Designated Substances Survey
202 Pitt Street, Cornwall, ON
Project Number 111-26203-00

JAN. 4, 2011
FINAL REPORT

GENIVAR Inc. 1345 Rosemount Ave., Cornwall, ON, K6J 3E5
TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY ........................................................................................................ 1

2.0 INTRODUCTION .................................................................................................................. 1

3.0 BACKGROUND INFORMATION AND REGULATORY REQUIREMENTS .................. 2

4.0 SURVEY AND ANALYTICAL METHODOLOGY ............................................................ 5

5.0 REPORTING FORMAT AND CODES .................................................................................. 7

6.0 SURVEY FINDINGS ............................................................................................................. 10

7.0 DISCUSSION AND GENERAL RECOMMENDATIONS ............................................... 17

8.0 RECOMMENDED ACTION PLAN ..................................................................................... 21

9.0 LIMITATIONS .................................................................................................................... 22

10.0 CLOSING COMMENTS AND SIGNATURE ..................................................................... 23

APPENDICES

APPENDIX A PHOTOGRAPHS
APPENDIX B ROOM SURVEY SHEETS
APPENDIX C LABORATORY CERTIFICATES
APPENDIX D MECHANICAL DRAWINGS

FIGURES

FIG. 1 BASEMENT FLOOR PLAN
FIG. 2 1st FLOOR PLAN
FIG. 3 2nd FLOOR PLAN
FIG. 4 3rd FLOOR PLAN
FIG. 5 4th FLOOR PLAN
FIG. 6  5th FLOOR PLAN
FIG. 7  6th FLOOR PLAN
FIG. 8  7th FLOOR PLAN
FIG. 9  8th FLOOR PLAN
FIG. 10 ROOF PLAN
1.0 EXECUTIVE SUMMARY

GENIVAR Inc. was retained by the St. Lawrence Seaway Management Corporation (SLSMC) to complete a designated substances survey of their head office located at 202 Pitt Street, Cornwall, ON.

The following designated substances and hazardous materials were identified:

- Friable asbestos containing materials (ACM):
  - Water and heating pipe insulation
  - Water and heating pipe fitting insulation
  - Boiler and condensate tank insulation
  - Drain pipe joint insulation
  - Duct insulation
  - Insulation around duct penetrations
  - Duct gaskets – suspected

- Non-friable asbestos containing materials (ACM):
  - Radiator pipe insulation (tar)
  - Drywall joint compound
  - Fire doors - suspected

- Lead-containing materials
  - Interior paint: orange, beige, grey, cream and white.
  - Solder and drain pipe gaskets (suspected).

- Silica-containing materials
  - Ceiling tiles, floor tiles, mortar, cement, masonry and other cementitious materials.

- Mercury containing materials:
  - Fluorescent light tubes

- PCB – containing materials:
  - Fluorescent light ballasts, transformers and capacitors installed prior to 1980.

- Mould and water damaged materials
  - None observed

The applicable regulations require that the owner repair the damaged asbestos containing materials (ACM) and implement an asbestos management plan.

2.0 INTRODUCTION

GENIVAR Inc. was retained by the St. Lawrence Seaway Management Corporation (SLSMC) to complete a designated substances survey of the building located at 202 Pitt Street, Cornwall, ON. The survey was conducted on December 13th and 15th, 2011.

This report will identify the applicable regulations, survey results and detailed recommendations for each designated substance and potential polychlorinated biphenyls. It forms an integral part of the asbestos management plan and as such must be relayed to the joint health and safety committee, all building occupants and outside contractors that work in these buildings.
3.0 BACKGROUND INFORMATION AND REGULATORY REQUIREMENTS

This section describes the designated substances, routes of exposure, associated diseases, time weighted average exposure values and applicable regulations.

Designated substances are minerals and chemicals that the Ministry of Labour (MOL) regulates in the workplace. The following is a current list of designated substances: asbestos, lead, mercury, silica, isocyanates, vinyl chloride monomer, benzene, acrylonitrile, coke oven emissions, arsenic, and ethylene oxide.

These substances are regulated under the Canada Labour Code (Part II), Canada Occupational Safety and Health Regulations (Part X) and the Ontario Occupational Health and Safety Act (OSHA) and the designated substances regulation identified as Ontario Regulation 490/09. The provincial designated substances regulation specifies the occupational exposure limits - time weighted average exposure limit (OEL-TWAEL) for each substance and prescribe control programs. However, under Section 14 of the Regulation, construction projects are excluded from OELs and most other requirements of the Regulation. This exclusion should not be interpreted as meaning that nothing is to be done for construction workers who are exposed to designated substances. The OELs establish Ontario standards for worker protection. Procedures that provide the equivalent level of protection should therefore be implemented on construction projects where exposure to designated substances is a hazard. Ensuring that such procedures are in place, would in the words of 25(2)(h) of OHSA be “taking reasonable precautions to protect the health and safety of workers”.

For this reason the MOL has prepared two Guidelines, to assist owners to meet this standard.
- Guideline- Lead on Construction Projects, September 2004
- Guideline- Silica on Construction Projects, September 2004

Copies of these Guidelines are available at the following web links:
- Lead – [http://www.labour.gov.on.ca/english/hs/guidelines/lead/index.html](http://www.labour.gov.on.ca/english/hs/guidelines/lead/index.html), and

3.1 Asbestos

Asbestos is a component of a variety of building materials manufactured before 1984 including mechanical insulation, floor tiles, ceiling tiles, caulking, plaster, wiring etc. Workers and building occupants may be exposed during demolition/renovation activities. Exposure to asbestos can cause cancer and lung disease. The route of exposure is primarily by inhalation.

The regulations refer to asbestos as either friable or non-friable. Friable asbestos-containing materials (ACM) can be readily reduced to dust or powder by hand pressure and include items such as sprayed-on or pipe insulation. Non-friable ACM is generally bound in the matrix of the material such and includes items such as vinyl asbestos tiles or transite. This survey assessed both friable and non-friable ACM.

The management of ACM in buildings and construction projects is controlled through Ontario Regulation 278/05 - Regulation respecting Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations, made under the Occupational Health and Safety Act. The regulation specifies abatement procedures, training and reporting requirements and post-clearance air quality limits of 0.01 fibres per cubic centimetre of air.

The disposal of asbestos is also regulated by the Ontario Environmental Protection Act and the Transportation of Dangerous Goods Act.

### 3.2 Lead

Lead may be present in paint, solder used on copper pipes, caulking on cast iron water pipes, glazing on ceramic tiles, and electrical wires and fixtures. Workers and building occupants may be exposed during demolition/renovation activities. Primary routes of exposure include inhalation, absorption through the skin and ingestion. Over exposure can affect the blood, kidneys, gastro-intestinal system, nervous system and reproductive system.

