Hazardous Building Materials Assessment
Upper Yonge Village Day Care
14 St. Clements Street
Toronto, Ontario

Prepared for:
City of Toronto
Facilities and Real Estate (DCAP)
55 John Street, 2nd Floor
Toronto, ON
M5V 3C6

Attention: Megan Aldcroft

November 21, 2008

Pinchin File: 49911

2470 MILLTOWER COURT, MISSISSAUGA, ONTARIO L5N 7W5 PHONE: (905) 363-0678 FAX: (905) 363-0681
ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT SERVICES FROM OFFICES ACROSS CANADA
www.pinchin.com • 1-888-767-3330

EXECUTIVE SUMMARY

Pinchin Environmental Ltd. (Pinchin) was retained by Megan Aldcroft of The City of Toronto (Client) to conduct an assessment of hazardous building materials of the Upper Yonge Village Day Care located at 14 St. Clements Street in Toronto, Ontario. This assessment has been performed prior to planned renovations.

Summary of Findings

Hazardous materials were confirmed to be present as follows:

- Back-up emergency lights are powered with lead-acid batteries.
- Wiring connectors, grounding conductors and solder contain lead.
- Cast iron drainage pipes contain lead wool as caulking in bell fittings.
- Free crystalline silica (common construction sand) will be present in concrete, mortar, brick, masonry, ceramics, granite, slate, stone, asphalt, etc., where present in the building.
- Original fluorescent light ballasts contain PCBs.
- Thermostat containing liquid mercury is present in the Common Area.
- Mercury vapour is present in all mercury vapour lamps and neon lamps.

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION AND SCOPE

1.1 Introduction

Pinchin Environmental Ltd. (Pinchin) was retained by The City of Toronto (Client) to conduct an assessment of hazardous building materials of Upper Yonge Village Day Care located at 14 St. Clements Street in Toronto, Ontario. This assessment has been performed prior to planned renovations. The assessment included the following parts of the building that are to be affected by the Unit Heater Upgrade Project:

- Play Areas
- Infant Sleep Area
- Common Area
- Kitchen
- Basement

This report was prepared to fulfil the Owner's requirements under Section 30 of the Ontario Occupational Health and Safety Act, Revised Statutes of Ontario 1990, (as amended). Prior to tendering project work in the building, the building owner or owner's agent must provide this report to constructors bidding on the project work. In turn, the constructor must provide this report to contractors and subcontractors prior to requesting bids. This report also fulfills the requirements of Section 10 of O.Reg. 278/05, Regulation respecting Asbestos on Construction Projects and in Buildings and Repair Operations. This requires that owners report the presence of both friable and non-friable asbestos to constructors prior as part of the tendering process.

This assessment is intended for pre-construction or pre-demolition purposes only, and may not provide sufficient detail for long term management of asbestos-containing materials as required in Section 8 (3) of O.Reg. 278/05.

The assessment was performed by Dave Newton of Pinchin on November 11, 2008.

1.2 Facility Description

The facility was constructed in the 1920's. The following provides a basic description of the building systems.

System	Description
Structure	Brick, wood trusses
Exterior Cladding	Brick
HVAC	Boiler, hot water heating
Roof	Shingled
Flooring	Vinyl tile
Interior Walls	Drywall
Ceilings	Drywall, acoustic ceiling tiles. plaster

1.3 Scope of Assessment

The assessment was performed to establish the location and type of hazardous building materials incorporated in the structure(s) and its finishes. For the purpose of the assessment, and this report, hazardous building materials are defined as those containing the following substances:

Ontario Ministry of Labour designated substances:

- Asbestos
- Lead
- Mercury
- Silica (free crystalline silica)

The investigation included an examination for the presence of:

- Polychlorinated Biphenyls (PCBs)
- Mould or microbial contamination (visible growth only)

The following Ministry of Labour Designated Substances are not typically found in buildings of this type, and were not addressed in this assessment. Furthermore, the Client did not report the presence of any of the following designated substances:

- Arsenic
- Acrylonitrile
- Benzene

- Coke oven emissions
- Ethylene oxide
- Isocyanates
- Vinyl chloride (vinyl chloride monomer, not PVC)

Not included, was an assessment of owner or occupant articles within the structure(s) (i.e. stored items, furniture, etc.), sampling of materials that could result in damage to the building (specific exclusions are described below), or subsurface materials or equipment (vessels, drums, underground storage tanks, pipes, etc.) or possible contaminants in the soil and groundwater on the site.

2.0 ASSESSMENT METHODOLOGIES AND CRITERIA

2.1 Methodology

The surveyor entered each room, corridor, service area, etc. where access was possible, within the extent of the area assessed. The surveyor inspected for the presence of hazardous building materials, and relevant information was recorded where hazardous building materials were present, including approximate quantities, locations, condition, sample and test locations. As-built drawings were referenced where provided.

Concealed locations such as spaces above solid ceilings, shafts and pipe chases were accessed via existing access panels only. Our investigation did not include demolition of drywall or plaster walls, or removal of finishes to view concealed conditions. Structural items or exterior building finishes were not removed to determine the presence of concealed materials. Wall spaces and concealed chases (e.g. at washrooms) were not demolished or accessed during this assessment. The investigation was limited to non-intrusive testing at request of the client.

