

APPENDIX A

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SASKATOON

220 3rd Avenue South,
Suite 413,
Saskatoon, Saskatchewan
S7K 1M1
T: 306.343.5500
TF: 1.866.919.8899
F: 306.343.3601

REGINA

369 Park Street,
Regina, Saskatchewan
S4N 5B2
T: 306.522.6100
TF: 1.866.919.1861
F: 306.522.6101

WINNIPEG

300 - 1600 Ness Avenue,
Madison Square
Winnipeg, Manitoba
R3J 3W7
T: 204.783.1276
TF: 1.866.919.4531
F: 204.478.4940

LONDON

700 Richmond Street,
Suite 307,
London, Ontario
N6A 5C7
T: 519.452.7700
TF: 1.866.919.4531
F: 519.452.1712

OTTAWA

5310 Canotek Road,
Unit 30,
Ottawa, Ontario
K1J 9N5
T: 613.824.8900
TF: 1.866.919.4530
F: 613.824.8901

IQALUIT

P.O. Box 957,
Iqaluit, Nunavut
X0A 0H0
T: 867.979.3300
TF: 1.866.919.4533
F: 867.979.3302

**DESIGNATED SUBSTANCE SURVEY
811-813 FIRST STREET EAST &
348 PRINCE ARTHUR STREET
CORNWALL, ONTARIO
FILE #: 9798-01-10749**

**PRODUCED FOR:
SEIZED PROPERTY MANAGEMENT DIRECTORATE
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

**PRODUCED BY:
CONCENTRIC ASSOCIATES INTERNATIONAL INCORPORATED**

**CONCENTRIC REFERENCE NUMBER:
12-4556**

**DATE:
SEPTEMBER 20, 2012**



Executive Summary

Public Works and Government Services Canada Seized Property Management Directorate (PWGSC SPMD) retained Concentric Associates International Incorporated (Concentric) to complete a Designated Substance Survey at the residential triplex located at 811-813 First Street East and 348 Prince Arthur Street in Cornwall, Ontario (hereafter referred to as ‘the site’). The purpose of this designated substance survey was to identify the types and locations of designated substances within the site in accordance with the Ontario Occupational Health and Safety Act.

The following eleven designated substances are defined under the Ontario Regulation 490/09 “Designated Substances”, published by the Ministry of Labour:

- Acrylonitrile
- Arsenic
- Asbestos
- Benzene
- Coke Oven Emissions
- Ethylene Oxide
- Isocyanates
- Lead
- Mercury
- Silica
- Vinyl Chloride

This Designated Substance Survey considered all designated substances; however, sampling and analysis of building materials at the site was limited to asbestos and lead. All other designated substances were identified visually as appropriate.

Polychlorinated Biphenyls (PCB’s) are not currently listed as a designated substance under Ontario Regulation 490/09 “Designated Substances” however, PCB containing materials were included in this designated substance because they must be handled and disposed of in accordance with provincial and federal regulations.

The following are the significant conclusions and recommendations resulting from the DSS (recommendations are in *Italics*):

Mercury

Liquid mercury was observed to be present at the site in four non-programmable thermostats.

Direct skin contact with the mercury or inhalation of mercury vapour should be avoided. The thermostats should be disposed of in accordance with O. Reg 347/11.

Silica

Silica was identified at the site in building materials such as brick, concrete, and mortar.



Cutting, grinding, drilling or the demolition of materials containing silica should be completed following guidelines provided by the Ministry of Labour entitled “Silica on Construction Projects”.

Asbestos

Asbestos was identified at concentrations greater than 0.5% in the following materials at the site:

- Vinyl floor tile with a pattern consisting of pink and green squares collected from the storage room of 348 Prince Arthur Street
- Vinyl floor tile with a pattern consisting of beige squares collected from underneath the carpet in the bedroom of 348 Prince Arthur Street
- Vinyl floor tile with a pattern consisting of light brown circles collected from under the carpet in the hallway and bedrooms of 811 First Street East
- Linoleum with a pattern consisting of dark brown squares with a yellow design collected from under the carpet in the kitchen, living room, bedroom and bathroom of 813 First Street East
- Drywall joint compound (all three units).
- Brick mortar collected from the decorative wall in the entranceway of 811 First Street East

All other samples collected and submitted for analysis returned no detectable levels of asbestos (i.e. below the method detection limit).

Refer to **Figures S1, S2 and S3** in **Appendix C** for locations of asbestos containing materials.

All asbestos containing materials encountered during demolition activities must be dealt with according to O. Reg 278/05. Disposal of asbestos containing material should be completed in accordance with O. Reg 347/11.

Lead

Paints at the site which were found to contain greater than 90 mg/kg of lead (and are therefore considered lead-amended) include:

- White and green paint collected from the trim, joists and door jams on the front porch;
- White and beige paint collected from the front door of 813 First St. E.;
- Red and green paint collected from behind the siding on the front porch;
- Blue paint collected from the front porch railing and floor;



- White paint collected from the tin siding on the front porch;
- White paint collected from the living area walls of 813 First St. E.;
- White and yellow paint collected from the front door step of 813 First St. E.;
- White paint (multiple layers) collected from the closet of 813 First St. E.;
- Pink paint collected from the kitchen ceiling of 813 First St. E.;
- Yellow and green paint collected from the bathroom ceiling (on wood above drywall) of 348 Prince Arthur St.;
- White paint collected from the ceiling (wood panels) in the bedroom of 811 First St. E.;
- Beige and white paint collected from the ceiling (drywall) in the kitchen and living room of 811 First St. E.;
- Yellow paint collected from the ceiling (drywall) in the kitchen of 811 First St. E.; and
- Green paint collected from the exterior wood siding.

Lead is also likely present in relatively small quantities in mortar, concrete and soldering joints in plumbing work.

Concentric recommends that any demolition work affecting any of these lead containing materials should be carried out in a controlled manner and in conjunction with the Ontario Ministry of Labour guideline entitled “Lead on Construction Projects” (April 2011).

General

PCB's, coke oven emissions, acrylonitrile, arsenic, benzene, ethylene, oxide, isocyanates, or vinyl chloride were not identified at the site or are in stable form and do not require special handling.

It should be noted that designated substances may exist between walls or behind other enclosures/barriers, which would not have been visible during the survey. Furthermore, inconsistencies in construction as well as later renovations, repairs and additions to the building may result in a deviation in the pattern of designated substance use within the building. As such, without sampling every building material, it is not possible to individually characterize every material present. Also, designated substances may be present in areas which were inaccessible to the consultant.

Please note that updates and additional assessment and/or sampling may be required if additional suspect materials not identified in this report are discovered.



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1. INTRODUCTION

Public Works and Government Services Canada Seized Property Management Directorate (PWGSC SPMD) retained Concentric Associates International Incorporated (Concentric) to complete a Designated Substance Survey (DSS) at the residential triplex located at 811-813 First Street East and 348 Prince Arthur Street in Cornwall, Ontario (herein referred to as the 'site'). The purpose of this survey was to determine the types and locations of designated substances at the site which may be disturbed during demolition activities.

2. BACKGROUND

The property is a two storey, wood framed residential triplex with painted metal siding. The site is located at 811-813 First Street East and 348 Prince Arthur Street, in the City of Cornwall.

It is Concentric's understanding that the residence was seized in accordance with the Seized Property Management Act and PWGSC SPMD has determined that demolition is required in order to effectively remediate the residence. A DSS is required in order to identify the types and locations of designated substances at the site which may be disturbed during demolition activities.

3. SCOPE OF ASSESSMENT

The objective of the DSS was to verify and document the location of designated substances at the site. The following eleven designated substances are defined under the Ontario Regulation 490/09 "Designated Substances", published by the Ministry of Labour:

- Acrylonitrile
- Arsenic
- Asbestos
- Benzene
- Coke Oven Emissions
- Ethylene Oxide
- Isocyanates
- Lead
- Mercury
- Silica
- Vinyl Chloride

This DSS considered all designated substances; however, sampling and analysis of building materials at the site was limited to asbestos and lead. All other designated substances were identified visually as appropriate.

Polychlorinated Biphenyls (PCB's) are not currently listed as a designated substance under Ontario Regulation 490/09 "Designated Substances" however, PCB's were included in this DSS because they must be handled and disposed of in accordance with provincial (Ontario Regulation 362 "Waste Management – PCB's") and federal (Canadian Environmental Protection Act "PCB's Regulations") regulations.



4. REGULATORY AND GUIDANCE FRAMEWORK

The following regulatory framework and guidance documents apply to this DSS:

1. Ministry of Labour – Ontario Occupational Health and Safety Act R.S.O. 1990 (OHSA) Section 30.

Section 30 of the OHSA published by the Ministry of Labour states the following: “Before beginning a project, the Owner shall determine whether any designated substances are present at the project site and shall prepare a list of all designated substances that are present at the site.” A designated substance is defined by the OHSA as “a biological, chemical or physical agent or combination thereof prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled.”

2. Ministry of Labour – Occupational Health and Safety Act Ontario Regulation 490/09 “Designated Substances” (O. Reg 490/09), amended by Ontario Regulation 259/10 (O. Reg 259/10).

O. Reg 490/09, amended by O. Reg 259/10, has published specific occupational exposure limits for the eleven designated substances that require assessment and a control program to ensure compliance. Exposure to designated substances is primarily through inhalation and limits are provided as concentrations of the designated substance in air. Limits are provided for a time weighted average, short term exposure limit and/or the maximum exposure not to be exceeded even momentarily (ceiling limit).

Although the application of O. Reg 490/09 does not directly apply to renovation projects, employers remain responsible to protect the health of their workers and comply with the OHSA to take “every precaution reasonable in the circumstances for the protection of a worker”.

3. Ministry of Labour - Occupational Health and Safety Act Ontario Regulation 278/05 “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations” (O. Reg 278/05).

The sampling, disturbance, handling and removal of asbestos containing materials are controlled by O. Reg 278/05. O. Reg 278/05 defines an asbestos containing material as that which “contains 0.5 per cent or more asbestos by dry weight”. Prior to the demolition of all or part of a building, all asbestos-containing materials that may be disturbed during the work must be removed to the extent practicable and will be subject to special handling and disposal. Asbestos removal can be classified into Type 1 Operations with the lowest exposure risk, Type 2 Operations where the risk is neither classified as Type 1 or Type 3 and Type 3



Operations where there is a potential to generate high concentrations of airborne asbestos fibres.

4. Health Canada - Canada Consumer Product Safety Act – “Surface Coatings Materials Regulations” (SOR 2005-109).

Although not specific to demolition and renovation projects, The Surface Coatings Materials Regulations (SOR 2005-109) states that “the concentration of total lead present in a surface coating material must not be more than 90 mg/kg” (dry weight) or it must display lead content information on the label. A surface coating material is defined by this regulation as “paint or other similar material that dries to a solid film when a layer of it is applied to a surface. It does not include a material that becomes a part of the substrate.” For the purposes of this DSS, paints containing concentrations of lead greater than 90 mg/kg will be considered lead containing.

