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February 16, 2021
File: PE5171-LET.01

Nicholson Gluckstein
249 McLeod Street
Ottawa, Ontario
K2P 1A1

Attention: **Mr. Derek Nicholson**

Subject: **Designated Substance Survey**
91 & 93 Holland Avenue
Ottawa, Ontario

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) conducted a Designated Substance Survey (DSS) at 91 and 93 Holland Avenue, in the City of Ottawa, Ontario. This letter report summarizes our findings and results of the DSS.

1.0 BACKGROUND

The subject residential properties are situated on the east side of Holland Avenue approximately 80m north of Wellington Avenue. The subject properties consist of two (2) wood framed structures that are currently occupied by restaurants. The properties are to be demolished in the near future as part of a proposed site re-development program.

The purpose of this investigation was to identify any potential designated substances within the subject buildings prior to any demolition. It is our understanding that the buildings were built before 1948, however, some interior renovations have occurred on both properties since the original development.

2.0 SITE INSPECTION AND OBSERVATIONS

A Paterson Group representative conducted a site visit on February 2, 2021. During the course of the site visit, a visual inspection for 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.

2.1 Acrylonitrile

Acrylonitrile is prescribed as a designated substance under Ontario Regulation (O.Reg.) 490/09 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 buildings 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 within the subject buildings.

2.2 Arsenic

Arsenic is prescribed as a designated substance under O.Reg. 490/09 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).

2.3 Asbestos

Asbestos is prescribed as a designated substance under O.Reg. 490/09 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 commonly used in residential and commercial construction between 1930 and 1980.

A total of twenty-six (26) bulk samples of potentially asbestos containing materials were obtained from the two (2) residential properties located at 91 and 93 Holland Avenue 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 in the tables below. Table 1 details all samples collected from the structure addressed 91 Holland Avenue. Table 2 details all samples collected from 93 Holland Avenue. The laboratory certificates of analysis are appended to this letter.

Table 1 – Summary of Asbestos Testing
91 Holland Avenue
February 2, 2021

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
DWJC1	Drywall joint compound	Ground floor	None	100% Non-Fibers
DWJC2		Ground floor	None	100% Non-Fibers
DWJC3		Ground floor	None	100% Non-Fibers
DWJC4		Stairwell	**2% Chrysotile**	98% Non-Fibers
DWJC5		Second floor	None	100% Non-Fibers
DWJC6		Second floor	None	100% Non-Fibers
DWJC7		Second floor	**1% Chrysotile**	99% Non-Fibers
VFT1	Vinyl Floor tiles Beige (30cm x 30cm)	Ground floor - Rear entrance	**1% Chrysotile**	99% Non-Fibers
VFT2		Ground floor - Rear entrance	Not analyzed (Positive stop)	
VFT3		Ground floor - Rear entrance		
INS1	Heat shield panel board	Basement	None	100% Non-Fibers
INS2		Basement	None	100% Non-Fibers
INS3		Basement	None	100% Non-Fibers

Notes: **Bold** – Asbestos containing material as defined under O.Reg. 278/05 as having a concentration of 0.5% or more by dry weight fibrous asbestos.
MMVF – Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool.

Drywall Joint Compound

Drywall joint compound was observed throughout the structure at 91 Holland Avenue. A total of seven (7) samples of the drywall joint compound were collected and submitted for analysis. Two (2) of the analyzed samples were found to contain **1-2% Chrysotile asbestos. Based on the analytical test results, the drywall joint compound is considered to be an asbestos containing material.**

Vinyl Floor Tile

Vinyl floor tiles were observed in the ground floor rear entrance of 91 Holland Avenue. Three (3) samples of vinyl floor tile were submitted for analysis via positive stop. One (1) sample was analyzed and found to contain **1% Chrysotile asbestos. Based on the analytical test results, the beige vinyl floor tiles are considered to be an asbestos containing material.**

Heat Shield Panel Board

Multiple panel boards located adjacent to the former furnace were observed in the basement of the 91 Holland Avenue. Three (3) samples of the panel boards were collected and submitted for analysis via positive stop. All samples analyzed were found to contain no asbestos. Based on the test results, the heat shield panel boards are not considered to be an asbestos containing material.

Insulation

No potentially asbestos containing insulation material was identified during the inspection of accessible ceiling and wall cavities. The attic was inspected via a ceiling access hatch. Observed insulation material consisted of fiberglass and cellulose based materials.