2.2 Asbestos

The surveyor inspected for the presence of friable and non-friable asbestos-containing materials (ACM). Typical examples of friable ACM include sprayed fireproofing, acoustic/texture finish, and mechanical insulation. Typical examples of non-friable ACM include asbestos cement sheets or pipes, vinyl floor tiles, vinyl sheet flooring, drywall compound and asbestos textile products (curtains, vibration dampers). Typical examples of non-friable ACM, which might become friable during construction, include plaster and acoustic ceiling tiles.

2.2.1 Asbestos Assessment Exclusions

A number of possible non-friable materials which might contain asbestos were *not* sampled during our assessment. The materials, listed below, must be assumed to be asbestos-containing and are best sampled *immediately* prior to commencing renovation. These non-friable materials could not be sampled without causing significant damage to the material or building.

- components or wiring within motors or lights
- high voltage wiring
- mechanical packing, ropes and gaskets
- underground services or piping
- paper products used under flooring or under metal or slate roofing

2.2.2 Asbestos Sampling Strategy and Frequency

Asbestos bulk samples were collected at a rate that was in compliance with the requirements of O.Reg. 278/05, which states a minimum number of samples are to be collected and analyzed (1, 3, 5, or 7 depending on quantity, application and friability) from each area of homogeneous material for the material to be considered non-asbestos. This frequency is indicated in the table below. A homogeneous sampling area is defined by the U.S. Environmental Protection Agency (EPA) as containing material that is uniform in texture and appearance, was installed at one time and is unlikely to consist of more than one type or formulation of material. The surveyor used information obtained on site by visual examination, available information on the phases of the construction and information on renovations obtained from the client to determine the extent of each homogeneous area and the number of samples required.

Type of Material	Size of Area of Homogeneous Material	Minimum Number of Samples
Surfacing material, including without limitation material that is applied to surfaces by spraying, by troweling or otherwise, such as acoustical plaster on ceilings, fireproofing materials on structural members and plaster	Less than 90 square metres	3
	90 or more square metres, but less than 450 square metres	5
	450 or more square metres	7
Thermal insulation, except as described below	Any size	3

Type of Material	Size of Area of Homogeneous Material	Minimum Number of Samples
Thermal insulation patch	Less than 2 linear metres or 0.5 square metres	1
Other material	Any size	3

Plaster is considered a non-friable ACM while intact, but the dust and debris created during demolition of plaster should be treated as a friable material. Plaster is considered a surfacing material to determine the number of samples required. Asbestos use in plaster is often inconsistent in a building because installation practices varied greatly during on site mixing of plaster, and asbestos was occasionally present as a contaminant in materials used in plaster. Therefore extensive sampling of plaster surfaces is necessary to come to a reliable determination regarding the presence and content of asbestos within plaster.

Drywall joint compound is considered a non-friable material. The use of asbestos in drywall joint compound was banned under the Federal Hazardous Products Act and it could possibly contain asbestos as late as 1986. Most buildings undergo constant renovation, including the removal and replacement of drywall partitions. Therefore extensive sampling of drywall compound was necessary to come to a reasonable conclusion. Furthermore, any attempt to distinguish and delineate asbestos-containing drywall compound from new non-asbestos drywall compound is often unachievable. Therefore, drywall joint compound was sampled at exterior walls, columns or other locations which are unlikely to have been renovated in an attempt to determine the presence of asbestos in the original drywall compound.

Asbestos cement products and various other non-friable materials (e.g. vibration dampers) were visually identified as asbestos-containing materials where present. Acoustic lay-in ceiling tiles were assumed to be non-asbestos if date code on the back lists the date of manufacture as after 1986.

2.2.3 Basis of Evaluation and Recommendations regarding ACM

The condition of any ACM found was evaluated as well as the potential for disturbance of the ACM. These evaluation criteria were based on the conclusions of published studies, particularly the “Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario”, existing Ontario regulation, and our experience involving buildings that contain ACM.

An asbestos-containing material was considered damaged if it is sprayed material that is delaminating, mechanical insulation with damaged/missing insulation or jacketing, non-friable materials that have been pulverized to a dust, exposed underpad on vinyl sheet flooring, etc., which causes it to become friable.

The priority for remedial action is based not only on the evaluation of condition but is also based on several other factors which include:

- Accessibility or potential for direct contact and disturbance which can cause release of asbestos to the air.
- Practicality of repair (for example, will damage to the ACM continue even if it is repaired).
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in good condition).

Recommendations also include those that are mandatory regulated requirements, such as some provincial requirements for institution of an Asbestos Management Program, training, record keeping etc.

2.3 Lead

Each distinctive paint finish present in more than very limited application was tested for lead content using a portable X-ray fluorescence analyzer (XRF). The Ontario Ministry of Labour (MOL) has not established a lower limit for concentrations of lead in paint, below which precautions do not need to be considered. The MOL will not accept U.S. Environmental Protection Agency (EPA) or U.S. Housing and Urban Development (HUD) limits (greater than 0.5%) for lead for this purpose. The XRF is a useful tool in indentifying paints with elevated concentrations of lead (greater than 0.5%). These paints are more likely to be problematic and result in worker exposure during certain activities/disturbances.