The Hazardous Products Act designates paint with a lead concentration in excess of 0.5% as “lead paint”. The U.S. Department of Housing and Urban Development (HUD) classify paints that contain 1 mg/cm² of lead or 5,000 ug/g by weight as “leaded paint”. The Regulation 490/09 defines the TWAEV for elemental lead, inorganic and organic compounds of lead is 0.05 mg/m³. The Regulation 490/09 TWAEV for tetraethyl lead is 0.10 mg/m³.

In April 2005, the Federal Hazardous Products Act Surface Coating Materials Regulation (SOR/2005-109) reduced the allowable concentration of total lead present in a surface coating material to 600 ug/g (600ppm). In February 2010, an amendment to the Surface Coating Materials Regulation was made, reducing the total allowable concentration of lead present in a surface coating material to 90 ug/g. Using this criterion, surface coating materials with lead concentrations greater than 90 ug/g are considered to be a lead paint.

The Ontario Ministry of Labour also enforces the Guideline Respecting Lead on Construction Sites. This guideline recommends procedures to minimize the workers exposure to lead following Type 1, 2, 3 procedures similar to those identified in the asbestos regulations and requires workers to wear personal protective equipment.

### 3.3 Mercury

Mercury may be present in thermostats, batteries, level gauges, recording devices, thermometers fluorescent light tubes and some paints. Workers and building occupants may be exposed during demolition/renovation activities. Over exposure can affect the nervous system, organs, skin, eyes, respiratory system, gastro-intestinal system and reproductive system. Regulation 490/09 specifies a TWAEV of 0.025 mg/m³ for all forms of mercury except alkyl mercury and 0.01 mg/m³ for alkyl mercury. The Canada Labour Code also applies.

In 1991, the MOL published the “Safe Handling of Mercury, A Guideline for the Construction Industry”. This guideline describes potential health effects of mercury exposure, potential sources of mercury on construction sites and provides remedial measures, and worker protection procedures.

### 3.4 Silica

Silica is present in cement, masonry, drywall and sand. Workers and building occupants may be exposed during demolition/renovation activities. Primary routes of exposure include
inhalation, skin absorption and ingestion. Over exposure can affect the blood, organs and reproductive system. Regulation 490/09 specifies a TWAEV of 0.05 mg/m$^3$ for cristobalite and 0.1 mg/m$^3$ for quartz/tripoli.

The Ontario Ministry of Labour also enforces the Guideline Respecting Silica on Construction Sites. This regulation recommends procedures to minimize the workers exposure to silica following Type 1, 2, 3, 4 procedures similar to those identified in the asbestos/lead regulations and recommends that workers wear personal protective equipment.

There are no restrictions on the disposal of silica under O.Reg. 347 of the EPA.

3.5 Isocyanates

Isocyanate compounds are commonly used in the production of certain types of plastics, foams, coatings, drugs, pesticides, polyurethane, polyisocyanurates, diisocyanates and other products. Primary routes of exposure include the eyes, skin and respiratory system. Over exposure can affect the respiratory system, the skin and eyes. Regulation 490/09 specifies a TWAEV of 0.005 ppm. This industrial regulation does not apply to construction projects.

3.6 Vinyl Chloride Monomer

Vinyl chloride monomers are generally present in industries producing resins. Primary routes of exposure are inhalation, ingestion and absorption. Regulation 490/09 specifies a TWAEV of 1 ppm.

3.7 Benzene

Benzene, an aromatic hydrocarbon, is produced as a by-product of coal gasification, coke production and from refining petroleum. Primary routes of exposure are inhalation, ingestion and absorption. Regulation 490/09 specifies a TWAEV of 0.5 ppm.

3.8 Acrylonitrile

Acrylonitrile is a clear colourless, toxic liquid. It is used to manufacture ABS and SAN resins, nitrile rubber, plastics, coatings and adhesives. Primary routes of exposure include inhalation of vapours, direct contact and ingestion. Regulation 490/09 specifies a TWAEV of 2 ppm.

3.9 Coke Oven Emissions

Coke oven emissions are generally present in the steel-related industry. Primary routes of exposure include inhalation of vapours, direct contact and ingestion. Regulation 490/09 specifies a TWAEV of 0.15 mg/m$^3$.

3.10 Arsenic

Arsenic is a heavy metal generally found in coal cinders and in the mining industry. Overexposure to arsenic can impair many human systems. Primary routes of exposure include inhalation and ingestion. Regulation 490/09 specifies a TWAEV of 0.01 mg/m$^3$. 
3.11 **Ethylene Oxide**

Ethylene oxide is generally present in organic chemical laboratories and in the petroleum industry. Primary routes of exposure include inhalation and ingestion. Regulation 490/09 specifies a TWAEV of 1.8 mg/m³.

3.12 **PCBs**

PCBs are not a designated substances regulated by the Ministry of Labour. They are fluids that are generally added to mineral oils contained within transformers, capacitors, ballasts and some hydraulic fluids. Due to their toxicity, PCBs are regulated by both the federal and provincial environment ministries. Environment Canada controls the transportation and storage and disposal of PCBs through SOR/2008-273 while the Ministry of Environment controls their storage and disposal through O.Reg. 347 and 362 of the Environmental Protection Act. PCBs must be managed on-site or disposed of, under manifest to a licensed waste disposal site.

3.13 **Mould and Water Damage**

Mould micro-organisms are rapidly growing fungi present throughout the natural world. Mould spores are always present in buildings, whether they are tracked in with dirt, or blown in through ducts and windows. Proliferation can occur when susceptible building materials are wet long enough for spores to grow and multiply. Common growth sites include wood and paper based products including drywall, ceiling tiles, and carpet. Once the spores become airborne, they represent a health hazard. No amount of mould growth can be present without health risks among some occupants.

Several professional bodies have released standards in recent years on the assessment and remediation of mould growth in buildings including:

- Guidelines on Assessment and Remediation of Fungi in Indoor Environments, 2000, New York City Department of Health;

4.0 **SURVEY AND ANALYTICAL METHODOLOGY**

4.1 **Survey Methodology**

GENIVAR staff conducted the survey of the building on December 13th and 15th, 2011.
The common applications of building materials made from designated substances were surveyed. GENIVAR staff entered each accessible room of the building to conduct a visual assessment.

Photographs of select sample locations are presented in Appendix A.

