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August 31, 2012
File: PE2734-LET.01

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2575 Del Zotto Drive
Ottawa, Ontario
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Attention: **Mr. Rosario Lindia**

Subject: **Designated Substance Survey**
2781, 2791, and 2797 Baseline Road
Ottawa

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) conducted a Designated Substance Survey (DSS) at 2781, 2791 and 2797 Baseline Road in the City of Ottawa, Ontario. This letter report summarizes our findings and results of the designated substance survey.

1.0 BACKGROUND

The subject site is situated on the north side of Baseline Road, at the northeast corner of Baseline Road and Morrison Street, in the City of Ottawa, Ontario. The subject buildings consist of three (3), two storey residential townhouse blocks. The buildings were all designed and constructed at the same time, using the same building materials. It is our understanding that the subject buildings are to be demolished in the near future, using heavy equipment from the exterior.

The purpose of this investigation was to identify designated substances in the subject buildings.

2.0 SITE INSPECTION AND OBSERVATIONS

During the course of the site visit, a visual inspection for sources or materials containing the following designated substances: acrylonitrile, arsenic, asbestos, benzene, coke oven emissions, ethylene oxide, isocyanates, lead, mercury, silica, vinyl chloride, and the following substances: ozone depleting substances (ODSs) and polychlorinated biphenyls (PCBs) was carried out.

Building materials including buried services, floor levelling compounds, caulkings and sealants, which have historically contained asbestos, were not included in the survey since they are generally inaccessible, used in a random fashion and have a low risk of asbestos fibre release.

Acrylonitrile

Acrylonitrile is prescribed as a designated substance under Ontario Regulation (O.Reg.) 835 of the Occupational Health and Safety Act. It is a volatile, flammable liquid that is used to make many chemicals such as plastics, rubber and synthetic fibres. Acrylonitrile may be present in stable form in surface coatings (eg. paints), building material adhesives and plastics. Common adhesives, observed in the building include applications for vinyl floor tiles and mouldings. The above noted products are not considered to pose a concern provided they are not subjected to extreme heat, such as a torch. Exposure to acrylonitrile is unlikely and not suspected on the subject site.

Arsenic

Arsenic is prescribed as a designated substance under O.Reg. 836 of the Occupational Health and Safety Act. Arsenic has many industrial uses such as hardening of copper and lead alloys and in older lead based paints. Similar to acrylonitrile, arsenic may also be present in stable form in building material adhesives and some metal alloys. Based on the limited quantity of potentially arsenic containing materials within the subject buildings, it is not expected that the arsenic concentration in the air will exceed its maximum allowable Time Weighted Average Exposure Value (TWAEV).

Asbestos

Asbestos is prescribed as a designated substance under O.Reg. 837 of the Occupational Health and Safety Act. Asbestos-containing materials (ACMs) are defined under O. Reg. 278/05 of the Occupational Health and Safety Act as having a concentration of 0.5% or more by dry weight of fibrous asbestos (i.e. chrysotile, amosite, crocidolite and/or other amphiboles). Asbestos was used extensively in residential and commercial construction between 1930 and 1980. Based on the age of the dwellings, asbestos containing materials may have been used during renovations.

A total of twenty-six (26) bulk samples of potential asbestos containing materials were obtained from the subject buildings during the sampling event and were submitted to Paracel Laboratories in Ottawa, Ontario for analysis. The potential asbestos containing materials were analyzed to determine the presence, type and content of asbestos, as shown on the following tables. The sample locations can also be found in the tables. The laboratory certificates of analysis are appended to this letter.