Building materials suspected of containing lead (e.g. lead sheeting) will be identified by appearance and age, and knowledge of historic applications.

2.4 Mercury

Building materials suspected of containing mercury were identified by appearance, age, and knowledge of historic applications. Sampling was not performed. Dismantling of equipment suspected of containing mercury was not performed.

2.5 Silica

Building materials suspected of containing crystalline silica were identified by knowledge of current and historic applications. Sampling was not performed.

2.6 Polychlorinated Biphenyls (PCBs)

Information labels on electrical equipment such as transformers and capacitors for motors were examined to assist in determining PCB content. The information was compared against information available in the "Handbook on PCB's in Electrical Equipment" issued by Environment Canada (http://www.ec.gc.ca/wmd-dgd/default.asp?lang=En&n=BCA7C003-1), in order to determine PCB content of materials.

Bulk sampling was not performed at live PCB impregnated cables, or of dielectric fluids or materials in live transformers or capacitors.

Light ballasts are present in fluorescent and HID light fixtures. Fluorescent light fixtures were not disassembled to examine ballasts during this assessment. It is assumed in a building of this era, that some of the light ballasts will contain PCB's if the building has not been re-lamped and all ballast replaced.

2.7 Visible Mould

Mould was identified if visibly present in a significant quantity on exposed building surfaces. If any mould growth is concealed within wall cavities it was not addressed in this assessment.

2.8 Analytical Methods

2.8.1 Asbestos

Bulk samples collected for asbestos identification were analyzed at the Pinchin Laboratory. Preliminary identification of asbestos fibres was made using polarized light microscopy, with confirmation of the presence and type of asbestos made by dispersion staining optical microscopy. The analysis was performed in accordance with Test Method EPA/600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials, June 1993. Pinchin laboratories are certified under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform asbestos analysis of bulk samples (Pinchin Laboratory Number 101270).

The asbestos analysis was completed using a stop positive approach. Only one result of greater than 0.5% asbestos content is required to determine that a material is asbestos-containing, but all

samples must be analyzed to conclusively determine that a material is non-asbestos (O. Reg. 278/05). The laboratory stopped analyzing samples from a homogeneous material once greater than 0.5% asbestos was detected in any of the samples of that material. All were analyzed if no asbestos was detected. Where building materials are described in this report as non-asbestos, or stated as containing no asbestos, this is subject to the limitations of the analytical method used, and should be understood to mean no asbestos was detected.

Sample locations were recorded on the drawings in Appendix IV. Analytical results are presented in Appendix II – Results of Bulk Sample Analysis for Asbestos.

2.8.2 Lead

Measurements for lead paint were made on-site with an X-ray fluorescence spectrum analyzer (XRF). The XRF analyzer is a portable computerized instrument designed for on-site detection of lead in paint. The analyzer is recognized by HUD and the EPA as equivalent or superior in accuracy, to the traditional paint scraping and laboratory analysis. The XRF analyzer allows many measurements to be made compared to sample collection and laboratory analysis, and is non-destructive.

Test/sample locations were recorded on the drawings in Appendix IV. Analytical results are presented in Appendix III.

3.0 FINDINGS

The following rooms or areas of the building were not accessible to the surveyor and their contents could not be assessed, and are therefore not included in the report:

3.1 Asbestos

3.1.1 Sprayed Fireproofing and Thermal Insulation

Sprayed fireproofing or sprayed thermal insulation was not found.

3.1.2 Texture Finishes (Acoustic/Decorative)

Texture finishes were not found.

3.1.3 Pipe Insulation

Pipes are either uninsulated or insulated with non-asbestos fibreglass jacketed with either canvas or foil.

3.1.4 Duct Insulation

Ducts are either uninsulated or insulated with non-asbestos fibreglass jacketed with either canvas or foil.

3.1.5 Mechanical Equipment Insulation

Asbestos-containing insulations were not found on mechanical equipment. All mechanical equipment is insulated with non-asbestos fibreglass or not insulated.

3.1.6 Acoustic Ceiling Tiles

No asbestos-containing ceiling tiles were identified. One (1) visually distinct type of acoustic ceiling tile was identified in the area assessed and determined to be non-asbestos (samples 002a-c).

3.1.7 Vermiculite

Loose fill vermiculite was not found.

3.1.8 Plaster

Plaster is present on the ceilings above the acoustic tile ceiling throughout the Main Floor of the building. Three (3) samples of plaster were collected (samples 003a-c). No asbestos was detected in the plaster.

3.1.9 Drywall Compound

Drywall (gypsum board) is present as a wall and ceiling finish throughout the building. Six (6) samples of drywall joint compound were collected (samples 001a-c and 004a-c). Asbestos was not detected in the joint compound.

3.1.10 Asbestos Cement Products

No asbestos cement products were found.

