minimum 2440 mm high. Support posts, with purpose made concrete support blocks or spread footing sufficient for self support.”

**3. SECTION 02 81 01 - HAZARDOUS MATERIALS**

- .1 Delete Section 02 81 01 – Hazardous Materials.
- .2 Add attached Section 02 81 01 – Hazardous Materials.

**4. SECTION 02 81 01.01 - SCHEDULE A - HAZARDOUS MATERIALS TABLE**

- .1 Delete Section 02 81 01.01 – Schedule A – Hazardous Materials Table.
- .2 Add attached Section 02 81 01.01 – Schedule A – Hazardous Materials Table.

**PLANS**

**1. DRAWING A100 – PARTIAL SITE PLAN**

- .1 Delete Note 2 and add new Note 2 to read:  
“Install temporary Exterior Construction Fencing system to fully enclose the exterior construction zone. Make good site upon completion of work and removal of temporary construction fencing.”
- .2 Delete Note 37 and add new Note 37 to read:  
“Provide temporary sliding construction zone vehicle access door in temporary construction zone fencing enclosure. Gate location to approval of Departmental Representative.”

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**PLANS** (CONT'D)

**2. DRAWING A300 – SUB GRADE LEVEL 1 FLOOR PLAN AND DETAILS**

- .1 Delete Drawing Note #35 and associated work.

**3. DRAWING A400 – BUILDING SECTIONS AND SECTION DETAILS**

- .1 Delete Drawing Note #16 and associated work.

**4. DRAWING A600 – DECORATIVE FENCING**

- .1 Delete Drawing A600 in its entirety.

**5. DRAWING S101 – STRUCTURAL TYPICAL DETAILS**

- .1 Delete Detail T3210.

**6. DRAWING S210 – STRUCTURAL SUB-GRADE LEVEL 2 - NEW**

- .1 Foundation and sub-grade Level 2 Floor Plan notes are as follows:
  - .1 SEE GENERAL REQUIREMENTS AND TYPICAL DETAILS ON S100 SERIES DRAWINGS.
  - .2 BASEMENT FLOOR DATUM ELEVATION IS LEVEL WITH EXISTING. ASSUMED DATUM ELEVATION IS 0 (GEODETIC EL. 77.64).
  - .3 TOP OF SLAB IS 0 FROM DATUM ELEVATION EXCEPT WHERE NOTED  $\pm X$  ON PLAN. REFER TO ARCHITECTURAL DRAWINGS FOR SLOPES FOR DRAINAGE.
  - .4 PROVIDE 125 THICK CONCRETE SLAB-ON-GRADE WITH 10@300 MID DEPTH.
  - .5 GROUT BASE PLATES AND BEARING PLATES PRIOR TO PLACING LOADS ON STEELWORK.
  - .6 EXISTING FOUNDATION LOCATIONS O AND ELEVATIONS ARE BASED UPON DRAWINGS PREPARED BY CULHAM-PEDERSON-VALENTINE. (CENTRE BLOCK UNDERGROUND SERVICES BUILDING, AS-BUILTS DATED OCT 1998, PROJECT NO. 720238).
  - .7 PROVIDE DOWELS TO WALLS TO MATCH VERTICAL REINFORCING (U/N).
  - .8 REFER TO GENERAL NOTES FOR FOUNDATION BEARING CAPACITY.

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**PLANS** (CONT'D)