Table 1 - Summary of Asbestos Testing
2781, 2791 and 2797 Baseline Road
Former Residential Townhouse Blocks

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
DWJC1	Drywall Joint Compound	2781 - Unit 1, 1st floor kitchen	**1% Chrysotile**	99% Non-Fibers
DWJC2		2781 - Unit 6, 1st floor, living room	**1% Chrysotile**	99% Non-Fibers
DWJC3		2791 - Unit 2, 1st floor, living room	**1% Chrysotile**	99% Non-Fibers
DWJC4		2791 - Unit 5, 1st floor, hall	**1% Chrysotile**	99% Non-Fibers
DWJC5		2791 - Main hallway, 1st floor	**1% Chrysotile**	99% Non-Fibers
DWJC6		2797 - Unit 12, 1st floor closet	**1% Chrysotile**	99% Non-Fibers
DWJC7		2797 - Unit 10, 1st floor hallway	**1% Chrysotile**	99% Non-Fibers
STIP1	Ceiling Stipple	2781 - Unit 1, 1st floor kitchen	**1% Chrysotile**	99% Non-Fibers
STIP2		2781 - Unit 6, 1st floor, living room	**1% Chrysotile**	99% Non-Fibers
STIP3		2791 - Unit 2, 1st floor, living room	**1% Chrysotile**	99% Non-Fibers
STIP4		2791 - Unit 5, 1st floor, hall	**1% Chrysotile**	99% Non-Fibers
STIP5		2797 - Unit 12, 1st floor	**1% Chrysotile**	99% Non-Fibers
STIP6		2797 - Unit 9, 1st floor	**1% Chrysotile**	99% Non-Fibers
STIP7		2797 - Unit 10, 1st floor	**1% Chrysotile**	99% Non-Fibers

Notes: **Bold** Results - Asbestos containing material as defined under O. Reg 278/05 as having a concentration of 0.5% or more by dry weight fibrous asbestos.

Table 1 - Summary of Asbestos Testing
2781, 2791 and 2797 Baseline Road
Former Residential Townhouse Blocks

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
PAP1	Paper Insulation	2781 - 1st floor hallway	**40% Chrysotile**	40% Cellulose 20% Non-Fibers
PARG1	Parging	2781 - 1st floor hallway where copper piping goes through concrete block	**60% Chrysotile**	40% Non-Fibers
PARG2	Boiler Insulation	2791 - Basement boiler room	**8.85% Chrysotile**	10% Cellulose 8.85% Other Fibers 72.3% Non-Fibers
LIN1	Linoleum Flooring	2781 - unit 1, 1st fl. Kitchen	**10% Chrysotile**	85% Non-Fibers 5% Cellulose
LIN2		2781 - unit 1, 1st fl. Kitchen	Not analysed due to positive/stop analysis	
LIN3		2781 - unit 1, 1st fl. Kitchen		
VFT1	Vinyl Floor Tiles (0.3 m x 0.3 m) Grey	2781 - unit 6, 1st fl. Kitchen	none	100% Non-Fibers
VFT2		2781 - unit 6, 1st fl. Kitchen	none	100% Non-Fibers
VFT3		2781 - unit 6, 1st fl. Kitchen	none	100% Non-Fibers
SCT1	Stick-on-Ceiling Tiles (0.3 m x 0.3 m) White	2781 - 1st floor, north entranceway	none	80% Cellulose 20% Non-Fibers
SCT2		2781 - 1st floor, north entranceway	none	80% Cellulose 20% Non-Fibers
SCT3		2781 - 1st floor, north entranceway	none	80% Cellulose 20% Non-Fibers

Notes: **Bold** Results - Asbestos containing material as defined under O. Reg 278/05 as having a concentration of 0.5% or more by dry weight fibrous asbestos.

It should be noted that the majority of the exterior wall and ceiling cavities were inspected at the time of the assessment. The insulation throughout the subject buildings was observed to be fibreglass.

Drywall Joint Compound

Drywall was observed in each of the subject buildings. Seven (7) samples of drywall joint compound were collected and submitted for analysis. All of the samples were observed to contain **1% Chrysotile asbestos**. The drywall joint compound in the subject buildings is an ACM.

Ceiling Stipple

Ceiling Stipple was observed in each of the subject buildings. Seven (7) samples of ceiling stipple were collected and submitted for analysis. All of the samples were observed to contain **1% Chrysotile asbestos**. As a result, the ceiling stipple in the subject buildings is an ACM.