3.1.11 Vinyl Sheet Flooring

Vinyl sheet flooring was not found.

3.1.12 Vinyl Floor Tile and Mastic

One (1) visually distinct type of vinyl floor tile is present in the building. We were informed that the tile was not being disturbed and were instructed not to sample it. Assume the vinyl tile and mastic to contain asbestos.

3.2 Lead

3.2.1 Lead-Containing Paint, Coatings and Ceramic Tile Glazes

Appendix III presents the lead testing and analytical results.

All paints throughout the surveyed area should be considered lead-containing, as there is currently no accepted standard for what constitutes a lead-based paint in Ontario.

Paint was in good condition and not flaking, peeling or delaminating.

3.2.2 Other Lead Applications

Lead is present in wiring connectors, grounding conductors and solder throughout the building.

Lead wool is present as caulking in bell fittings at cast iron drainage pipes and gas mains.

Back-up emergency lights, present throughout the building, are powered with lead-acid batteries.

3.3 Mercury

Mercury vapour is present in all fluorescent lamps.

Mercury is present as a liquid in one thermostat located on the south wall of the Common Area.

3.4 Silica

Free crystalline silica (common construction sand) will be is present in concrete, mortar, brick, masonry, ceramics, granite, slate, stone, asphalt, etc., where present in the building.

3.5 Polychlorinated Biphenyls (PCBs)

All transformers in the building are dry type transformers and do not contain PCB-containing dielectric fluids.

The building has not been re-lamped with new energy efficient light ballasts and lamps, and as such, a percentage of light ballasts will be pre-1978 and contain PCB's. Assume approximately 30-40% of all light ballasts to contain PCBs.

3.6 Mould

Visible mould growth was not observed during the assessment.

4.0 RECOMMENDATIONS

4.1 General

Dispose of waste containing hazardous materials as per the requirements of applicable waste handling regulations[1].

4.2 Asbestos

Sample all materials excluded from sampling or assumed to contain asbestos immediately prior to removal where required.

4.3 Lead

Construction disturbance of lead-containing products may result in exposure to lead. Cutting, grinding, drilling, removing, stripping or demolition of materials containing or coated with lead should be completed only with proper respiratory protection and other worker safety precautions as outlined in the Ministry of Labour Guideline – Lead on Construction Projects, 2004. The Ministry has not established a lower limit for concentrations of lead in paint (or other materials) below which precautions do not need to be considered, and will not accept US EPA or HUD limits (0.5% lead) for this purpose. Therefore the need for precautions and details of worker safety will need to be assessed on a project by project basis. Pinchin recommends that the building owner and contractor seek advice to develop a site-specific safety plan (including air monitoring) that considers the various factors that would affect worker exposure to lead from paint and other materials. The responsible parties should also consider the possibility of lead contamination remaining at the completion of the work. It may be prudent to test surface concentrations at completion of the work to ensure that a hazard does not remain for trades and

[1] Transportation and disposal of Hazardous Building Materials are under the jurisdiction of Federal, Provincial and local government agencies. Primarily, Ministry of the Environment Regulation 347 as amended, dictates disposal requirements. However, regional dumpsites have the ability to impose more stringent requirements. Disposal of some Hazardous Building Materials may require testing prior to disposal so as to classify the waste.

occupants. Performing a negative exposure assessment during demolition of walls painted with lead-containing paint may be able to alleviate the use of some of the precautions that are required during demolition.

4.4 Mercury

Avoid direct skin contact with mercury materials and avoid inhalation of mercury vapour. Avoid breaking lamps. Pinchin recommends recycling fluorescent lamps to reclaim mercury.

Recycle all mercury containing materials.

4.5 Silica

Construction disturbance of silica-containing products may result in excessive exposures to airborne silica, especially if performed indoors and dry. Cutting, grinding, drilling or demolition of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions as outlined in the Ministry of Labour Guideline – Silica on Construction Projects, 2004.

4.6 Polychlorinated Biphenyls (PCBs)

When light fixtures are removed, examine the ballasts for PCB content. If ballasts are not clearly labelled as "non-PCB" or are suspected to contain PCBs, handle in accordance with R.R.O. 1990, Reg. 362.

Liquid in mineral oil transformers should be sampled immediately prior to demolition to ensure the fluid was not contaminated with PCB-containing fluid in the past.

PCB materials and liquids that are removed as a result of planned demolition are to be packaged in accordance with R.R.O. 1990, Reg. 362 and incinerated at a provincially or federally permitted destruction facility.

5.0 LIMITATIONS

This report details the hazardous building materials found within or forming part of the building envelope. The assessment only included inspections of the structure and finishes, including mechanical equipment. The assessment did not include inspection of current or past owner or occupant articles within the building (i.e. process materials or equipment, portable equipment, curriculum items, etc.) and does not report on possible contaminants in the soil and groundwater

of the site, underground storage tanks, buried piping, inside drums, vessels, production equipment, or in areas not accessed by the surveyor.