**7. DRAWING S220 – STRUCTURAL SUB-GRADE LEVEL 1 - NEW**

- .1 Foundation and sub-grade Level 1 Floor Plan notes are as follows:
  - .1 SEE GENERAL REQUIREMENTS AND TYPICAL DETAILS ON S100 SERIES DRAWINGS.
  - .2 FLOOR DATUM ELEVATION IS 82.9.
  - .3 UNLESS NOTED OTHERWISE ON PLAN, DESIGN LOADS FOR THE NEW CONCRETE ROOF ARE:
    - LIVE LOAD = 12 kN/m<sup>2</sup>
    - SUPERIMPOSED DEAD LOAD = 3.65 kN/m<sup>2</sup>
    - SOIL OVERBURDEN = 68 kN/m<sup>2</sup>
  - .4 UNLESS NOTED OTHERWISE ON PLANS OR DETAILS, THE FOLLOWING DATA APPLIES:
  - .5 TOP OF SLAB IS 0 FROM DATUM ELEVATION EXCEPT AS CROSSED AND NOTED  $\pm X$  ON PLAN.
  - .6 WHERE BEAMS NOTED THUS  $\pm X$ , X IS THE DISTANCE TO TOP OF BEAM FROM ROOF DATUM.
  - .7 PROVIDE SLOPED UNREINFORCED CONCRETE TOPPING (150 THICK MAX, REFER TO ARCHITECTURAL) OVER SLABS.
  - .8 WHERE MECHANICAL LOADS ARE SHOWN ON PLAN, THE VALUES ARE APPROXIMATE, EXACT MAGNITUDE AND POSITION OF MECHANICAL LOADS ARE TO BE VERIFIED WITH MECHANICAL DRAWINGS.
  - .9 REFER TO ARCHITECTURAL DRAWINGS FOR INTUMESCENT PAINTING OF STRUCTURAL STEEL.
- .2 Delete the new prefabricated pit and the new prefabricated trench drain (Near gridline 2, west of gridline A).

**8. DRAWING M102 - MECHANICAL LEVEL 2 PLUMBING & FIRE PROTECTION NEW WORK**

- .1 Delete requirement for new 50 mm diameter sanitary piping to indirect connection at new floor drain.
- .2 Delete requirement for new floor drain FD1(N).

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**PLANS** (CONT'D)

**9. DRAWING M103 - MECHANICAL LEVEL 1 PLUMBING & FIRE PROTECTION  
NEW WORK**

- .1 Reference Note 1 & 2:
  - .1 Delete sump pump SP-1, trench drain system TF-1, associated piping and heat trace.
  - .2 Extend new sprinkler piping from new generator room glycol zone to new sprinklers to provide light hazard coverage to mechanical intake 126.

**10. DRAWING E004 - ELECTRICAL: SINGLE LINE DIAGRAM - FINAL  
INSTALLATION**

- .1 Change wiring from Generators to main breakers to: 4 sets of #1000KcMil CU 1/C Armored Cable (3291A) + 1#350KcMIL Grd.
- .2 Change wiring from Generators to VFD cabinet to: 4#4/0 +Grd, 53mmC.

**11. DRAWING E202 - ELECTRICAL: LEVELS 1 & 2 - POWER, LIGHTING AND FIRE  
ALARM LAYOUTS**

- .1 Delete detail 3/E202.

Enclosures: Section 01 14 25 - Designated Substances – (4) pages  
Section 02 81 01 - Hazardous Materials – (4) pages  
Section 02 81 01.01 - Schedule A - Hazardous Materials Table – (2) pages

## **PART 1 – GENERAL**

### **1.1 REFERENCES**

1. Federal Legislation
  1. Canada Labour Code, Part II, section 124 and 125. Canada Occupational Health and Safety Regulations
  2. Transportation of Dangerous Goods Act, 1992 (TDGA)
  3. Canada Consumer Product Safety Act
    1. Surface Coating Materials Regulations SOR/2005-109.
2. Provincial Legislation
  1. Ontario Occupational Health and Safety Act, R.S.O. 1990, 2010 edition.
    1. Ontario Regulation 490/09 – Designated Substances (O.Reg. 490/09).
    2. Ontario Regulation 278/05 – Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations, (O.Reg. 278/05).
    3. Ontario Regulation 213/91 for Construction Projects (O.Reg. 213/91)
  2. Ontario Environmental Protection Act, R.R.O. 1990,
    1. Ontario Regulation 347/09, General – Waste Management (O.Reg. 347/09).
    2. Ontario Regulations 362/90 – Waste Management, PCBs (O.Reg. 362/90)
    3. Ontario Regulation 463/10, Ozone Depleting Substances and Other Halocarbons (O.Reg. 463/10).
3. Canadian General Standards Board (CGSB).
4. Canadian Standards Association (CSA International). CAN/CSA-Z94.4-11 - Respiratory Protection
5. Underwriters' Laboratories of Canada (ULC).

### **1.2 DEFINITIONS**

Asbestos-Containing Materials (ACMs): means material that contains 0.5 per cent or more asbestos by dry weight as per Ontario Regulation 278/05.

Time-weighted average exposure limit (TWAEL): the time-weighted average airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day or work week as prescribed by Ontario Regulation 490/09 Designated Substances, as amended.