Linoleum Flooring

Linoleum flooring was observed in the kitchen of unit 1 in the building addressed 2781 Baseline Road. Three (3) samples were collected and submitted for analysis. Positive stop analysis was used to limit any unnecessary testing. The first sample was observed to contain **10% Chrysotile asbestos**. The linoleum flooring observed in the kitchen of unit 1 in the building addressed **2781 Baseline Road** is an ACM. It should be noted that this flooring was observed in two (2) other units throughout the subject buildings and not all units were inspected. It should be assumed to be an ACM where present.

Vinyl Floor Tiles

Vinyl floor tiles were observed in the kitchen of unit 6 in the subject building addressed 2781 Baseline Road. Three (3) samples were collected and submitted for analysis. None of the samples submitted were observed to contain asbestos. The vinyl floor tiles resembling those observed in unit 6 in the building addressed 2781 Baseline Road are not considered an ACM.

Stick on Ceiling Tiles

Stick on ceiling tiles were observed in the north entranceway to the building addressed 2781 Baseline Road. Three (3) samples were collected and submitted for analysis. None of the samples submitted were observed to contain asbestos. The stick on ceiling tiles in the subject buildings are not considered an ACM.

Paper Insulation

Paper insulation was observed on piping above the suspended ceiling tiles in the main hallway of all the subject buildings. One (1) sample of the paper insulation was collected and submitted for analysis. The paper insulation was observed to contain **40% Chrysotile asbestos**. The paper insulation throughout the subject buildings is an ACM.

Parging

Parging was observed where piping went through the concrete block walls that separate the main hallway from the apartment units. The parging was used as a fire-stop, only encasing the piping in a 100 mm diameter. One (1) sample of the parging was collected and submitted for analysis. The parging was observed to contain **60% Chrysotile asbestos**. The parging used in the aforementioned fashion throughout the subject buildings is an ACM.

Boiler Insulation

One boiler was observed in each of the subject buildings. All of the boilers previously had asbestos containing boiler insulation on them. All of the boiler insulation has been removed from the boilers in each of the subject buildings with the exception of some residual insulation on the boiler in the building addressed 2791 Baseline Road. One (1) sample of the residual boiler insulation was collected and submitted for analysis. The insulation was observed to contain **40% Chrysotile asbestos**. The residual boiler insulation in the building addressed 2791 Baseline Road is an ACM.

Benzene

Benzene is prescribed as a designated substance under O.Reg. 839 of the Occupational Health and Safety Act. Benzene is used in the manufacturing of many products including plastics, rubbers, resins and synthetic fibres. It is also used as a solvent in printing and paints as well as in petroleum products such as gasoline and diesel. Benzene may be present in older paints, sealants and roofing materials, some of which are present in the building.

Benzene is not considered to be a concern, since it typically vaporizes rapidly from most products shortly after manufacturing or application, however, the above noted materials should not be subjected to extreme heat without proper worker respiratory protection.

Coke Oven Emissions

Coke oven emissions are prescribed as a designated substance under O.Reg. 840 of the Occupational Health and Safety Act. Coke Oven emissions are not typically found outside the metal extraction industry. No sources of coke oven emissions are suspected or were observed with respect to the subject buildings.

Ethylene Oxide

Ethylene oxide is prescribed as a designated substance under Ontario Regulation 841 of the Occupational Health and Safety Act. Ethylene oxide is used in large volumes as a chemical intermediate in the manufacturing of many industrial products including textiles, detergents, foam, antifreeze, solvents and adhesives.

Based on the limited quantity of potential ethylene oxide containing materials within the subject buildings, ethylene oxide is not considered to pose a concern.

Isocyanates

Isocyanates are prescribed as a designated substance under O.Reg. 842 of the Occupational Health and Safety Act. Isocyanates are the raw materials from which all polyurethane products are made. They are used widely in the manufacturing of foams, plastics, adhesives, synthetic fibres and coatings such as paints and varnishes, some of which are present in the subject buildings. Over time, isocyanates will volatize out of these materials but will only be present in trace amounts and are not expected to reach hazardous air concentrations. As a result, isocyanates are not considered to pose a concern.

