

Geotechnical
Engineering

Environmental
Engineering

Hydrogeology

Geological
Engineering

Materials Testing

Building Science

Archaeological
Services

patersongroup

Phase I-Environmental Site Assessment

Commercial and Residential Properties
320 McRae Avenue, 1976 Scott Street,
311 and 315 Tweedsmuir Avenue
Ottawa, Ontario

Prepared For
The Estate of Carson Unsworth

Paterson Group Inc.

Consulting Engineers
154 Colonnade Road South
Ottawa (Nepean), Ontario
Canada K2E 7J5

Tel: (613) 226-7381
Fax: (613) 226-6344
www.patersongroup.ca

January 28, 2016
Report: PE3391-1R

Table of Contents

EXECUTIVE SUMMARY	ii
1.0 INTRODUCTION	1
2.0 PHASE I PROPERTY INFORMATION.....	2
3.0 SCOPE OF INVESTIGATION	3
4.0 RECORDS REVIEW	4
4.1 General.....	4
4.2 Environmental Source Information	9
4.3 Physical Setting Sources	12
5.0 INTERVIEWS	16
6.0 SITE RECONNAISSANCE	17
6.1 General Requirements.....	17
6.2 Specific Observations at Phase I Property	17
7.0 REVIEW AND EVALUATION OF INFORMATION	20
7.1 Land Use History	20
7.2 Conceptual Site Model.....	22
8.0 CONCLUSIONS	25
9.0 STATEMENT OF LIMITATIONS	27
10.0 REFERENCES	28

List of Figures

Figure 1 - Key Plan

Figure 2 - Topographic Map

Drawing PE3391-1R - Site Plan

Drawing PE3391-2R - Surrounding Land Use Plan

List of Appendices

Appendix 1 Chain of Title
 Topographical Survey Plan
 Aerial Photographs
 Site Photographs

Appendix 2 MOECC Freedom of Information Response
 MOECC Well Records
 City of Ottawa HLUI Search Request
 TSSA Correspondence

Appendix 3 Qualifications of Assessors

EXECUTIVE SUMMARY

Assessment

A Phase I – Environmental Site Assessment (ESA) was carried out for the commercial and residential properties addressed 320 McRae Avenue, 1976 Scott Street, 311 and 315 Tweedsmuir Avenue, in the City of Ottawa, Ontario. The subject site is an amalgamation of residential and commercial land, for which redevelopment is being considered.

Based on the available data, the general area of the subject site was utilized as a domestic landfill prior to the 1940s. The subject site was first developed with three (3) residential structures along Tweedsmuir, a commercial structure on the northeast corner of the property at 1976 Scott Street and one (1) or more commercial structures (including an autobody shop) on McRae Avenue in the 1940s and 1950s. Between the 1940s and 1960s, additions were made to the commercial structure on McRae Avenue. The commercial structure(s) along McRae Avenue have been occupied by one (1) or more automotive service garages and/or commercial autobody shops, since initial development. The northern portion of the subject site (1976 Scott Street) was occupied by a retail fuel outlet, with three (3) underground storage tanks, between 1971 and 2002.

The retail fuel outlet was decommissioned in 2002-2003 by SEACOR Environmental Inc. Based on a review of their letter report and the observations made during a 2008 Phase II-ESA, petroleum hydrocarbon impacted groundwater is considered to be present in the area of the former retail fuel outlet.

Paterson carried out a Phase I-II ESA for the subject site in 2008. Limited groundwater and soil testing identified petroleum hydrocarbon (PHC) fraction F1, benzene, toluene, xylenes and chloroform impacted groundwater north of the commercial building and PHC and metals impacted fill on the east side of the commercial building.

Following the historical review, a site visit was conducted. The site is occupied by residential dwellings (311 and 315 Tweedsmuir Avenue), a kiosk on the north side of the subject site and a commercial structure on the southeast portion of the subject site. The commercial structure is occupied by Westboro Self-storage, a construction site office, two (2) garage bays used for storage of landscaping equipment and two (2) automotive service garages (AutoRebex and Gifford Automotive). Two (2) aboveground storage tanks were observed in each automotive service garage and staining was observed throughout the garage units, including the landscaper's garage bays. Oil water separators and drains on interior of the subject building were observed to contain oily water.

The current use of the subject site as multiple automotive service garages is considered to represent on-site potentially contaminating activities, which generate areas of potential environmental concern (APECs) on the subject site.

Neighbouring properties in the area of the subject site consisted of residential commercial and industrial properties. Various commercial and industrial properties in the Phase I study area were identified as PCAs, however, none of these sites are considered to generate APECs for the subject site.

Recommendations

Based on the results of the Phase I - Environmental Site Assessment (ESA), **in our opinion a Phase II-ESA is required for the property.**

It is recommended that the garage tenants be asked to improve their management of chemicals, fuels and oils on the property. Future spills should be addressed immediately and saturated absorbent material should be removed and replaced where necessary.

As mentioned in Section 6.2, asbestos containing materials (ACMs) and lead based paint may be present within the subject buildings along with other designated substances. A designated substance survey should be carried out according to Ontario Regulation 278/05, under the Occupational Health and Safety Act, prior to demolition of the subject buildings.

1.0 INTRODUCTION

At the request of Ms. Carol Morris-Unsworth of the Estate of Carson Unsworth, Paterson Group (Paterson) conducted a Phase I-Environmental Site Assessment (Phase I-ESA) of the commercial and residential properties located at 320 McRae Avenue, 1976 Scott Street, 311 and 315 Tweedsmuir Avenue, in the City of Ottawa, Ontario. The purpose of this Phase I-ESA was to research the past and current use of the site and study area to identify any environmental concerns with the potential to have impacted the subject property.

Paterson was engaged to conduct this Phase I-ESA by Ms. Carol Morris-Unsworth.

A Phase I-ESA was conducted for the property at 320 McRae Avenue, 1976 Scott Street and 311 Tweedsmuir Avenue in 2014. Due to the addition of 315 Tweedsmuir Avenue to the subject site, the original Phase I-ESA has been updated in this report with the most recent site visit having been carried out in January 2016.

This report has been prepared specifically and solely for the above noted project which is described herein. It contains all of our findings and results of the environmental conditions at this site.

This Phase I-ESA report has been prepared in general accordance with Ontario Regulation 153/04 as amended by O.Reg. 269/11 (Environmental Protection Act), and also complies with the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I-ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

2.0 PHASE I PROPERTY INFORMATION

Address:	320 McRae Avenue, 1976 Scott Street, 311 and 315 Tweedsmuir Avenue, Ottawa, Ontario.
Legal Description:	Lots 12 to 19, Registered Plan 273 and Lots 23, 24 and 25, Registered Plan 263. Part of Lot 31 and 32, Concession 1, Nepean Township, Ottawa Front.
Property Identification Numbers:	04021-0013, 04021-0014, 04021-0015, 04021-0021, 04021-0022, 04021-0023, 04021-0024, 04021-0025, 04021-0026.
Location:	The subject site is located on the south side of Scott Street, between McRae Avenue and Tweedsmuir Avenue, in the City of Ottawa. The subject site is shown on Figure 1 - Key Plan following the body of this report.
Latitude and Longitude:	45° 23' 45" N, 75° 45' 02" W.
Site Description:	
Configuration:	Irregular.
Site Area:	0.51 ha (approximate).
Zoning:	GM[1576]H(15) – General Mixed Use Zone, R4G – Residential Fourth Density, TM[103] – Traditional Mainstreet Zone.
Current Use:	The subject site is currently occupied by two, 2 storey residential dwellings with a basement levels (311 and 315 Tweedsmuir Avenue), a small vacant kiosk and a single storey commercial structure with a partial second storey (320 McRae Avenue). The commercial building is occupied by a landscaper who uses two garage bays as storage space, two (2) automotive body shops, a construction site office, a self storage facility and an office for the self-storage facility.
Services:	The subject site is located in a municipally serviced area.

3.0 SCOPE OF INVESTIGATION

The scope of work for this Phase I-Environmental Site Assessment was as follows:

- Determine the historical activities on the subject site and study area by conducting a review of readily available records, reports, photographs, plans, mapping, databases and regulatory agencies;
- Investigate the existing conditions present at the subject site and study area by conducting site reconnaissance;
- Conduct interviews with persons knowledgeable of current and historic operations on the subject property, and if warranted, neighbouring properties;
- Present the results of our findings in a comprehensive report in general accordance with the requirements of Ontario Regulation 269/11 amending O.Reg. 153/04 made under the Environmental Protection Act and in compliance with the requirements of CSA Z768-01;
- Provide a preliminary environmental site evaluation based on our findings;
- Provide preliminary remediation recommendations and further investigative work if contamination is suspected or encountered.

4.0 RECORDS REVIEW

4.1 General

Phase I-ESA Study Area Determination

A radius of approximately 250 m was determined to be appropriate as a Phase I ESA study area for this assignment. Properties outside the 250 m radius are not considered to have impacted the subject land, based on their significant distance from the site.

First Developed Use Determination

The chain of title indicates that individuals acquired land from the Crown in 1803 and 1835. The historical literature on City of Ottawa landfill sites indicates that the landfill in the area of the subject site was active prior to 1940.

The earliest aerial photograph, from 1928, shows the northeast side of the subject site as vacant with potential fill piles from the possible use of the subject site as a landfill. The residences at Tweedsmuir Avenue appear to be present in 1928. By 1958 the residences at 311 and 315 Tweedsmuir Avenue, a restaurant at 1976 Scott Street and an autobody repair shop at 320 McRae are present as observed in the air photo and identified in the city directories.

Fire Insurance Plans

Fire insurance plans (FIPs) for the subject site and surrounding lands from 1956 and 1957 cover the majority of the Phase I study area. The FIPs show the subject site as occupied by two (2) residential dwellings addressed 305 and 311 Tweedsmuir Avenue, a workshop addressed 1980 Scott Street, Willy's Body Shop addressed 320 McRae and a building labeled 'Trucks' addressed 336 McRae Avenue. The residential dwellings at 311 and 315 Tweedsmuir Avenue are considered to be the present day structures at that location and the buildings at 320 and 336 McRae Avenue are considered to be part of the present day commercial structure addressed 320 McRae Avenue.

The on-site potentially contaminating activities (PCAs) identified during the review of the FIPs are the two (2) potential automotive service garages and commercial autobody shops at 320 and 336 McRae Avenue. The on-site PCAs are considered to represent areas of potential environmental concern (APECs).

Neighbouring land use in the Phase I study area consisted of residential, commercial, industrial, contractor's yards and coal/lumber yards. Various off-site potentially contaminating activities identified during the review of FIPs include: coal storage locations, contractors yards, retail fuel outlets, autobody and automotive repair garages, electronic manufacturing and commercial properties with underground storage tanks.

The locations of all of the PCAs identified in the Phase I-ESA area are depicted in the Surrounding Land Use Plan, Drawing PE3391-2R.

City of Ottawa Street Directories

City directories were reviewed in approximately ten (10) year intervals back to the 1930s. The subject site was first listed in the 1947 directories under Stewart Buckland (residential), at 305 Tweedsmuir Avenue. 311 Tweedsmuir Avenue was listed in 1952 under William E. Hay. 320 McRae Avenue was first listed in 1957 as Willy's Body Shop Auto Repairs, 336 McRae was listed under Edmond Poirier in 1952. 1976 Scott Street first listed in 1962 as Camies Grill, 1980 Scott Street was not identified during the review of the city directories.

Since the first listings, the properties along Tweedsmuir Avenue have always been listed as residential dwellings. The portion of the site with Scott Street addresses has been listed as Carson's Body Shop Gas Bar and J's Gas Bar in between 1972 to 1992, and in 2010 it was listed as Westboro Motors (used car lot). The properties along McRae have been listed as various commercial properties including Carson's Body Repairs Ltd., Westboro Self Storage and Auto Rebex International.

The uses of the subject site that are considered to present potentially contaminating activities include the automotive service garage(s), commercial autobody shop(s) and the retail fuel outlet.

Neighbouring properties in the Phase I study area were listed primarily as residential dwellings, with various commercial listings throughout and some industrial listings. The listings associated with potentially contaminating activities are listed below in Table 1.

**Table 1: Potentially Contaminating Activities
City Directories Review Summary**

Listing	Address	Years Listed	Potentially Contaminating Activity	Represents an Area of Potential Environmental Concern?
Safe Auto Repair Automotive	2046 Scott Street	2011	Automotive Service Garage	No
Alert Auto Sales & Leasing & Service;	2046 Scott Street	2000	Automotive Service Garage and Car Sales Lot	No
Engine Shop Inc.	2046 Scott Street	1981	Automotive Service Garage	No
Lafleur Bob Garage	2046 Scott Street	1952	Automotive Service Garage	No
Campbell's Pump Service	2050 Scott Street	1972, 1957	Potential Retail Fuel Outlet	No
Gervais Motors	1960 Scott Street	1989	Automotive Service Garage	No
Independent Coal and Lumber Co.	1960 Scott Street	1970	Bulk Coal Storage	No
R. Mahoney Service Station	1950 Scott Street	1950	Retail Fuel Outlet	No
Independent Coal and Lumber Co.	371 Clifton Road	1961, 1970	Bulk Coal Storage Facility	No
Independent Coal and Lumber Co.	25 Clifton Road	1941, 1951	Bulk Coal Storage Facility	No
Otto's Service Centre	225-245 Richmond Road	1961, 1970, 1980, 1989, 2000, 2010	Car Sales Lot and Automotive Service Garage	No
Nick's Service Centre	236 Richmond Road	1961, 1970, 1980, 1989, 2000, 2010	Automotive Service Station and Retail Fuel Outlet	No
Auto Body Lusitania Collision Centre	255 Richmond Road	1951, 1961, 1970, 1980, 1989, 2000	Commercial Autobody Shop	No
Ken Workman's Shell Service Station	225 Richmond Road	1951, 1961, 1970	Retail Fuel Outlet	No
Canadian Bank Note Company	145 Richmond Road	1990, 2000	Industrial Printing	No
R.L. Crain Printers	190 Richmond Road	1951	Printers	No
Canadian General Electric Co.	175 Richmond Road	1955, 1961	Electronics Manufacturer	No
Guillevin International Pro Restaurant Equipment	175 Richmond Road	1980, 1990, 2000	Restaurant Equipment Manufacturers	No
Fuller Construction	199 Richmond Road	1951, 1961, 1970	Contractors Yard	No

Table 1: Potentially Contaminating Activities (continued) City Directories Review Summary				
Listing	Address	Years Listed	Potentially Contaminating Activity	Represents an Area of Potential Environmental Concern?
Westboro Auto Imports	199 Richmond Road	1989	Automotive Service Garage	No
Sheera Car Care	201 Richmond Road	2000	Automotive Service Garage	No
Les Auto Body Repairs	314 Athlone Avenue	1961, 1970, 1980, 1989, 2000	Commercial Autobody Shop	No
Brebner Manufacturing and Repairs	360 Kirkwood Avenue	2000	Manufacturer Facility	No
Gifford Auto	359 McRae Avenue	1997, 2000	Automotive Service Garage	No
Frappier's Garage	345 Tweedsmuir	1959	Automotive Service Garage	No

None of the off-site potentially contaminating activities were considered to be significant risks that would represent areas of potential environmental concern on the subject site. The locations of all of the PCAs identified in the Phase I-ESA are depicted on the Surrounding Land Use Plan, Drawing PE3391-2R.

Chain of Title

Lots 31 and 32 of Concession 1, Ottawa Front were first acquired by individuals from the Crown in 1835 and 1803, respectively. These larger parcels, which the subject site straddles, were exchanged to various individuals up to 1909. Between 1909 and the present day, the property defined by the current legal plan (lots of Registered Plans 263 and 273), was exchanged between various individuals.

The property has always been owned by individuals with the exception of the Corporation of the Township of Nepean which held several lots at different stages and Donald G. Barnes, Robert W. Barnes, Dalton C. S. Barnes in partnership under Barnes Pick up Service. They held Lot 12 of Registered Plan 273 for less than a day, when the property was transferred to the current owner Carson Unsworth. Based on the results of the chain of title search Mr. Unsworth acquired the first portion of the subject site in 1958 and the last in 1966. No information with respect to potential environmental concerns could be isolated from the chain of title.

Topographical Survey Plan

Mr. Fred Unsworth provided Paterson with a copy of the topographical survey plan, prepared by Stantec Geomatics Ltd., dated 2008 and revised March 2013. The plan illustrates the various lots of the Registered Plans 263 and 273. The subject site is depicted with the residential structure, commercial complex and the vacant kiosk in their present day orientation.

Previous Engineering Reports

Paterson has conducted numerous environmental assessments in the area of the subject site, including a Phase I-II Environmental Site Assessment report for the subject site and the construction site across McRae Avenue, dated November 2008. Additionally, Paterson was provided with a letter report from SEACOR Environmental Inc. (SEACOR), titled “Re: Soil testing during retail gas station decommissioning”, dated September 24, 2003, as a historical source.

The SEACOR letter report indicated that three (3) 22,700 L single wall steel USTs, one pump island and all associated steel piping was removed from the northeast portion of the subject site. The report indicates that 180 metric tonnes of impacted soil were removed from the pump island excavation. Confirmatory samples were collected from both the UST nest excavation and the pump island excavation following the remedial excavation.

The results of the confirmatory samples were compared to MOECC Table F criteria for sensitive site use and Table B for non-potable commercial site use. Based on the presence of the shallow bedrock on the subject site, Table F (now Table 7) is considered to be the appropriate criteria. The results from the analytical testing indicated that the soils within both excavations exceeded the Table F criteria but were in compliance with the Table B criteria.

The MOECC standards and testing procedures have been revised since the issuance of the above noted report, as a result a direct comparison for petroleum hydrocarbons cannot be completed. Regardless, the concentrations present in final results did merit reassessment. Furthermore, no groundwater testing was carried out prior to, during or following the decommissioning and remedial programs.

The Phase I portion of the 2008 Paterson report identified the former use of the subject site as an automotive body shop and a retail fuel outlet, the use at the time as two (2) mechanical repair garages as concerns.

The Phase II consisted of drilling four (4) boreholes on the subject site, two (2) of which were instrumented with groundwater monitoring wells. A soil sample collected from BH8-08 was submitted for analytical testing of petroleum hydrocarbons (PHC) fractions F₁-F₄ and metals.

A groundwater sample collected from BH6-08 was submitted for analytical testing for PHCs (F₁-F₄) and volatile organic compounds (VOCs).

The soil from BH8-08 exceeded the applicable standards for PHCs F₂, F₃, F₄, arsenic, cadmium, barium, lead and zinc. The groundwater from BH6-08 exceeded the applicable standards for PHC F₁, benzene, toluene, xylenes and chloroform. It was also noted that while drilling BH4-08, in the area of the pump island remedial excavation, a strong PHC odour and sheen were observed from the corewater. The water sample collected from BH4-08 was observed to have an obvious sheen and had a strong PHC odour. At the time, the groundwater in the vicinity of BH4-08 was considered to be contaminated.

The report recommended that supplemental investigative work be carried out to delineate the extent of the soil and groundwater impacts on the subject property, in order to determine the most appropriate means of remediation. It also recommended carrying out an asbestos survey to assess the potential asbestos containing materials in the subject building.

4.2 Environmental Source Information

Environment Canada

A search of the National Pollutant Release Inventory (NPRI) was conducted electronically on September 10, 2014. The subject site was not listed in the NPRI database. One (1) site with NPRI records was identified within the Phase I study area. This site is the Canadian Bank Note Company building located at 145 Richmond Road, approximately 240 m east of the subject site.

The Canadian Bank Note Company includes a certificate air contaminant release form that indicates 10.891 tonnes of volatile organic compounds were released as emissions in 2010. Reports of this type appear available for this property for 2003 to 2010, however, no other details or figures were available. The use of this facility is considered to represent potentially contaminating activity, however, based on the distance from the subject site this facility is not considered to generate an APEC on the subject site.

PCB Inventory

A search of the national PCB waste storage sites was conducted. No PCB waste storage sites were identified within the Phase I study area.

Ontario Ministry of Environment and Climate Change (MOECC) Instruments

A request was submitted to the MOECC Freedom of Information office for information with respect to certificates of approval, permits to take water, certificates of property use or any other similar MOECC issued instruments for

the site. No such records were identified in the search. The MOECC response from the previous Phase I-II-ESA report was available and was reviewed as well. The response dated December 2, 2008, contained no information pertaining to instruments or permit applications.

MOECC Coal Gasification Plant Inventory

The Ontario Ministry of Environment and Climate Change document titled "Municipal Coal Gasification Plant Site Inventory, 1991" was reviewed to reference the locations of former plants with respect to the site. No coal gasification plants were identified on the subject site or within the Phase I study area.

MOECC Incident Reports

A request was submitted to the MOECC Freedom of Information office for information with respect to records concerning environmental incidents, orders, offences, spills, discharges of contaminants or inspections maintained by the MOECC for the site or adjacent properties. The response, dated November 26, 2014, returned two occurrence reports. The first was summarized as a 20 L diesel spill to asphalt, which occurred during a filling at Jay's Gas Bar (1976 Scott Street). The report indicates that absorbent material was utilized to clean the asphalt and the spill containment. The report indicated there were no environmental impacts. The second occurrence report pertained to a paint odour complaint from a resident adjacent to the auto body shop. The summary indicated that the representative of Carson's Auto Body claimed that the spray paint booth had been in operation for 10 years, and that no changes had been made to the operation. No further action was recommended.

MOECC Waste Management Records

A request was submitted to the MOECC Freedom of Information office for information with respect to waste management records.

The responses from the MOECC, dated November 26, 2014 as well as from December 2008, have three (3) waste management records. There is one (1) HWIN waste generator administration document for Jay's Gas Bar, waste class 221 – L (light fuels, liquid), active for off-site disposal. One (1) auditing summary indicating that Carson's Body Repairs Ltd. was housing caustic waste generated from cleaning car radiators, which is no longer done on-site and the equipment is no longer on-site. The final record was an acknowledgement of subject waste registration for the caustic waste identified in the auditing summary for waste class 112 – C (acid solutions, sludges and residues containing heavy metals).

MOECC Submissions

A request was submitted to the MOECC Freedom of Information office for information with respect to reports related to environmental conditions that have been submitted to the MOECC. No submission records were identified in the recent report, or the 2008 MOECC response.

MOECC Brownfields Environmental Site Registry

A search of the MOECC Brownfields Environmental Site Registry was conducted as part of this assessment for the site, neighbouring properties and the general area of the site. No Records of Site Condition (RSCs) were filed for the subject site. One (1) RSC property was identified within the Phase I study area. The RSC property is located at 309 Athlone Avenue (now 2000 Scott Street), approximately 50 m west of the subject site. Based on the RSC, 70 m³ of soil and 4,046 L of groundwater impacted by PHCs was removed from the RSC property during a remediation. The RSC indicates that none of the impacted soil was removed from within 3 m of the property boundary. The property has since been redeveloped with a residential condominium. The RSC property is not considered to represent a risk to the subject site.

MOECC Waste Disposal Site Inventory

The Ontario Ministry of Environment and Climate Change document titled "Waste Disposal Site Inventory in Ontario, 1991" was reviewed as part of the historical research. No landfill sites were identified in the Phase I study area.

Areas of Natural Heritage & Significance Interest

A search for areas of natural significance and features within the Phase I study area was conducted on the web site of the Ontario Ministry of Natural Resources (MNR) on September 10, 2014. The search did not identify any provincially significant life sciences or earth sciences areas of natural heritage and scientific interest within the Phase I study area.

Technical Standards and Safety Authority (TSSA)

The TSSA, Fuels Safety Branch in Toronto was contacted electronically on September 19, 2014 to inquire about current and former underground storage tanks, spills and incidents for the site and neighbouring properties. The TSSA has a record for 1976 Scott Street, of three (3) expired USTs.

Previous TSSA response from 2008 indicated that 1976 Scott Street was listed as a full service gas station with three (3) double walled, fibreglass underground storage tanks (USTs). The three (3) 22,700 L USTs were installed in 1992.

According to a note made by an inspector, the gas station was decommissioned in 2005. No other records were available for the subject site or the neighbouring properties in the immediate vicinity of the subject site.

Copies of the TSSA correspondences are included in Appendix 2.

City of Ottawa Landfill Document

The document entitled “Old Landfill Management Strategy, Phase I-Identification of Sites, City of Ottawa”, was reviewed. One (1) landfill site was identified in the area of the subject site. The review of the report indicates that the landfill was located on McRae Avenue, between Scott Street and Richmond Road, served the City of Ottawa and was active prior to the 1940s. The report indicates that the waste is domestic, of unknown thickness and the footprint has not been identified. The report also indicates that a printing industry was located nearby, approximately 160 m southeast of the subject site. A review of aerial photographs, in particular from 1928 (see Section 4.3 Physical Setting Sources), landfilling activities only appear to be taking place on the north eastern portion of the subject site, away from the Tweedsmuir properties.

The historic landfilling activities in the area of the subject site is a potentially contaminating activity which generates an area of potential environmental (APEC) concern on the subject site.

City of Ottawa Historical Land Use Inventory (HLUI)

A requisition form was sent to the City of Ottawa to request information from the City’s Historical Land Use Inventory (HLUI 2005) database for the subject property. At the time of issuance of this report, the response from the City of Ottawa had not been received, however, it is considered unlikely that the search results will contain information that would alter the general conclusions of this report. Should the response reveal new pertinent information, a copy of the response will be forwarded to the client.

4.3 Physical Setting Sources

Aerial Photographs

Historical air photos from the National Air Photo Library were reviewed in approximate ten (10) year intervals. The review period dates back to the first available air photos for the site. Based on the review, the following observations have been made:

- 1928 The subject site appears vacant, grassed and treed with some possible fill placement in the area of McRae Avenue. Tweedsmuir Avenue is present to the west of the subject site. Scott Street appears

to be a dirt road or path, a rail line further to the north of the subject site is present. McRae Avenue is partially constructed with the northern part of the street appearing to be occupied by fill piles. Properties to the south and further to the west of the subject site appear to have been developed with residential dwellings. The neighbouring properties are generally residential, with commercial along Richmond Road.

A large coal and lumber storage yard is present further to the northeast of the subject site. Land on the east side of McRae appears vacant at this time.

- 1953 Due to the poor resolution of the photograph, specific details cannot be identified at this time. The subject site appears to be occupied by at least one building in the area of the present day commercial structure. McRae Avenue and Scott Street appear to have been completed. It is unclear what the lands further to the east of McRae Avenue and north of the railway line were utilized for. A few larger industrial structures are present further to the east and southeast of the subject site.
- 1958 The subject site appears to be occupied by two (2) residential dwellings on Tweedsmuir Avenue, a small commercial building on Scott Street and two (2) buildings on McRae Street in the area of the present day commercial structure. The land use on the east side of McRae Avenue appears to be utilized for storage. A government building further to the north of the railway lines appears to be under construction. No other apparent changes have been made to the neighbouring properties.
- 1976 The subject site appears to be occupied by the present day commercial structure. The other structures on the property cannot be clearly observed in this photograph. The land to the east of McRae Avenue appears to be occupied by a single commercial structure. The properties along Scott Street appear to be increasingly commercial. The government buildings further to the north of the subject site have been completed. The former coal and lumber yard further to the northeast of the subject site is now vacant. Residential dwellings are present further to the northeast.

- 1984 The northeast corner of the subject site appears to have been cleared. The northwest side of the subject site is obscured by trees. No other apparent changes have been made to the subject site. An increasing number of commercial buildings are present on the east side of McRae Avenue. No other significant changes have been made to the neighbouring properties.
- 1993 Due to the poor resolution of the photograph, no specific details could be determined for the subject site, however, no significant changes appear to have been made. Neighbouring properties are generally consistent with the 1984 aerial photograph.
- 1991 (City of Ottawa website) The subject site appears generally consistent with the present day subject site with the exception of the retail fuel outlet present on the northeast corner of the property. An array of access points to underground storage tanks is present on the east side of the property and a pump island is present on the centre of the northern portion of the subject site. A small kiosk is present to the south of the pump islands and west of the underground storage tank (UST) nest. Neighbouring properties are generally consistent with the 1984 aerial photograph.
- 2002 (City of Ottawa website) No apparent changes have been made to the subject site. The large industrial facility further to the south of Richmond Road has been demolished. No other significant changes have been made to the neighbouring properties.
- 2005 (City of Ottawa website) The pump island and UST nest on the north portion of the subject site appear to have been decommissioned and patched areas of asphalt or crushed stone are present in their former locations. The former industrial property on the south side of Richmond Road has been redeveloped with a large commercial structure. The former coal and lumber storage yard, further to the northeast of the subject site has been redeveloped with townhouses and a residential tower.
- 2011 (City of Ottawa website) No apparent changes have been made to the subject site or neighbouring properties.

Laser copies of selected aerial photographs reviewed are included in Appendix 1.

Topographic Maps

Topographic maps were obtained from Natural Resources Canada – The Atlas of Canada website and from the City of Ottawa website. The topographic maps indicate that the regional topography generally slopes down towards the Ottawa River to the north. The topographic map depicts the nearby hydro corridor on the east side of McRae Avenue and a substation on the north side of Scott Street. Based on the topographic maps, the closest body of water to the subject site is the Ottawa River, the closest point of which is located between approximately 800 m west of the subject site. An illustration of the referenced topographic map is presented on Figure 2 – Topographic Map, appended to this report.

Physiographic Maps

The Ontario Geological Survey publication 'The Physiography of Southern Ontario, Third Edition' was reviewed as a part of this assessment. According to the publication and attached mapping, the site is situated within the Ottawa Valley Clay Plains physiographic region, described as "clay plains interrupted by ridges of rock or sand". Mapping shows the subject site as situated in an area of limestone and till plains.

Geological Maps

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on this information, the bedrock in the area of the subject site consists of interbedded limestone and dolostone of the Gull River Formation. Overburden soils are shown as till, with a drift thickness on the order of 2 to 5 m.

Water Well Records

The online interactive well record mapping system was accessed on August 12, 2014. A total of 13 well records were identified within the Phase I-study area. With the exception of a commercial and a domestic wells, all of the wells in the area of the subject site were utilized as test holes or groundwater monitoring wells. One (1) of the records is for the decommissioning of wells within the Phase I-study area.

Based on the locations of the wells, about Richmond Road where Athlone Avenue and Tweedsmuir Avenue intersect, the majority of the wells are believed to be to assess and monitor potential PHC contamination from operation of former and current retail fuel outlets in this area. None of the well records appear to be for wells installed within 50 m of the subject site.

Water Bodies and Areas of Natural Significance

No water bodies or Areas of Natural Significance are present in the Phase I study area. The closest water body is the Ottawa River, located approximately 800 m northwest of the subject site. No areas of natural significance are known to exist within the Phase I study area.

5.0 INTERVIEWS

Property Owner Representative

Mr. Vincent Dellapenna, the manager of Westboro Self-storage, was available for questions during the site visit on September 24, 2014. Mr. Dellapenna has operated out of the subject site for 45 years. Mr. Dellapenna indicated that he has never observed any spilling or leaking of chemicals or fuels at the subject site or neighbouring properties.

While discussing the history of the subject site, Mr. Dellapenna indicated the former residential dwelling at 305 Tweedsmuir Avenue had been demolished during his time at the property. He mentioned that the residence had a basement, which was filled with clean fill following the demolition.

Mr. Dellapenna indicated that the residential dwelling at 311 Tweedsmuir Avenue is currently heated by a natural gas fired furnace in the basement of the subject building. He is unaware of the date when the building changed its heating fuel from oil to natural gas. Mr. Dellapenna indicated that there has never been an issue regarding spills or leaks with oil within the current or former residential buildings (305 and 311 Tweedsmuir Avenue).

Mr. Dellapenna indicated that the northern garage bays on the commercial building have been occupied by a landscaper for the last two (2) years. He stated that the landscaper utilized these garage bays as a storage area for his equipment and vehicles. Prior to the landscaper, the bays were used as storage space for six (6) to seven years (7). Mr. Dellapenna indicated that the two (2) offices in the commercial building are occupied by a construction office (for the construction site across McRae Avenue to the east) and Westboro Self-storage. He mentioned that Westboro Self-storage had expanded its presence within the building in 1995 when it took over additional space.

When asked about potential environmental concerns from the subject site and neighbouring properties, Mr. Dellapenna indicated that a clean-up was carried out when the retail fuel outlet on the northern portion of the subject site was decommissioned. He stated that the retail fuel outlet operated between 1971 and 2002.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

The site visit was conducted on September 24, 2014, between 10:00 A.M. and 12:00 P.M. Weather conditions were overcast with a temperature of approximately 20° C. Mr. Sean Moggridge from the Environmental Department of Paterson Group conducted the site assessment. A return site visit was conducted on January 21, 2016 to assess the newly acquired property at 315 Tweedsmuir Avenue. In addition to the site, the uses of neighbouring properties within the Phase I study area were also assessed at the time of the site visit.

6.2 Specific Observations at Phase I Property

Buildings and Structures

The subject site is occupied by two, 2 storey residential dwellings on the northwest side of the subject site, a small single storey kiosk on the centre of the northern portion of the subject site and a single storey commercial garage and storage building with a partial second storey.

The commercial building is a mixture of single storey and two (2) storey buildings that were combined between the 1940s and 1960s. The structure is slab-on-grade, except in the self-storage area where the ground floor is on a sunken floor slab. The building has a flat tar and gravel style roof and is finished with concrete block, brick, and stucco.

The residential buildings are two (2) storey buildings each with a single basement level. The buildings have sloped and shingled roofs and are finished with stucco. The buildings are currently heated by individual natural gas fired furnaces.

The kiosk on the northern portion of the subject site is a small single storey, slab-on-grade shack, formerly utilized as a kiosk and washrooms for the gas station. The shack has a sloped shingled roof and is finished with vinyl siding.

Underground Utilities

Underground utilities at the subject site consist of stormwater and sanitary sewers, natural gas and telecommunications lines. Private services were also located as part of the Phase II-ESA conducted concurrently with this assessment.

Site Features

Residential dwellings occupy 311 and 315 Tweedsmuir Avenue on the northwest portion of the subject site. Ground cover in the backyard and around the

residence is grassed with trees. A grassed and treed section extends to the north from the residence to Scott Street. The southeastern portion of the site is occupied by the commercial complex. Ground cover to the north and south of the commercial building is asphaltic concrete. The former gas station portion of the site consists of a vacant kiosk and asphaltic concrete ground cover, with two areas of crushed stone ground cover from the tank nest and pump island decommissioning.

Staining was observed on the asphaltic concrete surface on the east side of the commercial building in the area of the waste storage location, adjacent to the natural gas connection. No significant staining was observed in the areas of the asphaltic concrete parking lots, however, many vehicles obscured the view of the parking lots.

Site topography generally slopes down towards the commercial building in the southeastern portion of the subject site, while regional topography slopes down towards the Ottawa River, to the northwest. Site drainage consists primarily of sheet flow to on-site and off-site catch basins. The subject site is generally at the same grade as the surrounding properties and roadways.

There were no fill piles or unidentified substances observed on the exterior of the subject site. One (1) of the groundwater monitoring wells, installed during the previous Phase II-ESA, was observed on the subject site. The subject site is illustrated on Drawing PE3391-1R – Site Plan.

Interior Assessment

During the return visit to site, 315 Tweedsmuir Avenue was found to be constructed as follows:

- Floor materials consist of laminate flooring and ceramic tile.
- Wall materials consist of lathe and plaster, and drywall.
- Ceiling materials consist of lathe and plaster (finished with stipple) and drywall
- Lighting throughout the building is provided by fluorescent and incandescent fixtures.

A general description of the interior of the commercial building is as follows:

- Floor materials consist of concrete with laminate and carpet in the office areas.
- Wall materials consist of drywall, plaster and concrete block.
- Ceiling materials consist of drywall, plaster and suspended ceiling tiles.

- Lighting throughout the building is provided by fluorescent and incandescent fixtures.

The residential and commercial buildings are heated by natural gas fired furnaces.

Based on the age of the residential and commercial buildings (constructed between 1940 and 1960), asbestos containing materials may be present within the buildings. Similarly, based on the age of the buildings, lead based paint may be present.

No sumps were observed in the buildings. Several drains and oil/water separators are present within the commercial property. An oily sheen or film was observed on the water in the two (2) oil/water separators and the interior drains observed in the garage units and the landscaper's unit.

Chemicals and fuels within the units were limited to general garage chemicals, including lubricants, fuels and cleaning solvents. Chemicals within the landscaper's garage bays included household herbicides, lubricants, paint, oil, salt and pot ash. Waste oil was also identified in the landscaper's unit in multiple open containers. Staining was observed in all of the garage bays, including the landscaper's unit.

One (1) waste oil tank and one (1) new oil aboveground storage tank are present in both of the garage units. Staining was observed around all of the ASTs. Saturated absorbent material was observed beneath the waste oil AST in the Gifford Automotive garage and the floor was stained with spilt oil.

Potential sources of ozone depleting substances included the refrigerator and fire extinguishers present within the building.

Neighbouring Properties

An inspection of neighbouring properties was conducted from publicly accessible roadways at the time of the site inspection. Land use adjacent to the subject site was as follows:

- North - Scott Street, followed by the OC Transpo Transit Way.
- East - McRae Avenue, followed by a construction site and Trailhead (retail commercial property).
- South - Residential dwellings, followed by Otto's Subaru (car dealership).
- West - Residential and Tweedsmuir Avenue, followed by residential and Adam's Moving (commercial service property).

Various properties within the Phase I study area are considered to represent potentially contaminating activities. Current land use and potentially

contaminating activities in the Phase I Study area are illustrated on Drawing PE3391-2R – Surrounding Land Use Plan in the Figures section of this report, following the text.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Land Use History

Based on the available historical information sources, prior to development, part of the land around McRae Avenue, between Richmond Road and Scott Street was utilized as a landfill for domestic waste. The exact area of the landfill is not known, however, it is possible that it covered the northeast part of the subject site. The subject site was developed with residential dwellings along Tweedsmuir Avenue as early as the 1920's and commercial structures along McRae Avenue as early as the 1940s. The present day structures were completed between the 1940s and 1960s. The commercial structure(s) along McRae Avenue have always been, in part, utilized as automotive service garages or commercial autobody shops. The northeastern portion of the subject site was utilized as a retail fuel outlet between 1971 and 2002.

Potentially Contaminating Activities (PCAs)

The three (3) on-site potentially contaminating activities are as follows:

- ☐ Item 28, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: "Gasoline and Associated Products Storage in Fixed Tanks." - this PCA was identified based on the historical presence of the retail fuel outlet with three (3) underground storage tanks, on the northern portion of the subject site.
- ☐ Item 10 and 52, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: "Commercial Autobody Shop" and "Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems" - this PCA was identified based on the historical or current presence of various automotive service garages and autobody shops on the eastern portion of the subject site.
- ☐ Item 30, Table 2, O.Reg. 153/04 as amended by O.Reg. 269/11: "Importation of Fill Material of Unknown Quality" – this PCA was identified based on the historical information pertaining to the use of McRae Avenue and surrounding lands between Richmond Road and Scott Street as a landfill.

A total of 27 off-site potentially contaminating activities were identified within the Phase I study area. Compared to the on-site PCAs, none of these are considered to represent significant APECs. All potentially contaminating

activities in the Phase I Study area are illustrated on Drawing PE3391-2R – Surrounding Land Use Plan in the Figures section of this report, following the text.

Areas of Potential Environmental Concern (APECs)

All of the on-site PCAs are considered to represent areas of potential environmental concern on the subject site. Details pertaining to the APECs are listed in Table 2 below. Other Potentially Contaminating Activities within the Phase I study area are not considered to pose an environmental concern to the subject site due to their separation distance and/or location downgradient or cross-gradient of the subject site or were previously addressed.

Table 2: Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil, and/or Sediment)
1976 Scott Street	Northern portion of the subject property	Item 28, Table 2, O.Reg. 153/04 – (Retail fuel outlet with three (3) underground storage tanks)	On-site	PHCs F1-F4, BTEX	Soil, Groundwater
320 McRae Avenue	Eastern portion of the subject property	Item 10 and 52, Table 2, O.Reg. 153/04 – (Commercial autobody shops and automotive repair garages)	On-site	PHCs F1-F4, metals, VOCs	Soil, Groundwater
1976 Scott Street, and 320 McRae Avenue	Subject property, eastern portion.	Item 30, Table 2, O.Reg. 153/04 – (Importation of Fill Material of Unknown Quality)	On-site	Metals	Soil (fill) and Groundwater

Contaminants of Potential Concern

Based on the past and current uses of the subject site, the following Contaminants of Potential Concern (CPCs) have been identified:

- Petroleum Hydrocarbons Fractions 1 through 4 (PHCs F1-F4) – this suite of parameters encompasses gasoline (Fraction 1), diesel and fuel oil (Fraction 2), and heavy oils (Fractions 3 and 4). PHCs F1-F4 were selected as CPCs for the Phase I property based on the historical use of three (3) underground storage tanks at the former retail fuel outlet, and the historical and present use of new and waste oil ASTs, as well as, various mechanical activities at the automotive service garages. Heavy oils may be present in the form of lubricants and transmission or hydraulic fluids. PHCs may be present in the

soil matrix, sorbed to soil particles, as well as in free or dissolved phase in the groundwater system. PHCs are generally considered to be LNAPLs – light non-aqueous phase liquids, indicating that when present in sufficient concentrations above the solubility limit, they will partition into a separate phase above the water table, due to their lower density.

- **Metals** – this suite of parameters encompasses various metals for which MOECC standards exist. Metals may be present in the soil matrix or dissolved in site groundwater. Metals were selected as CPCs for the Phase I property based on the reported historical presence of a landfill in the area of the subject site and the former and current use of the subject site as various automotive service garages.
- **Volatile Organic Compounds (VOCs)** – this suite of parameters includes chlorinated solvents (Tetrachloroethylene, Trichloroethylene, Dichloroethylenes, and Vinyl Chloride) associated with de-greasing and dry cleaning, as well as benzene, toluene, ethylbenzene, and xylenes (BTEX), associated with gasoline. These parameters were selected as CPCs for the Phase I study area based on the historical and present use of the eastern portion of the subject site as various automotive service garages and commercial autobody shops. VOCs may be present in the soil matrix as well as in the dissolved phase in the groundwater system.

7.2 Conceptual Site Model

Geological and Hydrogeological Setting

Based on information from the Geological Survey of Canada and previous subsurface investigations at the subject site and nearby properties, drift thickness in the area of the subject site is on the order of 1 to 3 m. Overburden soils consist of till and fill, and bedrock is identified as interbedded limestone and dolostone of the Gull River Formation.

Based on the previous report carried out in the vicinity of the subject site, the groundwater flow direction is interpreted to be in a north-easterly direction.

Contaminants of Potential Concern

The CPCs identified in this Phase I ESA are listed in Section 7.1 of this report.

The mechanisms of contaminant transport within the site soils include physical transportation and leaching. Physical transportation includes any intentional or unintentional movement or distribution of soil by physical means.

Contamination arising from localized spills or runoff from the washing area on-site may be physically transported by vehicle movement or site grading. Leaching may occur in areas where the ground surface consists of gravel or where asphalt quality is poor; precipitation infiltrating in these areas may transport surficial contaminants into lower strata. As such, this mechanism represents a potential pathway for soil contaminants to migrate into site groundwater.

The mechanisms of contaminant transport within the groundwater system include advection, dispersion, and diffusion. Advection and dispersion will be the dominant mechanisms of contaminant transport in soils with higher hydraulic conductivities, such as sands, gravels, silts, and some glacial till soils, whereas diffusion will dominate in soils with lower hydraulic conductivity, such as clays.

Buildings and Structures

The subject site is currently occupied by residential dwellings on the northwest side of the property, a kiosk on the north side of the property and a commercial structure on the southeast portion of the subject site, as discussed in Section 6.2 of this report.

Water Bodies

There are no water bodies on the subject site or within the Phase I study area.

Areas of Natural Significance

No areas of natural significance were identified on the site or in the Phase I study area.

Drinking Water Wells

A search of the MOECC water well database identified two (2) records of potable groundwater wells in the Phase I-study area. Based on the availability of municipal water in the Phase I-study area, no groundwater drinking wells within the Phase I-study area are suspected to be in use.

The search identified a total of 13 well records within the Phase I study area, as detailed in Section 4.3 of this report.

Neighbouring Land Use

Neighbouring land use in the Phase I study area is a mixture of residential, commercial and industrial properties. Various PCAs were identified with regard to the current and former use of properties within the Phase I study area, however, none of these PCAs were considered to represent APECs for the

subject site. Neighbouring land use is illustrated on Drawing PE3391-2R - Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As summarized in Table 2 of Section 7.1, on-site potentially contaminating activities were identified which represent areas of potential environmental concern across the entire site. These include possible landfilling on the subject site, the historical and present use of the subject site as various automotive service garages and commercial autobody shops, as well as, the former use of the northern portion of the subject site as a retail fuel outlet.

All potentially contaminating activities within the Phase I study area are illustrated on Drawing PE3391-2R Surrounding Land Use Plan and all areas of potential environmental concern for the subject site are illustrated on Drawing PE3391-1R Site Plan, in the Figures section of this report.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I ESA is considered to be sufficient to conclude that there are areas of potential environmental concern on the subject site and neighbouring properties which have had the potential to have impacted the subject site.

At the time of issuance of this report, Paterson had not received the results from the City of Ottawa Historic Land Use Inventory search. Although these sources may identify new potentially contaminating activities, notable occurrences or independent incidents, the responses from these searches are not considered likely to significantly alter the general conclusions of this report.

8.0 CONCLUSIONS

Assessment

A Phase I – Environmental Site Assessment (ESA) was carried out for the commercial and residential properties addressed 320 McRae Avenue, 1976 Scott Street, 311 and 315 Tweedsmuir Avenue, in the City of Ottawa, Ontario. The subject site is an amalgamation of residential and commercial land, for which redevelopment is being considered.

Based on the available data, the general area of the subject site was utilized as a domestic landfill prior to the 1940s. The subject site was first developed with three (3) residential structures along Tweedsmuir, a commercial structure on the northeast corner of the property at 1976 Scott Street and one (1) or more commercial structures (including an autobody shop) on McRae Avenue in the 1940s and 1950s. Between the 1940s and 1960s, additions were made to the commercial structure on McRae Avenue. The commercial structure(s) along McRae Avenue have been occupied by one (1) or more automotive service garages and/or commercial autobody shops, since initial development. The northern portion of the subject site (1976 Scott Street) was occupied by a retail fuel outlet, with three (3) underground storage tanks, between 1971 and 2002.

The retail fuel outlet was decommissioned in 2002-2003 by SEACOR Environmental Inc. Based on a review of their letter report and the observations made during a 2008 Phase II-ESA, petroleum hydrocarbon impacted groundwater is considered to be present in the area of the former retail fuel outlet.

Paterson carried out a Phase I-II ESA for the subject site in 2008. Limited groundwater and soil testing identified petroleum hydrocarbon (PHC) fraction F1, benzene, toluene, xylenes and chloroform impacted groundwater north of the commercial building and PHC and metals impacted fill on the east side of the commercial building.

Following the historical review, a site visit was conducted. The site is occupied by residential dwellings (311 and 315 Tweedsmuir Avenue), a kiosk on the north side of the subject site and a commercial structure on the southeast portion of the subject site. The commercial structure is occupied by Westboro Self-storage, a construction site office, two (2) garage bays used for storage of landscaping equipment and two (2) automotive service garages (AutoRebex and Gifford Automotive). Two (2) aboveground storage tanks were observed in each automotive service garage and staining was observed throughout the garage units, including the landscaper's garage bays. Oil water separators and drains on interior of the subject building were observed to contain oily water.

The current use of the subject site as multiple automotive service garages is considered to represent on-site potentially contaminating activities, which generate areas of potential environmental concern (APECs) on the subject site.

Neighbouring properties in the area of the subject site consisted of residential commercial and industrial properties. Various commercial and industrial properties in the Phase I study area were identified as PCAs, however, none of these sites are considered to generate APECs for the subject site.

Recommendations

Based on the results of the Phase I - Environmental Site Assessment (ESA), **in our opinion a Phase II-ESA is required for the property.**

It is recommended that the garage tenants be asked to improve their management of chemicals, fuels and oils on the property. Future spills should be addressed immediately and saturated absorbent material should be removed and replaced where necessary.

As mentioned in Section 6.2, asbestos containing materials (ACMs) and lead based paint may be present within the subject buildings along with other designated substances. A designated substance survey should be carried out according to Ontario Regulation 278/05, under the Occupational Health and Safety Act, prior to demolition of the subject buildings.

9.0 STATEMENT OF LIMITATIONS

This Phase I - Environmental Site Assessment report has been prepared in general accordance with O.Reg. 153/04 as amended by O.Reg. 269/11, and meets the requirements of CSA Z768-01. The conclusions presented herein are based on information gathered from a limited historical review and field inspection program. The findings of the Phase I - ESA are based on a review of readily available geological, historical and regulatory information and a cursory review made at the time of the field assessment. The historical research relies on information supplied by others, such as, local, provincial and federal agencies and was limited within the scope-of-work, time and budget of the project herein.

Should any conditions be encountered at the subject site and/or historical information 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 the Estate of Carson Unsworth. Permission and notification from the Estate of Carson Unsworth and Paterson will be required to release this report to any other party.

Paterson Group Inc.

Adrian Menyhart, B.Eng.

Mark S. D'Arcy, P.Eng.



Report Distribution:

- The Estate of Carson Unsworth
- Paterson Group

10.0 REFERENCES

Federal Records

Air photos at the Energy Mines and Resources Air Photo Library.

National Archives.

Maps and photographs (Geological Survey of Canada surficial and subsurface mapping).

Natural Resources Canada – The Atlas of Canada.

Environment Canada, National Pollutant Release Inventory.

PCB Waste Storage Site Inventory.

Provincial Records

MOECC Freedom of Information and Privacy Office.

MOECC Municipal Coal Gasification Plant Site Inventory, 1991.

MOECC document titled “Waste Disposal Site Inventory in Ontario”.

MOECC Brownfields Environmental Site Registry.

Office of Technical Standards and Safety Authority, Fuels Safety Branch.

MNR Areas of Natural Significance.

MOECC Water Well Inventory.

Municipal Records

City of Ottawa Document “Old Landfill Management Strategy, Phase I - Identification of Sites.”, prepared by Golder Associates, 2004.

Intera Technologies Limited Report “Mapping and Assessment of Former Industrial Sites, City of Ottawa”, 1988.

The City of Ottawa eMap website.

Local Information Sources

Chain of Title obtained through Read Abstracts Limited, March 2014.

Current Plan of Survey, prepared by Annis, O’Sullivan, Vollebakk Ltd.

Personal Interviews.

“Ottawa Yard, 1435 Caledon Street, Phase I Site Assessment, Ottawa, Ontario”, prepared by the Environmental Engineering Group of Canadian Pacific Rail Services, dated October, 1993.

“Phase III - Environmental Site Remediation, Express Transportation Services Inc. Property, 1435 Caledon Place, Ottawa, Ontario”, prepared by John D. Paterson and Associates Limited, dated November 21, 1994 (Paterson report E1114-1).

“Phase I and II Environmental Site Assessment, CPRS-CN Ottawa Yard, Ottawa, Ontario”, prepared by Jacques Whitford Consulting Engineers and Environmental Scientists, dated January 1995.

Public Information Sources

Google Earth.

Google Maps/Street View.

FIGURES

FIGURE 1 – KEY PLAN

FIGURE 2 – TOPOGRAPHIC MAP

DRAWING PE3391-1R – SITE PLAN

DRAWING PE3391-2R – SURROUNDING LAND USE PLAN

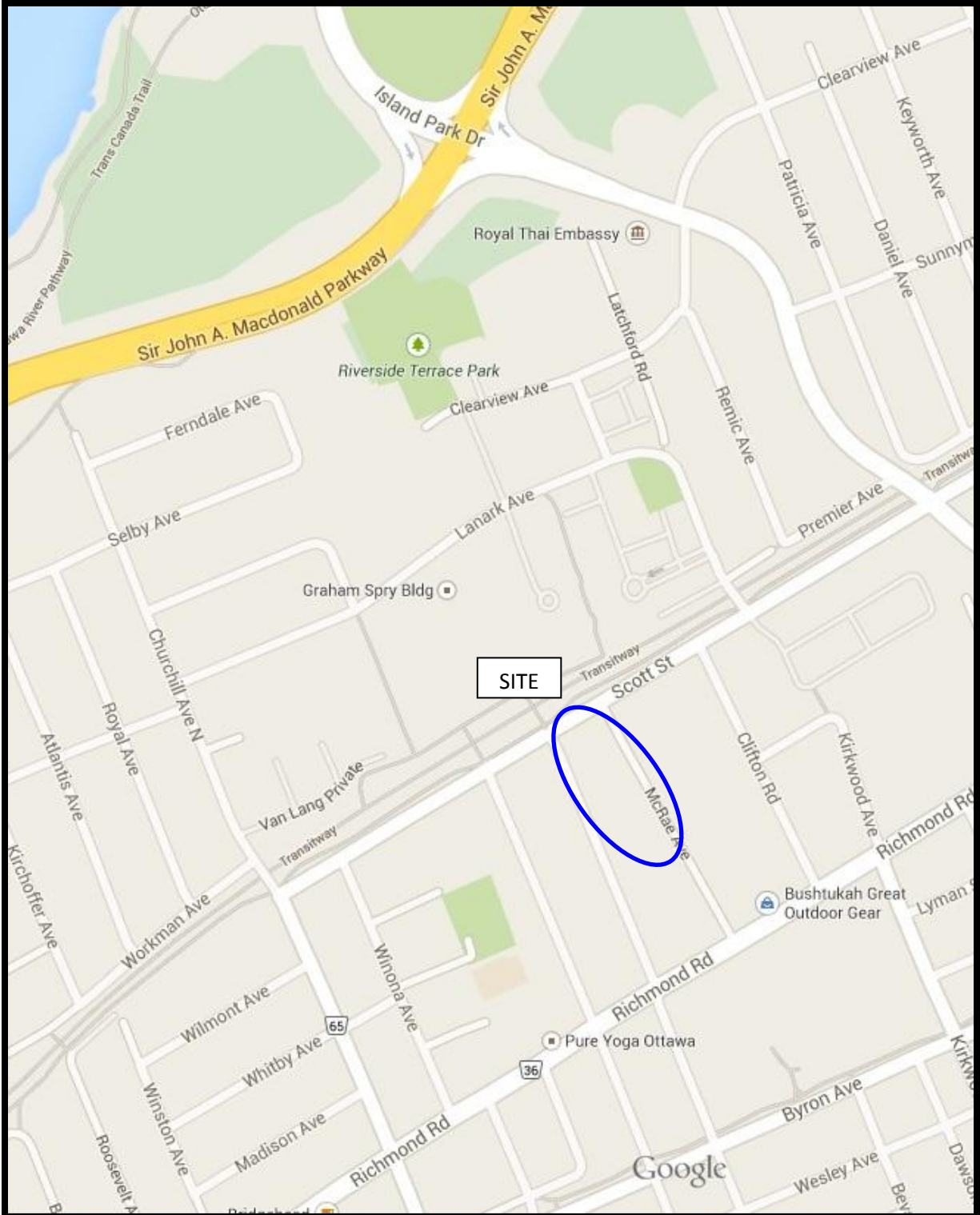


FIGURE 1
KEY PLAN

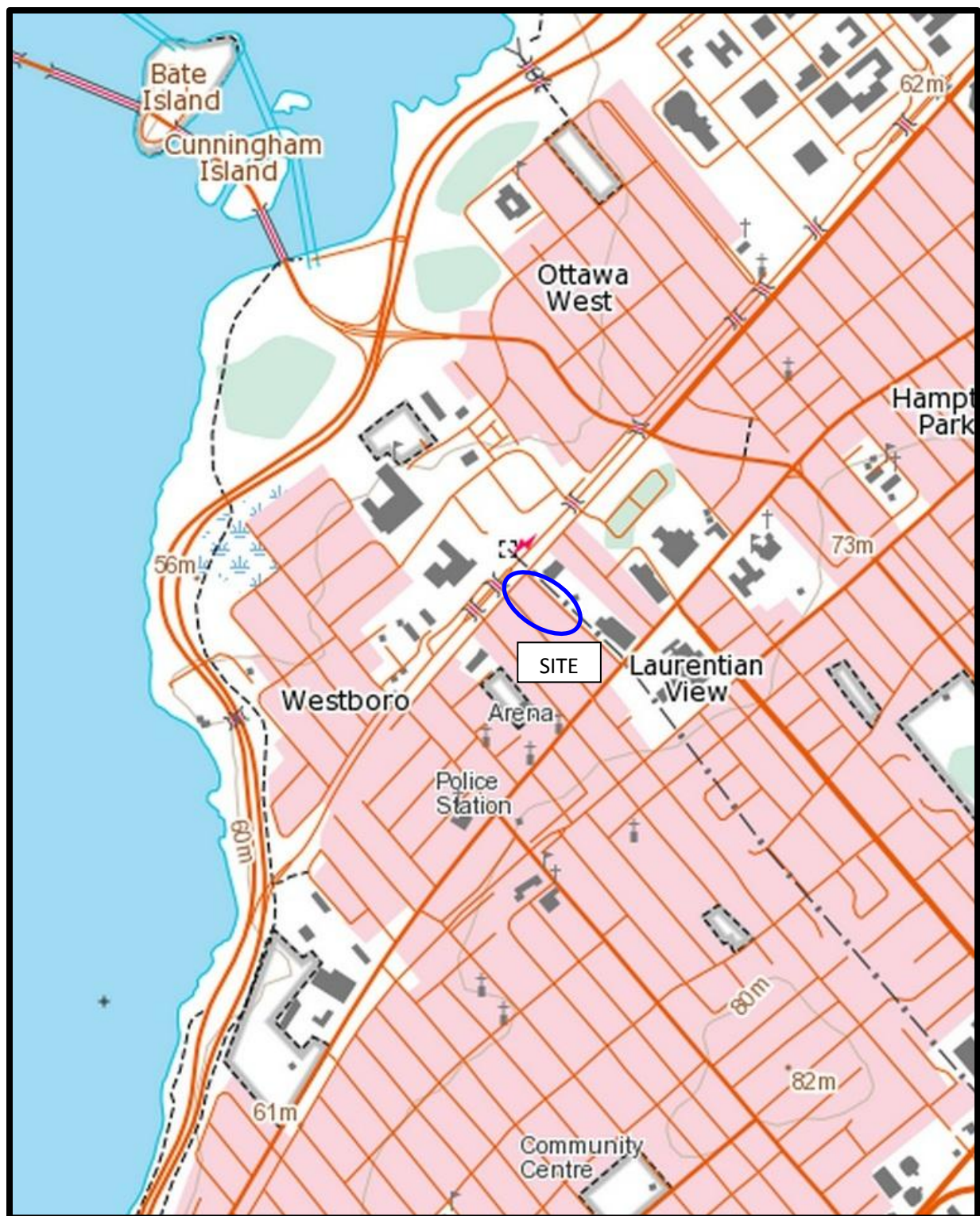
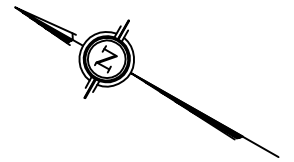
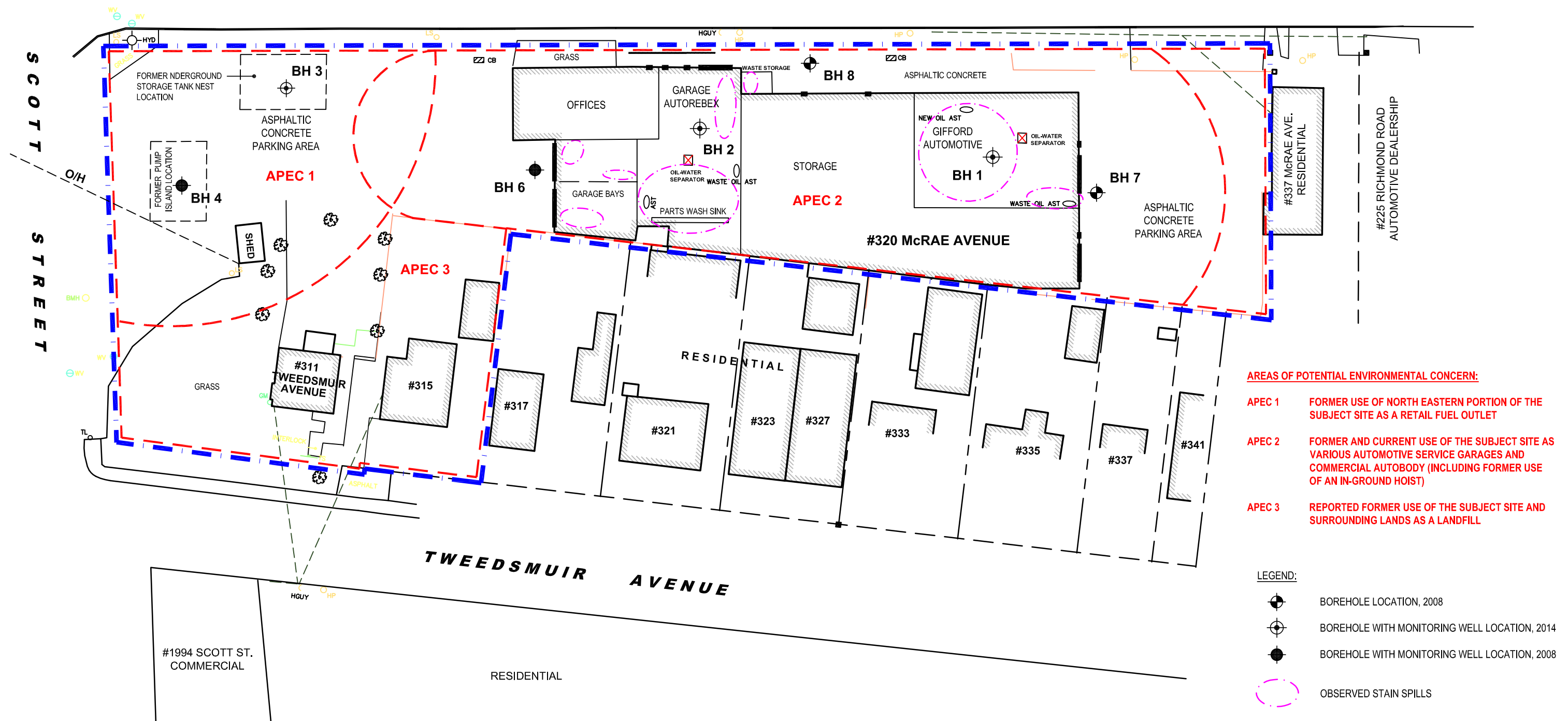


FIGURE 2
TOPOGRAPHIC MAP

#319 McRAE AVENUE
CONSTRUCTION SITE



M c R A E A V E N U E



**154 Colonnade Road South
Ottawa, Ontario K2E 7J5
(613) 226-7381 Fax: (613) 226-6344**

0			
NO.	REVISIONS	DATE	INITIAL

OTTAWA,
Title:

SITE PLAN

ONTARIO

Scale:	1:750	Date:	01/2016
Drawn by:	MPG	Report No.:	PE3391-R
Checked by:	AM	Dwg. No.:	PE3391-1R
Approved by:	MSD	Revision No.:	

p:\autocad drawings\environmental\pe33xx\pe3391\pe3391-1 site plan.dwg

APPENDIX 1

CHAIN OF TITLE

TOPOGRAPHICAL SURVEY PLAN

AERIAL PHOTOGRAPHS

SITE PHOTOGRAPHS



READ Abstracts Limited

331 Cooper Street, Suite 300, Ottawa, Ontario K2P 0A4

Email: search@readsearch.com

Tel.: 613-236-0664

Fax: 613-236-3677

ENVIRONMENTAL SEARCH

September 17, 2014

Patersongroup
Attn: Sean Moggridge

Re: PE3391

BRIEF DESCRIPTION OF LAND:

320 McRae Ave, 1976 Scott St, Ottawa
Lots 12-19, Plan 273, Lots 24-25, Plan 263
PIN: 04021-0014-0015, 0021-0026

LAST REGISTERED OWNER: UNSWORTH, Carson A. (as to pin 04021-0014

UNSWORTH, Carson (as to pin 04021-0015, 0021-0023,
0025)

UNSWORTH, Carson Archibald (as to pin 04021-0024,
0026)

CHAIN OF TITLE:

Lot 31, Con 1 Ottawa Front

Patent dated April 2, 1835
From Crown to Joshua Adams

Deed 854 registered May 15, 1835
From Joshua Adams to William Morris

Deed 10499 registered Jan 20, 1857
From William Morris to John Little

Deed 13089 registered Feb 23, 1859
From Hardy Little to Merrill & Currier

Deed 363 registered Dec 14, 1869
From H. Merrill & J. M. Currier to Hon James Skead

Mortgage 2419 registered Dec 16, 1873
From Hon James Skead to C. P. B. S. Society

Deed 7576 registered Dec 16, 1881
From C. P. L & S Company to Hon. Jas. Skead

Vesting Order 14329 registered April 14, 1890
To Thomas F Nellis

Quit Claim Deed 14330 registered April 14, 1890
From Thomas F. Nellis to Rosina Skead

Deed 16019 registered Feb 1, 1893
From Rosina Skead to George E. Kidd

Deed 17399 registered Jan 4, 1897
From George Eldon Kidd to John F. Kidd

Deed 17401 regisrered Feb 21, 1897
From John F. Kidd to Thomas A. Kidd

Deed 19309 registered June 3, 1902
From Thomas A. Kidd to Frederick A. Heney (1/2 interest)

Deed 19914 registered Feb 4, 1904
From John F. Kidd to Frederick A. Heney (1/2 interest)

Deed 23427 registered Dec 5, 1908
From Frederick A. Heney to Francis X. Laderoute

Lot 32, Con 1 Ottawa Front

Patent dated May 14, 1803
From Crown to Elizah Spicer

Deed 52 registered Dec 24, 1804
From Elizah Spicer to Rice Honeywell

Deed 32 registered Aug 18, 1821
From Rice Honeywell to Peter Aylen

Deed 33 registered Aug 18, 1821
From Rice Honeywell to Henry W. Fulford

Deed 1174 registered June 3, 1837
From Henry Fulford to Peter Aylen

Deed 1205 registered Sept 18, 1837
From Peter Aylen to Thomas Gibbons

Deed 4690 registered Aug 29, 1850
From Thomas Gibbons to Richard Harte

Deed 15088 registered Jan 6, 1860
From Richard Hart to John Heney

Deed 27314 registered June 26, 1867
From John Heney to William Archibald

Deed 1923 registered April 22, 1873
From John Heney to John Elliott

Deed 2228 registered Sept 16, 1873
From Estate of William Archibald to Evans Cameron

Deed 14100 registered Oct 18, 1889
From John Elliott to Andrew Cowan

Deed 14493 registered Aug 30, 1890
From Andrew Cowan to E. G. Godwin

Deed 18260 registered Aug 22, 1899
From E. G. Godwin to Rosa Spittal

Deed 20925 registered April 30, 1906
From Rosa Spittal and George Spittal to Henry V. Berry

Deed 22709 registered May 15, 1909
From Evans Cameron to William Ross

Deed 22775 registered June 10, 1909
From Henry V. Berry to William Ross

Lot 24, Plan 263

Deed 24906 registered Nov 18, 1911
From Francis K. Laderoute to Kastrel Cohen

Deed 24907 registered Nov 18, 1911
From Kastrel Cohen to Roland Lumoire

Deed 26986 registered July 26, 1913
From Roland Lumoire to Matthew Webster

Deed 27969 registered March 27, 1914
From Matthew Webster to James Grierson

Tax Deed 45113 registered March 13, 1955
From Corporation of the Township of Nepean to Corporation of the Township of Nepean

Deed 63271 registered Sept 6, 1949
From The Corporation of the Township of Nepean to Robert A. Barnes

Deed 63272 registered Sept 6, 1949
From Robert A. Barnes to Dorithe (?) Huguette and Evangeliste Huguette

Deed 1211 registered April 28, 1950
From Dorithe (?) Huguette and Evangeliste Huguette to William Hay and Dorothy Hay

Deed 510499 registered May 31, 1966
From William Hay and Dorothy Hay to Carson A. Unsworth

Lot 25, Plan 263

Deed 24647 registered Sept 2, 1911
From Francis K. Laderoute to Anthony M. Power

Deed 26925 registered July 10, 1913
From Anthony M. Power to Thomas Dean

Deed 28783 registered Nov 14, 1914
From Thomas Dean to Amedee M. Laurin

Deed 45495 registered Dec 10, 1936
From Amedee M. Laurin to Eva Laurin

Deed 55237 registered July 12, 1946
From Eva Reid (formerly Laurin) to Stewart H. Buckland and Lillice Buckland

Deed 510480 registered May 31, 1966
From Stewart H. Buckland to Carson Unsworth

Lot 12, Plan 273

Deed 28609 registered Sept 22, 1914
From Estate of William Ross to George A. Young

Tax Deed 46514 registered Feb 8, 1939
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 49106 registered April 21, 1942
From The Corporation of the Township of Nepean to Louis A. Miller

Deed 453580 registered Dec 14, 1962
From Louis A. Miller to Donald G. Barnes, Robert W. Barnes, Dalton C. S. Barnes in partnership under Barnes Pick up Service

Deed 453577 registered Dec 14, 1962
From Donald G. Barnes, Robert W. Barnes, Dalton C. S. Barnes in partnership under Barnes Pick up Service to Carson Unsworth

Lot 13, Plan 273

Deed 28609 registered Sept 22, 1914
From Estate of William Ross to George A. Young

Tax Deed 46052 registered Feb 3, 1938
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 46153 registered May 17, 1938
From The Corporation of the Township of Nepean to John Morris and Alice Morris

Deed 47135 registered Dec 19, 1939
From John Morris to Alice Morris

Deed 49063 registered April 7, 1942
From Alice Morris to Florence Laprade

Deed 314267 registered Sept 3, 1953
From Florence Laprade to Harry G. Barnes

Deed 453578 registered Dec 14, 1962
From Estate of Harry G. Barnes to Carson Unsworth

Lot 14, Plan 273

Deed 34842 registered July 22, 1920
From Estate of William Ross to John M. Ross and Charles W. Ross

Tax Deed 47247 registered March 11, 1940
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 58547 registered Nov 18, 1947
From The Corporation of the Township of Nepean to Harry G. Barnes

Deed 309962 registered April 21, 1953
From Harry G. Barnes to Robert W. Barnes

Deed 453580 registered Dec 14, 1962
From Robert W. Barnes to Carson Unsworth

Lot 15, Plan 273

Deed 34842 registered July 22, 1920
From Estate of William Ross to John M. Ross and Charles W. Ross

Tax Deed 47247 registered March 11, 1940
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 63642 registered Oct 21, 1949
From The Corporation of the Township of Nepean to Harry G. Barnes

Deed 382954 registered Jan 14, 1959
From Estate of Harry G. Barnes to Carson A. Unsworth

Lot 16, Plan 273

Deed 34842 registered July 22, 1920

From Estate of William Ross to John M. Ross and Charles W. Ross

Tax Deed 47247 registered March 11, 1940

From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 64276 registered Dec 12, 1949

From The Corporation of the Township of Nepean to William Jurgens and Gertrude Jurgens

Deed 375480 registered July 31, 1958

From William Jurgens and Gertrude Jurgens to Carson Unsworth

Lot 17, Plan 273

Deed 29904 registered Nov 22, 1915

From William Ross to David Latimer

Tax Deed 43204 registered May 26, 1932

From The Corporation of the Township of Nepean to Ralph Smith

Tax Deed 44224 registered May 1, 1934

From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 64276 registered Dec 12, 1949

From The Corporation of the Township of Nepean to William Jurgens and Gertrude Jurgens

Deed 375480 registered July 31, 1958

From William Jurgens and Gertrude Jurgens to Carson Unsworth

Lot 18, Plan 273

Deed 29904 registered Nov 22, 1915

From William Ross to David Latimer

Tax Deed 43204 registered May 26, 1932

From The Corporation of the Township of Nepean to Ralph Smith

Tax Deed 44224 registered May 1, 1934
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean

Deed 64276 registered Dec 12, 1949
From The Corporation of the Township of Nepean to William Jurgens and Gertrude Jurgens

Deed 375480 registered July 31, 1958
From William Jurgens and Gertrude Jurgens to Carson Unsworth

Lot 19, Plan 273

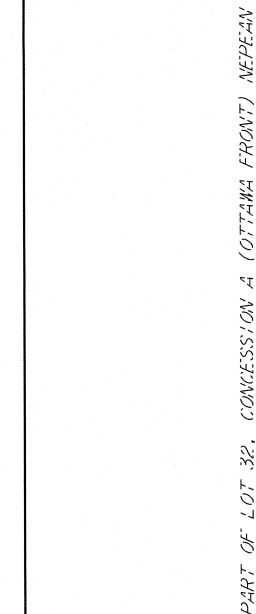
Deed 29904 registered Nov 22, 1915
From William Ross to David Latimer

Tax Deed 43204 registered May 26, 1932
From The Corporation of the Township of Nepean to Ralph Smith

Tax Deed 44224 registered May 1, 1934
From The Corporation of the Township of Nepean to The Corporation of the Township of Nepean


Deed 62201 registered May 23, 1949
From The Corporation of the Township of Nepean to Frank J. Shouldice

Deed 405292 registered May 11, 1960
From Frank J. Shouldice and Gertrude Jurgens to Carson A. Unsworth



SCALE 1:400 METRES

0 10 20 30 40 50 METRES



METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

BEARING NOTE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE EASTERLY LIMIT OF PARTS 1 & 3 OF PLAN SR-14562, HAVING A BEARING OF N29°20'10"W.

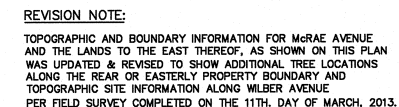
ELEVATION NOTE

ELEVATIONS ARE GEODETIC AND ARE DERIVED FROM THE CITY OF OTTAWA VERTICAL CONTROL MONUMENT No. N-2 (INDEX No. 98), HAVING AN ELEVATION OF 68.260 m.

SITE BENCH MARK AS SHOWN ON THE FACE OF THE PLAN.


SERVICE NOTE

LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE AND ARE PER THE CITY OF OTTAWA DEPARTMENT OF PUBLIC WORKS AND SERVICES AND MUST BE VERIFIED PRIOR TO CONSTRUCTION.



STANTEC
GEOMATICS
LTD.

FIELD :		CHECKED :	FILE :
---------	--	-----------	--------



Stantec

DRAWN BY : WS	FIELD : BL	C
---------------	------------	---

**STANTEC
GEOMATICS
LTD.**

Ontario Land Surveyors
OTTAWA - ONTARIO
(613)722-4420 FAX (613)722-0769
"E"-Mail: doug.simmmonds@stantec.com
Website: www.stantec.com

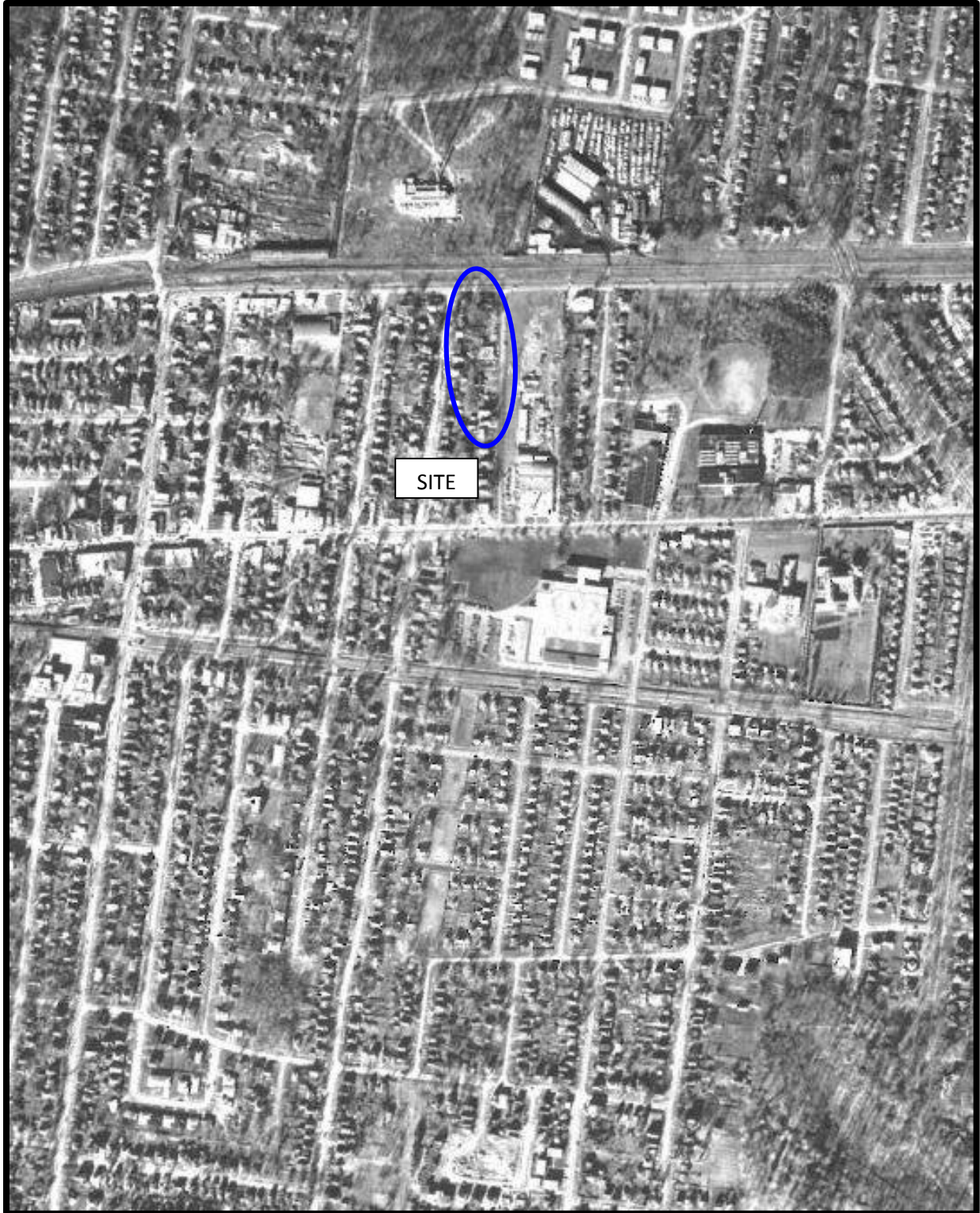
ED : KMJ	FILE : 161612927-111
----------	----------------------



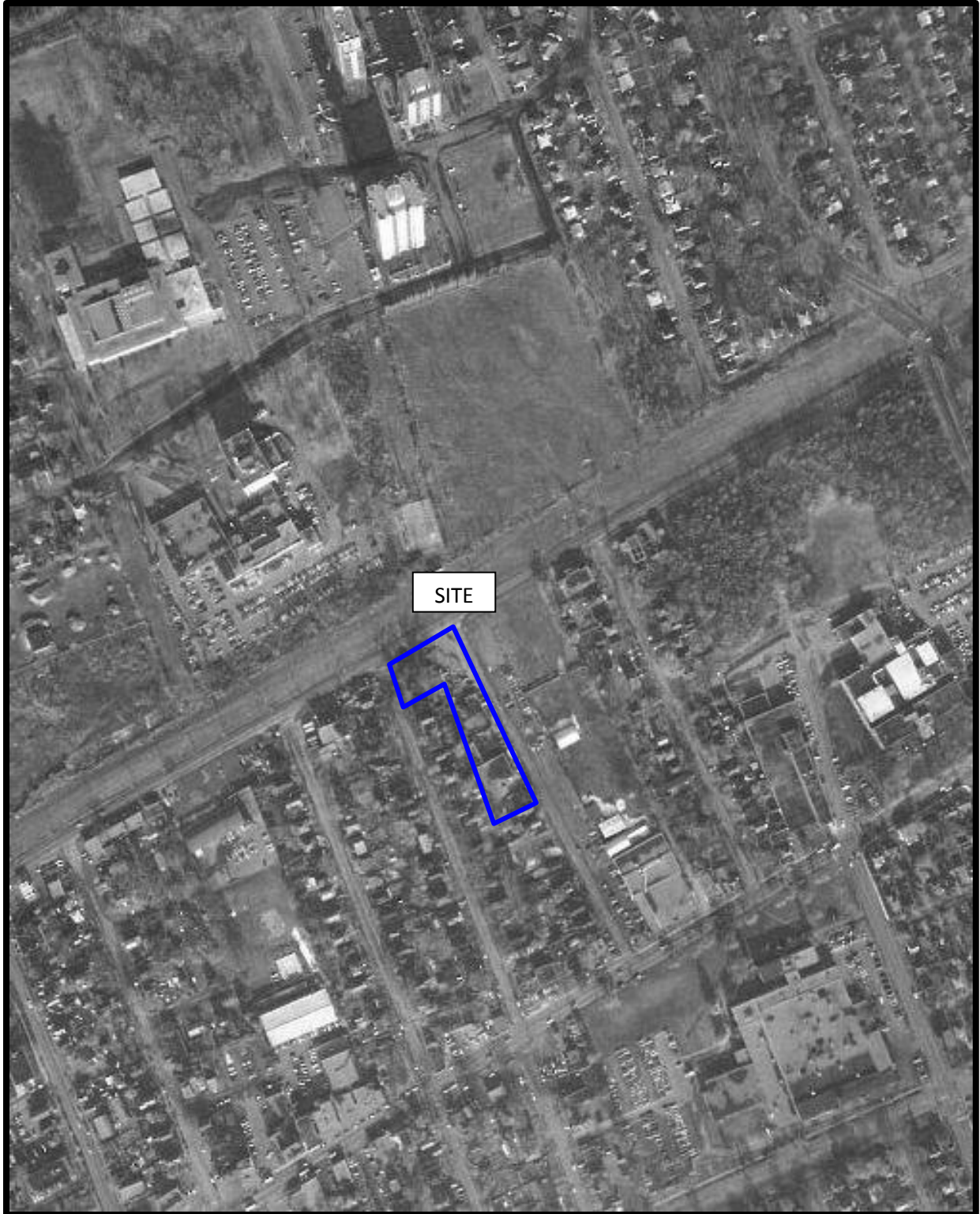
AERIAL PHOTOGRAPH
1928



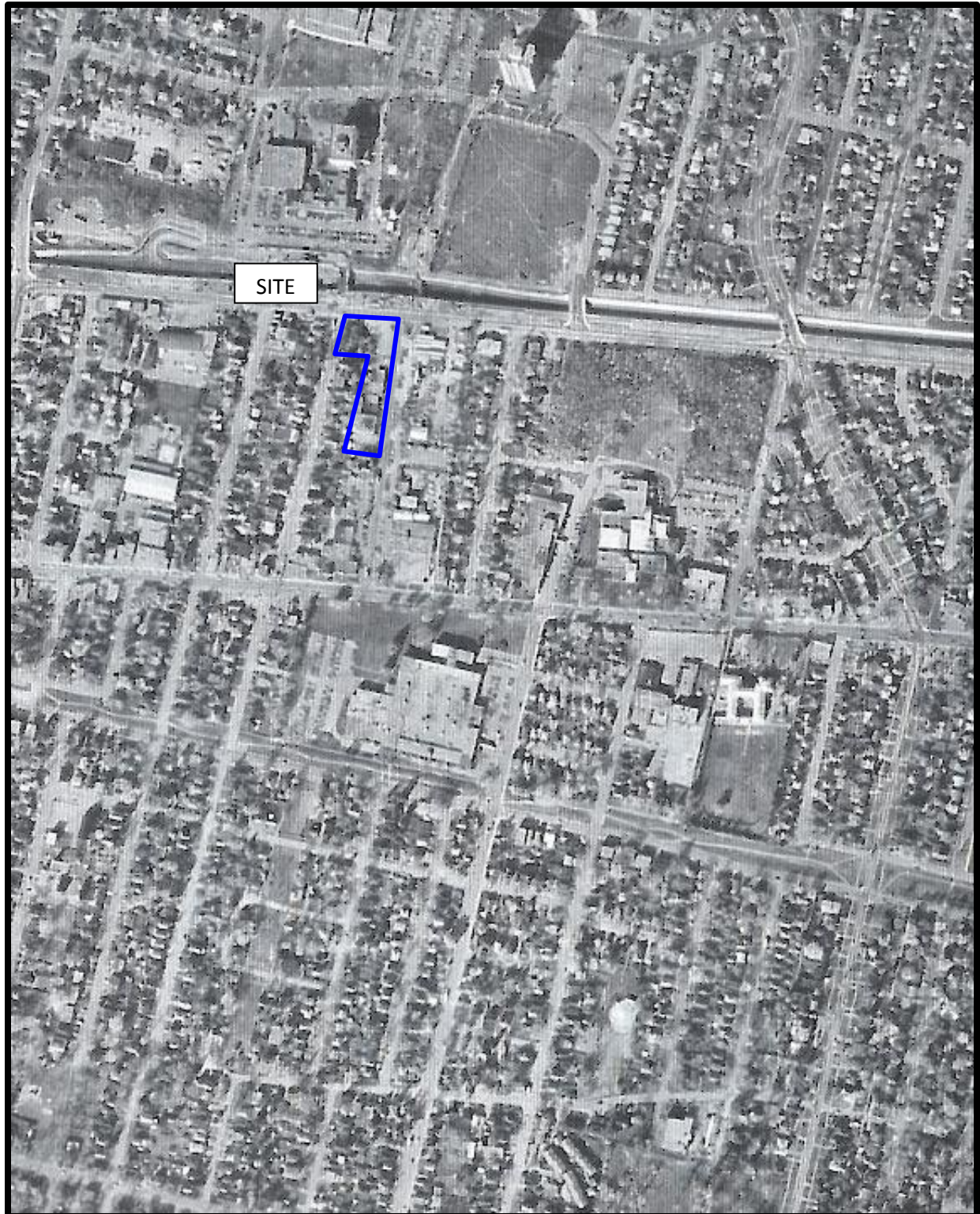
AERIAL PHOTOGRAPH
1953



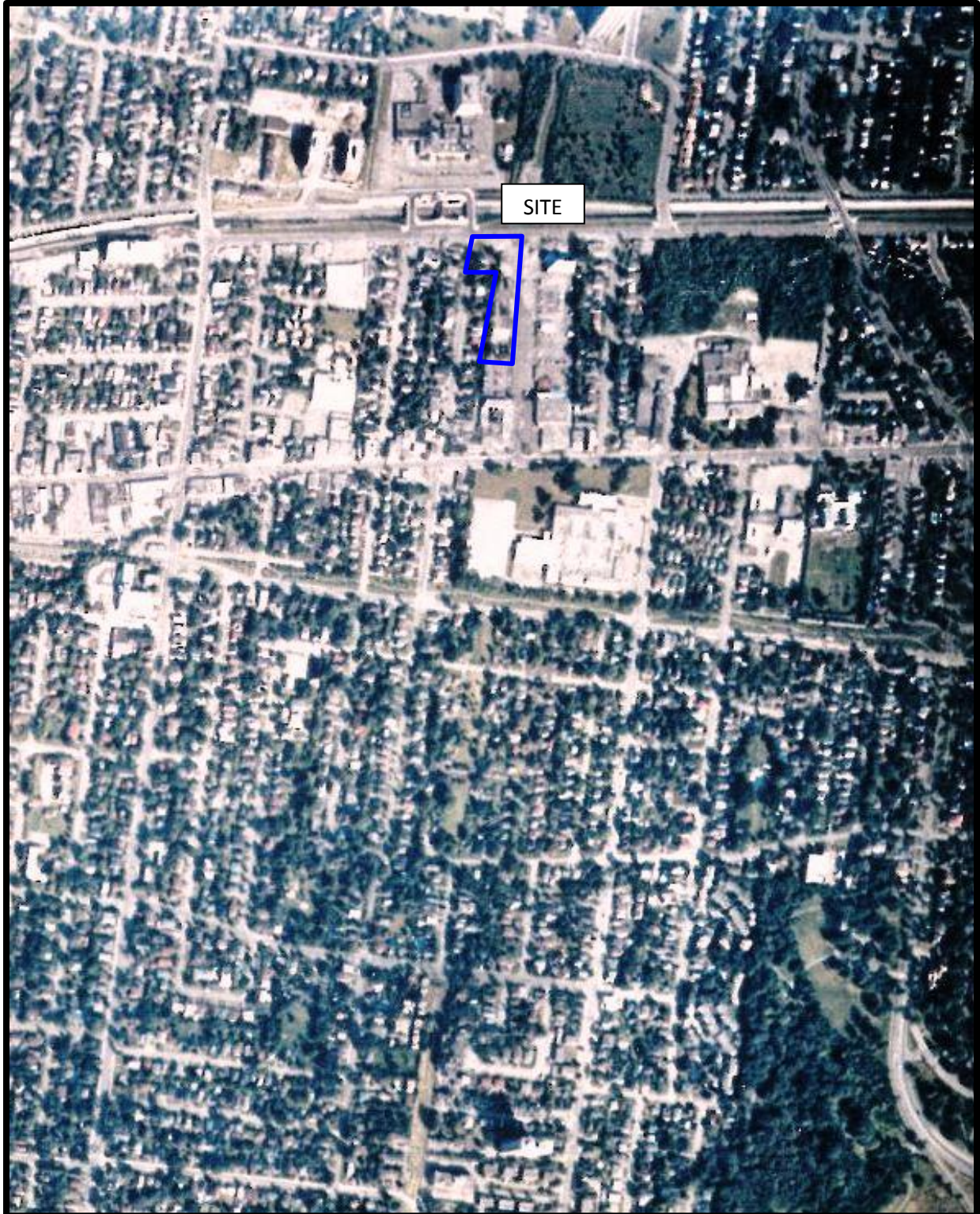
AERIAL PHOTOGRAPH
1958



AERIAL PHOTOGRAPH
1976



AERIAL PHOTOGRAPH
1984



AERIAL PHOTOGRAPH
1993

Site Photographs

PE3391

320 McRae Avenue, 1976 Scott Street and
311 Tweedsmuir Avenue, Ottawa, ON

September 24, 2014



Photograph 1: View of subject site, looking south along east property boundary. Photograph includes the commercial building, the parking area and the gravel cover of the former UST nest excavation.



Photograph 2: View of a chemical cabinet in the Gifford Automotive garage. Photograph illustrates the variety of chemicals and lubricants utilized at the general automotive service garages.

Site Photographs

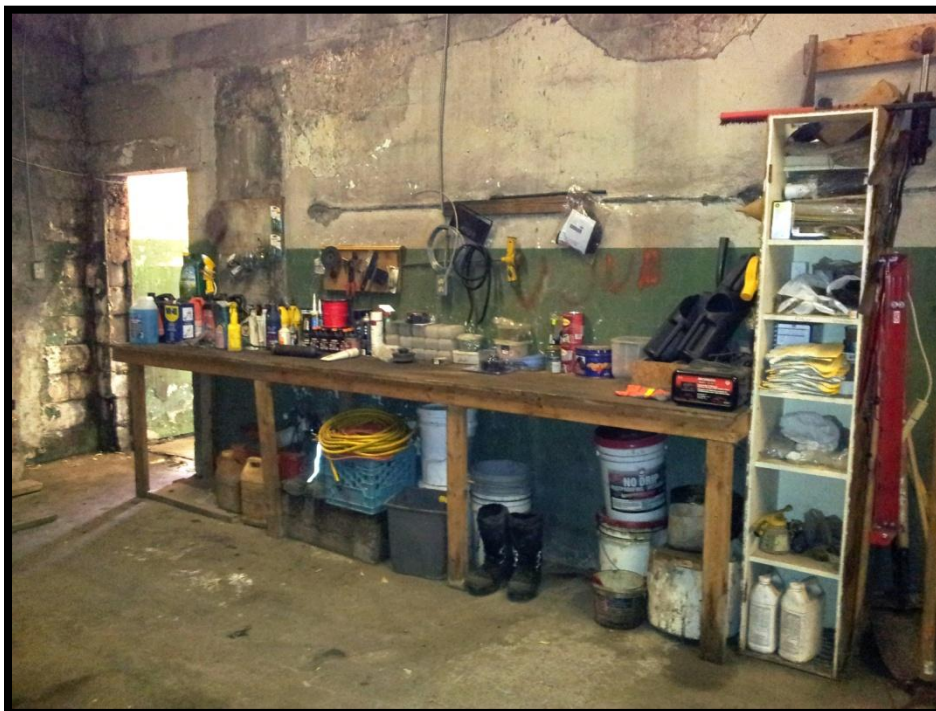
PE3391

320 McRae Avenue, 1976 Scott Street and
311 Tweedsmuir Avenue, Ottawa, ON

September 24, 2014



Photograph 3: View of drain in the landscaper's garage bay. Photograph depicts oil water with a film in the drain system.



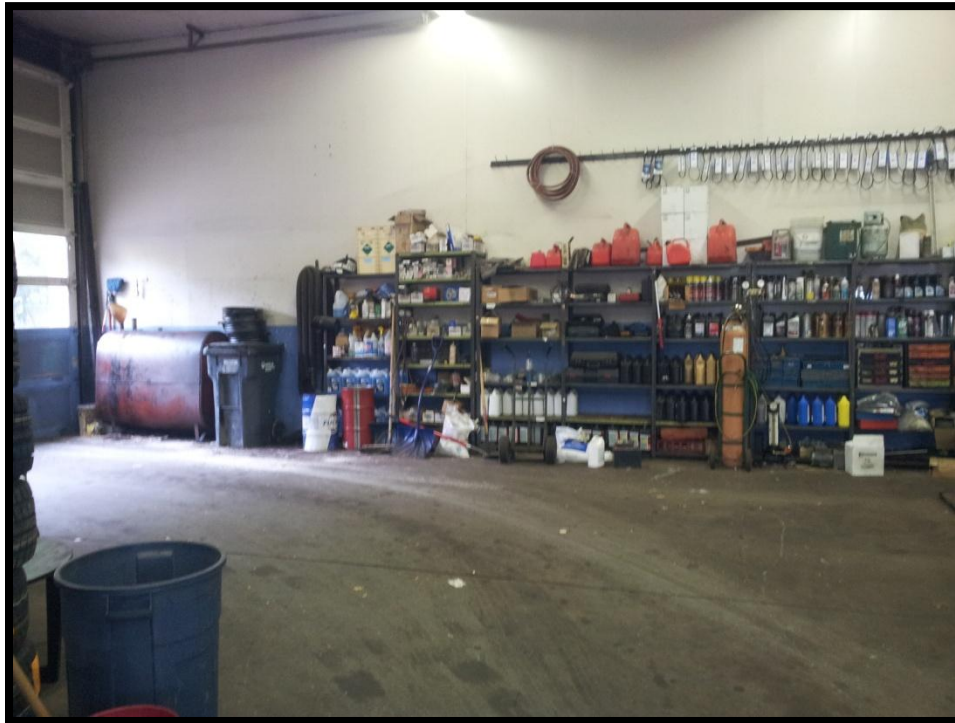
Photograph 4: View of interior wall of landscaper's garage bay. Photograph illustrates general chemicals (including waste oil buckets) and equipment in the garage bays which indicate the likelihood of continued mechanical servicing activities within the unit.

Site Photographs

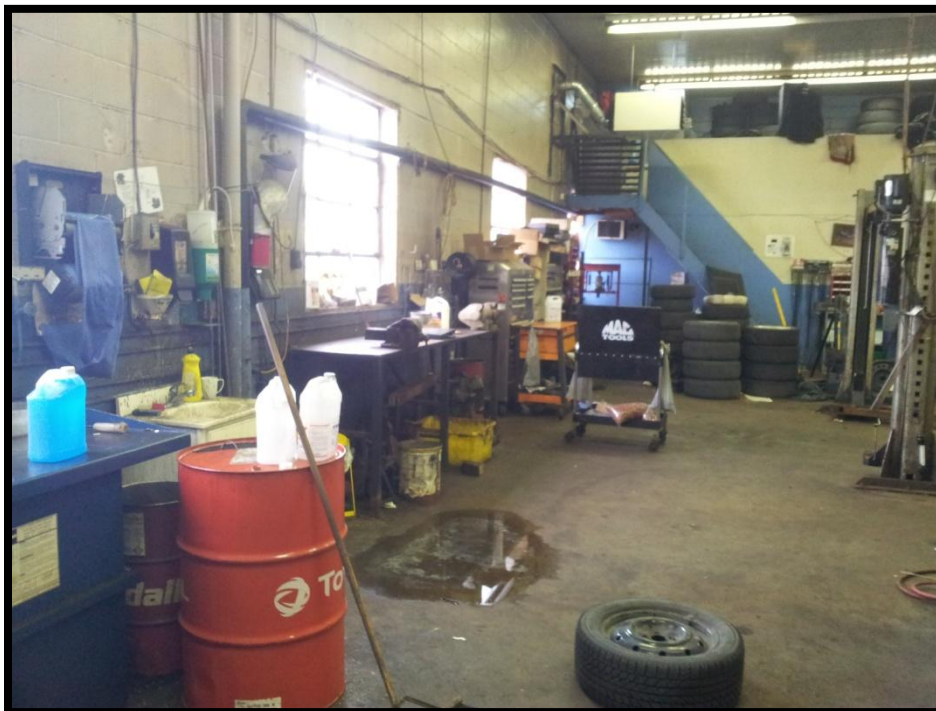
PE3391

320 McRae Avenue, 1976 Scott Street and
311 Tweedsmuir Avenue, Ottawa, ON

September 24, 2014



Photograph 5: View of west wall within the Gifford Automotive garage unit. Photograph depicts various chemicals and supplies, including solvents and aerosol containers used in various activities on-site. Waste oil tank present at south end of the wall.



Photograph 6: View of east wall within Gifford Automotive garage unit. Photograph depicts general automotive mechanical garage, with new oil AST on far left and minor spill of miscellaneous fluid.

Site Photographs

PE3391

320 McRae Avenue, 1976 Scott Street and
311 Tweedsmuir Avenue, Ottawa, ON

September 24, 2014



Photograph 7: View of oil/water separator drain within Gifford Automotive. Photograph depicts active oil water separator with oily water.



Photograph 8: View of the waste oil AST on east wall of Gifford Automotive garage unit. Photograph depicts staining around AST, absorbent material on and around the AST and recent oil releases to the floor.

Site Photographs

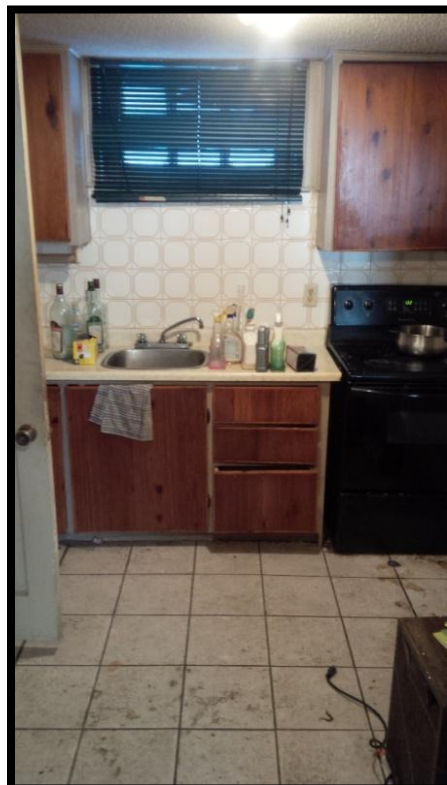
PE3391

320 McRae Avenue, 1976 Scott Street and
311 and 315 Tweedsmuir Avenue, Ottawa, ON

January 22, 2016



Photograph 9: View of 315 Tweedsmuir Avenue, looking east.



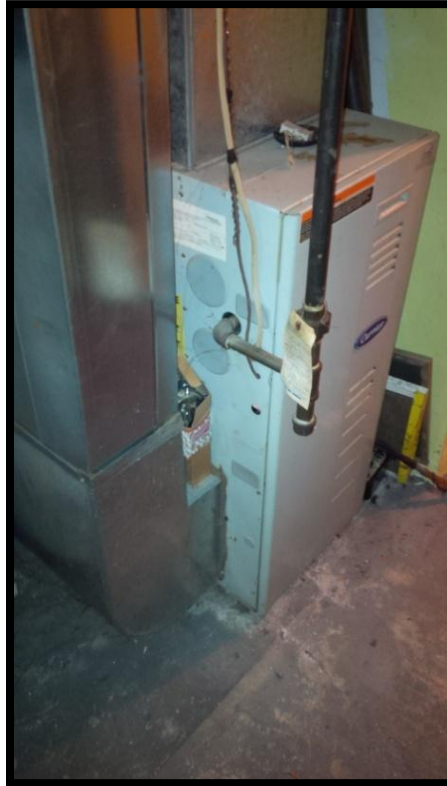
Photograph 10: Basement apartment kitchen at 315 Tweedsmuir Avenue.

Site Photographs

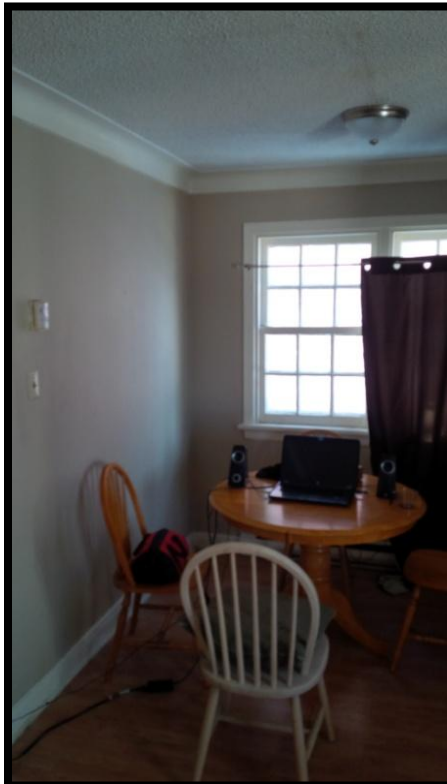
PE3391

320 McRae Avenue, 1976 Scott Street and
311 and 315 Tweedsmuir Avenue, Ottawa, ON

January 22, 2016



Photograph 11: Natural gas furnace in basement at 315 Tweedsmuir Avenue.



Photograph 12: First floor living room at 315 Tweedsmuir Avenue.

APPENDIX 2

MOECC FREEDOM OF INFORMATION SEARCH RESPONSE

MOECC WELL RECORDS

CITY OF OTTAWA HLUI SEARCH REQUEST

TSSA CORRESPONDENCE

Ministry of the Environment
and Climate Change

Ministère de l'Environnement et de
l'Action en matière de changement
climatique



Freedom of Information and
Protection of Privacy Office

Bureau de l'accès à l'information et
de la protection de la vie privée

12th Floor
40 St. Clair Avenue West
Toronto ON M4V 1M2
Tel: (416) 314-4075
Fax: (416) 314-4285

12^e étage
40, avenue St. Clair ouest
Toronto ON M4V 1M2
Tél. : (416) 314-4075
Télec.: (416) 314-4285

November 26, 2014

Sean Moggridge
Paterson Group Inc
154 Colonnade Rd
Ottawa, ON K2E 7J5

Dear Sean Moggridge:

RE: *Freedom of Information and Protection of Privacy Act Request*
Our File #: A-2014-05383, Your Reference #: PE3391

This letter is further to your request made pursuant to the *Freedom of Information and Protection of Privacy Act relating to 320 McRae Avenue and 1976 Scott Street, Ottawa.*

After a review of the records received from the Ministry's Ottawa District Office and Environmental Monitoring and Reporting Branch, the final decision has been made to provide partial access to the attached information as the identity of complainants has been removed to protect his or her privacy in accordance with Section 21(1)(f) of the Act.

You may request a review of my decision by contacting the Information and Privacy Commissioner/Ontario, 2 Bloor Street East, Suite 1400, Toronto, ON M4W 1A8 (800-387-0073 or 416-326-3333). Please note that there is a \$25.00 fee and you only have 30 days from receipt of this letter to request a review.

If you have any questions regarding this matter, please contact Eric Mak at eric.mak@ontario.ca.

Yours truly,


Heidi Ritscher
FOI Manager

Attachment


Ministry of the Environment

[HOME](#) | [AIR](#) | [WATER](#) | [LAND](#) | [ABOUT US](#) | [NEWS & PUBLICATIONS](#)

[central site](#) | [feedback](#) | [search](#) | [site map](#) | [français](#)

[User Management](#) | [Company Management](#) | [Manifests](#) | [Site Data](#) | [HELP](#) | [Logout](#)




Generator Details

Registration/Notification Number

ON8892252

Legal Company Name

Primary Name:	JAY'S GAS BAR	Division Name:	NA
---------------	---------------	----------------	----

Company Operating Name

Primary Name:	JAY'S GAS BAR	Division Name:	NA
---------------	---------------	----------------	----

Mailing Address

Division Building:	NA	Post Box Number:	NA
Address Line 1:	1976 SCOTT STREET	Address Line 2:	NA
Town/City:	OTTAWA	Postal Code / Zip Code:	K1Z 6T3
County: (if inside Ontario)	OTTAWA CARLTON (RM)	Province / State (if inside Canada / US):	ONTARIO
County: (if outside Ontario)	NA	Province / State (if outside Canada / US):	NA
Country:	Canada		

Site Location

This should be the street address of the site that is being registered. You are required to register each site that generates hazardous waste separately.

Division Building:	NA	Post Box Number:	NA
Address Line 1:	1976 SCOTT STREET		
Address Line 2:	NA		
Town/City:	OTTAWA	Postal Code / Zip Code:	K1Z 6T3
County: (if inside Ontario)	OTTAWA CARLTON (RM)	Province / State (if inside Canada / US):	ONTARIO
County: (if outside Ontario)	NA	Province / State (if outside Canada / US):	NA
Country:	Canada		

000001

http://10.77.231.152/hwinadmin/generator/new_generator_registration2_search.jsp?iCompanyID=69169

09/18/2014



Ministry of the
Environment

[control site](#) | [feedback](#) | [search](#) | [site map](#) | [français](#)

[HOME](#) | [AIR](#) | [WATER](#) | [LAND](#) | [ABOUT US](#) | [NEWS & PUBLICATIONS](#)

[User Management](#) | [Company Mgmt](#) | [Manifests](#) | [Site Data](#) | [HELP](#) | [Logout](#)



Search

Company Name: JAY'S GAS BAR
 Company Number: ON8892252 (Generator)

Active Waste Classes

Active Waste Class Listing

[Add New Waste Class](#) [Inactive waste classes](#)

Active On-site Waste Classes

Waste Class	View Details	Hazardous Waste Number (per waste stream)	Reg. 347 Schedules	Disposal Method	Part 2B required	Part 2B complete	Physical State	Off-Site	Status
221 - L	View Details	N/A					Liquid	Off-Site	Active

[Back](#)



Ministry of the Environment
Ministère de l'Environnement

135 St. Clair Avenue West
Suite 100
Toronto, Ontario
M4V 1P5

135, Avenue St. Clair ouest
Bureau 100
Toronto (Ontario)
M4V 1P5

FEB 11 1991

Carson's Body Repairs Ltd.
320 McRae Avenue
Carleton, Ontario
K1Z 5R8

Attn: Mr. V. Dellapenna
Manager

Dear Mr. Dellapenna:

RE: Acknowledgement of Subject Waste Registration

As prescribed by Section 15(3) of Ontario Regulation 309, this letter acknowledges receipt of your Generator Registration Report(s) received January 7, 1991 for the following site:

320 McRae Avenue
Carleton, Ontario

The Generator Registration Number assigned to your company at this site is:

ON1380500

Please note that this Generator Registration Number must be used only in conjunction with the site for which it was issued.

Please ensure that the company name shown in this letter is complete and accurate. This would be the corporate name or, if a partnership or proprietorship, the name of the principal(s). If you intend to carry on business under a separate name or style, this should also be entered. If there is a discrepancy, it is your responsibility to re-register providing us with your complete and accurate company name.

A list of the waste stream(s) covered by this acknowledgement is attached to this letter as Schedule "A".

For off-site disposal of subject wastes, the waste number(s) describing the waste stream(s) in Schedule "A" and the Generator Registration Number must be entered on manifest forms for each waste transaction after you have received this generator registration document. A copy of an example manifest form is attached for your information.

For on-site disposal of subject wastes covered by this acknowledgement, including on-site incineration, landfilling and discharges to sanitary sewers, every generator shall retain records for a period of at least two years. These records shall include the generator registration number, waste name(s), waste number(s), quantity and disposition of the waste(s).

For off-site disposal of any registerable solid wastes shown in Schedule "A" (waste classes ending in the letter "N"), manifesting is not required at this time. These wastes can be disposed of at most approved municipal landfilling sites.

The selection of accurate waste classes is the responsibility of each waste generator. This acknowledgement must not be considered as a confirmation of the accuracy of information submitted by you. Based on the information you have provided, the waste class(es) that has (have) been selected appear(s) to be correct. If, due to new information or re-assessment of information submitted, you feel your waste is inappropriately classified, you should apply for a revision to your registration using the Generator Registration Report, Form 2. Should the waste class(es) that you have selected be deemed incorrect by the Ministry, or improper waste disposal occurs at any time, you may be subject to legal action as provided by the Environmental Protection Act and Regulation 309.

Your Generator Registration Report has now been forwarded to the District Office of this Ministry that is closest to your generating site. The District Office will be conducting a post-registration audit and may be contacting you for additional information or may be conducting site visits.

It is important to note that under Section 15(4) of Ontario Regulation 309, a new Generator Registration Report must be submitted to the Ministry within fifteen (15) days for any of the following reasons:

1. If the name, address or telephone number of your company or waste generating site changes.
2. If the description, the waste class or physical or chemical characteristics of your registered wastes change(s).
3. If you generate a hazardous or liquid industrial waste that has not been registered with the Ministry.

If the quantity of registered wastes or your carrier or receiver changes, automatic re-registration is not required. However, in order to update our file, we may periodically request additional information when we observe or suspect a significant change as compared to the most recent information submitted by you for registration purposes.

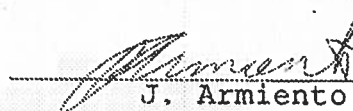
Should you have any questions concerning generator registration or manifesting requirements, please contact the Waste Management Branch Reviewer identified below at 323-5056.

Yours truly,



Director
Regulation 309, R.R.O., 1980
Environmental Protection Act

Waste Management Branch Reviewer:


J. Armiento

WT/lvc

Enclosure

ADDITIONAL COMMENTS:

Please ensure that the wastes shown in Schedule "A" include all of your subject wastes and that other registerable wastes, such as paints, solvents and oils, have not been omitted.

Based on the information you have submitted in your Generator Registration Report and/or through telephone discussion, we have selected the waste class 122C for your caustic waste.

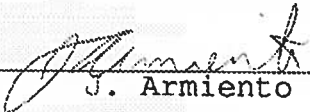
It is your responsibility to evaluate this waste class and re-register within fifteen (15) days if it is found to be inappropriate for your particular waste.

SCHEDULE "A"

This attached Schedule forms part of the acknowledgement of generator registration for the facility and site identified by Generator Registration Number ON1380500, dated at Toronto, FEB 11 1991

	Waste Stream	Waste Class
1.	Caustic waste	122C

Waste Management Branch Reviewer:


J. Armiento



OCCURENCE REPORT

Ministry of the
Environment

Location of Occurrence:

Reg: 4 Dist: OT Municipality: 20101

Entered: ORIS No.
9240200329

Received By:
NANCY BOON

Occurrence Type: Subtype:
C 01

Work Plan:

Reported By:

Telephone No. Alternate No.
- - x

Address:

Postal Code:

Syn: ODOURS

Brief Summary:

PAINT ODOUR FROM BODY SHOP AUTO BODY SHOP IS ABUTTING CALLER'S PROPERTY. ODOURS FROM THE BODY ARE MOST APPARENT ON HOT NIGHTS. CALLER CERTAIN THAT THE EMISSIONS ARE RESPONSIBLE FOR HER ALLERGIC REACTIONS AND AN INFECTION IN HER PET DOG EAR. JULY 31/92 SPOKE WITH MICHEL SIOUI, CARSON'S AUTOBODY. MR SIOUI RESPONDED THAT SPRAY PAINT BOOTHS AT 320 MCRAE HAVE BEEN IN OPERATION FOR THE PAST TEN YEARS. NO CHANGES OR ADDITIONS HAD BEEN MADE TO THE SPRAY PAINT BOOTHS NOR TO THE EMISSIONS TO ATMOSPHERE.

If there are related reports, record initial/master ORIS No. here >>

Followup Action: X Abatement IEB Other

BF Date:

NO FURTHER ACTION NECESSARY

File Closed: X Abatement IEB Other

Suspected Violation:

Report Prepared By: Date:
TOR RUSTAD 14/07/92

Approving Officer Date:
GEORGE CLARKE 11/08/92

Specify number(s) for routing Original [] [] [] [] [] []

Specify number(s) for copy distribution [] [] [] [] [] []

1. Investigator/E.O.

2. D. O. /File

3. SAC (initial spills)

4. Reg. Dir. / _____ Mgr.

5. IEB Reg. Spv

6. IEB H.O./file

7. Other _____

IEB Investigator: IEB BF Date

Reviewing Officer: Date

Continued [] Yes

SAC Action Class: 1: 2:

Material 1:
Amount:
Material 2:

Code:
UN No.:
Code:

000008

Amount :		UN No.:
Material 3:		Code :
Amount :		UN No.:
Cause :		Code . . :
Reason :		Code . . :
Person in Control:		Waste GenNum :
Owner :		Waste GenNum :
Agencies Involved :		
Clean up and Restoration Carried out by:		
<input type="checkbox"/> Controller	<input type="checkbox"/> Owner	<input type="checkbox"/> Other
% Cleaned up:		Estimated Cost:
Were Directions or Approval Given Under		
EPA Part X <input type="checkbox"/>	Regulation 362 <input type="checkbox"/>	Manifest No.
Waste Class :		Code . . :
Hauler :		Code . . :
Disposal Site :		Code . . :
Environmental Impact:	Nature of Impact:	
		Code . . :
People/Business Damaged		
(Other than to Owner/Controller) :		
Nature of Damage:		Code . . :



OCCURENCE REPORT

Ministry of the
Environment

Location of Occurrence:
OTTAWA CITY
JAYS GAS BAR, 320 MCRAE AVE (SCOTT AND MCRAE)

Reg: 4 Dist: OT Municipality: 20101

Entered: 1998/11/05 16:30
ORIS No. 9800010555

Received By:
SCOTT THOMPSON

Occurrence Type: S
Subtype: L

Work Plan: CS

Reported By: RICK MCCAGG
DRUMMOND FUEL

Telephone No. 613-226-4444 x
Alternate No. x

Address:

Postal Code:

Syn: DRUMMOND FUELS 20L DIESEL SPILLED TO ASPHALT

Brief Summary:

20L OF DIESEL SPILLED TO ASPHALT DURING A STATION FILL WHEN THE ELBOW JUMPED OFF THE ADAPTER AS THE OVERFILL VALVE CLOSED. ASPHALT HAS BEEN CLEANED WITH ABSORBENTS, THE SPILL CONTAINER HAS ALSO BEEN CLEANED OUT. NO WATER IMPACTS.

If there are related reports, record initial/master ORIS No. here >>

Followup Action: Abatement IEB Other

BF Date:

File Closed: X Abatement: IEB Other

Suspected Violation:

Report Prepared By: BRYAN DICKMAN
Date: 05/11/98

Approving Officer: GEORGE CLARKE
Date: 05/11/98

Specify number(s) for routing Original [] [] [] [] []
Specify number(s) for copy distribution [] [] [] [] []

1. Investigator/E.O. 2. D. O. /File 3. SAC (initial spills)
4. Reg. Dir. / Mgr. 5. IEB Reg. Spv 6. IEB H.O./file

Continued [] Yes

7. Other _____

SAC Action Class: 1:25 2: 16

Source:
DRUMMOND FUELS
TANK TRUCK (CARGO)
Sector: TA Source: TT SIC: 4560

UTM: N: [5026000] E: [447000] Zone: [18]

Abstracts: 0
Diaries: 0

Batch: 3958
I. E. B. No.

Occurrence Date: 1998/11/05

Occurrence Time: 08 45

Report to MOE : 1998/11/05 16 30

MOE at Scene:

Assigned To: BRYAN DICKMAN

ERP Contacted:

Callout: [] NSP: []

ERP Name:

Material 1: DIESEL FUEL
Amount: 20 L
Material 2:
Amount:
Material 3:
Amount:

Code : 13
UN No.: 1202
Code :
UN No.:
Code :
UN No.:

Cause. :

Reason. :

Person in Control: DRUMMOND FUELS

Owner : DRUMMOND FUELS

Agencies Involved :

Clean up and Restoration Carried out by:

☒ [v] Controller

☒ [v] Owner

☐ [N] Other 98

Y

Y

% Cleaned up: 98

Estimated Cost:

Were Directions or Approval Given Under

EPA Part X ☒ [v]

Regulation 362 ☒ [v]

Manifest No.

N

N

Waste Class :

Hauler :

Disposal Site :

Environmental Impact:

Nature of Impact:

N

People/Business Damaged

(Other than to Owner/Controller) :

Nature of Damage:

Code. . : 11

Code. . : 10

Waste GenNum :

Waste GenNum :

Code . . : 000

Code . . :

Code . . :

Code . . :

Code . . :



Ontario

Ministry of
the Environment

Well

A 074567

or (Master Well) (Duplicate)

Master Well Record for
Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Master Well Owner's and Land Owner's Information

First Name: 255 Richmond Road Holdings
Last Name: 255 Richmond Road
Mailing Address (Street Number/Name, RR): 255 Richmond Road
Municipality: Ottawa
Province: ON
Postal Code: K1H 1B1
Telephone No. (inc. area code):

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR): 255 Richmond Road
County/District/Municipality: Ottawa
Township: Ottawa
City/Town/Village: Ottawa
Province: Ontario
Postal Code: K1H 1B1

UTM Coordinates: Zone: 18S, Easting: 441257, Northing: 750269712
GPS Unit Make: Garmin, Model: eTrex
Mode of Operation: Undifferentiated, specify: Averaged

Overburden and Bedrock Materials (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
Brown	Fill	Sand/gravel	dry	0	2.3
Brown	Fill	Boulders + Cobbles		2.3	4.5
Gray	Bedrock	Limestone		4.5	7.5

Hole Details

Depth (Metres) From	Depth (Metres) To	Diameter (Centimetres)
0	4.57	20
4.57	7.5	10

Water Use

☐ Public ☐ Industrial ☐ Not used ☐ Other, specify
☐ Domestic ☐ Commercial ☐ Degradation
☐ Livestock ☐ Municipal ☒ Monitoring
☐ Irrigation ☐ Test Hole ☐ Cooling & Air Conditioning

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☒ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☒ Other, specify
☐ Rotary (Air) ☐ Drilling HSA

Status of Well

☒ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☐ Other, specify
☐ Alteration (Construction) ☐ Abandoned, other, specify

No Casing and Screen Used

Upon Hole: ☒ Yes ☐ No
 Static Water Level Test: 16.77 Metres

Screen

☒ Galvanized ☐ Steel ☐ Fiberglass ☐ Concrete ☒ Plastic
 Outside Diameter (Centimetres): 5.8
 Slot No.: 10

Water Details

Water found at Depth: Metres, Kind of Water: Fresh, Salty, Sulphur, Minerals
 Water found at Depth: Metres, Kind of Water: Fresh, Salty, Sulphur, Minerals
 Water found at Depth: Metres, Kind of Water: Fresh, Salty, Sulphur, Minerals

Disinfected ☐ Yes ☒ No, provide reason: Date Master Well Completed (yyyy/mm/dd): 2005/10/17

Cluster Information (Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)

Total Wells in Cluster: 2
 Please indicate Number of Cluster Well Information Log Sheets Submitted: 1
 Total Wells on this Property: Unknown

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 11"). Sketches are not allowed.
☒ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to the Director upon request

Well Contractor and Well Technician Information

Business Name of Well Contractor: George Downing Estate Drilling Ltd.
 Business Address (Street No./Name, number, RR): 410 Rue Principale Grenville-sur-la-Rouge
 Province: QC
 Postal Code: J6V 1B0
 Business E-mail Address: george.downing@xplornet.com
 Business Telephone No. (inc. area code): 819 242 6469
 Name of Well Technician (Last Name, First Name): Bruce
 Well Technician's Licence No.: 173
 Signature of Technician: [Signature]
 Date Submitted (yyyy/mm/dd): 2008/10/29

Well Contractor's Licence No.: M 02900
 Date Received (yyyy/mm/dd): NOV 24 2008
 Date of Inspection (yyyy/mm/dd):
 Remarks:

Ministry of
the Environment

12

A 074567

1 West Targ (No. 1)

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1[illegible]



Trow Associates Inc.

154 Colonsvate Road South,
Ottawa, Ontario K2E 7J5

Tel: (613) 225-9040
Fax: (613) 225-7337

DATE OCT 2008

CLIENT

GIBSONS LLP

OTEN No.

OTEN00019750A

BY CH

CHKD CTK

SCALE

1:500 ±

PROJECT

RG

TITLE

**BOREHOLE & MONITORING WELL LOCATION PLAN
255 RICHMOND ROAD, OTTAWA, ON.**

FIG

FIG 2

C-1844 m02900 C01995

NOV 24 2008

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

11

1532963

Municipality

Conv

115502

15502 475 Richmond Co

County or District Ottawa - Carleton	Township/Borough/City/Town/Village City of Ottawa	Con block tract survey, etc. .	Lot -
Address Ottawa St		Date completed 21 06 07	Day day

	Northings	RC	Elevation	RC	Basin Code	II	IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

[illegible][illegible]

41 WATER RECORD				51 CASING & OPEN HOLE RECORD							
Water found at - feet		Kind of water		Inside diam inches		Material		Wall thickness inches		Depth - feet	
										From To	
10-13		<input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Salty		10-11		<input type="checkbox"/> Steel <input checked="" type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		188		0 6	
15-18		<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Salty		17-18		<input type="checkbox"/> Steel <input checked="" type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		0 4		20-23	
20-23		<input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Salty		24-25		<input type="checkbox"/> Steel <input checked="" type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		4		51	
25-28		<input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Salty		26-27		<input type="checkbox"/> Steel <input checked="" type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		4		51	
30-33		<input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Salty		28-29		<input type="checkbox"/> Steel <input checked="" type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic		4		51	

71	Pumping test method ¹⁰ <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Baller		Pumping rate ¹¹⁻¹⁴ 1/3 GPM		Duration of pumping ¹⁵⁻¹⁸ 1 Hours 17 Mins	
	Static level	Water level end of pumping	Water levels during		<input type="checkbox"/> Pumping	<input checked="" type="checkbox"/> Recovery
	19-21 13 feet	22-24 13 feet	15 minutes ²⁵⁻²⁸ 45 feet	30 minutes ²⁹⁻³¹ 39 feet	45 minutes ³²⁻³⁴ 33 feet	60 minutes ³⁵⁻³⁷ 31 feet
	If flowing give rate		Pump intake set at		Water at end of test	
Recommended pump type <input type="checkbox"/> Shallow <input type="checkbox"/> Deep		Recommended pump setting		Recommended pump rate		44-49 1/3 GPM

FINAL STATUS OF WELL		54
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well
3 <input checked="" type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)	
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering	
<i>Test hole</i>		
WATER USE		55-56
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	10 <input checked="" type="checkbox"/> Not use
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	11 <input type="checkbox"/> Other
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply	
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning	
METHOD OF CONSTRUCTION 57		
1 <input type="checkbox"/> Cable tool	5 <input checked="" type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting	

Name of Well Contractor Air-Rock Drilling Co. Ltd	Well Contractor's Licence No. 1119
Address RR #2 Jasper St	
Name of Well Technician Shannon Thrall	Well Technician's Licence No. 10122
Signature of Technician/Contractor [Signature]	Submission date day 10 mo 07 yr

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.

#475 Richmond Rd

237915

MINISTRY USE ONLY	Date source	58	Confidential	58-62	Date approved	063-60
	1119		JUL 29 2002			
Date of inspection	Inspector					
Remarks	CSS.ES2					

Address of Well Location (City & Number) (Name)		Township		Lot		Concession	
2046 Scott St.		City/Town/Village Orhona				Province* Ontario	
County/District/Municipality		Municipal Plan and Subline Number				Postal Code	
UTM Coordinates		Zone		Easting		Northing	
NAD 83		18		44		60125027136	
						Other	

[illegible]

Annular Space			Results of Well-Yield Testing						
Depth Set at (mft)		Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)	After test of well yield, water was:		Draw Down		Recovery	
From	To			<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify	Time (min)	Water Level (mft)	Time (min)	Water Level (mft)	
0	31	Flush pump/concrete		<input type="checkbox"/>					
0.31	2.74	bitumite		<input type="checkbox"/>					
2.74	5.79	Hyper sand							
				If pumping discontinued, give reason:		Static Level			
				Pump intake set at (mft)		1		1	
						2		2	

Method of Construction		Well Use		Pumping rate (l/min / GPM)	3	3
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	4	4
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> De-watering	5	5
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input checked="" type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring	10	10
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning		15	15
<input checked="" type="checkbox"/> Jet percussion		<input type="checkbox"/> Industrial				
<input checked="" type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____				

Construction Record - Casing				Status of Well	
Inside Diameter (cm/ft)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Well Thickness (cm/ft)	Depth (m/ft)		<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned
			From	To	
PVC			0	2.77	Recommended pump depth (m/ft) Recommended pump rate (l/min / GPM) Well production (l/min / GPM) Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No
					20
					25
					30
					40
					50
					60

Construction Record - Screen			
Outside Diameter (cm/in)	Material (Plastic, Galvanized Steel)	Slot No.	Depth (m/ft) From To
	PVC	10	2.74 5.79

☐ Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify _____
☐ Other, specify _____

Map of Well Location

Please provide a map below following instructions on the back.

Water Details		Hole Diameter	
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Depth (mft)	Diameter (cm/in)
(mft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		From To	
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	0 4.57	11.43
(mft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		4.57 5.79	7.62
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		
(mft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify			

2046

H
L
O
N
E

Well Contractor and Well Technician Information		<div style="text-align: center;">  </div>	
Business Name of Well Contractor Strata Soil Sampling		Well Contractor's Licence No. 712 411	
Business Address (Street Number/Name) 1712 West Beaver Creek Rd		Municipality Richmond Hill	
Province ON	Postal Code L4B1C6	Business E-mail Address records@stratasoil.com	
Business Telephone No. (inc. area code) 905 764 9309		Name of Well Technician (Last Name, First Name) Beatty Brian	
Well Technician's Licence No. 36916		Signature of Technician and/or Contractor 	
Date Submitted 2011/10/17		<div> <div> Well owner's package delivered <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <div> Date Package Delivered Y1Y2Y3Y4M1M2D1D2 20111017 </div> </div>	
		<div> <div> Date Work Completed Y1Y2Y3Y4M1M2D1D2 20111017 </div> <div> Ministry Use Only Audit No. z134396 NOV 01 2011 </div> </div>	
Comments:			

ATHLETES

A diagram of a rectangular block. The top horizontal edge is labeled 5m . The right vertical edge is labeled 3m . Inside the block, the number 2046 is written, representing its weight in Newtons.

Scot St.

Comments:

Well owner's information package delivered	Date Package Delivered	Ministry Use Only Audit No. z 134396 NOV 01 2011
	Date Work Completed	



**Ontario**Ministry of
the Environment

Well Tag: A 029527 (for below)

A029527

Well Record
Regulation 903 Ontario Water Resources Act

page 1 of 2

Instructions for Completing Form

- For use in the Province of Ontario only. This document is a permanent legal document. Please retain for future reference.
- All Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- All metre measurements shall be reported to 1/10th of a metre.
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

Ministry Use Only													
MUN							CON			LOT			

RR#/Street Number/Name 309 Athlone Avenue	City/Town/Village Ottawa	Site/Compartment/Block/Tract etc.
GPS Reading NAD 83 118 144.1134	Unit Make/Model Garmin GPS map 76	Mode of Operation: <input type="checkbox"/> Undifferentiated <input type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
DK Brown	Asphalt concrete		Typical Monitoring Well Installation (5 wells as a cluster)	0	1.10
Brown	Silty sand	Gravel		0.10	1.27
Grey	Sandy silt			1.27	1.52
	Limestone	Shale layers		1.52	4.70

Hole Diameter		
Depth From	Metres To	Diameter Centimetres
0	4.70	20

Water Record	
Water found at: <input type="checkbox"/> m <input type="checkbox"/> Gas <input type="checkbox"/> Other:	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
<input type="checkbox"/> m <input type="checkbox"/> Gas <input type="checkbox"/> Other:	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
<input type="checkbox"/> m <input type="checkbox"/> Gas <input type="checkbox"/> Other:	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Salty <input type="checkbox"/> Minerals
After test of well yield, water was <input type="checkbox"/> Clear and sediment free <input type="checkbox"/> Other, specify	
Chlorinated <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Construction Record				
Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
Casing				
50 mm	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass	Schedule 40	0.9	1.25
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete			
	<input type="checkbox"/> Galvanized			
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass			
	<input type="checkbox"/> Plastic <input type="checkbox"/> Concrete			
	<input type="checkbox"/> Galvanized			
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass	Slot No.		
58 mm	<input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Concrete	#30	1.25 4.70	
	<input type="checkbox"/> Galvanized			
No Casing or Screen				
<input type="checkbox"/> Open hole				

Test of Well Yield				
Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping - hrs + min	2		2	
Final water level end of pumping - metres	3		3	
Recommended pump type: <input type="checkbox"/> Shallow <input type="checkbox"/> Deep	4		4	
Recommended pump depth - metres	5		5	
Recommended pump rate - (litres/min)	10		10	
If flowing give rate - (litres/min)	15		15	
	20		20	
	25		25	
If pumping discontinued, give reason	30		30	
	40		40	
	50		50	
	60		60	

Plugging and Sealing Record			<input checked="" type="checkbox"/> Annular space <input type="checkbox"/> Abandonment
Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)	
From To			
0.9 1.25	Bentonite. 20 kg.	20 kg.	

Method of Construction			
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input checked="" type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input checked="" type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	Small
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well	
<input type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well
<input checked="" type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality
	<input type="checkbox"/> Unfinished
	<input type="checkbox"/> Dewatering
	<input type="checkbox"/> Replacement well
Well Contractor/Technician Information	
Name of Well Contractor George Downing Estate Drilling Ltd	Well Contractor's Licence No. 1844
Business Address (street name, number, city etc.) 410 Main St. Grenville-sur-la-Rouge, QC J0V1B0	
Name of Well Technician (last name, first name) Downing, Bruce	Well Technician's Licence No. T2113
Signature of Technician/Contractor x [Signature]	Date Submitted 2005/08/25

Location of Well
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.

Please see site plan (attached)

Audit No. Z 31645	Date Well Completed 2005/08/25
Was the well owner's information package delivered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Date Delivered YYYY MM DD

Ministry Use Only	
Date Source	Contractor 1844
Date Received OCT 12 2005	Date of Inspection YYYY MM DD
Remarks	Well Record Number

Address of Well Location (Street Number/Name) Twoedsmuir R North Richmond Rd Ottawa				Township Carleton Place		Elevation 100	
County/District/Municipality North York				City/Town/Village Carleton Place		Province Ontario	
UTM Coordinates (Zone, Easting, Northing) NAD 83 18 414 1308 5026953				Municipal Plan and Sublot Number 100		Other Other	

[illegible]

Annular Space			Results of Well Yield Testing					
Depth Set at (mft)		Type of Sealant Used (Material and Type)	Volume Placed (in ft ³)	After test of well yield, water was	Draw Down		Recovery	
From	To			<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Time (min)	Water Level (mft)	Time (min)	Water Level (mft)
0'	0.5'	Cement			Static Level			
0.5'	11'	Bentonite		If pumping discontinued, give reason:	1		1	
11'	22'	Sand		Pump intake set at (mft)	2		2	

Method of Construction		Well Use		Pumping rate (l/min / GPM)	3	3
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	4	4
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering	5	5
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Drilling	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring	10	10
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning		15	15
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial				
<input type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____				

Construction Record - Casing				Status of Well		20	20
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	From	To		
1.25"	Plastic	5/32"	0'	7.12'	<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned	Recommended pump depth (m/ft)	
						Recommended pump rate (l/min / GPM)	30
						Well production (l/min / GPM)	40
						Disinfected?	50
						<input type="checkbox"/> Yes <input type="checkbox"/> No	60

Construction Record - Screen				
Outside Diameter (in./ft)	Material (Plastic, Galvanized, Steel)	Sta No.	Depth (mm)	
			From	To
1.5"	Plastic	10	12'	22'

Water Details		Hole Diameter	
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Depth (m/f)	Diameter (m/f)
(m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		From	To
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	0'	22'
(m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify			3.25"
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		
(m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify			

N

Om on carb

tweeds

Mac S milk

Well Contractor and Well Technician Information		20m Richmond R	
Business Name of Well Contractor Strata Soil Sampling	Well Contractor's Licence No. 7-2-4-1	Comments:	
Business Address (Street Number/Name) 2-147 West Beaver Creek Dr Richmond Hill	Municipality		
Province ON	Postal Code L4B1C6	Business E-mail Address w.records@stratasoil.com	
Bus. Telephone No. (inc. area code) 905-764-9304	Name of Well Technician (Last Name, First Name) Mike Mike	Well owner's Information package delivered <input type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered Y Y Y Y M M D D Date Work Completed 2009/11/05 Ministry Use Only Audit No. Z106623 DEC 21 2009 RECEIVED
Well Technician's License No. 3-4-4-8	Signature of Technician and/or Contractor [Signature]	Date Submitted 2009/11/05	



Ministry of
the Environment

Well Tag No. (Place Sticker on the Right Side)

A123765

Tag#: A123765

Regulation 903 Ontario Water Resources Act

Well Record

Page 1 of 2

Well Location

Address of Well Location (Street Number/Name)

2046 Scott St.

County/District/Municipality

Township

Ottawa

Lot

Concession

Province

Ontario

Postal Code

UTM Coordinates

Zone

Eastings

Northing

Municipal Plan and Sublot Number

HAD 813

11844106015027155

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (m)	
				From	To
BLK	gravel	asphalt	loose	0	3.1
BRN	sand	stones	soft	3.1	2.13
GRY	sand	silt	packed	2.13	3.1
GRY	limestone		hard	3.1	6.7

Annular Space			Results of Well Yield Testing						
Depth Sealed at (m/ft)		Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	After test of well yield, water was:		Draw Down		Recovery	
From	To			<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)	
0	3.1	flushmount concrete							
3.1	3.66	bentonite							
3.66	6.7	filter sand							
				If pumping discontinued, give reason:		Static Level			
				Pump intake set at (m/ft)					

Method of Construction		Well Use	
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify	<input type="checkbox"/> Diamond <input type="checkbox"/> Jutting <input type="checkbox"/> Driving <input type="checkbox"/> Digging Direct Push	<input type="checkbox"/> Public <input type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify	<input type="checkbox"/> Commercial <input type="checkbox"/> Municipal <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Not used <input type="checkbox"/> Dewatering <input type="checkbox"/> Monitoring

Construction Record - Casing			Status of Well	
Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Well Thickness (cm)	Depth (m)	
			From	To
	PVC		0	3.66
			<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input checked="" type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify <input type="checkbox"/> Other, specify	

Construction Record - Screen			Status of Well	
Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m)	
			From	To
	PVC	10	3.66	6.7
			<input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify <input type="checkbox"/> Other, specify	

Water Details		Hole Diameter	
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Depth (m)	Diameter (cm)
(m) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		From To	
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	0 3.1	1.43
(m) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify		3.1 6.7	7.62
Water found at Depth	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		
(m) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify			

2046

3m

5m

thione

Well Contractor and Well Technician Information			
Business Name of Well Contractor	Well Contractor's Licence No.		
Strata Soil Sampling	7121411		
Business Address (Street Number/Name)	Municipality		
1472 West Beaver Creek Rd	Richmond Hill		
Province	Postal Code	Business E-mail Address	
ON		L4B1C6 l.wrecords@stratasoil.com	
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)		
9057649304	Beatty Brian		
Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted	
316116		2011/10/12	

Map of Well Location

Please provide a map below following instructions on the back.

Athlone St.

2046

3m

5m

Scott St.

Comments:

Well owner's information package delivered ☐ Yes ☒ No

Date Package Delivered

Y | Y | Y | M | D | D

Date Work Completed

2011/10/12

Ministry Use Only

Audit No.

2134395

Received

Address of Well Location (Street Number/Name)		Township	Lot	Concession	
Tweedsmuir North of Richmond Rd		04			
County/District/Municipality		City/Town/Village	Province		Postal Code
		Ottawa	Ontario		
UTM Coordinates		Municipal Plan and Sublot Number		Other	
Zone	Easting	Northing			
NAD 83	1844112995	5026953			

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)

Annular Space			Results of Well Yield Testing				
Depth Set at (mft)		Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft)	Draw Down - Recovery			
From	To			Time (min)	Water Level (mft)	Time (min)	Water Level (mft)
0'	05'	Cement					
05'	12'	Bentonite					
12'	23'	Sand					

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____		

Construction Record - Casing				Status of Well	
Inside Diameter (in/in)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Well Thickness (in/in)	Depth (m/f)		<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Inactive, or Sealed
			From	To	
1.25"	Plastic	0.25"	0'	13'	

Construction Record - Screen					<input type="checkbox"/> Abandoned, Poor Water Quality
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		<input type="checkbox"/> Abandoned, other, specify
			From	To	<input type="checkbox"/> Other, specify
1.5"	Plastic	10	13'	23'	

Water Details		Hole Diameter	
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	Depth (m/ft) From To	Diameter (cm/in)
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested	0' 23'	3.25
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested		

Well Contractor and Well Technician Information	
Business Name of Well Contractor	Well Contractor's Licence No.
Strada Soil Sampling	7241
Business Address (Street Number/Name)	Municipality
2-147 west Beaver Creek	Richmond
Province	Postal Code
ON	L4B1C6
Business E-mail Address	
wrecords@stradaSoil.co	
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, F. rst Name)
9057649304	Mait Mike
Well Technician's Licence No. / Signature of Technician and/or Contractor / Date Submitted	
3448 muk 2009/1/15	

Results of Well Yield Testing					
After test of well yield, water was:		Draw Down		Recovery	
<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____		Time (min)	Water Level (m/l)	Time (min)	Water Level (m/l)
If pumping discontinued, give reason: _____		Static Level			
		1		1	
Pump intake set at (m/l)		2		2	
Pumping rate (l/min / GPM)		3		3	
		4		4	
Duration of pumping hrs + min		5		5	
Final water level end of pumping (m/l)		10		10	
If flowing give rate (l/min / GPM)		15		15	
Recommended pump depth (m/l)		20		20	
		25		25	
Recommended pump rate (l/min / GPM)		30		30	
		40		40	
Well production (l/min / GPM)		50		50	
Disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No		60		60	

Map of Well Location

Please provide a map below following instructions on the back.

NT

Tweedsmuir Rd

15m

Richmond Rd

Comments: 11							
Well owner's information: package delivered <input type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered Y Y M M D D Date Work Completed 2009 11 05						
<table border="1"> <tr> <th colspan="2">Ministry Use Only</th> </tr> <tr> <td>Audit No.</td> <td>Z 106621</td> </tr> <tr> <td>Received</td> <td>DEC 21 2009</td> </tr> </table>		Ministry Use Only		Audit No.	Z 106621	Received	DEC 21 2009
Ministry Use Only							
Audit No.	Z 106621						
Received	DEC 21 2009						

Address of Well Location (Street Number/Name)			Township		Lot	Concession	
Tweedsmuir North of Richmond Rd			Ottawa				
County/District/Municipality			City/Town/Village		Province		Postal Code
			Ottawa		Ontario		
UIN Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number		Other	
NAD 83	18	441301	5026945				

[illegible]

Annular Space			Results of Well-Yield Testing					
Depth Set at (mft)		Type of Sealant Used (Material and Type)	Volume Placed (m ³ /m ³)	After test of well yield, water was:	Draw Down		Recovery	
From	To			<input type="checkbox"/> Clear and sand free <input type="checkbox"/> Oily, specify	Time (min)	Water Level (mft)	Time (min)	Water Level (mft)
0'	0.5'	Cement						
0.5'	9'	Benbrite						
9'	20'	sand						
				If pumping discontinued, give reason:	Static Level			
				Pump intake set at (mft)	1		1	
					2		2	

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input checked="" type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input checked="" type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		
			From	To	
1.25"	Plastic	0.25"	0'	10'	<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned

Construction Record - Screen				
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
1.5"	Plastic	10	10'	20'

☐ Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify _____
☐ Other, specify _____

Water Details		Hole Diameter	
Water found at Depth (mft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (mft) From To	Diameter (inches)
Water found at Depth (mft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	0' 20'	3.25
Water found at Depth (mft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____		

Well Contractor and Well-Technician Information			
Business Name of Well Contractor		Well Contractor's License No.	
Strata Soil Sampling		712141	
Business Address (Street Number/Name)		Municipality	
2-147 West Beaver Creek Dr Richmond/H			
Province	Postal Code	Business E-mail Address	
ON	L4B1C6	wrecords@strataoil.com	
Bus. Telephone No. (inc. area code)		Name of Well Technician (Last Name, First Name)	
9057649304		Milt Mike	
Well Technician's License No.		Signature of Technician and/or Contractor	
344877		2009/11/15	

Results of Well-Yield Testing				
After test of well yield, water was <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Oily, specky	Draw Down		Recovery	
	Time (min)	Water Level (m)	Time (min)	Water Level (m)
If pumping discontinued, give reason:	Static Level			
	1		1	
	2		2	
	3		3	
	4		4	
	5		5	
	10		10	
	15		15	
	20		20	
	25		25	
Pump intake set at (m)				
Pumping rate (l/min / GPM)				
Duration of pumping _____ hrs + _____ min				
Final water level and of pumping (m)				
If flowing give rate (l/min / GPM)				
Recommended pump depth (m)				
Recommended pump rate (l/min / GPM)				
Well production (l/min / GPM)				
Discontinued?				
<input type="checkbox"/> Yes <input type="checkbox"/> No				
	60		60	

A hand-drawn map titled "Map of Well Location". The map shows a road on the left with a north arrow pointing upwards. A road labeled "treatment Rd" runs vertically. To the right of the road is a well marked with a circled 'X'. A vertical line segment next to the well is labeled "23m". To the right of the well is a building labeled "M... M...".

Richmond Rd Comments 	
Well owner's information package delivered <input type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered Y Y Y Y M M D D Date Work Completed 2009 11 05
Ministry Use Only Audit No. Z 106622 DEC 21 2009 Received	

TWEEDSMUIR AVE



• For use in the Province of Ontario only. This document is a permanent legal document. Please retain for future reference.

• All Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.

• Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.

• All metre measurements shall be reported to 1/10th of a metre.

• Please print clearly in blue or black ink only.

Ministry Use Only

[illegible]

Site/Compartment/Block/Tract etc

☐ Undifferentiated[illegible][illegible]

Plugging and Sealing Record			<input type="checkbox"/> Annular space	<input checked="" type="checkbox"/> Abandonment
Depth set - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)		
From	To			
2.5	2.6	Bentonite Slurry		2
1.5	2	Cement		3 Bags
0	1.5	Gravel Cut Off -		
		9 Rebarbed		

Method of Construction			
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Rotary (air)	<input type="checkbox"/> Diamond	<input type="checkbox"/> Digging
<input type="checkbox"/> Rotary (conventional)	<input type="checkbox"/> Air percussion	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other
<input type="checkbox"/> Rotary (reverse)	<input type="checkbox"/> Boring	<input type="checkbox"/> Driving	

Water Use			
<input type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Supply	<input type="checkbox"/> Other
<input type="checkbox"/> Stock	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used	
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Municipal	<input type="checkbox"/> Cooling & air conditioning	

Final Status of Well			
<input type="checkbox"/> Water Supply	<input type="checkbox"/> Recharge well	<input type="checkbox"/> Unfinished	<input type="checkbox"/> Abandoned, (Other _____)
<input type="checkbox"/> Observation well	<input type="checkbox"/> Abandoned, insufficient supply	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, poor quality	<input type="checkbox"/> Replacing well	

Well Contractor/Technician Information	
Name of Well Contractor <i>Shivers</i>	Well Contractor's Licence No. <i>6574</i>
Business Address (street name, number, city, etc.) <i>Box 5049</i>	<i>017</i>
Name of Well Technician (last name, first name) <i>Shivers</i>	Well Technician's Licence No. <i>370</i>
Signature of Technician/Contractor <i>[Signature]</i>	Date Submitted <i>3/28/99</i>

Location of Well			
In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.			
Audit No. z 28743		Date Well Completed yyyy mm dd	
Was the well owner's information accurate delivery? <input type="checkbox"/> Yes <input type="checkbox"/> No		Date Delivered yyyy mm dd	

Ministry Use Only	
Data Source	Contractor 6574
Date Received NOV 24 2005 <small>YYYY MM DD</small>	Date of Inspection NOV 24 2005 <small>YYYY MM DD</small>
Remarks DWC VIA PHONE 2005/11/15	Well Record Number



Ontario

Ministry of
the Environment

Well Tag No. for Master

A 056104

A056104

Master Well Record for
Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Master Well Owner's and Land Owner's Information

First Name

Last Name

CITY OF OTTAWA

Public Works & Services

Mailing Address (Street Number/Name, RR)

Municipality

Province

Postal Code

Telephone No. (inc. area code)

100 CONSTITUTION CRES

OTTAWA

ON

K1P 1G1S18

613 518 0124/24

Location and Construction of the Master Well in the Cluster

Address of Well Location (Street Number/Name, RR)

Township

Lot

Concession

SEE ATTACHED PLAN

County/District/Municipality

City/Town/Village

Province

Postal Code

OTTAWA

Ontario

UTM Coordinates

Zone

Easting

Northing

GPS Unit Make

Model

Mode of Operation:

Undifferentiated

Averaged

NAD 83

18T

44

2331

15012794

GAM12

765

Differentiated, specify

30

Overburden and Bedrock Materials (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres)	From	To
GRY	ASPHALT			0	0.2	
GRY	CONCRETE			0.2	0.5	
BRN	SAND	GRAVELY COBBLES		0.5	3.3	
GRY	LIMESTONE			3.3	5.3	

BH 8

Hole Details

Depth (Metres)	Diameter (Centimetres)
From	To
0	5.3
	20.0

Water Use

<input type="checkbox"/> Public	<input type="checkbox"/> Industrial	<input type="checkbox"/> Not used	<input type="checkbox"/> Other, specify
<input type="checkbox"/> Domestic	<input type="checkbox"/> Commercial	<input type="checkbox"/> Dewatering	
<input type="checkbox"/> Livestock	<input type="checkbox"/> Municipal	<input type="checkbox"/> Monitoring	
<input type="checkbox"/> Irrigation	<input checked="" type="checkbox"/> Test Hole	<input type="checkbox"/> Cooling & Air Conditioning	

Method of Construction

<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Air Percussion	<input type="checkbox"/> Digging
<input checked="" type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Diamond	<input checked="" type="checkbox"/> Boring
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Other, specify
<input type="checkbox"/> Rotary (Air)	<input type="checkbox"/> Driving	

Status of Well

<input checked="" type="checkbox"/> Test Hole	<input type="checkbox"/> Abandoned, Insufficient Supply
<input type="checkbox"/> Replacement Well	<input type="checkbox"/> Abandoned, Poor Water Quality
<input type="checkbox"/> Dewatering Well	<input type="checkbox"/> Other, specify
<input type="checkbox"/> Alteration (Construction)	<input type="checkbox"/> Abandoned, other, specify

No Casing and Screen Used

Open Hole

☐ Yes ☐ No

Static Water Level Test

Metres

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fiberglass, concrete, galvanized)	Wall Thickness	Depth (Metres)	From	To
3.2	PLASTIC	RISEN	0.2	0	2.3
		SUNKEN	0.2	2.3	5.3

Annular Space/Abandonment Sealing Record

Depth Set at (Metres)	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
From	To	
0.2	1.8 BENTONITE MOLEPLUG	N/A

Water Details

Water found at Depth	Kind of Water
3.5 Metres	<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
Water found at Depth	Kind of Water
Metres	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
Water found at Depth	Kind of Water
Metres	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed

(yyyy/mm/dd)

2007/10/15

Cluster Information (Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)

Total Wells in Cluster

5

Please indicate Number of Cluster Well Information Log Sheets Submitted

1

Total Wells on this Property

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☐ Check box to confirm detailed map is provided as per Section 11.1 (3)

Consent to release additional information concerning the cluster to the Director upon request

Signature of Technician/Contractor

Date (yyyy/mm/dd)

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
DST CONSULTING	6181318
Business Address (Street No./Name, number, RR)	Municipality
605 HEWITSON ST	THUNDER BAY
Province	Postal Code
ONTARIO	A1A1A1A1
Business E-mail Address	
dstgroup.com	
Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
1076123129129	FINKE C. ALAN
Well Technician's Licence No.	Signature of Technician
215144	[Signature]
Date Submitted (yyyy/mm/dd)	
OCT 2007	

Master Well Owner's/Land Owner's consent to use Cluster Form

Ministry Use Only

Audit No.	Well Contractor No.
M 00136	
Date Received (yyyy/mm/dd)	Date of Inspection (yyyy/mm/dd)
NOV 22 2007	
Remarks	
C 00100	

Ministry of
the Environment

Well Tag No. for Master Well (Print Well Tag No.)

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

Page 7 of 7

[illegible]

City of Ottawa – ISCS Department

INFORMAL REQUEST FOR INFORMATION PROCESS

INFORMATION SHEET

What is the informal Request for Information process?

The City of Ottawa provides an informal process through which parties conducting research on existing or former uses of a site, often for a Phase I Environmental Site Assessment or in conjunction with an application for a development approval, can request and obtain information from the City of Ottawa regarding properties located within its boundaries. As of January 1st, 2001, this process also incorporates information from the Historical Land Use Inventory (“HLUI”), which was compiled by the former Region of Ottawa-Carleton. This database was recently updated current to 2005 data.

This informal process provides applicants with a streamlined way in which to obtain useful information from the City of Ottawa. It is called an **informal process** because it allows applicants to request information outside of the legislated process found in the *Municipal Freedom of Information and Protection of Privacy Act* (“MFIPPA”).

What does the City of Ottawa do when it receives an informal Request for Information?

Once the City of Ottawa receives a request for information along with the appropriate consent and signed disclaimer, the search process is triggered. Staff members from the Planning and Growth Management Branch of the Infrastructure Services and Community Sustainability Department review the Request for Information and the consent to ensure that they are complete and, if necessary, clarify any details with the requester. The request is then circulated to the following Departments within the City of Ottawa:

- City Operations: Environmental & Health Protection Division (Public Health);
- Infrastructure Services and Community Sustainability: Sewer Use Program;
- Infrastructure Services and Community Sustainability: Environmental Programs (Waste Diversion);
- City Manager’s Office: Real Estate Services Division;
- City Manager’s Office: Legal Services Division.

Staff members of the Planning and Growth Management Branch also conduct a search of the HLUI database.

The nature of the information that the Departments may have on a particular property will vary, depending on their scope of activities and mandate. Document retention periods and recording methods will also determine which information may be available regarding a particular property. As a result, the amount of information available on a property will vary on a case-by-case basis. Any information that is found regarding a particular property is then

pooled and reviewed by staff within the City of Ottawa's Planning and Growth Management Branch. The information is then provided to the requester, together with any necessary explanations.

What are the advantages of using the informal Request for Information process?

This process was put into place to assist applicants conducting research on a particular site in obtaining certain information. The streamlined circulation and search process has been designed to ensure that those departments that are most likely to have relevant information available regarding properties are canvassed. The staff members involved in this process are all familiar with environmental assessments and land use planning. At present, there are no fees associated with this process.

While the time required to process requests will vary depending on each property, the City of Ottawa attempts to provide a response within a 30 day time period.

Who can submit an informal Request for Information?

This process is available to individual and corporate landowners alike. Consultants and other third parties may also make requests on behalf of any landowner with the landowner's written consent.

What about MFIPPA?

This informal process is designated to operate as a limited alternative to the access to information process found in MFIPPA.

MFIPPA is a provincial statute affecting all municipalities and local boards in Ontario. It regulates public access to information contained in municipal records and sets out rules regarding protection of individual privacy. MFIPPA provides a formalized process for access to information by the public, whereby individuals may request, in writing, access to information under the custody and control of the City of Ottawa. MFIPPA also prescribes an application fee as well as processing fees for each request. Deposits are required for requests involving a substantial amount of municipal records.

Although all individuals and corporations are free to make formal requests for information under MFIPPA, the City's informal Request for Information process provides requesters with an alternative route for obtaining certain information that is in the custody and control of the City of Ottawa.

What impact does MFIPPA have on the City's informal Request for Information process?

The City of Ottawa must follow the rules in MFIPPA with respect to disclosure of information, regardless of whether the request for the information has been made formally under MFIPPA or informally under the City's informal Request for Information process. As

a result, the City of Ottawa may be unable to release certain information that is in its custody and control with respect to some properties.

How is an informal Request for Information submitted?

Request for Information form: Requesters must fill out the attached 'Request for Information' form and submit it to the City of Ottawa's Planning and Growth Management Branch. The location of the subject property must be clearly indicated on the form.

Consent to Disclose Information: Consultants and other third parties may make requests for information on behalf of an individual or corporation. However, if the requester is not the owner of the property, **the requester must provide the City of Ottawa with a 'consent to disclose information' letter, signed by the property owner.** This will authorize the City of Ottawa to release any relevant information about the property or its owner(s) to the requester. Consent for disclosure is required in the event that personal information or proprietary company information is found concerning the property and its owner. All consents must clearly indicate the name of the property owner as well as the name of the requester, and must be signed and dated.

Description of the Property: In order to assist the City of Ottawa in its search for information, please provide as much information as possible about the property, including:

- Both the municipal address and the legal description of the property;
- A site plan or key plan of the property, its location and particular features;
- A clear description of what information you are interested in receiving; and,
- Any significant dates or time frames you would like researched.

Disclaimer: Requesters must read and understand the conditions included in the attached disclaimer and submit a signed disclaimer to the City of Ottawa's Planning and Growth Management Branch. This disclaimer is related to the Historic Land Use Inventory and must be received by the City of Ottawa, signed and dated by the requestor, before the process can begin.

Where can I get more information about this process?

You may contact Mark Young with the Planning Division at (613) 580-2424 ext. 14743 or HLUI@ottawa.ca to obtain further information regarding the City of Ottawa's informal Request for Information process.

Questions, comments and suggestions are always welcome.



DISCLAIMER

For use with HLUI Database

CITY OF OTTAWA ("the City") is the owner of the HISTORICAL LAND USE INVENTORY ("HLUI"), a database of information on the type and location of land uses within the geographic area of Ottawa, which had or have the potential to cause contamination in soil, groundwater or surface water.

The City, in providing information from the HLUI, to Paterson Group Inc. ("the Requester") does so only under the following conditions and understanding:

1. This is a free service offered by the City.
2. The information which is contained in the HLUI has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that such records and sources of information may be flawed. Changes in municipal addresses over time may have introduced error in such records and sources of information. The City is not responsible for any errors or omissions in the HLUI and reserves the right to change and update the HLUI without further notice. The City does not, however, make any commitment to update the HLUI. Accordingly, all information from the HLUI is provided on an "as is" basis with no representation or warranty by the City with respect to the information's accuracy or exhaustiveness in responding to the request.
3. City staff will perform a search of the HLUI based on the information given by the Requester. City staff will make every effort to be accurate, however, the City does not provide an assurance, guarantee, warranty, representation (express or implied), as to the availability, accuracy, completeness or currency of information which will be provided to the Requester. The HLUI in no way confirms the presence or absence of contamination or pollution of any kind. The information provided by the City to the Requester is provided on the assumption that it will not be relied upon by any person whatsoever. The City denies all liability to any such persons attempting to rely on any information provided from the HLUI database.
4. The City, its employees, servants, agents, boards, officials or contractors take no responsibility for any actions, claims, losses, liability, judgments, demands, expenses, costs, damages or harm suffered by any person whatsoever including negligence in compiling or disseminating information in the HLUI.
5. Copyright is reserved to the City.
6. Any use of the information provided from the HLUI which a third party makes, or any reliance on or decisions to be based on it, are the responsibilities of such third parties. The City, its employees, servants, agents, boards, officials or contractors accept no responsibility for any damages, if any, suffered by a third party as a result of decisions made as a result of an information search of the HLUI.
7. Any use of this service by the Requestor indicates an acknowledgement, acceptance and limits of this disclaimer.
8. All information collected under this request and all records provided in response to this request are subject to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. M.56, as amended.

Signed: _____

Per: Sean Moggridge, B.Eng.
(Please print name)
Title: Environmental Consultant
Company: Paterson Group Inc.

Dated: _____

September 12, 2014



INFORMAL REQUEST FOR INFORMATION PROCESS
CONFIDENTIAL

File No.: PE3391

Request for Information

(Informal Request)*

1. REQUESTER INFORMATION

- a) Name of Requester: Sean Moggridge
- b) Address of Requester: 154 Colonnade Road South, Ottawa, Ontario, K2E 7J5
- c) Telephone Number: 613-226-7381
- d) Site Address: Lot- Part of Lot 31 and 32 Concession: 1, Nepean Township
Street: 320 McRae Avenue and 1976 Scott Street
City/Town: Ottawa (Ottawa Front), Ontario
Postal Code:
- e) Legal Plan Attached: Yes () No (X), Keyplan and Topographic Site Plan Attached
- f) Site Owner: The Estate of Carson Unsworth Sr.
- g) Adjacent Property Owners: Various commercial and residential
- h) Date of Ownership: Began acquiring properties in 1953
Previous Owner(s): Various, unknown
- i) Type of Site: () vacant, (X) residential, (X) commercial,
() other (specify)
- j) Requestors relationship to Site: Environmental Site Assessor
- k) Date of Previous Request: n/a
- l) Date of Previous ESA: November, 2008
- m) Information Requested: Environmental Records (violations, sewer use
infractions, spills or leaks, waste disposal sites...) and HLUI database for historical land
use in the area of the site.

2. CONFIDENTIALITY

- a) Consent Required: (x) Owner () Tenant () Purchaser () Legal**
- b) Consent Obtained: (x) Owner () Tenant () Purchaser () Legal**

*Will not be processed as a request for information pursuant to MFIPPA.

** (Consent letters must contain the information required, give authorization to requestor, and be dated and signed)

Sean Moggridge

From: squibell@tssa.org on behalf of Public Information Services
[publicinformationsservices@tssa.org]
Sent: September-19-14 3:49 PM
To: Sean Moggridge
Subject: Re: TSSA Records Search, PE3391 - 320 McRae Avenue

Hi Sean,

Thank you for your inquiry.

I have searched the below noted address (addresses) and I have located the following record:

1976 Scott St, Ottawa has record of 3 expired underground tanks and 1 expired propane tank.

For a more detailed report including underground fuel storage tank details and copies of all inspection reports, please submit your request in writing to Public Information Services via e-mail (publicinformationsservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day!

Regards,

Sarah Quibell

Public Information Services

TECHNICAL STANDARDS & SAFETY AUTHORITY
"Putting Public Safety First"
14th Floor, Centre Tower
3300 Bloor Street West

Toronto, ON M8X 2X4

www.tssa.org

Toll-Free: 1-877-682-8772

On Fri, Sep 19, 2014 at 3:23 PM, Sean Moggridge <SMoggridge@patersongroup.ca> wrote:

Good afternoon,

Could you please conduct a search of your records for underground/aboveground storage tanks, historical spills and other incidents/infractions for the following addresses of properties located in Ottawa, Ontario:

319, 320, 336, 344, 351 McRae Avenue;

1960, 1976, 1980 Scott Street

205, 225 Richmond Road.

Thank you for your time and effort.

Sean Moggridge, B.Eng.

patersongroup

consulting engineers

Solution Oriented Engineering

Tel: [\(613\) 226-7381](tel:(613)226-7381)

Fax: [\(613\) 226-6344](tel:(613)226-6344)

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

APPENDIX 3

QUALIFICATIONS OF ASSESSORS

Adrian Menyhart
B.Eng.
Ing. junior

POSITION

Junior Engineer

EDUCATION

Carleton University, B.Eng., 2011
Environmental Engineering

EXPERIENCE

2011 to Present:

Paterson Group Inc.

Consulting Engineers
Environmental Division
Junior Engineer

2009-2011 (summers)

Canadian Food Inspection Agency

Federal Government – Ottawa
Inspector

SELECT LIST OF PROJECTS

Remediation Supervision – Ottawa Arts Gallery
Remediation Supervision – Rideau Centre Expansion
Remediation Supervision – Carling Avenue, Ottawa
Remediation Supervision – Tall Ships Landing, Brockville
Remediation Supervision – Commercial Development, Elgin Street - Ottawa
Phase I & II ESA – Former Mine, Bristol Quebec
Designated Substance and Asbestos Surveys – Various Locations, Ottawa
Asbestos Air Testing – Various Locations, Ottawa
Mould Air Testing – Various Locations, Ottawa
Groundwater Monitoring and Sampling – Various Location, Ottawa
Phase I & II ESA – Various Locations, Ontario and West Quebec

**Environmental
Engineering**

**Geotechnical
Engineering**

**Materials Testing
Quality Control**

Building Sciences

Hydrogeology

**Archaeological
Services**

POSITION

Associate and Supervisor of the Environmental Division
Senior Environmental/Geotechnical Engineer

EDUCATION

Queen's University, B.A.Sc.Eng, 1991
Geotechnical / Geological Engineering

MEMBERSHIPS

Ottawa Geotechnical Group
Professional Engineers of Ontario
Consulting Engineers of Ontario

EXPERIENCE

1991 to Present

Paterson Group Inc.

Associate and Senior Environmental/Geotechnical Engineer
Environmental and Geotechnical Division
Supervisor of the Environmental Division

SELECT LIST OF PROJECTS

Mary River Exploration Mine Site - Northern Baffin Island
Rideau Centre Expansion project - Ottawa
Agricultural Supply Facilities - Eastern Ontario
Laboratory Facility – Edmonton (Alberta)
Ottawa International Airport - Contaminant Migration Study - Ottawa
Investigation and Remediation – Cotton Mill Redevelopment, Cornwall
Billings Hurdman Interconnect - Ottawa
Bank Street Reconstruction - Ottawa
Environmental Review – Various Laboratories across Canada - CFIA
Dwyer Hill Training Centre – Ottawa
Nortel Networks Environmental Monitoring - Carling Campus – Ottawa
Remediation Program - Block D Lands – Kingston
Investigation of former landfill sites – City of Ottawa
Record of Site Condition for Railway Lands – North Bay
Assessment and Remediation - North Bay Airport
Commercial Properties – Guelph and Brampton
Brownfields Remediation – Alcan Site - Kingston
PWGSC Building – 90 Elgin Street - Ottawa
Remediation Program - Ottawa Train Yards
MHLH Facility – CFB Petawawa
Ottawa Congress Centre
Lansdowne Park Redevelopment - Ottawa

**Environmental
Engineering**

**Geotechnical
Engineering**

**Materials Testing
Quality Control**

Building Science

Hydrogeology

**Archaeological
Services**