The designated substances were assessed as follows:

- The presence of lead paint was suspected given the age of the building. A total of 7 samples were collected for analyses;
- The presence of mercury was assessed by visually surveying the building for thermostats and fluorescent light tubes. No samples were collected or analysed.
- The presence of silica was assessed by visually surveying the building for common materials including concrete and masonry products. No samples were collected or analysed.
- The presence of poly-chlorinated biphenyls (PCB) was assessed by interviewing the owner. No samples were collected or analysed.
- The presence of mould and water damage was assessed by visually surveying the building for evidence of water staining or black residue. No samples were collected and analysed.
- The presence of friable and non-friable asbestos-containing materials (ACM) was assessed through the collection and analyses of bulk samples per Table 1 of the Regulation 278/05, which specifies the required sampling frequency for materials unless they are assumed or known to contain asbestos:
  - 7 samples of surfacing materials applied by spraying, trowelling or otherwise over an area of 450 square metres or more;
  - 3 samples of thermal insulation of any size;
  - 1 sample of thermal insulation patch for an area of 2 linear metres or 0.5 square metres; and
  - 3 samples of other materials of any size.

There are some materials which may contain asbestos that were not sampled during this survey. Such materials should be assumed to contain asbestos until sampling confirms otherwise.

- Wiring;
- Mechanical packing;
- Elevator components;
- Moulded plastic or phenolics;
- Buried pipe or services;
- Interior duct insulation;
- Boiler Interiors and
- Paper products present under flooring, siding or roofing.

4.2 Analytical Methodology

The bulk asbestos samples were analysed by Macck Industrial Hygiene utilizing polarized light microscopy and dispersion staining. This analytical method followed the Ministry of Labour (MOL) code for the Determination of Asbestos from Bulk Samples. The MOL considers materials containing greater than 0.5 % asbestos as asbestos-containing materials.
The lead paint samples were analyzed by Caduceon Environmental Laboratories, following MOL approved techniques. Samples containing greater than 90 ug/g are considered to be lead paint.

The analytical results for lead and asbestos samples are presented in Appendix B & C.

5.0 REPORTING FORMAT AND CODES

GENIVAR has implemented a procedure to manage the data generated during a detailed designated substances survey. The data is collected from the field on hand-written forms and transferred to MS Excel in table form where the data can be updated. This report section will identify and clarify the acronyms used in the forms and in this report.

5.1 Building Codes

The building codes are unique to each building.

S - Seaway Building (202 Pitt Street)

5.2 Floor Codes

The floor codes refer to the building levels.

5.3 Room Codes

To facilitate in the collection of the field data, GENIVAR staff assigned a unique room number to each area surveyed, while also referencing the numbering scheme assigned by the owner.

5.4 Specific Location

The locations of building materials and/or suspect designated substance are described. i.e. floors, walls, boiler etc.

5.5 Material Codes

The building materials are described utilizing the following material codes. These codes are hypothetical and do not reference any particular legislation or policy.

<table>
<thead>
<tr>
<th>Code</th>
<th>Material</th>
<th>Code</th>
<th>Material</th>
<th>Code</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Insulation</td>
<td>12</td>
<td>Spray-on insulation</td>
<td>13</td>
<td>Transite</td>
</tr>
<tr>
<td>14</td>
<td>Vermiculite</td>
<td>15</td>
<td>Fibreglass</td>
<td>16</td>
<td>Blown Cellulose</td>
</tr>
</tbody>
</table>
5.6 **Friability**

The building materials are described as either friable or non-friable.

**Friable Material** - when dry, can be crumbled, pulverized or powdered by hand pressure, or is crumbled, pulverized or powdered (i.e. pipe insulation).

**Non-friable Materials** are by definition not readily crumbled, pulverized or powdered by hand pressure (i.e. vinyl floor tile)

5.7 **Condition Codes**

The condition of the building materials are described as follows.

**(G) Good Condition** - Sprayed ACM shows no significant signs of deterioration or damage and is not delaminating. Mechanical insulation is jacketed and shows no evidence of deterioration, cracking etc. Friable surface coatings are not exposed or are encapsulated.

**(F) Fair Condition** – The jackets covering mechanical insulation have minor cuts or cracks. Friable surface coatings are exposed but show few signs of damage or deterioration. All damage is easily repaired.

**(P) Poor Condition** – Sprayed ACM is damaged, deteriorated or delaminated. Mechanical insulation is badly damaged and exposed. The damage is not easily repaired.

**(A) Abated** – Records clearly indicate and support that the ACM has been removed from the room.

**(U) Unknown** – The ACM is concealed and the condition is uncertain.
5.8 **Accessibility Codes**

The accessibility of the building materials are described as follows:

1. Accessible to all occupants
2. Accessible to maintenance only
3. Concealed by a movable barrier (i.e. door or suspended ceiling tile)
4. Concealed by fixed barrier (concrete walls or ceiling)

5.9 **Recommendation Codes**

The recommendations for remedial action are described as follows:

1. **On-going Management**: Remedial action is not currently required. The ACM is in good condition.
2. **Repair**: Apply non-asbestos plaster or canvas to insulation in fair condition to restore open joints, plaster, valves and flanges.
3. **Encapsulate**: Apply a sealant to sprayed-on insulation that cannot be enclosed. Situations where encapsulation should be avoided include: badly damaged insulation, materials with poor cohesive strength, materials not firmly attached to the underlying surface, and materials which are easily accessible to or damaged by workers.
4. **Enclose**: Construct airtight and impact resistant walls and ceilings around the ACM. Control access to the enclosure. Suspended ceiling tiles are not an acceptable enclosure.
5. **Remove/Abate**: Remove ACM that is in poor condition, readily accessible to building occupants and/or easily dispersed by air handling systems.

The recommendations are based on the following decision matrix.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 manage</td>
<td>repair</td>
<td>remove/repair</td>
<td></td>
</tr>
<tr>
<td>2 manage</td>
<td>repair</td>
<td>remove/repair</td>
<td></td>
</tr>
<tr>
<td>3 manage</td>
<td>repair</td>
<td>remove/repair</td>
<td></td>
</tr>
<tr>
<td>4 manage</td>
<td>manage</td>
<td>manage</td>
<td></td>
</tr>
</tbody>
</table>

5.10 **Quantity**

The quantity of materials is based on estimated lengths, areas or volumes. In many cases the estimates were based on visible findings. The owner and contractors are to review the as built drawings for actual quantities.
5.11 Sample Codes

Typical sample code: S-5-59, suggests that the sample was collected from the Seaway building – room 5- drywall joint compound.

6.0 Survey Findings

6.1 Building Details and Construction Dates

The building was constructed in 1959.