Lead

Lead is prescribed as a designated substance under O.Reg. 843 of the Occupational Health and Safety Act. Lead may be present in older paints, plastics, lead caulking in bell joints for cast iron piping systems, lead solder in copper piping systems, electrical equipment and ceramics. Painted surfaces and copper piping were observed during the site visit.

Three (3) paint samples were obtained as possible lead containing materials. The samples were submitted to Paracel for lead content analysis. The potential lead containing materials were analyzed to determine the presence and content of lead, as shown on the following table. The sample locations can also be found in Table 2. The laboratory certificates of analysis are appended to this letter.

Table 2 - Lead Content Determination Results

Sample/Location	Description	Colour	Maximum Allowable Concentration (µg/g)	Lead Content (µg/g)
P1 - 2781 - unit 1, basement	Paint	White	600	317
P2 - 2781 - main hallway		White	600	54
P3 - 2791 - unit 2, 1st floor living room		White	600	270

The paint samples tested do not exceed the maximum allowable concentration and are not considered to be lead based.

Mercury

Mercury is prescribed as a designated substance under O.Reg. 844 of the Occupational Health and Safety Act. Mercury may be present in thermostats, barometers and hydrometers along with other laboratory measuring devices. It may also be present in older lead based paints (which were not identified) and many types of lights including fluorescent tubes and compact fluorescent bulbs (CFBs).

No potential sources of mercury were observed in the building with the exception of fluorescent light bulbs. Any mercury containing equipment must be removed prior to demolition and disposed of according to Ontario Regulation 347 as amended by O. Reg. 558.

Vinyl Chloride

Vinyl chloride is prescribed as a designated substance under O.Reg. 846 of the Occupational Health and Safety Act. Vinyl chloride is the parent compound of polyvinyl chloride (PVC) which is used in many consumer and industrial plastic products. It is also used extensively in the glass, rubber and paper industries. Vinyl chloride may be present, in stable form, in pipes, plastics, vinyls and interior finishes such as paints and varnishes throughout the building. The health hazard associated with vinyl chloride comes primarily from the inhalation of fumes.

In most applications vinyl chloride is considered to be stable as long as it is not subjected to extreme heat. As a result, vinyl chloride is not expected to be a concern as long as materials are not subjected to extreme heat.

Silica

Silica is prescribed as a designated substance under O.Reg. 845 of the Occupational Health and Safety Act. Silica or silicon dioxide is the basic component of sand, quartz and granite rock. Silica is expected to be present in the cast-in-place concrete, concrete blocks and mortar. It may also be present in ceramic tiles. Typical procedures including wetting materials prior to, and during, any demolition activities are required to control dust.

Ozone Depleting Substances (ODSs)

Potential ODS containing equipment present on site included fire extinguishers, air conditioners and refrigerators. The above noted appliances should be decommissioned by certified personnel.

Polychlorinated Biphenyls (PCBs)

Fluorescent light ballasts manufactured prior to 1980 may contain PCBs, however, it is expected that most, if not all of the light ballasts, have been replaced with new non-PCB containing ballasts by this time. No concerns with respect to PCBs were noted at the time of the site inspection.

3.0 SURVEY SUMMARY AND RECOMMENDATIONS

The possible presence of limited quantities of acrylonitrile, arsenic, benzene, ethylene oxide, isocyanates, mercury, lead and silica in the aforementioned building materials do not pose a concern during the demolition of the subject buildings.

It is understood that the subject buildings will be demolished using heavy equipment. As a result, the risk of exposure to workers is considered to be very negligible. Regardless, efforts should be made to minimize dust creation during the demolition process.

Mercury

Mercury is suspected to be present within the fluorescent lights tubes and thermostats in the subject buildings. Mercury within light fixtures and thermostats poses no risk to occupants provided the containers remain intact and undisturbed. These devices must be removed prior to demolition and disposed of according to O.Reg. 347/558.

Ozone Depleting Substances (ODS)

The potential ODS containing equipment observed throughout the buildings was associated with fire extinguishers, air conditioners and refrigerators. Any maintenance or disposal of potential ODS containing equipment should be done by certified personnel.

