March 28, 2011

PROPOSAL

# DESIGNATED SUBSTANCE SURVEY

# 327 Kellet Street, Port Perry, Ontario

**Submitted to:**
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The Regional Municipality of Durham, Works Department
605 Rossland Road East
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**Proposal Number:** 10-1187-0256(8000)

**Distribution:**

3 copies - The Regional Municipality of Durham

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Golder Associates

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# 1.0 INTRODUCTION

At the request of The Regional Municipality of Durham (the "Region"), Golder Associates Ltd. ("Golder") conducted a non-intrusive Designated Substances Survey ("DSS") of the Residential Apartment Building located at 427 Kellet Street in Port Perry, Ontario (the "Site"). The field portion of the survey was conducted on January 27, 2011 by Mr. Allistair Davis, Environmental Health and Safety Specialist, under the direction of Mr. Michael Falle, Senior Project Manager for Golder's Environmental Health and Safety Group. Access to the Site was provided by Mr. Narayan Shrestha, Operations Technician with the Region.

The objective of the survey was to compile an inventory of designated substances present at the Site as required under the *Ontario Occupational Health and Safety Act*. The designated substances surveyed were: acrylonitrile; arsenic; asbestos-containing materials ("ACM"); benzene; coke oven emissions; ethylene oxide; isocyanates; lead; mercury; silica; and vinyl chloride.

## 1.1 Description of Site Building

The Site building, which was occupied at the time of the investigation, is a two-storey Residential Apartment building consisting of 30 Residential Units, Corridors, Common Areas, Storage Rooms, Mechanical and Maintenance Rooms. Golder understands that the Site was originally constructed in 1974 and occupies an approximate area of 2,025 square meters.

The following is a brief description of the building systems observed:

- **Structural:** the structural systems observed include a concrete block structure and a wooden truss roofing system.
- **Walls:** exterior walls consisted of brick and aluminum siding. Interior walls consisted of drywall, ceramic, plywood, concrete block and texture finish over concrete block.
- **Flooring:** included ceramic tile, vinyl floor tile, vinyl sheet flooring, concrete and carpet.
- **Ceilings:** included drywall, texture finish over drywall, texture finish over concrete, concrete and new 60 cm x 60 cm "lay-in" acoustic ceiling tiles.
- **Mechanical:** the Site is heated via electric baseboard units and a forced air heating system feeding the Corridors. Mechanical pipes and ductwork were noted to be either insulated with fibreglass or uninsulated. Illumination for the Site is provided by fluorescent lights and incandescent lamps.

# 2.0 SCOPE OF WORK

The survey was performed with the objective of identifying designated substances at the Site. It is Golder's understanding that the purpose of the survey is to provide recommendations on the handling and/or removal of these materials for management purposes.

The scope of the project included a non-intrusive building materials survey within the Site to: identify designated substances including, but not limited to, asbestos, lead, mercury and silica present on the interior and exterior of the Site building; complete representative sampling of materials suspected of containing asbestos and paint suspected to contain lead; complete analysis of samples for asbestos type / percentage and lead content; and to provide a report detailing the findings and to provide recommendations on the handling and/or removal of the designated substances in accordance with existing provincial regulations and guidelines.

Access was provided to the Site's Common Areas, Mechanical Areas and Residential Units for purposes of completing the Survey. Generally all areas of the Residential Units were available for inspection; however, a limited number of bedrooms were inaccessible due to tenants occupying them at the time of the survey. It is assumed that the materials and finishes present in these areas are consistent with the materials and finishes in similar areas (i.e. other Bedrooms) throughout the Site. The Scope of Work was limited to readily accessible indoor and selected accessible, outdoor building materials only. It was beyond the scope to move tenant belongings, furniture, etc. for purposes of completing the survey.

The Scope of Work does not include the investigation for possible contamination in the soil or groundwater of the Site, or the presence of underground storage tanks or buried pipes.

## 3.0 REGULATIONS AND GUIDELINES

The *Ontario Occupational Health and Safety Act* ("*OH&S Act*"), R.S.O. 1990 (as amended) outlines designated substances that may be present within buildings. Section 30 of the Act requires that, prior to beginning a construction project (including building renovation or demolition); a document summarizing the presence of these materials must be available to contractors and subcontractors requesting tenders.

## 3.1 Asbestos-Containing Materials ("ACM")

Ontario Regulation 278/05 "Designated Substance - Asbestos on Construction Projects and in Buildings and Repair Operations" ("O. Reg. 278/05"), made under the *OH&S Act* outlines specific procedures for the identification of ACM and protocols for their removal. Under this regulation, if ACM are suspected to be present or ought reasonably to be suspected, locations of the materials must be documented. Prior to a renovation project, a document detailing the presence of all ACM must be available to contractors and subcontractors requesting tenders. All ACM must be removed or managed appropriately prior to renovation in accordance to provincial regulations.

R.R.O. 1990, Regulation 347: "General Waste Management" ("Reg. 347"), as amended, made under the *Environmental Protection Act*, sets out requirements for general waste management including ACM. The Regulation defines "asbestos waste" as "solid or liquid waste that results from the removal of asbestos-containing construction or insulation materials or from the manufacture of asbestos-containing products and contains asbestos in more than a trivial amount or proportion". This Regulation requires the disposal of asbestos waste in a double sealed container, properly labelled and free of cuts, tears or punctures. The waste must be disposed of in a licensed waste facility which has been properly notified of the presence of asbestos waste.

## 3.2 Lead-Containing Materials

Lead was used as a pigment and drying agent in alkyd oil-based paint. The "Liquid Coating Materials Regulations" were enacted under the *Hazardous Products Act* in 1976, to restrict the lead content of paints and other liquid coatings on furniture, household products, children's products, industrial surfaces and exterior and interior surfaces to 0.5% by weight. The Canadian Paint and Coatings Association ("CPCA"), the national trade association for Canada's paint manufacturers, recommended that the Canadian paint industry voluntarily stop using any lead compounds in consumer paints by the end of 1990. Over the years, the amount of lead in paint has continued to decrease, due to the co-operative efforts of government and industry.

Ontario Regulation 490/09 "Designated Substances" ("O. Reg. 490/09"), made under the *OH&S Act*, outlines requirements relating to protocols for lead-containing materials in the workplace, where lead is present, produced, used, handled or stored and at which the worker is likely to inhale, ingest, or absorb lead.

If operations that will likely produce airborne lead dust or fumes (e.g. during welding, torch cutting, sanding and sand blasting) are to occur during building renovation or construction, it is recommended that the disturbance of lead paint be carried out in accordance with procedures outlined in the Ontario Ministry of Labour ("MOL") "Guideline - Lead on Construction Projects" dated September 2004.

The MOL currently does not include criteria for classification of lead-based paint, and allows for no minimum concentrations of lead in paint to be acceptable as non-lead containing. Therefore, in these circumstances Golder considers all paints with any detectable presence of lead, as lead-containing paint. The accepted laboratory testing methods for determination of lead in paint is either flame atomic absorption spectroscopy ("FAAS") or Inductively Coupled Argon Plasma-Atomic Emission Spectroscopy ("ICAP-AES").

## 3.3 Mercury

Mercury is regulated under *the Act*, as per O. Reg. 490/09. This regulation sets out occupational exposure standards and prescriptive requirements surrounding engineering controls, work practices and hygiene practices and facilities for workers who may become exposed to mercury.

## 3.4 Silica

Silica is a naturally occurring mineral and may be found in common aggregates in concrete mortar, brick and ceiling tiles. Silica is likely present in the concrete and mortar used to construct the Site. The health risk associated from exposure to silica is due primarily to the inhalation of free silica, particularly in the form of dust associated with the abrading or cutting of silica containing materials.

As set out in O. Reg. 490/09, under the *OH&S Act*, an employer shall take all reasonable precautions to prevent worker exposure to silica. Procedures for workers involved in construction/demolition activities occurring on a Site where Silica is disturbed are outlined in the MOL "Guideline - Silica on Construction Projects" dated September 2004. Although there is no legal requirement to follow the Guideline, it is referenced herein, where appropriate, to provide guidance on recommended handling and exposure control procedures when dealing with silica on construction projects. This Guideline is enforceable as a reasonable precaution under the general duty clause 25(2)(h) of the *OH&S Act*.