6.2 Previous Surveys

Pinchin Environmental completed a limited designated substances survey of the building located at 202 Pitt Street in 2006 and 2008. The survey was limited to the CIBC banking area only that occupies a portion of the main floor and basement. The report identified the presence of asbestos in the pipe and fitting insulation in the men’s washroom and janitor’s closet; and 12” vinyl floor tiles observed in the main floor vaults and basement server room. Lead paint, mercury thermostats and PCBs in light ballasts was also identified. Another Pinchin report dated July 20th, 2009 indicated that the asbestos containing floor tiles in the basement server room and treasury vault have been abated.

Refer to Appendix E.

6.3 Asbestos Containing Materials

The asbestos sample results are presented below and on the Room Survey Sheet & Figures.

6.3.1 Thermal Insulation (Material Code 11)

6.3.1.1 Pipe & Fitting Insulation

- Representative samples (S-1-11A; S-87-11A; S-156-11A) confirm that the white fibrous pipe insulation contains 25-50% friable, chrysotile asbestos. The pipe insulation observed in the building ranged from poor to good condition.
- Representative samples (S-1-11B; S-156-11B) confirm that the grey fibrous insulation mud observed on the fittings contains 25-50% friable, chrysotile asbestos. The fitting insulation observed in the building ranged from poor to good condition.
- Representative samples (S-6-11C-A,B,C) confirm that the brown hair insulation observed on the drain pipes does not contain asbestos.
- Representative samples (S-6-11D-A,B,C) confirm that the brown paper insulation on the drain pipes does not contain asbestos.
- Representative samples (S-19-11E) confirm that the grey fibrous insulation observed on the joints of the drain pipes contains 50-75% friable, chrysotile asbestos. The insulation ranged from poor to fair condition.
- Representative samples (S-191-11I-A,B,C) confirm that the ten-test wall insulation observed in the east and west penthouse does not contain asbestos.
- Representative samples (S-20-11J-A,B,C) confirm that the cork fitting insulation observed on the fittings in the office cupboards does not contain asbestos.
Representative samples (S-20-11K-A,B,C) confirm that the tar covering on the paper and cork clad piping observed in the 7th Floor office radiator cupboards contains 5-25% non-friable, chrysotile asbestos. The insulation was observed in fair condition.

Representative samples (S-194-11L-A,B,C) confirm that the fitting insulation observed on the chilled water lines in the basement contains 25-50% friable, chrysotile asbestos. The insulation was observed in good condition.

Refer to the mechanical drawings in Appendix D for the pipe and ductwork layout for the building. Assume that all mechanical systems are clad with asbestos insulation unless sampling proves otherwise.

The canvas wrapping on much of the asbestos piping was never installed leaving the asbestos exposed.

Much of the visible asbestos pipe insulation had deteriorated and has contributed to asbestos debris on top of the ceiling tiles. This is of particular concern on the 8th Floor where the ceiling space is used as a return air plenum. Repairs to the 8th Floor piping were undertaken in January 2012.

Deteriorated asbestos insulation and fallen debris was also observed in the mechanical rooms. These areas should also be remediated as soon as possible.

In addition to the asbestos insulation which can be observed above the asbestos ceiling tiles, the owner and contractors must assume that all mechanical systems present above/within fixed ceilings, walls and chases also contain asbestos.

Workers entering spaces containing suspect damaged asbestos insulation must wear proper personal protective equipment.

6.3.1.2 Duct Insulation (Material Code 11)

Representative samples (S-156-11F-A,B,C) confirm that the duct insulation (grey mud with black tar coating) observed in Room 156 contains 50-75% friable, chrysotile asbestos. The insulation ranged from poor to fair condition.

Representative samples (S-164-11G-A,B,C) confirm that the insulation around the duct penetration in Room 164 contains 25-50% friable, chrysotile asbestos. The insulation was observed in poor condition, had no canvas and was exposed.

Representative samples (S-164-11H-A,B,C) confirm that the black tar and wrapping over the fiberglass duct insulation in Room 164 contains 50-75% friable, chrysotile asbestos. The insulation was observed in poor condition.

Refer to the mechanical drawings in Appendix E for the duct layout for the building.

Deteriorated asbestos insulation and fallen debris was also observed in the mechanical rooms. These areas should also be remediated as soon as possible.

In addition to the asbestos insulation which can be observed above the asbestos ceiling tiles, the owner and contractors must assume that all mechanical systems present above/within fixed ceilings, walls and chases also contain asbestos.

Workers entering spaces containing suspect damaged asbestos insulation must wear proper personal protective equipment.

6.3.1.3 Equipment Insulation (Material Code 11)

Asbestos insulation was observed on the boilers and condensate tanks located in the boiler room in the basement (Room 202). The insulation ranged from fair to poor condition.
6.3.2 Spray-On Insulation (Material Code 12)
- No spray-on insulation was observed.

6.3.3 "Transite" Asbestos Cement (Material Code 13)
- No transite pipe or panels were observed.
- Transite asbestos soffit on the underside of the canopies may also be concealed by aluminum.

6.3.4 Vermiculite (Material Code 14)
- Representative samples (S-164-14-A,B,C) confirm that the vermiculite insulation observed in Room 164 does not contain asbestos.
- Industry standard recommends that this material be managed as an asbestos containing material.
- Vermiculite may also be present within the core of the terracotta block walls, however none was observed within the wall openings observed during this assessment.

6.3.5 Caulking (Material Code 21)
- The sampling of exterior building finishes was beyond the current scope of work.
- We understand that all of the windows and doors have been replaced. Asbestos containing caulking would have been removed at that time.

6.3.6 Gaskets (Material Code 22)
- Representative samples (S-194-22A-A,B,C) confirm that the explosion proof light gaskets does not contain asbestos.
- Representative samples (S-202-22B-A,B,C) confirm that the boiler gasket from the basement boiler room does not contain asbestos.
- The gasket connecting the ductwork in the Room 202 (8th Floor Mech Rm.) was observed to contain friable asbestos. Samples were not collected.
- The replacement of this gasket with a non-asbestos variety is recommended.

6.3.7 Tar Paper (Material Code 23) and Roofing Felt (Material Code 74)
- Representative samples (S-6-23A-A,B,C) confirm that the tar paper covering on the fittings of the drain pipes does not contain asbestos.
- Representative samples (S-20-11K-A,B,C) confirm that the tar covering on the paper and cork and paper clad piping observed in the 7th Floor office radiator cupboards contains 5-25% non-friable, chrysotile asbestos. The insulation was observed in fair condition.
- The black tar on ductwork and drain pipes may also contain asbestos.