5. Ministry of the Environment – Environmental Protection Act R.R.O. 1990, Ontario Regulation 362 – “Waste Management – PCB’s” (O. Reg 362), amended by Ontario Regulation 232/11 (O. Reg 232/11).

The definition, management, handling, transport and disposal of PCB’s are controlled by O. Reg 362, published by the Ministry of the Environment, amended by O. Reg 232/11, O. Reg 362 defines PCB materials as “materials containing PCB’s at a concentration of more than fifty parts per million by weight whether the material is liquid or not”. Also, PCB waste is defined as “PCB equipment, PCB liquid or PCB material” however; it does not include an electrical capacitor that has never contained over one kilogram of PCB’s.

6. Canadian Environmental Protection Act “PCB Regulations” (SOR/2008-273), amended SOR/210-57.

The management, handling and storage of PCB’s are also controlled federally under “PCB Regulations” (SOR/2008-273).

7. Ministry of the Environment – Environmental Protection Act R.R.O. 1990, Regulation 347 “General – Waste Management” (O. Reg 347), amended by Ontario Regulation 234/11 (O. Reg 234/11).

Waste disposal is controlled by O. Reg 347, published by the Ministry of the Environment and amended by O. Reg 234/11. O. Reg 347 defines asbestos waste as “solid or liquid waste that results from the removal of asbestos-containing construction or insulation materials or the manufacture of asbestos-containing products and contains asbestos in more than a trivial amount or proportion”. O. Reg 347 also defines common mercury waste as “electrical switches, thermostats or fluorescent lamps that contain mercury and that are damaged, worn out or



discarded". In addition to the above, O. Reg 347 has also published disposal treatment requirements for waste that contains any of the eleven designated substances.

8. Ministry of Labour – Occupational Health and Safety Branch – Guideline – “Lead on Construction Projects”.

Guidance for the handling of lead containing products during renovation projects is outlined in the Ontario Ministry of Labour document entitled “Lead on Construction Projects”. This guideline has been prepared to raise the awareness of employers and workers in the construction industry of the hazards posed by lead in construction projects and the measures and procedures that should be followed to control those hazards.

9. Ministry of Labour – Occupational Health and Safety Branch – Guideline – “Silica on Construction Projects”.

Guidance for the handling of silica containing products during construction projects is outlined in the Ontario Ministry of Labour document entitled “Silica on Construction Projects”. This guideline has been prepared to raise the awareness of employers and workers in the construction industry of the hazards posed by silica in construction projects and the measures and procedures that should be taken to control those hazards.

5. ASSESSMENT METHODOLOGY

Representatives of Concentric were present at the site for assessment purposes on September 5, 2012. The site assessment comprised a visual assessment and sampling of building materials for analysis of lead or asbestos content (as appropriate).

5.1. Visual Assessment

The visual inspection of the site was conducted to identify the potential for the presence of designated substances. Representatives of Concentric completed the DSS by entering all accessible rooms within the site. Each room was first visually inspected and suspected designated substances were identified and samples were collected as applicable.

Mercury, silica and PCB's as well as materials with potential to contain asbestos and lead were identified based on appearance, age, and knowledge of historic applications. It should be noted that no destructive investigations or openings were performed in areas of drywall, plaster, concrete, etc. or where there was no absolute access point. As such it is possible that asbestos or other hazardous substances may exist between walls, above ceilings or in other enclosures or barriers that would not have been visible to the consultant during the survey.



Coke oven emissions, acrylonitrile, arsenic, benzene, ethylene, oxide, isocyanates, and vinyl chloride are not typically found in residential dwellings (or are in stable form) and were not addressed during the designated substance survey.

5.2. Asbestos

The collection of samples was completed in accordance with Table 1 (Bulk Material Samples) of Ontario Regulation 278/05.

The bulk samples collected were placed in sealable plastic bags, labelled, and delivered to Paracel Laboratories Ltd. (Paracel) in Ottawa, Ontario under chain of custody procedures for analysis for asbestos content. All samples were analyzed in accordance with Ontario Regulation 278/05 via the EPA 600/R-93/116 Method. Paracel is accredited by the NIST (National Institute of Standards and Technology) National Voluntary Laboratory Accreditation Program (NVLAP) to perform the analysis of bulk asbestos samples.

A total of 76 samples were collected from within the site and submitted for analysis.

Field notes detailing sample identification, location and descriptions have been attached for your reference in *Appendix A*. A summary of the types and number of samples collected are presented in *Table 1* in *Appendix B*. Sample identification and locations are illustrated in *Figures S1, S2* and *S3*, in *Appendix C*.

It should be noted that the asbestos containing materials survey did not include the following due to health hazard or inaccessibility to the surveyor:

- Components or wiring within motor control centers, breakers, motors, lights, etc.;
- Concrete levelling compound for floors;
- Insulation on or in high voltage wiring;
- Mastics, adhesives and tar on roofs, beneath floor, etc.;
- Mechanical packing, ropes, gaskets, etc.; and
- Materials within wall cavities or confined spaces.

5.3. Lead

In the absence of specific provincial guidelines and regulations regarding lead containing material sample collection, sampling requirements of the American Society of Testing and Materials (ASTM) Method E1729-05 Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination were followed. Immediately following collection, samples were placed in dedicated sealable polyethylene bags and labelled with the project name and number, date and sample location identification. The samples were delivered to Paracel for analysis via EPA Method 6020 Inductively Coupled Plasma-Mass Spectrometry (ICP-MS) to determine the concentration of lead.



A total of 20 paint samples were collected from within the site and submitted for analysis.

Field notes detailing sample identification, location and descriptions have been attached for reference in **Appendix A**. A summary of the types of samples collected are presented in **Table 2** in **Appendix B**. Sample identification and locations on the main floor and the second floor are illustrated in **Figures S1, S2 and S3**, in **Appendix C**.

6. RESULTS

6.1. Visual Assessment

The visual assessment identified mercury and silica within the site.

6.1.1. Mercury

Four non-programmable thermostats were observed to contain liquid mercury.

6.1.2. Silica

Silica exists in several forms, of which crystalline silica is of most concern. Worker exposure to silica is a concern because silica is present in many construction materials including brick, concrete, and mortar. These construction materials were identified within the site during the designated substance survey.

6.2. Asbestos

All bulk samples were analyzed by Paracel in accordance with O. Reg. 278/05. Results from the analysis are detailed in the Laboratory Certificates of Analysis which are presented in **Appendix D**. Photos of all asbestos containing materials are included in **Appendix E**.

The analysis returned the following results:

- Vinyl floor tile with a pattern consisting of pink and green squares collected from the storage room of 348 Prince Arthur Street contains 15.79% Chrysotile asbestos (Sample ID # VF4).
- Vinyl floor tile with a pattern consisting of beige squares collected from underneath the carpet in the bedroom of 348 Prince Arthur Street contains 4.11% Chrysotile asbestos (Sample ID VF7).
- Vinyl floor tile with a pattern consisting of light brown circles collected from under the carpet in the hallway and bedrooms of 811 First Street East contains 0.81% Chrysotile asbestos (Sample ID VF10).



- Linoleum with a pattern consisting of dark brown squares with a yellow design collected from under the carpet in the kitchen, living room, bedroom and bathroom of 813 First Street East contains 4.37% Chrysotile asbestos (Sample ID lino1).
- Drywall joint compound collected from 348 Prince Arthur Street contains 5% Chrysotile asbestos (Sample ID DJC2).
- Drywall joint compound collected from 811 First Street East contains 1% Chrysotile asbestos (Sample ID DJC3).
- Brick mortar collected from the decorative wall in the entranceway of 811 First Street East contains 1% Chrysotile asbestos (Sample ID Int.Brick1).

All other samples collected and submitted for analysis returned no detectable levels of asbestos (i.e. below the method detection limit).

6.3. Lead

Lead paint chip samples were analyzed by Paracel to determine the concentration of lead. Results from the analysis are detailed in the Laboratory Certificates of Analysis which are presented in *Appendix D*.

Lead was detected in all 20 paint samples analysed. Paints which were found to contain greater than 90 mg/kg of lead include:

- White and green paint collected from the trim, joists and door jams on the front porch;
- White and beige paint collected from the front door of 813 First St. E.;
- Red and green paint collected from behind the siding on the front porch;
- Blue paint collected from the front porch railing and floor;
- White paint collected from the tin siding on the front porch;
- White paint collected from the living area walls of 813 First St. E.;
- White and yellow paint collected from the front door step of 813 First St. E.;
- White paint (multiple layers) collected from the closet of 813 First St. E.;
- Pink paint collected from the kitchen ceiling of 813 First St. E.;
- Yellow and green paint collected from the bathroom ceiling (on wood above drywall) of 348 Prince Arthur St.;
- White paint collected from the ceiling (wood panels) in the bedroom of 811 First St. E.;



- Beige and white paint collected from the ceiling (drywall) in the kitchen and living room of 811 First St. E.;
- Yellow paint collected from the ceiling (drywall) in the kitchen of 811 First St. E.; and
- Green paint collected from the exterior wood siding.

During the DSS, Concentric observed that many layers of paint have been applied to several surfaces within the site. Paints that were recently applied may be covering older paints, which have the potential to contain lead.

A summary of the laboratory analysis including lead containing materials within the site, their colour and concentration are presented in **Table 2** in **Appendix B**. Lead paint chip sample locations on the main floor and the second floor are illustrated in **Figures S1, S2** and **S3** in **Appendix C**.

It should also be noted that lead is likely present in relatively small quantities in mortar and concrete as well as in soldering joints on plumbing work. Workers should avoid the creation of dust when dealing with lead-containing products.

7. CONCLUSIONS AND RECOMMENDATIONS

The following are the significant conclusions and recommendations resulting from the DSS (recommendations are in *Italics*):

7.1. Mercury

Liquid mercury was observed to be present at the site in four non-programmable thermostats.

Direct skin contact with the mercury or inhalation of mercury vapour should be avoided. The thermostats should be disposed of in accordance with O. Reg 347/11.

7.2. Silica

Silica was identified at the site in building materials such as brick, concrete, and mortar.

Cutting, grinding, drilling or the demolition of materials containing silica should be completed following guidelines provided by the Ministry of Labour entitled "Silica on Construction Projects".



7.3. Asbestos

Asbestos was identified at concentrations greater than 0.5% in the following materials at the site:

- Vinyl floor tile with a pattern consisting of pink and green squares collected from the storage room of 348 Prince Arthur Street
- Vinyl floor tile with a pattern consisting of beige squares collected from underneath the carpet in the bedroom of 348 Prince Arthur Street
- Vinyl floor tile with a pattern consisting of light brown circles collected from under the carpet in the hallway and bedrooms of 811 First Street East
- Linoleum with a pattern consisting of dark brown squares with a yellow design collected from under the carpet in the kitchen, living room, bedroom and bathroom of 813 First Street East
- Drywall joint compound (in all three units due to the homogeneity of the material)
- Brick mortar collected from the decorative wall in the entranceway of 811 First Street East

All other samples collected and submitted for analysis returned no detectable levels of asbestos (i.e. below the method detection limit).

Refer to **Figures S1, S2** and **S3** in **Appendix C** for locations of asbestos containing materials.