## 3.5 Transportation of Waste

Reg. 347 outlines waste characterization, handling and disposal requirements for generators of hazardous waste. The transportation of hazardous wastes is governed under the *Transportation of Dangerous Goods Act* (and Regulations) which outline the requirements for storage, handling, and transportation of such waste.

# 4.0 METHOD

The surveyor investigated the Site for suspected ACM, lead-based paint, mercury in thermostats and pressure sensing devices, silica and other designated substances if observed.

Site work was completed in accordance with standards outlined by the Province of Ontario's *Occupational Health and Safety Act*.

## 4.1 Asbestos-Containing Materials

Readily available information was gathered regarding the building including age, type of structure, presence of renovated areas or additions, and any details regarding the building mechanical systems. The systems that are typically reviewed during an investigation for ACM are as follows:

- Mechanical: Building mechanical systems were inspected for the presence of suspected ACM. The inspection, included insulation on mechanical equipment and on pipes and fittings at the Site.
- Structural: The method of construction of the building was determined, including interior rooms, mezzanines and roofing support systems. Fireproofing, fire-stop and other materials installed as a part of the structure were reviewed (if applicable).
- Architectural: The presence of designated substances was assessed in building materials and finishes such as floor and ceiling tiles, texture coats, asbestos sheet materials, light fixtures, and drywall joint compound.

The areas surveyed were visually inspected on a system-by-system basis in order to identify the locations of potential ACM.

Homogeneous materials sampling was utilized during the course of the investigation. The bulk material sampling was completed on homogeneous materials that are uniform in color, texture, and installation and construction date. As per "Table 1" of O. Reg. 278/05, a minimum of 3 samples per homogeneous material were collected and submitted for analysis. However, dependent on the quantity and type of the building materials present, up to 5 or 7 samples may have been collected to verify the presence or absence of asbestos. During analysis, once a positive sample was identified, no additional analysis was conducted for other samples and the entire area of homogeneous material from which the sample was taken is deemed to be an ACM. This is referred to as a "stop positive" analytical result.

Representative samples of suspect ACM were submitted to International Asbestos Testing Laboratories ("IATL") in New Jersey, U.S.A., for analysis to determine asbestos type and percentage content. In accordance with O. Reg. 278/05, materials suspected of containing asbestos were analyzed following U.S. Environmental Protection Agency Test Method EPA/600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials". O. Reg. 278/05 identifies ACM as "a material that contains 0.5 percent or more asbestos by dry weight".

## 4.2 Lead-Containing Materials

Systematic sampling and visual identification of suspected lead-containing painted materials was completed as part of the survey. Samples of suspected–lead paint were collected and submitted to IATL. Testing for lead-containing paints was conducted following method ASTM D3335-85A. This method is derived from the US EPA SW 846 Method 3050B where each sample is digested, diluted and analyzed by Flame Atomic Absorption.

## 4.3 Other Designated Substances and Hazardous Materials

The Site was visually assessed for the presence of other designated substances. Where applicable, label or equipment information was collected and compared to historical data to confirm the presence / absence of specific designated substances and hazardous materials.

# 5.0 RESULTS AND DISCUSSION

## 5.1 Asbestos-Containing Materials

A total of 35 samples, representing nine homogenous building materials were collected from the Site and submitted/ tested for asbestos content. Materials sampled by Golder included: tar on a mechanical vent; exterior caulking; four types of 30 cm x 30 cm vinyl floor tiles; drywall joint compound on walls and ceilings; texture coat on ceilings; and texture coat on walls.

Based on the Laboratory Certificate of Analysis, four homogeneous materials were determined to contain chrysotile asbestos, as per the requirements of O. Reg. 278/05 (i.e. 0.5% asbestos or greater by dry weight). Confirmed ACM include:

- Beige 30 cm x 30 cm vinyl floor tile with brown spots (Samples 6A-C) were found to contain 4.5% chrysotile asbestos. At least 50 square meters of this floor tile is present in each of the Residential Units. However, newer non-ACM flooring materials (i.e. newer non-ACM vinyl floor tiles, “peel and stick” floor tiles, carpet, etc.) were observed in various Residential Units. These materials have likely been installed directly on-top of the original asbestos-containing vinyl floor tiles. As such, within the Residential Units, all secondary layers of flooring concealed by newer materials should be presumed to be asbestos-containing. The ACM floor tiles are considered to be non-friable and were observed to be in good condition
- Drywall wall joint compound (Samples 7A-G) was found to contain 1.5% chrysotile asbestos. Approximately 900 square meters of the material are present on select walls and ceilings throughout the Site. The joint compound is considered to be a non-friable material was noted to be in mostly in good condition with areas of minor damage (i.e. at corners) in several of the units.
- White texture coat (Samples 8A-C) was found to contain 2.8% chrysotile asbestos. Approximately 260 square meters of texture coat was observed on the ceilings of the Common Areas and within the Residential Units. Texture coat ‘overspray’ present on attic access hatches, walls, on duct work, etc. should also be considered to be asbestos-containing. Texture coat is considered to be a friable ACM and was generally observed to be in good condition.
- Painted white texture coat was found to contain 1.4% chrysotile asbestos. Approximately 16 square meters of the material is present over the concrete block walls in the Laundry Room on the Second Floor. Texture coat is considered to be a friable ACM and was observed to be in good condition.

Based on the Laboratory Certificate of Analysis the following material was determined to have an asbestos content, although not in sufficient quantity to be considered an ACM under the requirements of O. Reg. 278/05:

- Beige 30 cm x 30 cm vinyl floor tiles with brown flecks (Samples 4A-C) were found to contain “Trace” amounts to 0.25% chrysotile asbestos. Approximately 3 square meters of the tile was observed in the Elevator Mechanical Room on the Second Floor. The term “Trace” and 0.25% indicates an asbestos content below the regulated 0.5% asbestos (by dry weight) and is therefore, not considered to be an ACM under O. Reg. 278/05.

**The quantities of ACM as reported are estimates only and may not accurately reflect the exact quantities at the Site. Contractors retained to complete, or quote on, maintenance or abatement activities should independently confirm the reported quantities.**

Materials sampled that were found to not contain asbestos, include the following:

- Tar on the vents in the Attic Space (Samples 1A-C);
- White exterior caulking from the Balconies (Samples 2A-C);
- White 30 cm x 30 cm vinyl floor tiles with green flecks from the Common Areas (Samples 3A-C); and
- Beige 30 cm x 30 cm vinyl floor tiles with brown streaks from Unit 201 (Samples 5A-C).

Due to the non-intrusive nature of the investigation, asbestos-containing building materials may be present beneath existing flooring, behind wall cavities, crawl spaces and above ceilings that were inaccessible. Also, dependant on the building construction, vermiculite fill insulation may be present within the voids of the concrete cinder block. Some forms of vermiculite insulation have been known to contain minor amounts of asbestos fibres. During the survey, Golder could not confirm or refute the presence of vermiculite fill insulation at the Site. Based on this, if renovation or demolition activities are planned whereby the cinder block would be impacted, the voids should be investigated prior to the renovations to assess its presence or absence.

If suspected ACM not identified in this report are encountered during any future renovation activities, the work should stop immediately and the material tested to confirm the presence or absence of asbestos. This would be executed in order to provide recommendations on the applicable work procedures outlined in O. Reg. 278/05.

Sample results including the location, friability, area, condition, and recommendations for these materials is presented in Appendix A – "Spreadsheet of Findings – Asbestos". The Laboratory Certificate of Analysis is presented in Appendix B. A Site diagram showing the general ACM locations is included in Appendix E.

## 5.2 Lead-Containing Materials

A total of five bulk lead samples were collected of the most commonly found applications of painted surfaces at the Site. The samples were analyzed and found to contain varying low concentrations of lead ranging from 0.0067% to 0.10% lead by weight. As discussed in section 3.2 and based on the analytical results of the painted surfaces sampled, all tested paints are considered lead-containing.