6.3.8 Fire/Welding Curtains (Material Code 24)
- No fire or welding curtains were observed.
- Fire doors were observed in the building on the 8th floor and the basement.
- The interior of the fire doors may contain friable asbestos, however this asbestos is currently concealed and does not represent a health risk.
6.3.9 Ceiling Tiles (Material Codes 31, 32, and 33)

- Representative samples (S-3-31A; S-46-31A; S-92-31A) confirm that the 12” ceiling tiles described as Type A (deep serration) do not contain asbestos.
- Representative samples (S-28-31B; S-88-31B; S-149-31B) confirm that the 12” ceiling tiles described as Type B (shallow serration) do not contain asbestos.
- Representative samples (S-123-31C) confirm that the 12” ceiling tiles described as Type C (small pinholes) do not contain asbestos.
- Representative samples (S-201-31D) confirm that the 12” ceiling tiles described as Type D (white with swirls) do not contain asbestos.
- Representative samples (S-18-32A-A; S-53-32A; S-120-32A) confirm that the 2’x2’ suspended ceiling tiles described as Type A (small pinhole with irregular serration) located in the elevator lobby do not contain asbestos.
- Representative samples (S-1-33A-A,B,C) confirm that the 2’x4’ suspended ceiling tiles described as Type A (small pinhole with width-wise serration) do not contain asbestos.
- Representative samples (S-6-33B-A,B; S-7-33B) confirm that the 2’x4’ suspended ceiling tiles described as Type B (small pinhole with fissures) do not contain asbestos.
- Representative samples (S-36-33C-A,B,C) confirm that the 2’x4’ suspended ceiling tiles described as Type C (few small pinhole with width-wise serration) do not contain asbestos.
- Representative samples (S-149-33D-A,B,C) confirm that the 2’x4’ suspended ceiling tiles described as Type D (small and large holes) do not contain asbestos.
- Representative samples (S-159-33E-A,B,C) confirm that the 2’x4’ suspended ceiling tiles described as Type E (pinhole and swirl) do not contain asbestos.
- In summary, the ceiling tiles observed within the building do not contain asbestos.

6.3.10 Fire Brick (Material Codes 46)

- The interior boiler insulation and fire brick was not assessed during this investigation.
- The owner has stated that the refractory was recently replaced and as such it should not contain asbestos.

6.3.11 Mortar (Material Code 47)

- Representative samples (S-6-47A-A,B; S-11-47A; S-43-47A; S-194-47A-A,B,C) confirm that the block mortar does not contain asbestos.

6.3.12 Drywall (Material Code 51) and Drywall Joint Compound (Material Codes 59)

- Representative samples (S-7-51B; S-66-51B; S-115-51B) confirm that the grey vinyl coated drywall does not contain asbestos.
- Representative samples (S-55-51B; S-57-51B; S-98-51B) confirm that the white vinyl coated drywall does not contain asbestos.
- Representative samples (S-3-59; S-5-59; S-14-59; S-29-59; S-34-59; S-200-59-A,B) confirm that the drywall joint compound contains 0.5-5% friable, chrysotile asbestos. The drywall joint compound ranged from fair to good condition.
- The joint compound sample that failed was collected from Rm.3 (8th floor stairway).
- It is not possible to determine whether this joint compound differs from that found in other locations in the building.
- As such all drywall joint compound should be considered to contain asbestos unless further location specific testing proves otherwise.
6.3.13 Plaster, Texture Coat and Stucco (Material Codes 52, 54 and 60)

- No texture coat or stucco was observed.
- Representative samples (S-1-52A; S-11-52A; S-18-52A; S-18-52A; S-19-52A; S-24-52A; S-43-52A; S-129-52A) confirm that the smooth, two phase plaster does not contain asbestos.

6.3.14 12” Flooring Tiles (Material Codes 63)

- Representative samples (S-1-63A-A,B,C) confirm that the 12” vinyl floor tiles described as Type A (white with black streak) do not contain asbestos.
- Representative samples (S-83-63B-A,B,C) confirm that the 12” vinyl floor tiles described as Type B (Light grey with black streak) do not contain asbestos.
- Representative samples (S-135-63C-A,B,C) confirm that the 12” vinyl floor tiles described as Type C (tan with brown fleck) do not contain asbestos.
- Representative samples (S-162-63D-A,B,C) confirm that the 12” vinyl floor tiles described as Type D (black with white streak) do not contain asbestos.
- Asbestos containing 12” vinyl floor tiles were present in the bank branch based on the results from the 2006 and 2008 Pinchin reports. The 2009 report confirms that the asbestos containing 12” vinyl floor tiles in the main floor treasury vaults and the basement server room have been abated and that the remaining dark grey 12” vinyl floor tiles observed in the basement corridor, washrooms and kitchen contains <0.5% chrysotile asbestos and is not regulated as an asbestos containing material.

6.3.15 9” Flooring Tiles (Material Codes 64)

- Representative samples (S-46-64A; S-88-64A; S-141-64A) confirm that the 9” vinyl floor tiles present under the carpet tiles described as Type A (brown backing) do not contain asbestos.

6.3.16 Laminant Flooring Tiles (Material Codes 65)

- No laminant flooring was observed in the building.

6.3.17 Linoleum (Material Codes 66)

- Representative samples (S-4-66A-A,B,C) confirm that the red linoleum observed in the service elevator (Room 4) does not contain asbestos.
- Representative samples (S-44-66B-A,B,C) confirm that the grey terrazzo pattern vinyl flooring does not contain asbestos.

6.3.18 Mastic (Material Code 67)

- Representative samples (S-176-67-A,B,C) confirm that the carpet mastic does not contain asbestos.

6.3.19 Floor Levelling Cement and Parging (Material Code 69)

- No floor levelling cement or parging was observed.
6.3.20 Asphalt Shingles (Material Code 71)

- No asphalt shingles were observed.

6.3.21 Tar and Gravel Roof (Material Code 72)

- The sampling of exterior building finishes was beyond the current scope of work.
- We understand that the roofing system was replaced after 1980 and as such should not contain asbestos.

6.4 Lead (Material Code 301)

- Seven (7) samples of paint were collected from the building.
- Representative paint samples (S-194-301(orange); S-194-301(beige); S-161-301(grey); S-132-301(cream); S-32-301(white); S-27-301(beige)) confirm that the lead levels are greater than 90 ug/g and are regulated.
- Representative paint samples (S-5-301(blue)) confirm that the lead levels are below 90 ug/g and are not regulated.
- Lead may also be present within the solder and pipe gaskets on the copper piping.

6.5 Mercury (Material Code 201)

- No mercury-containing thermostats were observed.
- Mercury vapour will be present in the fluorescent lights.

6.6 Silica

- Silica is present in the ceiling tiles, floor tiles, cement, masonry and other cementitious materials.

6.7 Isocyanates

- No isocyanates were observed.

6.8 Vinyl Chloride Monomer

- No vinyl chloride monomer was observed.

6.9 Benzene

- No benzene was observed.

6.10 Acrylonitrile

- No acrylonitrile was observed.