All asbestos containing materials encountered during demolition activities must be dealt with according to O. Reg 278/05. Disposal of asbestos containing material should be completed in accordance with O. Reg 347/11.

7.4. Lead

Paints at the site which were found to contain greater than 90 mg/kg of lead (and are therefore considered lead-amended) include:

- White and green paint collected from the trim, joists and door jams on the front porch;
- White and beige paint collected from the front door of 813 First St. E.;
- Red and green paint collected from behind the siding on the front porch;



- Blue paint collected from the front porch railing and floor;
- White paint collected from the tin siding on the front porch;
- White paint collected from the living area walls of 813 First St. E.;
- White and yellow paint collected from the front door step of 813 First St. E.;
- White paint (multiple layers) collected from the closet of 813 First St. E.;
- Pink paint collected from the kitchen ceiling of 813 First St. E.;
- Yellow and green paint collected from the bathroom ceiling (on wood above drywall) of 348 Prince Arthur St.;
- White paint collected from the ceiling (wood panels) in the bedroom of 811 First St. E.;
- Beige and white paint collected from the ceiling (drywall) in the kitchen and living room of 811 First St. E.;
- Yellow paint collected from the ceiling (drywall) in the kitchen of 811 First St. E.; and
- Green paint collected from the exterior wood siding.

Lead is also likely present in relatively small quantities in mortar, concrete and soldering joints in plumbing work.

Concentric recommends that any demolition work affecting any of these lead containing materials should be carried out in a controlled manner and in conjunction with the Ontario Ministry of Labour guideline entitled “Lead on Construction Projects” (April 2011).

7.5. General

PCB’s, coke oven emissions, acrylonitrile, arsenic, benzene, ethylene, oxide, isocyanates, or vinyl chloride were not identified at the site or are in stable form and do not require special handling.

It should be noted that designated substances may exist between walls or behind other enclosures/barriers, which would not have been visible during the survey. Furthermore, inconsistencies in construction as well as later renovations, repairs and additions to the building may result in a deviation in the pattern of designated



substance use within the building. As such, without sampling every building material, it is not possible to individually characterize every material present. Also, designated substances may be present in areas which were inaccessible to the consultant.

Please note that updates and additional assessment and/or sampling may be required if additional suspect materials not identified in this report are discovered.

8. GENERAL LIMITATIONS

This report was prepared exclusively for the purposes, project and site location outlined in the report. The report is based on information provided to, or collected and/or obtained by Concentric as indicated in the report, and applies solely to site conditions existing at the time of the site assessment. Concentric's report represents a reasonable analysis and interpretation of available information within an agreed work scope, schedule and budget.

Concentric prepared this report for the sole benefit of the Seized Property Management Directorate Public Works and Government Services Canada. The material in it reflects Concentric's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Concentric accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

The services performed and outlined herein were based in part, upon visual observations of the Site within the building envelope. Our opinion cannot be extended to portions of the Site that were unavailable for direct observation by objects or coverings at the time of our onsite review. It should be noted that no investigations were performed where there was no absolute access point. As such, it is possible that asbestos and other designated substances may exist between walls or other enclosures/barriers, which would not have been visible during the survey.

Any of our observations relating to hazardous and toxic materials and asbestos in the environment at the Site are described in this report. Where testing was performed, it was executed in accordance with our contract for these services. It should be noted that other compounds or materials, not tested for, may be present.

The objective of this report was to survey the environmental conditions at the Site, within the context of our contract, with respect to the existing regulations, within the applicable jurisdiction.

Compliance of past and current owners with applicable local, provincial and federal government laws and regulations was not included in our contract for services.



The conclusions of this report are based, in part, on the information provided by others and any testing and analyses described in the report. The possibility remains that unexpected environmental conditions may be encountered at the Site locations not explored. Should such an event occur, Concentric should be notified in order that we may determine if modifications to our conclusions are necessary.

This report has been prepared in accordance with generally accepted environmental study and/or engineering practices. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

We trust this provides the information you require. In the meantime, if you have any questions or concerns regarding the above, please do not hesitate to contact the undersigned.

Yours sincerely,

Concentric Associates International Incorporated



Donghyun (Paul) Park, OCAD, C.E.T., EPT, CEICI
Environmental Technologist

Robert A. Hoad, C.Tech., CMI
Project Manager and Partner

Project No.: 12-4556

Client: PWGSC SPMD

Title: Designated Substance Survey of Triplex Residence in Cornwall, Ontario



Appendix A

Field Notes





Concentric Associates International Incorporated

Asbestos Survey Bulk Collection

Site Location: #348 Pine Arthur Cornwall

Project Number: _____ Date: Sept 5/12

Location Floor	Room/ Area	Building Component	Material	Sample I.D.	Sample Layers			Comments
					Layers: Y/N	Number of Layers	Description	
✓ Main Floor	Closet (basement kitchen)	-Storage	Vinyl flooring	VF 4ABC	N		green, pink squares	
✓ Main Floor	Bathroom	Floor	Vinyl tile	VF 5ABC	N		pink & white pattered.	
"	Kitchen	Floor	"	VF 6ABC	N		yellow (white originally)	
"	Bedroom	Floor - under carpet	Vinyl tile	VF 7ABC	N		brown pattered.	
Main	Bathroom	Ceiling	3 rd CT ceiling tile	CT 2abc	N		white	dropped ceiling
Main	Ceilings throughout except bathroom (1m ²)			BSC 2abcde	N			d, e taken from basement.

Asbestos Survey Bulk Collection

Site Location: #811 1st St. Cornwall

Project Number: _____

Date: Sept 5/12

Ann RP.

Location Floor	Room/ Area	Building Component	Material	Sample I.D.	Sample Layers		Description	Comments
					Layers: Y/N	Number of Layers		
1st floor	Vestibule	brick decorative wall	brick & mud	Int. Brick (abc)	Y	2	brick red + white larger	
2nd floor	Vestibule	linoleum floor	dry wall j.c.	DTC 3abcde	N		beige square pattern	
1st floor	Vestibule	linoleum floor	linoleum	lino 2abc	N		beige	underneath
2nd floor	Kitchen	Floor	vinyl tile	Vf 8abc	N		grey	underneath
2nd floor	living room	Floor	linoleum	lino 3abc	N		light brown	under the carpet
2nd floor	bathroom	Floor	vinyl tile	Vf 9abc	N		beige	under linoleum
2nd floor	bathroom	Floor	linoleum	lino 4abc	N		beige	
2nd floor	hallway	Floor	vinyl tile	Vf 10abc	N		boron beige	under carpet

Asbestos Survey Bulk Collection

Site Location: #813 Main Floor

Project Number: _____

Date: 1 Sept 5/12

Location Floor	Room/ Area	Building Component	Material	Sample I.D.	Sample Layers		Description	Comments
					Layers: Y/N	Number of Layers		
✓ Main Floor	Living Area	Ceiling Tile		CT 1-1A	N		White Ceiling Tile	Treat as 1 Sample.
✓ Bathroom		Vinyl Floor Tile		VF 1-B	N		Vinyl Light Brown Floor Tile	
✓ Shingle	Kitchen & Bathroom ceiling			SHIPLE 1-3	N		White textured shingle.	
✓ DSC		all walls		DSC 1-3	N			
✓ Vinyl Kit Area	vinyl floor tile			VF 2ABC	N		Black	just in kitchen
✓ Roof	shingles - top layer			Shingles 1ABC	N		Black	
✓ Roof	shingles - bottom layer			Shingles 2ABC	N		Black & Gray	
✓ Kitchen	- vinyl floor tile			VF 3ABC	N		Brown, beige	floor tile

- all walls are drywall
- main area - ceiling board 2x1
- Kitchen & Bathroom - shingle on top of dry wall
- Bathroom

207-8455-1



Concentric Associates International Incorporated

Lead Paint Bulk Collection

Site Location: 811-813 1st St., 348 Prince Arthur Cornwall

Project Number: _____ Date: Sept 5 2012

Floor	Room/ Area	Building Surface	Colour	Sample I.D.	Sample Layers		Description	Comments
					Layers: Y/N	Number of Layers		
2nd floor	living room	ceiling drywall	pink	Paint 17	N	2	pink	2x8m on ceiling
2nd floor	living room	ceiling	beige white	Paint 18	Y	2	beige + white	
2nd floor	Kitchen	ceiling part of dry wall	Yellow	Paint 19	N	1	Yellow	-appears to just be 1 drywall slab above CT
2nd floor	Swim room	-wood starts under roof eave	Green	Paint 20	N	1	Green	
2nd floor	living room	ceiling	pink	Paint 17	N	2	pink	

Lead Paint Bulk Collection

Site Location: 411-813 1st Street; 348 Prince Arthur Cornwall

Project Number: 12- Date: Sept 5/12

Floor	Location Room/ Area	Building Surface	Colour	Sample I.D.	Sample Layers			Comments
					Layers: Y/N	Number of Layers	Description	
Ext Porch	33.5' x 6'	Porch Ceiling	White	Paint 1	N		White Paint	
Ext Porch		Porch trim doors, jambs	White & Green	Paint 2	Y	2	White & Green Paint	
Ext Porch		APT 813 Door	White & Grey	Paint 3	Y	2	White & Beige Pt.	
Ext Porch	sunroom exterior on glass	Behind Siding	Red & Green	Paint 4	Y	2	Red & Green Paint	
Ext Porch		Railing & Floor	Blue	Paint 5	N		Blue Paint	
Ext Porch		Siding (fin)	White	Paint 6	N		White Paint	
*813	Noir Hood	Paint on Ceiling Tile	White	Paint 7	N		White/Beige Paint	
*813	Living Room	Paint on Dry Wall	White	Paint 8	N		White Paint	