Painted surfaces from which samples were collected include:

- Teal paint (LP-1) from the drywall walls in the Staircases was found to contain 0.055% lead by weight;
- White paint (LP-2) from the concrete ceilings of the Residential Balconies was found to contain 0.0067% lead by weight;
- Grey paint (LP-3) from the concrete floors in the Mechanical Rooms was found to contain 0.10% lead by weight;
- Grey paint (LP-4) on mechanical vents in the Attic Space was found to contain 0.64% lead by weight; and
- Dark teal paint (LP-4) from the trim in the Common Areas was found to contain 0.087% lead by weight.

In addition to the painted surfaces as outlined above, lead is also suspected in the solder on domestic water pipes and in lead-acid batteries associated with emergency lighting located in the Corridors and Common Areas.

Although not observed, lead sheeting may also be concealed behind finished surfaces throughout the Site (i.e. flashing, brick ties, plugs for weeping holes in brick, etc).

A summary of the samples collected including location, area, condition, lead content, and recommendations are present in the "Spreadsheet of Findings - Lead Based Paint" in Appendix C. The "Laboratory Certificate of Analysis - Lead-Based Paint" is provided in Appendix D.

## 5.3 Other Designated Substances and Hazardous Materials

The following designated substances and/or hazardous materials were also identified during the inspection:

- **Silica** is a naturally occurring mineral and may be found in common aggregates in concrete, mortar and brick. Silica is likely present in the concrete and mortar in the Site building; and
- **Mercury** is present in trace amounts within the approximately 75 fluorescent light tubes observed in: the First and Second Floor Corridors; the Kitchens of three Tennant Units (211, 212 and 218); Ground Floor Laundry Room; Common Room; Maintenance Office; and the Second Floor Elevator Mechanical Room. Thermostats inspected were noted to be non-mercury containing.

Based on the survey, the following Designated Substances were not identified in the investigated areas at the Site, and would not be expected based on the use of the building: acrylonitrile; arsenic; benzene; coke oven emissions; ethylene oxide; isocyanates; and vinyl chloride.

# 6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the Site investigation, sampling and laboratory analysis, and Golder's understanding of the project, the following recommendations are provided:

## 6.1 Asbestos-Containing Materials

Through the Site investigation, laboratory analytical testing, asbestos was identified in the following materials: beige 30 cm x 30 cm vinyl floor vinyl floor tile with brown spots present in the Residential Units; drywall joint compound on walls and ceilings throughout the Site; texture coat on ceilings of Common Areas and the Residential Units; and texture coat on the walls of the Second Floor Laundry Room.

Golder provides the following recommendations:

- Asbestos-containing vinyl floor tile present in good condition throughout the Residential Units may be managed in place. If the floor tiles become damaged or prior to activities which may impact the floor tiles, they should be removed following Type 1 procedures, as outlined in O. Reg. 278/05, provided non-powered hand tools and water are used. Any secondary layers of concealed flooring materials should be presumed to be asbestos-containing until laboratory analysis proves otherwise.
- Asbestos-containing drywall joint compound present in good condition may be managed in place. If the joint compound becomes damaged, or prior to activities which may impact the joint compound, it should be removed following Type 1 (if less than 1 square meter) or Type 2 procedures (if greater than 1 square meter), as outlined in O. Reg. 278/05.
- Asbestos-containing texture coat present in good condition on the ceilings of the Common Areas and within the Residential Units and on the walls of the Second Floor Laundry Room, may be managed in place. If the texture coat becomes damaged, or prior to activities which may impact the texture finish (including areas with texture coat 'overspray'), it should be removed following Type 2 (if less than 1 square meter) or Type 3 procedures (if greater than 1 square meter), as outlined in O. Reg. 278/05.

- As outlined in O. Reg. 278/05, due to the presence of the above noted ACM, an Asbestos Management Program should be developed for the Site. The purpose of the program is to protect Site personnel including Site occupants and contractors who may come in contact with ACM. The program should incorporate a strategy that will include: a written policy; an inventory indicating locations of ACM; removal or repair of damaged ACM; a procedure and schedule for periodic inspections of the ACM for any changes in exposure potential (e.g. deterioration); training requirements for maintenance staff and other staff who may come in contact with the ACM or work in proximity to the materials; procedures to follow should the condition of the ACM change or work routines be altered; procedures to follow in the event of damage to the ACM or other emergency situations; and notification procedures for occupants and others at the Site.

- **The quantities of ACM as reported are estimates only and may not accurately reflect the exact quantities at the Site. Contractors retained to complete, or quote on, asbestos abatement or maintenance activities should independently confirm the reported quantities.**

- Due to the non-intrusive nature of the investigation, ACM may be present in inaccessible or concealed areas such as: beneath existing flooring; in wall cavities; crawl spaces; within bulk heads; above ceilings and the internal components of mechanical equipment**. If suspected asbestos-containing materials not identified in this report are encountered during future renovation/demolition activities, the work should stop immediately and the material tested to confirm the presence or absence of asbestos.** This would be executed in order to provide recommendations on the applicable work procedures as outlined in O. Reg. 278/05.

- Although not observed during the survey, the potential exists for asbestos-containing vermiculite fill insulation to be present within the voids of the concrete cinder block. Some forms of vermiculite insulation have been known to contain trace amounts of asbestos. During the survey, Golder could not confirm or refute the presence of vermiculite fill insulation at the Site. Based on this, if renovation or demolition activities are planned whereby the cinder block would be impacted, the voids should be investigated prior to the renovations to assess its presence or absence.

## 6.2 Lead-Containing Materials

Based on the Laboratory Certificates of Analysis, varying low concentrations of lead ranging from 0.10% to 0.0067% lead, by dry weight, were identified in the painted surfaces at the Site. The Ministry of Labour ("MOL") currently does not have criteria for the classification of lead-based paint. Therefore, under these circumstances Golder considers all painted surfaces with any detectable presence of lead to be lead-containing. Lead is also suspected in the solder on domestic water pipes and in lead-acid batteries associated with emergency lighting located in the Corridors and Common Areas.

Reg. 490/09 specifies the occupational exposure limit ("OEL") for lead at 0.05 $mg/m^3$ calculated as an 8 hour/daily and, 40 hour/weekly time-weighted average exposure value. Despite the fact that Reg. 490/09 does not generally apply to a construction project, employers still have the general duty and responsibility under Section 25(2)(h) of the *OH&S Act* to protect workers. Although the concentrations of lead identified in the painted surfaces at this Site are considered minimal, the potential exists for worker exposure to exceed the OEL, as it is dependant on how the materials are to be disturbed.

Based on this, if the contracted personnel retained to conduct the work are required to perform operations where significant levels of airborne dust containing lead may be generated, then measures must be taken by the contractor to ensure the OEL for lead is not exceeded and that all reasonable regulatory and health and safety precautions are taken. The Ministry of Labour Guideline publication, "Guideline - Lead on Construction

Projects", dated September 2004 provides a classification system to assist with determining the required control measures necessary, based on the proposed work activity.

Any contractors retained to complete the work at the Site should consult the guideline prior to completing a specific task with the objective of evaluating the need for health and safety precautions such as engineering controls, safe work and hygiene practices, personal protective equipment, and training.

## 6.3 Other Designated Substances

Silica is a naturally occurring mineral and may be found in common aggregates in concrete mortar, brick and ceiling tiles and is likely present in the Site building. The health risk associated from exposure to silica is due primarily to the inhalation of free silica, particularly in the form of dust associated with the abrading or cutting of silica-containing materials.

In the event that materials suspected to contain silica are scheduled to be impacted, then it is recommended that continual misting with water is implemented to control airborne dust levels to prevent worker exposure to silica in accordance to the MOL publication "Guideline, - Silica on Construction Projects" dated September 2004. Workers in the immediate vicinity or having the potential to become exposed to airborne silica should be provided with the appropriate respiratory protection.

Mercury vapour is present in trace amounts within the approximately 75 fluorescent light tubes observed in: the First and Second Floor Corridors; the Kitchens of three Tennant Units (211, 212 and 218); Ground Floor Laundry Room; Common Room; Maintenance Office; and the Second Floor Elevator Mechanical Room. It is recommended that at the time of their disposal, mercury tubes are kept separate from all other waste to prevent damage to the glass tube containing the mercury. Mercury vapour bulbs may be recycled and reused by qualified personnel or may be disposed of in accordance with procedures specified by federal and provincial regulations.