6.11 Coke Oven Emissions

- No coke oven emissions were observed.
6.12 Arsenic

- No arsenic was observed.

6.13 Ethylene Oxide

- No ethylene oxide was observed.

6.14 Mould and Water Damage

- No significant mould or water damage was observed.

6.15 Polychlorinated Biphenyls

- The owner has stated that all pre 1980 ballasts have been replaced as such no PCB containing ballasts should remain in the building.
- The owner was not aware of any PCB containing equipment in the building.
- Transformers and capacitors installed before 1980 may also contain PCBs.

6.16 Summary & Conclusion

GENIVAR staff has identified the following designated substances and hazardous materials within the building.

- Friable asbestos containing materials (ACM):
  - Water and heating pipe insulation
  - Water and heating pipe fitting insulation
  - Boiler and condensate tank insulation
  - Drain pipe joint insulation
  - Duct insulation
  - Insulation around duct penetrations
  - Duct gaskets – suspected
- Non-friable asbestos containing materials (ACM):
  - Radiator pipe insulation (tar)
  - Tar covered pipes and ductwork
  - Drywall joint compound
  - Fire doors - suspected
- Lead-containing materials
  - Interior paint: orange, beige, grey, cream and white.
  - Solder and drain pipe gaskets (suspected).
- Silica-containing materials
  - Ceiling tiles, floor tiles, mortar, cement, masonry and other cementitious materials.
- Mercury – containing materials:
  - Fluorescent light tubes
- PCB – containing materials:
  - Fluorescent light ballasts, transformers and capacitors installed prior to 1980.
- Mould and water damaged materials
  - None observed
7.0 DISCUSSION AND GENERAL RECOMMENDATIONS

The following recommendations are provided for both identified substances and for those potentially identified in the future.

- Refer to the mechanical drawings in Appendix D for the pipe and ductwork layout for the building.
- Assume that all original mechanical systems are clad with asbestos insulation unless sampling proves otherwise.
- The canvas wrapping on much of the concealed or partially concealed piping was never installed leaving the asbestos exposed.
- Much of the asbestos pipe and duct insulation has deteriorated and has contributed to asbestos debris on top of the ceiling tiles. This is of particular concern on the 8th Floor where the ceiling space is used as a return air plenum. Repairs to the 8th Floor piping were undertaken in January 2012.
- Deteriorated asbestos insulation and fallen debris was also observed in the mechanical rooms. These areas should also be remediated as soon as possible.
- In addition to the asbestos insulation which can be observed above the asbestos ceiling tiles, the owner and contractors must assume that all mechanical systems present above/within fixed ceilings, walls and chases also contain asbestos.
- Workers entering spaces containing suspect damaged asbestos insulation must wear proper personal protective equipment.
- The owner must prepare and asbestos management plan, which must include annual inspection of asbestos containing materials, staff training, and a system of communicating the presence of asbestos to all those who can disturb it.

7.1 Repair and Abatement Activities

Future asbestos abatement activities must proceed in accordance with the Type 1, 2 or 3 operations and specified controls. A description of these operations is defined below.

7.1.1 Type 1 Operations

The following activities are classified as Type 1 operations.

- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area less than 7.5 square metres and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Installing or removing non-friable asbestos-containing material, other than ceiling tiles, if the material is installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
  - the material is wetted to control the spread of dust or fibres, and
  - the work is done only by means of non-powered hand-held tools.
- Removing less than one square metre of drywall in which joint-filling compounds that are asbestos-containing material have been used.
7.1.2 Controls for Type 1 Operations

- Prohibit eating, drinking, smoking and gum chewing in the work area.
- Provide workers with NIOSH approved respirators as specified in the regulation. (if requested).
- Provide worker training and implement a respiratory protection program per the CSA standards.
- Provide workers with protective clothing impervious to asbestos.
- Remove visible dust in the work area before beginning work with by damp wiping or HEPA vacuum.
- Prohibit use of compressed air to clean asbestos dust from surfaces.
- Use hand-powered tools and water when disturbing non-friable asbestos.
- Use polyethylene drop sheets to control the dust.
- Clean up asbestos waste frequently by damp wiping or HEPA vacuum.
- Wet the ACM before removal to minimize the spread of dust.
- Decontaminate personal protective equipment before leaving the work area.
- Decontaminate and dispose of protective clothing, drop sheets and non-rigid barriers as asbestos waste.
- Clean containers or bags with damp cloth or HEPA vacuum.
- Double – bag all asbestos waste.
- Dispose of asbestos waste to an approved waste disposal site.
- Provide a wash basin, soap, water and towels to workers to wash before leaving the work area, eating, drinking, smoking, etc.

7.1.3 Type 2 Operations

- Removing all or part of a false ceiling to obtain access to a work area, if asbestos-containing material is likely to be lying on the surface of the false ceiling.
- The removal or disturbance of one square metre or less of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of machinery or equipment or a building, aircraft, locomotive, railway car, vehicle or ship.
- Enclosing friable asbestos-containing material.
- Applying tape or a sealant or other covering to pipe or boiler insulation that is asbestos-containing material.
- Installing or removing ceiling tiles that are asbestos-containing material, if the tiles cover an area of 7.5 square metres or more and are installed or removed without being broken, cut, drilled, abraded, ground, sanded or vibrated.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if,
  - the material is not wetted to control the spread of dust or fibres, and
  - the work is done only by means of non-powered hand-held tools.
- Removing one square metre or more of drywall in which joint filling compounds that are asbestos-containing material have been used.
- Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material if the work is done by means of power tools that are attached to dust-collecting devices equipped with HEPA filters.
- Removing insulation that is asbestos-containing material from a pipe, duct or similar structure using a glove bag.
• Cleaning or removing filters used in air handling equipment in a building that has sprayed fireproofing that is asbestos-containing material.
• An operation that,
  o is not mentioned above,
  o may expose a worker to asbestos, and
  o is not classified as a Type 1 or Type 3 operation.

7.1.4 Controls for Type 2 Operations

The following controls apply to Type 2 Operations in addition to those described for Type 1 Operations.

• Add a wetting agent to the water used to wet asbestos.
• Post warning signs outside and at the entrances to the work area.
• Construct enclosures to prevent the spread of dust.
• Disable ventilation systems that are present within the enclosed area.
• Provide workers with NIOSH approved respirators as specified in the regulation.
• Provide worker training and implement a respiratory protection program per the CSA standards.