### **1.3 RELATED SECTIONS**

Section 02 81 01 – Hazardous Materials

Section 02 81 01.01 – Schedule A, Hazardous Materials Table

### **1.4 DESIGNATED SUBSTANCES**

A designated substances survey was completed in support of the Parliament Hill Emergency Power Project, Centre Block. Refer to Designated Substances Summary Report: Project Specific Designated Substances Survey, Parliament Hill Emergency Power Project, Centre Block, dated October 2 2015 (DST Consulting Engineers Inc., Project No.: BE-OT-020903) for the description of the methodology used to assess the designated substances within the project areas. Work will involve removal or disturbance of these designated substances.

Confirm with the Departmental Representative that no additional designated substances have been brought to the project area prior to beginning work.

Additional designated substances and hazardous materials may exist outside the accessible survey area but are beyond the scope of this project.

Should any additional material, suspected to be a designated substance, be encountered within the project area, any disturbance of such material must be stopped, precautionary measures taken, and the Departmental Representative must be notified immediately. Do not proceed until written instructions have been received.

1. ACRYLONITRILE: Not Identified
2. ARSENIC: Not Identified
3. ASBESTOS: Not Identified

Samples of the following materials were collected and confirmed to be non-asbestos: grey caulking/sealant on joint of exhaust equipment (Level 1, Exhaust Tunnel, Room 129); Textured cementitious parging on walls of exhaust tunnel (Level 1, Exhaust Tunnel, Room 129); Cementitious mortar around decorative exhaust grills (Level 1, Exhaust Tunnel, Room 129); Off-white fibrous insulation beneath metal cladding, generator exhaust piping (Level 1, Exhaust Tunnel, Room 129); Red mastic applied to seams of generator ductwork (Level 2, Generator Room).

4. BENZENE: **Assumed**

Benzene is assumed to be present as a constituent of fuel in the following:

- Aboveground fuel storage tank in the generator room, Level 2 (935 litre capacity); and
- Fuel storage tank room, adjacent to the generator room, Level 2 (7,600 litre capacity).

5. COKE OVEN EMISSIONS: Not identified
6. ETHYLENE OXIDE: Not Identified
7. ISOCYANATES: Not Identified
8. LEAD: **Identified**

Two (2) paints were collected within the project area. These paints were confirmed to contain detectable concentrations of lead, however, in concentrations below the Federal Canada Consumer Product Safety Act's limit of 90 ppm:

- Grey floor paint observed in the exhaust tunnel, Room 129, Level 1, contains 29 ppm lead (Sample 20903-LP01); and
- Beige wall paint observed in the exhaust tunnel, Room 129, Level 1 contains 24 ppm lead (Sample 20903-LP02)

Other paint/surface coatings could not be sampled as other paints/surface coatings were in good condition. Other paints/surface coatings should be assumed to be lead-containing.

Lead is also suspected to be present in the following:

- Emergency light batteries
- Generator batteries.

9. MERCURY: **Identified**

Fluorescent light fixtures containing fluorescent light tubes were observed throughout the project area. Fluorescent light tubes contain mercury in a vapour form and in the phosphor coating on the lamp tube.

10. SILICA: **Identified**

Free crystalline silica is expected to be present in concrete and cement materials, cementitious parging, mortar, Durock® cement board wall panels, asphalt.

11. VINYL CHLORIDE MONOMER: Not Identified

12. Polychlorinated Biphenyls (PCBs): Not Identified

13. Other Hazardous Materials: **Identified**

The following additional hazardous materials were observed to be present in the project area:

- Metal and plastic drums, marked as containing used oil and anti-freeze, were observed in the generator room, Level 2; and
- Flammable cabinets, generator room, Level 2, are suspected to contain maintenance chemicals/supplies.

1.5 RECOMMENDATIONS

1. BENZENE

1. There are no regulations that specifically govern the disturbance of benzene on construction projects. Industrial processes involving benzene are regulated under "Designated Substances" O.Reg. 490/09, of the Occupational Health and Safety Act.
2. The time weighted average exposure limit (TWAEL) for benzene is prescribed by Ontario Regulation 490/09 Designated Substances, as amended. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to benzene levels that exceed this TWAEL.