# 7.0 LIMITATIONS

This report was prepared for the exclusive use of the Regional Municipality of Durham (the "Region"). This report is limited by the Scope of Work and is based on data and information collected during the Site visit and through communications conducted between Golder and the Region. This report is solely representative of Site conditions encountered at the time of the Site visit on January 27, 2011.

Any use which a third party makes of this report, or any reliance on or decision to be made based on it, is the sole responsibility of the third party.

The data reported, the findings, observations, conclusions and recommendations expressed in this report are limited by the Scope of Work agreed upon between Golder and the Region, and is applicable only to the areas investigated.

The findings, observations, conclusions and recommendations expressed by Golder in this report are not, and should not be considered, an opinion concerning compliance of any past or present owner or operator of the Site with any federal, provincial or local laws or regulations.

The conclusions and recommendations contained in this report are based upon professional opinions with regard to the subject matter. These opinions are in accordance with currently accepted environmental assessment standards and practices applicable to this location.

In evaluating the Site conditions, Golder has relied in good faith on information provided by others. We accept no responsibility for any deficiency, mis-statements or inaccuracies contained in this report as a result of omissions, misinterpretations or fraudulent acts of the persons involved.

The data and findings presented in this report are valid as of the date of the Site visit but additional materials that were not observed and/or are not currently thought to contain designated substances may become apparent in the future. The passage of time, manifestation of latent conditions or occurrence of future events or changes to currently accepted environmental assessment standards and practices may warrant further exploration at the Site, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.

If additional designated substances or hazardous building materials not identified in this report become evident during renovation/demolition activities, Golder requests that this information be brought to our attention so that we may re-assess the conclusions presented herein. The quantities as reported are estimates only and may not accurately reflect the exact quantities at the Site. Contractors retained to complete asbestos abatement activities should independently confirm the reported quantities.

Golder will not be held responsible for any real or perceived decrease in property value, its saleability or ability to gain financing through the reporting of information in this report.

## 8.0 CLOSURE

If you have any questions or require any further information, please feel free to contact the undersigned at (905) 723-2727. Thank you for the opportunity to be of service. We look forward to working with you again.

# Signature Page

**GOLDER ASSOCIATES LTD.**

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AHD/MF:pb



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# APPENDIX A

## Spreadsheet of Findings - Asbestos

APPENDIX A - SPREADSHEET OF FINDINGS - ASBESTOS
327 Kellet Street, Port Perry, Ontario
Bulk Asbestos Sampling Results
Designated Substances Survey

| Area | Level | Location | Material & Description | Est. Qty* | Units | Condition | Friable Yes/No | Accessibility | Sample # | % Asbestos and Type | Photographs | Recommended Actions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Interior | Attic Space | Air vents | Black tar | 2 | Square meters | Good | No | Moderate | 1A-C | None Detected |  Photograph 1 | No action required. |
| Exterior | All | Balcony - perimeter of concrete deck | White caulking | 28 | Meters | Good | No | High | 2A-C | None Detected |  Photograph 2 | No action required. |
| Party Room (Kitchen and Closet), Second Floor Laundry Room and Stairwells | All | Floor | White 30cm x 30cm vinyl floor tiles with green flecks | 31 | Square meters | Good | No | High | 3A-C | None Detected |  Photograph 3 | No action required. |
| Second Floor Elevator Room | Second Floor | Floor | Beige 30cm x 30cm vinyl floor tiles with brown flecks | 3 | Square meters | Good to damaged | No | Moderate | 4A-C | TRACE to 0.25% chrysotile |  Photograph 4 | No action required. |
| Unit 201 | Second Floor | Floor | Light beige 30cm x 30cm vinyl floor tiles with brown streaks | 37 | Square meters | Good | No | High | 5A-C | None Detected |  Photograph 5 | No action required. |

Accessibility:
High: Accessible to Workers
Mod: Accessible Only With a Ladder
Low: Enclosed in Building Materials

APPENDIX A - SPREADSHEET OF FINDINGS - ASBESTOS
327 Kellet Street, Port Perry, Ontario
Bulk Asbestos Sampling Results
Designated Substances Survey

| Area | Level | Location | Material & Description | Est. Qty* | Units | Condition | Friable Yes/No | Accessibility | Sample # | % Asbestos and Type | Photographs | Recommended Actions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tenant Spaces | All | Floor (suspected under new tiles and carpet in all Residential Units) | Beige 30 cm x 30 cm vinyl floor tiles with brown spots. | 103 | Square meters | Good | No | High to Low | 6A-C | 4.5% chrysotile |  Photograph 6 | Manage in Place or, if the tiles become damaged or if they will be impacted by future renovation/demolition activities, remove following Type 1 Asbestos Abatement Procedures, as outlined in O. Reg. 278/05. |
| Throughout | All | Select walls and ceilings | Drywall joint compound | 888 | Square meters | Good | No | High | 7A-C | 1.5% chrysotile |  Photograph 7 | Manage in Place or, if the drywall joint compound will be impacted by future renovation/demolition activities, remove following Type 1 (if less than 1 square meter) or Type 2 (if more than 1 square meter) Asbestos Abatement Procedures, as outlined in O. Reg. 278/05. |
| Throughout | All | Select ceilings | Texture coat | 260 | Square meters | Good | Yes | High | 8A-C | 2.8% chrysotile |  Photograph 8 | Manage in Place or, if the texture finish will be impacted by future renovation/demolition activities, remove following Type 2 (if less than 1 square meter) or Type 3 (if more than 1 square meter) Asbestos Abatement Procedures, as outlined in O. Reg. 278/05. |
| Maintenance Office and Second Floor Laundry Room | All | Wall | Texture coat | 38 | Square meters | Good | Yes | High | 9A-C | 1.4% chrysotile |  Photograph 9 | Manage in Place or, if the texture finish will be impacted by future renovation/demolition activities, remove following Type 2 (if less than 1 square meter) or Type 3 (if more than 1 square meter) Asbestos Abatement Procedures, as outlined in O. Reg. 278/05. |

*** The quantities of asbestos-containing materials as reported, are estimates only and may not accurately reflect the exact quantities at the Site.**
****Contractors retained to complete or quote on the abatement activities should independently confirm the reported quantities.**

Inputted by: AHD
Checked by: Original to be Signed

Accessibility:
High: Accessible to Workers
Mod: Accessible Only With a Ladder
Low: Enclosed in Building Materials

# APPENDIX B

## Laboratory Certificate of Analysis - Asbestos

**IATL** International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

# CERTIFICATE OF ANALYSIS

**Client:** Golder Associates Ltd
100 Scotia Court
Whitby, ON L1N 8Y6

**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207284 **Description / Location:** Black Tar
**Client No.:** 1A Roof Vent; Attic Space

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | 5 | Cellulose | 95 |

**Lab No.:** 4207285 **Description / Location:** Black Tar
**Client No.:** 1B Roof Vent; Attic Space

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | 5 | Cellulose | 95 |

**Lab No.:** 4207286 **Description / Location:** Black Tar
**Client No.:** 1C Roof Vent; Attic Space

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | Trace | Fibrous Glass | 95 |
| | | 5 | Cellulose | |

**Lab No.:** 4207287 **Description / Location:** Off-White Glazing
**Client No.:** 2A 204-Balcony

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | 2 | Other | 98 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC–Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

**Analysis Performed By:** L. Solebello

**Approved By:**

**Date:** 2/11/2011

Frank E. Ehrenfeld, III
Laboratory Director

**IATL** International Asbestos Testing Laboratories

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**Report Date:** 2/11/2011
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**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207288 **Description / Location:** Off-White Glazing
**Client No.:** 2B 204-Balcony

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | 2 | Other | 98 |

**Lab No.:** 4207289 **Description / Location:** Off-White Glazing
**Client No.:** 2C 204-Balcony

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | 2 | Other | 98 |

**Lab No.:** 4207290 **Description / Location:** Off-White Floor Tile; 12x12
**Client No.:** 3A Party Rm-Closet

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207290 **Description / Location:** Black Mastic **Layer No.:** 2
**Client No.:** 3A Party Rm-Closet