Table 2 – Summary of Asbestos Testing
93 Holland Avenue
February 2, 2021

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
DWJC8	Drywall joint compound	Basement	None	100% Non-Fibers
DWJC9		Basement	None	100% Non-Fibers

Notes: **Bold** – 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 2 (Continued) – Summary of Asbestos Testing
93 Holland Avenue
February 2, 2021

Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
DWJC10	Drywall joint compound	Ground floor	None	100% Non-Fibers
DWJC11		Ground floor	None	100% Non-Fibers
DWJC12		Ground floor	None	100% Non-Fibers
DWJC13		Second floor	None	100% Non-Fibers
DWJC14		Second floor	None	100% Non-Fibers
STUC1	Ceiling stucco	Second floor - Dining area	None	100% Non-Fibers
STUC2		Second floor - Dining area	None	100% Non-Fibers
STUC3		Second floor - Dining area	None	100% Non-Fibers
STIP1	Ceiling stipple plaster	Ground floor - Dining area	None	100% Non-Fibers
STIP2		Ground floor - Dining area	None	100% Non-Fibers
STIP3		Ground floor - Dining area	None	100% Non-Fibers

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

Drywall Joint Compound

Drywall joint compound was observed throughout the structure at 93 Holland Avenue. Seven (7) samples of the drywall joint compound were collected and submitted for analysis. All samples analysed were found to contain no asbestos. Based on the test results, the drywall joint compound is not considered to be an asbestos containing material.

Ceiling Stucco

Ceiling stucco was observed throughout the second-floor dining area. Three (3) samples of the ceiling stucco were collected and submitted for analysis. All samples analysed were found to contain no asbestos. Based on the test results, the ceiling stucco on the second floor of the structure is not considered to be an asbestos containing material.

Ceiling Stipple Plaster

Ceiling stipple plaster was observed throughout the ground floor of the building. Three (3) samples of the decorative plaster were collected and submitted for analysis. All samples analysed were found to contain no asbestos. Based on the test results, the ceiling stipple plaster throughout the ground floor of the structure is not considered to be an asbestos containing material.

Insulation

No potentially asbestos containing insulation material was identified during the inspection of accessible ceiling and wall cavities. The attic was inspected via a ceiling access hatch. Observed insulation material consisted of fiberglass and cellulose based materials.

2.4 Benzene

Benzene is prescribed as a designated substance under O.Reg 490/09 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 may be present in the buildings.

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.

2.5 Coke Oven Emissions

Coke oven emissions are prescribed as a designated substance under O.Reg. 490/09 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.

2.6 Ethylene Oxide

Ethylene oxide is prescribed as a designated substance under Ontario Regulation 490/09 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 potentially ethylene oxide containing materials within the subject buildings, ethylene oxide is not considered to pose a concern.

2.7 Isocyanates

Isocyanates are prescribed as a designated substance under O.Reg. 490/09 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.

2.8 Lead

Lead is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. For the purposes of this report, the commonly used value of 90 ppm [Surface Coatings Material Regulation (SOR/2005-109) – October 2010] will serve as the lead-containing definable limit. Lead concentrations will be categorized into three (3) classes, lead-based (greater than 5000 ppm), lead-containing (between 90 ppm and 5000 ppm) and non-lead containing (less than 90 ppm).

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 on the interior and exterior of the subject buildings were observed. Three (3) paint samples were obtained from 91 Holland Avenue and two (2) paint samples were obtained form 93 Holland avenue during the sampling event. All samples were submitted to Paracel Laboratories in Ottawa, Ontario for lead content analysis. Table 3 summarizes the lead results for samples collected from both buildings. The laboratory certificate of analysis is appended to this letter.

Table 3 – Summary of Lead Testing
91 - 93 Holland Avenue
February 2, 2021

Sample	Location Description	Colour	Lead-Containing Definable Limit (µg/g)	Lead Content (µg/g)
PT1	91 Holland Avenue - Ground floor dining area	Red	90	<20
PT2	91 Holland Avenue - Second floor dining area	Green	90	<20

Notes: **Bold** - Results exceed the lead-containing definable limit.

Table 3 (Continued) – Summary of Lead Testing
91 - 93 Holland Avenue
February 2, 2021

Sample	Location Description	Colour	Lead-Containing Definable Limit (µg/g)	Lead Content (µg/g)
PT3	91 Holland Avenue - Ground floor rear entrance	Beige	90	<20
PT4	93 Holland Avenue - Ground floor dining area	Green	90	<20
PT5	93 Holland Avenue - Second floor dining area	Black	90	<20

Notes: **Bold** - Results exceed the lead-containing definable limit.