Asbestos

Based on observations made during the testing program, combined with analytical test results, the following ACMs were identified in the residential townhouse blocks:

- **The drywall joint compound throughout the subject buildings**
- **The ceiling stipple throughout the subject buildings**
- **All linoleum flooring throughout the subject buildings similar to the pattern observed in the kitchen of unit 1 in the building addressed 2781 Baseline Road**
- **The paper insulation on the piping throughout the subject buildings**
- **The parging used where piping goes through concrete blocks throughout the subject buildings**
- **The boiler insulation on the boiler in the building addressed 2791 Baseline Road.**

The aforementioned asbestos containing materials were observed to be in good condition at the time of the assessment.

The removal, disturbance or encapsulation of identified ACMs throughout the buildings must be done in accordance with the procedures outlined in Ontario Regulation 278/05. The ACMs must be removed by a contractor specialized in this type of work prior to large scale demolition activity. It is our opinion that the aforementioned ACMs can be removed using Type I and II procedures with the exception of the ceiling stipple, which will require Type III. The drywall joint compound and ceiling stipple (if removed in bulk along with the drywall), will not require special disposal as an ACM.

A full copy of Ontario Regulation 278/05 made under the Occupational Health and Safety Act can be found at www.e-laws.gov.on.ca/html/regs/englich/elaws_regs_050278_e.htm.

4.0 STATEMENT OF LIMITATIONS

A designated substance survey was completed at 2781, 2791 and 2797 Baseline Road, in the City of Ottawa, Ontario. The results of the survey are based on our visual observations made at the time of the site visit. It should be noted that buried services were not observed during the investigation.

This report was prepared for the sole use of Bassi Construction. Permission and notification from Bassi Construction and this firm will be required to release this report to any other party.

Should any conditions be encountered at the subject site that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

We trust that this submission will satisfy your present requirements. If you have any questions regarding this report, please contact our office.

Paterson Group Inc.

Tyler Robinson, B.Sc. Mark S. D'Arcy, P.Eng.

Report Distribution:
- ❑ Bassi Construction (3 hard copies and 1 pdf)
- ❑ Paterson Group Inc. (1 copy)

Attachments:
- ❑ Laboratory Certificates of Analysis

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Certificate of Analysis

Paterson Group Consulting Engineers
154 Colonnade Road South
Nepean, ON K2E 7J5
Attn: Tyler Robinson

Phone: (613) 226-7381
Fax: (613) 226-6344

Client PO: 13137
Project: PE2734
Custody: 95472, 95139, 95132

Report Date: 22-Aug-2012
Order Date: 17-Aug-2012
Order #: 1233267

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1233267-01	DWJC1
1233267-02	DWJC2
1233267-03	DWJC3
1233267-04	DWJC4
1233267-05	DWJC5
1233267-06	DWJC6
1233267-07	DWJC7
1233267-08	LIN1
1233267-09	LIN2
1233267-10	LIN3
1233267-11	STIP1
1233267-12	STIP2
1233267-13	STIP3
1233267-14	STIP4
1233267-15	STIP5
1233267-16	STIP6
1233267-17	STIP7
1233267-18	VFT1
1233267-19	VFT2
1233267-20	VFT3
1233267-21	PAP1
1233267-22	PARG1
1233267-23	PARG2
1233267-24	SCT1
1233267-25	SCT2
1233267-26	SCT3

Approved By:

Heather S.H. McGregor, BSc
Laboratory Director - Microbiology

PARACEL LABORATORIES LTD.