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

**Comments:** (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207291 **Client No.:** 3B
**Description / Location:** Off-White Floor Tile; 12x12 Party Rm-Closet

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207291 **Client No.:** 3B
**Description / Location:** Black Mastic Party Rm-Closet **Layer No.:** 2

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207292 **Client No.:** 3C
**Description / Location:** Off-White Floor Tile; 12x12 Laundry Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

**Comments:** (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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Whitby, ON L1N 8Y6

**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207293 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 4A Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC Trace | Chrysotile | None Detected | None Detected | 100 |

**Lab No.:** 4207293 **Description / Location:** Black/Yellow Mastic **Layer No.: 2**
**Client No.:** 4A Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207294 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 4B Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC 0.25 | Chrysotile | None Detected | None Detected | PC 99.75 |

**Lab No.:** 4207294 **Description / Location:** Black/Yellow Mastic **Layer No.: 2**
**Client No.:** 4B Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

**Comments:** (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

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**Date:** 2/11/2011

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**Report Date:** 2/11/2011
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**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207295 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 4C Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC Trace | Chrysotile | None Detected | None Detected | 100 |

**Lab No.:** 4207295 **Description / Location:** Black/Yellow Mastic **Layer No.: 2**
**Client No.:** 4C Elevator Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207296 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 5A 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207296 **Description / Location:** Yellow/Black Mastic **Layer No.: 2**
**Client No.:** 5A 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

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**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207297 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 5B 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207297 **Description / Location:** Yellow/Black Mastic **Layer No.:** 2
**Client No.:** 5B 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207298 **Description / Location:** Tan Floor Tile; 12x12
**Client No.:** 5C 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**Lab No.:** 4207298 **Description / Location:** Yellow/Black Mastic **Layer No.:** 2
**Client No.:** 5C 201

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

**Comments:** (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC–Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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**Client:** Golder Associates Ltd
100 Scotia Court
Whitby, ON L1N 8Y6

**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207299 **Description / Location:** Lt Grey Floor Tile; 12x12
**Client No.:** 6A 103

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC 4.5 | Chrysotile | None Detected | None Detected | PC 95.5 |

**Lab No.:** 4207300 **Description / Location:** Sample Not Analyzed
**Client No.:** 6B

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207301 **Description / Location:** Sample Not Analyzed
**Client No.:** 6C

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207302 **Description / Location:** White Joint Compound
**Client No.:** 7A Staircase-G.F.

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| None Detected | None Detected | None Detected | None Detected | 100 |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

**Comments:** (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC–Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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# CERTIFICATE OF ANALYSIS

**Client:** Golder Associates Ltd
100 Scotia Court
Whitby, ON L1N 8Y6

**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207303 **Description / Location:** Off-White Joint Compound
**Client No.:** 7B Laundry Rm-G.F.

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC 1.5 | Chrysotile | None Detected | None Detected | PC 98.5 |

**Lab No.:** 4207304 **Description / Location:** Sample Not Analyzed
**Client No.:** 7C

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207305 **Description / Location:** Sample Not Analyzed
**Client No.:** 7D

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207306 **Description / Location:** Sample Not Analyzed
**Client No.:** 7E

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

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**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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**Report Date:** 2/11/2011
**Project:** DSS 327 Kellet St
**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207307 **Description / Location:** Sample Not Analyzed
**Client No.:** 7F

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207308 **Description / Location:** Sample Not Analyzed
**Client No.:** 7G

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207309 **Description / Location:** White Ceiling Texture Staircase-G.F.
**Client No.:** 8A

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC 2.8 | Chrysotile | None Detected | None Detected | PC 97.2 |

**Lab No.:** 4207310 **Description / Location:** Sample Not Analyzed
**Client No.:** 8B

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

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**Analysis Performed By:** L. Solcbello

**Date:** 2/11/2011

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## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207311 **Description / Location:** Sample Not Analyzed
**Client No.:** 8C

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207312 **Description / Location:** Sample Not Analyzed
**Client No.:** 8D

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207313 **Description / Location:** Sample Not Analyzed
**Client No.:** 8E

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207314 **Description / Location:** Sample Not Analyzed
**Client No.:** 8F

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**



Analysis Method: EPA 600/R-93/116

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**Project No.:** 10-1187-0256-8000

## BULK SAMPLE ANALYSIS SUMMARY

**Lab No.:** 4207315 **Description / Location:** Sample Not Analyzed
**Client No.:** 8G

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207316 **Description / Location:** Off-White Wall Texture
**Client No.:** 9A Laundry Rm-2nd Fl

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| PC 1.4 | Chrysotile | None Detected | None Detected | PC 98.6 |

**Lab No.:** 4207317 **Description / Location:** Sample Not Analyzed
**Client No.:** 9B

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**Lab No.:** 4207318 **Description / Location:** Sample Not Analyzed
**Client No.:** 9C

| % Asbestos | Type | % Non-Asbestos Fibrous Material | Type | % Non-Fibrous Material |
|---|---|---|---|---|
| Sample Not Analyzed | | Sample Not Analyzed | | |

**NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA Lab No. 100188**

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Analysis Method: EPA 600/R-93/116

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**Analysis Performed By:** L. Solebello

**Date:** 2/11/2011

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[redacted]
9000 COMMERCE PARKWAY, SUITE B
MT. LAUREL, NJ 08054

[redacted]
TEL: 856-231-9449
FAX: 856-231-9818

# - Chain of Custody -

**Client:** Golder Associates
160 Scotia Court, Whitby

**Project Name:** DSS - 327 Kellet St, Port Perry
**Project No.:** 107132-0256(8000)

**Phone:** (905) 723-2727
**FAX:** (905) 723-2182

**Contact:** adavis@golder.com
**Pager:**

**Special Instructions:** Analyze all layers - Stop Positive Analysis

**Type:**

| Asbestos | | | Lead | | | Other |
|---|---|---|---|---|---|---|
| [ ] Air | [ ] Soil | | [ ] Air | [ ] Soil | | |
| [X] Bulk | [ ] Dust | | [ ] Bulk | [ ] Paint | | |
| [ ] Water | [ ] Other | | [ ] Water | [ ] Other | | |

**Analysis Method:**

| | | |
|---|---|---|
| [ ] PCM : NIOSH 7400 | [X] PLM : Bulk Asbestos EPA 600 | [ ] TEM : AHERA |
| [ ] PCM : OSHA | [ ] PLM : Point Counting 198.1 | [ ] TEM : NIOSH 7402 |
| [ ] PCM : Other_____ | [ ] PLM : NOB via 198.1 (PLM only) | [ ] TEM : EPA Level II |
| | [ ] If <1% by PLM, to TEM via 198.4 | [ ] TEM : Microvac / Wipe |
| [ ] AAS : NIOSH 7082 (Air) | to meet NYSDOH requirements ** | [ ] TEM : Asbestos in Water |
| [ ] AAS : Lead in Drinking Water | (**call to confirm TAT!) | [ ] TEM : Bulk Analysis |
| [ ] AAS : Lead in Paint ASTM D3335-85a | | [ ] TEM : NOB 198.4 |
| [ ] AAS : Lead Dust/Wipe | | [ ] TEM : Other_____ |
| [ ] AAS : Other Metals / Soil_____ | | [ ] Total Dust : NIOSH 0500 |

**Turnaround Time:** **FAX:** _____ (date / time) **Verbals:** _____ (date / time)

[ ] 10 Day [X] 5 Day [ ] 3 Day [ ] 2 Day [ ] 1 Day [ ] 6 hour [ ] RUSH

Preliminary FAX/Verbal Results Requested by: _____

**Sample Numbers:** Client #(s): 1(A-C) (start) - 9(A-C) (end) IATL#(s): _____ (start) - _____ (end) Total: 35

**Chain of Custody:**

| | | | |
|---|---|---|---|
| Relinquished: | A-Davis | Date: 02 Feb 11 | Time: 11:00 |
| Received: | | Date: | Time: |
| Sample Log-in: | [illegible] 2/7/11 | Date: | Time: |
| Sample Prep: | | Date: | Time: |
| Analyzed: | [illegible] 2/11/11 | Date: | Time: |
| QA/QC Review: | | Date: FEB - 4 2011 | Time: |