2. LEAD

1. Follow recommendations provided in the Ontario Ministry of Labour (MoL) Guideline entitled "Guideline: Lead on Construction Projects". This guideline classifies all lead disturbances as Type 1, Type 2a, Type 2b, Type 3a or Type 3b work, and assigns different levels of respiratory protection and work procedures for each classification.
2. Work procedures and personal protective equipment must be used to ensure that workers are not exposed to airborne lead levels that exceed the TWAEL of 0.05 milligram per cubic metre (mg/m<sup>3</sup>) prescribed by O.Reg 490/09, as amended.
3. Even at low concentrations, there may be a potential for exposure to high concentrations 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.



4. Disposal of construction waste containing lead must be done in accordance with O.Reg 347/90 – General Waste Management, as amended, under the Ontario Environmental Protection Act and the federal Transportation of Dangerous Goods 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. Based upon analytical results, bulk leachate samples were determined to be non-hazardous for disposal with respect to lead.

3. MERCURY

1. All work involving disturbance of mercury-containing equipment must be done in accordance with O.Reg 490/09.
2. Follow recommendations provided in the MoL Guideline entitled “The Safe Handling of Mercury: A Guide for the Construction Industry”. This document provides advice on how to reduce the risk of mercury exposure, and outlines clean-up methods for spills.
3. When removal of fluorescent light tubes is required, the tubes should be removed intact from the fixtures. Other sources of liquid mercury should be removed intact to prevent worker exposure.
4. Disposal of waste containing mercury must be done in accordance with “General – Waste Management” O.Reg 347/90 (as amended) under the Ontario Environmental Protection Act and the federal Transportation of Dangerous Goods Act.

4. SILICA

1. Comply with Ontario Regulations O.Reg 490/09 when performing works that may disturb silica-containing materials. 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 select materials within the project area, appropriate respiratory protection and ventilation must be donned during the demolition and modifications of these structures.
3. Follow recommendations provided in the MoL Guideline entitled “Guideline: Silica on Construction Projects”. This document classifies all silica disturbances 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. OTHER HAZARDOUS MATERIALS

1. The handling and use of these materials should be undertaken by those with proper training (e.g. Workplace Hazardous Materials Information System, etc.) and adhere to any applicable guidelines and/or regulations.
2. Prior to construction operations, they should be disposed of appropriately, as required. The transport and disposal of chemical waste is governed by O. Reg. 347/90 – General – Waste Management, as amended.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES**

- .1 Refer to the following document for details and recommendations pertaining to designated substances and hazardous materials in the project area to be removed/disturbed as part of the project:
  - .1 Project Specific Designated Substances Survey, Parliament Hill Emergency Power Project, Centre Block. Prepared by DST Consulting Engineers Inc. (File No.: BE-OT-020903). October 2, 2015.
  - .2 Section 02 81 01.01 Schedule A – Hazardous Materials Table
- .2 Work site may involve contact with the following:
  - .1 Lead
  - .2 Benzene
  - .3 Mercury
  - .4 Silica
  - .5 Other hazardous materials and chemicals.
- .3 Canadian Environmental Protection Act, 1999 (CEPA 1999).
  - .1 Export and Import of Hazardous Waste Regulations.
  - .2 Ontario Environmental Protection Act, R.R.O 1990.
- .4 Ontario Ministry of Labour (MoL).
  - .1 Occupational Health and Safety Act, R.S.O. 1990, c. O.1 (OHSA).
    - .1 O.Reg. 213/91, Construction Projects.
    - .2 Designated Substance - Asbestos on Construction Projects and In Building and Repair Operations, O.Reg 278/05, as amended
    - .3 R.R.O. 1990, Regulation 490/09, "Designated Substances".
  - .2 Guideline: Lead on Construction Projects, September 2004, as amended.
- .5 Transport Canada (TC).
  - .1 Transportation of Dangerous Goods Act, 1992 (TDGA).
- .6 Ontario Ministry of Environment (MoE).
  - .1 R.R.O. 1990, Reg. 347, General – Waste Management, as amended.
- .7 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .8 National Fire Code of Canada 2010.
- .9 Transportation of Dangerous Goods Act, as amended.
- .10 Transportation of Dangerous Goods Regulations, as amended.

**1.2 DEFINITIONS**

- .1 Dangerous Goods: product, substance, or organism that is specifically listed or meets hazard criteria established in Transportation of Dangerous Goods Regulations.