Client: Paterson Group Consulting Engineers
154 Colonnade Road South
Nepean, ON K2E 7J5

Attn: Tyler Robinson
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Fax: (613) 226-6344

Project: PE2734
Paracel Report No.: 1233267

Received Date: 17-Aug-12
Report Date: 22-Aug-12

Asbestos by PLM **MDL - 0.5%**

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1233267-01	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC1	
						Chrysotile	1
						Non-Fibers	99
1233267-02	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC2	
						Chrysotile	1
						Non-Fibers	99
1233267-03	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC3	
						Chrysotile	1
						Non-Fibers	99
1233267-04	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC4	
						Chrysotile	1
						Non-Fibers	99
1233267-05	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC5	
						Chrysotile	1
						Non-Fibers	99
1233267-06	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC6	
						Chrysotile	1
						Non-Fibers	99
1233267-07	16-Aug-12	sample homogenized	Grey	DJC	Yes	Client ID: DWJC7	
						Chrysotile	1
						Non-Fibers	99
1233267-08	16-Aug-12	sample homogenized	Brown/Grey	Linoleum	Yes	Client ID: LIN1	
						Chrysotile	10
						Cellulose	5
						Non-Fibers	85
1233267-09	16-Aug-12					Client ID: LIN2	
						not analyzed	
1233267-10	16-Aug-12					Client ID: LIN3	
						not analyzed	

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Client: Paterson Group Consulting Engineers
154 Colonnade Road South
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Attn: Tyler Robinson
Tel: (613) 226-7381
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Project: PE2734
Paracel Report No.: 1233267

Received Date: 17-Aug-12
Report Date: 22-Aug-12

Asbestos by PLM **MDL - 0.5%**

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1233267-11	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP1**	
						Chrysotile	1
						Non-Fibers	99
1233267-12	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP2**	
						Chrysotile	1
						Non-Fibers	99
1233267-13	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP3**	
						Chrysotile	1
						Non-Fibers	99
1233267-14	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP4**	
						Chrysotile	1
						Non-Fibers	99
1233267-15	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP5**	
						Chrysotile	1
						Non-Fibers	99
1233267-16	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP6**	
						Chrysotile	1
						Non-Fibers	99
1233267-17	16-Aug-12	sample homogenized	Beige	Stipple	Yes	**Client ID: STIP7**	
						Chrysotile	1
						Non-Fibers	99
1233267-18	16-Aug-12	sample homogenized	Grey	Vinyl Floor Tile	No	**Client ID: VFT1** [AS-PRE]	
						Non-Fibers	100
1233267-19	16-Aug-12	sample homogenized	Grey	Vinyl Floor Tile	No	**Client ID: VFT2** [AS-PRE]	
						Non-Fibers	100
1233267-20	16-Aug-12	sample homogenized	Grey	Vinyl Floor Tile	No	**Client ID: VFT3** [AS-PRE]	
						Non-Fibers	100
1233267-21	16-Aug-12	sample homogenized	Grey	Paper wrap	Yes	**Client ID: PAP1**	
						Chrysotile	40
						Cellulose	40
						Non-Fibers	20

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Client:	Paterson Group Consulting Engineers 154 Colonnade Road South Nepean, ON K2E 7J5	**Attn:**	Tyler Robinson Tel: (613) 226-7381 Fax: (613) 226-6344
Project:	PE2734	**Received Date:**	17-Aug-12
Paracel Report No.:	1233267	**Report Date:**	22-Aug-12

Asbestos by PLM **MDL - 0.5%**

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1233267-22	16-Aug-12	sample homogenized	Grey	Parging	**Yes**	**Client ID: PARG1**	
						Chrysotile	60
						Non-Fibers	40
1233267-23	16-Aug-12	sample homogenized	Grey	Parging	**Yes**	**Client ID: PARG2** [AS-PRE]	
						Chrysotile	8.85
						Cellulose	10
						Non-Fibers	72.3
						Other fibers	8.85
1233267-24	16-Aug-12	sample homogenized	Beige/White	Ceiling Tile	No	**Client ID: SCT1** [AS-PRE]	
						Cellulose	80
						Non-Fibers	20
1233267-25	16-Aug-12	sample homogenized	Beige/White	Ceiling Tile	No	**Client ID: SCT2** [AS-PRE]	
						Cellulose	80
						Non-Fibers	20
1233267-26	16-Aug-12	sample homogenized	Beige/White	Ceiling Tile	No	**Client ID: SCT3** [AS-PRE]	
						Cellulose	80
						Non-Fibers	20

MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

Analytes in bold indicate asbestos content which may include:
Actinolite, Amosite, Anthopyllite, Chrysotile, Crocidolite and/or Tremolite.