Archived/Released:_____ QA/QC InterLAB Use:_____ Date:_____ Time:_____

IATL - [illegible]

Golder Associates LTD
100 Scotia Court
Whitby, Ontario, Canada L1N 8Y6
Tel (905) - 723 - 2727; Fax (905) - 723 - 2182

# Asbestos Materials Survey
## Collection Data Sheet

Golder Associates

**Project Number:** 10-1187-0256(8000)

**Project Short Title:** RoD DSS

**Location** 327 Kellet St., Port Perry

## Asbestos Samples

| Sample Number | | Type of Materials and Description | Room and Description |
|---|---|---|---|
| 1A | 4207284 | Tar on roof vent | Attic space |
| 1B | 4207285 | Tar on roof vent | Attic space |
| 1C | 4207286 | Tar on roof vent | Attic space |
| | | | |
| 2A | 4207287 | White exterior caulking | 204 - balcony |
| 2B | 4207288 | White exterior caulking | 204 - balcony |
| 2C | 4207289 | White exterior caulking | 204 - balcony |
| | | | |
| 3A | 4207290 | White 12x12 VFT with green flecks | Party Rm - Closet |
| 3B | 4207291 | White 12x12 VFT with green flecks | Party Rm - Closet |
| 3C | 4207292 | White 12x12 VFT with green flecks | Laundry Rm - 2nd fl |
| | | | |
| 4A | 4207293 | Beige 12x12 VFT with brown flecks | Elevator Rm - 2nd fl |
| 4B | 4207294 | Beige 12x12 VFT with brown flecks | Elevator Rm - 2nd fl |
| 4C | 4207295 | Beige 12x12 VFT with brown flecks | Elevator Rm - 2nd fl |
| | 4207296 | | |
| 5A | | Light beige 12x12 VFT with brown streaks | 201 |
| 5B | 4207297 | Light beige 12x12 VFT with brown streaks | 201 |
| 5C | 4207298 | Light beige 12x12 VFT with brown streaks | 201 |
| | | | |
| 6A | 4207299 | Beige 12x12 VFT with Brown spots | 103 |
| 6B | 4207300 | Beige 12x12 VFT with Brown spots | 103 |
| 6C | 4207301 | Beige 12x12 VFT with Brown spots | 103 |
| | | | |
| | | | |
| | | | |
| | | LC 2/11/11 | |
| | | | |
| | | | |
| | | 2-Feb-11 | |
| | | | |
| | | | |

Golder Associates Ltd.
100 Scotia Court
Whitby, Ontario, Canada L1N 8Y6
Tel (905) - 723 - 2727; Fax (905) - 723 - 2182

# Asbestos Materials Survey
## Collection Data Sheet

**Project Number:** 10-1187-0256(8000)

**Project Short Title:** RoD DSS

**Location** 327 Kellet St., Port Perry

## Asbestos Samples

| Sample Number | | Type of Material and Description | Room and Description |
|---|---|---|---|
| 7A | 4207302 | DJC WALL | Staircase - g.f. |
| 7B | 4207303 | DJC WALL | Laundry Rm - g.f. |
| 7C | 4207304 | djc bulkhead | boiler rm |
| 7D | 4207305 | djc wall | 111 |
| 7E | 4207306 | djc wall | 105 - hall |
| 7F | 4207307 | djc wall | 217 |
| 7G | 4207308 | djc wall | 108 |
| | | | |
| 8A | 4207309 | texture coat ceiling | staircase - g.f. |
| 8B | 4207310 | texture coat ceiling | Laundry room - g.f. |
| 8C | 4207311 | texture coat ceiling | Main corridor - outside 105 |
| 8D | 4207312 | texture coat ceiling | Main corridor - outside 214 |
| 8E | 4207313 | texture coat ceiling | 2nd fl. Apt. |
| 8F | 4207314 | texture coat ceiling | 107 bedroom |
| 8G | 4207315 | texture coat ceiling | 216 |
| | | | |
| 9A | 4207316 | texture coat on WALL | Laundry Rm - 2nd fl. |
| 9B | 4207317 | ↓ | ↓ |
| 9C | 4207318 | | |

LS 2/11/11

# APPENDIX C

## Spreadsheet of Findings - Lead

APPENDIX C - SPREADSHEET OF FINDINGS - LEAD
327 Kellet Street, Port Perry, Ontario
Bulk Lead Paint Sampling Results
Designated Substances Survey

| Area | Level | Location / Substrate | Colour & Description | Est. Quantity* | Accessibility | Sample # | % Lead | Photographs | Recommended Actions |
|---|---|---|---|---|---|---|---|---|---|
| Common Areas | Throughout | Drywall walls | Teal paint | Unknown | High | LP-1 | 0.055% |  Photograph 1 | **Measures must be taken to ensure the TWAE for lead is not exceeded. Refer to conclusions and recommendations for further details.** |
| Exterior - Balconies | Throughout | Concrete deck | White paint | Unknown | High | LP-2 | 0.0067% |  Photograph 2 | **Measures must be taken to ensure the TWAE for lead is not exceeded. Refer to conclusions and recommendations for further details.** |
| Maintenance Areas | Throughout | Concrete floors | Grey paint | Unknown | Moderate | LP-3 | 0.1% |  Photograph 3 | **Measures must be taken to ensure the TWAE for lead is not exceeded. Refer to conclusions and recommendations for further details.** |
| Attic Space | Attic | Mechanical vents | Grey paint | Unknown | High | LP-4 | 0.064% |  Photograph 4 | **Measures must be taken to ensure the TWAE for lead is not exceeded. Refer to conclusions and recommendations for further details.** |

Accessibility:
High: Accessible to Workers
Mod: Accessible With a Ladder
Low: Enclosed in Building Materials

APPENDIX C - SPREADSHEET OF FINDINGS - LEAD
327 Kellet Street, Port Perry, Ontario
Bulk Lead Paint Sampling Results
Designated Substances Survey

| Area | Level | Location / Substrate | Colour & Description | Est. Quantity* | Accessibility | Sample # | % Lead | Photographs | Recommended Actions |
|---|---|---|---|---|---|---|---|---|---|
| Common Areas | All | Metal and wood trim | Dark teal | Unknown | High | LP-5 | 0.087% |  Photograph 5 | **Measures must be taken to ensure the TWAE for lead is not exceeded. Refer to conclusions and recommendations for further details.** |

Inputted by: AHD
Checked by: Original to be Signed

*** The quantities of lead-containing materials as reported, are estimates only and may not accurately reflect the exact quantities at the Site.**
****Contractors retained to complete or quote on the abatement activities should independently confirm the reported quantities.**



Accessibility:
High: Accessible to Workers
Mod: Accessible With a Ladder
Low: Enclosed in Building Materials

# APPENDIX D

## Laboratory of Certificate of Analysis - Lead

**IATL** International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

# CERTIFICATE OF ANALYSIS

**Client:** Golder Associates Ltd
100 Scotia Court
Whitby, ON L1N 8Y6

**Report Date:** 2/10/2011
**Report Number:** 0211002825
**Project:** RoDDSS,327KelletStPortPerry
**Project No.:** 10-1187-0256-8000

## LEAD PAINT SAMPLE ANALYSIS SUMMARY

| Lab No. | Client No. | Location / Description | Concentration Lead By Weight (%) |
|---|---|---|---|
| 4206096 | LP-1 | Teal Paint On DJC Wall<br>Staircase - G.F. | 0.055 |
| 4206097 | LP-2 | White Paint On Concrete Ceiling<br>209 - Balcony | 0.0067 |
| 4206098 | LP-3 | Grey Paint On Concrete Floor<br>Electrical Rm. | 0.10 |
| 4206099 | LP-4 | Grey Paint On Attic Mechanical<br>Attic Space | 0.064 |
| 4206100 | LP-5 | Dk. Teal On Trim<br>2nd Fl. Corridor | 0.087 |