- .2 Hazardous Material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .3 Hazardous Material Waste: any hazardous material that is no longer used for its original purpose and that is intended for recycling, treatment or disposal.
- .4 Workplace Hazardous Materials Information System (WHMIS): Canada-wide system designed to give employers and workers information about hazardous materials used in workplace. Under WHMIS, information on hazardous materials is provided on container labels, material safety data sheets (MSDS), and worker education programs. WHMIS is put into effect by combination of federal and provincial laws.

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for hazardous materials and include product characteristics, performance criteria, physical size, finish and limitations.
  - .2 Submit to Departmental Representative current Material Safety Data Sheet (MSDS) for each hazardous material required prior to bringing hazardous material on site.
  - .3 Submit hazardous materials management plan to Departmental Representative that identifies hazardous materials, their use, their location, personal protective equipment requirements, and disposal arrangements.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Co-ordinate storage of hazardous materials with Departmental Representative and abide by internal requirements for labelling and storage of materials and wastes.
- .2 Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.
- .3 Store and handle flammable and combustible materials in accordance with current National Fire Code of Canada requirements.
- .4 Keep no more than 45 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.
  - .1 Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada or Factory Mutual seal of approval.
  - .2 Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires the written approval of the Departmental Representative.
- .5 Transfer of flammable and combustible liquids is prohibited within buildings.
- .6 Do not transfer flammable and combustible liquids in vicinity of open flames or heat-producing devices.
- .7 Do not use flammable liquids having flash point below 38 degrees Celsius, such as naphtha or gasoline as solvents or cleaning agents.
- .8 Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum.

- .9 Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.
- .10 Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:
  - .1 Store hazardous materials and wastes in closed and sealed containers.
  - .2 Label containers of hazardous materials and wastes in accordance with WHMIS.
  - .3 Store hazardous materials and wastes in containers compatible with that material or waste.
  - .4 Segregate incompatible materials and wastes.
  - .5 Ensure that different hazardous materials or hazardous wastes are not mixed.
  - .6 Store hazardous materials and wastes in secure storage area with controlled access.
  - .7 Maintain clear egress from storage area.
  - .8 Store hazardous materials and wastes in location that will prevent them from spilling into environment.
  - .9 Have appropriate emergency spill response equipment available near storage area, including personal protective equipment.
  - .10 Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began.
- .11 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.
- .12 Report spills or accidents immediately to Departmental Representative, Engineer or Consultant. Submit a written spill report to Departmental Representative within 24 hours of incident.

## **1.5 TRANSPORTATION**

- .1 Transport hazardous materials and wastes in accordance with federal Transportation of Dangerous Goods Act, Transportation of Dangerous Goods Regulations, and applicable provincial regulations.
- .2 If exporting hazardous waste to another country, ensure compliance with federal Export and Import of Hazardous Waste Regulations.
- .3 If hazardous waste is generated on site:
  - .1 Co-ordinate transportation and disposal with Departmental Representative.
  - .2 Ensure compliance with applicable federal, provincial and municipal laws and regulations for generators of hazardous waste.
  - .3 Use licensed carrier authorized by provincial authorities to accept subject material.
  - .4 Prior to shipping material obtain written notice from intended hazardous waste treatment or disposal facility that it will accept material and that it is licensed to accept this material.
  - .5 Label containers with legible, visible safety marks as prescribed by federal and provincial regulations.
  - .6 Ensure that trained personnel handle, offer for transport, or transport dangerous goods.
  - .7 Provide photocopy of shipping documents and waste manifests to Departmental Representative.
  - .8 Track receipt of completed manifest from consignee after shipping dangerous goods. Provide a photocopy of completed manifest to Departmental Representative.

- .9 Report discharge, emission, or escape of hazardous materials immediately to Departmental Representative and appropriate provincial authority. Take reasonable measures to control release.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Only bring on site quantity of hazardous materials required to perform work.
- .2 Maintain MSDS in proximity to where materials are being used. Communicate this location to personnel who may have contact with hazardous materials.

**Part 3 Execution**

**3.1 DISPOSAL**

- .1 Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.
- .2 Recycle hazardous wastes for which there is approved, cost effective recycling process available.
- .3 Send hazardous wastes to authorized hazardous waste disposal or treatment facilities.
- .4 Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.
- .5 Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.
- .6 Dispose of hazardous wastes in timely fashion in accordance with applicable provincial regulations.
- .7 Minimize generation of hazardous waste to maximum extent practicable. Take necessary precautions to avoid mixing clean and contaminated wastes.
- .8 Identify and evaluate recycling and reclamation options as alternatives to land disposal, such as:
  - .1 Hazardous wastes recycled in manner constituting disposal.
  - .2 Hazardous waste burned for energy recovery.
  - .3 Lead-acid battery recycling.
  - .4 Hazardous wastes with economically recoverable precious metals.