Based on the test results, all paint samples analyzed are considered to be non-lead containing.

2.9 Mercury

Mercury is prescribed as a designated substance under O.Reg 490/09 of the Occupational Health and Safety Act. Mercury may be present in thermostats (which were not observed in the buildings), 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.

Any mercury containing equipment must be disposed of according to Ontario Regulation 347 as amended by O. Reg. 558, if it is being decommissioned.

2.10 Vinyl Chloride

Vinyl chloride is prescribed as a designated substance under O.Reg. 490/09 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, vinyl's and interior finishes such as paints and varnishes throughout the buildings. 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.

2.11 Silica

Silica is prescribed as a designated substance under O.Reg. 490/09 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 concrete and cement parging. Typical procedures including wetting materials prior to, and during, any demolition activities are required to control dust.

2.12 Ozone Depleting Substances (ODSs)

Potentially ODS containing equipment such as refrigerators, freezers and air conditioners were observed during the site visit. These appliances should be repaired or decommissioned by certified technicians.

2.13 Polychlorinated Biphenyls (PCBs)

No potential sources of PCBs were observed during the site visit.

3.0 SURVEY SUMMARY AND RECOMMENDATIONS

Based on our survey, two (2) asbestos containing materials (ACM) and no lead containing paints were identified within the subject building. The possible presence of limited quantities of acrylonitrile, arsenic, benzene, ethylene oxide, isocyanates, lead and silica in the aforementioned building materials do not pose a concern, provided precautionary measures are followed during future proposed demolition works.

Asbestos

Based on the observations made during the February 2, 2021 site inspection, combined with the analytical test results, the following ACMs were identified in the subject building.

- ❒ **Drywall joint compound throughout the structure at 91 Holland Avenue.**
- ❒ **Beige vinyl floor tiles located at the rear entrance of 91 Holland Avenue.**

All ACMs must be removed from the subject buildings prior to being disturbed by any planned renovation or demolition activities. If any insulation materials are encountered in the wall or ceiling cavities that have not been identified in this report, we request that we be notified to allow for the testing of this material. In the event that other suspected asbestos containing materials are discovered, all work is to cease until samples can be collected and analysed. Alternatively, these materials can be treated as asbestos containing and be disposed/managed of accordingly.

The removal, disturbance, or encapsulation of the identified ACMs throughout the subject building must be done in accordance with the procedures outlined in O.Reg. 278/05 and conducted by a contractor specialized in this type of work. A full copy of O.Reg. 278/05, made under the Occupational Health and Safety Act, can be found at http://www.elaws.gov.on.ca/html/regs/english/elaws_regs_050278_e.htm.

Silica

Silica is expected to be present in various building materials, including concrete and cement parging. When potential silica containing materials (as identified in this report) are to be disturbed, precautions should be taken to minimize dust creation (wetting surfaces) and protect workers, such as providing appropriate dust masks. Further information can be obtained from the document entitled "Guideline – Silica on Construction Projects" (April 2011), prepared by the Occupational Health and Safety Branch of the Ontario Ministry of Labour.

4.0 STATEMENT OF LIMITATIONS

A designated substance survey was completed at 91 and 93 Holland Avenue, located 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 in conjunction with our analytical test results. 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.

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

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.

Mark St Pierre, B.Eng.

Mark D'Arcy, P.Eng.

Report Distribution:

- ❑ Nicholson Gluckstein
- ❑ Paterson Group Inc.

Attachments:

- ❑ Laboratory Certificates of Analysis

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Certificate of Analysis

Paterson Group Consulting Engineers

154 Colonnade Rd South
Nepean, ON K2E 7J5
Attn: Mark St. Pierre

Client PO: 31906
Project: PE5171
Custody: 38795, 44558, 44559

Report Date: 11-Feb-2021
Order Date: 5-Feb-2021

Order #: 2106553

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

Paracel ID	Client ID
2106553-01	DWJC 1
2106553-02	DWJC 2
2106553-03	DWJC 3
2106553-04	DWJC 4
2106553-05	DWJC 5
2106553-06	DWJC 6
2106553-07	DWJC 7
2106553-08	DWJC 8
2106553-09	DWJC 9
2106553-10	DWJC 10
2106553-11	DWJC 11
2106553-12	DWJC 12
2106553-13	DWJC 13
2106553-14	DWJC 14
2106553-15	STUC 1
2106553-16	STUC 2
2106553-17	STUC 3
2106553-18	STIP 1
2106553-19	STIP 2
2106553-20	STIP 3
2106553-21	VFT 1
2106553-22	VFT 2
2106553-23	VFT 3
2106553-24	INS 1
2106553-25	INS 2
2106553-26	INS 3