7.1.5 Type 3 Operations

• The removal or disturbance of more than one square metre of friable asbestos-containing material during the repair, alteration, maintenance or demolition of all or part of a building, aircraft, ship, locomotive, railway car or vehicle or any machinery or equipment.
• The spray application of a sealant to friable asbestos-containing material.
• Cleaning or removing air handling equipment, including rigid ducting but not including filters, in a building that has sprayed fireproofing that is asbestos-containing material.
• Repairing, altering or demolishing all or part of a kiln, metallurgical furnace or similar structure that is made in part of refractory materials that are asbestos-containing materials.
• Breaking, cutting, drilling, abrading, grinding, sanding or vibrating non-friable asbestos-containing material, if the work is done by means of power tools that are not attached to dust-collecting devices equipped with HEPA filters.
• Repairing, altering or demolishing all or part of any building in which asbestos is or was used in the manufacture of products, unless the asbestos was cleaned up and removed before March 16, 1986.
• Work on ceiling tiles, drywall or friable asbestos-containing material is classified according to the total area on which work is done consecutively in a room or enclosed area, even if the work is divided into smaller jobs.

7.1.6 Controls for Type 3 Operations

The following controls apply to Type 3 Operations in addition to those described for Type 1 and 2 Operations.

• Disable and seal off the air handling systems servicing the work area.
• Damp wipe or HEPA vacuum movable objects and remove them from the work area.
• Seal with polyethylene sheets all objects that cannot be removed.
• Isolate the work area utilizing existing or polyethylene walls.
• Seal off all openings to the work area.
• Line the walls and floor with polyethylene sheeting.
• Install negative air systems to provide 0.02 inches of water pressure inside the chamber relative to outside the chamber.
• Shutdown, isolate, lock/tag out electrical power when using wet removal methods and install a temporary ground fault circuit interrupter (GFCI) supply.
• Construct a three stage entry decontamination facility, with showers and overlapping doors.
• Decontaminate all equipment and workers that are leaving the work area.
• Clean-up asbestos frequently before it dries out.

7.2 Lead Recommendations

• Remove lead containing materials before renovations and demolition (excluding paint).
• Minimize the disturbance of surfaces which contain lead.
• Where possible utilize hand tools when disturbing lead.
• Follow the Type 1, 2, 3 procedures described in the Guideline Respecting Lead on Construction Sites when disturbing leaded materials.
• Ensure staff and workers that disturb lead are properly trained and equipped with personal protective equipment.
• Staff and contractors must not be exposed to elemental lead levels and tetraethyl lead in excess of 0.05 mg/m$^3$ and 0.10 mg/m$^3$ respectively.
• Dispose of lead contaminated materials as per O.Reg. 347 of the Environmental protection Act.
• Not all lead waste may be disposed of to a landfill site. A TCLP analyses is required to characterize the waste.

7.3 Mercury Recommendations

• Sweep (not vacuum) spilled mercury or broken fluorescent lights.
• Ventilate the area.
• Remove and store spent fluorescent light tubes in cardboard boxes to prevent breakage.
• Staff and contractors must not be exposed to levels of all forms of mercury and alkyl mercury in excess of 0.025 mg/m$^3$ and 0.01 mg/m$^3$ respectively.
• Dispose of mercury contaminated materials as per O.Reg. 347 of the Environmental protection Act.
• Not all mercury waste may be disposed of to a landfill site. A TCLP test is required to characterize the waste.

7.4 Silica Recommendations

• Minimize the disturbance of silica during renovation and demolition.
• Where possible utilize hand tools when disturbing silica.
• Follow the Type 1, 2, 3, and/or 4 procedures described in the Regulation Respecting Silica on Construction Sites when disturbing silica.
• Ensure staff and workers that disturb silica are properly trained and equipped with the required personal protective equipment.
• Staff and contractors must not be exposed to silica levels of cristobalite and quartz/tripoli in excess of 0.05 mg/m$^3$ and 0.1 mg/m$^3$ respectively.
• Mist the work area with water to minimize airborne dust levels.
7.5 **Mould Recommendations**

- Identify and repair the source of the water infiltration within 48 hours of the occurrence and promptly remove the water damaged material.
- Retain a mould abatement contractor to remediate all mould following Canadian Construction Association standards.
- Retain a GENIVAR architectural technician to review the water damage and recommend repair options.
- Improve the drainage around the perimeter of the floor slab.
- Install eaves trough to direct excess storm water away from the building.

7.6 **PCB Recommendations**

- Verify the PCB content of all electrical equipment prior to renovation/disposal.
- Retain a licensed contractor to dispose of PCB waste as per O.Reg. 347.

8.0 **RECOMMENDED ACTION PLAN**

The presence and current condition of the asbestos containing materials in the building requires that the owner develop an action plan. This plan will be predicated on the legislation, worker safety and budget. We recommend that the following actions be considered:

**Priority - 1**

- Repair or remove all damaged, friable asbestos present in the ceiling space return air plenum on the 8th Floor. - These repairs have commenced and a new return air ductwork was installed. (Type 2 or 3)
- Maintain existing and repair any damaged, friable asbestos insulation present in areas which are easily accessible to staff or the general public. (ie. bathrooms, boiler rooms, mechanical rooms, basement etc.) (Type 2 or 3)
- Abate all of the asbestos from the mechanical rooms (164 and 156), as it is exposed, in very poor condition and has the potential to enter the air handling systems.
- Ensure all staff entering areas containing damaged, friable asbestos are adequately trained and wear proper personal protective equipment.

**Priority - 2**

- Repair or remove all damaged, friable asbestos located above the suspended ceiling tiles. (Type 2 or 3).
- Replace the asbestos duct gasket in the 8th Floor mechanical room (Type 1).
- Ensure all non-friable asbestos containing materials (tar, floor tiles, fire doors, drywall joint compound etc.) is maintained in good condition and is not cut, grinded, drilled etc, unless abatement procedures are followed.
9.0 LIMITATIONS

- The assessment includes designated substances observed within the building envelope including the structure, finishes and permanent mechanical equipment.

- The assessment does not assess designated substances:
  - Within sealed wall or ceiling cavities (i.e. no destructive testing);
  - Within the soil, groundwater or air; and
  - Within column enclosures and inaccessible shafts/tunnels.

- The field observations and laboratory analyses presented herein are considered sufficient in detail and scope to form a general inventory of designated substances present in the buildings.

- GENIVAR staff prepared the survey in accordance with generally accepted environmental survey methods in place at the time the work was undertaken.

- GENIVAR staff did not assess every mechanical and architectural detail of the building. Designated substances may exist which could not be reasonably identified within the scope of the assessment or which were not apparent during the site visit. In these instances GENIVAR generally assumed the materials contained asbestos.

- GENIVAR cannot warrant or guarantee that the information provided herein is absolutely complete or accurate beyond current environmental consulting standards.

- GENIVAR neither expresses nor implies any warrantee with respect to the findings or report.

- The client acknowledges that conditions may vary from those which are identified within this report.