Lead Paint Bulk Collection



Site Location: 811-813 1st Street ; 348 Pince Arrow St. Cornwall

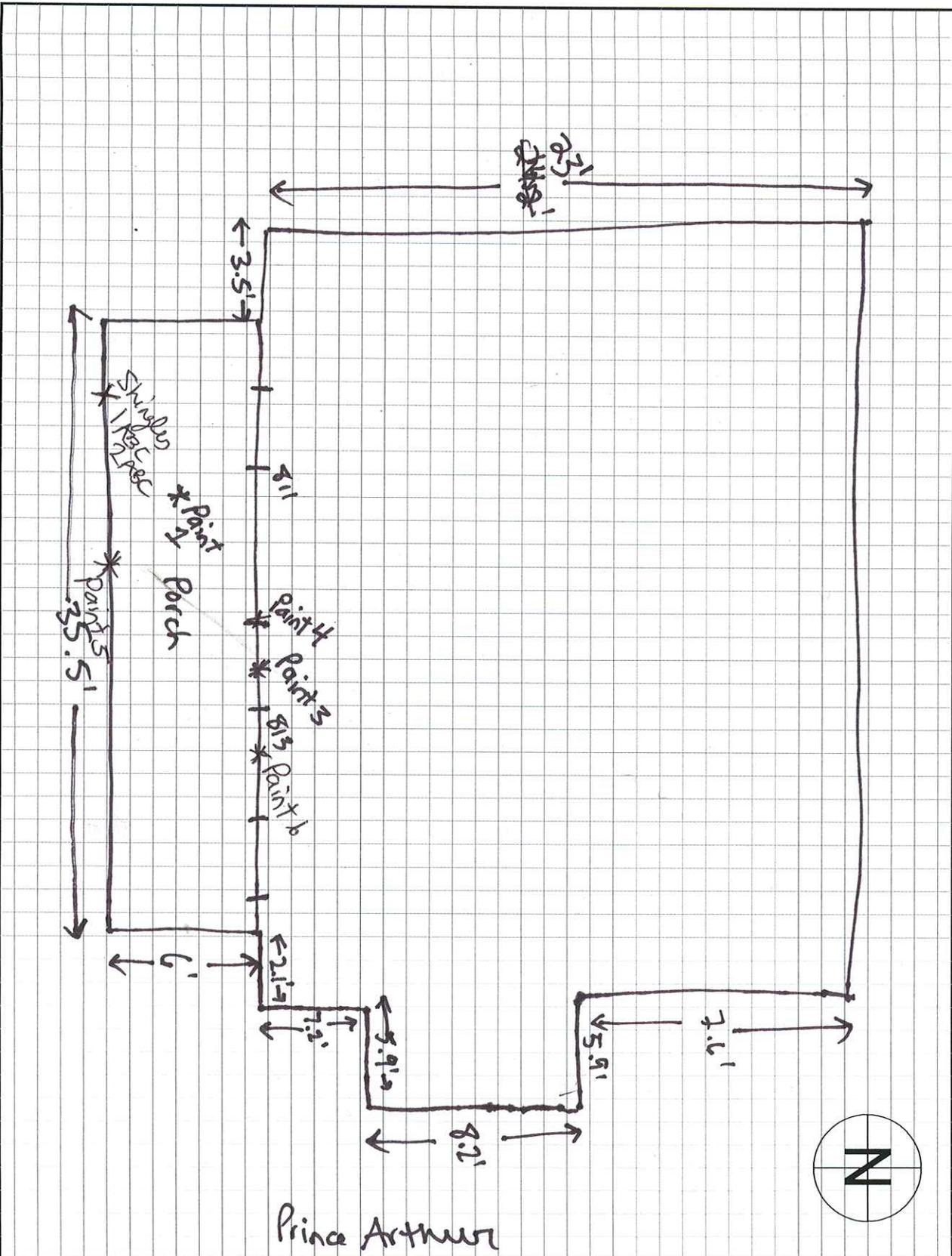
Project Number: _____ Date: Sept. 5 2012

Location	Room/Area	Building Surface	Colour	Sample I.D.	Sample Layers			Comments
					Layers: Y/N	Number of Layers	Description	
#813 Main Floor	Door	Door step	Yellow & White	Paint 9	Y	2		
#813 Main Floor	Closet		White Green & Green paint	Paint 10	Y	4		
#813 Main Floor		Ceiling in Kitchen	Pink	Paint 11	N			
#348 Main Floor		Bathroom ceiling & wood above drywall	Yellow & Green	Paint 12	Y	2		
#348 Main Floor		Kitchen & Bathroom walls	White & Green	Paint 13	Y	2		
#348 Main Floor	Bedroom	Walls	Green	Paint 14	N	1		
#811 Main Floor	Throughout	Walls	White	Paint 15	N	1		
Bedroom		ceiling - or wood panels (1st section)	White	Paint 16	N	1		

811-813 R 1st St Cornwall

Sept 5/12

AM / PD



1st St.

Field Notes

Paint 1 - White Paint (ceiling panels)

Paint 2 - white Paint on trim joists, door jams

Paint 3 - Door Paint white (# 913)

Paint 4 - Red's Green - door behind siding

Paint 5 - Rain's Blue Paint 6 - Siding Paint



LONDON
708 Richmond St. Suite 104
London, Ontario N6A 5C7
Tel. 519-452-7700
Fax. 519-452-1772

IGALUIT
P.O. Box 957
Igaliut, Nunavut, X0A 0H0
Tel. 867-979-3300
Fax. 867-979-3302

OTTAWA
1420 Blair Place, Suite 104
Ottawa, Ontario K1J 9L8
Tel. 613-824-8900
Fax. 613-824-8901

CLIENT DRIVEN RESULTS ORIENTED
EXPERIENCE THE DIFFERENCE

CLIENT NAME:

PROJECT ADDRESS:

PROJECT NAME:

DRAWING TITLE:

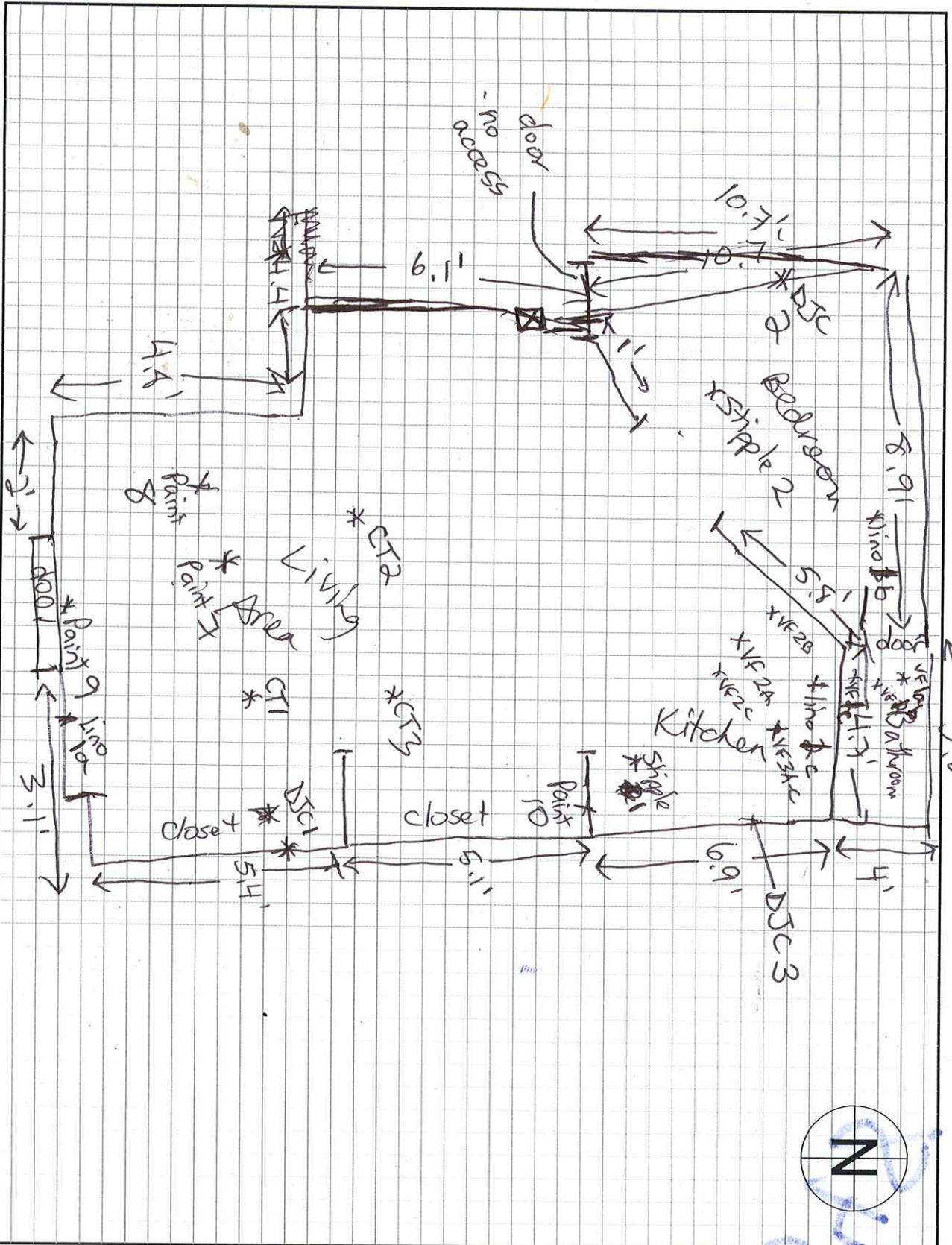
DATE:

DRAWN:

SHEET No.

SK-

#813 Main Floor



- possible they thermostat
 - mould on walls



Field Notes:

Paint 7 - RTA
 DTC1



LONDON
 700 Richmond St. Suite 104
 London, Ontario N6A 5C7
 Tel: 519.452.7700
 Fax: 519.452.1712

OTTAWA
 1420 Blair Place, Suite 104
 Ottawa, Ontario K1J 9L8
 Tel: 887.979.3300
 Fax: 887.979.3302

ICALUIT
 P.O. Box 957
 Iqaluit, Nunavut, X0A 0H0
 Tel: 867.979.3300
 Fax: 867.979.3302

CLIENT DRIVEN RESULTS ORIENTED
 EXPERIENCE THE DIFFERENCE

CLIENT NAME:
 PROJECT ADDRESS:
 PROJECT NAME:
 DRAWING TITLE:

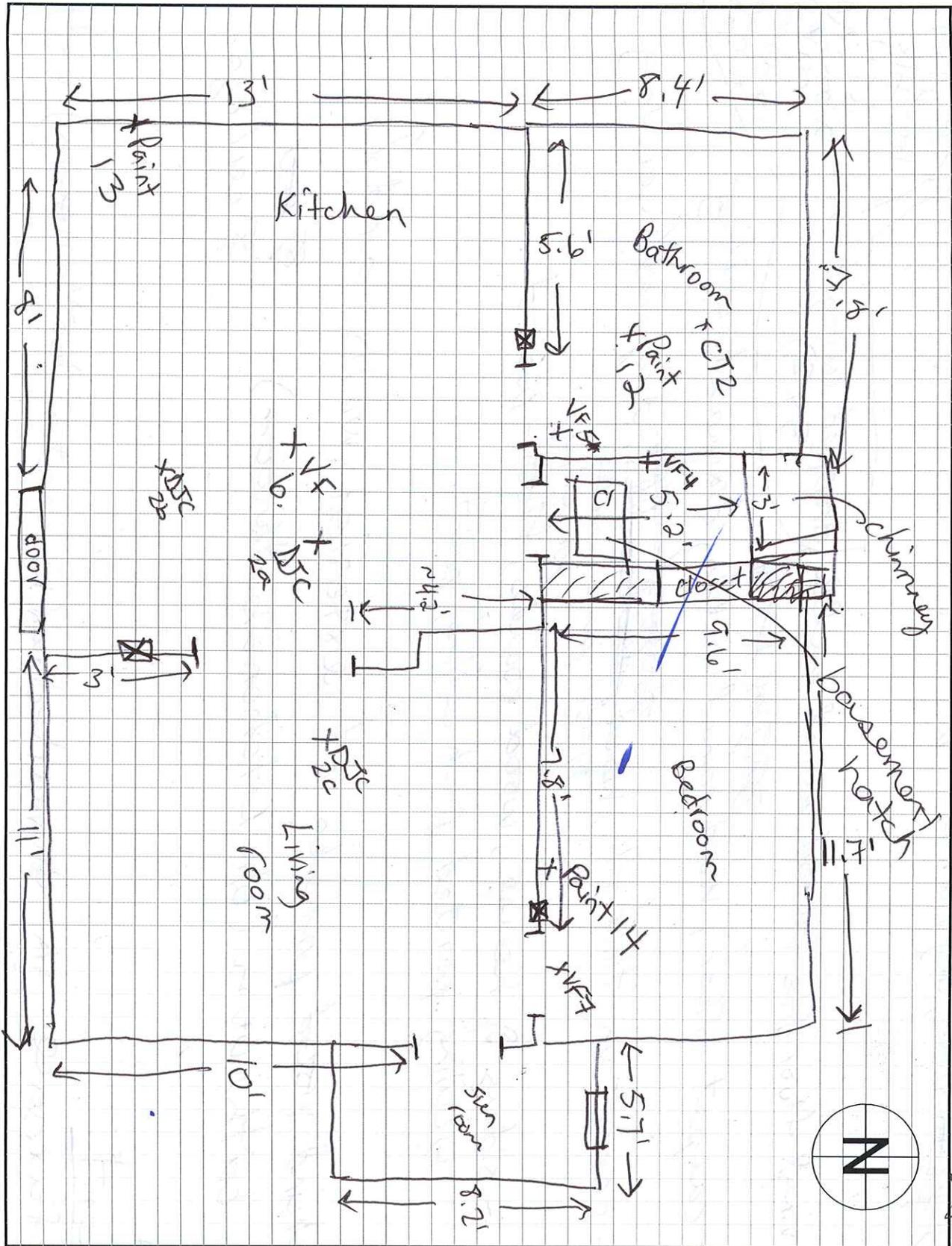
DATE:
 DRAWN:
 SHEET NO.