Approved By:

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

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31906

Report Date: 11-Feb-2021

Order Date: 5-Feb-2021

Project Description: PE5171

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2106553-01	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 1**	
					Non-Fibers	100
2106553-02	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 2**	
					Non-Fibers	100
2106553-03	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 3**	
					Non-Fibers	100
2106553-04	04-Feb-21	Off-white	Drywall Joint Compound	**Yes**	**Client ID: DWJC 4**	
					Chrysotile	2
					Non-Fibers	98
2106553-05	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 5**	
					Non-Fibers	100
2106553-06	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 6**	
					Non-Fibers	100
2106553-07	04-Feb-21	Grey/Beige	Drywall Joint Compound	**Yes**	**Client ID: DWJC 7** [Z-01]	
					Chrysotile	1
					Non-Fibers	99
2106553-08	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 8**	
					Non-Fibers	100
2106553-09	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 9**	
					Non-Fibers	100
2106553-10	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 10**	
					Non-Fibers	100
2106553-11	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 11**	
					Non-Fibers	100

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31906

Report Date: 11-Feb-2021

Order Date: 5-Feb-2021

Project Description: PE5171

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2106553-12	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 12**	
					Non-Fibers	100
2106553-13	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 13**	
					Non-Fibers	100
2106553-14	04-Feb-21	Grey	Drywall Joint Compound	No	**Client ID: DWJC 14**	
					Non-Fibers	100
2106553-15	04-Feb-21	Grey	Stucco	No	**Client ID: STUC 1**	
					Non-Fibers	100
2106553-16	04-Feb-21	Grey	Stucco	No	**Client ID: STUC 2**	
					Non-Fibers	100
2106553-17	04-Feb-21	Grey	Stucco	No	**Client ID: STUC 3**	
					Non-Fibers	100
2106553-18	04-Feb-21	White	Stipple	No	**Client ID: STIP 1**	
					Non-Fibers	100
2106553-19	04-Feb-21	White	Stipple	No	**Client ID: STIP 2**	
					Non-Fibers	100
2106553-20	04-Feb-21	White	Stipple	No	**Client ID: STIP 3**	
					Non-Fibers	100
2106553-21	04-Feb-21	Grey	Vinyl Floor Tile	**Yes**	**Client ID: VFT 1**	
					Chrysotile	1
					Non-Fibers	99
2106553-22	04-Feb-21	Grey	Vinyl Floor Tile		**Client ID: VFT 2**	
					not analyzed, positive stop	
2106553-23	04-Feb-21	Grey	Vinyl Floor Tile		**Client ID: VFT 3**	
					not analyzed, positive stop	

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Order #: 2106553

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31906

Report Date: 11-Feb-2021

Order Date: 5-Feb-2021

Project Description: PE5171

Asbestos, PLM Visual Estimation **MDL - 0.5%**

Paracel ID	Sample Date	Colour	Description	Asbestos Detected	Material Identification	% Content
2106553-24	04-Feb-21	Grey	Insulation	No	**Client ID: INS 1**	
					Non-Fibers	100
2106553-25	04-Feb-21	Grey	Insulation	No	**Client ID: INS 2**	
					Non-Fibers	100
2106553-26	04-Feb-21	Grey	Insulation	No	**Client ID: INS 3**	
					Non-Fibers	100

**** Analytes in bold indicate asbestos mineral content.**

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Lab Accreditation	*	Analysis Date
Asbestos, PLM Visual Estimation	AppE to SubE of 40CFR Part753 and EPA/600/R-93/116	2 - Ottawa West	NVLAP 200812-0		11-Feb-21

* 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.

Ottawa West Lab: 25 Northside Rd, Unit C Nepean, Ontario K2H 8S1

Qualifier Notes

Sample Qualifiers :

Z-01: Layers inseperable

Work Order Revisions | Comments

None

PARACEL LABORATORIES LTD.