- The observations apply only to the dates they were made.

- The report is limited only to those areas of concern identified by the client or described in our proposal. Other areas of concern may exist that were not investigated.

- GENIVAR makes no other recommendations, including those concerning the legal significance of the findings, or other legal matters described in this report.

- Regulatory statutes are subject to interpretation and these interpretations may change.

- GENIVAR accepts no responsibility for consequential financial effects or transactions or property values or requirements for follow-up actions or costs.

- GENIVAR will not be responsible for consequential or indirect damages.

- GENIVAR is only responsible for damages resulting from the negligence of our staff.

- GENIVAR will not provide results or information to any party unless required by law.
• GENIVAR accepts no responsibility for damages suffered by any third party that relies on the contents of this report.

• Contractors bidding on renovations or demolition of these buildings must verify dimensions, asbestos quantities and unforeseen conditions.

• The data presented herein is for general purposes only. No other warranties are implied or expressed.

10.0 CLOSING COMMENTS AND SIGNATURE

It has been a pleasure working with the St. Lawrence Seaway Management Corporation on this project. Should you have any questions or require assistance in managing the designated substances during the proposed renovation/demolition, please contact the undersigned.

Sincerely,

GENIVAR INC.

[Signature]

Jason White, B. Sc.
Environmental Technician

Lyle Casselman, B.Eng., C.E.T.
Manager, Environmental Site Assessment
APPENDIX A
Photographs
Photo 1  White 12” floor tile – Room 1 – Level 8 (Non-ACM)

Photo 2  Typical two phase plaster – Room 1 – Level 8 (Non-ACM)

Photo 3  Typical fitting insulation - Room 1 – Level 8 (ACM)

Photo 4  Fitting insulation – poor condition – Room 1 – Level 8 (ACM)

Photo 5  Typical 2’x4’ Type A ceiling tiles – Room 3 – Level 8 (Non-ACM)

Photo 6  Typical drywall joint compound – Room 3 – Level 8 (ACM)

Photo 7  Red linoleum – Room 4 – Level 8 (Non-ACM)

Photo 8  Typical fitting insulation – Room 3 – Level 8 (ACM)

Photo 9  Typical 2’x4’ type B ceiling tile – Room 6 – Level 8 (Non-ACM)

Photo 10 Typical roof drain fitting insulation – Room 6 – Level 8 (Non-ACM)

Photo 11 Thermostats do not contain mercury

Photo 12 Typical roof coated drywall – Room 7 – Level 8 (Non-ACM)

Photo 13 Exposed pipe insulation – Room 12 – Level 8 (ACM)

Photo 14 Damaged fitting insulation – Room 16 – Level 8 (ACM)

Photo 15 Typical duct gaskets – Room 16 – Level 8 (ACM)

Photo 16 Typical fire door – Room 16 – Level 8 (ACM suspected)

Photo 17 Damaged fitting insulation – Room 16 – Level 8 (ACM)

Photo 18 Damaged fitting insulation – Room 19- Level 7 (ACM)

Photo 19 Damaged drain pipe insulation – Room 19 – Level 7 (ACM)

Photo 20 Damaged asbestos debris on ceiling tiles – Room 28 – Level 7 (ACM)

Photo 21 Damaged fitting insulation and asbestos debris on the tiles – Room 35 – Level 7 (ACM)
Photo 22  Damaged fitting insulation and asbestos debris on the tiles – Room 35 – Level 7 (ACM)

Photo 23  Damaged fitting insulation and asbestos debris on the tiles – Room 35 – Level 7 (ACM)

Photo 24  Black and white linoleum – Room 44- Level 6 (Non-ACM)

Photo 25  9” yellow floor tile (typical) – Room 46 – Level 6 (Non-ACM)

Photo 26  Typical coated drywall – Room 57 – Level 6 (Non-ACM)

Photo 27  Damaged pipe insulation and debris on ceiling tiles – Room 82 – Level 5 (ACM)

Photo 28  Light grey 12” floor tiles – Room 83 – Level 5 (Non-ACM)

Photo 29  Damaged pipe insulation and debris on ceiling tiles – Room 120 - Level 3 (ACM)

Photo 30  Damaged pipe insulation and debris on ceiling tiles – Room 120 - Level 3 (ACM)

Photo 31  Typical 12” type “C” ceiling tile – Room 123 – Level 3 (Non-ACM)

Photo 32  Tan and black 9” floor tile – Room 132 – Level 2 (Non-ACM)

Photo 33  Brown 12” floor tile – Room 135- Level 2 (Non-ACM)

Photo 34  Typical 2’x4’ type “D” ceiling tile – Room 149 – Level 2 (Non-ACM)

Photo 35  Damaged pipe insulation – Room 156 – Level 2 (ACM)

Photo 36  Damaged pipe insulation – Room 156 – Level 2 (ACM)

Photo 37  Damaged duct insulation – Room 156 – Level 2 (ACM)

Photo 38  Typical 2’x4’ type ‘E” ceiling tile – Room 159 – Level 1 (Non-ACM)

Photo 39  Black 12” floor tile – Room 162 – Level 1 (Non-ACM)

Photo 40  Vermiculite insulation – Room 164 – Level 1 (Non-ACM) (manage as asbestos)

Photo 41  Damaged/exposed insulation on ductwork – Room 164 – Level 1 (ACM)

Photo 42  Damaged duct insulation – Room 164 – Level 1 (ACM)

Photo 43  Damaged/exposed insulation packed along walls – Room 164 – Level 1 (ACM)

Photo 44  Typical black tar insulation on duct work – Room 164 – Level 1 (ACM)

Photo 45  Asbestos duct insulation – Room 19 – Level East Penthouse (ACM)
Photo 46  Ten test wall insulation – Room 191 – Level East Penthouse (Non-ACM)
Photo 47  Bell Penthouse (No access)
Photo 48  East Penthouse
Photo 49  Fitting insulation – Room 194 – Level 0 (ACM)
Photo 50  Damaged pipe insulation – Room 194 – Level 0 (ACM)
Photo 51  Explosion proof light gaskets – Room 194 – Level 0 (Non-ACM)
Photo 52  12” ceiling tile type “D” – Room 201 – Level 0 (Non-ACM)
Photo 53  Damaged Asbestos insulation boilers – Room 202 – Level 0 (ACM)
Photo 54  Damaged asbestos insulation on water tanks – Room 202 – Level 0 (ACM)
Photo 55  Damaged asbestos pipe insulation – Room 202 - Level 0 (ACM)
Photo 56  Boiler gasket – Room 202 – Level 0 (Non-ACM)
Photo 57  Typical fire doors – Room 202 – Level 0 (ACM suspected)