The work performed by Pinchin was conducted in accordance with generally accepted engineering or scientific practices current in this geographical area at the time the work was performed. The Client acknowledges that subsurface and concealed conditions may vary from those encountered or inspected. Pinchin can only comment on the environmental conditions observed on the date(s) the assessment is performed. The work is limited to those materials or areas of concern identified by the Client or outlined in our proposal. Other areas of concern may exist but were not investigated within the scope of this assignment.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issue, regulatory statutes are subject to interpretation and these interpretations may change over time. Pinchin accepts no responsibility for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

No warranty is either expressed or implied, or intended by this agreement or by furnishing oral or written reports or findings. The liability of Pinchin or its staff will be limited to the lesser of the fees paid or actual damages incurred by the Client. Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from negligence of Pinchin. Pinchin will not be liable for any losses or damage if client has failed, within a period of (2) years following the date upon which the claim is discovered within the meaning of the Limitations Act, 2002 (Ontario), to commence legal proceedings against Consultant to recover such losses or damage.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party other than the Client, unless the Client, in writing, requests information to be provided to a third party or unless disclosure by Pinchin is required by law. Any use by a third party, of reports or documents authored by Pinchin, or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

6.0 CLOSURE

Should there be any questions regarding the contents of this report, please contact David Newton at 905-363-1365.

Yours Truly,

Pinchin Environmental Ltd.

Prepared by:

Original signed by...

per: David Newton, BES
Project Technologist
Hazardous Materials Group
dnewton@pinchin.com

Reviewed by:

Original signed by...

per: Jay Inman
Technical Manager
Hazardous Materials Group
jinman@pinchin.com

J:\49000s\49911\DSUB Report\49911 City of Toronto, 14 St Clements Hazardous Materials Assessment Report, Nov 21 2008.doc

APPENDIX I

FRIABILITY AND REGULATIONS

1.0 FRIABILITY

As per regulation 278/05, a "friable material" means material that, (a) when dry, can be crumbled, pulverized or powdered by hand pressure, or (b) is crumbled, pulverized or powdered. Asbestos-containing materials (ACM) that are friable have a much greater potential than non-friable ACM to release airborne asbestos fibres when disturbed. The most common friable ACM used in the past are surfacing materials (usually sprayed fireproofing, texture, decorative or acoustic plaster) and thermal insulations on mechanical systems. Asbestos-containing manufactured materials include vinyl floor tiles, ceiling tiles, gasket materials, asbestos cement pipe or board, and asbestos textiles. Depending on the formulation these may be friable or non-friable. Note that though a product may be considered non-friable when new, if the product releases fine dust due to deterioration or during removal, the free dust is considered friable. For example, lay-in acoustic ceiling tiles or plaster may release significant dust at the time of removal.

2.0 REGULATIONS - ONTARIO

Section 30 of the Occupational Health and Safety Act requires building owners or their agents (architects, general contractors, construction managers, etc.) to prepare or have prepared, a list of designated substances present in the area of construction or facility undergoing construction work. There are eleven designated substances subject to special regulation under the Occupational Health and Safety Act. Of these eleven, asbestos, lead, mercury, and silica are commonly found in buildings and can impact construction, demolition, and renovation projects. The owner should ensure that a prospective constructor has received a designated substance report before entering into a binding contract with the contractor. The owner or the owner's agent is liable to the contractor for damages and costs arising from unreported materials (of which the owner should reasonably have been aware), and could also be subject to orders and fines from the Ministry of Labour.

The disturbance of asbestos-containing materials (ACM) on construction projects is controlled by Ontario Ministry of Labour Regulation 278/05 made under the Occupational Health and Safety Act (Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations). The Regulation classifies all disturbances as Type 1, Type 2, or Type 3, each of which has defined work practices. All ACM are subject to special handling and disposal, and must be removed before partial or full demolition. The Ministry of Labour must be notified prior to any project involving removal of more than a minor amount of friable ACM (Type 3 or Glove Bag abatement).

In addition to the requirements under the Occupational Health and Safety Act, Section 6 of the Ministry of Labour Regulations for Construction Projects (Ontario Regulation 213/91 as amended to O.Reg. 628/05) requires the contractor to report any Designated Substances likely to be used (asbestos is a Designated Substance), handled or disturbed during the project. This information is required when submitting the Notice of Project form.

The Ministry of Labour released two documents in December 2004, Ministry of Labour Guideline - Lead on Construction Projects, and Ministry of Labour Guideline - Silica on Construction Projects. Although these documents were not released as Regulations, to quote the Ministry of Labour *"These guidelines will raise awareness of the potential hazards associated with Lead and Silica for common construction activities and tasks, and will provide assistance to employers, constructors and workers in how to take reasonable precautions to protect workers from exposure to Lead and Silica. These Guidelines include specific measures and procedures for typical construction activities and operations and can be used as best practices by the industry."* These guidelines are expected to be widely enforced by the Ministry of Labour, via the general duty clause 25 (2) (h) of the Occupational Health and Safety Act, since there is no other construction regulation regarding lead and silica available for them to draw upon as a resource. The Ministry of Labour has also issued guidelines or proposed regulations for coal tar products and handling of mercury on construction sites.