**END OF SECTION**

**SCHEDULE A: DESIGNATED SUBSTANCES/ HAZARDOUS MATERIALS** <sup>Note 1</sup>

Designated Substances/Hazardous Material <sup>1</sup>	Area of Concern	Recommended Action
Benzene	<p>Benzene is assumed to be a constituent ingredient of fuel in the following:</p> <ul style="list-style-type: none"> <li>• Aboveground fuel storage tank in the generator room, Level 2 (935L capacity); and</li> <li>• Fuel storage tank room, adjacent to the generator room, Level 2 (7,600L capacity).</li> </ul>	<p>The transport and disposal of chemical waste is governed by O. Reg. 347/90, as amended, <i>General Waste Management</i></p> <p>Handling of this waste should be undertaken by those with proper training (e.g. Workplace Hazardous Materials Information System, TDGA, etc.) and shall adhere to any applicable guidelines and/or regulations.</p> <p>Work procedures and personal protective equipment must be used to ensure that workers are not exposed to benzene levels that exceed time weighted average exposure limits, as per O.Reg. 490/09.</p> <p>Removal of aboveground storage tanks (where required) shall be completed by licensed and certified personnel and shall be completed as per applicable codes and regulations pertinent to the work being performed.</p>
Lead	<p>Detectable concentrations of lead have been confirmed in representative paint applications that may result in a health risk during work activities. All paints, and other surface coatings associated with project are considered as containing detectable concentrations of lead.</p> <p>Lead is also assumed or suspected to be present in the following materials:</p> <ul style="list-style-type: none"> <li>• Emergency light batteries;</li> <li>• Generator batteries</li> </ul>	<p>As required to accommodate the project, remove or disturb lead-containing materials in accordance with O. Reg. 490/09, Designated Substances, as amended; Ontario Ministry of Labour - Guideline: Lead on Construction Projects. Lead is to be disposed of in accordance with O. Reg. 347/90, as amended, General Waste Management.</p>
Mercury	<p>Mercury vapour is present in fluorescent light tubes located in the project area</p>	<p>Remove equipment containing mercury for recycling or disposal in accordance with O. Reg. 490/09, as amended, Designated Substances; and O. Reg. 347/90, General Waste Management, as amended.</p>

Designated Substances/Hazardous Material <sup>1</sup>	Area of Concern	Recommended Action
Silica	<p>Silica is assumed to be present within the following materials:</p> <ul style="list-style-type: none"> <li>• Concrete and cement materials;</li> <li>• Cementitious parging;</li> <li>• Mortar;</li> <li>• Durock® cement board wall panels; and</li> <li>• Asphalt.</li> </ul>	<p>Appropriate work practices must be utilized during the disturbance of these structures in accordance with O. Reg. 490/09, as amended, Designated Substances; and Ontario Ministry of Labour - Guideline: Silica on Construction Projects.</p>
Other Hazardous Materials	<p>The following hazardous materials were observed to be present in the building:</p> <ul style="list-style-type: none"> <li>• Metal and plastic drums, marked as containing used oil and anti-freeze, were observed in the generator room, Level 2; and</li> <li>• Flammable cabinets, generator room, Level 2, are suspected to contain maintenance chemicals/supplies.</li> </ul>	<p>The handling and disposal of other hazardous materials shall be undertaken by those with proper training (e.g. Workplace Hazardous Materials Information System, etc.), and adhere to any applicable Material Safety Data Sheet guidelines and/or regulations.</p> <p>The transport and disposal of waste is governed by O. Reg. 347/90 – General – Waste Management, as amended.</p>

**Note 1:** This schedule only summarizes designated substances and hazardous materials. Please refer to the below referenced report for additional information. All contractors are to verify site conditions, quantities, and hazardous materials locations themselves and base their bids upon their own observations and quantity take-offs. Contractors are responsible for understanding and confirming scope of work for project prior to removal or disturbance.

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References:

Project Specific Designated Substances Survey, Parliament Hill Emergency Power Project, Centre Block. Prepared by DST Consulting Engineers Inc. (File No.: BE-OT-020903). October 2, 2015.