SK-

348 Pine Arthrop

Sept 5/12

Am/PP



1st St.

possible Hg thermostat

Field Notes:

CONCENTRIC ASSOCIATES INTERNATIONAL INCORPORATED

LONDON
 700 Richmond St. Suite 104
 London, Ontario N6A 5C7
 Tel: 519.452.2700
 Fax: 519.452.1712

IGALUIT
 P.O. Box 957
 Igaliut, Nunavut, X0A 0H0
 Tel: 867.979.3300
 Fax: 867.979.3302

OTTAWA
 1420 Blair Place, Suite 104
 Ottawa, Ontario K1J 9L8
 Tel: 613.824.8900
 Fax: 613.824.8901

CLIENT DRIVEN RESULTS ORIENTED
 EXPERIENCE THE DIFFERENCE

CLIENT NAME: _____
 PROJECT ADDRESS: _____
 PROJECT NAME: _____
 DRAWING TITLE: _____
 DATE: _____
 DRAWN: _____ FILE NO.: _____
 SHEET NO.: _____

SK-

Project No.: 12-4556

Client: PWGSC SPMD

Title: Designated Substance Survey of Triplex Residence in Cornwall, Ontario



Appendix B

Tables



Table 1
Types and Number of Samples Collected for Asbestos Analysis

Type of Material	Number of Samples	Sample ID	% Chrysotile Content	Containing
<i>348 Prince Arthur Street</i>				
Vinyl Floor Tile-green and pink squares	3	VF 4abc	<u>15.79</u>	<u>Yes</u>
Vinyl Floor Tile-pink and white pattern	3	VF 5abc	0	No
Vinyl Floor Tile-white	3	VF 6abc	0	No
Vinyl Floor Tile-brown pattern	3	VF 7abc	<u>4.11</u>	<u>Yes</u>
Ceiling Tile- 3x2	3	CT 2abc	0	No
Drywall Joint Compound	5	DJC 2abcde	0	<u>Yes</u>
<i>811 First Street East</i>				
Brick mortar-decorative (White)	3	Int. Brick 1abc	<u>1</u>	<u>Yes</u>
Brick –decorative (Red)	3	Int. Brick 1abc	0	No
Drywall Joint Compound	5	DJC 3abcde	<u>1</u>	<u>Yes</u>
Linoleum-beige pattern	3	Lino 2abc	0	No
Vinyl Floor Tile-grey	3	VF 8abc	0	No
Linoleum-light brown	3	Lino 3abc	0	No
Vinyl Floor Tile-beige	3	VF 9abc	0	No
Linoleum-beige	3	Lino 4abc	0	No
Vinyl Floor Tile-light brown circle pattern	3	VF 10abc	<u>0.81</u>	<u>Yes</u>
<i>813 First Street East</i>				
Ceiling Tile	3	CT 1abc	0	No
Vinyl Floor Tile-light brown	3	VF 1abc	0	No
Stipple	3	Stipple 1,2,3	0	No
Drywall Joint Compound	3	DJC 1abc	0	No
Vinyl Floor Tile-Black	3	VF 2abc	0	No
Shingles-top layer	3	Shingles 1abc	0	No
Shingles-bottom layer	3	Shingles 2abc	<MDL	No
Vinyl Floor Tile	3	VF 3abc	0	No
Linoleum-dark brown and yellow squares	3	Lino 1abc	<u>4.37</u>	<u>Yes</u>

MDL – method detection limit

Table 2
Types and Number of Samples Collected for Lead Analysis

Location	Colour	Sample ID	Lead Concentration (ug/g)	Lead Containing
348 Prince Arthur Street				
Bathroom ceiling-wood panels	Yellow and Green	Paint 12	1490	Yes
Kitchen and bathroom walls	White and Green	Paint 13	14	No
Bedroom walls	Green	Paint 14	34	No
811 First Street East				
Walls throughout	White	Paint 15	6	No
Master Bedroom ceiling (wood)	White	Paint 16	1460	Yes
Kitchen and living room ceiling	Pink	Paint 17	57	No
Kitchen and living room ceiling	Beige and White	Paint 18	2230	Yes
Kitchen ceiling	Yellow	Paint 19	2930	Yes
813 First Street East				
Ceiling tiles	White	Paint 7	11	No
Living Area walls	White	Paint 8	1020	Yes
Door step	Yellow and White	Paint 9	922	Yes
Closet walls	White, Green, Pink	Paint 10	353	Yes
Kitchen ceiling	Pink	Paint 11	8190	Yes
Exterior				
Porch ceiling panels	White	Paint 1	59	No
Porch trim, joints and door jams	White and Green	Paint 2	30200	Yes
Door to 813 First St. E.	White and Beige	Paint 3	423	Yes
Behind siding	Red and Green	Paint 4	60900	Yes
Railing and Porch Floor	Blue	Paint 5	1440	Yes
Siding (tin)	White	Paint 6	200	Yes
Wood slats on side of triplex	Green	Paint 20	96000	Yes

Notes:

- For the purposes of this DSS, paints containing concentrations of lead greater than 90 mg/kg will be considered lead containing.

- 90 µg/g is equal to 90 mg/kg

Project No.: 12-4556

Client: PWGSC SPMD

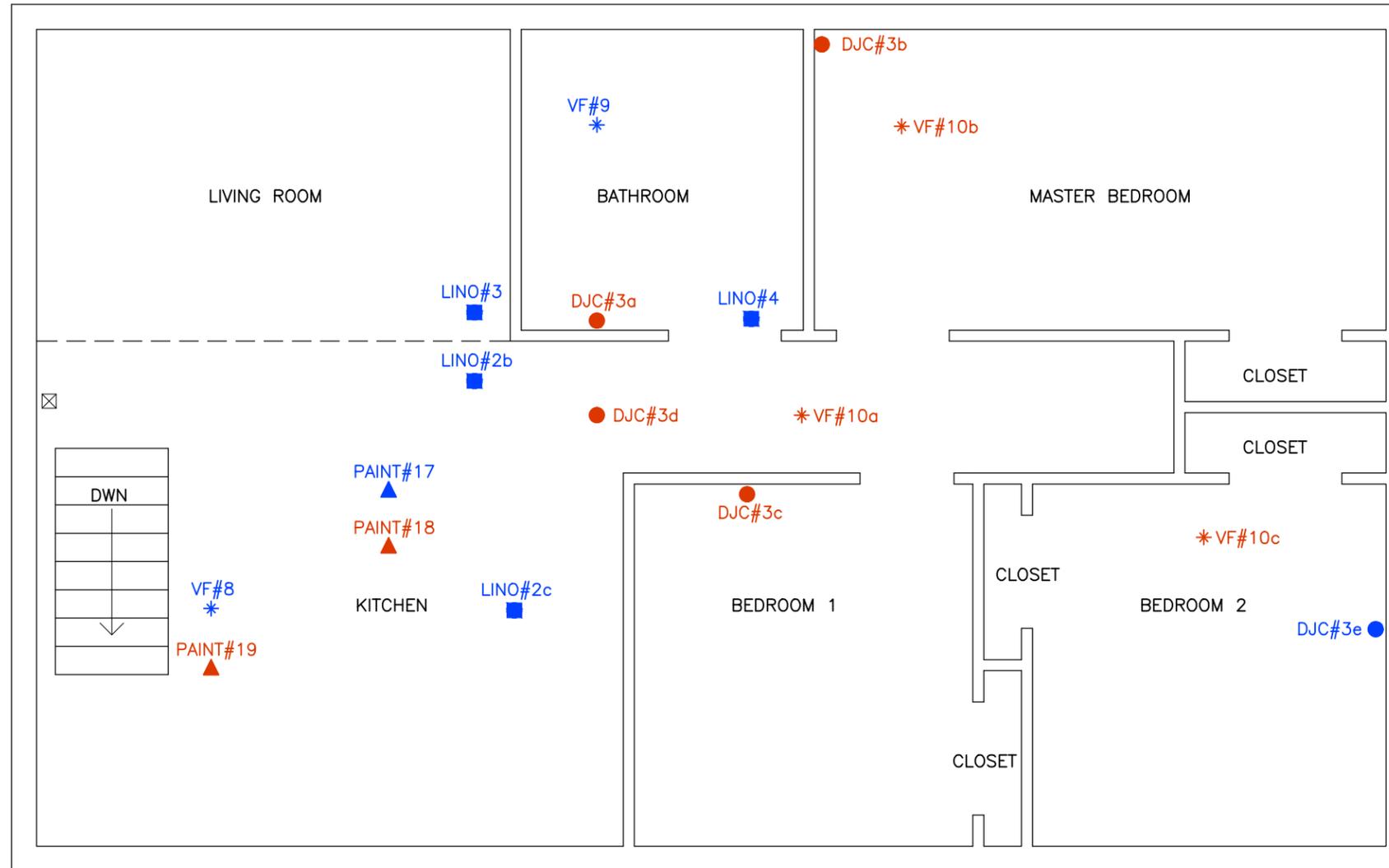
Title: Designated Substance Survey of Triplex Residence in Cornwall, Ontario



Appendix C

Figures

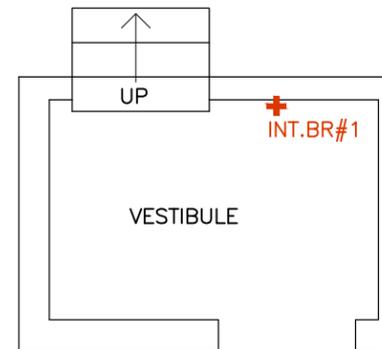




1
S1 **UNIT 811- SECOND FLOOR**
SCALE: 1/4" = 1'-0"

LEGEND:

* VF#	INDICATES APPROXIMATE LOCATION OF VINYL FLOOR SAMPLE
* VF#	INDICATES APPROXIMATE LOCATION OF VINYL FLOOR SAMPLE CONTAINING ASBESTOS
● DJC#	INDICATES APPROXIMATE LOCATION OF DRYWALL JOINT COMPOUND SAMPLE
● DJC#	INDICATES APPROXIMATE LOCATION OF DRYWALL JOINT COMPOUND SAMPLE CONTAINING ASBESTOS
▲ PAINT#	INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE
▲ PAINT#	INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE CONTAINING ASBESTOS
■ LINO#	INDICATES APPROXIMATE LOCATION OF LINOLEUM TILE SAMPLE
■ LINO#	INDICATES APPROXIMATE LOCATION OF LINOLEUM TILE SAMPLE CONTAINING ASBESTOS
+ INT.BR#	INDICATES APPROXIMATE LOCATION OF INTERIOR BRICK SAMPLE CONTAINING ASBESTOS
⊠	HG THERMOSTAT



1
S1 **UNIT 811- FIRST FLOOR**
SCALE: 1/4" = 1'-0"

NO.	REVISION	DATE
1	XXX	MNTH. DD, YYYY
2		
3		
4		

CONCENTRIC
ASSOCIATES INTERNATIONAL
INCORPORATED

LONDON **OTTAWA**
Tel. 1-519-452-7700 Tel. 1-613-824-8900
Toll Free 1-866-919-4531 Toll Free 1-866-919-4530

IQALUIT **SASKATOON**
Tel. 1-867-979-3300 Tel. 1-306-343-5500
Toll Free 1-866-919-4533 Toll Free 1-866-919-8899

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Toll Free 1-866-919-1861 Toll Free 1-866-919-4531

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CLIENT NAME:
PWGSC SPMD

PROJECT ADDRESS:
PLACE DU PORTAGE, 11 LAURIER GATINEAU,
QUEBEC

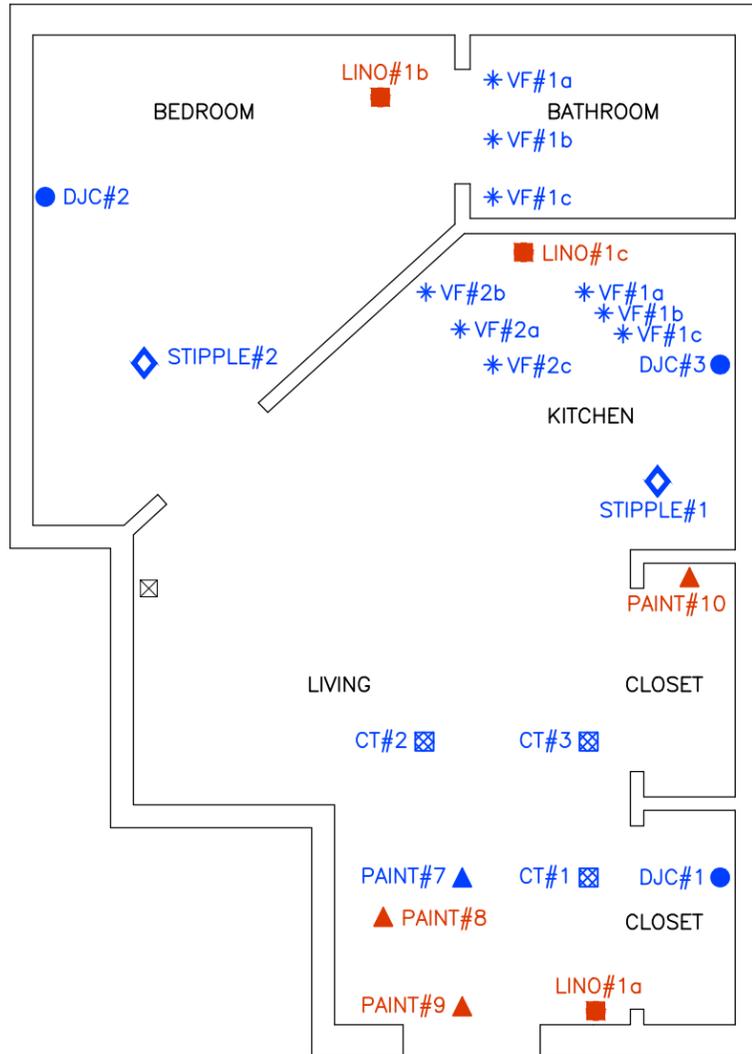
PROJECT NAME:
DSS OF RESIDENTIAL TRIPLEX

DRAWING TITLE:
811 FIRST STREET EAST FLOOR PLANS

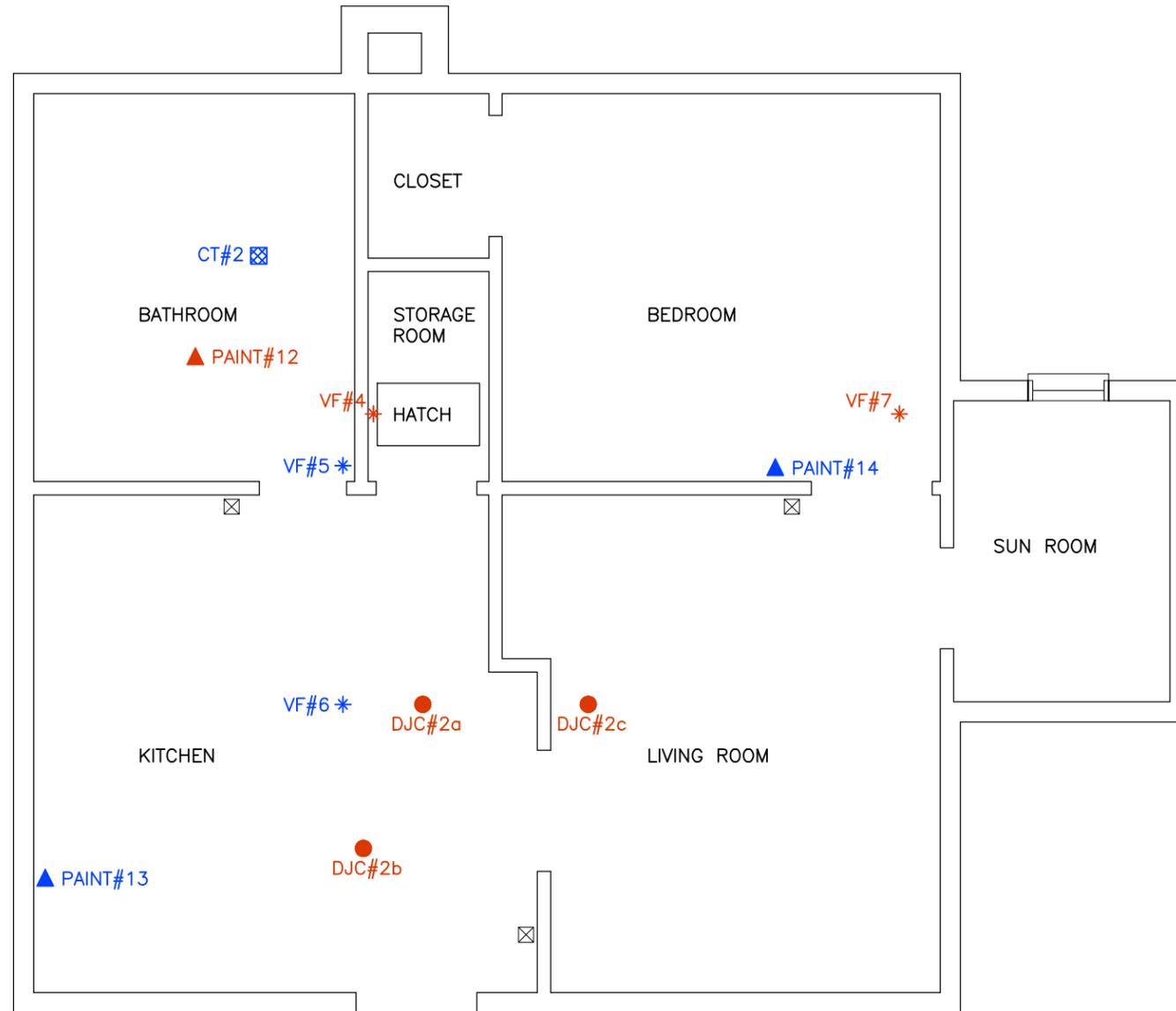
DESIGN: AM SCALE: AS SHOWN
DRAWN: SM DATE: SEPT / 2012
APPV'D: AJ FILE No: 12-4556

SHEET No.
S1

NO.	REVISION	DATE
1	XXX	MNTH. DD, YYYY
2		
3		
4		



1 UNIT 813- MAIN FLOOR
S2 SCALE: 1/4" = 1'-0"



1 UNIT 348- MAIN FLOOR
S2 SCALE: 1/4" = 1'-0"

LEGEND:

- * VF# INDICATES APPROXIMATE LOCATION OF VINYL FLOOR SAMPLE
- * VF# INDICATES APPROXIMATE LOCATION OF VINYL FLOOR SAMPLE CONTAINING ASBESTOS
- DJC# INDICATES APPROXIMATE LOCATION OF DRYWALL JOINT COMPOUND SAMPLE
- DJC# INDICATES APPROXIMATE LOCATION OF DRYWALL JOINT COMPOUND SAMPLE CONTAINING ASBESTOS
- ▲ PAINT# INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE
- ▲ PAINT# INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE CONTAINING ASBESTOS
- LINO# INDICATES APPROXIMATE LOCATION OF LINOLEUM TILE SAMPLE
- LINO# INDICATES APPROXIMATE LOCATION OF LINOLEUM TILE SAMPLE CONTAINING ASBESTOS
- ☒ CT# INDICATES APPROXIMATE LOCATION OF CEILING TILE SAMPLE
- ◆ STIPPLE# INDICATES APPROXIMATE LOCATION OF STIPPLE SAMPLE
- ☒ HG THERMOSTAT



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PROJECT ADDRESS:
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QUEBEC

PROJECT NAME:
DSS OF RESIDENTIAL TRIPLEX

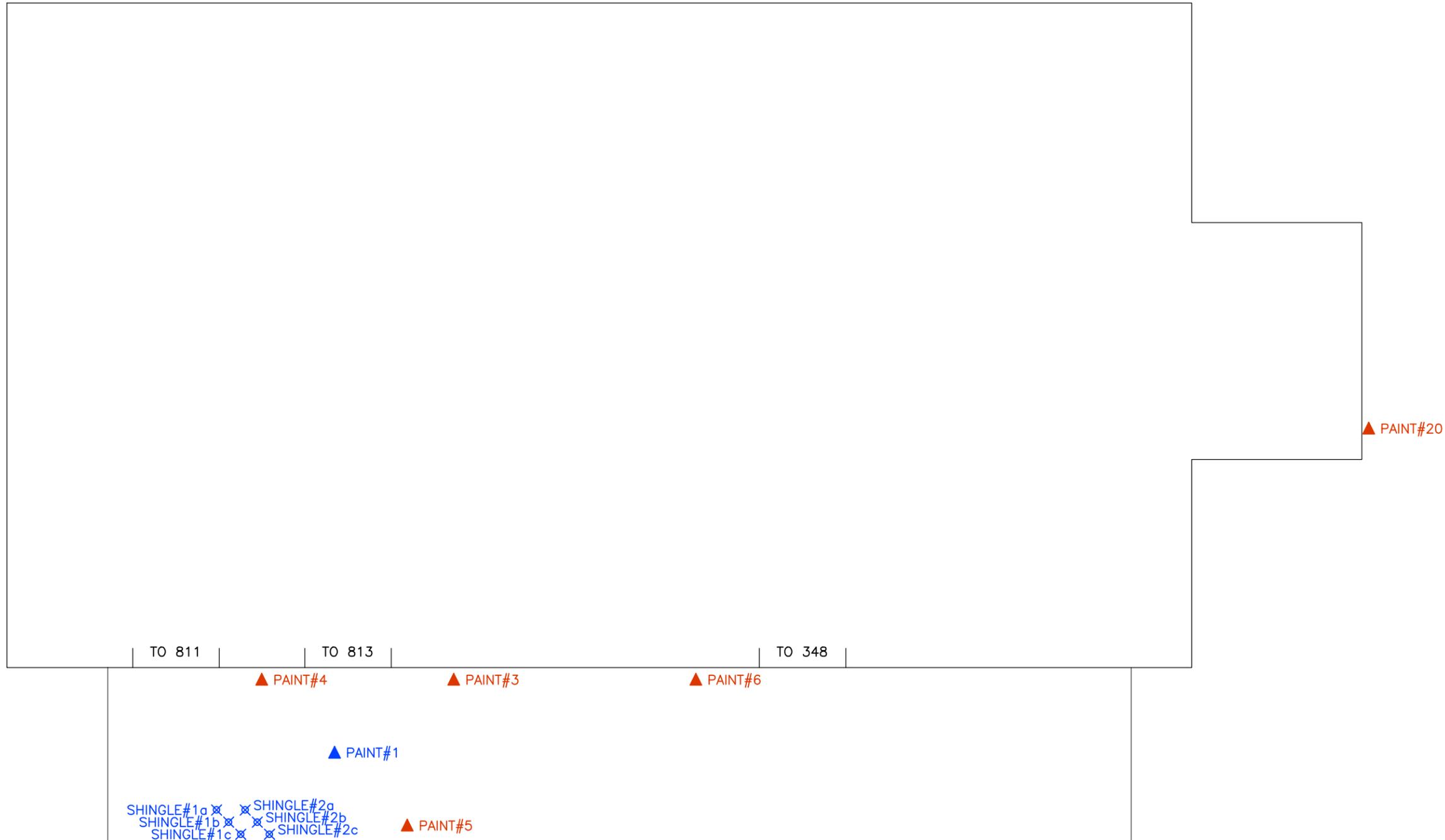
DRAWING TITLE: 813 FIRST STREET &
348 PRINCE ARTHUR STREET FLOOR PLANS

DESIGN: AM SCALE: AS SHOWN
DRAWN: SM DATE: SEPT / 2012
APPV'D: AJ FILE No: 12-4556

SHEET No.

S2

NO.	REVISION	DATE
1	XXX	MNTH. DD, YYYY
2		
3		
4		



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PWGSC SPMD

PROJECT ADDRESS:
PLACE DU PORTAGE, 11 LAURIER GATINEAU,
QUEBEC

PROJECT NAME:
DSS OF RESIDENTIAL TRIPLEX

DRAWING TITLE:
BUILDING ENVELOPE

DESIGN: AM	SCALE: AS SHOWN
DRAWN: SM	DATE: SEPT / 2012
APPV'D: AJ	FILE No: 12-4556

SHEET No.
S3

1 BUILDING ENVELOPE
S3 SCALE: 1/4" = 1'-0"

LEGEND:

- ▲ PAINT# INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE
- ▲ PAINT# INDICATES APPROXIMATE LOCATION OF PAINT SAMPLE CONTAINING ASBESTOS
- ⊗ SHINGLE# INDICATES APPROXIMATE LOCATION OF SHINGLE SAMPLE

Project No.: 12-4556

Client: PWGSC SPMD

Title: Designated Substance Survey of Triplex Residence in Cornwall, Ontario



Appendix D
Laboratory Certificates of Analysis



Certificate of Analysis

Concentric Associates International Inc. (Ottawa)

5310 Canotek Rd. Suite 30
Ottawa, ON K1J 9N5
Attn: Donghyun Park

Phone: (613) 824-8900
Fax: (613) 824-8901

Client PO:
Project: 12-4556
Custody: 3451-52, 3983-85

Report Date: 11-Sep-2012
Order Date: 5-Sep-2012
Order #: 1236152

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

Parcel ID	Client ID	Parcel ID	Client ID
1236152-01	VF1A	1236152-25	VF9A
1236152-02	VF1B	1236152-26	VF9B
1236152-03	VF1C	1236152-27	VF9C
1236152-04	VF2A	1236152-28	VF10A
1236152-05	VF2B	1236152-29	VF10B
1236152-06	VF2C	1236152-30	VF10C
1236152-07	VF3A	1236152-31	lino 1A
1236152-08	VF3B	1236152-32	lino 1B
1236152-09	VF3C	1236152-33	lino 1C
1236152-10	VF4A	1236152-34	lino 2A
1236152-11	VF4B	1236152-35	lino 2B
1236152-12	VF4C	1236152-36	lino 2C
1236152-13	VF5A	1236152-37	lino 3A
1236152-14	VF5B	1236152-38	lino 3B
1236152-15	VF5C	1236152-39	lino 3C
1236152-16	VF6A	1236152-40	lino 4A
1236152-17	VF6B	1236152-41	lino 4B
1236152-18	VF6C	1236152-42	lino 4C
1236152-19	VF7A	1236152-43	CT1A
1236152-20	VF7B	1236152-44	CT1B
1236152-21	VF7C	1236152-45	CT1C
1236152-22	VF8A	1236152-46	DJC1A
1236152-23	VF8B	1236152-47	DJC1B
1236152-24	VF8C	1236152-48	DJC1C

Approved By:



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

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Client: Concentric Associates International Inc. (Ottawa)
5310 Canotek Rd. Suite 30
Ottawa, ON K1J 9N5

Attn: Donghyun Park
Tel: (613) 824-8900
Fax: (613) 824-8901

Project: 12-4556
Paracel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

1236152-49 DIC2A
1236152-50 DIC2B
1236152-51 DIC2C
1236152-52 DIC2D
1236152-53 DIC2E
1236152-54 DIC3A
1236152-55 DIC3B
1236152-56 DIC3C
1236152-57 DIC3D
1236152-58 DIC3E
1236152-59 CT2A
1236152-60 CT2B
1236152-61 CT2C
1236152-62 Stiplpe 1
1236152-63 Stiplpe 2
1236152-64 Stiplpe 3
1236152-65 Shingles 1A
1236152-66 Shingles 1B
1236152-67 Shingles 1C
1236152-68 Shingles 2A
1236152-69 Shingles 2B
1236152-70 Shingles 2C
1236152-71 Int. Brick 1A (Red)
1236152-72 Int. Brick 1B (Red)
1236152-73 Int. Brick 1C (Red)
1236152-74 Int. Brick 1A (White)
1236152-75 Int. Brick 1B (White)
1236152-76 Int. Brick 1C (White)

Client: Concentric Associates International Inc. (Ottawa)
5310 Canotek Rd. Suite 30
Ottawa, ON K1J 9N5

Attn: Donghyun Park
Tel: (613) 824-8900
Fax: (613) 824-8901

Project: 12-4556
Parcel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-01	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF1A [AS-PRE] Non-Fibers	100
1236152-02	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF1B [AS-PRE] Non-Fibers	100
1236152-03	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF1C [AS-PRE] Non-Fibers	100
1236152-04	05-Sep-12	sample homogenized	Black	Floor Tile	No	Client ID: VF2A [AS-PRE] Non-Fibers	100
1236152-05	05-Sep-12	sample homogenized	Black	Floor Tile	No	Client ID: VF2B [AS-PRE] Non-Fibers	100
1236152-06	05-Sep-12	sample homogenized	Black	Floor Tile	No	Client ID: VF2C [AS-PRE] Non-Fibers	100
1236152-07	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF3A [AS-PRE] Non-Fibers	100
1236152-08	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF3B [AS-PRE] Non-Fibers	100
1236152-09	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF3C [AS-PRE] Non-Fibers	100
1236152-10	05-Sep-12	sample homogenized	Green	Vinyl Sheet Flooring	Yes	Client ID: VF4A [AS-PRE] Chrysotile Cellulose Non-Fibers	15.79 14.21 70
1236152-11	05-Sep-12					Client ID: VF4B [AS-PRE] not analyzed	
1236152-12	05-Sep-12					Client ID: VF4C [AS-PRE] not analyzed	
1236152-13	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF5A [AS-PRE] Non-Fibers	100
1236152-14	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF5B [AS-PRE] Non-Fibers	100
1236152-15	05-Sep-12	sample homogenized	Beige/Black	Floor Tile	No	Client ID: VF5C [AS-PRE] Non-Fibers	100

P: 1-800-749-1947
E: PARACEL@PARACELLABS.COM
WWW.PARACELLABS.COM

OTTAWA
300-2319 St. Laurent Blvd.
Ottawa, ON K1G 4J8

MISSISSAUGA
6645 Kitimat Rd. Unit #27
Mississauga, ON L5N 6J3

NIAGARA FALLS
5415 Morning Glory Cr.
Niagara Falls, ON L2J 0A3

SARNIA
123 Christina St. N.
Sarnia, ON N7T 5T7

Client: Concentric Associates International Inc. (Ottawa)
5310 Canotek Rd. Suite 30
Ottawa, ON K1J 9N5

Attn: Donghyun Park
Tel: (613) 824-8900
Fax: (613) 824-8901

Project: 12-4556
Parcel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-16	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF6A [AS-PRE] Non-Fibers	100
1236152-17	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF6B [AS-PRE] Non-Fibers	100
1236152-18	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF6C [AS-PRE] Non-Fibers	100
1236152-19	05-Sep-12	sample homogenized	Grey	Floor Tile	Yes	Client ID: VF7A [AS-PRE] Chrysotile Non-Fibers	4.11 95.89
1236152-20	05-Sep-12					Client ID: VF7B [AS-PRE] not analyzed	
1236152-21	05-Sep-12					Client ID: VF7C [AS-PRE] not analyzed	
1236152-22	05-Sep-12	sample homogenized	Grey	Floor Tile	No	Client ID: VF8A [AS-PRE] Cellulose MMVF Non-Fibers	10 1 89
1236152-23	05-Sep-12	sample homogenized	Grey	Floor Tile	No	Client ID: VF8B [AS-PRE] Cellulose MMVF Non-Fibers	10 1 89
1236152-24	05-Sep-12	sample homogenized	Grey	Floor Tile	No	Client ID: VF8C [AS-PRE] Non-Fibers	100
1236152-25	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF9A [AS-PRE] Non-Fibers	100
1236152-26	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF9B [AS-PRE] Non-Fibers	100
1236152-27	05-Sep-12	sample homogenized	Beige	Floor Tile	No	Client ID: VF9C [AS-PRE] Non-Fibers	100
1236152-28	05-Sep-12	sample homogenized	Grey	Floor Tile	Yes	Client ID: VF10A [AS-PRE] Chrysotile Non-Fibers	0.81 99.19

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Project: 12-4556
Parcel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-29	05-Sep-12					Client ID: VF10B [AS-PRE] not analyzed	
1236152-30	05-Sep-12					Client ID: VF10C [AS-PRE] not analyzed	
1236152-31	05-Sep-12	sample homogenized	Brown	Linoleum	Yes	Client ID: lino 1A [AS-PRE] Chrysotile 4.37 Cellulose 15.63 Non-Fibers 80	
1236152-32	05-Sep-12					Client ID: lino 1B [AS-PRE] not analyzed	
1236152-33	05-Sep-12					Client ID: lino 1C [AS-PRE] not analyzed	
1236152-34	05-Sep-12	sample homogenized	Grey	Linoleum	No	Client ID: lino 2A [AS-PRE] MMVF 5 Non-Fibers 95	
1236152-35	05-Sep-12	sample homogenized	Grey	Linoleum	No	Client ID: lino 2B [AS-PRE] Cellulose 20 MMVF 5 Non-Fibers 75	
1236152-36	05-Sep-12	sample homogenized	Grey	Linoleum	No	Client ID: lino 2C [AS-PRE] MMVF 5 Non-Fibers 95	
1236152-37	05-Sep-12	sample homogenized	Brown	Linoleum	No	Client ID: lino 3A [AS-PRE] Cellulose 20 MMVF 5 Non-Fibers 75	
1236152-38	05-Sep-12	sample homogenized	Brown	Linoleum	No	Client ID: lino 3B [AS-PRE] Cellulose 10 MMVF 5 Non-Fibers 85	

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Project: 12-4556
Paracel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-39	05-Sep-12	sample homogenized	Brown	Linoleum	No	Client ID: lino 3C [AS-PRE]	
						Cellulose	10
						MMVF	5
						Non-Fibers	85
1236152-40	05-Sep-12	sample homogenized	Grey/Brown	Linoleum	No	Client ID: lino 4A [AS-PRE]	
						Non-Fibers	100
1236152-41	05-Sep-12	sample homogenized	Grey/Brown	Linoleum	No	Client ID: lino 4B [AS-PRE]	
						Non-Fibers	100
1236152-42	05-Sep-12	sample homogenized	Grey/Brown	Linoleum	No	Client ID: lino 4C [AS-PRE]	
						Non-Fibers	100
1236152-43	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT1A [AS-PRE]	
						Cellulose	80
						MMVF	1
						Non-Fibers	19
1236152-44	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT1B [AS-PRE]	
						Cellulose	80
						MMVF	1
						Non-Fibers	19
1236152-45	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT1C [AS-PRE]	
						Cellulose	80
						MMVF	1
						Non-Fibers	19
1236152-46	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC1A	
						Non-Fibers	100
1236152-47	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC1B	
						Non-Fibers	100
1236152-48	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC1C	
						Non-Fibers	100
1236152-49	05-Sep-12	sample homogenized	Grey	DJC	Yes	Client ID: DJC2A	
						Chrysotile	5
						Non-Fibers	95

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Project: 12-4556
Parcel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-50	05-Sep-12					Client ID: DJC2B not analyzed	
1236152-51	05-Sep-12					Client ID: DJC2C not analyzed	
1236152-52	05-Sep-12					Client ID: DJC2D not analyzed	
1236152-53	05-Sep-12					Client ID: DJC2E not analyzed	
1236152-54	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC3A Non-Fibers	100
1236152-55	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC3B Non-Fibers	100
1236152-56	05-Sep-12	sample homogenized	Grey	DJC	No	Client ID: DJC3C Non-Fibers	100
1236152-57	05-Sep-12	sample homogenized	Beige	DJC	Yes	Client ID: DJC3D Chrysotile Non-Fibers	1 99
1236152-58	05-Sep-12					Client ID: DJC3E not analyzed	
1236152-59	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT2A [AS-PRE] Cellulose Non-Fibers	60 40
1236152-60	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT2B [AS-PRE] Cellulose Non-Fibers	60 40
1236152-61	05-Sep-12	sample homogenized	White/Brown	Ceiling Tile	No	Client ID: CT2C [AS-PRE] Cellulose Non-Fibers	60 40
1236152-62	05-Sep-12	sample homogenized	Beige	Stipple	No	Client ID: Stiplpe 1 Non-Fibers	100
1236152-63	05-Sep-12	sample homogenized	Beige	Stipple	No	Client ID: Stiplpe 2 Non-Fibers	100

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Project: 12-4556
Paracel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-64	05-Sep-12	sample homogenized	Beige	Stipple	No	Client ID: Stipple 3 Non-Fibers	100
1236152-65	05-Sep-12	sample homogenized	Black	Shingle	No	Client ID: Shingles 1A Cellulose Non-Fibers	20 80
1236152-66	05-Sep-12	sample homogenized	Black	Shingle	No	Client ID: Shingles 1B Cellulose Non-Fibers	20 80
1236152-67	05-Sep-12	sample homogenized	Black	Shingle	No	Client ID: Shingles 1C Cellulose Non-Fibers	20 80
1236152-68	05-Sep-12	sample homogenized	Black	Shingle	Yes	Client ID: Shingles 2A [ASTrc] Chrysotile Cellulose Non-Fibers	<MDL 40 60
1236152-69	05-Sep-12	sample homogenized	Black	Shingle	Yes	Client ID: Shingles 2B [ASTrc] Chrysotile Cellulose Non-Fibers	<MDL 40 60
1236152-70	05-Sep-12	sample homogenized	Black	Shingle	No	Client ID: Shingles 2C Cellulose Non-Fibers	40 60
1236152-71	05-Sep-12	sample homogenized	Red	Brick	No	Client ID: Int. Brick 1A (Red) Non-Fibers	100
1236152-72	05-Sep-12	sample homogenized	Red	Brick	No	Client ID: Int. Brick 1B (Red) Non-Fibers	100
1236152-73	05-Sep-12	sample homogenized	Red	Brick	No	Client ID: Int. Brick 1C (Red) Non-Fibers	100
1236152-74	05-Sep-12	sample homogenized	White	Brick	Yes	Client ID: Int. Brick 1A (White) Chrysotile Non-Fibers	1 99

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Project: 12-4556
Parcel Report No.: 1236152

Received Date: 05-Sep-12
Report Date: 11-Sep-12

Asbestos by PLM **MDL - 0.5%**

Parcel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1236152-75	05-Sep-12					Client ID: Int. Brick 1B (White) not analyzed	
1236152-76	05-Sep-12					Client ID: Int. Brick 1C (White) not analyzed	

MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool
Analytes in bold indicate asbestos content which may include:
Actinolite, Amosite, Anthophyllite, 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	11-Sep-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
- AS-PT Asbestos quantitation by PLM Point Count method.
- ASTrc Trace asbestos was observed below the noted detection limit but could not be accurately quantified.

Certificate of Analysis

Concentric Associates International Inc. (Ottawa)

5310 Canotek Rd. Suite 30
Ottawa, ON K1J 9N5
Attn: Donghyun Park

Phone: (613) 824-8900
Fax: (613) 824-8901

Client PO:
Project: 12-4556
Custody: 5349/50

Report Date: 10-Sep-2012
Order Date: 5-Sep-2012

Order #: 1236135

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

Paracel ID	Client ID
1236135-01	Paint 1
1236135-02	Paint 2
1236135-03	Paint 3
1236135-04	Paint 4
1236135-05	Paint 5
1236135-06	Paint 6
1236135-07	Paint 7
1236135-08	Paint 8
1236135-09	Paint 9
1236135-10	Paint 10
1236135-11	Paint 11
1236135-12	Paint 12
1236135-13	Paint 13
1236135-14	Paint 14
1236135-15	Paint 15
1236135-16	Paint 16
1236135-17	Paint 17
1236135-18	Paint 18
1236135-19	Paint 19
1236135-20	Paint 20

Approved By:



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

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 10-Sep-2012

Order Date: 5-Sep-2012

Client: **Concentric Associates International Inc. (Ottawa)**

Client PO:

Project Description: 12-4556

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals	EPA 6020 - Digestion, ICP-MS	6-Sep-12	7-Sep-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.

Certificate of Analysis

Report Date: 10-Sep-2012

Order Date: 5-Sep-2012

 Client: **Concentric Associates International Inc. (Ottawa)**

Client PO:

Project Description: 12-4556

Sample Results

Lead				Matrix: Paint
				Sample Date: 05-Sep-12
Parcel ID	Client ID	Units	MDL	Result
1236135-01	Paint 1	ug/g	5	59
1236135-02	Paint 2	ug/g	5	30200
1236135-03	Paint 3	ug/g	5	423
1236135-04	Paint 4	ug/g	5	60900
1236135-05	Paint 5	ug/g	5	1440
1236135-06	Paint 6	ug/g	5	200
1236135-07	Paint 7	ug/g	5	11
1236135-08	Paint 8	ug/g	5	1020
1236135-09	Paint 9	ug/g	5	922
1236135-10	Paint 10	ug/g	5	353
1236135-11	Paint 11	ug/g	5	8190
1236135-12	Paint 12	ug/g	5	1490
1236135-13	Paint 13	ug/g	5	14
1236135-14	Paint 14	ug/g	5	34
1236135-15	Paint 15	ug/g	5	6
1236135-16	Paint 16	ug/g	5	1460
1236135-17	Paint 17	ug/g	5	57
1236135-18	Paint 18	ug/g	5	2230
1236135-19	Paint 19	ug/g	5	2930
1236135-20	Paint 20	ug/g	5	96000

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	981	5	ug/g	1030			5.0	50	
Matrix Spike									
Lead	49.4		ug/L	0.2	98.4	70-130			

Project No.: 12-4556

Client: PWGSC SPMD

Title: Designated Substance Survey of Triplex Residence in Cornwall, Ontario



Appendix E

Site Photos





Photo #1 –Vinyl Floor Tile (Sample ID **VF4**) in the storage room of 348 Prince Arthur Street.



Photo #2 – Vinyl Floor Tile (Sample ID **VF7**) underneath the carpet in the bedroom of 348 Prince Arthur Street.



Photo #3 –Vinyl Floor Tile (Sample ID **VF10**) underneath the carpets of the bedrooms and hallway of 811 First Street East.



Photo #4 – Linoleum (Sample ID **lino1**) underneath the carpets in the living room, bedroom and kitchen of 813 First Street East.



Photo #5 – Brick decorative façade (Sample ID **Int. Brick 1**) in the entranceway of 811 First Street East.



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