## NATIONAL LEAD LABORATORY ACCREDITATION PROGRAM (NLLAP)

AIHA No. 100188 / NYSDOH-ELAP No. 11021

**Analysis Methods:** ASTM D3335-85A "Standard Method To Test For Low Concentrations Of Lead In Paint By Atomic Absorption Spectrophotometry"
EPA SW846-(7420/7421) "Standard Method To Test For Low Concentrations Of Lead In Soils, Sludges and Sediments By AAS"

**Comments:** Regulatory limit is 0.5% lead by weight (EPA/HUD guidelines). Recommend multiple sampling for all samples less than regulatory limit for confirmation. All results are based on the samples as received at the lab. IATL assumes that appropriate sampling methods have been used and the data upon which these results are based have been accurately supplied by the client. Method Detection Limit (MDL) per EPA Method 40CFR Part 136 Apendix B. Reporting Limit (RL) based upon Lowest Standard Determined (LSD) in accordance with AIHA-ELLAP policies. LSD=0.2 ppm MDL=0.0024% by weight. RL= 0.010% by weight (based upon 100 mg sampled). * Insufficient sample provided to perform QC reanalysis (<200 mg) ** Not enough sample provided to analyze (<50 mg) *** Matrix / substrate interference possible. Sample results are not corrected for contamination by field or analytical blanks. This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any government agency. This report shall not be reproduced except in full, without written approval of the laboratory.

**Date Received:** 2/4/2011

**Date Analyzed:** 2/10/2011

**Analyst:** C. Shaffer

**Approved By:** _____

Frank E. Ehrenfeld, III
Laboratory Director

International Asbestos Testing Laboratories
[redacted]
9000 COMMERCE PARKWAY, SUITE B
MT. LAUREL, NJ 08054

[redacted]
TEL: 856-231-9449
FAX: 856-231-9818

# - Chain of Custody -

**Client:** Golder Associates Ltd.
100 Scotia Court, Whitby

**Project Name:** DSS - 327 Kellet St, Port Perry
**Project No.:** 10-1187-0256 (8000)

**Phone:** (905) 723-2727
**FAX:** (905) 723-2182

**Contact:** adavis@golder.com
**Pager:**

**Special Instructions:**

**Type:**

| Asbestos | | | | Lead | | | | Other |
|---|---|---|---|---|---|---|---|---|
| [ ] Air | [ ] Soil | | | [ ] Air | [ ] Soil | | | |
| [ ] Bulk | [ ] Dust | | | [ ] Bulk | [X] Paint | | | |
| [ ] Water | [ ] Other | | | [ ] Water | [ ] Other | | | |

**Analysis Method:**

| | | | | | |
|---|---|---|---|---|---|
| [ ] PCM : NIOSH 7400 | [ ] PLM : Bulk Asbestos EPA 600 | [ ] TEM : AHERA |
| [ ] PCM : OSHA | [ ] PLM : Point Counting 198.1 | [ ] TEM : NIOSH 7402 |
| [ ] PCM : Other_____ | [ ] PLM : NOB via 198.1 (PLM only) | [ ] TEM : EPA Level II |
| | [ ] If <1% by PLM, to TEM via 198.4 | [ ] TEM : Microvac / Wipe |
| [ ] AAS : NIOSH 7082 (Air) | to meet NYSDOH requirements ** | [ ] TEM : Asbestos in Water |
| [ ] AAS : Lead in Drinking Water | (**call to confirm TAT!) | [ ] TEM : Bulk Analysis |
| [X] AAS : Lead in Paint ASTM D3335-85a | | [ ] TEM : NOB 198.4 |
| [ ] AAS : Lead Dust/Wipe " | | [ ] TEM : Other_____ |
| [ ] AAS : Other Metals / Soil_____ | | [ ] Total Dust : NIOSH 0500 |

**Turnaround Time:**

**FAX:** _____ (date / time) **Verbals:** _____ (date / time)

[ ] 10 Day [X] 5 Day [ ] 3 Day [ ] 2 Day [ ] 1 Day [ ] 6 hour [ ] RUSH

Preliminary FAX/Verbal Results Requested by: _____

**Sample Numbers:**

Client #(s): LP-1 (start) - LP-5 (end) IATL#(s): _____ (start) - _____ (end) Total: ___

**Chain of Custody:**

RECEIVED

| | | | |
|---|---|---|---|
| Relinquished: | A. Davis | Date: 02 FEB 11 | Time: 11:00 |
| Received: | | Date: FEB - 4 2011 | Time: |
| Sample Log-in: | [illegible] | Date: | Time: |
| Sample Prep: | 6/10/11 | Date: | Time: |
| Analyzed: | | Date: | Time: |
| QA/QC Review: | | Date: | Time: |

Archived/Released: _____ QA/QC InterLAB Use: _____ Date: _____ Time: _____

Golder Associates LTD
100 Scotia Court
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Tel (905) - 723 - 2727; Fax (905) - 723 - 21

**Lead Materials Survey**
**Collection Data Sheet**

Golder Associates

**Project Number:** 10-1187-0256(8000)

**Project Short Title:** RoD DSS

**Location** 327 Kellet St., Port Perry

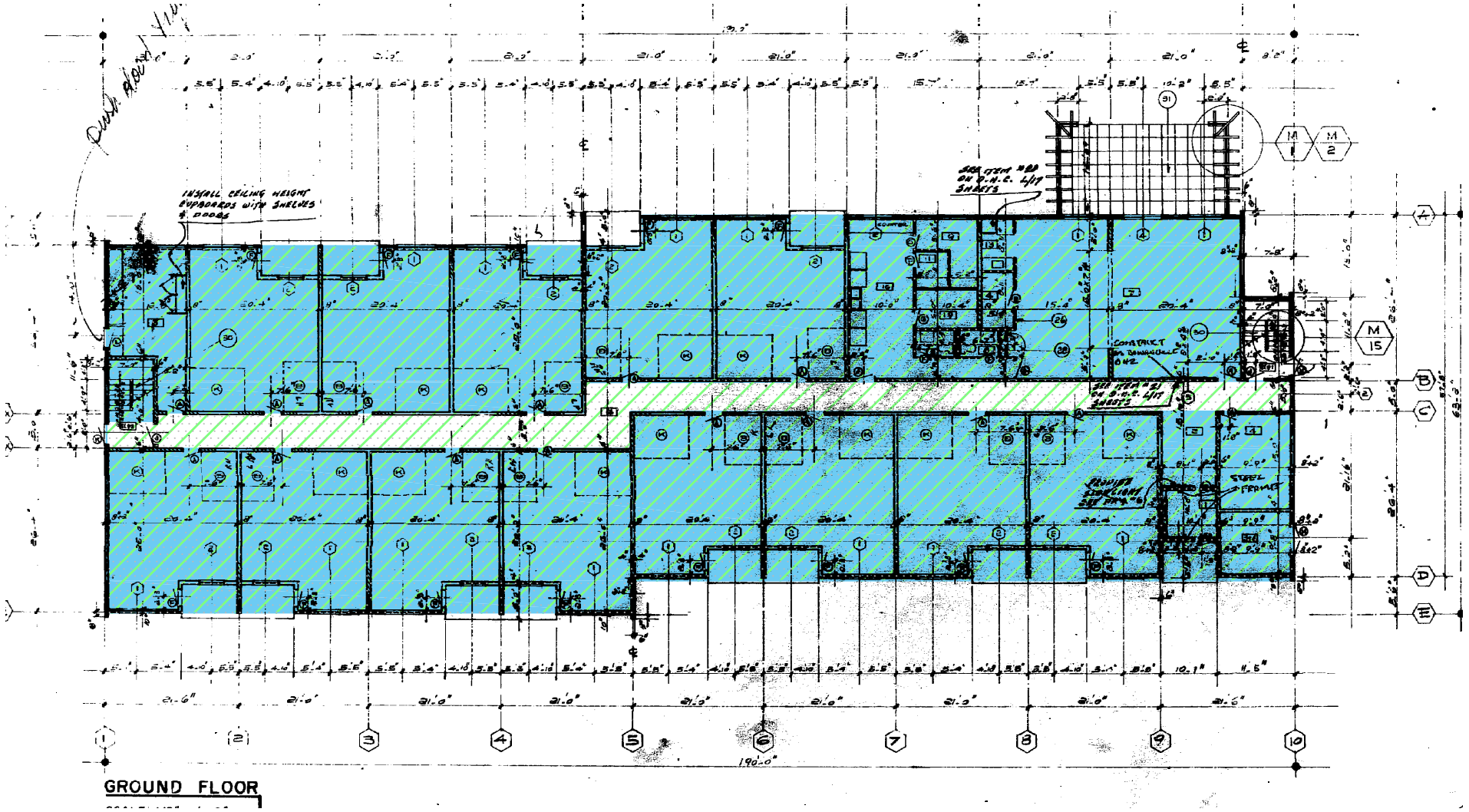
## Lead Samples

| Sample Number | Type of Materials and Description | Room and Description |
|---|---|---|
| LP-1 4206096 | teal paint on djc wall | staircase - g.f. |
| LP-2 4206097 | white paint on concrete ceiling | 209 - balcony |
| LP-3 4206098 | grey paint on concrete floor | electrical rm |
| LP-4 4206099 | grey paint on attic mechanical | Attic space |
| LP-5 4206100 | Dark teal on trim | 2nd fl. Corridor |
| | 2-Feb-11 | |

# APPENDIX E

## Site Drawings

Drawing file: N:\CAD_PROJECTS\2010\10-1187-0256 (ROD, Durham Region)\-MA-DSS-(8000) (327 Kellet St)\1011870256MA01.dwg Mar 09, 2011 - 1:54pm




GROUND FLOOR

NOT TO SCALE
ALL LOCATIONS ARE APPROXIMATE

**LEGEND**

- ASBESTOS-CONTAINING DRYWALL JOINT COMPOUND (WHERE PRESENT)
- LOCATION OF ASBESTOS-CONTAINING VINYL FLOOR TILE
- TEXTURE COAT CEILING

PROJECT

Designated Substances Survey
327 Kellet Street
Whitby, Ontario

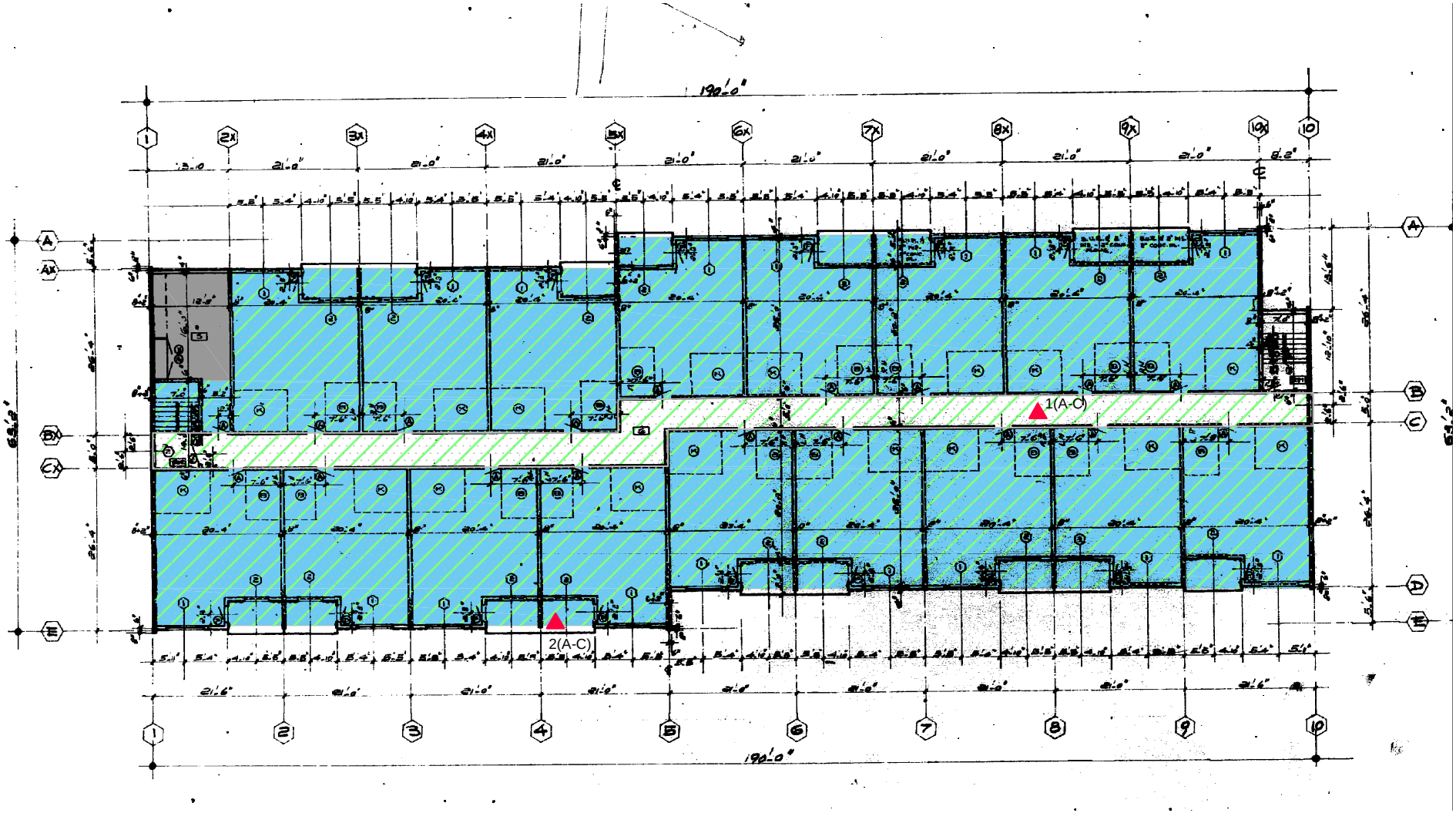
TITLE

**SAMPLE LOCATIONS PLAN: GROUND FLOOR**

Golder Associates

| | | | | |
|---|---|---|---|---|
| PROJECT No. 10-1187-0256(8000) | | | FILE No. | MA01 |
| DESIGN | | | SCALE NTS | REV. |
| CADD | PJV | Mar. 2011 | | |
| CHECK | | | **FIGURE 1** | |
| REVIEW | | | | |

Drawing file: N:\CAD_PROJECTS\2010\10-1187-0256 (ROD, Durham Region)\-MA-DSS-(8000) (327 Kellet St)\1011870256MA02.dwg Mar 09, 2011 - 1:55pm




NOT TO SCALE
ALL LOCATIONS ARE APPROXIMATE

**LEGEND**

- SUSPECT ASBESTOS BULK SAMPLE LOCATION
- TEXTURE COAT ON WALL
- TEXTURE COAT CEILING
- ASBESTOS-CONTAINING DRYWALL JOINT COMPOUND (WHERE PRESENT)
- LOCATION OF ASBESTOS-CONTAINING VINYL FLOOR TILE

PROJECT

Designated Substances Survey
327 Kellet Street
Whitby, Ontario

TITLE

# SAMPLE LOCATIONS PLAN: SECOND FLOOR

Golder Associates

| | | | | |
|---|---|---|---|---|
| PROJECT No. 10-1187-0256(8000) | | | FILE No. | MA02 |
| DESIGN | | | SCALE NTS | REV. |
| CADD | PJV | Mar. 2011 | | |
| CHECK | | | | |
| REVIEW | | | | |

**FIGURE 2**

At Golder Associates we strive to be the most respected global company providing consulting, design, and construction services in earth, environment, and related areas of energy. Employee owned since our formation in 1960, our focus, unique culture and operating environment offer opportunities and the freedom to excel, which attracts the leading specialists in our fields. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees who operate from offices located throughout Africa, Asia, Australasia, Europe, North America, and South America.


| | |
|---|---|
| Africa | + 27 11 254 4800 |
| Asia | + 86 21 6258 5522 |
| Australasia | + 61 3 8862 3500 |
| Europe | + 356 21 42 30 20 |
| North America | + 1 800 275 3281 |
| South America | + 55 21 3095 9500 |

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Golder Associates