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code *	Analysis Date
Asbestos by PLM	by EPA 600/R-93/116	Ottawa West Lab	200812-0	17-Aug-12

** Reference to the NVLAP term does not permit the user of this report to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.*

Report Notes

AS-PRE	Due to the difficult nature of the bulk sample (interfering fibers/binders), additional NOB preparation was required prior to analysis
LG-AS002	Asbestos - Not double bagged

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Chain of Custody
(Lab Use Only)
Nº 95472

Page 1 of 3

Client Name: Paterson
Project Reference: PE2734
Contact Name: Tyler Robinson
Quote #
Address: 154 Colonnade Rd. Ottawa, ON
PO # 13137
Email Address: trobinson@patersongroup.ca
Telephone: (613) 226-7381
TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Date Required:

Criteria: [ ] O. Reg. 153/04 Table __ [ ] O. Reg. 153/11 (Current) Table __ [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality:_____ [ ] Other:_____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1233267

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP/MS	Hg	CrVI	B (HWS)	Asbestos
1	DWJC1	O			Aug. 16/12									X
2	DWJC2	O												X
3	DWJC3	O												X
4	DWJC4	O												X
5	DWJC5	O												X
6	DWJC6	O												X
7	DWJC7	O												X
8	LIN1 } group	O												X
9	LIN2	O												X
10	LIN3	O												X

Comments: positive - stop on grouped samples

Method of Delivery: Paracel Courier

Relinquished By (Print & Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
	M. Jeouse	Karen Wiggins	Karen Wiggins
	Date/Time: 17/08/12 12:05PM	Date/Time: 08/17/12 1:00	Date/Time: 08/17/12 1:17
Date/Time:	Temperature: _____ °C	Temperature: _____ °C	pH Verified [ ] By:

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p: 1-800-749-1947
e: paracel@paracellabs.com
www.paracellabs.com

Chain of Custody
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Nº 95139

Page 2 of 3

Client Name: Paterson
Contact Name: Tyler Robinson
Address: 154 Colonnade Rd South Ottawa, ON
Telephone: 613 226-7381

Project Reference: PE2734
Quote #
PO # 13137
Email Address: trobinson@patersongroup.ca

TAT: |X| Regular | | 3 Day | | 2 Day | | 1 Day
Date Required: _____

Criteria: | | O. Reg. 153/04 Table __ | | O. Reg. 153/11 (Current) Table __ | | RSC Filing | | O. Reg. 558/00 | | PWQO | | CCME | | SUB (Storm) | | SUB (Sanitary) Municipality: _____ | | Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1233267

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP/MS	Hg	CrVI	B (HWS)	Asbestos						
1	STIP1	X			Aug. 16/12									X						
2	STIP2	X												X						
3	STIP3	X												X						
4	STIP4	X												X						
5	STIP5	X												X						
6	STIP6	X												X						
7	STIP7	X												X						
8	VFT1 } group	X												X						
9	VFT2 } group	X												X						
10	VFT3 } group	X												X						

Comments: positive-stop analysis on grouped samples

Method of Delivery: Paracel Courier

Relinquished By (Print & Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
	M Deouse	Karen Wiggins	Karen Wiggins
Date/Time:	Date/Time: 17/08/12 12:05 pm	Date/Time: 08/17/12 1:00	Date/Time: 08/17/12 1:17
	Temperature: _____ °C	Temperature: _____ °C	pH Verified		By: _____

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Nº 95132

Page 3 of 3

Client Name: Paterson
Contact Name: Tyler Robinson
Address: 154 Colonnade Rd. South Ottawa
Telephone: @ 613 226-7381

Project Reference: PE2734
Quote #
PO # 13137
Email Address: trobinson@patersongroup.ca

TAT: [X] Regular [ ] 3 Day [ ] 2 Day [ ] 1 Day
Date Required: _____

Criteria: [ ] O. Reg. 153/04 Table __ [ ] O. Reg. 153/11 (Current) Table __ [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality: _____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1233267