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Chain of Custody
(Lab Use Only)
№ 38795

Page 1 of 2

Client Name: Paterson Group
Contact Name: Mark St Pierre
Address: 154 Colonnade Road South
Telephone: 613-226-7381

Project Reference: PE 5171
Quote #:
PO #: 31906
Email Address: mstpierre@patersongroup.ca

Turnaround Time:
☐ Immediate ☐ 1 Day
☐ 4 Hour ☐ 2 Day
☐ 8 Hour ☐ 3 Day
☑ Regular
Date Required: _____

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☑ Bulk ☐ Tape Lift ☐ Swab ☐ Other **Regulatory Guideline:** ☑ ON ☐ QC ☐ AB ☐ SK ☐ Other:

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☑ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number: 2106553

	Sample ID	Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk: Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) *	Positive Stop?
1	DWJC1	Feb 4, 2021		PLM	Drywall Joint Compound	☐
2	DWJC2					☐
3	DWJC3					☐
4	DWJC4					☐
5	DWJC5					☐
6	DWJC6					☐
7	DWJC7					☐
8	DWJC8					☐
9	DWJC9					☐
10	DWJC10					☐
11	DWJC11					☐
12	DWJC12					☐

* If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.

Method of Delivery: PARACEL COURIER

Comments:

Relinquished By (Sign):	Received at Depot: A. LEDUC	Received at Lab:	Verified By:
Relinquished By (Print): Mark St Pierre	Date/Time: 05/02/21 2:01 pm	Date/Time: Feb 8/21 7:72	Date/Time: Feb 8/21 7:42
Date/Time: Feb 4, 2021			

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Paracel ID: 2106553

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Chain of Custody
(Lab Use Only)
№ 44558

Page 1 of 3

Client Name: Paterson Group	Project Reference: PE 5171
Contact Name: Mark St Pierre	Quote #:
Address: 154 Colonnade Road South	PO #: 31906
Telephone: 613-226-7381	Email Address: mstpierre@patersongroup.ca

Turnaround Time:
☐ Immediate ☐ 1 Day
☐ 4 Hour ☐ 2 Day
☐ 8 Hour ☐ 3 Day
☑ Regular
Date Required: _____

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☑ Bulk ☐ Tape Lift ☐ Swab ☐ Other **Regulatory Guideline:** ☑ ON ☐ QC ☐ AB ☐ SK ☐ Other:

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☑ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number: 2106553

	Sample ID	Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk: Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) *	Positive Stop?
1	DWJC 13	Feb 4, 2021		PLM	~~DWJC~~ Drywall Joint Compound	☐
2	DWJC 14	↓	↓	↓	↓	☐
3	STUC 1				STUCCO	☐
4	STUC 2				↓	☐
5	STUC 3				↓	☐
6	STIP 1				Stipple Plaster	☐
7	STIP 2				↓	☐
8	STIP 3				↓	☐
9	VFT 1 } Group				Vinyl Floor Tile	☑
10	VFT 2				↓	☑
11	VFT 3				↓	☑
12	INS 1 2 Group w/ INS 2 & INS 3	↓		↓	Insulation Board	☑

* If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign):	Received at Depot: A. DENISE	Received at Lab:	Verified By:
Relinquished By (Print): Mark St Pierre			
Date/Time: Feb. 4. 2021	Date/Time: 05/02/21 2:01 pm	Date/Time: Feb 8/21 7:32	Date/Time: Feb 8/21 7:42

PARACEL LABORATORIES LTD.

Paracel ID: 2106553

St. Laurent Blvd.
Ontario K1G 4J8
613-731-9577
info@paracellabs.com

Chain of Custody
(Lab Use Only)
№ 44559

Client Name: Paterson Group	Project Reference: PE5171
Contact Name: Mark St Pierre	Quote #:
Address: 154 Colonnade Road South	PO #: 31906
Telephone: 613-226-7381	Email Address: mstpierre@patersongroup.ca

Turnaround Time:
☐ Immediate ☐ 1 Day
☐ 4 Hour ☐ 2 Day
☐ 8 Hour ☐ 3 Day
☑ Regular
Date Required: _____

ASBESTOS & MOLD ANALYSIS

Matrix: ☐ Air ☑ Bulk ☐ Tape Lift ☐ Swab ☐ Other **Regulatory Guideline:** ☑ ON ☐ QC ☐ AB ☐ SK ☐ Other:

Analyses: ☐ Microscopic Mold ☐ Culturable Mold ☐ Bacteria GRAM ☐ PCM Asbestos ☑ PLM Asbestos ☐ Chatfield Asbestos ☐ TEM Asbestos