The Ministry of Labour has not yet passed regulations or issued guidelines for control of other designated substances on construction projects. The Ministry of Labour has promulgated industrial regulations for all the designated substances, which give guidance on exposure monitoring, permissible exposure levels, medical monitoring, etc.

Management, handling and transfer of PCBs are controlled by R.R.O. 1990, Reg. 362, Waste Management - PCB's Regulation, made under the Ontario Environmental Protection Act, and the Chlorobiphenyls Regulation (SOR/91-152) made under the federal Environmental Protection Act. The presence of PCBs may have a significant cost impact if present.

The Ontario Ministry of Labour published the hazard alert "Mould in Workplace Buildings", in December 2000. To quote from the alert, "The sustained and/or extensive growth of any visible mould on the interior surfaces of a building is unacceptable. Mould growth on the interior surfaces of buildings is a risk factor for health problems." The Ministry of Labour has enforced work stoppages as a result of indoor mould growth and has enforced removal using work practices similar to those required for asbestos abatement.

Waste disposal is controlled by Ministry of the Environment Regulation, R.R.O. 1990 Reg. 347 as amended.

APPENDIX II

RESULTS OF BULK SAMPLE ANALYSIS FOR ASBESTOS

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name:	**14 St. Clements Street**		
Project No.:	**49911**		
		Date Received:	**November 11, 2008**
Lab Reference No.:	**b56920**	**Date Analyzed:**	**November 19, 2008**
Analyst(s):	**A. Di Giulio**	**# Samples submitted:**	**12**
		# Phases analyzed:	**12**

Method of Analysis:

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. The percentage range category reported reflects the level of uncertainty of the method for estimating quantities of asbestos in bulk samples. A reported concentration of less than (<) the regulatory threshold (see chart below) indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. 244-2). Multiple phases within a sample are analyzed separately.

Provincial Jurisdiction	Regulatory Threshold	Provincial Jurisdiction	Regulatory Threshold
Ontario	0.5%	Manitoba	0.1% friable 1% non-friable
Quebec	0.1%	Saskatchewan	Unstated, likely 1.0%
Alberta, British Columbia, NWT, Yukon, Nunavut	1.0%	Atlantic Provinces (NL, NS, PEI, NB)	1.0%

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

Pinchin Environmental Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0 and 200795-0) for selected test methods for the identification of asbestos in bulk samples and meets all requirements of ISO/IEC 17025:1999 and relevant requirements of ISO 9002:1994.

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: 14 St. Clements Street
Project No.: 49911
Prepared For: Dave Newton

Lab Reference No.: b56920
Date Analyzed: November 19, 2008

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
001a Drywall Compound- Play Area #1, South wall	Homogeneous, off-white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
001b Drywall Compound- Play Area #2, West wall	Homogeneous, off-white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
Comments:	Drywall is present on the surface of this sample.		
001c Drywall Compound- Common Area, West wall	Homogeneous, white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
002a Acoustic Ceiling Tile- 2x4, Random fissures and pin holes, Common Area	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 25-50% Other Non-Fibrous 0.5-5%
002b Acoustic Ceiling Tile- 2x4, Random fissures and pin holes, Play Area #1	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 25-50% Other Non-Fibrous 0.5-5%
002c Acoustic Ceiling Tile- 2x4, Random fissures and pin holes, Play Area #3	Homogeneous, beige, layered, compressed, fibrous material.	None Detected	Cellulose 25-50% Mineral Wool 25-50% Perlite 25-50% Other Non-Fibrous 0.5-5%

ANALYST: H. Di Sarcina

PINCHIN ENVIRONMENTAL

THE PINCHIN GROUP

Pinchin Environmental Asbestos Laboratory
Certificate of Analysis

Project Name: 14 St. Clements Street
Project No.: 49911
Prepared For: Dave Newton

Lab Reference No.: b56920
Date Analyzed: November 19, 2008

BULK SAMPLE ANALYSIS

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION	% COMPOSITION (VISUAL ESTIMATE)	
		ASBESTOS	OTHER
003a Plaster- Located above acoustic tile ceiling- Play Area #1, Ceiling	Homogeneous, off-white, hard, cementitious material.	None Detected	Cellulose < 0.5% Hair < 0.5% Non-Fibrous Material > 75%
003b Plaster- Located above acoustic tile ceiling- Play Area #2, Ceiling	Homogeneous, off-white, hard, cementitious material.	None Detected	Non-Fibrous Material > 75%
003c Plaster- Located above acoustic tile ceiling- Common Area, Ceiling	Homogeneous, beige, hard, cementitious material.	None Detected	Hair 0.5-5% Non-Fibrous Material > 75%
004a Drywall Compound- Basement, Storage Room	Non-homogeneous, off-white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
004b Drywall Compound- Basement, Storage Room	Homogeneous, off-white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%
004c Drywall Compound- Basement, Boiler Room	Homogeneous, off-white, soft, cementitious material.	None Detected	Non-Fibrous Material > 75%

ANALYST: J. Di Tinlee

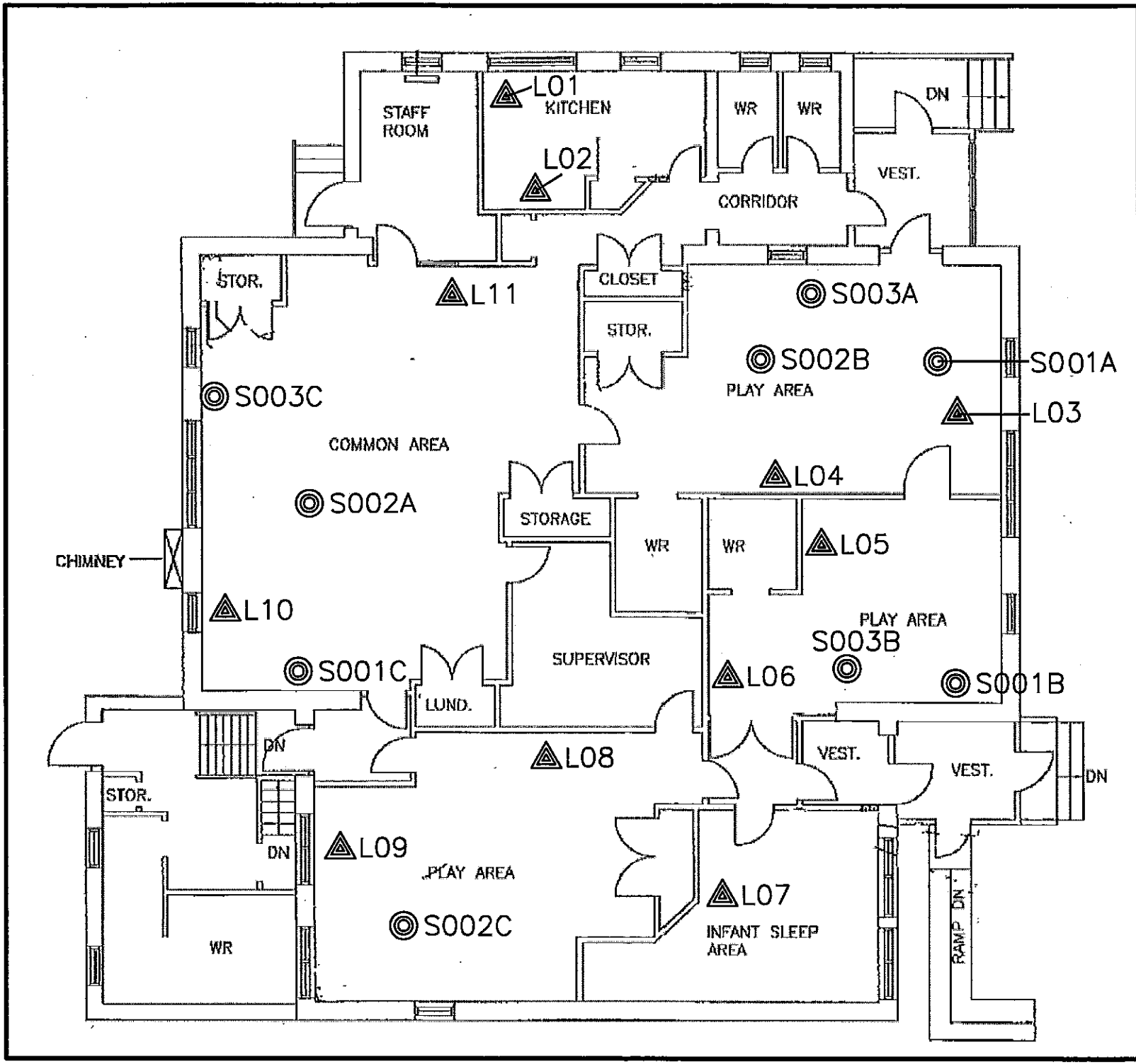
APPENDIX III

RESULTS OF TESTING FOR LEAD IN PAINT

Test	Floor	Room Name or Number	Colour and Substrate	Test Result (mg/cm^2)
L01	Ground	Play Area	White on drywall wall	0.10
L02	Ground	Play Area	Dark green on wood door	0.00
L03	Ground	Play Area	Pink on drywall wall	0.05
L04	Ground	Play Area	Blue on wood door	0.00
L05	Ground	Play Area	Blue on wood door	0.10
L06	Ground	Play Area	Light pink on drywall wall	0.00
L07	Ground	Infant Sleet Area	Blue on drywall wall	0.08
L08	Ground	Play Area	White on drywall wall	0.20
L09	Ground	Play Area	Purple on metal door frame	0.00
L10	Ground	Common Area	Light green on drywall wall	0.04
L11	Ground	Common Area	Dark green on metal door	0.11
L12	Base.	Main Area	White on brick wall	0.00
L13	Base.	Storage Area	White on drywall ceiling	0.01

APPENDIX IV

DRAWINGS



PROJECT NORTH:

LEGEND

- ASBESTOS BULK SAMPLE LOCATION
- LEAD SAMPLE NUMBER

PINCHIN ENVIRONMENTAL
2470 Milltower Court
Mississauga, Ontario
Phone: 1 888 767 3330

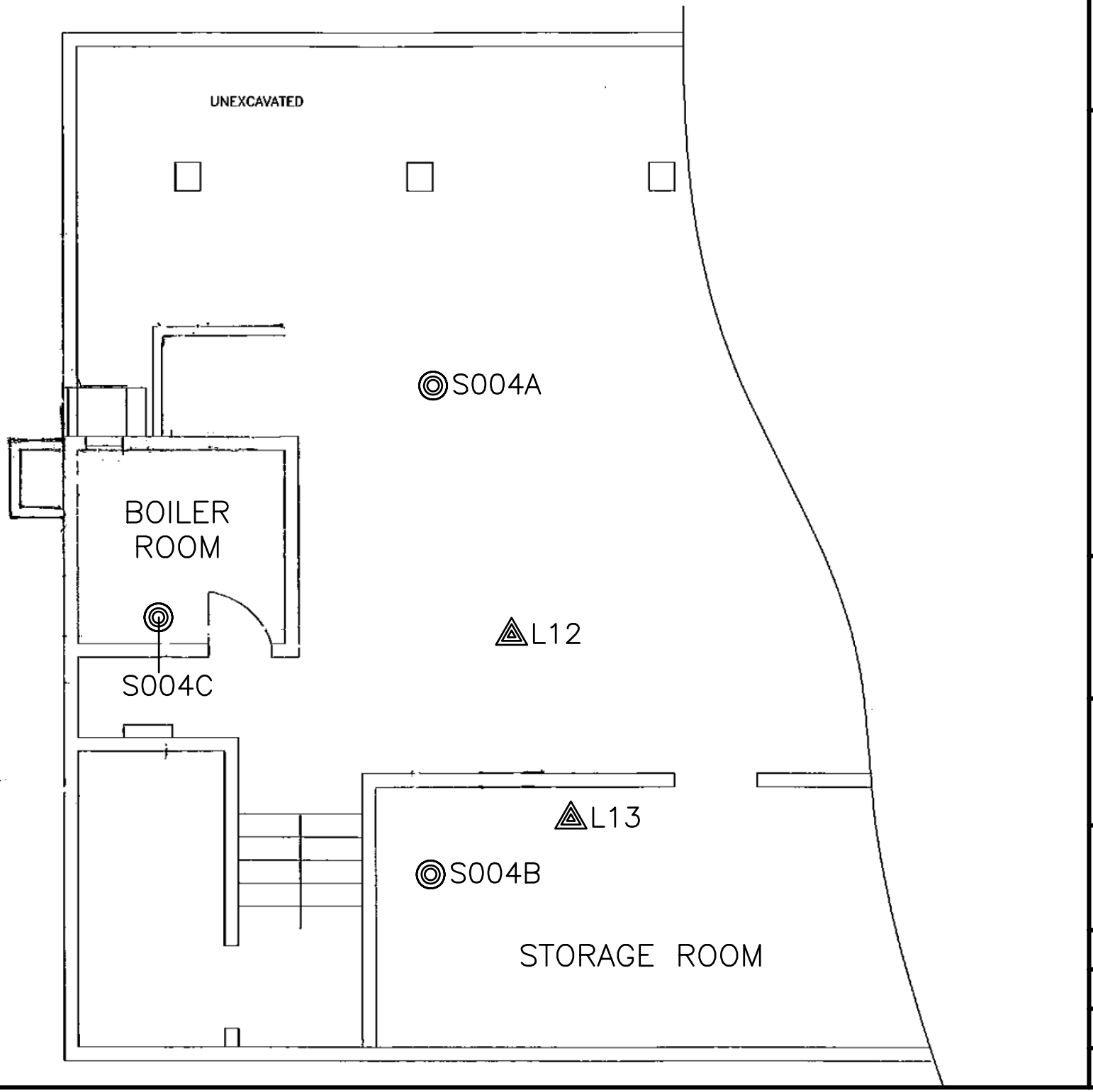
PROJECT NAME

UPPER YONGE VILLAGE
DAY CARE
14 ST. CLEMENTS STREET
TORONTO, ONTARIO

DRAWING NAME

GROUND FLOOR

PROJECT NUMBER	REVISION NUMBER
49911	–
DRAWN BY: ICG	CHECKED BY: DN
SCALE: NTS	DRAWING NUMBER: 1 OF 2
DATE: 2008/11/20	



PROJECT NORTH:

LEGEND

ASBESTOS BULK SAMPLE LOCATION

LEAD SAMPLE NUMBER

PINCHIN ENVIRONMENTAL
2470 Milltower Court
Mississauga, Ontario
Phone: 1 888 767 3330

PROJECT NAME

UPPER YONGE VILLAGE
DAY CARE
14 ST. CLEMENTS STREET
TORONTO, ONTARIO

DRAWING NAME

BASEMENT

PROJECT NUMBER	REVISION NUMBER
49911	–
DRAWN BY: ICG	CHECKED BY: DN
SCALE: NTS	DRAWING NUMBER: 2 OF 2
DATE: 2008/11/20	