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP/MS	Hg	CrVI	B (HWS)	Asbestos	Lead					
1	PA P1	O			Aug. 16/12									X						
2	PARG1	O												X						
3	PARG2	O												X						
4	P1	P													X					
5	P2	P													X					
6	P3	P													X					
7	SCT1	O												X						
8	SCT2	O												X						
9	SCT3	O												X						
10																				

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Print & Sign):	Received by Driver/Depot: M. Crouse	Received at Lab: Karen Wiggins	Verified By: Karen Wiggins
Date/Time:	Date/Time: 17/08/12 12:05	Date/Time: 08/17/12 1:00	Date/Time: 08/17/12 1:17
	Temperature: ____ °C	Temperature: ____ °C	pH Verified [ ] By: ____

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Certificate of Analysis

Paterson Group Consulting Engineers
154 Colonnade Road South
Nepean, ON K2E 7J5
Attn: Tyler Robinson

Phone: (613) 226-7381
Fax: (613) 226-6344

Client PO: 13137
Project: PE2734
Custody: 95132

Report Date: 22-Aug-2012
Order Date: 17-Aug-2012
Order #: 1233294

This Certificate of Analysis contains analytical data applicable to the following samples submitted:

Paracel ID	Client ID
1233294-01	P1
1233294-02	P2
1233294-03	P3

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

PARACEL LABORATORIES LTD.

Order #: 1233294

Certificate of Analysis

Report Date: 22-Aug-2012
Order Date:17-Aug-2012

Client: **Paterson Group Consulting Engineers**
Client PO: 13137 Project Description: PE2734

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals	EPA 6020 - Digestion, ICP-MS	20-Aug-12	20-Aug-12

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

PARACEL LABORATORIES LTD.

Order #: 1233294

Certificate of Analysis

Report Date: 22-Aug-2012
Order Date:17-Aug-2012

Client: **Paterson Group Consulting Engineers**
Client PO: 13137 Project Description: PE2734

Sample Results

Lead

Matrix: Paint
Sample Date: 16-Aug-12

Paracel ID	Client ID	Units	MDL	Result
1233294-01	P1	ug/g	5	317
1233294-02	P2	ug/g	5	54
1233294-03	P3	ug/g	5	270

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	ND	5	ug/g						
Matrix Duplicate									
Lead	432	5	ug/g	302			35.3	50	
Matrix Spike									
Lead	61.8		ug/L	12.1	99.5	70-130			

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Page 3 of 3

Client Name: Paterson	Project Reference: PE2734	TAT: [X] Regular [ ] 3 Day
Contact Name: Tyler Robinson	Quote #	[ ] 2 Day [ ] 1 Day
Address: 154 Colonnade Rd. South Ottawa	PO # 13137	Date Required:
Telephone: @ 613 226-7381	Email Address: trobinson@patersongroup.ca	

Criteria: [ ] O. Reg. 153/04 Table __ [ ] O. Reg. 153/11 (Current) Table __ [ ] RSC Filing [ ] O. Reg. 558/00 [ ] PWQO [ ] CCME [ ] SUB (Storm) [ ] SUB (Sanitary) Municipality:_____ [ ] Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Paracel Order Number: 1233294

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP/MS	Hg	CrVI	B (HWS)	Asbestos	Lead					
1	PAP1	O			Aug. 16/12									X						
2	PARG1	O												X						
3	PARG2	O												X						
4	P1	P													X					✓
5	P2	P													X					✓
6	P3	P													X					✓
7	SCT1	O												X						
8	SCT2	O												X						
9	SCT3	O												X						
10																				

Comments:

Method of Delivery: Pick up

Relinquished By (Print & Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
	T. Brouse	SUNEEPORN	WC
Date/Time:	Date/Time: 17/08/12 12:05	Date/Time: AUG 17, 2012 08:19	Date/Time: Aug 17/12 3:51
Temperature:	Temperature: ____ °C	Temperature: ____ °C	pH Verified [ ] By: N/A