Paracel Order Number: 2106553

	Sample ID	Sampling Date	Air Volume (L)	Analysis Required	Asbestos - Bulk: Identify Distinct Building Materials to Be Analyzed (if not specified, all materials identified will be analyzed) *	Positive Stop?
1	INS2 } Group	Feb 4, 2021		PLM	Insulation Board	☑
2	INS3 }	↓		↓	↓	☑
3						☐
4						☐
5						☐
6						☐
7						☐
8						☐
9						☐
10						☐
11						☐
12						☐

* If left blank, all distinct materials identified in the samples will be analyzed and reported separately as per EPA 600/R-93/116. Additional charges will apply.

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign):	Received at Depot: M. LOUISE	Received at Lab:	Verified By:
Relinquished By (Print): Mark St Pierre			
Date/Time: Feb. 4, 2021	Date/Time: 05/02/21 2:01 pm	Date/Time: Feb 8/21 7:32	Date/Time: Feb 8/21 7:42

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Certificate of Analysis

Paterson Group Consulting Engineers

154 Colonnade Rd South
Nepean, ON K2E 7J5
Attn: Mark St. Pierre

Client PO: 31906
Project: PE5171
Custody: 59263

Report Date: 11-Feb-2021
Order Date: 5-Feb-2021

Order #: 2106558

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

Paracel ID	Client ID
2106558-01	PT1
2106558-02	PT2
2106558-03	PT3
2106558-04	PT4
2106558-05	PT5

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 11-Feb-2021

Client: Paterson Group Consulting Engineers

Order Date: 5-Feb-2021

Client PO: 31906

Project Description: PE5171

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-OES	based on MOE E3470, ICP-OES	11-Feb-21	11-Feb-21

Sample and QC Qualifiers Notes

1- Gen-19 : Complete separation of paint from substrate not possible for this sample and a small amount of substrate has been included in the paint digestion.

2- QR-01 : Duplicate RPD is high, however, the sample result is less than 10x the MDL.

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.

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 31906

Report Date: 11-Feb-2021

Order Date: 5-Feb-2021

Project Description: PE5171

Sample Results

Lead

Matrix: Paint

Sample Date: 04-Feb-21

Paracel ID	Client ID	Units	MDL	Result
2106558-01	PT1	ug/g	20	<20
2106558-02	PT2	ug/g	20	<20
2106558-03	PT3	ug/g	20	<20
2106558-04	PT4	ug/g	20	<20
2106558-05	PT5	ug/g	20	<20 [1]

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Lead	**ND**	**20**	**ug/g**						
Matrix Duplicate									
Lead	**42**	**20**	**ug/g**	**95**			**NC**	**30**	**QR-01**
Matrix Spike									
Lead	294	20.00	ug/g	48	98.6	70-130			

PARACEL LABORATORIES LTD.

Paracel ID: 2106558

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2106558	№ 59263

Client Name: Paterson Group	Project Ref: PE5171	Page 1 of 1
Contact Name: Mark St Pierre	Quote #:	**Turnaround Time**
Address: 154 Colonnade Road South	PO #: 31906	☐ 1 day ☐ 3 day
	E-mail: mstpierre@patersongroup.ca	☐ 2 day ☑ Regular
Telephone: 613-226-7381		Date Required:

Regulation 153/04			Other Regulation	
☐ Table 1	☐ Res/Park	☐ Med/Fine	☐ REG 558	☐ PWQO
☐ Table 2	☐ Ind/Comm	☐ Coarse	☐ CCME	☐ MISA
☐ Table 3	☐ Agri/Other		☐ SU - Sani	☐ SU - Storm
☐ Table			Mun:	
For RSC: ☐ Yes ☐ No			☐ Other:	

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Lead Paint
1	PT1	P		1	Feb4.2021		✓
2	PT2	P		1	↓		✓
3	PT3	P		1	↓		✓
4	PT4	P		1	↓		✓
5	PT5	P		1	↓		✓
6							
7							
8							
9							
10							

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign): [signature]	Received By Driver/Depot: [signature]	Received at Lab: Sineeporn Dokmai	Verified By: [signature]
Relinquished By (Print): Mark St Pierre	Date/Time: 05/02/21 2:01	Date/Time: Feb 05, 2021 02.40	Date/Time: 2-5-21 5:24
Date/Time: Feb. 4, 2021	Temperature: °C	Temperature: °C	pH Verified: ☐ By: