FirstGroup America Inc.

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

1830 Trim Road, Ottawa, Ontario

1 August 2019

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT - FINAL

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ACRONYMS AND ABBREVIATIONS

ANSI	Areas of Natural and Scientific Interest
APEC	Area of Potential Environmental Concern
Arcadis	Arcadis Canada Inc.
CSA	Canadian Standards Association
ESA	Environmental Site Assessment
FOI	Freedom of Information
HLUI	Historical Land Use Inventory
km	kilometres
L	litres
m	metres
MOECC	Ministry of the Environment and Climate Change
PCA	Potentially Contaminating Activities
QP	Qualified Person
RMS	Risk Management Services
RSC	Record of Site Condition
TSSA	Technical Standards and Safety Authority
UST	Underground Storage Tank

1 EXECUTIVE SUMMARY

Arcadis Canada Inc. (Arcadis) was retained by FirstGroup America Inc. (FirstGroup) to conduct a Phase One Environmental Site Assessment (ESA) of the property located at 1830 Trim Road, in Ottawa, Ontario. The activities undertaken as part of the Phase One ESA were identified and completed in accordance with O.Reg 153/04 (as amended by O.Reg. 511/09).

Until recently, the subject site was used for school bus parking and as a school bus maintenance garage. The purpose of the Phase One ESA was to determine environmental conditions at the subject site as the site is currently for sale.

The subject property, located at 1830 Trim Road in Ottawa, is approximately 4.1 hectares in size and is bounded by Trim Road to the east, a hydro corridor to the north and west, and by a residential neighborhood to the south. The site is situated in the east end of Orleans in an area of relatively recent single family residential development.

The site was historically used for agricultural purposes prior to 1988. After sale of the property in 1988 to Laidlaw Transit Limited, the subject property was then developed as a bus garage and bus maintenance facility, including a garage building and bus parking area.

The Phase One ESA historical research included gathering and review of records that were related to both historical and current activities of the subject property and surrounding properties. This research included but was not limited to review of fire insurance plans, topographic maps, city street directories, land titles information, and Ecolog ERIS environmental reporting which searches numerous federal, provincial, and private environmental databases. Arcadis also corresponded with the MOECC and with the City of Ottawa for circulation of environmental information requests throughout various departments.

Information on the historic use of the property, as well as a preliminary understanding of subsurface conditions was provided by FirstGroup, as documented in the following report:

- Tank Excavation Monitoring, First Student Canada - # 31430, 1830 Trim Road Orleans, ON, K4A 3P8, Strata Environmental Project 1528465, dated 29 October 2015, prepared by Strata Environmental for FirstGroup America Inc.

Locations of underground fuel and waste oil storage tanks, aboveground storage tanks, salt bins, and areas of specific maintenance operations were detailed in the Strata report. This information was corroborated by site reconnaissance, as well as an interview and site escort from a person knowledgeable of historical and current site operations. The Strata report also detailed the removal of two 45,500 L diesel storage tanks.

Based on the Phase One historical review, interviews, the Strata Environmental Report, and the 2016 Arcadis site reconnaissance, the following Areas of Potential Environmental Concern (APECs) were identified:

APEC 1 - The bus maintenance garage and wash bay area from multiple potential sources including: the use of lubricants, motor oils, grease and gear oils; the production of waste oils; the use of antifreeze and bus windshield wash fluid; the use of maintenance tools which may generate metal grindings/welding fumes; and replacement of vehicle tires;

APEC 2 - The bus maintenance garage and wash bay area from multiple potential sources including: the use of solvents for parts de-greasing arising from a small 60L manual wash station;

APEC 3 - The bus maintenance garage exterior area sources including: the presence of solid waste bins and scrap metal dumpsters;

APEC 4 - The exterior bus service areas and parking lot due to the presence of a septic tank (sanitary);

APEC 5 - The exterior bus service areas and parking lot due to the presence of a former underground waste oil tank;

APEC 6 - The exterior bus service areas and parking lot due to the presence of an existing shop drain underground holding tank;

APEC 7 - The bus parking area due to the placement of gravel fill of unknown origin across the Site;

APEC 8 - The gravel parking lot due to parking lot maintenance, potentially including use and storage of road salt;

APEC 9 - The stockpile of excess topsoil fill in the northeast corner of property;

APEC 10 - The stockpile of excess granular fill located on the edge of the graveled area, near the gate;

APEC 11 - The area of the former diesel underground storage tanks formerly present in the yard, north of the maintenance garage building;

APEC 12 - The parking lot and grassed areas throughout the property, specifically from potential use of pesticides during historical agricultural operations.

APEC 13 - Presence of a ground transformer (circa 1990) located at the southeast corner of the site building.

A Phase Two ESA has been recommended to determine impacts to the subject site surface soils, sub-surface soils, and groundwater from the following contaminants of concern: petroleum hydrocarbon compounds, benzene, toluene, ethylbenzene and xylenes, polycyclic aromatic hydrocarbons, volatile organic compounds, organochlorine pesticides, and heavy metals as well as inorganics (ie. EC, SAR, pH), as appropriate to the identified APECs.

Each potentially contaminating activity and, if deemed relevant, its subsequent APEC location, has been provided in Figure 4, the conceptual site model included at the rear of the report. A summary of APECs including the contaminants of potential concern related to those APECs has been provided in Table 9 included at the rear of the report.

During the site reconnaissance inside the garage building, several locations were identified as having mould impact, specifically, at an air diffuser on suspended ceiling tile surrounding the vent, as well as behind a baseboard heater in the office area. A more intrusive search behind ceiling panels and drywall walls may possibly reveal more mould impact than was identified during the visual survey.

Radon testing was not conducted at the subject property. Radon monitoring is recommended to be completed according to Health Canada protocols where occupant health concerns may be an issue.

2 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by the FirstGroup America Inc. (FirstGroup) to conduct a Phase One Environmental Site Assessment (ESA) of the property located at 1830 Trim Road, in Ottawa, Ontario (the 'Phase One property' or the 'subject property'). This report was prepared to support a Record of Site Condition (RSC) that will be submitted to the Ontario Ministry of the Environment and Climate Change (MOECC).

2.1 Phase One Property Information

The subject property, located at 1830 Trim Road in Ottawa, is approximately 4.1 hectares in size and is bounded by Trim Road to the east, a hydro corridor to the north and west and by a residential neighborhood to the south. The site is situated in the east end of Orleans in an area of relatively recent single family residential development. Lands further to the east and south, beyond the current limits of residential development, appear to be predominantly used for agricultural purposes. Existing agricultural land uses appear to be greater than 800 m distant from the subject property. The nearest natural water bodies to the site are Cardinal Creek located approximately 670 m to the northwest and the Ottawa River located approximately 3.5 km to the north.

The site was historically used for school bus parking and as a school bus maintenance garage but remains unoccupied at the current time. It is relatively flat with a 40 m x 25 m concrete block garage and office building in the southwest corner of the property. A small grassed area runs from the south end of the office building to the southern property limit. The eastern one third of the property is vegetated with grasses and shrubs and does not appear to have been used in the operations of the maintenance facility. A raised mound which appears graded and which may comprise a stockpile of topsoil fill is visible in satellite imagery at the northeast end of the property. In addition, a small stockpile of excess gravel fill material is located in the vicinity of the property entrance. The remainder of the property is gravel surfaced and was used for school bus access/egress and parking.

The property information required by O.Reg. 153/04 is included in the following table.

Table 1: Property Information

Site Inquiry	Site Information
Municipal Address	1830 Trim Road, Ottawa, ON
Current Zoning	Commercial/Industrial
Property Identifier Numbers (PIN)	14531-0715 (LT)
Legal Description	CON 9 PT LOT A; RP 50R-5951; PARTS 1 TO 8 -Geographic Township of Cumberland
Assessment Roll#	06145003010170500000
Area	4.1 ha (10 acres)

Property Owner	Laidlaw Transit Ltd. (FirstGroup Canada ULC (FGA))
Contact Person for Owner	Mike Casey
Person Who Engaged Qualified Person	Susan Kirkpatrick (FGA)

The property was used as a bus depot and repair facility from its development in 1990 through to July 2012, when garage maintenance operations ceased and equipment removal began. The lot was then used solely for school bus parking up to June 2015. The property has remained vacant from June 2015 to present.

The location and outline of the subject property boundary is shown on the accompanying **Figure 1** (Site Location Plan). A list of Acronyms can be found on page vi) for reference purposes while a Phase One ESA Contact List with the name, title and contact information for persons contacted for purposes of this Phase One ESA is found in **Appendix M**.

The main contact for the property is:

Ms. Susan Kirkpatrick
Environmental Program Manager
FirstGroup America Inc.
600 Vine Street, Suite 1400
Cincinnati, OH, 45202

This Phase One Environmental Site Assessment was completed by:

Troy Austrins, P.Eng., QP $_{ESA}$
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Ottawa, Ontario, K2H 8K7
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3 SCOPE OF INVESTIGATION

The activities undertaken as part of the Phase One ESA were identified and completed in accordance with O.Reg 153/04 (as amended by O.Reg. 511/09) except where indicated in the report. The scope of the investigation for the Phase One ESA included the activities listed below.

3.1 Records Review

The records review task comprised the gathering and review of records that are related to both historical and current activities at the subject property to identify potentially contaminating activities (PCAs) and areas of environmental concern on the subject property. Similarly, records that relate to adjacent properties lying within the interpreted Phase One ESA study area (refer to section 4.1.1 below) were also compiled and reviewed for the same purposes. Information sources included:

- municipal directories and/or land registry office records, reviewed for previous occupants or tenants of the subject property and adjacent properties within the Phase One ESA study area;
- historical aerial photographs, reviewed for evidence of environmental concerns on the subject property and adjacent properties within the Phase One ESA study area;
- insurance plans and reports, reviewed or purchased where available from public archives or Risk Management Services (RMS), for evidence of contaminant use and storage on site, or other potential environmental concerns;
- a Freedom of Information (FOI) request, submitted to the MOECC to identify if they may have information regarding environmental infractions, orders, spills or other environmental concerns on the subject property and within the Phase One ESA study area;
- an EcoLog ERIS environmental database report providing information on the subject property as well as the surrounding Phase One ESA study area with respect to environmental occurrence reports, waste generators, MOECC director orders etc.;
- the Technical Standards and Safety Authority (TSSA), contacted regarding the possible presence of fuel storage tanks;
- the MOECC Brownfield Site Registry, reviewed for RSCs and potentially risk-assessed lands;
- MOECC registries, reviewed for active or abandoned waste disposal sites, coal gasification plant sites and PCB storage facilities in the vicinity of the Phase One ESA study area;
- the MOECC Hazardous Waste Generators database, reviewed for registered waste streams of commercial/industrial properties within the Phase One ESA study area; and
- any construction drawings, site operating records and other existing environmental assessment documents that were made available for review.

3.2 Interviews

Interviews were conducted and documented with persons having specific knowledge of past and/or current activities carried out on the Phase One ESA property to identify the location and nature of PCAs and areas of potential environmental concern (APECs) on the subject property as well as to coordinate other property related information collected during the Phase One ESA.

3.3 Site Reconnaissance

A site reconnaissance of the subject property was undertaken to assess if APECs through observations regarding current and past land uses and activities. Observations concerning PCAs and potential contaminants of concern associated with such activities together with an assessment of contaminant migration pathways were made during the site reconnaissance visit. Information gathered included:

- photographs;
- general site features such as water bodies, ground cover and topography;
- observations and descriptions of any adjacent buildings or other structures, and evidence of potential environmentally contaminating activities or impacts;
- evidence of ditches and existing monitoring wells;
- areas of suspected fill; and
- presence of readily observable wastes, staining, plant kills or other readily observable evidence of contamination that might be present.

Observations of PCAs within the interpreted Phase One ESA study area were similarly made from publicly-accessible areas to the extent practical. At the time of the Phase One ESA site reconnaissance, snow cover prevented the thorough review of ground surface conditions. Selected photos from the site reconnaissance are attached in **Appendix A.**

3.4 Environmental Report

This Phase One ESA report was prepared to present an evaluation and interpretation of the information gathered during the records review, interviews and site reconnaissance activities. This information was compiled to produce a Phase One ESA conceptual site model (CSM) for the subject property and to provide a recommendation as to whether a Phase Two ESA is warranted.

4 RECORDS REVIEW

4.1 General

4.1.1 Phase One ESA Study Area Determination

The Phase One ESA study area, as defined in O.Reg. 153/04, as amended, comprises lands that are located within 250 m of the subject property limits. These lands, due to their proximity to the subject property, were assessed to determine if PCAs have occurred or are currently occurring that may impact the subject property. APECs associated with the PCAs were then identified and documented. The Phase One ESA study area may be expanded beyond the 250 m limit at the discretion of the Qualified Person (QP) in accordance with O.Reg. 153/04, as amended, if the need is determined to include additional properties where a particular past or current site use represents a potentially contaminating activity or potential area of environmental concern to the subject property. O.Reg. 153/04, as amended, requires that the limits of the Phase One ESA study area be determined in regards to its interpreted limits beyond the 250 m distance to account for such circumstances.

The majority of the lands beyond the 250 m limit of the subject property were and continue to comprise residences and vacant grassed land, a Hydro Ottawa easement and the Maple Ridge Elementary School. These land uses are not considered to represent significant sources of potential environmental concern and therefore the limits of the Phase One ESA study area were not extended beyond the 250 m boundary.

The limits of the Phase One ESA study area are shown on **Figure 4** attached at the rear of the report.

A recent Plan of Survey was commissioned for the subject property, a copy of which is attached in **Appendix N**. The Surveyor's Real Property Report was prepared by Fairhall, Moffatt and Woodland Limited for Part of Lot 'A', Concession 9, Geographic Township of Cumberland, as completed on March 4, 2016. The boundary of the Phase One ESA study area is shown on the Plan of Survey.

4.1.2 First Developed Use Determination

The subject property was historically used for agricultural purposes prior to 1988. The subject property was then developed as a bus garage and bus maintenance facility, including a garage building and bus parking area by approximately 1990. Based on the review of historical air photos, land registry documentation, and site reconnaissance, no development or other structures than the bus maintenance garage/office building have been constructed at the subject property to date.

A Site Grading design drawing dated July 1988 for the Trim site redevelopment (reference SG-1) indicates that the parking lot and building areas were to be stripped of topsoil and that such topsoil was to be placed in the location where the current large topsoil stockpile is found at northeast quadrant of the site.

4.1.3 Fire Insurance Plans

ERIS was contacted and requested to review their files for any information available for the property located at 1830 Trim Road. ERIS was unable to locate any fire insurance plans, sketches or reports with historical coverage for the subject property within their files. The response from ERIS to our inquiry for files related to the subject property can be found attached in **Appendix C**.

4.1.4 Chain of Titles

Land title information for the subject property was obtained from an online database search of the Teranet system for data compiled using recorded plans and documents. A printout of the property identifier and legal description was obtained but does not constitute a full title search in the legal sense. The property has a property identifier PIN of 14531-0715(LT) and is described as:

"PART OF LOT A CONCESSION 9, DESIGNATED AS PARTS 1-8, 50R5951 CUMBERLAND SUBJECT TO EXECUTION 95-079470 CU16002"

Records regarding ownership list the Laidlaw Transit Ltd. as the present owner of the above described property since 1988. Laidlaw is the corporate predecessor of FirstCanada ULC; with registration modification made as of 21 October 2016. The owner previous to Laidlaw is listed as the company 729080 Ontario Limited, commencing in 1987. It was considered likely that the numbered company acted as a developer for surrounding farmlands in close proximity to the city limits. Prior to 1987, the property was privately owned, being transferred ten times between individual owners, dating back to 1837 when it was transferred from the Crown. Records prior to 1837 were not found in the search. A PIN print from the Teranet records review can be found in **Appendix D**.

4.1.5 Environmental Reports

Information on the historic use of the property as well as a preliminary understanding of subsurface conditions has been provided by FirstGroup in the following report:

- Tank Excavation Monitoring, First Student Canada - # 31430, 1830 Trim Road Orleans, ON, K4A 3P8, Strata Environmental Project 1528465, dated 29 October 2015, prepared by Strata Environmental for FirstGroup America Inc.
- A summary of the report from Strata Environmental has been provided by the TSSA as outlined in the TSSA letter found in Appendix I. In summary, on July 7, 2015, one (1) 2,270 L waste oil underground storage tank (UST) and two diesel USTs (45,500 L size) were removed from the site. Prior to removal, fluids in USTs were evacuated and the tanks were inerted to remove potentially explosive vapours. Approximately 1,104 L of the tank fluids were removed using a vacuum truck by Triangle Pump Services Limited (TPSL) and was transported off site for recycling/disposal at the TPSL facility located at 2565 Delzotto Avenue in Gloucester, Ontario.

Two excavations were completed to remove diesel USTs and waste oil UST. It was reported that no groundwater was observed in the excavations. Upon removal the single-walled steel diesel USTs were observed to be in good condition with no surface corrosion, pitting or perforations apparent and were

transported off site to a metals recycling facility. The waste oil UST was fibreglass with no holes or openings observed.

Contaminated soil exhibiting vapour concentrations in excess of 5,000 parts per million (ppm) were encountered beneath the east half of diesel UST excavation. This contaminated soil was characterized and classified with the results presented in the *"Waste Classification of Contaminated Soil Material, First Student Facility, 1830 Trim Road, Orleans, Ontario"* report prepared by Strata, dated July 15, 2015. As presented in the report, petroleum constituents in excess of the applicable standards were detected in a representative sample of the contaminated soil. Waste classification indicated that the contaminated soil was deemed non-hazardous under Ontario Regulation 347/558. A total of 380.59 tonnes of contaminated soil was transported on August 11 and 12, 2015 to the GFL Environmental waste disposal facility located at 17335 Allaire Road in Moose Creek, Ontario.

Sixty-two soil samples were collected from the final limits of diesel UST excavation of which five floor sample and six sidewall samples were submitted to Caduceon Environmental Laboratories (Caduceon), an accredited laboratory for analysis of benzene, toluene, ethylbenzene, xylenes (BTEX) and petroleum hydrocarbon fractions 1 to 4 (PHC F1-F4). Selected soil samples were also analysed for metals.

Sixteen soil samples collected from the final limits of waste oil UST excavation of which 2 floor samples and 3 sidewall samples were submitted to Caduceon for analysis of one or more of volatile organic compounds (VOCs), PHC F1 to F4 and metals.

Fill material for tank excavation backfilling was obtained at the Lafarge Aggregate facility in Ottawa, Ontario. Five (5) samples were submitted to Caduceon for analysis of an array of parameter suites including VOCs, PHCs, Polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals, electrical conductivity (EC), sodium adsorption ratio (SAR) and pH.

Strata selected the Ontario Ministry of the Environment and Climate Change (MOECC) (O. Reg. 153/04, as amended) Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non Potable Ground Water Condition for Industry/Commercial/Community property use with medium to fine textured soil as being applicable for the site. The residential land use standards were also selected for the site due to a residential use within 30 m of the site.

The 2015 confirmation sample data from Strata Environmental was added to the Phase Two CSM in the appropriate Section. For the Waste Oil UST tank having an approx. 31.1 m^2 bottom area, O.Reg.153/04 Table 3 requirements include 2 floor samples and 3 sidewall samples for >25m^2 but <50m^2 excavation floor area. Strata completed 2 floor samples (F1 and F2) and 3 sidewall samples (N1,7 & E1,7 & S1,3). For the two Diesel UST tank removal excavation, having an approx. 166.5 m2 floor area- O.Reg. 153 Table 3 requirements include for >100 but <250m2 floor area a requirement for 3 x excavation floor and 5 sidewall samples. Strata completed 4 floor samples (F2, F5, F7, and F11) and 7 sidewall samples (N1,12 & N3,4 & E3,4 & E1,8 & S4,6 & S2,8 & W1,8). All 2015 Strata sampling appears to meet O.Reg. 153/04 Table 3 excavation sampling and laboratory testing requirements. It was noted that all this same data also meets the O.Reg. 153/04 Table 6 (potable groundwater/shallow soil) generic site condition standards.

Strata reported that the submitted soil samples from the final limits of excavations, segregated soil and imported fill met the SCSs with the exception of six (6) soil samples (T2-F1; T2-F2; T2-N1,7; T2-E1,7; T1-F11 and T1-F2) collected from the excavation walls. Vanadium and cobalt concentrations in these samples exceeded the SCSs for residential property use. Strata reported that all six soil samples were collected from the native clay formation. All soil samples were devoid of visual and olfactory evidence of anthropogenic impact and none of the samples exhibited detected concentrations of organic constituents related to diesel or waste oil. Due to the absence of anthropogenic impacts in these samples, it was Strata's opinion that the elevated cobalt and vanadium concentrations are most likely a naturally occurring characteristic of the local clay formation.

4.2 Environmental Source Information

A number of private and public databases were searched for relevant information with respect to the Phase One study area. The databases listed below were searched and a summary of the information received is provided in each of the individual sections below.

4.2.1 Brownfield Registry

The MOECC Brownfields Registry was searched and all RSCs located within one kilometre of the subject property were examined. No information was returned with environmental relevance to the subject property.

4.2.2 MOECC Freedom of Information Request

A FOI request was forwarded to the MOECC for documents which are in the Ministry's files pertaining to any environmental concerns, orders, spills, charges/prosecutions, Certificates of Approval and waste sites on the subject property. On March 10, 2016, Arcadis received a MOECC response to the Arcadis FOI request stating that information had been located and asking if Arcadis would like to proceed with record retrieval. On March 10, 2016, a request was made to MOECC to conduct the final records retrieval. On May 19, 2016 Arcadis received the final copy of the records review for 1830 Trim Road. A summary of what was found in the records is listed below:

- MOE Use Permit for Class 4,5,6 Sewage Systems (1983)
- MOE Application Form and Certificate of Approval for a Class 2-6 Sewage System (1988)
- Kostuch Engineering Ltd Report (1988) Application for Approval of Class 5 Sewage Systems
- MOE Letter (1988) approval of design criteria
- Township of Cumberland (1988) site plan application
- MOE HWIN Report (1996)
- MOE Occurrence Report (1997) possible hazardous waste leak
- MOE Occurrence Report (2002) waste oil leakage
- MOE Occurrence Report (2002) oil leakage
- MOE Director's Order (2002) revocation of Provincial Officers Order P392034

- Golder Associates Report (2002) support for revocation of Provincial Officers Order P392034
- Laidlaw Transit (2002) appeal to work order
- Certificate of Service (2002) Ontario Environmental Protection Act, Ontario Water Resources Act and the Pesticide Act
- Provincial Officer Report (2002)
- Provincial Officer Order (2002)
- Laidlaw Transit (2002) appeal to work order
- MOEE Occurrence Report (2002) discharge of contaminants
- MOE Incident Report (2015) load refusal
- City of Ottawa (2015) laboratory results on-site waste
- Strata Environmental Tank Excavation Monitoring Report (2016) as referenced in Section 3.2.5 and Appendix I of this report
- MOECC (2016) soil laboratory results

A copy of the MOECC FOI responses have been included in **Appendix E**.

4.2.3 City of Ottawa Freedom of Information Request

Mr. David Wise, Program Manager with the City of Ottawa (Development Review (Suburban Services) – West Planning and Growth Management Department of the City of Ottawa) provided records for the subject property from the Historic Land Use Inventory following a FOI request which was forwarded to the City.

The Historical Land Use Inventory (HLUI) was investigated for documented historical uses and ownership at and adjacent to the subject property.

A search of the HLUI database revealed one (1) activity associated with the subject property: Activity Number 7520. One record for activities on surrounding properties was noted and is associated with Activity Number 7520. The HLUI listed numerous North American Industry Classification System (NAICS) and Standard Industrial Classification (SIC) codes for the facility. The NAICS code 7520 was found to be related to the use of buses for school and scenic travel, and the automotive repair and maintenance of such vehicles.

The HLUI database search also revealed that the Sewer Use Program had files pertaining to a discharge violation for the subject property, occurring in 2015. There are administrative enforcement files related to this event, as well as laboratory results. The sewer discharge violation records were ordered from the City of Ottawa although have not been received as of the date of the current report. Once the records are received by Arcadis, FirstGroup will be notified by Arcadis and the records can be included in this report forwarded to FirstGroup at that time.

The FOI request made with the City of Ottawa was also circulated to various City of Ottawa departments. No additional comments were received with respect to the subject property. A copy of the City of Ottawa FOI request has been included in **Appendix F**.

On 17 March 2017, Arcadis notified the City of Ottawa that it was Arcadis' intent to assess the property using non-potable groundwater condition standards. On 17 March 2017, the City of Ottawa responded with the statement that the City objects to the use of non-potable groundwater standards for the property as there are at least four properties on private drinking water wells within 250 m of the subject property and that potable groundwater standards must be used. A copy of Arcadis' request and the response from the City of Ottawa has been included in **Appendix F**.

4.2.4 EcoLog ERIS Report

A search of provincial, federal, and private databases for records pertaining to the subject property and all properties within 250 metres was conducted by EcoLog ERIS, as listed below. Arcadis has relied upon the EcoLog ERIS database information to be complete and accurate for the study area. A copy of the EcoLog ERIS report is provided as **Appendix G**.

Table 2: Federal Government Databases

Acronym	Database	Data Years Available
EEM	Environmental Effects Monitoring	1992-2007
EIIS	Environmental Issues Inventory System	1992-2001
FCON	Federal Convictions	1988-Jun 2007
FCS	Contaminated Sites on Federal Land	June 2000-Oct 2015
FOFT	Fisheries & Oceans Fuel Tanks	1964-Sept 2003
IAFT	Indian & Northern Affairs Fuel Tanks	1950-Aug 2003
NATES	National Analysis of Trends in Emergencies Systems	1974-1994
NDFT	National Defense & Canadian Forces Fuel Tanks	Up to May 2001
NDSP	National Defense & Canadian Forces Spills	Mar 1999-Aug2010
NDWD	National Defense & Canadian Forces Waste Disposal Sites	2001- April 2007
NEES	National Environmental and Emergencies Systems	1974-2003
NPCB	National PCB Inventory	1988-June 2008
NPRI	National Pollutant Release Inventory	1993-2013
PCFT	Parks Canada Fuel Tanks	1920-Jan2005
TCFT	Transport Canada Fuel Tanks	1970-March 2007

Table 3: Provincial Source Databases

Acronym	Database	Data Years Available
AAGR	Abandoned Aggregate Inventory	Up to Sept 2002
AGR	Aggregate Inventory	Up to Mar 2015

Acronym	Database	Data Years Available
AMIS	Abandoned Mines Information System	1800-Jan 2014
BORE	Borehole	1875-Jul 2014
CA	Certificates of Approval	1985-30 Oct 2011
CFOT	TSSA Commercial Fuel Oil Tanks	1948, Aug 2014
CONV	Compliance and Convictions	1989-Feb 2015
COAL	Coal Gasification Plants	1987, 1988
CPU	Certificates of Property Use	1994 – Nov 2015
DRL	Drill Holes	1886-Jun 2014
EBR	Environmental Registry	1994-Nov 2015
EASR	Environmental Activity and Sector Registry	1994 - Jun 2015
ECA	Environmental Compliance Approval	Oct 2011 – Jun 2015
EMHE	Environmental Management Historical Event	May 31 2014
EXP	List of TSSA Expired Facilities	Nov 2014 to Current
FST	Fuel Storage Tank (TSSA)	1964 – Sept 2003
FSTH	Fuel Storage Tank Historic (TSSA)	Pre-Jan 2010
GEN	Waste Generators Summary	1986-May2015
HNIC	TSSA Historic Incidents	2006-Jun 2009
NIC	TSSA Incidents	Jun 2009-2014
LIMO	Land Inventory Management Ontario	2012
MNR	Mineral Occurrences	1846-Apr 2013
NCPL	Non Compliance Reports	1994-2012
OOGW	Ontario Oil and Gas Wells	1880-2013
OPCB	Inventory of PCB Storage Sites	1987-Oct 2004, 2012-2013
ORD	Orders	1994-Nov 2015
PES	Pesticide Register	1988- Jun 2013
PINC	TSSA Pipeline Incidents	Jun2009-2014
PRT	Private Fuel Storage Tanks	1989-1996
PTTW	Permit to Take Water	1994-Nov2015
REC	Waste Receivers Summary	1986-2013
RSC	Record of Site Condition	1997-Sept 2001, Oct 2004 - Nov 2015
SPL	Ontario Spills	1988-June 2015
SRDS	Wastewater Discharger Registration Database	1990-2011
VAR	TSSA Variances for Abandonment of USTs	Current to Nov 2014
WDS	Waste Disposal Sites – MOECC CA Inventory	1970-Jun 2015

Acronym	Database	Data Years Available
WDSH	Waste Disposal Sites – MOECC 1991 Historical Approval Inventory	Up to Oct 1990
WWIS	Water Well Information System	1995-Mar 2014

Table 4: Private Source Databases

Acronym	Database	Data Years Available
ANDR	Anderson's Waste Disposal Sites	1860's – Present
AUWR	Automobile Wrecking & Supplies	2001-Jul 2014
CHEM	Chemical Register	1992, 1999-Jul 2014
EHS	ERIS Historical Searches	1999-Aug 2014
MINE	Canadian Mine Locations	1998-2009
OGW	Oil & Gas Wells	1988- Jun 2015
PAP	Canadian Pulp & Paper	1999,2002, 2004, 2009
SCT	Scott's Manufacturing Directory	1992- Jun 2009
TANK	Anderson's Storage Tanks	1915-1953

The results of the search indicated that the following database entries were found within a 0.25 km radius of the subject property:

Table 5: Search Summary Results

Database	Number of Records
Borehole (BORE)	2
Certificates of Approval (CA)	1
Environmental Compliance Approval (ECA)	1
Fuel Storage Tank (FST)	2
Fuel Storage Tank Historic (FSTH)	2
Ontario Regulation 347 Waste Generators Summary (GEN)	12
TSSA Historic Incidents (HNIC)	6
Private and Retail Fuel Storage Tanks (PRT)	1
Water Well Information System (WWIS)	2

Two results within the borehole database were found in the ERIS search. The two boreholes are identified as being located on the north side of Trim Road, one advanced in 1964 and the other advanced in 2001. No information environmentally relevant to the subject property was detailed in either borehole database listings.

Two Certificates of Approval (now known as Environmental Compliance Approvals) were discovered associated to the subject property (i.e. within the 250 m search radius). One certificate is listed as being issued to 1070280 Ontario Inc. at 1820 Trim Road, immediately north of the subject property. The approval is listed as being for Municipal and Private Sewage Works, with status listed as approved, issued in December of 2002. A second Certificate of Approval within the Environmental Compliance Approval Database was also found within the ERIS search results. The Certificate is listed as being issued to Longwood Building Corporation at 1765 Trim Road / Mondavi Street. The approval is listed as being for Municipal and Private Sewage Works, with status listed as approved, issued in January of 2014. No information environmentally relevant to the subject property was detailed in either Certificate of Approval listing.

Two storage tanks were identified within both the Fuel Storage Tank and Historical Fuel Storage Tank Databases searches, and both results are related to the subject property. The tanks are listed as two steel single-walled 25,000 L USTs installed in 1989 for the purpose of storing diesel and gasoline fuel. Corrosion protection is listed to comprise a sacrificial anode on both tanks. The existence of these tanks on the subject property is considered a PCA.

Six TSSA incident reports were found within the ERIS search. All these incidents are reported as near miss natural gas pipeline strikes on surrounding residential properties. These incidents are not expected to have impacted the subject property.

A review of the Private and Retail Storage Tanks database returned one result from the ERIS database search. The storage tank is listed as being located at the subject property and having a capacity of 45,460L. No further information is provided. The existence of this storage tank at the subject property is considered to be a PCA.

The Waste Generator Database had a total of 12 listings returned, following the ERIS data base search; each listing related to the subject property address of 1830 Trim Road. Each listing represents a year of operation as a waste generator for either First Canada ULC (member of FirstGroup America Inc.) or Laidlaw Transit Limited with years spanning the operation. All results describe the site as performing school bus operations, generating petroleum distillates, light fuels, oil skimmings and sludges, waste oil lubricants, waste crankcase oil lubricants, and aliphatic solvents. The generation, and therefore, usage, waste collection, and storage of these products are considered PCAs.

Two wells were identified by the ERIS search of the Water Well Information System Database. One well record was from a 1961 domestic fresh water well installation, mapped as being located north of the subject property, on the north side of Trim Road. The other listing was related to a well at Lot A Con 9, mapped east of the subject property near what is now Destiny Private; this listing also identifies the well as a domestic fresh water well, installed in 1975. Neither record had details of environmental relevance to the

subject property. However, based on these findings, the subject site was classified as requiring adherence to the potable groundwater standards even though the site itself does not contain a drinking water well.

4.2.5 Historical Street Directory Search

A historical city street directory search was also conducted by Ecolg ERIS, the results of which did not yield any information relevant to this report. The street directory search results are attached as **Appendix H**.

4.2.6 TSSA Information Request

The TSSA provided a letter to First Canada ULC with report details of the removal of two (2) 45,500 L diesel USTs and a waste oil UST from the subject property, 1830 Trim Road. The report provided was titled *Tank Excavation Monitoring, First Student Canada # 31430, 1830 Trim Road, Orleans, ON K4A 3P8, Strata Environmental Project 1528465, prepared by Strata Environmental Services, Inc*. This letter can be found attached as **Appendix I**.

TSSA records were also searched as a part of the Ecolog ERIS database search. The various TSSA databases searched and their results are found in Section 4.2.4.

4.3 Physical Setting Sources

4.3.1 Aerial Photographs

Arcadis staff visited the National Air Photo Library (NAPL) in Ottawa and reviewed aerial photographs of the subject property for the years 1945, 1960, 1968, 1978, 1983, 1990 and 2001. Aerial photos were chosen to provide 10 year intervals of the site or as close to this period as possible depending on photo availability and quality. Alternative years from the 10 year interval spacing were also chosen in order to obtain appropriate photos with sufficient clarity and scale detail. Descriptions of the conditions on the subject property and the surrounding areas for the current years are provided in Table 6. Due to its large scale and similarity with the 1945 photograph, the 1960 photograph was reviewed at the library and not copied for this report. Copies of all other of the above listed aerial photographs with coverage of the subject property have been provided in **Appendix B** for reference purposes. It should be noted that the scale of some of the aerial photographs did not permit identification of some building features, equipment, or materials on the subject property or adjacent properties.

Table 6: Review of Air Photograph Data - 1830 Trim Road

Year	Description
1945 A9551-106 (1:15,000)	– The subject property is vacant at the time of this photograph – The subject property and surrounding lands north, east, south and west appear to comprise mainly farmed land. – Two buildings and a few other small structures are visible to the northeast of 1830 Trim Road, one larger possible farm house as well as several smaller structures.
1960	– No significant changes were observed from the previous (1945) photograph.

Year	Description
A17262-134 (1:25,000)	
1968 A20890-1 (1:7,000)	– No changes appear to the subject property as it remains vacant agricultural land. – A larger cleared area is present as well as an increased number of smaller buildings visible on the property to the northeast of the subject property.
1978 A31190-50 (1:15,000)	– No significant changes to the subject property or surrounding properties were observed from the previous (1968) photograph
1983 A26246-148 (1:7,000)	– No significant changes were observed to the subject property or surrounding properties from the previous (1978) photograph.
1990 A27643-108 (1:6,000)	– A cleared/paved area now appears on the subject property. The large garage which remains on the site to current date is visible; many large vehicles/buses are also observed. – The surrounding properties are observed to be relatively unchanged from previous photographs.
2001 28466-37 (1:20,000)	– The subject property appears similar to present conditions. A fill pile on the east of the subject property is visible in this photograph. – Portions of the northern part of the property, as well as the lands to the immediate north are disturbed. The hydro corridor is visible adjacent to the north. The corridor appears to be under construction at the time of the taking of this photograph. – More residential development is observed on the surrounding properties than in previous years' photographs – Surrounding lands to east and south east appear mixed agricultural and residential in usage.

Based on the air photo review, the only environmental concerns observed were in relation to the Laidlaw Bus maintenance facility visible in the 1990 and 2001 photographs.

A review of MapArt publishing street mapping for the vicinity provided indication that the nearby Mondavi and Breezewood residence development was constructed subsequent to 2005.

Typical agricultural crops for eastern Ontario include soybeans, corn, oat, barley, alfalfa, hay, and mustard. It is not known which specific crops would have been grown at the subject property historically. It is likely that associated with any such crops, some variety of pesticide product may have historically been applied to prevent crop loss or damage. It would be expected that the heaviest usage of such chemicals would have occurred in the 1960s or 1970s. Typically, pesticides reside in the upper layers of topsoil following application.

4.3.2 Topography, Hydrology, Geology

The topography of the subject property is shown on topographic mapping attached to the rear of the report as **Figure 3** (with reference to Ontario Base Mapping). Topographic mapping was reviewed for the

subject property and a flat topography was noted at an approximate elevation of 89 m above mean sea level. Surface drainage was inferred to be directed to a drainage ditch alongside Trim Road which generally flows northward to connect to the Ottawa River. It would be expected that overland flow at the subject property would be to the northeast. A ditch had been constructed on the subject property to drain standing water towards the northeast and to the ditch line along Trim Road.

As a majority of the site is either provided with gravel or grass surface covering, it is expected that storm water accumulations would readily infiltrate into the overburden. Shallow groundwater is inferred to flow in a northerly direction, towards Cardinal Creek and the Ottawa River. Based on the presence of the native silts and clays, groundwater flow rates would be expected to have a low hydraulic conductivity value approaching 10^{-6} cm/s.

Geological Setting

The subject property is located in the Cumberland Township area of the Ottawa Valley. It is located in the physiographic region of Southern Ontario known as the St-Lawrence Lowlands, as delineated in The Atlas of Canada (Natural Resources Canada, atlas.gc.ca, 2006 – Canada Physiographic Regions Map). The Lowlands are characterized by plain-like areas. They were affected by the Pleistocene Glaciation and the subsequent Champlain Sea which was fed by the retreating glaciers. They are covered by surficial deposits, consisting mostly of pulverized rock and other fine geological material, and features associated with glaciers.

The surficial geology observed at the subject property consists of mottled and laminated reddish-brown to blueish grey silty-clay and clay sediments deposited by the Champlain Sea that submerged the Lowlands following the Pleistocene Glaciation. The mass of this continental ice sheet had depressed the rock beneath it below the sea level. Upon the retreat of the ice sheet, the ocean submerged the Saint-Lawrence and Ottawa River valleys.

The sediments within the upper 2.4 m below the ground surface are composed of reddish-brown silty clay and occasionally of fine sand lenses. At greater depth, the sediments are very uniform and consist of blueish-grey clay with trace amounts of silt. The lower blueish-grey clay sediments are very uniform in nature with a natural water content which increases gradually with depth until exceeding the liquid limit.

Water well records were found for two properties within Cumberland Township, Lot A- Concession 9 (W. Eggert and L. Gratton). Both entries indicate that blue clay was found to a depth of 27 m below grade with underlying gravel found ranging between 28.6 to 30.5 m below grade. Other well record data provided indication that the bedrock, comprising the Ottawa Formation limestone (with some shaly partings and some sandstone in the basal part), is located at depths ranging between 28 to 35 m below grade in the vicinity of the subject property.

It appears that the site was stripped of its surface topsoil at the time of the initial gravel parking lot site redevelopment occurring in the late 1980s. It is inferred that the stripped topsoil materials remain on site at the northeast corner of the property in the existing vegetated topsoil fill stockpile.

Arcadis staff reviewed the City of Ottawa Official Plan for the Watershed and Sub-watershed Plans and the Environmental Constraints maps (Official Plan, Schedule K, October 2006). The area to the north of the subject property alongside Cardinal and Taylor creeks are surrounded by areas marked as ‘unstable

slopes' in relation to tributary features. The subject property is located within the 'Greater Cardinal Creek' watershed as identified on Annex 2 (Official Plan; Oct. 2006) - Rural Watershed and Sub-watershed map.

4.3.3 Fill Material

The records review revealed that gravel fill of unknown quality had been introduced to the site to serve as bedding for bus parking. A small gravel stockpile was observed near the entrance gate at the time of initial Arcadis Phase One ESA site reconnaissance. The unknown quality of the gravel fill is a PCA and should be investigated.

The large topsoil pile at the northeast quadrant of the site is not considered to be from an imported soil source. This large knoll was formed from pilling the topsoil extracted from the parking lot when said area was being graded and gravel surfaced. Nonetheless, the quality of the topsoil stockpile should be investigated.

Fill material was imported by Strata in 2015 following removal of the two diesel USTs and the one underground waste oil tank. Arcadis reviewed the laboratory testing of the imported fill and observed that it met O.Reg. 153/04 Table 3 and Table 6 criteria for metals/ VOCs/ BTEX and PHCs

4.3.4 Water Bodies and Area of Natural Significance/Species at Risk

A small ditch is located within the boundary of the Phase One ESA study area, and is suspected to permit the drainage of the subject land. The ditch appears to lead towards Trim Road and any storm water is suspected to flow northward alongside Trim Road, eventually emptying into Cardinal Creek and the Ottawa River.

A search was undertaken to determine the presence of any local Areas of Natural and Scientific Interest (ANSI) or the occurrence of any sensitive or endangered Species at Risk. No specific areas of natural significance were portrayed on City of Ottawa Official Plan mapping within 250 m of the subject property.

A review of the locally endangered or sensitive species was undertaken by Arcadis. A listing of such potential species is provided in **Appendix K** for reference. None of the specific species listed were observed or expected to be present within the subject Phase One ESA study area.

4.3.5 Well Records

A total of two well records were returned for the Phase One ESA study area. Detailed information is provided in the Ecolog ERIS report provided in **Appendix G**.

The Ecolog ERIS reporting provides detailed information on water well location, stratigraphy of overburden, depth to bedrock and depth to water table.

4.3.6 Site Operating Records

No site operating records were available for review at the subject property as it is currently a vacant bus garage facility. A review of former site operations was conducted during the interview process conducted by Arcadis staff.

5 INTERVIEWS

As part of the Phase One ESA, interviews are conducted with persons knowledgeable about the subject properties. The interview process follows a standard procedure and is designed to obtain the information required. As indicated in the Regulation, a knowledgeable person is to be interviewed by a QP or persons working under the direction of the QP. During the interview process, questions concerning the present use of the property and past use, if known, are to be submitted. The following table provides information on the interviews and provides a determination of the validity of the information gathered during the process.

Table 7: Summary of Interviews

Property Address	1830 Trim Road, Ottawa (Orleans)
Date of Interview	2 February 2016
Location of Interview	At the 1830 Trim Road facility
Method of Interview	Face to Face
Name of Interviewee	Mike Casey
Relationship of Interviewee of Property	Property Manager
Property Use	Vacant bus garage facility
APECs Identified by Interviewer	Several- including the presence of former bus maintenance activities, the former presence of aboveground storage tanks and USTs, the storage/handling or disposal of solvent agents/de-icing or antifreeze agents/salt. The former facility had scrap metal disposal bins. The former building operated with an oil/water separator, a wastewater holding tank and a septic tank.
Validity of Information Provided by Interviewee	Reliable
Previous Site Use (including source of information)	Agricultural land
Interview Summary	Environmental concerns on site were reflected in some of Mr. Casey's answers. PCAs are as follows: – Use, storage, handling or disposal of solvent agent related to a 60L manual parts wash station formerly found next to the maintenance pit – Use, storage, handling or disposal of windshield washer, de-icing and antifreeze agent – Use, storage, handling or disposal of salt – Maintenance or repair of motor vehicles (school buses) – Scrap metal bins pick up – Use of a septic tank – Importation of gravel material of unknown quality

	– Oil/water separator located in the shop – Former diesel and waste oil USTs on site – Two new drums of vehicle coolant (either steel drums or plastic drums) were kept in the garage at any given time. An old steel drum was used to store used coolant until 2011/2012. In addition, Safety Kleen supplied the Trim Road site of a round yellow plastic container to store about 1000 litres of used coolant material subsequent to 2011/2012.

Mr. Casey advised that the property was used as a bus depot and repair facility from its development in 1990 through to July 2012, when garage maintenance operations ceased and equipment removal began. The lot was then used solely for school bus parking up to June 2015. The property has remained vacant from June 2015 to present.

A copy of the Phase One ESA Interview form is found in **Appendix K**.

Any tenants within the recent residential developments would not be expected to have historical knowledge of the subject property.

6 SITE RECONNAISSANCE

A site reconnaissance was conducted as a part of the site visit. This reconnaissance follows a checklist that identifies specific information to be gathered and recorded. This information is then used to determine the potential for contamination on the subject and surrounding properties. At the time of the Phase One ESA site reconnaissance, snow cover prevented a thorough review of ground surface conditions.

6.1 General Requirements

After reviewing available records, Arcadis completed a site reconnaissance on February 2, 2016. The manager of the Phase One property granted Arcadis access to the entire property. The site reconnaissance was conducted by Ms. Alisha Williamson and Mr. Elliot Holden of Arcadis from approximately 1:30pm to 4:15pm. At the time of Arcadis' site reconnaissance, the weather was sunny and clear with temperatures ranging from approximately -5 to -12 degrees Celsius.

At the time of the site reconnaissance, the former Phase One property bus maintenance activities were not in operation. Arcadis conducted observations of the entire Phase One study area by walking and/or driving through the entirety of the area. Photographs of the Phase One property showing site features are presented in **Appendix A.**

Specific observations are also listed on the Phase One ESA Site Inspection Checklist form found in **Appendix L**. These observations address conditions at the site that may provide indications for the potential for environmental impact on the soil and groundwater.

6.1.1 Specific Observations at the Phase One Property

6.1.1.1 General Description of Property

At the time of the site reconnaissance, the Phase One property was owned by FirstGroup America Inc. The Phase One property is approximately 4 hectares in size and is developed with one mixed-level multi use building, built by 1990 (the site building). The site building comprises a wash bay, a large maintenance garage and office space. Much of the Phase One property is covered with a gravel parking lot and low-lying vegetation on the east side of the property.

The ground surface is relatively flat and the grade generally slopes towards the north. Access to the property is gained from Trim Road to the north through a locked chain link gate. A chain link fence encloses all sides of the site, which restricts public access to the property.

6.1.1.2 Underground Utilities

Underground utilities are known to be present at the Phase One property. However, the property is not serviced by municipal water and there was one potable water well on site (since decommissioned). The main water line entered the site building from the southeast corner, fed from a former drilled well. Arcadis was advised that tenants always used bottled water for drinking purposes.

Propane was previously supplied to the site building for heating purposes from the main line located off the northwest corner of the building to the centre of the former parking lot, where a large propane tank once sat.

Power is supplied to the site building through the hydro transformer located on the subject property at the southeast corner of the site building. Underground power cables run from the transformer to the southeast corner of the site building. Arcadis received a letter from Hydro One on March 20, 2017 stating that the transformer box at 1830 Trim Road does not contain PCBs in the mineral insulation oil. The letter from Hydro One is presented in **Appendix J.**

The Bell telecommunications wire is also located in the same underground trench. A HVAC system is present on the building rooftop.

The former waste oil and diesel USTs had been removed from the property in 2015. However, there is remaining one UST holding tank located on the north side of the site building which collects floor runoff from the garage and wash bay of the site building.

A septic holding tank is reported to be present on the east side of the office/garage building.

No other evidence of existing USTs was noted on the subject property.

6.1.1.3 Site Buildings/Structures

The Phase One property is currently occupied by the site building, which is a single level building comprising a wash bay, maintenance garage, and offices. The site building footprint is approximately 1,700 m^2 and was constructed by 1990.

Heating and cooling systems for the office portion of the building are separate. A propane tank provided fuel for heating on-site, but has since been removed and the site building is no longer heated. A forced-air rooftop unit cools the office portion of the site building. The unit is no longer in use as the building is vacant.

Minor staining was observed on the floors and ceilings of the site building and the drains throughout the building appeared to be in good condition. Minor quantities of mould were observed within the building. No unidentified substances were observed.

6.1.1.4 Water Wells

The property is serviced with one potable water well. Although not located during the Phase One ESA, it was located and examined during the follow-up Phase Two ESA investigation in May 2016. The well was 8 inches (20 cm) in diameter, and approximately 9 m deep, based on the depth to which the water level probe could be lowered. The pump was still located in the well. The observations did not appear to match either of the existing well records (described in Section 4.2.4).

At the time of the Phase One ESA site reconnaissance, no ground water monitoring wells were observed at the Phase One property. The majority of the neighbouring residential uses are provided with municipal water supply. However, there are at least four properties on private water wells within 250 m of the subject land. An overview of potable wells in the vicinity of the 1830 Trim Road is provided in **Table 10** included at the rear of the report.

6.1.1.5 Ground Surface Conditions

The ground surface was noted to be primarily gravel surrounding the site building with long grass and partially landscaped boundaries on the edges of the parking lot area. The condition of the parking lot could not be judged as it was snow- and ice-covered at the time of the site reconnaissance.

6.1.1.6 Stressed Vegetation, Fill Materials

The property is currently a commercial property, largely covered by a building, gravel surfaces, and grass covered land. The grass covered area offers ecological habitat and appeared to be in a healthy state. The grassy areas may be intermittently wet during periods of precipitation. Aquatic species were not observed. No evidence of stressed vegetation nor significant staining was noted and no unidentified substances were observed during the site reconnaissance.

There were no exposed fill areas observed during the site reconnaissance other than one area at the northeast corner of the property which is much higher in elevation compared to the surrounding area and a small gravel stockpile near the entrance gate. This large topsoil fill mound was identified as a PCA and APEC. The small gravel stockpile was also recommended for sampling.

6.1.1.7 Observations on Off-Site Properties within Phase One ESA study area

The Phase One property is bordered by residential and community land use to the east, north, west and south, with a utility corridor also bordering the west part of the property. A description of properties surrounding the subject property is provided below:

- Trim Road borders the Phase One property to the north.
- North of Trim Road (from east to west) is residential housing.
- Winsome Terrace and Luesby Crescent are located south of the subject property, all residential.
- Destiny Private and Brasseur Crescent are located to the east, all residential.
- Demeter Street and Ludlowe Street are located west of the site.
- An Ottawa Hydro utility corridor borders the Phase One Property to the northwest.+

6.2 Enhanced Investigation Property

The Phase One property is considered an Enhanced Investigation Property pursuant to O.Reg. 153/04 as it was formerly used for industrial/commercial purposes (former school bus maintenance garage). The property was used as a bus depot and repair facility from its development in 1990 through to July 2012, when garage maintenance operations ceased and equipment removal began. The lot was then used solely for school bus parking up to June 2015. The property has remained vacant from June 2015 to present.

Office and retail spaces are located all along the eastern portion of the site building and along the northeastern and southeastern corners of the building. The middle of the building serves as the maintenance garage with a pit where repairs and maintenance were performed on buses. A small portion of the site building located on the western side is a wash bay, previously used to automatically wash the

exteriors of the buses stored on site. These locations, along with the bay doors and exit and entry points to the building are shown on **Figure 2**.

There are ten large bay doors around the site building, five located on the south side and five located on the north side of the building. The large bay doors were previously used to drive each bus through the large maintenance garage for repair/maintenance.

There is an oil/water separator at the property. It is located on the west side of the pit area in the maintenance shop. It is no longer in use and all waste flows into the underground holding tank located on the north side of the building. The pit area contains no hydraulics or hydraulic fluid or any other lubricants/ oils. A small parts washing station was installed next to the Maintenance pit- consisting of a drum with wash sink overtop; serviced by Safety Kleen.

Detailed descriptions on the maintenance pit other sump pits is found below:

Maintenance Pit

The Maintenance Pit measures approximately 23m in length with a width of 1m and a depth of 1.4 m below grade. The pit is found on the west end of the garage and was formerly used to inspect the underside of the school buses and complete routine oil changes & lubrication and other maintenance. Used oil was directed to the inlet pipe within the north end of the pit for gravity drainage into the exterior waste oil underground tank (since removed in 2015). The south side of the pit contains an alcove where some small quantities of raw lubricants and motor oil were kept. The alcove inside the pit currently contains one 60 L drum of Shell Spirax 75W-90 gear oil.

The floor of the maintenance pit was found to be dry upon inspection with very little hydrocarbon staining observed.

Given the fact that the site has a shallow groundwater table (at approximately 0.5m below grade), if there were any cracks in the Maintenance Pit walls or bottom, water would start to infiltrate into this structure. Based on the site Phase I ESA and interviews, it is known that no water had historically or currently entered this Maintenance Pit. As such, there is no opportunity for any PHC products previously used in the Pit to have escaped and impacted the subsurface beneath the garage.

South Sump Pit

This structure contains a sump pump for the removal of water which could potentially infiltrate into the Maintenance Pit, based on the shallow water table found at this site. Based on the site Phase I ESA and interviews, it is known that no water had historically or currently entered the Maintenance Pit and that the South Sump Pit was never activated to remove infiltrating groundwater.

This sump pit measures approximately 1.6 m x 2.0 m and a depth of 2 m below grade. Architectural drawings for this Sump Pit indicate that it was furnished with a Hydromatic SP-40 4/10 HP with auto controller.

This South Sump Pit remained dry during inspections occurring in 2017 and a bare clean concrete bottom was observed at the base of the pit. On January 18, 2019, approximately 39 cm thickness of water was observed at the bottom of this pit. No staining and no environmental concerns were observed related to the South Sump Pit.

6 x interior garage Floor Drains

Each garage floor drain measures approximately 0.3 x 0.55 m in size with an invert depth of 0.9 m below grade. Typically, 0.45m depth of water was present inside each floor drain following inspections occurring on 18 January 2019. The floor drains are all interconnected and lead northward to the underground Floor Drain Holding Tank, after first progressing through the Floor Drain Sand/Oil interceptor.

North Sump Pit

This structure measures approximately 0.75 x 0.75 cm in dimension and extends to 2.4 m bgs depth. Architectural drawings for the north sump pit indicate that it contains a Hydromatic SV-25 30 gpm sump pump (1/4 HP) complete with AutoControl. On 18 January 2019, the depth to water in the sump pit was approximately 2 mbgs even though the power had been shut off for the garage. This sump pit discharges into the Shop Floor Drains system via the Floor Drains Sand/Oil Interceptor sump. The un-perforated cover plate indicates that this sump is not meant to accept general garage floor washings.

An inlet pipe appeared to be present on the north side of the sump pit wall at a depth of approximately 0.8 m bgs. No staining and no environmental concerns were observed related to the North Sump Pit.

Floor Drains Sand/Oil Interceptor

The Sand/Oil interceptor unit for the Garage Floor Drains is configured as one sump pit measuring 80 x 60 cm in size and a 0.8m approximate bottom depth. Floor drain water contents were reviewed on 18 January 2019 and found to be clear water without any sheen or staining. This interceptor unit flows into the buried Shop Drains Holding Tank which is a buried fibreglass tank of 2,000 L capacity. No records were found on the frequency of Shop Drains Holding Tank pump out.

Bus Wash Sand/Oil Interceptor

The Sand/Oil interceptor for the Bus Wash measures is configured as two separate sump pits. The northmost pit measures 105 x 105cm in size with an approximate depth of 2m bgs. The southmost pit had the same measurements. The un-perforated cover plate indicates that this sump is not meant to accept general garage floor washings.

This interceptor was used as a primary separation for the removal of grit following from the bus washing procedures. This interceptor unit would likely handle large quantities of soapy road grit-laden wash water. This interceptor unit empties into the exterior 45,000 L underground septic holding tank.

Bus Wash Floor Drain

The elongated floor drain in the Bus Wash measures approximately 15m in length with a width of 0.3m and a depth varying between 0.24 to 0.16 m bgs. This drain was used as a primary collection point for used wash water in the Bus Wash. We expect that bus wash residues entering this floor drain would include large quantities of water and detergents with smaller quantities of road salt, grit and grime with traces of lubricating oil/grease. No staining and no environmental concerns were observed related to this Bus Wash Floor Drain. This floor drain was connected to the exterior 45,000 L underground septic holding tank after first passing through the bus wash sand/oil interceptor unit

There was no evidence of spills within the warehouse at the time of the site reconnaissance and no spills were reported to have occurred, according to the interviewee, Mr. Casey.

6.3 Written Description of Investigation

The investigations undertaken to address the requirements of Sections 13 and 14 of O.Reg. 153/04 included a review of available documents, interviews and site reconnaissance as described above. At the time of the site reconnaissance there was one on-site building (the site building). Efforts were taken to investigate the nature of the historical operations through a review of available historical documentation including former environmental reports and aerial photographs.

The Phase One property was inspected to identify the presence of underground utilities (e.g. maintenance covers, pedestals, grates, asphalt patches, etc.). Public utilities located on-site consisted of an underground powerline and telecommunications cable including on the south-east corner of the site building. Private utilities such as water and a sewage tank are located on the site. Propane utilities have been removed from the site along with the existing tank, which was previously used for heating the building.

The investigations identified eight (8) PCAs for the subject property (all of which were present within the Phase One study area). These PCAs were evaluated and generated thirteen (13) on-site APECs, as outlined in Section 7.2 and 7.3.

A Phase Two ESA investigation is warranted to confirm the presence of contaminants at the Phase One property.

6.3.1 Designated Substances

No suspect friable or non-friable asbestos-containing materials were noted associated with the subject property following the site reconnaissance. All insulation observed was fibre-glass. The building was made of mostly concrete block walls and floors. The office area of the garage did contain some drywall walls and suspended acoustical tiles. As the subject property was constructed between 1988 -1990, it is unlikely that these building materials would contain asbestos.

During the building survey several locations were identified as having mould impact, specifically, at an air diffuser on suspended ceiling tile surrounding the vent, as well as behind a baseboard heater in the office area. A more intrusive search behind ceiling panels and drywall walls may reveal more mould impact than was identified during the visual survey.

Control of exposure to mould is required under Section 25(2)(h) of the *Ontario Occupational Health and Safety Act*, which states that employers shall take every precaution reasonable in the circumstances for the protection of workers. Recommended work practices are outlined in the following documents:

- Information Bulletin - *Abatement and Mould Remediation in Construction.* Ontario Ministry of Labour. January 2000;
- *Mould Guidelines for the Canadian Construction Industry.* Standard Construction Document CCA 82 2004. Canadian Construction Association; and

- *EACO Mould Abatement Guidelines, Edition 2- 2010*- Environmental Abatement Council of Ontario.

Lead containing paint may be present on building wall surfaces, though this cannot be confirmed without a sampling program.

Potential mercury-based products would include thermostats or large numbers of florescent light tubes as well as paints which can contain mercury traces. Mercury may also be present in switchgear. During the course of the site inspection, one mercury-containing thermostat was observed in the garage area.

No large transformers were noted on the subject property which could possibly contain PCBs although all fluorescent lamp ballasts should be checked to verify the potential for PCB content.

Silica would be expected to be a constituent of all concrete products observed at the subject property.

A full Designated Substances Survey (DSS) should be completed in advance of any building demolition or renovation program.

6.3.2 Radon

Radon testing has not been conducted at the subject property. Radon monitoring is recommended to be completed according to Health Canada protocols where future occupant health concerns may be an issue.

6.3.3 Adjacent land Use

The adjacent properties currently consisted of residential land uses to the west, south and east. A Hydro Ottawa transmission corridor is found to the west of the subject property.

7 REVIEW AND EVALUATION OF INFORMATION

7.1 Current and Past Uses

The property is current a vacant unoccupied lot which was formerly operated by a commercial land use (school bus maintenance garage and parking facility). The site was first developed in the late 1980s for such uses. The land was used for agricultural purposes in prior years. The site is proposed to be redeveloped for residential use but is currently a commercial/industrial land use.

For a chronological history of the Phase One ESA property dating back to earliest records, reference should be made to the attached Summary Table (**Table 8**): Current and Past Uses of the Phase One Property, found at the rear of the report.

Reference should also be made to Summary Table (**Table 9**) at the rear of the report, which provides a summary of the APECs identified.

7.2 Potentially Contaminating Activities

PCAs identified at the subject property include:

PCA 1 - Operation of a bus maintenance garage and wash bay; including (a) the use of lubricants, motor oils, grease and gear oils, (b) production of waste oils and presence of an oil-water separator, (c) the use of antifreeze and bus windshield wash fluid, (d) the use of solvents for parts de-greasing, (e) the use of maintenance tools which may generate metal grindings/ welding fumes, (f) replacement of vehicle tires and (g) the presence of solid waste bins and scrap metal dumpsters; (O.Reg.153/04; Part VI; Table 2 PCA items: 4 (antifreeze), 52 (vehicle maintenance));

PCA 2 - Bus maintenance garage services, including (a) septic field and tank, (b) underground waste oil tank and (c) shop drains sanitary underground holding tank. (O.Reg.153/04; Part VI; Table 2 PCA item: 58 (Waste Disposal/Management));

PCA 3 - Placement of gravel fill of unknown origin across the site for purposes of the bus parking area; (O.Reg.153/04; Part VI; Table 2 PCA item: 30);

PCA 4 - Maintenance of the gravel parking lot, including use of salt; (O.Reg.153/04; Part VI; Table 2 PCA item: 48);

PCA 5 - Presence of the stockpile of excess topsoil fill in the northeast corner of the property (O.Reg.153/04; Part VI; Table 2 PCA item: 48);

PCA 6 - Former diesel USTs present in yard to the north of the maintenance garage building;

PCA 7 - Potential for pesticide use with former agricultural operations; and (O.Reg.153/04; Part VI; Table 2 PCA item: 40); and

PCA 8 - Presence of the small granular materials stockpile (excess fill) located on the edge of the graveled area, near the gate; (O.Reg.153/04; Part VI; Table 2 PCA item:30 (importation of fill of unknown quality)).

PCA 9 - Presence of a ground transformer (circa 1990) located at the southeast corner of the site building (O.Reg.153/04; Part VI; Table 2 PCA item: 55).

Parameters of concern associated with a school bus maintenance garage and servicing facility would include inorganics/ heavy metals, solvents or volatile organic compounds (VOCs), and petroleum hydrocarbon compounds (PHCs). Polycyclic aromatic hydrocarbons (PAHs) were also considered to be a potential contaminant of concern.

Historical uses on the 1830 Trim Road property were known to be agricultural prior to the start of the school bus maintenance garage. There is the possibility of pesticide use with former agricultural activities.

7.3 Areas of Potential Environmental Concern

The PCAs were found to be associated with on-site activities only. No off-site concerns were identified, other than the presence of the Hydro Ottawa transmission towers present just beyond the subject property fence lines.

No excess debris or solid wastes were noted at the subject property. However, due to the winter conditions present at the time of site reconnaissance, no thorough review for ground staining or debris was possible due to snow accumulations.

A listing of APECs and potential contaminants at each of the APECs listed above is found in a Summary Table (**Table 9**): Areas of Potential Environmental Concern, found at the rear of the report.

7.3.1 Assessment of APEC

The findings of the Phase One ESA report completed by Arcadis have identified several past or present uses on, in, or under the Phase One property, and PCAs on, in, or under the Phase One property or within the Phase One study area. These result in APECs on the Phase One property where one or more contaminants may be present.

PCAs which were determined to be of negligible concern were not classified as APECs. The PCA-8: Hydro Ottawa electrical transmission corridor, was not considered as an APEC as there were no transmission towers installed within the subject property itself and the fact that the likely metals contaminants of concern were to be evaluated based on environmental testing conducted for the evaluation of APEC 7 (parking lot gravel fill). No potentially oil-filled barrel or box transformers were observed within the Hydro corridor. The APECs identified in the Phase One ESA include:

APEC 1 - The bus maintenance garage and wash bay area from multiple potential sources including: the use of lubricants, motor oils, grease and gear oils; the production of waste oils; the use of antifreeze and bus windshield wash fluid; the use of maintenance tools which may generate metal grindings/welding fumes; and replacement of vehicle tires;

APEC 2 - The bus maintenance garage and wash bay area from multiple potential sources including: the use of solvents for parts de-greasing at the one manual parts wash station (formerly located next to maintenance pit);

APEC 3 - The bus maintenance garage exterior area sources including: the presence of solid waste bins and scrap metal dumpsters;

APEC 4 - The exterior bus service areas and parking lot due to the presence of a septic tank (sanitary);

APEC 5 - The exterior bus service areas and parking lot due to the presence of a former underground waste oil tank;

APEC 6 - The exterior bus service areas and parking lot due to the presence of an existing shop drain underground holding tank;

APEC 7 - The bus parking area due to the placement of gravel fill of unknown origin across the Site;

APEC 8 - The gravel parking lot due to parking lot maintenance, potentially including use and storage of road salt;

APEC 9 - The stockpile of excess topsoil fill in the northeast corner of property;

APEC 10 - The stockpile of excess granular fill located on the edge of the graveled area, near the gate;

APEC 11 - The area of the former diesel underground storage tanks formerly present in the yard, north of the maintenance garage building;

APEC 12 - The parking lot and grassed areas throughout the property, specifically from potential use of pesticides during historical agricultural operations.

APEC 13 - Presence of a ground transformer (dry-type) located at the southeast corner of the site building.

No other current or former activities on lands within the Phase One ESA study area were assessed as having the potential for affecting the environmental quality of the Phase One ESA property. The rationale for the APECs is listed in Table 9, attached to the rear of the report. PCAs of negligible concern that were not likely to have resulted in APECs on the site were therefore not included in the summary table.

7.4 Phase One Conceptual Site Model

A CSM is attached as **Figure 4** which portrays the site boundaries and locations of PCAs as well as APECs. This figure highlights the potential for loss of solvents and petroleum hydrocarbons during the servicing of school bus vehicles in addition to evaluation of the potential for contamination derived from historical on-site uses.

As the current property is unoccupied, only historic activities within the subject property and/or those within the Phase One study area would likely pose an environmental risk to the Phase One property.

7.4.1 Contaminants of Potential Concern

Contaminants of potential concern present or potentially present on the site include the following:

i) PAHs associated with by-products of combustion (school bus uses) or presence of diesel fuel;
ii) PHCs (F1 to F4 fraction) and benzene, toluene, ethylbenzene, and xylenes (BTEX) as associated with the former use of oils, greases, fuels and lubricants;

iii) VOCs, particularly the BTEX compounds associated with potential use of fuels; and with respect to thinners/ degreasers or other solvent uses;
iv) Glycol- as associated with antifreeze fluids kept on site;
v) Inorganics/metals as associated with metal working/ welding/ grinding, salt storage and use or imported gravel fill materials; and,
vi) Pesticides, as potentially related for former agricultural uses.
vii) PCB- potentially associated with the one green box transformer.

All contaminants of concern were expected to potentially be present in both soil and groundwater; aside from PCBs which were inferred to be a shallow soil contaminant adjacent to the transformer.

No human receptors would be at risk to potential environmental contaminants under current site uses since the site is vacant and unoccupied. However, redevelopment of the property is currently under consideration and it is expected that such uses would potentially involve many different age groups of people, with the toddler likely being the most sensitive potential human receptor.

Based on the site location, potential ecological receptors may include vegetation which is present around the site periphery. The vegetation at the site is limited to grasses and isolated trees. It is also expected that there are soil invertebrates at the site; as represented by earthworms. It is reasonable to expect that some urban wildlife and migrating birds may also have access the site.

Due to the size of the site, it is expected that other mammals, such as predatory mammals (including transitory crossings of domestic pets), would not receive a significant amount of exposure from this site. Due to the limited size of the site, the migrating and transitory ecological receptors, although potentially present, would not be expected to receive a significant exposure from the on-site environment.

Under current conditions, all pathways of exposure to potential environmental contaminants should be considered for both human health and ecological receptors until further characterized following the completion of a Phase Two ESA.

7.4.2 Utilities

It has been determined that utilities typically associated with municipal services are not present at the subject property. The site building was serviced with its own drilled drinking water well (since decommissioned according to O.Reg. 903 requirements), own on-site private septic waste system and holding tanks for sanitary services and drains as well as an underground tank for waste oils.

Neighbouring residential uses are supplied with municipal water and sewer in addition to hydro and natural gas utilities.

The site building was formerly serviced with propane for heating purposes via a large aboveground storage supply tank. Hydro electric service and telephone wiring connect via overhead lines to the building. There are no storm sewer catch basins present within the parking area and storm water is permitted to infiltrate into the gravel surfacing or sheet runoff to nearby ditch structures or swales.

The approximate location of underground utilities (septic tank and holding tank) is found on the Site Plan in Appendix A. Due to the absence of underground services leading onto the site, there was not expected

to be the potential for conduits for migration of contaminants in soil and groundwater due to bedding surrounding underground utilities.

7.4.3 Validity of the Phase One Conceptual Model

A Phase One ESA was completed for the property and available information was collected and reviewed. The sources of this information included historical records (aerial photographs, fire insurance plans, land registry documents and historic environmental reports), accessing numerous public and private databases and interviews with persons knowledgeable of the property. The presence of contaminants associated with historical operations on the Phase One ESA property has been documented through completion of one previous soil and groundwater investigation program directed at the former diesel UST and waste oil UST infrastructure. All of the above information was reviewed and compiled in this report and it is felt that the model is valid.

Uncertainties exist with respect to the completeness or accuracy of the Phase One ESA in that the property representative interviewed may not have been entirely knowledgeable regarding the absence of spills or other discharges from the site operations.

The sources of information contained in this Phase One ESA have been compiled from various reference materials, including information provided by private, federal and provincial government databases. Although Arcadis has endeavoured to present accurate information, Arcadis cannot and does not provide warranty that the information gathered from outside sources is either fully complete or accurate.

8 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the historical research, interviews, site reconnaissance and the property inspection undertaken by Arcadis, a Phase Two ESA has been recommended to determine impacts to the subject site surface soils, sub-surface soils, and groundwater from the following contaminants of concern: PHCs, BTEX, PAHs, VOCs, organochlorine pesticides, and heavy metals, as appropriate to the identified APECs.

Under current conditions, all pathways of exposure to potential environmental contaminants should be considered for both human health and ecological receptors until further characterized following the completion of a Phase Two ESA.

Radon testing was not conducted at the subject property. Radon monitoring is recommended to be completed according to Health Canada protocols where future occupant health concerns may be an issue. Mould may also be an issue if the building is to return to full occupancy.

9 REFERENCES

Canadian Standards Association; Standard for Phase I Environmental Site Assessments- CSA Standard Z768-01 (2006)

Geological Survey of Canada map 1425A – Surficial Geology, Ottawa

Geological Survey of Canada map 1508A – Bedrock Geology, Ottawa

Lajoie, Paul G., Clay flows and the formation of bluffs and low terraces on the Ottawa and St-Lawrence ancient and actual river courses, First Edition, 25 March 2001.

Landry, Bruno et Mercier, Michel, Notions de Geologie –, 3rd edition, 1992.

Ontario Regulation 153/04 (as amended), Records of Site Condition- Part XV.1 of the Act

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act- MOECC, 27 July 2009 (as amended 15 April 2011)

Strata Environmental -*Tank Excavation Monitoring, First Student Canada - # 31430, 1830 Trim Road Orleans, ON, K4A 3P8,* Strata Project 1528465, dated 29 October 2015, prepared by Strata Environmental for FirstGroup America Inc.

10 APPENDICES

The appendices can be found at the rear of this report.

TABLES

"TABLE OF CURRENT AND PAST USES OF THE PHASE ONE PROPERTY"

(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)

Year	Name of Owner	Description of Property Use	Property Use[1]	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
1830 Trim Rd. Ottawa				
1842-1987	Various owners	Agricultural	Agricultural	Air photography review from present day back to 1945 determined that prior to 1988 the subject property and surrounding properties were used for agricultural purposes. No other property uses were indicated through review of Fire Insurance Plans, Ecolog ERIS database searches, or street directory searches.
1987-1988	729080 Ontario Limited	Vacant Agricultural and real estate purposes	Agricultural	For a one year period the subject property was sold to 729080 Ontario Limited, likely a company bought from previous owners for the purposes of selling the property. No indications of any commercial property use, or construction activities exist over the one year period.
1988-2006	Laidlaw Transit Ltd.	Bus Garage	Commercial	1830 Trim Road was bought in 1988 by Laidlaw Transit Ltd. and converted into a bus depot and bus garage. Land titles confirms the date of purchase, and air photos reviewed from 1990 indicate the first visible evidence of the construction of the bus garage and parking lot; in the 1990 and 2001 air photos, the subject site footprint is consistent with current site conditions. A fill stockpile was observed during review of 2001 photography; this fill pile exists on the site at present day as observed during the Phase One site reconnaissance. Over the years of the bus garage property use, within the Ontario Waste Generators database the subject site is described as performing School Bus Operations, generating petroleum distillates, light fuels, oil skimmings and sludges, waste oil lubricants, waste crankcase oil lubricants, and aliphatic solvents. The bus garage also had over these years 45000 L USTs installed in 1989, as well as a 4,550 used oil UST, 2 motor oil ASTs, 1 x 1,130 L Transmission fluid AST, 1 Windshield Washer Fluid AST, and multiple other drums of antifreeze, grease and gear oils.
2006- present	Laidlaw (First Canada ULC)	Bus Garage	Commercial	The subject property appears similar to the above, with the same wastes generated according to the Ontario Waste Generator Database. The aerial photograph footprint is similar to the 1988-2006 period, with a site garage, parking lot, bus parking, and the fill pile all visible. According to review of TSSA documentation and a report provided to us by the TSSA and First Group, the 2 x 25,500 L diesel USTs and waste oil UST

NOTES:

1 - for each owner, specify one of the following types of property use (as defined in O.Reg. 153/04) that applies

Agriculture or other use
Commercial use
Community use
Industrial use
Institutional use
Parkland use
Residential use

2 - when submitting a record of site condition for filing, a copy of this table must be attached

"TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN"

(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Specific Location of PCA (on-site or off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC 1- Subsurface: 1830 Trim Rd- garage: Use of lubricants, motor oils, grease and gear oils	Inside Garage; soil and groundwater underlying site & subsurface fill: Ajacent to and beneath site building	PCA # 52, #4: Storage, maintenance, fueling, and repair of equipment, vehicles, and material used to maintain transportation systems and use of antifreeze. Including: a) Use of lubricants, motor oils, grease, and gear oils; b) Production of waste oils and presence of an oil-water separator; c) Use of antifreeze and bus windshield water fluids; d) Use of maintenance tools which may generate welding fumes and metal grindings; e) Replacement of vehicle tires	on-site	PHCs, BTEX, VOCs, metals and inorganics, PAH, Glycol	Soil / Groundwater
APEC 2- Subsurface: 1830 Trim Rd. garage- production of waste oils	Inside Bus maintenance garage services; Parts de-greasing next to maintenance pit	Use of solvents for parts degreasing; PCA#51: Solvent Manufacturing, Processing and Bulk Storage. Presence of 60L manual parts wash station.	on-site	VOCs, metals	Soil / Groundwater
APEC 3- Subsurface: 1830 Trim Rd.	Outside west end of garage building	PCA #58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners. Solid waste and scrap metal dumpsters.	on-site	Metals	Soil / Groundwater
APEC 4- Subsurface: 1830 Trim Rd.- use of solvents (parts degreasing)	A septic holding Tank	PCA #58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners. Presence of septic holding tank.	on-site	VOCs, PHCs, PAHs, metals	Soil / Groundwater
APEC 5- Subsurface: 1830 Trim Rd.	North side of garage at Former Waste Oil tank	PCA #28: Gasoline and Associated Products Storage in Fixed Tanks. 2,270 L was oil UST removed in 2015.	on-site	VOCs, PHCs	Soil / Groundwater
APEC 6- Subsurface: 1830 Trim Rd.	North side of garage at shop drains holding tank	PCA #58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners. Presence of holding tank for shop drain lines.	on-site	VOCs, PHCs, metals	Soil / Groundwater
APEC 7- Subsurface: 1830 Trim Rd.	Gravel Parking Lot	PCA #30 – Importation of fill of unknown origin. Bus parking area and circulation roadway provided with gravel fill surfacing of unkown origin	on-site	metals, inorganics	Soil / Groundwater
APEC 8- Subsurface: 1830 Trim Rd.	Gravel parking lot area -use of road salt	PCA (no code) - Application of Road Salt, ue of road de-icing salt on gravel parking lot. Two former salt bins.	on-site	Chloride, Natrium, metals, elektrical conductivity, sodium adsorption ratio	Soil / Groundwater
APEC 9- Subsurface: 1830 Trim Rd.- Placement of gravel fill across exterior parking areas	Small stockpile of excess gravel, near entrance gate	PCA #30 – Importation of fill material of unknown quality. Gravel fill pile (removed in 2017).	on-site	PAHs, metals	Soil / Groundwater
APEC 10- Subsurface: 1830 Trim Rd- Placement of gravel fill across exterior parking areas	Large topsoil stockpile, northeast property corner	PCA # (no code)– native topsoil stockpile with elevated cyanide concentrations. Uncharacterized native topsoil stockpile with elevated cyanide concentrations.	on-site	Cyanide	Soil / Groundwater

"TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN"

(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)

APEC 11- Subsurface: 1830 Trim Rd.	Former pump island and 2x diesel USTs	PCA #28 – Gasoline and associated products stored in fixed tanks. 2 x former diesel USTs (removed in 2015).	on-site	VOCs, PAHs, PHCs	Soil / Groundwater
APEC 12- Subsurface: 1830 Trim Rd.	Parking lot and grassed areas within Property Boundary	PCA #40 – Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage, and Large-Scale Application. Potential	on-site	Pesticides	Soil / Groundwater
APEC 13- Surface/Subsurface: 1830 Trim Rd.	presence of an exterior green box Transformer on ground located to east of office bldg.	PCA #55 – Transformer Use	on-site; Soils	PCBs, PHCs	Soil

NOTES:

1 - Area of Potential Environmental Concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assesment, including through,

(a) identification of past or present uses on, in or under the phase one property, and

(b) identification of potentially contaminating activity.

2 - Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occuring or has occurred in a phase one study area

3 - when completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

ABNs	PCBs	Metals	Electrical Conductivity	SAR
CPs	PAHs	As, Sb, Se	Cr (VI)	
1,4-Dioxane	THMs	Na	Hg	
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury	
OCs	BTEX	Cl^-	high pH	
PHCs	Ca, Mg	CN^-	low pH	

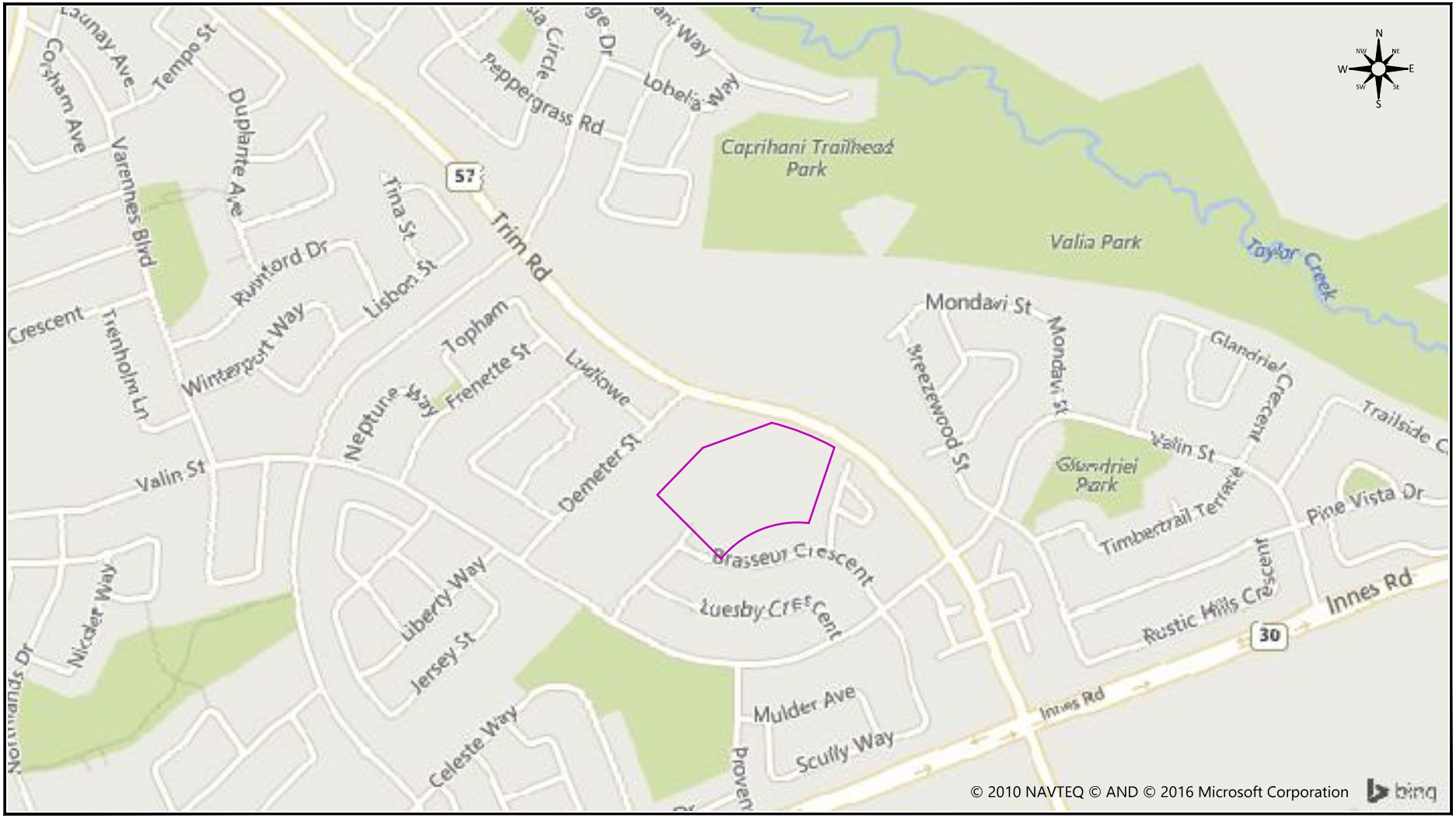
4 - when submitting a record of site condition for filing, a copy of this table must be attached

Table 10
Potable Wells in Vicinity of the 1830 Trim Road, Ottawa, Property
FirstGroup America
1830 Trim Road
Orleans, Ontairo

Ontario Borehole ID	MOE WellRecord #	Inferred Address	Use	Date Completed	Static water level (m)	Water encountered (m)	Pump set depth (m)	Depth to Bedrock (ft)	Depth to Bedrock (m)	Overburden or Bedrock pumping well	Approx. Distance from Site Building (m)
10034766	1512778	-	domestic	1964-02-11	7.6	-	18.3	101	30.7848	overburden	416
10038629	1516731	-	domestic	1978-03-11	4.6	-	9.1	102	31.0896	overburden	491
10034767	1512779	777 Safari	domestic	1965-03-15	9.1	-	15.2	98	29.8704	overburden	500
10034765	1512777	793 Safari	domestic	1958-11-09	3.7	32.3	-	100	30.48	Bedrock	259
10034499	1512510	805 Safari	domestic	1972-02-08	5.5	32.3	9.1	106	32.3088	overburden	280
11172512	1534760	1970 Trim Rd	domestic	2004-06-18	7.7	31.1	24.4	not reached	31.1 m end of drill hole	overburden	477
10034764	1512776	27 Writh St	domestic	1961-03-30	5.5	28.6	7.6	not reached - 94 ft	28.65 m end of drill hole	overburden	286
10037794	1515855	1869 Trim	domestic	1976-08-25	4.6	33.5	9.1	105	32.004	Bedrock	300
10045062	1520493	-	industrial	1989-06-03	9.1	-	36.6	125	38.1	@overburden/ bedrock contact	300
10034763	1523287	-	domestic	1960-12-17	5.8	-	7.6	not reached - 100 ft	30.48 m end of drill hole	overburden	566

NOTE:
a: Water Well locations based from data available on ontariogroundwater.com
b: Aquifer source inferred as gravel/sand seam found just above bedrock depth (at 30m bgs +/-)
- : Information not available

FIGURES



LEGEND

Site Property Line

Title: **KEY PLAN**

ARCADIS

Project: **PHASE I ENVIRONMENTAL SITE ASESSMENT 1830 TRIM ROAD, OTTAWA, ONTARIO**

Date: **OCTOBER 2017**

Client: **FirstGroup**

Metres: 150 0 150 300

1:10000

FIGURE 1

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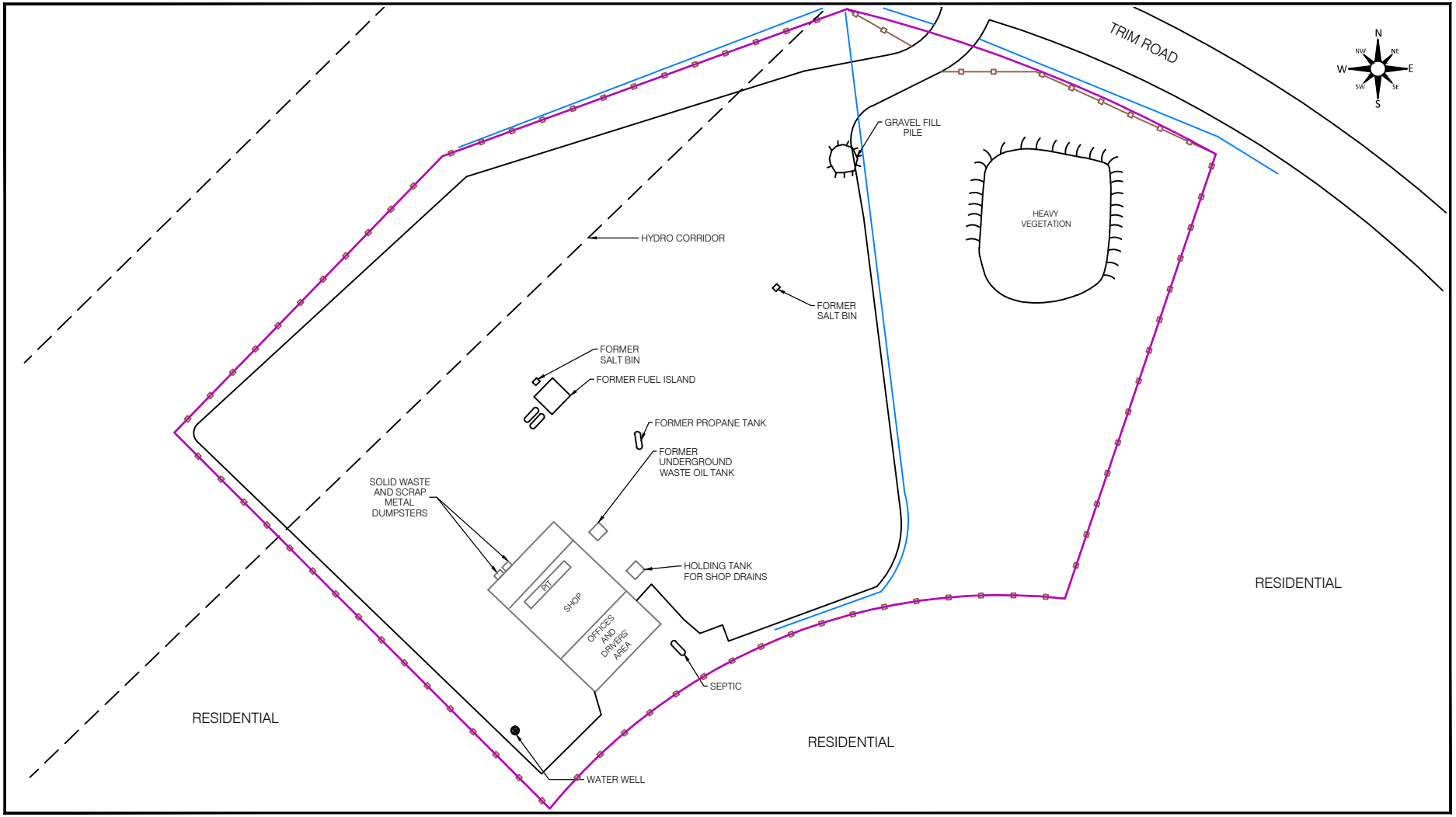

LEGEND

- Site Property Line
- Drainage Ditch
- Fence

Reference: Surveyor's Real Property Report,
Fairhall, Moffatt & Woodland
Ref # 137-9 Cumberland

Title: **SITE PLAN**	
ARCADIS	Project: **PHASE I ENVIRONMENTAL SITE ASESSMENT 1830 TRIM ROAD, OTTAWA, ONTARIO**
Date: **OCTOBER 2017**	Client: **FirstGroup**
Metres 25 0 25 50 1:1700	**FIGURE 2**

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LEGEND

- Site Property Line
- Topographic Contours (1m interval)
- 88 Contour Elevation (m)

Reference: Ontario Base Map - accessed March, 2016.

Title: **TOPOGRAPHY PLAN**	
ARCADIS	Project: **PHASE I ENVIRONMENTAL SITE ASESSMENT 1830 TRIM ROAD, OTTAWA, ONTARIO**
Date: **OCTOBER 2017**	Client: **FirstGroup**
Metres 75 0 75 150 1:5500	**FIGURE 3**

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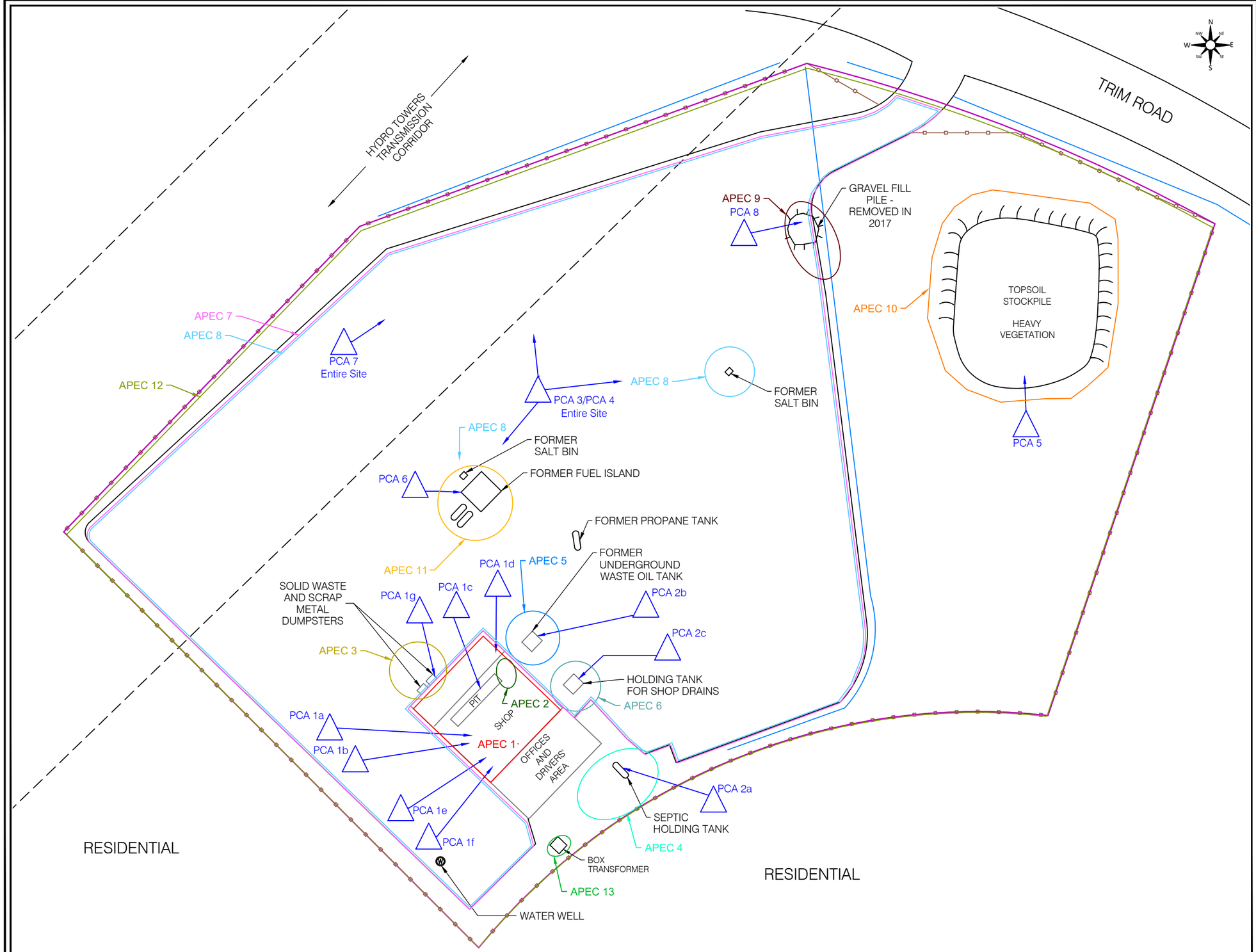


PCA 1 - Operation of bus maintenance garage; including
(a) the use of lubricants, motor oils, grease and gear oils,
(b) production of waste oils,
(c) the use of antifreeze and bus windshield wash fluid,
(d) the use of solvents for parts de-greasing,
(e) the use of maintenance tools which may generate metal grindings/ welding fumes,
(f) replacement of vehicle tires, and
(g) the presence of solid waste bins and scrap metal dumpsters.

PCA 2 - Bus maintenance garage services, including
(a) septic field and tank,
(b) underground waste oil tank and
(c) shop drains sanitary underground holding tank.

PCA 3 - Placement of gravel fill of unknown origin across the site for purposes of the bus parking area.

PCA 4 - Maintenance of the gravel parking lot- including use of salt.

PCA 5 - Presence of the stockpile of excess topsoil fill at northeast corner of property.

PCA 6 - Former diesel underground storage tanks (USTs) present in yard to the north of the
maintenance garage building.

PCA 7 - Potential for pesticide use with former agricultural operations.

PCA 8 - Presence of the former stockpile of excess gravel fill near the entrance.

APEC 1 - The bus maintenance garage area from multiple contamination sources
including the use of lubricants, motor oils, grease and gear oils, production of waste oils, antifreeze and bus windshield wash fluid, maintenance tools which may generate metal grindings/welding fumes and replacement of vehicle tires.

APEC 2 - The bus maintenance garage area from multiple contamination sources including the use of solvents for parts de-greasing.

APEC 3 - The bus maintenance garage area from multiple contamination sources including the presence of solid waste bins
and scrap metal dumpsters.

APEC 4 - The exterior bus service areas and parking lot due to the presence of a septic tank.

APEC 5 - The exterior bus service areas and parking lot due to the presence of an underground waste oil tank.

APEC 6 - The exterior bus service areas and parking lot due to the presence of the shop drain/sanitary underground holding tank.

APEC 7 - The bus parking area due to the placement of gravel fill of unknown origin across the site.

APEC 8 - The gravel parking lot due to parking lot maintenance, potentially including use and storage of salt.

APEC 9 - The stockpile of excess gravel fill near the entrance of the property.

APEC 10 - The stockpile of excess fill in the northeast corner of property.

APEC 11 - The area of the former diesel underground storage tanks present in the yard, north of the maintenance garage building.

APEC 12 - The parking lot and grassed areas throughout the property, specifically from potential use of pesticides during historical agricultural operations.

APEC 13 - Box transformer on ground

Reference: Surveyor's Real Property Report,
Fairhall, Moffatt & Woodland
Ref # 137-9 Cumberland

Metres
10 0 10 20
1:1000

Title:
CONCEPTUAL SITE MODEL

Project:
PHASE I ENVIRONMENTAL SITE ASESSMENT
1830 TRIM ROAD, OTTAWA, ONTARIO

Client:
FirstGroup

ARCADIS

Date:
JANUARY 2019

FIGURE 4

APPENDIX A

Site Photographs

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Photo: 1

Date:
Feb. 2, 2016

Description:
Front of the school bus maintenance facility

Location:
Centre of property facing southwest

Photo: 2

Date:
Feb. 2, 2016

Description:
Back of the school bus maintenance facility

Location:
Southwest side of property facing northeast

Photo: 3

Date:
Feb. 2, 2016

Description:
Access manholes to sanitary holding tank

Location:
South side of facility

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Photo: 4

Date:
Feb. 2, 2016

Description:
North side of the school bus maintenance facility

Location:
North side of facility facing southeast

Photo: 5

Date:
Feb. 2, 2016

Description:
Former location of aboveground propane tank (foreground) and vegetated berm (background)

Location:
North side of facility facing northeast

Photo: 6

Date:
Feb. 2, 2016

Description:
Gravel stockpile

Location:
Centre of property facing northeast

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Photo: 7

Date:
Feb. 2, 2016

Description:
Bus wash bay

Location:
Back side of wash bay facing northeast

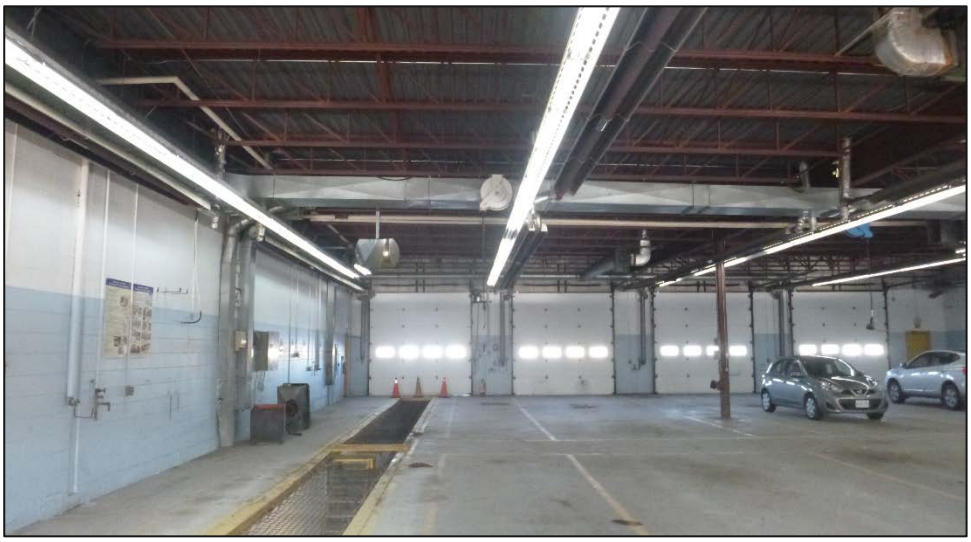


Photo: 8

Date:
Feb. 2, 2016

Description:
School bus maintenance pit in garage

Location:
Back side of garage facing northeast

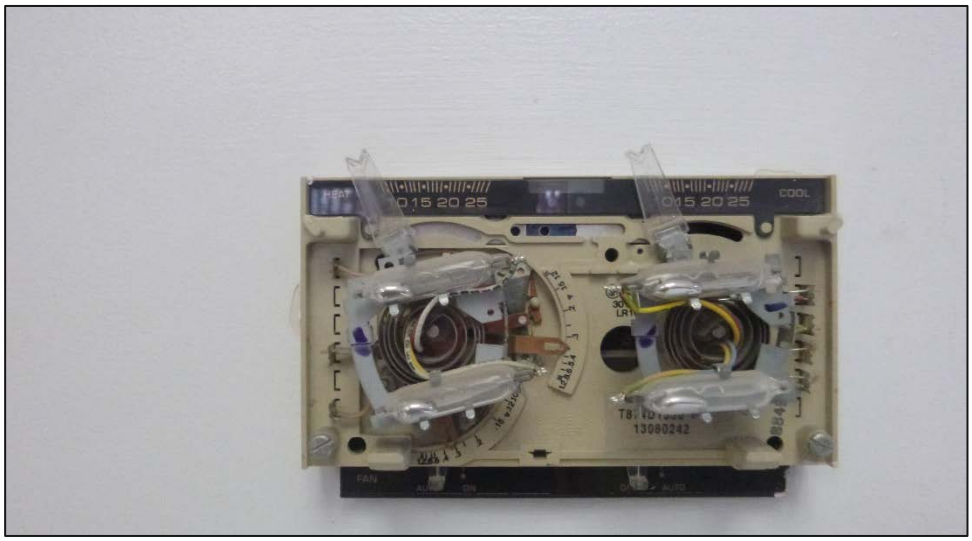


Photo: 9

Date:
Feb. 2, 2016

Description:
Thermostat without cover

Location:
Office side of facility

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Photo: 10

Date:
Feb. 2, 2016

Description:
Black mold behind baseboard heater

Location:
Office side of facility

Photo: 11

Date:
Feb. 2, 2016

Description:
Mold on air diffuser

Location:
Office side of facility

Photo: 12

Date:
Feb. 2, 2016

Description:
Water damage from roof leak

Location:
Office side of facility

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Photo: 13

Date:
Feb. 2, 2016

Description:
Waste storage area

Location:
Wash bay side of facility

Photo: 14

Date:
Feb. 2, 2016

Description:
Former 25,000 L UST area

Location:
Parking Lot

Photo: 12

Date:
Feb. 2, 2016

Description:
Former 4,520 L UST area

Location:
Office side of facility

Project Photographs

Phase One Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

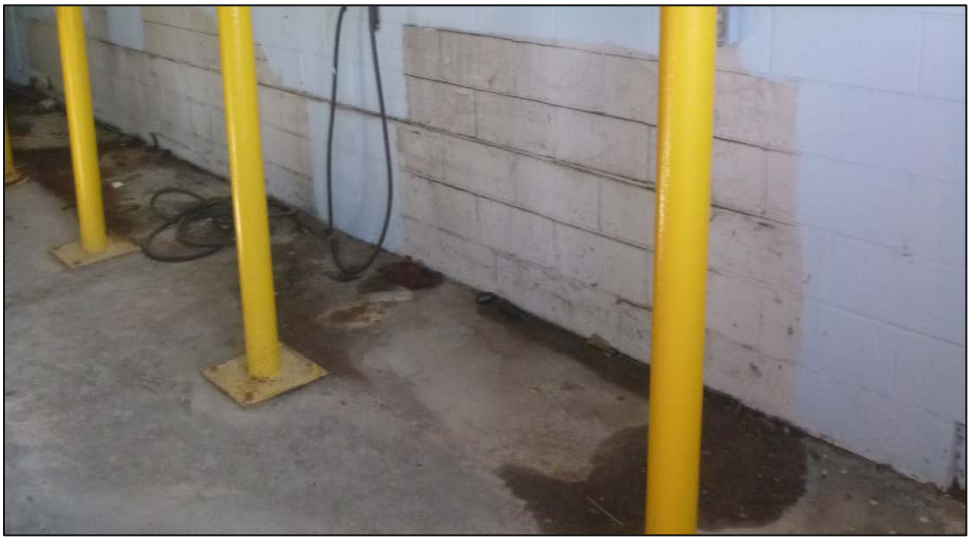


Photo: 16

Date:
Feb. 2, 2016

Description:
Material Storage Area, former location of motor oil, antifreeze and windshield washer fluid

Location:
Wash bay

Photo: 17

Date:
Feb. 2, 2016

Description:
Material Storage Area, former antifreeze and grease storage area

Location:
Garage

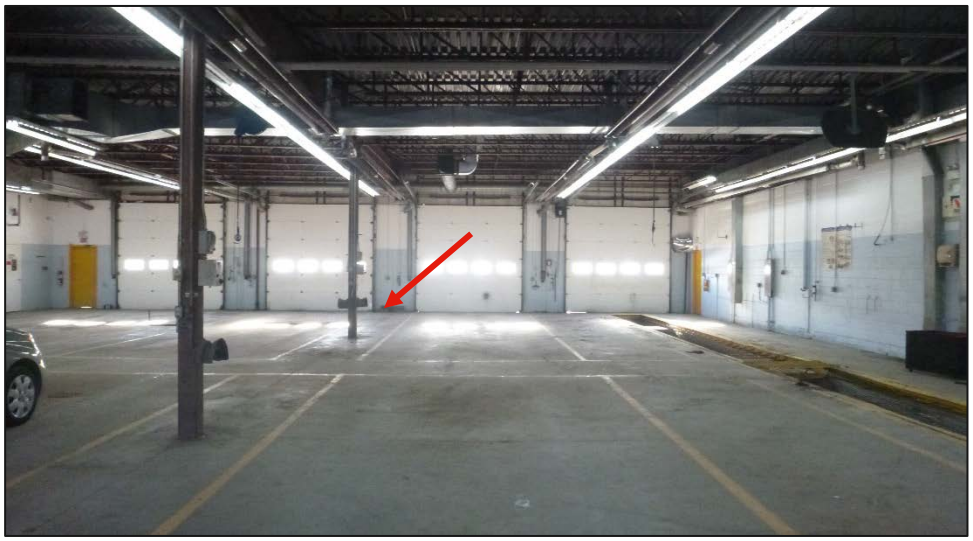


Photo: 18

Date:
Feb. 2, 2016

Description:
Material Storage Area, former antifreeze storage area

Location:
Office side of facility

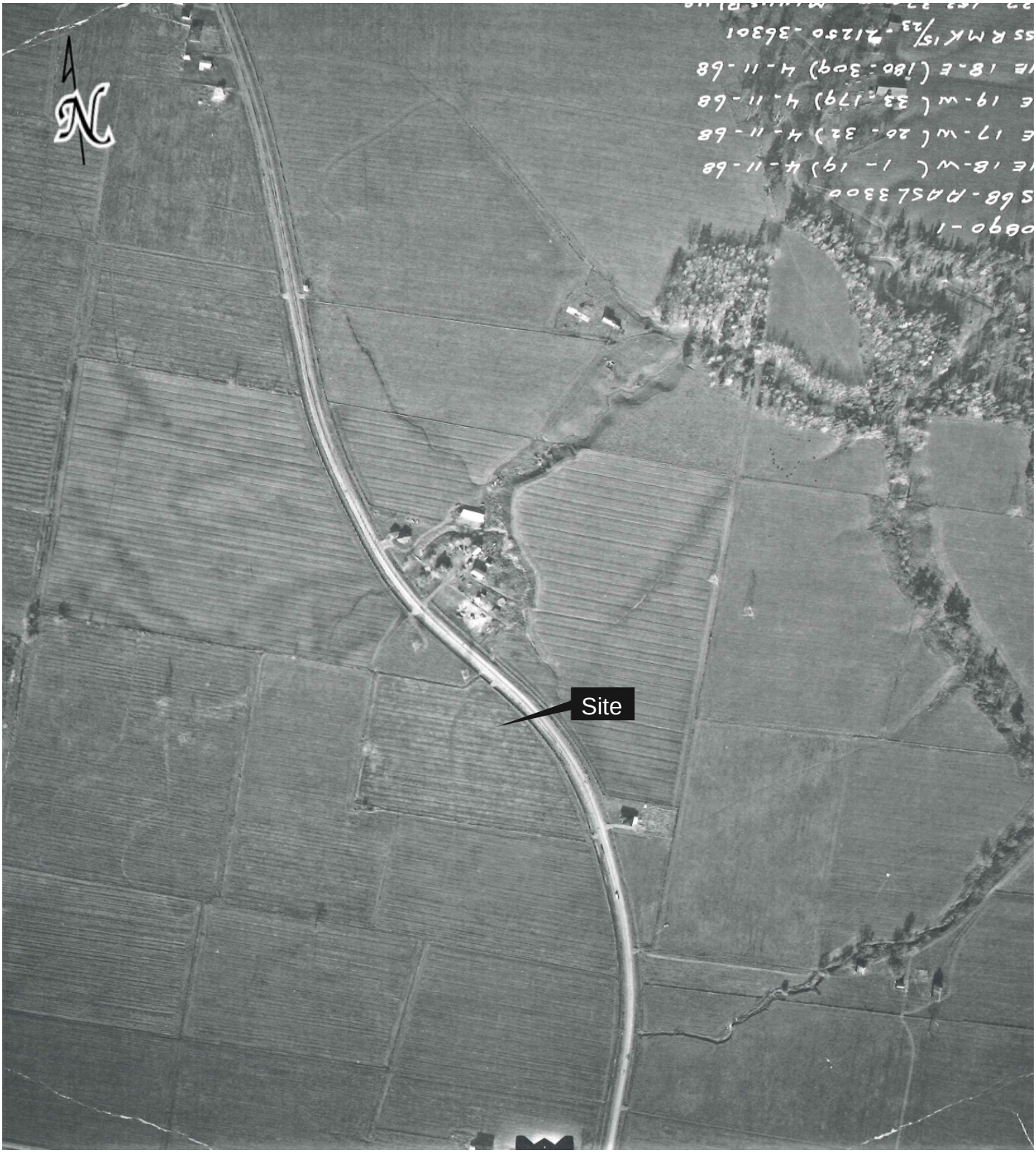
APPENDIX B

Aerial Photographs

APPENDIX B Aerial Photographs
Year: 1945

Phase I Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Source: National Air Photo Library , Photo: A9551-106 (Approx. Scale: 1:15,000)



Source: National Air Photo Library , Photo: A20890-1 (Approx. Scale: 1:7,000)

APPENDIX B Aerial Photographs
Year: 1978

Phase I Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Source: National Air Photo Library , Photo: A31190-50 (Approx. Scale: 1:15,000)

APPENDIX B Aerial Photographs
Year: 1983

Phase I Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Source: National Air Photo Library , Photo: A26246-148 (Approx. Scale: 1:7,000)

APPENDIX B Aerial Photographs
Year: 1990

Phase I Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Source: National Air Photo Library , Photo: A27643-108 (Approx. Scale: 1:7,000)

APPENDIX B Aerial Photographs
Year: 2001

Phase I Environmental Site Assessment
1830 Trim Road, Ottawa, Ontario

Source: National Air Photo Library , Photo: A28466-37 (Approx. Scale: 1:20,000)

APPENDIX C

Fire Insurance Plans

ENVIRONMENTAL RISK INFORMATION SERVICE

FIRE INSURANCE MAP RESEARCH RESULTS

Date: 1/22/2016

Order Number: 20160119099

1830 Trim Rd, Ottawa, ON, K4A3P8

ERIS has searched our in-house collection of Fire Insurance Maps for the address at:

1830 Trim Rd, Ottawa, ON, K4A3P8

Please note that no information was found for your site or adjacent properties.

If you have any questions regarding the enclosed information, please do not hesitate to contact us.

Individual Fire Insurance Maps for the subject property and/or adjacent sites are included with the ERIS environmental database report to be used for research purposes only and cannot be resold for any other commercial uses other than for use in a Phase I environmental assessment.

Address: 38 Lesmill Rd Unit 2,Toronto, ON M3B 2T5
Phone: 416-510-5204 • Fax: 416-510-5133
info@erisinfo.com • www.erisinfo.com

APPENDIX D

Land Titles

CHAIN OF TITLE REPORT

Project #:	20160119099	Searched at:	Ottawa	Page 1
Address:	1830 Trim Road, Ottawa	LRO #:	4	
Legal Description:	Part lot A, Con 9 desig. As Pts 1-8, 50R5951			
PIN #:	14531-0715(LT)			

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
	Patent	20 01 1837	Crown	Jane MCGILLIVRAY
3321	Deed	04 02 1842	Jane McGillivray	Daniel MCDOUGALL
5224	Deed	24 11 1852	Daniel McDougall	Laurence MERCER
6756	Deed	20 08 1856	Laurence Mercer	John MAITLAND
1218	Deed	27 02 1877	John Maitland	John MCWILLIAM
1437	Deed	27 05 1923	John McWilliam	Thomas MCWILLIAM
1485	Deed	05 12 1924	Thomas McWilliam	Kenneth FINDLAY
20520	Deed	23 05 1956	Kenneth Findlay	Allan John FINDLAY
10982B	Deed	21 09 1965	Allan John Findlay	Kenneth Edward FINDLAY

Cont'd on page 2

CHAIN OF TITLE REPORT

Project #:	20160119099	Searched at:	Ottawa	Page 2
Address:	1830 Trim Road, Ottawa	LRO #:	4	
Legal Description:	Part lot A, Con 9 desig. As Pts 1-8, 50R5951			
PIN #:	14531-0715(LT)			

INSTR #	DOC. TYPE	REG. DATE	PARTY FROM	PARTY TO
92649	Deed	19 12 1984	Kenneth Edward Findlay	Allan FINDLAY
98338	Deed	25 11 1985	Allan Findlay	Allan FINDLAY & Ethel FINDLAY
110278	Deed	18 09 1987	Allan Findlay & Ethel Findlay	729080 Ontario Limited
RR117565	Deed (Present Owner)	12 10 1988	729080 Ontario Limited	**Laidlaw Transit Ltd.**

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

PROPERTY DESCRIPTION: PT LT A, CON 9 , PART 1 TO 8 INCL , 50R5951 ; S/T CU16002 ; CUMBERLAND ; SUBJECT TO EXECUTION 95-079470, IF ENFORCEABLE. ;

PROPERTY REMARKS:

ESTATE/QUALIFIER:
FEE SIMPLE
LT CONVERSION QUALIFIED

RECENTLY:
FIRST CONVERSION FROM BOOK CU28

PIN CREATION DATE:
1995/05/29

OWNERS' NAMES
LAIDLAW TRANSIT LTD.

CAPACITY SHARE
BENO

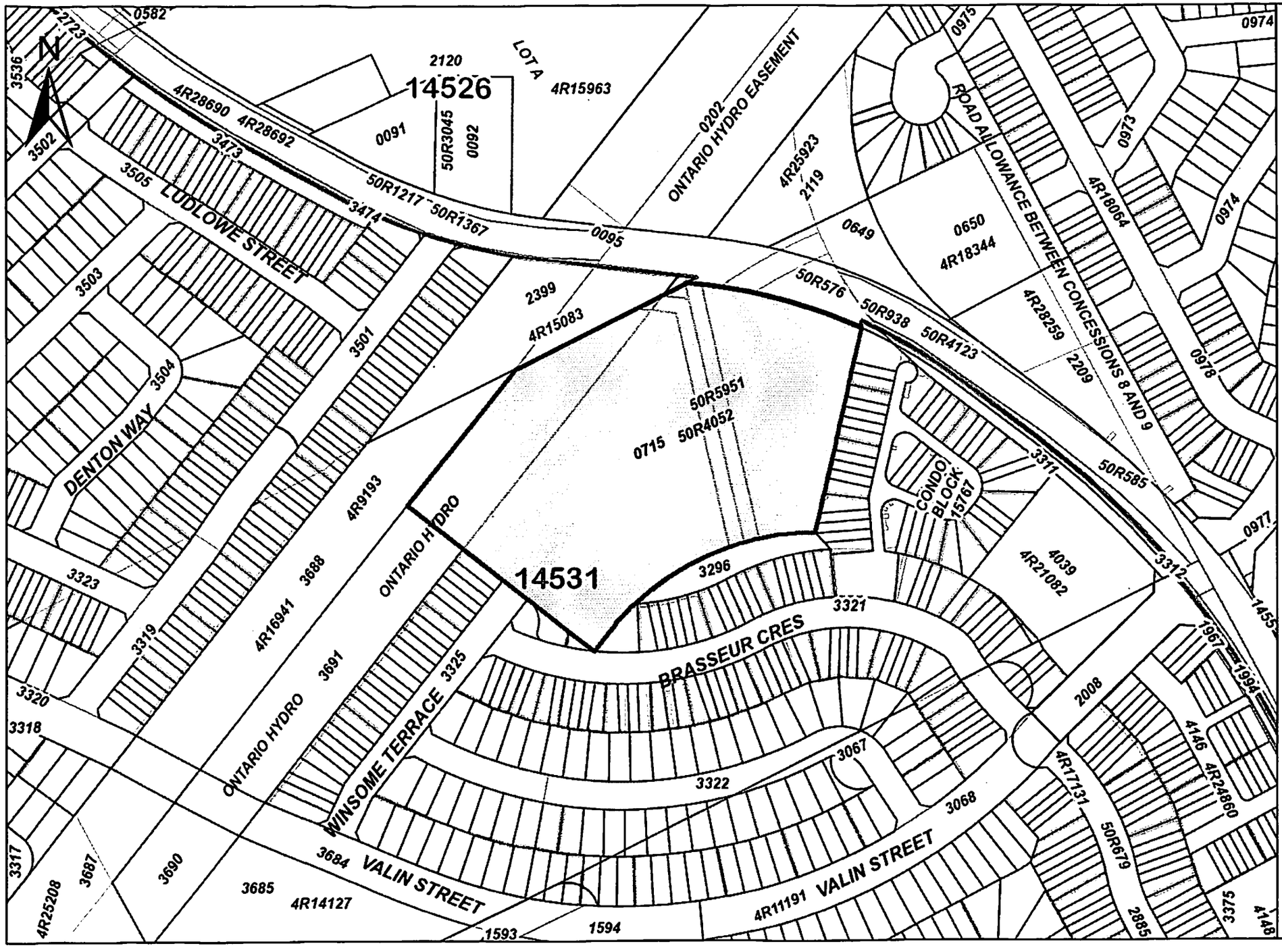
REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
EFFECTIVE 2000/07/29 THE NOTATION OF THE "BLOCK IMPLEMENTATION DATE" OF 1995/05/29 ON THIS PIN						
WAS REPLACED WITH THE "PIN CREATION DATE" OF 1995/05/29						
*** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE: 1995/05/26 ***						
***SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO:*						
*** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES **						
*** AND ESCHEATS OR FORFEITURE TO THE CROWN.*						
*** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF*						
*** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY*						
*** CONVENTION.*						
*** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES.*						
***DATE OF CONVERSION TO LAND TITLES: 1995/05/29 ***						
CU16002	1932/11/15	TRANSFER EASEMENT			THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO	C
50R4052	1983/11/22	PLAN REFERENCE				C
50R5951	1988/07/19	PLAN REFERENCE				C
RR117565	1988/10/12	TRANSFER	$200,900		LAIDLAW TRANSIT LTD.	C
RR117844	1988/10/27	AGREEMENT *REMARKS: SITE PLAN*			THE TOWNSHIP OF CUMBERLAND	C
OC211576	2003/06/23	CHARGE		*** COMPLETELY DELETED *** LAIDLAW TRANSIT LTD.	CITIBANK CANADA	

NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
OC481479	2005/07/05	DISCH OF CHARGE		*** COMPLETELY DELETED *** CITIBANK CANADA		
REMARKS: RE: OC211576						

NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.



ServiceOntario

PRINTED ON 26 JAN, 2016 AT 08:56:06
FOR P

SCALE

0 30 60 90 120 meters

PROPERTY INDEX MAP

OTTAWA-CARLETON(No. 04)

LEGEND

FREEHOLD PROPERTY	
LEASEHOLD PROPERTY	
LIMITED INTEREST PROPERTY	
CONDOMINIUM PROPERTY	
RETIRED PIN (MAP UPDATE PENDING)	
PROPERTY NUMBER	0449
BLOCK NUMBER	08050
GEOGRAPHIC FABRIC	——
EASEMENT	- - - -

THIS IS NOT A PLAN OF SURVEY

NOTES

REVIEW THE TITLE RECORDS FOR COMPLETE PROPERTY INFORMATION AS THIS MAP MAY NOT REFLECT RECENT REGISTRATIONS

THIS MAP WAS COMPILED FROM PLANS AND DOCUMENTS RECORDED IN THE LAND REGISTRATION SYSTEM AND HAS BEEN PREPARED FOR PROPERTY INDEXING PURPOSES ONLY

FOR DIMENSIONS OF PROPERTIES BOUNDARIES SEE RECORDED PLANS AND DOCUMENTS

ONLY MAJOR EASEMENTS ARE SHOWN

REFERENCE PLANS UNDERLYING MORE RECENT REFERENCE PLANS ARE NOT ILLUSTRATED

Ontario

APPENDIX E

MOECC Correspondence

Ministry of the Environment and Climate Change

Freedom of Information and Protection of Privacy Office

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

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

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

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

Ontario

February 2, 2016

Troy Austrins
Arcadis Canada Inc.
329 Churchill Ave. N
Ottawa, ON K1Z 5B8

Dear Troy Austrins:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2016-00648, Your Reference 450271

The Ministry is in receipt of your request made pursuant to the *Freedom of Information and Protection of Privacy Act* and has received your payment in the amount of $5.00 (non-refundable application fee).

The search is being conducted on the following: 1830 Trim Rd, Ottawa. If there is any discrepancy please contact us immediately.

You may expect a reply or additional communication as your request is processed. For your information, the Ministry charges for search and preparation time and photocopying.

If you have any questions regarding this matter, please contact Everett Burge at (416) 314-6129 or everett.burge@ontario.ca.

Yours truly,

EB

for Jacqueline Gallacher
FOI Manager (A)

Ministry of the Environment and Climate Change

Freedom of Information and Protection of Privacy Office

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

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

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

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

Ontario

February 29, 2016

Troy Austrins
Arcadis Canada Inc.
329 Churchill Ave. N
Ottawa, ON K1Z 5B8

Dear Troy Austrins:

RE: *Freedom of Information and Protection of Privacy Act* Request
Our File #: A-2016-00648, Your Reference #: 450271

This letter is in response to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 1830 Trim Rd, Ottawa.

After a thorough search of the Ministry's Ottawa District Office, Investigations and Enforcement Branch, Environmental Monitoring and Reporting Branch, Sector Compliance Branch and Safe Drinking Water Branch, records were located in response to your request. It is my preliminary decision to provide partial access to the information as the identity of complainants will be removed to protect privacy (Section 21(1)(f) of the Act).

In accordance with Section 57 of the *Freedom of Information and Protection of Privacy Act*, the estimated fee is:

• Search Time 1 hour @ $30/hour	$30.00
• Copying approx. 110 pages @ $0.20/page	22.00
• Preparation Time 0.25 hour @ $30/hour	7.50
• Delivery	3.00
• **Total**	**$62.50**

In order to receive a copy of the records please forward this amount to our office. You may pay by money order or cheque (made payable to the "Minister of Finance (FOI)") or by credit card. Credit card forms are available on the Ministry's website http://www.ontario.ca/environment-and-energy/freedom-information-request-form-credit-card-form. Please do not mail cash.

If payment has not been received within 45 days or should you no longer require the records, please remit $30.00 for the work already undertaken and this file will be closed. When remitting payment, please quote our file number or attach a copy of this letter.

The District Office has advised that there may be records in the Records Centre, Mississauga. To retrieve these files there is a charge of $60.00 with no guarantee that any records will be located responsive to your request. If you would like us to retrieve these files, $60.00 in addition to the above amount is required. Please note, a request for records must usually be answered within 30 calendar days, however Section 27 allows for time extensions under certain circumstances. If you choose to have the files retrieved from the Records Centre, the time for answering your request will be extended for an additional 30 days.

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 Sharon Menzies at (416) 327-1429.

Yours truly,

Jacqueline Gallacher
FOI Manager (A)

Ministry of the Environment and Climate Change

Freedom of Information and Protection of Privacy Office

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

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

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

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

Ontario

March 24, 2016

Troy Austrins
Arcadis Canada Inc.
329 Churchill Ave. N
Ottawa, ON K1Z 5B8

Dear Troy Austrins:

RE: Freedom of Information and Protection of Privacy Act Request
Our File #: A-2016-00648, Your Reference #: 450271

This letter is further to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 1830 Trim Rd, Ottawa. After a detailed review of the records, it appears that disclosure affects the interests of a third party.

In accordance with Section 28(1)(a) of the Act, notice has been provided to the third party in relation to the records that they supplied to the Ministry. As a result, the Ministry's reply will not be made before April 25, 2016.

If you have any questions regarding this, please contact Fred Ruiter at (416) 327-1492 or Fred.K.Ruiter@ontario.ca.

Yours truly,

Jacqueline Gallacher
FOI Manager (A)

Ministry of the Environment and Climate Change

Freedom of Information and Protection of Privacy Office

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

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

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

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

Ontario

April 14, 2016

recvd 19 Apr. 16

Troy Austrins
Arcadis Canada Inc.
329 Churchill Ave. N
Ottawa, ON K1Z 5B8

Dear Troy Austrins:

RE: ***Freedom of Information and Protection of Privacy Act* Request**
Our File # A-2016-00648

This letter is further to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* for records relating to 1830 Trim Rd, Ottawa.

On the basis that the third party made no submissions, the records and previous decision of the Information and Privacy Commission, it is my decision to provide you with partial access to the information as the identity of a complainant has been removed to protect privacy (Section 21(1)(f) of the Act).

In terms of the third party's records, the Ministry is of the opinion that the records are the result of technical and/or scientific study (part one of the Information and Privacy Commissioner's three part test) and the information was supplied explicitly in confidence. The third part of the three part test (harms) is not successful as the third party has not provided detailed and convincing evidence as to the harms that are likely to occur should the information be released.

Since the third party has not consented to disclosure of the records, it has 30 days to appeal the Ministry's decision. During this 30 day period, the records will not be disclosed.

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 Fred Ruiter at (416) 327-1492.

Yours truly,

Jacqueline Gallacher
FOI Manager (A)

Ministry of the Environment and Climate Change

Freedom of Information and Protection of Privacy Office

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

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

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

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

Ontario

May 19, 2016

Troy Austrins
Arcadis Canada Inc.
329 Churchill Ave. N
Ottawa, ON K1Z 5B8

recvd 24 mai 16

Dear Troy Austrins:

RE: *Freedom of Information and Protection of Privacy Act* Request
Our File # A-2016-00648, Your Reference 450271

This letter is further to your request made pursuant to the *Freedom of Information and Protection of Privacy Act* relating to 1830 Trim Rd, Ottawa.

Since the third party did not appeal, attached is a copy of the records.

If you have any questions regarding this matter, please contact Fred Ruiter at (416) 314-6272 or Fred.K.Ruiter@ontario.ca.

Yours truly,

Jacqueline Gallacher
FOI Manager (A)

Attachment

Generator Details

Registration/Notification Number

ON0222827

Legal Company Name

Primary Name:	FirstCanada ULC	Division Name:	NA

Company Operating Name

Primary Name:	FIRST STUDENT CANADA	Division Name:	NA

Mailing Address

Division Building:	NA	Post Box Number:	NA
Address Line 1:	1830 TRIM ROAD	Address Line 2:	NA
Town/City:	ORLEANS	Postal Code / Zip Code:	K4A 3P8
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:	1830 TRIM ROAD		
Address Line 2:	NA		
Town/City:	ORLEANS	Postal Code / Zip Code:	K4A 3P8
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		

Company Official

Ontario

Ministry of the Environment

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User Management | Company Mgmt | Manifests | Site Data | Help | Logout

hwin Administration

Go

Company Name: **FirstCanada ULC**
Company Number: **ON0222827 (Generator)**

Active Waste Classes

Active Waste Class Listing

Add New Waste Class Inactive waste classes

Active Off-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	UnRegister Waste Class
212 - L	View details	N/A					Liquid	Off-Site	Active	☐
213 - I	View Details	D001	5, 13	Recycling	N		Liquid	Off-Site	Active	☐
213 - L	View Details	N/A					Liquid	Off-Site	Active	☐
221 - I	View Details	D001	5, 13	Out of Ontario - Potential Land Disposal	Y	Y	Liquid	Off-Site	Active	☐
251 - L	View Details	N/A					Liquid	Off-Site	Active	☐
		N/A					Liquid	Off-Site	Active	☐
252 - L	View Details	N/A					Liquid	Off-Site	Active	☐
		N/A					Liquid	Off-Site	Active	☐

Unregister Selected Waste Class

000002

Ontario

Ministry of the Environment

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hwin Administration

Search Go

Company Name: **FirstCanada ULC**
Company Number: **ON0222827 (Generator)**

Inactive Waste Classes

Inactive Waste Class Listing

Add New Waste Class Active waste classes

Inactive Off-site Waste Classes

Waste Class	Physical State	Off-Site	Status	Activate	
221 - L	Liquid	Off-Site	Inactive	○	View Details

Activate

Ontario

Ministry of Environment and Energy

Ministère de l'Environnement et de l'Énergie

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

135, avenue St. Clair ouest
Bureau 100
Toronto ON M4V 1P5

April 24, 1996

LAIDLAW TRANSIT LTD.
30 HERITAGE ROAD
MARKHAM, ONT
L3P 1M4

Attention: MR. JOHN GIANNONE

Re: Acknowledgement of Subject Waste Registration

In accordance with Subsection 18(3) of Ontario Regulation 347, this letter acknowledges receipt of your Generator Registration Report dated **April 11, 1996.** The Generator Registration Number assigned to your company is:

ON0222827

for the site located at:

1830 TRIM ROAD
CUMBERLAND, ONT

A list of acknowledged waste number(s) is attached as Schedule "A". The format of this schedule has been modified since July 1993. A waste number now appears only once, regardless of the number of different waste streams which may have identical waste numbers. The waste description is also generic. However, you are still required to register all waste streams, even if they have identical waste numbers.

For off-site disposal of subject waste, the appropriate waste number(s) acknowledged in Schedule "A", and the Generator Registration Number, must be entered in Part A of each manifest form after receipt of this generator registration document. Under Ontario's Environmental Protection Act, the property receiving the waste must be approved as a disposal site for the waste it is receiving. The disposal of waste at an uncertified site is illegal.

The selection of accurate waste numbers is your responsibility. This acknowledgement must not be considered a confirmation of the accuracy of the information submitted by you. Should the waste number(s) 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 347.

It is important to note that under Subsection 18(4) of Regulation 347, a supplementary Generator Registration Report must be submitted to the Ministry within 15 days for any of the following reasons:

1. if the name, address or telephone number of your company or generating site changes, or

2. if there is a significant change in the description, the waste number, or the physical or chemical characteristics of your registered waste(s), or

3. **if you generate a hazardous or liquid industrial waste that has not been registered with the Ministry, even if its waste number is already listed on Schedule "A".**

Your Generator Registration Report has been forwarded to the District Office of this Ministry that is closest to your generating site. Staff of the District Office conduct post-registration audits and may contact you for additional information or may visit your site.

Should you have any questions concerning generator registration or manifesting requirements, please contact the appropriate District Office of the Ministry.

Toronto	(416)326-6700	Owen Sound	(519)371-2901
Oakville	(905)815-5920	Sarnia	(519)336-4030
York-Durham	(905)427-5600	Windsor	(519)254-2546
Hamilton	(905)521-7650	Sudbury	(705)675-4501
Cambridge	(519)622-8121	North Bay	(705)476-1001
Welland	(905)732-0816	Gravenhurst	(705)687-6647
Kingston	(613)549-4000	Barrie	(705)726-1730
Cornwall	(613)933-7402	Thunder Bay	(807)475-1315
Ottawa	(613)521-3450	Kenora	(807)468-2718
Peterborough	(705)743-2972	Sault Ste. Marie	(705)949-4640
London	(519)661-2200	Timmins	(705)268-3222

D. Tolson

Director
Regulation 347, R.R.O., 1990
Environmental Protection Act

SCHEDULE "A"

In accordance with information submitted with your generator registration report(s), the site indicated below is registered for the waste number(s) shown on this schedule, which may represent more than one waste stream. This attached Schedule forms part of the acknowledgement of generator registration for the following site:

LAIDLAW TRANSIT LTD.

1830 TRIM ROAD
CUMBERLAND, ONT

identified by Generator Registration Number ON0222827, dated in Toronto, April 24, 1996.

WASTE STREAM	WASTE NUMBER
1. ALIPHATIC SOLVENTS	212L
2. PETROLEUM DISTILLATES	213I
3. LIGHT FUELS	221I
4. LIGHT FUELS	221L
5. OIL SKIMMINGS & SLUDGES	251L
6. WASTE OILS & LUBRICANTS	252L

---- End of List ----

Strata ENVIRONMENTAL

PRIVILEGED AND CONFIDENTIAL
PREPARED AT THE REQUEST OF COUNSEL

October 29, 2015

Ms. Susan Kirkpatrick
Sr. Environmental Project & Program Manager
FirstGroup America
600 Vine Street, Suite 1400
Cincinnati, Ohio 45202

Tank Excavation Monitoring
First Student Canada - # 31430
1830 Trim Road, Orleans, ON K4A 3P8
Strata Environmental Project 1528465

Dear Ms. Kirkpatrick,

Under the authorization of First Canada, Inc., Strata Environmental Services, Inc. in association with COLESTAR Environmental Inc. (hereinafter collectively referred to as Strata) is pleased to provide the results of the tank excavation monitoring work completed in July 2015 at the above-referenced site. Two tank removal excavations were completed: Tank Excavation 1 and Tank Excavation 2. Tank Excavation 1 resulted in the removal of two 45,500-L (10,000-gallon) capacity diesel underground storage tanks (USTs). Tank Excavation 2 resulted in the removal of one 2,270-L (500-gallon) capacity waste oil UST. The location of the site is illustrated on **Figure 1** and the locations of the excavations within the site are shown on **Figure 2**. Site plans for Tank Excavation 1 and Tanks Excavation 2 are provided as **Figure 3** and **Figure 4**, respectively.

Methods

Underground Storage Tank Removal

On July 7, 2015, Cannington Construction Ltd. (CCL) personnel removed two 45,500-L (10,000-gallon) diesel USTs at Tank Excavation 1 and one 2,270-L (500-gallon) waste oil UST at Tank Excavation 2. Prior to removal, fluids were evacuated and the tanks were inerted to remove potentially explosive vapours. The tank fluids were removed using a vacuum truck operated by Triangle Pump Services Limited (TPSL). See Appendix A for manifest. Approximately1,104 L of extracted fluid/sludge was transported off site for recycling/disposal at the TPSL facility located at 2565 Delzotto Avenue in Gloucester, Ontario.

Tank Excavation and Segregated Soil Assessment

Strata collected soil samples from the excavation limits and segregated non-impacted excavated soil or spoil for contaminant assessment and textural classification. Each soil sample was split; the first half of the sample was jarred for possible laboratory analysis and the second half was placed in a polyethylene bag for textural classification and contaminant assessment. The contaminant assessment included combustible vapour concentration measurement and assessment for visual and olfactory evidence of fuel and waste oil-related impact. Combustible vapours were measured using an RKI Eagle combustible gas detector calibrated against hexane and operated in methane elimination mode. Based on the results of the contaminant assessment, selected samples were retained for laboratory analysis of the potential contaminants of concern (pCoC) associated with diesel and waste oil. The samples were submitted for analysis to Caduceon Environmental Laboratories, a Canadian Association for Laboratory Accreditation Inc. (CALA) accredited laboratory, in Richmond Hill, Ontario.

110 Perimeter Park, Suite E, Knoxville, TN 37922 • tel 865.539.2077 • fax 865.539.3970 • www.strataenv.com

Strata collected a total of ninety-four (94) soil samples from Tank Excavation 1 (Figure 3), including forty-six (46) samples from the excavation sidewalls, eighteen (18) samples from the excavation floor and thirty (30) samples from the excavated spoil. Based on the contaminant assessment, Strata submitted fourteen (14) soil samples for laboratory analysis of fuel-related constituents (benzene, toluene, ethylbenzene and xylenes [BTEX] and petroleum hydrocarbon [PHC] fractions 1 to 4). The analyzed samples included: four floor samples (T1-F2, T1-F5, T1-F7 and T1-F11), three excavated spoil samples (T1-ES3, T1-ES7 and T1-ES13), and seven sidewall samples (T1-N1,12, T1-N3,4, T1-E1,8, T1-E3,4, T1-S2,8, T1-S4,6, and T1-W1,8). The excavation sidewall analyzed samples included two north sidewall samples (T1-N1,12 and T1-N3,4), two east sidewall samples (T1-E1,8 and T1-E3,4), two south sidewall samples (T1-S2,8 and T1-S4,6), and one west sidewall sample (T1-W1,8).

Strata collected thirty-six (36) soil samples from Tank Excavation 2 (Figure 4), including twelve (12) samples from the excavation sidewalls, four (4) samples from the excavation floor, and twenty (20) samples from the excavated spoil. Based on the contaminant assessment, Strata submitted fourteen (14) soil samples for laboratory analysis of waste oil-related constituents (volatile organic compounds [VOCs], PHC F1 to F4, and metals). The samples analyzed included: two floor samples (T2-F1 and T2-F2), three excavated spoil samples (T2-ES4, T2-ES9 and T2-ES14), and three sidewall samples. The analyzed excavation sidewall samples included one north sidewall sample (T2-N1,7), one east sidewall sample (T2-E1,7), and one south sidewall sample (T2-S1,3).

Strata acquired three field duplicate soil samples for Quality Assurance/Quality Control (QA/QC) purposes. The field duplicates, denoted DUP1, DUP2 and T2-DUP1, were acquired at T1-W1,8; T1-F11; and T2-S1,3 for analysis of BTEX and PHC F1 to F4.

Imported Fill Assessment

Fill material for tank excavation backfilling was obtained at the Lafarge Aggregate facility in Ottawa, Ontario. Strata sampled the fill material in accordance with the requirements set out in Ontario Regulation 153. Fifty (50) soil samples were collected from the stockpile allocated for use at the Site. Each soil sample was split; half was jarred for possible laboratory analysis and half was placed in a polyethylene bag for textural classification and contaminant assessment. The contaminant assessment included combustible vapour concentration measurement and assessment for visual and olfactory evidence of anthropogenic impact. Combustible vapours were measured using an RKI Eagle combustible gas detector calibrated against hexane and operated in methane elimination mode. Strata submitted five samples from locations intended to obtain appropriate spatial coverage (SP1, SP2, SP3, SP4 and SP5) for laboratory analysis of an array of parameter suites (VOCs, PHCs, PAHs, PCBs, metals, EC, SAR and pH). One field duplicate, denoted DUP-S1, was acquired at SP2 for metals analysis for QA/QC purposes.

Assessment Standards

Strata evaluated the results of the soil laboratory testing against the non-potable based soil quality standards (Table 3 Standards) for residential and commercial sites with fine to medium grained soil provided in the *"Ontario Ministry of the Environment, Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"* publication dated April 15, 2011 (2011 Standards). The rationale used to select these standards as applicable to the site is outlined below.

- The site is currently utilized for commercial purposes and is surrounded by lands occupied by residential dwellings/units. Ontario Regulation 153 requires consideration of more sensitive land uses such as residential when the sensitive land use is situated within 30 m of the Site. As a result, both the commercial and residential land use standards were selected for application to the Site.
- The non-potable standards were selected as applicable because the site and surrounding lands are within a region serviced by a municipal drinking water system which acquires its raw water source from a surface water source (Ottawa River).

- The site is not located within 30 m of a water body. The closest water body is Cardinal Creek located approximately 100 m north of the Site.
- The site is not a "Shallow Soil" property as bedrock is more than 2 m below grade (bg). Overburden soil at Tank Excavation 1 extends to at least 4.3 m bg (14 ft bg).
- The native subsurface soil formation consists of clay. As a result, the fine to medium textured soil standards were selected as applicable to the Site.
- As per the *City of Ottawa, Official Plan,* the site is not located in, or within 30 m of, an Area of Natural Significance (ANS).
- The site and study area are not located within or proximate to:
  - An area reserved or set apart as a provincial park or conservation reserve under the *Provincial Parks and Conservation Reserves Act, 2006*;
  - An area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources as having provincial significance;
  - A wetland identified by the Ministry of Natural Resources as having provincial significance;
  - An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the *Niagara Escarpment Planning and Development Act*;
  - An area identified by the Ministry of Natural Resources as significant habitat of a threatened or endangered species;
  - An area which is habitat of a species that is classified under Section 7 of the *Endangered Species Act, 2007* as a threatened or endangered species;
  - Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the *Oak Ridges Moraine Conservation Act, 2001* applies; and
  - An area set apart as a wilderness area under the *Wilderness Area Act.*

Results

Underground Storage Tanks

Upon removal the single-walled steel diesel USTs were observed to be in good condition with no surface corrosion, pitting or perforations apparent and were transported off site to a metals recycling facility. The waste oil UST was fibreglass with no holes or openings observed.

Stratigraphy

Beneath the asphalt in the excavation area, the soil stratigraphy generally consists of 0.6 to 0.9 m (2 to 3 ft) of sand, gravel and silt fill overlying native clay of moderate plasticity extending to the maximum depth of excavation of 4.3 m (14 ft).

Groundwater Conditions

Strata did not observe any groundwater accumulating in the open excavations.

Soil Conditions and Vapour Concentrations

Contaminated soil exhibiting vapour concentrations in excess of 5,000 ppm were encountered beneath the east half of Tank Excavation 1. This contaminated soil was characterized and classified with the results presented in the *"Waste Classification of Contaminated Soil Material, First Student Facility, 1830 Trim Road, Orleans, Ontario"* report prepared by Strata, dated July 15, 2015. As presented in the report, petroleum constituents in excess of the applicable standards were detected in a representative sample of the contaminated soil. Waste classification indicated that the contaminated soil is deemed non-hazardous under Ontario Regulation 347/558. CCL transported the contaminated soil off site on August 11 and 12, 2015 to the GFL Environmental waste disposal facility located at 17335 Allaire Road in Moose Creek, Ontario. The total mass of contaminated soil transported off site was 380.59 tonnes. Weigh scale tickets are provided in Appendix A.

Strata observed no visual or olfactory evidence of fuel impact or waste oil impact apparent in the soil samples recovered from the final excavation limits of Tank Excavation 1 or Tank Excavation 2. Vapour concentrations in the soil samples collected from the final limits of the tank removal excavations did not exceed 15 ppm. Likewise, no visual or olfactory evidence of anthropogenic impacts were apparent in the segregated spoil samples or imported fill samples and vapour concentrations measured in these samples were not detected.

Soil Laboratory Results

The results of laboratory testing performed on selected soil samples from the final excavation limits, segregated spoil, and imported fill are presented along with the standards in Tables 1, 2, 3, 4 and 5. Laboratory certificates supporting this data are provided in Appendix A. None of the analyzed parameters in soil samples from the final excavation limits exceed the standards except cobalt and vanadium. In addition, none of the segregated spoil or imported fill samples exhibited constituent concentrations above standards.

Laboratory analysis detected cobalt and vanadium at concentrations above the residential standard (22 mg/kg) and commercial/residential standard (86 mg/kg) in all of the analyzed samples (6) from the native clay formation. Cobalt and vanadium concentrations in the clay samples ranged from 27 to 30 mg/kg and from 90 to 97 mg/kg, respectively. All of the clay samples were devoid of visual and olfactory evidence of anthropogenic impact and none of the samples exhibited detected concentrations of organic constituents related to diesel or waste oil. Due to absence of anthropogenic impacts in these samples, it is Strata's opinion that the elevated cobalt and vanadium concentrations are most likely a naturally occurring characteristic of the local clay formation.

The laboratory results on the QA/QC sample sets were the same for both the soil samples and their duplicates. This indicates excellent reproducibility of the results suggesting that the field sampling methodology and associated field QA/QC protocols were executed in a manner which yielded a reliable data set. The laboratory certificate (Appendix A) did not identify any QA/QC issues with the soil analytical data. As a result, it is presumed that the batch analyses were consistent with generally accepted industry practices and that the results represent satisfactory data reproducibility, precision and accuracy.

Backfilling

CCL backfilled the excavations with segregated spoil and imported fill material that was assessed and tested and found to meet the applicable standards for inorganic and organic constituents. The imported fill which was assessed at the source site was acquired from the Lafarge Aggregate facility located at 1649 Bearbrook Road in Ottawa, Ontario. The volume of non-impacted segregated soil reused as backfill in the excavations is estimated at approximately 300 m^3. The mass of imported fill placed in the excavations was 380 metric tons. Imported fill weigh scale tickets are provided in Appendix A.

Conclusions

Based on the observations and laboratory results provided in this report, soil quality at the final limits of the tank removal excavations and soil quality of the segregated spoil and imported fill used to backfill the excavations complies with the applicable standards for the parameters tested. As a result, no further remedial action is required at the tank excavation locations at the Site. The following supports this conclusion:

- None of the soil samples collected from the final tank excavation limits or from the excavated spoil or imported fill used to backfill the excavations exhibited visual or olfactory evidence of anthropogenic impact.
- With the exception of cobalt and vanadium, representative soil samples analyzed for fuel and waste oil-related constituents from the final excavation limits and from the excavated spoil and imported fill used to backfill the excavations did not exhibit diesel or waste oil constituent concentrations above standards.
- Elevated cobalt and vanadium concentrations above standards were detected in all of the analyzed samples acquired from the native clay formation at the final limits of the excavations. It is Strata's opinion that these elevated concentrations are likely naturally occurring in the local native clay formation because:
    - The clay samples were devoid of visual and olfactory evidence of anthropogenic impact;
    - Organic constituents, including those which are characteristic of the site contaminants (diesel, waste oil), were not detected in the analyzed clay samples;
    - The cobalt and vanadium concentrations in the clay samples are the same order of magnitude with maximum deviations relative to their means of 1.7 mg/kg and 3.5 mg/kg or 5.8 percent and 3.7 percent. These deviations are low and statistically insignificant, and suggest that the similar concentrations detected are most likely representative of the clay formation; and
    - Cobalt and vanadium are commonly found in clay deposits in Canada (Canadian Council of Ministers of the Environment (CCME) Vanadium 1997, Environment Canada Cobalt 2013).

Limitations

Strata prepared this report in accordance with generally accepted environmental methodologies referred to in applicable Canadian and Provincial Guidelines, Policies and Standards, which contains the limitations inherent in such methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

No assessment or investigation can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of the entire project area, and soil, groundwater and geologic conditions may vary between test samples. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Even when investigation work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies. Measurements and sampling data only represent the site conditions at the time of data collection and for the area(s) investigated.

Strata's investigation, within the framework of the contractual scope of work, was performed using the degree of care and skill ordinarily exercised, under similar circumstances by reputable environmental specialists in this or similar localities. The report represents Strata's, best professional judgment. Since

the facts forming the basis for the report are subject to professional interpretation, differing conclusions could be reached. None of the work performed herein shall constitute a legal opinion of any kind or nature.

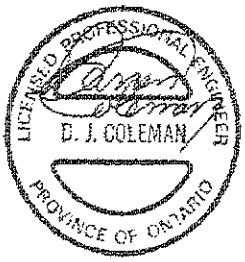
This report is issued with the understanding that it is the responsibility of the owner, or his/her representative, to ensure proper/legal disclosures to public, private, and regulatory entities. Strata makes no warranty as to the accuracy of statements made or reported by outside sources which are contained or referenced in this report. The interpretations of this report are based on the data collected and Strata's present working knowledge of environmental site assessments. As such, this report is valid as of the date shown and Strata cannot be responsible for subsequent changes in physical, chemical, environmental, and/or legislation over which Strata has no control.

Certification

This report has been prepared for the sole benefit of First Canada, Inc. The report may not be relied upon by any other person or entity without the express written consent of Strata.

STRATA ENVIRONMENTAL

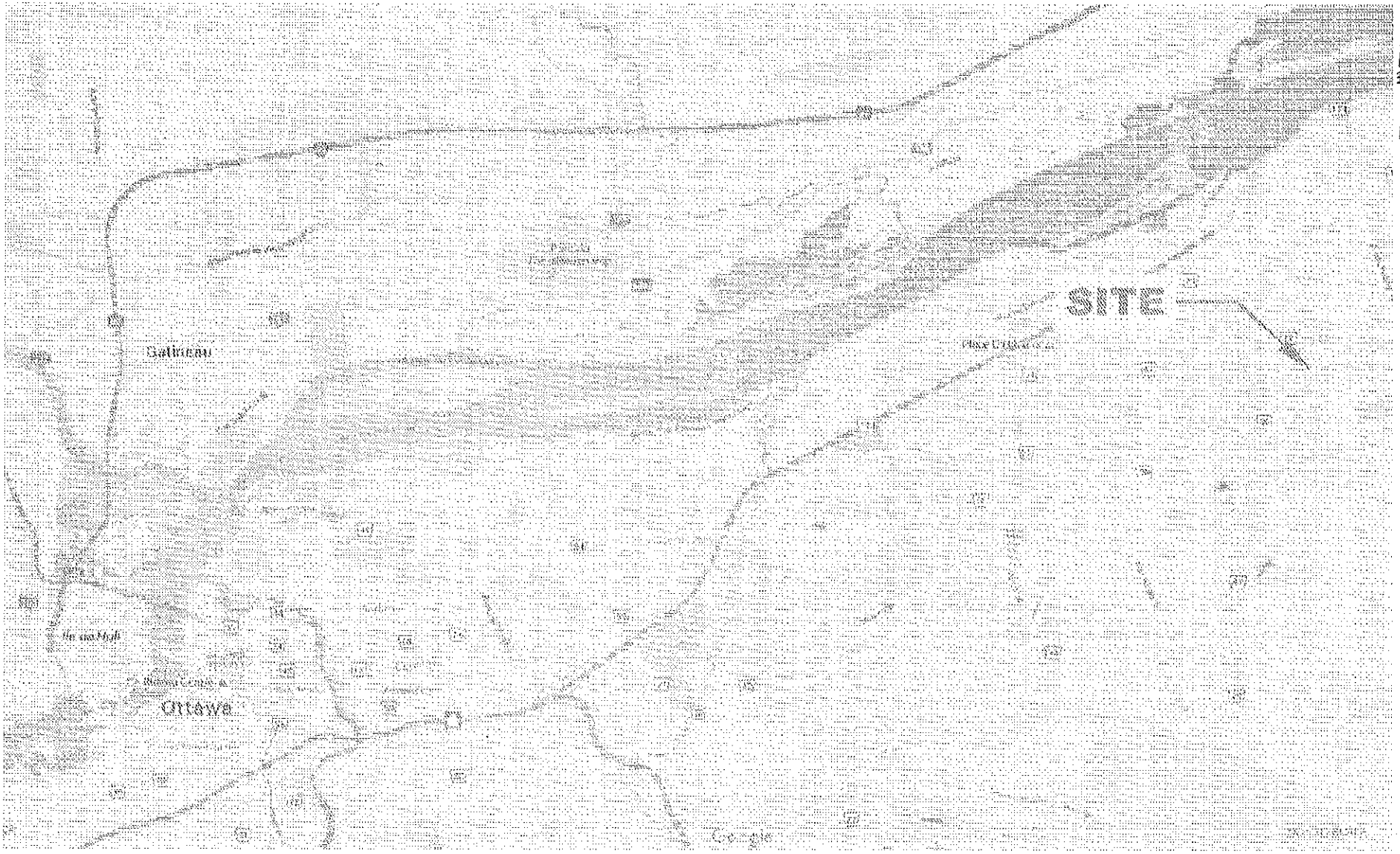
Prepared by:



PEO Certificate of Authorization #100140463
Darren Coleman, P.Eng., QP
President
COLESTAR Environmental Inc.

Tim Riddle, P.G.
Principal Geologist
Strata Environmental Services, Inc.

FIGURES



BASEMAP SOURCE: GOOGLE MAPS™

Strata ENVIRONMENTAL

110 PERIMETER PARK, SUITE E
KNOXVILLE, TN 37922
W[illegible]TRATAENV.COM
P (865) 538-2077

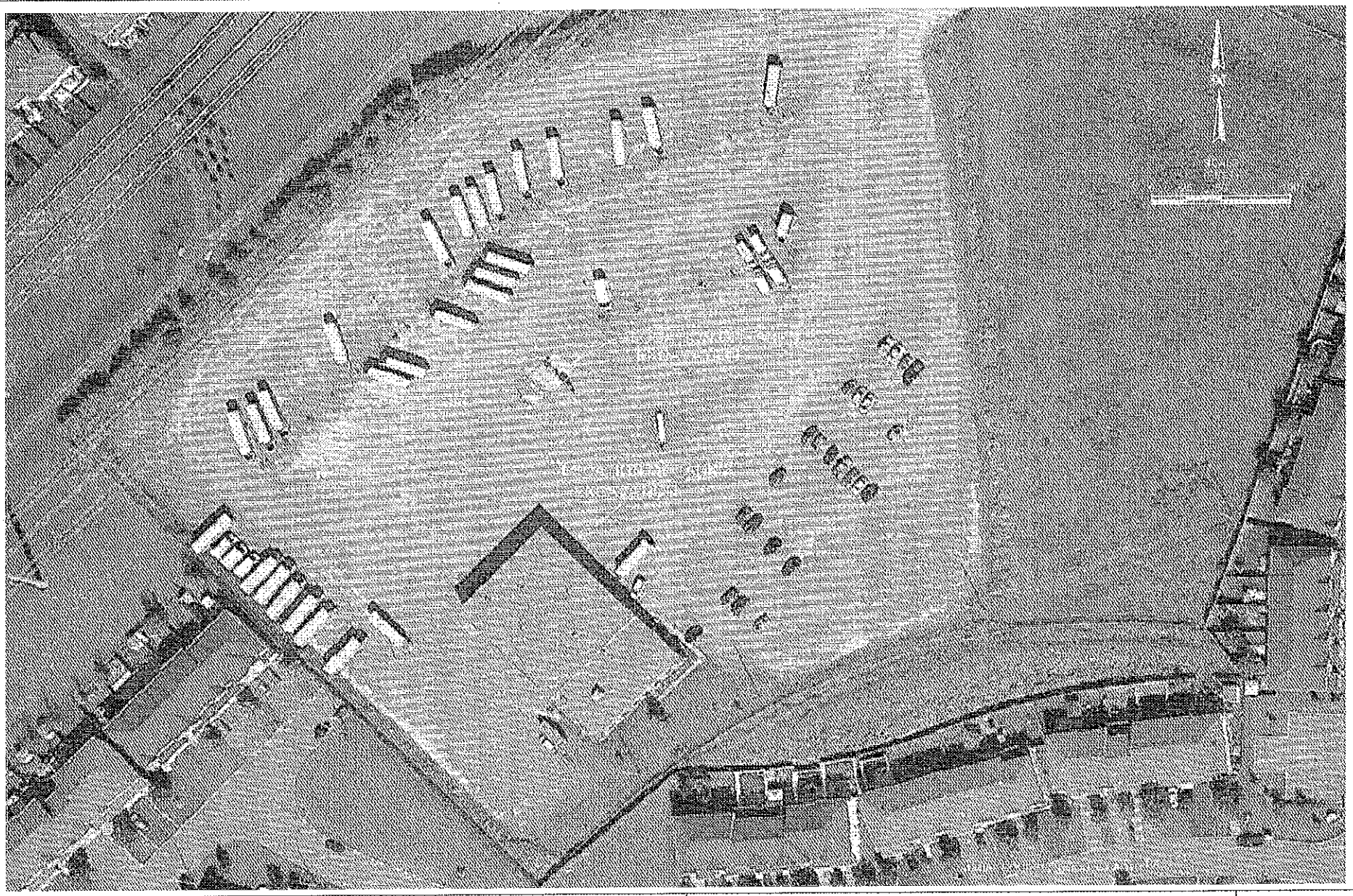
PROJECT NUMBER	DATE
0038409_1	October 2015

Site Location Map

First Student
1830 Trim Road, Orleans, Ontario

FIGURE 1

000014



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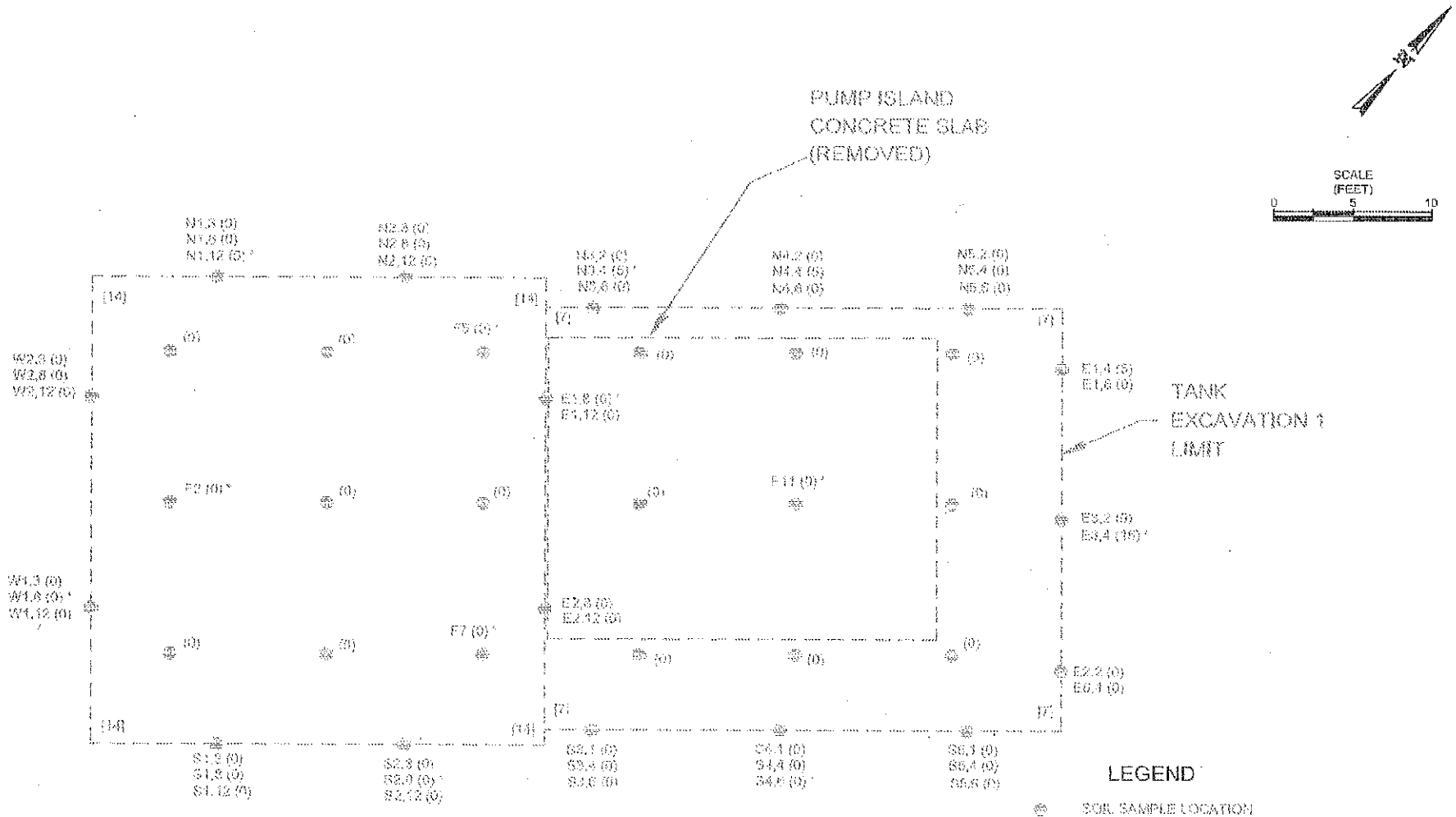
PROJECT NUMBER	DATE
0038409_1	October 2015

Location of Excavations

First Student
1630 Trim Road, Orleans, Ontario

FIGURE
2



LEGEND

- SOIL SAMPLE LOCATION
- [5] EXCAVATION DEPTH (FT)
- F1 FLOOR SAMPLE IDENTIFIER
- S1,3 SIDEWALL SAMPLE IDENTIFIER, SAMPLE DEPTH (FT)
- (0) COMBUSTIBLE VAPOR CONCENTRATION (PPMV)
- * SOIL SAMPLE ANALYZED AT OFFSITE LABORATORY

Strata ENVIRONMENTAL

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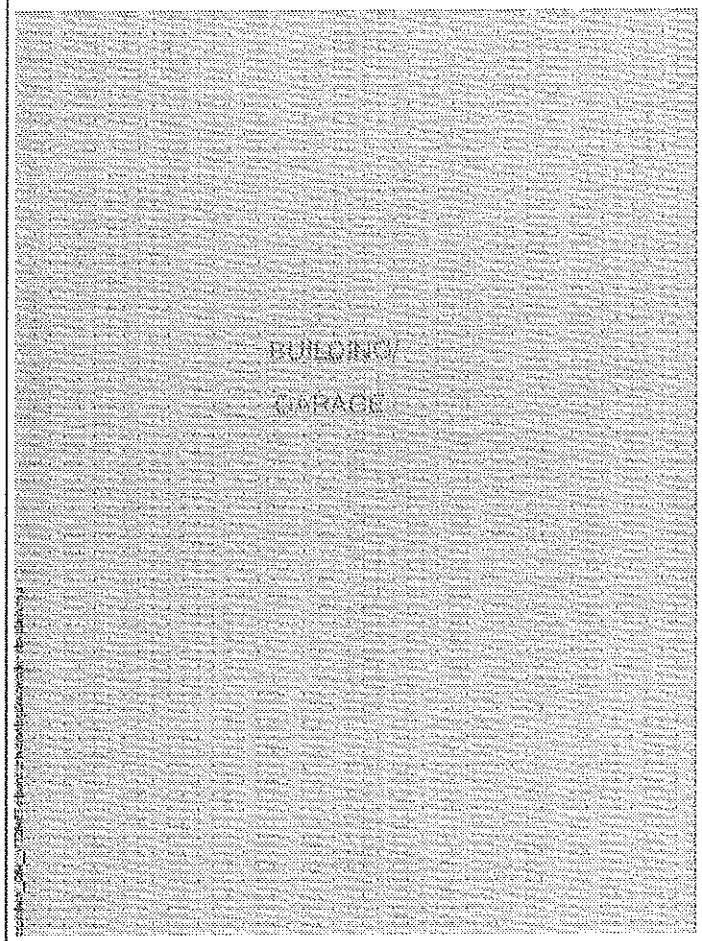
TANK EXCAVATION 1 (DIESEL USTS) SAMPLE LOCATIONS

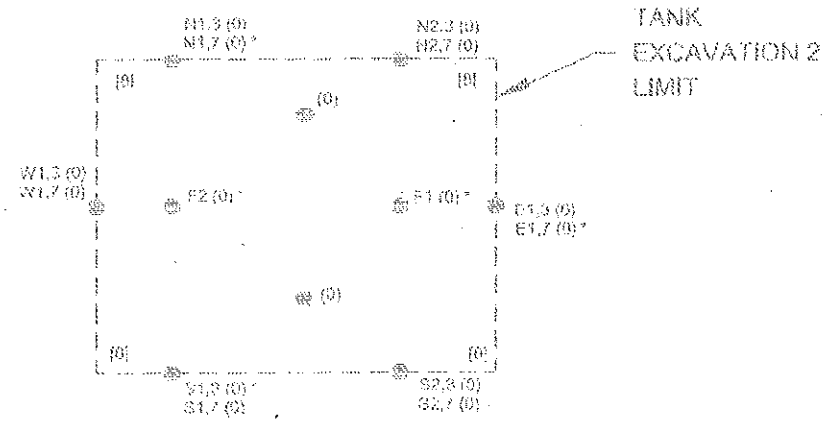
PROJECT NUMBER	DATE
1528465	October 2015

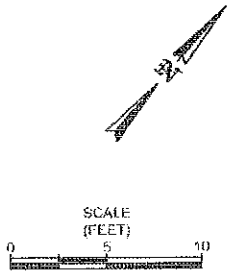
First Student
1830 Trim Road, Orleans, Ontario

FIGURE 3

000016







LEGEND

⊗	SOIL SAMPLE LOCATION
[8]	EXCAVATION DEPTH (FT)
F1	FLOOR SAMPLE IDENTIFIER
S1.3	SIDEWALL SAMPLE IDENTIFIER, SAMPLE DEPTH (FT)
(0)	COMBUSTIBLE VAPOR CONCENTRATION (PPMV)
*	SOIL SAMPLE ANALYZED AT OFFSITE LABORATORY

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116 PERIMETER PARK, SUITE E
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TANK EXCAVATION 2 (WASTE OIL UST) SAMPLE LOCATIONS

PROJECT NUMBER	DATE
1528465	October 2015

First Student
1830 Trim Road, Orleans, Ontario

FIGURE
4

000017

TABLES

TABLE 1

SOIL LABORATORY RESULTS: BTEX and PHCs

TANK EXCAVATION 1 [DIESEL USTs] - FINAL EXCAVATION LIMITS

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Excavation Floor					Excavation Sidewalls	
			T1-F2	T1-F5	T1-F7	T1-F11	T1-F11	T1-N3,4	T1-N1,12
			8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15
							DUP2		
	Residential	Commercial	B15-17039-4	B15-17039-3	B15-17039-5	B15-17034-1	B15-17034-3	B15-17034-5	B15-17039-8
Vapour Concentration (ppm)	---	---	0	0	0	0	0	5	0
pH	5 to 9	5 to 9	8.11	---	---	---	---	---	7.53
BTEX/PHCs									
Benzene	0.17	0.4	---	< 0.02	---	< 0.02	< 0.02	< 0.02	---
Toluene	6	78	---	< 0.03	---	< 0.03	< 0.03	< 0.03	---
Ethylbenzene	15	19	---	< 0.03	---	< 0.03	< 0.03	< 0.03	---
Xylenes	25	30	---	< 0.05	---	< 0.05	< 0.05	< 0.05	---
F1 (C6-C10) - BTEX	65	65	---	< 10	---	< 10	< 10	< 10	---
F2 (C10-C16 Hydrocarbons)	150	250	< 7	< 7	< 8	< 5	< 5	< 5	< 8
F3 (C16-C34 Hydrocarbons)	1300	2500	< 10	< 10	< 10	< 10	< 10	< 10	< 10
F4 (C34-C50 Hydrocarbons)	5600	6600	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Reached Baseline at C50	---	---	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Parameter	MOE Standards (1)		Excavation Sidewalls					
			T1-E1,8	T1-E3,4	T1-S2,8	T1-S4,6	T1-W1,8	T1-W1,8
			8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15	8-Jul-15
								DUP1
	Residential	Commercial	B15-17039-1	B15-17034-4	B15-17039-6	B15-17034-2	B15-17039-10	B15-17039-11
Vapour Concentration (ppm)	---	---	0	15	0	0	0	0
BTEX/PHCs								
Benzene	0.17	0.4	< 0.02	< 0.02	---	< 0.02	---	---
Toluene	6	78	< 0.03	< 0.03	---	< 0.03	---	---
Ethylbenzene	15	19	< 0.03	< 0.03	---	< 0.03	---	---
Xylenes	25	30	< 0.05	< 0.05	---	< 0.05	---	---
F1 (C6-C10) - BTEX	65	65	< 10	< 10	---	< 10	---	---
F2 (C10-C16 Hydrocarbons)	150	250	9	43	< 6	< 5	< 6	< 6
F3 (C16-C34 Hydrocarbons)	1300	2500	13	15	< 10	< 10	< 10	< 10
F4 (C34-C50 Hydrocarbons)	5600	6600	< 10	< 10	< 10	< 10	< 10	< 10
Reached Baseline at C50	---	---	Yes	Yes	Yes	Yes	Yes	Yes

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

'---' - no standard or not analyzed

DUP - field duplicate

B15-17039-4 - laboratory sample identifier

TABLE 2

SOIL LABORATORY RESULTS: VOCs and PHCs

TANK EXCAVATION 2 [WASTE OIL UST] - FINAL EXCAVATION LIMITS

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Excavation Floor		Excavation Sidewalls			
			T2-F1	T2-F2	T2-N1,7	T2-E1,7	T2-S1,3	T2-S1,3
			09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
								T2-DUP1
	Residential	Commercial	B15-17106-2	B15-17106-1	B15-17106-6	B15-17106-7	B15-17106-8	B15-17106-9
Vapour Concentration (ppm)	---	---	0	0	0	0	0	0
VOCs/PHCs								
1,1,1,2-Tetrachloroethane	0.05	0.11	---	< 0.02	---	< 0.02	---	---
1,1,1-Trichloroethane	3.4	12	---	< 0.02	---	< 0.02	---	---
1,1,2,2-Tetrachloroethane	0.05	0.094	---	< 0.02	---	< 0.02	---	---
1,1,2-Trichloroethane	0.05	0.11	---	< 0.02	---	< 0.02	---	---
1,1-Dichloroethane	11	21		< 0.03		< 0.03		
1,1-Dichloroethylene	0.05	0.48	---	< 0.02	---	< 0.02	---	---
1,2-Dichlorobenzene	4.3	8.5	---	< 0.02	---	< 0.02	---	---
1,2-Dichloroethane	0.05	0.05	---	< 0.03	---	< 0.03	---	---
1,2-Dichloropropane	0.085	0.68		< 0.03	---	< 0.03	---	---
1,3-Dichlorobenzene	6	12	---	< 0.02	---	< 0.02	---	---
1,3-Dichloropropene (Cis + Trans)	0.083	0.21	---	< 0.03	---	< 0.03	---	---
1,4-Dichlorobenzene	0.097	0.84	---	< 0.02	---	< 0.02	---	---
Acetone	28	28		< 0.3		< 0.3		
Benzene	0.17	0.4	---	< 0.02	---	< 0.02	---	---
Bromodichloromethane	13	18	---	< 0.02	---	< 0.02	---	---
Bromoform	0.26	1.7	---	< 0.02	---	< 0.02	---	---
Bromomethane	0.05	0.05		< 0.03	---	< 0.03		
Carbon Tetrachloride	0.12	1.5	---	< 0.02	---	< 0.02	---	---
Chlorobenzene	2.7	2.7	---	< 0.03	---	< 0.03	---	---
Chloroform	0.18	0.18	---	< 0.03	---	< 0.03	---	---
CIS 1,2-Dichloroethylene	30	37		< 0.02		< 0.02		
Dibromochloromethane	9.4	13	---	< 0.02	---	< 0.02	---	---
Dichlorodifluoromethane	25	25	---	< 0.02	---	< 0.02	---	---
Ethylbenzene	15	19	---	< 0.03	---	< 0.03	---	---
Ethylene Dibromide	0.05	0.05	---	< 0.02	---	< 0.02		---
Methyl Ethyl Ketone	44	88	---	< 0.1	---	< 0.1	---	---
Methyl Isobutyl Ketone	4.3	210	---	< 0.02	---	< 0.02	---	---
Methyl tert-butyl Ether	1.4	3.2	---	< 0.02	---	< 0.02	---	---
Methylene Chloride	0.96	2		< 0.04		< 0.04		
n-Hexane	34	88	---	< 0.03	---	< 0.03	---	---
Styrene	2.2	43	---	< 0.03	---	< 0.03	---	---
Tetrachloroethylene	2.3	21	---	< 0.03	---	< 0.03	---	---
Toluene	6	78		< 0.03	---	< 0.03	---	
TRANS-1,2-Dichloroethylene	0.75	9.3	---	< 0.03	---	< 0.03	---	---
Trichloroethylene	0.52	0.61	---	< 0.03	---	< 0.03	---	---
Trichlorofluoromethane	5.8	5.8	---	< 0.02	---	< 0.02	---	---
Vinyl Chloride	0.022	0.25		< 0.02		< 0.02		
Xylenes	25	30	---	< 0.05	---	< 0.05	---	---
F1 (C6-C10) - BTEX	65	65	---	< 10	---	< 10	---	---
F2 (C10-C16 Hydrocarbons)	150	250	< 7	< 8	< 6	< 7	< 6	< 6
F3 (C16-C34 Hydrocarbons)	1300	2500	< 10	< 10	< 10	< 10	< 10	< 10
F4 (C34-C50 Hydrocarbons)	5600	6600	< 10	< 10	< 10	< 10	< 10	< 10
Reached Baseline at C50	---	---	---	---	---	---	---	---

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

'---' - no standard or not analyzed

DUP - field duplicate

B15-17106-2 - laboratory sample identifier

TABLE 3

SOIL LABORATORY RESULTS: METALS

FINAL EXCAVATION LIMITS

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Tank Excavation 1				Tank Excavation 2	
			Excavation Floor		Excavation Sidewalls		Excavation Floor	
			T2-F1	T2-F2	T2-N1,7	T2-E1,7	T1-F11	T1-F2
			09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
			Clay	Clay	Clay	Clay	Clay	Clay
	Residential	Commercial	B15-17106-2	B15-17991-3	B15-17106-6	B15-17991-4	B15-17991-1	B15-17991-2
Antimony	7.5	50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	18	18	1.4	0.8	1.3	0.7	0.6	0.8
Barium	390	670	294	321	331	327	330	267
Beryllium	5	10	0.7	0.7	0.7	0.7	0.7	0.8
Boron	120	120	18.6	6.6	17.9	6.1	5.6	8.8
Boron (Hot Water Soluble)	1.5	2	0.13	0.16	0.15	0.18	0.09	0.39
Cadmium	1.2	1.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	160	160	113	117	112	117	113	106
Chromium (VI)	10	10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	22	100	28	29	29	29	30	27
Copper	180	300	49	50	50	51	52	49
Lead	120	120	10	8	10	9	9	9
Mercury	1.8	20	0.017	0.007	0.016	0.01	0.008	0.011
Molybdenum	6.9	40	< 1	< 1	< 1	< 1	< 1	< 1
Nickel	130	340	63	65	64	66	64	62
Selenium	2.4	5.5	0.8	0.5	0.7	0.6	0.5	0.6
Silver	25	50	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	1	3.3	0.4	0.4	0.4	0.4	0.4	0.3
Uranium	23	33	0.8	0.7	0.7	0.6	0.8	1.8
Vanadium	86	86	92	95	94	93	97	90
Zinc	340	340	122	128	126	123	128	120

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

'---' - no standard or not analyzed

B15-17106-2 - laboratory sample identifier

BOLD - value exceeds commercial and residential standards

BOLD - value exceeds residential standard

TABLE 4
SOIL LABORATORY RESULTS: VOCs, PHCs and METALS
EXCAVATED SPOIL REUSED AS BACKFILL
FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO
(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Tank Excavation 1			Tank Excavation 2		
			T1-ES3	T1-ES7	T1-ES13	T2-ES4	T2-ES9	T2-ES14
			8-Jul-15	8-Jul-15	8-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
	Residential	Commercial	B15-17039-9	B15-17039-2	B15-17039-7	B15-17106-4	B15-17106-3	B15-17106-5
Vapour Concentration (ppm)	---	---	0	0	0	0	0	0
VOCs/PHCs								
1,1,1,2-Tetrachloroethane	0.05	0.11	---	---	---	---	< 0.02	---
1,1,1-Trichloroethane	3.4	12	---	---	---	---	< 0.02	---
1,1,2,2-Tetrachloroethane	0.05	0.094	---	---	---	---	< 0.02	---
1,1,2-Trichloroethane	0.05	0.11	---	---	---	---	< 0.02	---
1,1-Dichloroethane	11	21	---	---	---	---	< 0.03	---
1,1-Dichloroethylene	0.05	0.48	---	---	---	---	< 0.02	---
1,2-Dichlorobenzene	4.3	8.5	---	---	---	---	< 0.02	---
1,2-Dichloroethane	0.05	0.05	---	---	---	---	< 0.03	---
1,2-Dichloropropane	0.085	0.68	---	---	---	---	< 0.03	---
1,3-Dichlorobenzene	6	12	---	---	---	---	< 0.02	---
1,3-Dichloropropene (Cis + Trans)	0.083	0.21	---	---	---	---	< 0.03	---
1,4-Dichlorobenzene	0.097	0.84	---	---	---	---	< 0.02	---
Acetone	28	28	---	---	---	---	< 0.3	---
Benzene	0.17	0.4	---	< 0.02	---	---	< 0.02	---
Bromodichloromethane	13	18	---	---	---	---	< 0.02	---
Bromoform	0.26	1.7	---	---	---	---	< 0.02	---
Bromomethane	0.05	0.05	---	---	---	---	< 0.03	---
Carbon Tetrachloride	0.12	1.5	---	---	---	---	< 0.02	---
Chlorobenzene	2.7	2.7	---	---	---	---	< 0.03	---
Chloroform	0.18	0.18	---	---	---	---	< 0.03	---
CIS 1,2-Dichloroethylene	30	37	---	---	---	---	< 0.02	---
Dibromochloromethane	9.4	13	---	---	---	---	< 0.02	---
Dichlorodifluoromethane	25	25	---	---	---	---	< 0.02	---
Ethylbenzene	15	19	---	< 0.03	---	---	< 0.03	---
Ethylene Dibromide	0.05	0.05	---	---	---	---	< 0.02	---
Methyl Ethyl Ketone	44	88	---	---	---	---	< 0.1	---
Methyl Isobutyl Ketone	4.3	210	---	---	---	---	< 0.02	---
Methyl tert-butyl Ether	1.4	3.2	---	---	---	---	< 0.02	---
Methylene Chloride	0.96	2	---	---	---	---	< 0.04	---
n-Hexane	34	88	---	---	---	---	< 0.03	---
Styrene	2.2	43	---	---	---	---	< 0.03	---
Tetrachloroethylene	2.3	21	---	---	---	---	< 0.03	---
Toluene	6	78	---	< 0.03	---	---	< 0.03	---
TRANS-1,2-Dichloroethylene	0.75	9.3	---	---	---	---	< 0.03	---
Trichloroethylene	0.52	0.61	---	---	---	---	< 0.03	---
Trichlorofluoromethane	5.8	5.8	---	---	---	---	< 0.02	---
Vinyl Chloride	0.022	0.25	---	---	---	---	< 0.02	---
Xylenes	25	30	---	< 0.05	---	---	< 0.05	---
F1 (C6-C10) - BTEX	65	65	---	< 10	---	---	< 10	---
F2 (C10-C16 Hydrocarbons)	150	250	< 5	< 5	< 7	< 7	< 5	< 5
F3 (C16-C34 Hydrocarbons)	1300	2500	< 10	< 10	< 10	< 10	< 10	11
F4 (C34-C50 Hydrocarbons)	5600	6600	< 10	< 10	< 10	< 10	< 10	< 10
Reached Baseline at C50	---	---	Yes	Yes	Yes	Yes	Yes	Yes

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

B15-17039-9 - laboratory sample identifier

'---' - no standard or not analyzed

TABLE 4
SOIL LABORATORY RESULTS: VOCs, PHCs and METALS
EXCAVATED SPOIL REUSED AS BACKFILL
FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO
(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Tank Excavation 1			Tank Excavation 2		
			T1-ES3	T1-ES7	T1-ES13	T2-ES4	T2-ES9	T2-ES14
			8-Jul-15	8-Jul-15	8-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
						Fill/Clay		Fill
	Residential	Commercial	B15-17039-9	B15-17039-2	B15-17039-7	B15-17106-4	B15-17106-3	B15-17106-5
Metals								
Antimony	7.5	50	---	---	---	< 0.5	---	< 0.5
Arsenic	18	18	---	---	---	1.4	---	0.9
Barium	390	670	---	---	---	230	---	97
Beryllium	5	10	---	---	---	0.6	---	< 0.2
Boron	120	120	---	---	---	16.3	---	6.1
Boron (Hot Water Soluble)	1.5	2	---	---	---	0.14	---	0.09
Cadmium	1.2	1.9	---	---	---	< 0.5	---	< 0.5
Chromium	160	160	---	---	---	95	---	6
Chromium (VI)	10	10	---	---	---	< 0.5	---	< 0.5
Cobalt	22	100	---	---	---	21	---	3
Copper	180	300	---	---	---	43	---	9
Lead	120	120	---	---	---	9	---	7
Mercury	1.8	20	---	---	---	0.019	---	0.019
Molybdenum	6.9	40	---	---	---	< 1	---	< 1
Nickel	130	340	---	---	---	54	---	7
Selenium	2.4	5.5	---	---	---	0.7	---	< 0.5
Silver	25	50	---	---	---	< 0.2	---	< 0.2
Thallium	1	3.3	---	---	---	0.3	---	0.1
Uranium	23	33	---	---	---	0.7	---	0.5
Vanadium	86	86	---	---	---	70	---	7
Zinc	340	340	---	---	---	96	---	25

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

'---' - no standard or not analyzed

B15-17039-9 - laboratory sample identifier

TABLE 5

SOIL LABORATORY RESULTS: VOCs, PHCs, PAHs, PCBs and INORGANICS

IMPORTED FILL MATERIAL

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		SP-4
			28-Jul-15
	Residential	Commercial	B15-19020-4
Vapour Concentration (ppm)	---	---	0
VOCs/PHCs			
1,1,1,2-Tetrachloroethane	0.05	0.11	< 0.02
1,1,1-Trichloroethane	3.4	12	< 0.02
1,1,2,2-Tetrachloroethane	0.05	0.094	< 0.02
1,1,2-Trichloroethane	0.05	0.11	< 0.02
1,1-Dichloroethane	11	21	< 0.03
1,1-Dichloroethylene	0.05	0.48	< 0.02
1,2-Dichlorobenzene	4.3	8.5	< 0.02
1,2-Dichloroethane	0.05	0.05	< 0.03
1,2-Dichloropropane	0.085	0.68	< 0.03
1,3-Dichlorobenzene	6	12	< 0.02
1,3-Dichloropropene (Cis + Trans)	0.083	0.21	< 0.03
1,4-Dichlorobenzene	0.097	0.84	< 0.02
Acetone	28	28	< 0.3
Benzene	0.17	0.4	< 0.02
Bromodichloromethane	13	18	< 0.02
Bromoform	0.26	1.7	< 0.02
Bromomethane	0.05	0.05	< 0.03
Carbon Tetrachloride	0.12	1.5	< 0.02
Chlorobenzene	2.7	2.7	< 0.03
Chloroform	0.18	0.18	< 0.03
CIS 1,2-Dichloroethylene	30	37	< 0.02
Dibromochloromethane	9.4	13	< 0.02
Dichlorodifluoromethane	25	25	< 0.02
Ethylbenzene	15	19	< 0.03
Ethylene Dibromide	0.05	0.05	< 0.02
Methyl Ethyl Ketone	44	88	< 0.1
Methyl Isobutyl Ketone	4.3	210	< 0.02
Methyl tert-butyl Ether	1.4	3.2	< 0.02
Methylene Chloride	0.96	2	< 0.04
n-Hexane	34	88	< 0.03
Styrene	2.2	43	< 0.03
Tetrachloroethylene	2.3	21	< 0.03
Toluene	6	78	< 0.03
TRANS-1,2-Dichloroethylene	0.75	9.3	< 0.03
Trichloroethylene	0.52	0.61	< 0.03
Trichlorofluoromethane	5.8	5.8	< 0.02
Vinyl Chloride	0.022	0.25	< 0.02
Xylenes	25	30	< 0.05
F1 (C6-C10) - BTEX	65	65	< 10
F2 (C10-C16 Hydrocarbons)	150	250	12
F3 (C16-C34 Hydrocarbons)	1300	2500	16
F4 (C34-C50 Hydrocarbons)	5600	6600	< 10
Reached Baseline at C50	---	---	Yes

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commercial sites with fine to medium grained soil in a non-potable groundwater setting.

Dates presented are sample dates

"---" - no standard or not analyzed

DUP - field duplicate

B15-19020-4 - laboratory sample identifier

TABLE 5

SOIL LABORATORY RESULTS: VOCs, PHCs, PAHs, PCBs and INORGANICS

IMPORTED FILL MATERIAL

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		SP-1	SP-2	SP-2
			28-Jul-15	28-Jul-15	28-Jul-15
					Dup-S1
	Residential	Commercial	B15-19020-1	B15-19020-2	B15-19020-6
Inorganics					
pH (pH units)	5 to 9	5 to 9	---	7.69	---
Electrical Conductivity (mS/cm)	0.7	1.4	---	0.528	---
Sodium Adsorption Ratio (unitless)	5	12	---	0.551	---
Antimony	7.5	50	< 0.5	< 0.5	< 0.5
Arsenic	18	18	0.6	1.1	2
Barium	390	670	301	302	264
Beryllium	5	10	< 0.2	< 0.2	< 0.2
Boron	120	120	6.7	7.1	6.3
Boron (Hot Water Soluble)	1.5	2	0.16	0.15	0.16
Cadmium	1.2	1.9	< 0.5	< 0.5	< 0.5
Chromium	160	160	5	5	5
Chromium (VI)	10	10	< 0.5	< 0.5	< 0.5
Cobalt	22	100	2	2	2
Copper	180	300	5	5	4
Lead	120	120	< 5	< 5	< 5
Mercury	1.8	20	0.007	0.007	0.006
Molybdenum	6.9	40	< 1	< 1	< 1
Nickel	130	340	7	7	7
Selenium	2.4	5.5	< 0.5	< 0.5	< 0.5
Silver	25	50	< 0.2	< 0.2	< 0.2
Thallium	1	3.3	0.1	0.1	< 0.1
Uranium	23	33	0.6	0.6	0.5
Vanadium	86	86	3	3	3
Zinc	340	340	23	16	14

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commercial sites with fine to medium grained soil in a non-potable groundwater setting.

Dates presented are sample dates

'---' - no standard or not analyzed

DUP - field duplicate

B15-19020-1 - laboratory sample identifier

TABLE 5
SOIL LABORATORY RESULTS: VOCs, PHCs, PAHs, PCBs and INORGANICS
IMPORTED FILL MATERIAL
FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO
(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Generic Standards (1)		SP-3	SP-5
			28-Jul-15	28-Jul-15
	Residential	Commercial	B15-19020-3	B15-19020-5
Acenaphthene	58	96	< 0.005	---
Acenaphthylene	0.17	0.17	< 0.005	---
Anthracene	0.74	0.74	< 0.005	---
Benz(a)anthracene	0.63	0.96	< 0.005	---
Benzo(a)pyrene	0.3	0.3	< 0.005	---
Benzo(b)fluoranthene	0.78	0.96	< 0.005	---
Benzo(k)fluoranthene	0.78	0.96	< 0.005	---
Benzo(g,h,i)perylene	7.8	9.6	< 0.005	---
Chrysene	7.8	9.6	< 0.005	---
Dibenz(a,h)anthracene	0.1	0.1	< 0.005	---
Fluoranthene	0.69	9.6	< 0.005	---
Fluorene	69	69	< 0.005	---
Indeno(1,2,3-cd)pyrene	0.48	0.95	< 0.005	---
2-and 1-methyl Naphthalene	3.4	85	0.014	---
Naphthalene	0.75	28	0.023	---
Phenanthrene	7.8	16	0.009	---
Pyrene	78	96	< 0.005	---
Poly-Chlorinated Biphenyls (PCB's)	0.35	1.1	---	< 0.3

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commercial sites with fine to medium grained soil in a non-potable groundwater setting.

Dates presented are sample dates

Depths provided are in metres (m) and feet (ft) and are relative to grade

'---' - not analyzed or no standard

B15-22317-1 - laboratory sample identifier

APPENDIX A
MANIFEST AND WEIGH SCALE TICKETS

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciales sur l'environnement et le transport.

HL71269-5

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

A Generator / Consignor / Producteur / expéditeur — Registration No. / Generator ID No. / N° d'enregistrement - GID producteur: OU0228837

Company name / Nom de l'entreprise: First Canada ULC

Mailing address / Adresse postale: Same.

Street address / Adresse de livraison: 1830 Tom Rd

City / Ville: Ottawa — Province: Ont — Postal code / Code postal: K4M 3P8

Intended hauler or consignee / Transporteur ou destinataire prévu: Triangle Service — Registration No. / Hauler ID No. / N° d'enregistrement - GID transporteur: 2302-SWB-ON

Same

Stock Room Ctr triangle-p-ca6682220ca

2565 Delta Ave

Ottawa Ont K1B1K

B Carrier / Transporteur — Registration No. / Hauler ID No. / N° d'enregistrement - GID transporteur: AB60231

Company name / Nom de l'entreprise: Triangle Pump Service Limited

2565 Delta Ave Ottawa Ont K1B1K

Stock Room Ctr triangle-p-ca6682220ca

Vehicle / Véhicule: 720-7PK — Province: Ont

Port of entry / Point d'entrée — Port of exit / Point de sortie

Carrier Certification: I certify that the information contained in Part B and that the information contained in Part C is correct, complete and unambiguous. I have not reason or cause to believe or suspect that any of the information or description given is false or misleading, or that any material fact has been omitted or misrepresented, or that any other circumstance exists that may affect the environment, health & safety of any person.

Name of authorized person (print): JEFF Mulligan — Tel. No. / N° de tél.: 6138220624

Year / Année: 15 — Month / Mois: 07 — Day / Jour: 07 — Signature

C Receiver / consignee / Récipiendaire / destinataire — Registration No. / Receiver ID No. / N° d'enregistrement - GID récipiendaire

Reference No. (if other than one in Part A) / N° de référence (si autre que celle de la section A ci-dessus)

Receiver / Consignee certification: name as in Part A. I am the representative of the receiver / consignee and I is authorized to receive.
☐ Yes / Oui ☐ No, consignee has not taken delivery, complete cases as required.

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

Tel. No. / N° de tél.

Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ AM ☐ PM

Remarks or exceptions to be transferred, specify intended recipient, if not the hauler, or reasons for exceptions discovered after transfer, continue in extra cells as necessary

Name of authorized person (print): Name de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél.

Flow code / Code de flux	Shipping name / Appellation de l'expédition	Class / Classe	UN No.	Packing group / Groupe d'emballage	Quantity / Quantité	Units / Unités	Packaging / Contenant No.	Codes	Hazardous Waste Code / Code de déchet dangereux
02L	used oil & lubs	N/A	N/A	N/A	1104	L	01	03	L

Generator / Consignor certification: I certify that the information contained in Part A is true and complete.
Signature: Del Cameron — Tel. No. / N° de tél.: 416-684-1736

Date / Date: Year / Année 15 — Month / Mois 07 — Day / Jour 07 — Time / Heure ☐ AM ☐ PM 0830

Estimated arrival date / Date d'arrivée prévue: Year / Année 15 — Month / Mois 07 — Day / Jour 07

1-800-263-8860

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 1 (white / blanche)

MOE 06-807 (03/07)

000028

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MC-88442 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 10:38 am	11-Aug-2015 10:48 am

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL

Reference/Référence: H.F SMITH 86-15

BOL/No. de Commande:

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

Contract/Contrat: 20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

	INBOUND	
GROSS WEIGHT/BRUT	56,990.00	kg
TARE WEIGHT/TARE VEHICULE	21,260.00	kg
NET WEIGHT/NET	35,730.00	kg

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
35.73	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MC-88463 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 11:06 am	11-Aug-2015 11:23 am

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL

Reference/Référence: H.F SMITH 89-07

BOL/No. de Commande:

001169 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

Contract/Contrat: 20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

	INBOUND	
GROSS WEIGHT/BRUT	58,300.00	kg
TARE WEIGHT/TARE VEHICULE	20,000.00	kg
NET WEIGHT/NET	38,300.00	kg

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
38.30	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MC-8844 Weighmaster/Operator: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 11:57 am	11-Aug-2015 12:32 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 80-03

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

INBOUND
61,460.00
20,480.00
40,970.00

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
40.97	MT	SOIL: C				

Signature:

H.S.T # 84188 4893770001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MC-8848 Weighmaster/Operator: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 12:48 pm	11-Aug-2015 1:00 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 98-13

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

INBOUND
57,530.00
21,180.00
36,350.00

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
36.35	MT	SOIL: C				

Signature:

H.S.T # 84188 4893770001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MO-89948 Weighmaster/Operator: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 1:38 pm	11-Aug-2015 1:51 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 66-07

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

INBOUND
58,290.00
19,990.00
38,300.00

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Tarif	Extension/Extension	Tax/Taxe	Total/Total
38.30	MT	SOIL: C				

Signature:

H.S.T # 841[illegible] 4893RT0001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: MO-89950 Weighmaster/Operator: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 2:49 pm	11-Aug-2015 2:53 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 60-03

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

INBOUND
60,420.00
20,100.00
40,320.00

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Tarif	Extension/Extension	Tax/Taxe	Total/Total
40.32	MT	SOIL: C				

Signature:

H.S.T # 841[illegible] 4893RT0001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: M0-8981 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 3:22 pm	11-Aug-2015 3:32 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 66-15

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

INBOUND
58,450.00
21,120.00
38,330.00

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
38.33	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

REPRINT

Ticket: M0-8953 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
11-Aug-2015 4:38 pm	11-Aug-2015 4:54 pm

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 66-07

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

INBOUND
58,500.00
19,960.00
38,540.00

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
38.54	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

REPRINT

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

environmental

Ticket: MO-88864 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
12-Aug-2015 7:09 am	12-Aug-2015 7:21 am

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
H.F SMITH 60-03

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

INBOUND
59,800.00
20,320.00
39,580.00

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
39.58	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

REPRINT

GFL ENVIRONMENTAL - Moose Creek
17335 Allaire Road
Moose Creek, ON K0C 1W0
PH:(613) 538-4880 FX:(613) 538-4882

environmental

Ticket: MO-88958 Weighmaster/Operateur: SAMANTHA HORT

Date/Entrée	Date/Sortie
12-Aug-2015 10:04 am	12-Aug-2015 10:28 am

Project: 20151292 - FIRST STUDENT/1830 TRIM RD, ORL
HF SMITH/60-03

001160 - CANNINGTON CONSTRUCTION LIMITED
4 FORTECON DRIVE UNIT #3
GORMLEY, ON L0H 1G0

20151292 - FIRST STUDENT/1830 TRIM RD, ORLEANS

INBOUND
54,370.00
20,200.00
34,170.00

Quantity/Quantité	Unit/Unité	Description/Description	Rate/Taux	Extension/Extension	Tax/Taxe	Total/Total
34.17	MT	SOIL: C				

Signature:

H.S.T # 84188 4893RT0001

APPENDIX B
LABORATORY CERTIFICATES

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47732

REPORT No. B15-17034

Report To:
Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 08-Jul-15
DATE REPORTED: 10-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T1-F11	T1-S4,6	T1-Dup2	T1-E3,4
			Sample I.D.		B15-17034-1	B15-17034-2	B15-17034-3	B15-17034-4
			Date Collected		08-Jul-15	08-Jul-15	08-Jul-15	08-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
% moisture	%			10-Jul-15/K	33.8	26.1	27.1	29.7
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02	< 0.02	< 0.02	< 0.02
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	< 0.03
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	< 0.03
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O	< 0.04	< 0.04	< 0.04	< 0.04
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	< 0.03
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O	< 0.05	< 0.05	< 0.05	< 0.05
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O	104	105	104	105
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O	< 10	< 10	< 10	< 10
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	10-Jul-15/K	< 5	< 5	< 5	43
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	15
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	< 10

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
Client Centered. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47732

REPORT No. B15-17034

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 08-Jul-15
DATE REPORTED: 10-Jul-15
SAMPLE MATRIX: * Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T1-N3,4			
			Sample I.D.		B15-17034-5			
			Date Collected		08-Jul-15			
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
% moisture	%			10-Jul-15/K	24.6			
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02			
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03			
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03			
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O	< 0.04			
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03			
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O	< 0.05			
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O	105			
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O	< 10			
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	10-Jul-15/K	< 5			
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10			
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10			

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
Client centrified. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47735

REPORT No. B15-17039

Report To:
Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 08-Jul-15
DATE REPORTED: 14-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-02
WATERWORKS NO.

			Client I.D.		T1-E1,8	T1-ES7	T1-F5	T1-F2
			Sample I.D.		B15-17039-1	B15-17039-2	B15-17039-3	B15-17039-4
			Date Collected		08-Jul-15	08-Jul-15	08-Jul-15	08-Jul-15
Parameter	Units	M.D.L.	Reference Method	Date/Site Analyzed				
% moisture	%			14-Jul-15/K	31.1	11.6	41.0	45.5
pH @25°C	pH Units		SM 4500H	13-Jul-15/O				8.11
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02	< 0.02	< 0.02	
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O	< 0.04	< 0.04	< 0.04	
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03	< 0.03	< 0.03	
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O	< 0.05	< 0.05	< 0.05	
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O	104	105	105	
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O	< 10	< 10	< 10	
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	10-Jul-15/K	9	< 5	< 7	< 7
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	10-Jul-15/K	13	< 10	< 10	< 10
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	< 10

1 Note: Elevated MDL due to high % moisture.

Gord Murphy
Lab Supervisor

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47735

REPORT No. B15-17039

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 08-Jul-15
DATE REPORTED: 14-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-02
WATERWORKS NO.

			Client I.D.		T1-F7	T1-S2,8	T1-ES13	T1-N1.12
			Sample I.D.		B15-17039-5	B15-17039-6	B15-17039-7	B15-17039-8
			Date Collected		08-Jul-15	08-Jul-15	08-Jul-15	08-Jul-15
Parameter	Units	M.D.L.	Reference Method	Date/Site Analyzed				
% moisture	%			14-Jul-15/K	41.3	29.8	34.6	45.9
pH @25°C	pH Units		SM 4500H	13-Jul-15/O				7.53
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O				
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O				
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O				
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O				
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O				
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	10-Jul-15/K	< 8 [1]	< 6 [1]	< 7 [1]	< 8 [1]
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	< 10
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	< 10

1 Note: Elevated MDL due to high % moisture.

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
Client centered. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47735

REPORT No. B15-17039

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 08-Jul-15
DATE REPORTED: 14-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-02
WATERWORKS NO.

			Client I.D.		T1-ES3	T1-W1,8	T1-Dup1	
			Sample I.D.		B15-17039-9	B15-17039-10	B15-17039-11	
			Date Collected		08-Jul-15	08-Jul-15	08-Jul-15	
Parameter	Units	M.D.L.	Reference Method	Date/Site Analyzed				
% moisture	%			14-Jul-15/K	11.8	28.4	29.2	
pH @25°C	pH Units		SM 4500H	13-Jul-15/O				
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O				
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O				
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O				
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O				
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O				
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	10-Jul-15/K	< 5	< 6 [1]	< 6 [1]	
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	10-Jul-15/K	< 10	< 10	< 10	

1 Note: Elevated MDL due to high % moisture.

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (i)

Report To:
Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-F1	T2-ES4	T2-ES14	T2-N1,7
			Sample I.D.		B15-17106-2	B15-17106-4	B15-17106-5	B15-17106-6
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Antimony	µg/g	0.5	EPA 6020	10-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	µg/g	0.5	EPA 6020	10-Jul-15/O	1.4	1.4	0.9	1.3
Boron (HWS)	µg/g	0.02	MOE3470	10-Jul-15/O	0.13	0.14	0.09	0.15
Selenium	µg/g	0.5	EPA 6020	10-Jul-15/O	0.8	0.7	< 0.5	0.7
Thallium	µg/g	0.1	EPA 6020	10-Jul-15/O	0.4	0.3	0.1	0.4
Uranium	µg/g	0.1	EPA 6020	10-Jul-15/O	0.8	0.7	0.5	0.7
Barium	µg/g	1	EPA 6010	10-Jul-15/O	294	230	97	331
Beryllium	µg/g	0.2	EPA 6010	10-Jul-15/O	0.7	0.6	< 0.2	0.7
Boron	µg/g	0.5	EPA 6010	10-Jul-15/O	18.6	16.3	6.1	17.9
Cadmium	µg/g	0.5	EPA 6010	10-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	µg/g	1	EPA 6010	10-Jul-15/O	113	95	6	112
Chromium (VI)	µg/g	0.5	EPA7196A	13-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	µg/g	1	EPA 6010	10-Jul-15/O	28	21	3	29
Copper	µg/g	1	EPA 6010	10-Jul-15/O	49	43	9	50
Lead	µg/g	5	EPA 6010	10-Jul-15/O	10	9	7	10
Mercury	µg/g	0.005	EPA 7471A	10-Jul-15/O	0.017	0.019	0.019	0.016
Molybdenum	µg/g	1	EPA 6010	10-Jul-15/O	< 1	< 1	< 1	< 1
Nickel	µg/g	1	EPA 6010	10-Jul-15/O	63	54	7	64
Silver	µg/g	0.2	EPA 6010	10-Jul-15/O	< 0.2	< 0.2	< 0.2	< 0.2
Vanadium	µg/g	1	EPA 6010	10-Jul-15/O	92	70	7	94
Zinc	µg/g	3	EPA 6010	10-Jul-15/O	122	96	25	126

Gord Murphy
Lab Supervisor

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill
Uncertainty Values available upon request

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-F2	T2-F1	T2-ES9	T2-ES4
			Sample I.D.		B15-17106-1	B15-17106-2	B15-17106-3	B15-17106-4
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	Units	M.D.L.	Reference Method	Date/Site Analyzed				
% moisture	%			15-Jul-15/K	41.3	33.1	6.80	29.3
Acetone	µg/g	0.3	EPA 8260	09-Jul-15/O	< 0.3		< 0.3	
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Bromodichloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Bromoform	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Bromomethane	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Carbon Tetrachloride	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Chloroform	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dibromochloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dibromoethane,1,2- (Ethylene Dibromide)	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichlorobenzene,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichlorobenzene,1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichlorobenzene,1,4-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichlorodifluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichloroethane,1,1-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dichloroethane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-F2	T2-F1	T2-ES9	T2-ES4
			Sample I.D.		B15-17106-1	B15-17106-2	B15-17106-3	B15-17106-4
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Dichloroethene, 1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichloroethene, cis-1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichloroethene, trans-1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dichloromethane (Methylene Chloride)	µg/g	0.04	EPA 8260	09-Jul-15/O	< 0.04		< 0.04	
Dichloropropane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dichloropropene 1,3-cis+trans	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dichloropropene, cis-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Dichloropropene, trans-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Hexane	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Methyl Ethyl Ketone	µg/g	0.1	EPA 8260	09-Jul-15/O	< 0.1		< 0.1	
Methyl Isobutyl Ketone	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Methyl-t-butyl Ether	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Monochlorobenzene (Chlorobenzene)	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Styrene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	

Gord Murphy
Lab Supervisor

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

Report To:
Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-F2	T2-F1	T2-ES9	T2-ES4
			Sample I.D.		B15-17106-1	B15-17106-2	B15-17106-3	B15-17106-4
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	Units	M.D.L.	Reference Method	Date/Site Analyzed				
Tetrachloroethane,1,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Tetrachloroethane,1,1,2,2-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Tetrachloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Trichloroethane,1,1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Trichloroethane,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Trichloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Trichlorofluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Vinyl Chloride	µg/g	0.02	EPA 8260	09-Jul-15/O	< 0.02		< 0.02	
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O	< 0.04		< 0.04	
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O	< 0.05		< 0.05	
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O	< 0.03		< 0.03	
Dichloroethane-d4,1,2-(SS)	%	10	EPA 8260	09-Jul-15/O	109		108	
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O	106		106	
Bromofluorobenzene,4(SS)	%	10	EPA 8260	09-Jul-15/O	88		82	
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O	< 10		< 10	
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	14-Jul-15/K	< 8	< 7	< 5	< 7

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

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Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

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5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

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2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
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DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-F2	T2-F1	T2-ES9	T2-ES4
			Sample I.D.		B15-17106-1	B15-17106-2	B15-17106-3	B15-17106-4
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	14-Jul-15/K	< 10	< 10	< 10	< 10
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	14-Jul-15/K	< 10	< 10	< 10	< 10

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DATE RECEIVED: 09-Jul-15
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SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-ES14	T2-N1,7	T2-E1,7	T2-S1,3
			Sample I.D.		B15-17106-5	B15-17106-6	B15-17106-7	B15-17106-8
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
% moisture	%			15-Jul-15/K	6.10	28.9	29.6	23.6
Acetone	µg/g	0.3	EPA 8260	09-Jul-15/O			< 0.3	
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Bromodichloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Bromoform	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Bromomethane	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Carbon Tetrachloride	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Chloroform	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dibromochloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dibromoethane,1,2- (Ethylene Dibromide)	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichlorobenzene,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichlorobenzene,1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichlorobenzene,1,4-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichlorodifluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichloroethane,1,1-	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dichloroethane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

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Final Report

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Markham ON L6B 1G3
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Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-ES14	T2-N1,7	T2-E1,7	T2-S1,3
			Sample I.D.		B15-17106-5	B15-17106-6	B15-17106-7	B15-17106-8
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Dichloroethene, 1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichloroethene, cis-1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichloroethene, trans-1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dichloromethane (Methylene Chloride)	µg/g	0.04	EPA 8260	09-Jul-15/O			< 0.04	
Dichloropropane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dichloropropene 1,3-cis+trans	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dichloropropene, cis-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Dichloropropene, trans-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Hexane	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Methyl Ethyl Ketone	µg/g	0.1	EPA 8260	09-Jul-15/O			< 0.1	
Methyl Isobutyl Ketone	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Methyl-t-butyl Ether	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Monochlorobenzene (Chlorobenzene)	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Styrene	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

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Final Report

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Attention: Darren Coleman

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Ottawa Ontario K1V 7P1
Tel: 613-526-0123
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DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-ES14	T2-N1,7	T2-E1,7	T2-S1,3
			Sample I.D.		B15-17106-5	B15-17106-6	B15-17106-7	B15-17106-8
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Tetrachloroethane,1,1,2,2-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Tetrachloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Trichloroethane,1,1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Trichloroethane,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Trichloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Trichlorofluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Vinyl Chloride	µg/g	0.02	EPA 8260	09-Jul-15/O			< 0.02	
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O			< 0.04	
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O			< 0.05	
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O			< 0.03	
Dichloroethane-d4,1,2-(SS)	%	10	EPA 8260	09-Jul-15/O			107	
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O			105	
Bromofluorobenzene,4(SS)	%	10	EPA 8260	09-Jul-15/O			82	
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O			< 10	
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	14-Jul-15/K	< 5	< 6	< 7	< 6

Gord Murphy
Lab Supervisor

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

CADUCEON ENVIRONMENTAL LABORATORIES
Client centered. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-ES14	T2-N1.7	T2-E1.7	T2-S1.3
			Sample I.D.		B15-17106-5	B15-17106-6	B15-17106-7	B15-17106-8
			Date Collected		09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	14-Jul-15/K	11	< 10	< 10	< 10
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	14-Jul-15/K	< 10	< 10	< 10	< 10

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

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DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-Dup1			
			Sample I.D.		B15-17106-9			
			Date Collected		09-Jul-15			
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
% moisture	%			15-Jul-15/K	25.4			
Acetone	µg/g	0.3	EPA 8260	09-Jul-15/O				
Benzene	µg/g	0.02	EPA 8260	09-Jul-15/O				
Bromodichloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O				
Bromoform	µg/g	0.02	EPA 8260	09-Jul-15/O				
Bromomethane	µg/g	0.03	EPA 8260	09-Jul-15/O				
Carbon Tetrachloride	µg/g	0.02	EPA 8260	09-Jul-15/O				
Chloroform	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dibromochloromethane	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dibromoethane,1,2- (Ethylene Dibromide)	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichlorobenzene,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichlorobenzene,1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichlorobenzene,1,4-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichlorodifluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichloroethane,1,1-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dichloroethane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O				

Gord Murphy
Lab Supervisor

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
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DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-Dup1			
			Sample I.D.		B15-17106-9			
			Date Collected		09-Jul-15			
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Dichloroethene, 1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichloroethene, cis-1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichloroethene, trans-1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dichloromethane (Methylene Chloride)	µg/g	0.04	EPA 8260	09-Jul-15/O				
Dichloropropane,1,2-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dichloropropene 1,3- cis+trans	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dichloropropene, cis-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Dichloropropene, trans-1,3-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Ethylbenzene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Hexane	µg/g	0.03	EPA 8260	09-Jul-15/O				
Methyl Ethyl Ketone	µg/g	0.1	EPA 8260	09-Jul-15/O				
Methyl Isobutyl Ketone	µg/g	0.02	EPA 8260	09-Jul-15/O				
Methyl-t-butyl Ether	µg/g	0.02	EPA 8260	09-Jul-15/O				
Monochlorobenzene (Chlorobenzene)	µg/g	0.03	EPA 8260	09-Jul-15/O				
Styrene	µg/g	0.03	EPA 8260	09-Jul-15/O				

Gord Murphy
Lab Supervisor

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REPORT No. B15-17106 (ii)

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Ottawa Ontario K1V 7P1
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Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-Dup1			
			Sample I.D.		B15-17106-9			
			Date Collected		09-Jul-15			
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Tetrachloroethane,1,1,2,2-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Tetrachloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Toluene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Trichloroethane,1,1,1-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Trichloroethane,1,1,2-	µg/g	0.02	EPA 8260	09-Jul-15/O				
Trichloroethylene	µg/g	0.03	EPA 8260	09-Jul-15/O				
Trichlorofluoromethane	µg/g	0.02	EPA 8260	09-Jul-15/O				
Vinyl Chloride	µg/g	0.02	EPA 8260	09-Jul-15/O				
Xylene, m,p-	µg/g	0.04	EPA 8260	09-Jul-15/O				
Xylene, m,p,o-	µg/g	0.05	EPA 8260	09-Jul-15/O				
Xylene, o-	µg/g	0.03	EPA 8260	09-Jul-15/O				
Dichloroethane-d4,1,2-(SS)	%	10	EPA 8260	09-Jul-15/O				
Toluene-d8 (SS)	%	10	EPA 8260	09-Jul-15/O				
Bromofluorobenzene,4(SS)	%	10	EPA 8260	09-Jul-15/O				
PHC F1 (C6-C10)	µg/g	10	MOE E3398	09-Jul-15/O				
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	14-Jul-15/K	< 6			

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47670

REPORT No. B15-17106 (ii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 09-Jul-15
DATE REPORTED: 15-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T2-Dup1			
			Sample I.D.		B15-17106-9			
			Date Collected		09-Jul-15			
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	14-Jul-15/K	< 10			
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	14-Jul-15/K	< 10			

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

Gord Murphy
Lab Supervisor

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G54816

REPORT No. B15-17991

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 17-Jul-15
DATE REPORTED: 21-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.:
P.O. NUMBER: 0162-01
WATERWORKS NO.

			Client I.D.		T1-F11	T1-F2	T2-F2	T2-E1.7
			Sample I.D.		B15-17991-1	B15-17991-2	B15-17991-3	B15-17991-4
			Date Collected		08-Jul-15	08-Jul-15	09-Jul-15	09-Jul-15
Parameter	**Units**	**M.D.L.**	**Reference Method**	**Date/Site Analyzed**				
Antimony	µg/g	0.5	EPA 6020	20-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	µg/g	0.5	EPA 6020	20-Jul-15/O	0.6	0.8	0.8	0.7
Barium	µg/g	1	EPA 6010	20-Jul-15/O	330	267	321	327
Beryllium	µg/g	0.2	EPA 6010	20-Jul-15/O	0.7	0.8	0.7	0.7
Boron	µg/g	0.5	EPA 6010	20-Jul-15/O	5.6	8.8	6.6	6.1
Boron (HWS)	µg/g	0.02	MOE3470	20-Jul-15/O	0.09	0.39	0.16	0.18
Cadmium	µg/g	0.5	EPA 6010	20-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	µg/g	1	EPA 6010	20-Jul-15/O	113	106	117	117
Chromium (VI)	µg/g	0.5	EPA7196A	20-Jul-15/O	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	µg/g	1	EPA 6010	20-Jul-15/O	30	27	29	29
Copper	µg/g	1	EPA 6010	20-Jul-15/O	52	49	50	51
Lead	µg/g	5	EPA 6010	20-Jul-15/O	9	9	8	9
Mercury	µg/g	0.005	EPA 7471A	20-Jul-15/O	0.008	0.011	0.007	0.010
Molybdenum	µg/g	1	EPA 6010	20-Jul-15/O	< 1	< 1	< 1	< 1
Nickel	µg/g	1	EPA 6010	20-Jul-15/O	64	62	65	66
Silver	µg/g	0.2	EPA 6010	20-Jul-15/O	< 0.2	< 0.2	< 0.2	< 0.2
Selenium	µg/g	0.5	EPA 6020	20-Jul-15/O	0.5	0.6	0.5	0.6
Thallium	µg/g	0.1	EPA 6020	20-Jul-15/O	0.4	0.3	0.4	0.4
Uranium	µg/g	0.1	EPA 6020	20-Jul-15/O	0.8	1.8	0.7	0.6
Vanadium	µg/g	1	EPA 6010	20-Jul-15/O	97	90	95	93
Zinc	µg/g	3	EPA 6010	20-Jul-15/O	128	120	128	123

R.D.L. = Reported Detection Limit
Site Analyzed: K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill
Uncertainty Values available upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (i)

Report To:
Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-1	SP-2	Dup-S1	
			Sample I.D.		B15-19020-1	B15-19020-2	B15-19020-6	
			Date Collected		28-Jul-15	28-Jul-15	28-Jul-15	
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
pH @25°C	pH Units		SM 4500H	28-Jul-15/O		7.69		
Conductivity @25°C	mS/cm	0.001	SM 2510B	29-Jul-15/O		0.528		
Sodium Adsorption Ratio	units		SM 3120	30-Jul-15/O		0.551		
Antimony	µg/g	0.5	EPA 6020	29-Jul-15/O	< 0.5	< 0.5	< 0.5	
Arsenic	µg/g	0.5	EPA 6020	29-Jul-15/O	0.6	1.1	2.0	
Barium	µg/g	1	EPA 6010	30-Jul-15/O	301	302	264	
Beryllium	µg/g	0.2	EPA 6010	30-Jul-15/O	< 0.2	< 0.2	< 0.2	
Boron	µg/g	0.5	EPA 6010	30-Jul-15/O	6.7	7.1	6.3	
Boron (HWS)	µg/g	0.02	MOE3470	30-Jul-15/O	0.16	0.15	0.16	
Cadmium	µg/g	0.5	EPA 6010	30-Jul-15/O	< 0.5	< 0.5	< 0.5	
Chromium	µg/g	1	EPA 6010	30-Jul-15/O	5	5	5	
Chromium (VI)	µg/g	0.5	EPA7196A	29-Jul-15/O	< 0.5	< 0.5	< 0.5	
Cobalt	µg/g	1	EPA 6010	30-Jul-15/O	2	2	2	
Copper	µg/g	1	EPA 6010	30-Jul-15/O	5	5	4	
Lead	µg/g	5	EPA 6010	30-Jul-15/O	< 5	< 5	< 5	
Mercury	µg/g	0.005	EPA 7471A	30-Jul-15/O	0.007	0.007	0.006	
Molybdenum	µg/g	1	EPA 6010	30-Jul-15/O	< 1	< 1	< 1	
Nickel	µg/g	1	EPA 6010	30-Jul-15/O	7	7	7	
Selenium	µg/g	0.5	EPA 6020	29-Jul-15/O	< 0.5	< 0.5	< 0.5	
Silver	µg/g	0.2	EPA 6010	30-Jul-15/O	< 0.2	< 0.2	< 0.2	
Thallium	µg/g	0.1	EPA 6020	29-Jul-15/O	0.1	0.1	< 0.1	
Uranium	µg/g	0.1	EPA 6020	29-Jul-15/O	0.6	0.6	0.5	
Vanadium	µg/g	1	EPA 6010	30-Jul-15/O	3	3	3	
Zinc	µg/g	3	EPA 6010	30-Jul-15/O	23	16	14	

R.L. = Reporting Limit
Site Analyzed: K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill
Uncertainty Values available upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (ii)

Report To:

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5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

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2378 Holly Lane
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Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-3	SP-5		
			Sample I.D.		B15-19020-3	B15-19020-5		
			Date Collected		28-Jul-15	28-Jul-15		
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Acenaphthene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Acenaphthylene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Anthracene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Benzo(a)anthracene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Benzo(a)pyrene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Benzo(b)fluoranthene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Benzo(b+k)fluoranthene	µg/g	0.01	EPA 8270	30-Jul-15/K	< 0.01			
Benzo(g,h,i)perylene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Benzo(k)fluoranthene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Chrysene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Dibenzo(a,h)anthracene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Fluoranthene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Fluorene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Indeno(1,2,3,-cd)pyrene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Methylnaphthalene,1-	µg/g	0.005	EPA 8270	30-Jul-15/K	0.005			
Methylnaphthalene,2-	µg/g	0.005	EPA 8270	30-Jul-15/K	0.009			
Naphthalene	µg/g	0.005	EPA 8270	30-Jul-15/K	0.023			
Phenanthrene	µg/g	0.005	EPA 8270	30-Jul-15/K	0.009			
Pyrene	µg/g	0.005	EPA 8270	30-Jul-15/K	< 0.005			
Terphenyl-d14 (SS)	% rec.	10	EPA 8270	30-Jul-15/K	92			
Poly-Chlorinated Biphenyls (PCB's)	µg/g	0.3	EPA 8080	30-Jul-15/K		< 0.3		

R.L. = Reporting Limit
Site Analyzed: K-Kingston,W-Windsor,O-Ottawa,R-Richmond Hill
Uncertainty Values available upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (iii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-4			
			Sample I.D.		B15-19020-4			
			Date Collected		28-Jul-15			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
% moisture	%	0.1		31-Jul-15/O	4.3			
Acetone	µg/g	0.3	EPA 8260	30-Jul-15/O	< 0.3			
Benzene	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Bromoform	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Bromodichloromethane	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Bromomethane	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Carbon Tetrachloride	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Monochlorobenzene (Chlorobenzene)	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Chloroform	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Dibromochloromethane	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dibromoethane,1,2- (Ethylene Dibromide)	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichlorobenzene,1,2-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichlorobenzene,1,3-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichlorobenzene,1,4-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichlorodifluoromethane	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichloroethane,1,1-	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			

R.L. = Reporting LImit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
Client satisfied. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (iii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-4			
			Sample I.D.		B15-19020-4			
			Date Collected		28-Jul-15			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Dichloroethane,1,2-	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Dichloroethene, cis-1,2-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichloroethene, 1,1-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichloroethene, trans-1,2-	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Dichloropropane,1,2-	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Dichloropropene, trans-1,3-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichloropropene, cis-1,3-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Dichloropropene 1,3-cis+trans	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Ethylbenzene	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Dichloromethane (Methylene Chloride)	µg/g	0.04	EPA 8260	30-Jul-15/O	< 0.04			
Hexane	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Methyl Ethyl Ketone	µg/g	0.1	EPA 8260	30-Jul-15/O	< 0.1			
Methyl Isobutyl Ketone	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Methyl-t-butyl Ether	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Styrene	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Tetrachloroethane,1,1,1,2-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			

R.L. = Reporting Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
Client centered. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (iii)

Report To:

Colestar Environmental
5 Innisvale Drive,
Markham ON L6B 1G3
Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-4			
			Sample I.D.		B15-19020-4			
			Date Collected		28-Jul-15			
Parameter	**Units**	**R.L.**	**Reference Method**	**Date/Site Analyzed**				
Tetrachloroethane,1,1,2,2-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Tetrachloroethylene	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Toluene	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Trichloroethane,1,1,1-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Trichloroethane,1,1,2-	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Trichloroethylene	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Trichlorofluoromethane	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Vinyl Chloride	µg/g	0.02	EPA 8260	30-Jul-15/O	< 0.02			
Xylene, m,p-	µg/g	0.04	EPA 8260	30-Jul-15/O	< 0.04			
Xylene, o-	µg/g	0.03	EPA 8260	30-Jul-15/O	< 0.03			
Xylene, m,p,o-	µg/g	0.05	EPA 8260	30-Jul-15/O	< 0.05			
Dichloroethane-d4,1,2-(SS)	%	10	EPA 8260	30-Jul-15/O	99			
Toluene-d8 (SS)	%	10	EPA 8260	30-Jul-15/O	98			
Bromofluorobenzene,4(SS)	%	10	EPA 8260	30-Jul-15/O	105			
PHC F1 (C6-C10)	µg/g	10	MOE E3398	30-Jul-15/O	< 10			
PHC F2 (>C10-C16)	µg/g	5	CWS Tier 1	30-Jul-15/K	12			
PHC F3 (>C16-C34)	µg/g	10	CWS Tier 1	30-Jul-15/K	16			

R.L. = Reporting Limit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: G47293

REPORT No. B15-19020 (iii)

Report To:

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5 Innisvale Drive,
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Attention: Darren Coleman

Caduceon Environmental Laboratories
2378 Holly Lane
Ottawa Ontario K1V 7P1
Tel: 613-526-0123
Fax: 613-526-1244

DATE RECEIVED: 28-Jul-15
DATE REPORTED: 31-Jul-15
SAMPLE MATRIX: Soil

JOB/PROJECT NO.: 0162-02
P.O. NUMBER:
WATERWORKS NO.

			Client I.D.		SP-4			
			Sample I.D.		B15-19020-4			
			Date Collected		28-Jul-15			
Parameter	Units	R.L.	Reference Method	Date/Site Analyzed				
PHC F4 (>C34-C50)	µg/g	10	CWS Tier 1	30-Jul-15/K	< 10			

µg/g = micrograms per gram (parts per million) and is equal to mg/Kg
F1 C6-C10 hydrocarbons in µg/g, (F1-btex if requested)
F2 C10-C16 hydrocarbons in µg/g, (F2-napth if requested)
F3 C16-C34 hydrocarbons in µg/g, (F3-pah if requested)
F4 C34-C50 hydrocarbons in µg/g
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
Any deviations from the method are noted and reported for any particular sample.
nC6 and nC10 response factor is within 30% of response factor for toluene:
nC10,nC16 and nC34 response factors within 10% of each other:
C50 response factors within 70% of nC10+nC16+nC34 average:
Linearity is within 15%:
All results expressed on a dry weight basis.
Unless otherwise noted all chromatograms returned to baseline by the retention time of nC50.

R.L. = Reporting LImit
Site Analyzed: K-Kingston, W-Windsor, O-Ottawa, R-Richmond Hill
Uncertainty Values avialable upon request

Unless otherwise noted all extraction, analysis, QC requirements and limits for holding time were met.
If analyzed for F4 and F4G they are not to be summed but the greater of the two numbers are to be used in application to the CWS PHC
QC will be made available upon request.

Greg Clarkin , BSc., C. Chem
Lab Manager - Ottawa District

CADUCEON ENVIRONMENTAL LABORATORIES

Client Focused. Quality Assured.

TESTING REQUIREMENTS

☒ O.Reg 153 — Table 1
☒ Surface Soil
☐ Yes ☒ No
☐ Provincial Water Quality Objectives
☐ Sewer Use By-Law:
☐ MIA Guidelines
☐ O.Reg 558 Leachate Analysis
Disposal Site:
☐ Landfill Monitoring
☐ Other:

July 28.15

B15-19020

Indicate Laboratory Samples are submitted to: ☐ Kingston ☒ Ottawa ☐ Richmond Hill ☐ Windsor

Organization: CELESTAR
Contact: DARREN COLEMAN
Tel: 905-554-4156
Fax: -4157
Email: dcoleman@celestarenvironmental.com

Address and Invoicing Address (if different): 5 TANNSVALE DRIVE, MARKHAM, ONTARIO L6B 1G3

Quotation: CELESTAR RATES
Project Name: 0162-02
P.O. No.:
Additional Info.:

ANALYSIS REQUESTED (Print Test in Boxes): O.Reg 153 metals/Sol; BTSAR; pH; PAHs; VOCs/PHC Fraction; PCBs; Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page):
☐ Platinum 200% Surcharge
☐ Gold 100% Surcharge
☐ Silver 50% Surcharge
☐ Bronze 25% Surcharge
☐ Standard 5-7 days
☒ Specific Date: FRIDAY JULY 31, 2015 EV

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? ☐ Yes ☐ No (If yes, submit all drinking water samples on a drinking water Chain of Custody) EVA BUSHKA

Sample Matrix Legend: W=Potable Water, WW=Wastewater, Sw=Surface Water, Gw=Groundwater, SL=Liquid Sludge, SS=Solid Sludge/Sediment, SO=Soil, Other=Air, Oil, Oil

Lab No.	Sample Identification	S/S	Sample Matrix	Date Collected (yy-mm-dd)	Time Collected	Analysis Requested (By Order in Listed Boxes, Left to Right)												Turn Around Time Required		Number of Containers	Field Filtered
1	SP-1		SOIL			1	X													2	
2	SP-2					2	X	X	X											3	
3	SP-3					3					X									2	
4	SP-4					4						X								3 1-2VOC	
5	SP-5					5							X							2	
6	DUP-S1					6	X													2	

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	CARL FRANKHUYZER	CARL FRANKHUYZER
Sign:		
Date Collected (yy-mm-dd):	July 28/15	July 28/15 - 1pm
Date Received (yy-mm-dd):		

SHIPPING INFORMATION: Client's Courier ☐; Courier ☐; Drop Off ☒; Pick-up ☐; Invoice ☐; # of Pieces: 1 Cooler

REPORTING INFORMATION: Report by Fax ☐; Report by Email ☒; Invoice by Email ☒; Invoice by Mail ☐

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received by (print): Pat C.O. Signature:
Date Received (yy-mm-dd): 15-7-28 Time Received: 11:40
Laboratory Prepared Coolers: ☒ Yes ☐ No
Sample Temperature °C: Initiated by:
Comments:
1. SOIL JARS
2. VOC VIALS

Page 1 of 1
G 47283

Kingston Lab - 420 Dalton Ave., Kingston, ON K7K 6C2, Tel: (613) 544-0361, Fax: (613) 544-1768, Email: contact@caducean-environmental.com
Ottawa Lab - 2378 Holly Lane, Ottawa, ON K1V 7P1, Tel: (613) 526-0123, Fax: (613) 526-1018, Email: contact@caducean-environmental.com
Richmond Hill Lab - 27A-10 West Gate Crescent Rd., ON L4B 1J9, Tel: (905) 881-1227, Fax: (905) 881-1268, Email: contact@caducean-environmental.com
Windsor Lab - 45-381 Manning Ave., Windsor, ON N9C 0C2, Tel: (519) 258-9411, Fax: (519) 258-9507, Email: contact@caducean-environmental.com

090000

White: Lab Copy / Yellow: Internal Copy / Pink: Client Copy

Cdn. Sept. 2014, Revision No. 16

CADUCEON

ENVIRONMENTAL LABORATORIES

Client committed. Quality assured.

2015 ONTARIO REGULATION 153 EPD PRICING

January 01, 2015 — Valid Until: December 31, 2015

Analysis Request	Method	Soil	Water
BTEX[1] PHC (F1,F2,F3,F4) (Tables 1-9)	Purge & Trap GC/FID/MS, Solvent Extraction, GC-FID	85.00	85.00
PHC (F1,F2,F3,F4) (Tables 1 - 9)	Purge & Trap GC/FID, Solvent Extraction, GC-FID	75.00	75.00
PHC (F2,F3,F4) (Tables 1-9)	Solvent Extraction, GC-FID	60.00	60.00
F1 (Tables 1-9)	Purge & Trap GC/FID/MS	40.00	40.00
BTEX[1] (Tables 1-9)	Purge & Trap GC/MS	45.00	45.00
BTEX[1] & F1 (Tables 1-9)	Purge & Trap GC/FID/MS	55.00	55.00
VOC, PHC (F1,F2,F3,F4) (Tables 1-9)	Purge & Trap GC/FID/MS, Solvent Extraction, GC-FID	95.00	95.00
PHC (F4 Gravimetric)	Gravimetric	30.00	30.00
VOC[1,2,3] (Tables 1-9)	Purge & Trap GC/MS based on EPA 8260	70.00	70.00
VOC[1,2,3] (Table 11 - for Nickle impacted samples - 2 runs ddered and averaged)	Purge & Trap GC/MS based on EPA 8260	*125.00	125.00
Terra Core Samplers - 5 g	REG 153 Soil VOC/F1 sampling	2.00	n/a
Methanol Charged Vials - 30mL	REG 153 Soil VOC/F1 sampling	1.50	n/a
PAHs[4] (Table 1-9)	Solvent Extraction, GC/MS - based on EPA 8270	75.00	75.00
Acid, Base/Neutral Extractables[5] (SVOC) (Table 1-9)	Solvent Extraction, GC/MS - based on EPA 8270	125.00	125.00
Chlorophenols[6]	Solvent Extraction, GC/MS - based on EPA 8270	100.00	100.00
Organochlorine Pesticides/PCB's (Tables 1-9)	Solvent Extraction, GC/ECD - based on SW846 8081/8082	100.00	100.00
Full SVOC Suite: PAHs[4], Acid, Base/Neutral Extractables[5], Chlorophenols[6] (Tables 1-9)	Solvent Extraction, GC/MS - based on EPA 8270	160.00	n/a
Full SVOC Suite: PAHs[4], Acid, Base/Neutral Extractables[5], Chlorophenols[6] (Table 1 & 2)	Solvent Extraction, GC/MS - based on EPA 8270	n/a	185.00
Full SVOC Suite: PAHs, Acid, Base/Neutral Extractables, Chlorophenols (Table 3-9)	Solvent Extraction, GC/MS - based on EPA 8270	n/a	160.00
PCB's (Table 1-9)	Solvent Extraction, GC/ECD - based on SW846 8082	50.00	50.00
Dioxins & Furans (Tables 1-9) - subcontracted	HRMS	950.00	950.00
Fractional Organic Carbon (Tables 1-9) - subcontracted	LECO Furnace (Analyzed in triplicate as per MOE Requirements for this Reg. 153)	160.00	n/a
Metal Suites - Soil			
Metals (Sb, As, B, Cd, Cr(total), Co, Cu, Pb, Mo, Ni, Ag, Tl, U, V and Zn)	ICP/MS, ICP	35.00	
Metals, Hydride-Forming (As, Se, Sb)	ICP/MS, ICP	25.00	
Metals Suite 1: (Sb, As, Ba, Be, B, Cd, Cr(total), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V, Zn)	ICP/MS, ICP, CVAA	45.00	
Metals Suite 2 Surface Soil: Full Metals (Sb, As, B, B(HWS), Ba, Be, Cd, Cr(total and VI), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V and Zn)	ICP/MS, ICP, CVAA, Colourimetric	55.00	
Metals Suite 3 Surface Soil: (Sb, As, B, B(HWS), Ba, Be, Cd, Cr(total), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V and Zn)	ICP/MS, ICP, CVAA	50.00	
Metals Suite 4 Sub Surface Soil: Full Metals (Sb, As, B, Ba, Be, Cd, Cr(total and VI), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V and Zn)	ICP/MS, ICP, CVAA, Colourimetric	55.00	
Metal Suites - Water			
Metals (Sb, As, B, Cd, Cr(total), Co, Cu, Pb, Mo, Ni, Ag, Tl, V, U and Zn)	ICP/MS, ICP	30.00	
Metals, Hydride-Forming (As, Se, Sb)	ICP/MS, ICP	20.00	
Metals Suite 1: (Sb, As, Ba, Be, B, Cd, Cr(total), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V, Zn)	ICP/MS, ICP, CVAA	40.00	
Metals Suite 2, Water: Full Metals (Sb, As, Ba, Be, B, Cd, Cr(total and VI), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, U, V and Zn)	ICP/MS, ICP, CVAA, Colourimetric	50.00	
Inorganic Suites - Soil			
Inorganic Suite 1, Soil (pH, EC, SAR)	ICP, Meter	40.00	
Inorganic Suite 2, Soil (pH, EC, SAR, CN)	ICP, Meter, Colourimetric	60.00	
Inorganic Suites - Water			
Inorganic Suite 1, Water (pH, EC, Na)	ICP, Meter	35.00	
Inorganic Suite 2, Water (pH, EC, Na, CN)	ICP, Meter, Colourimetric	55.00	
Inorganic Suite 3, Water (pH, EC, Na, CN, Cl)	ICP, Meter, Colourimetric	70.00	

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

INCIDENT REPORT

Reference Number:	7808-9WPQD8	Module Type:	Other
Status:	Recommended	File Storage Number:	S
Program:	Brownfields - Contaminated Sites	Activity:	General (No related specific activity)

Caller or PO Reporting/Receiving Information

First Name:	Last Name:
Tina	Ranger
Name of Company:	
City of Ottawa, Compliance Officer	

MAILING ADDRESS			
Civic Address:		Unit Identifier:	
Delivery Designator:		Delivery Identifier:	
Municipality/ Unorganized Twp:	County/District:	Province/State:	Postal Code:
Ottawa		Ontario	
Postal Station:		Country:	Canada
Telephone Number:	Extension:	Other Number:	Email Address:
61358012424	22170	Fax	

Date Reported to MOE:	2015/05/20	Time Reported to MOE:	15:04

Date of Incident:	2015/04/22	Time of Incident:	
Incident Date Confirmation:	Actual		

Client(s)

Client Details
1st Student Canada<UNOFFICIAL>, Business/Facility Name: Mailing Address: , , , Ontario, Canada Physical Address: Lot: , Part: , , , Ontario, Canada Telephone: , FAX:

Client Type: , NAICS:

Site(s)

Site Details
1830 Trim Road<UNOFFICIAL> Address: Lot: , Part: , Ottawa, City, District Office: Ottawa

Incident Summary:
Caller reporting a load refusal from ROPEC dated April 22, 2015.

Initial Incident Description (as reported):
Created: Lance Larkin (Ottawa District Office) - 2015/05/20 03:04:19 PM
Caller reporting a load refusal from ROPEC dated April 22, 2015. The load contained hauled sewage contaminated with fuel from a bus depot headquarters (1st Student Groupe). City sample results show VOCs above sewer use bi-law. Caller will forward results to Officer Larkin. Veolia (approved hauler) had pumped out the Site's sewage UST on April 22, 2015. The building the UST services is not in use as much since 1st Student stopped washing their buses at that location. Caller suspects some groundwater infiltration since the tank continues to be pumped out despite slow down of operations. At 15:32 I called Ms. Ranger (City). She indicated that there are UST's in front of the building that contain waste oil. She suspects they may be leaking. The load refused was sent back to Veolia's transfer station for approved treatment. Caller indicated that 1St Student has recently been sold. She's not sure if the property has been sold or if they are preparing to sell it.

SAC Action Class:	
Non-Standard Procedure:	No

Incident Description:
Last update: Lance Larkin (Ottawa District Office) - 2016/01/19 11:15 AM
Oct 15, 2015 - Will schedule a time for a field response. Oct 19, 2015 - I conducted a field response. The site is secured by locked gate. The lot in question was empty. There was a ~5 bay door garage/main building in the back of the property. The Site is located between two residential developments. 14:18 - Mr. Steve Collinson (1-360-608-5781, out of Portland Oregan), Director of Realestate returned my phone call. He works for 1St, an international company based out of England. He works out of his home in Portland. He indicated that 1 or 2 USTs were removed. He indicated they retained Strata Environmental to oversee the tank removal and closure report. He doesn't believe there are any off-property concerns. He indicated they will share the closure report and any other reports with prospective buyers. He indicated they don't have any use for the Site anymore. The Site is 10 acres. He expects that the buyer will likely obtain a Phase II ESA. I asked if he would share a copy of the closure report with me. He indicated he would have to go through head office but doesn't see that there would be an issue with providing me with a copy of the closure report. I gave him my email. He'll get back to me in a couple of days. Nov 19, 2015 - I called Steve Collinson at 1-360-608-5781 (Director of Realestate). I left a voice mail and reminded him that he was supposed to get back to me. As noted above, he had to go through head office. December 7, 2015 - I received a copy of a closure report from Steve Collinson by email (attached below). _____ From: Larkin, Lance (MOECC) Sent: December-08-15 9:30 AM

To: Collinson, Steves
Subject: RE: Orleans, ON UST Closure Report

Thank you Steve,

Has 1st Student provided a copy of the closure report to the Technical Standards & Safety Authority (TSSA), as part of the regulated Fuels Safety Program?

Their contact information can be obtained here: www.tssa.org

Regards,

From: Collinson, Steve [mailto:Steve.Collinson@firstgroup.com]
Sent: December-08-15 9:41 AM
To: Larkin, Lance (MOECC)
Subject: Re: Orleans, ON UST Closure Report

Lance,

I'll make certain our consultant has or will.

LL - Dec 22, 2015 - I reviewed the tank removal report. The Site is in a non-potable serviced area. Two tank excavations located towards the middle of the property were excavated. Soil sample results met residential and commercial site standards with two exceptions. Cobal and Vanadium were slightly over the residential standard but were deemed to be naturally ocurring in the local native clay. As per a CCME report dated 1997, Cobalt and Vanadium are commonly found in clay deposits in Canada. No groundwater accumulated in the excavations as per the Qualified Person's (QP) report. Vapour concentrations in the soil samples collected from the final limits did not exceed 15 ppm. The QP also recommends no further remedial action.

Jan 19, 2016 - I notifed Stephen Hoyle at TSSA about this matter and provided him with Steven Collinson's contact inforation. This site is currently TSSA's jurisdiction. No potential off-site impacts identified. No further action at this time.

Incident Description Continuation:

Incident Update:

Was there an MOE field response?		Yes	
Site Visit (other than inspection or ERP Response):		Yes	
Inspection:		No	
ERP Response:			
Date of Arrival at Site:	2015/10/19	Time of Arrival at Site:	10:14
Were there samples collected / analyzed at any time?		No	
Known or Suspected Health / Environmental Consequence at the Time of Incident			
Health / Environmental Consequence:		0 - No Impact	

Has a Water Body been impacted?	
Receiving Environment:	

Incident Event:	
Incident Reason:	
MOE/Other Agencies Involved:	
Was there a discharge / emission / spill of a contaminant to the environment?	
No	

Attachments:	There are no attachments for this document.
Links & Comments:	Strata Environmental Report: 1528465.26189.pdf

Environmental Compliance Reporting (ECR)

Is this an air emission (measured or modelled) or wastewater (sewage) discharge exceedance that will become part of the Environmental Compliance Report? (legislation, certificate of approval, order, or guideline)
No

Voluntary / Mandatory Abatement

Was there Non-Compliance/Non-Conformance Identified?	○ Yes ● No

Voluntary / Mandatory Compliance Items

Type	Parent RefNo	Work Summary (may be truncated)	Date	AttainList

Waste / EGR Information

Waste / EGR Information entries:

Document Related Information

Cross Reference:	(doc link)	Task Link:	0584-9WPR8Q
Originating Document:		Created by:	Lance Larkin
Date Created:	2015/05/20	Date Completed:	
Office Receiving Incident Report:	Ottawa District Office	Incident Info Received By:	Lance Larkin
Bring Forward Date:		Bring Forward Reason:	

Signatures

Provincial Officer:

Name:	Lance Larkin
Badge No:	723
Work Unit:	
District/Area Office:	Ottawa District Office
Date:	2016/01/19
Signature:	

District/Area Supervisor:

Name:	
Work Unit:	
District/Area Office:	
Date:	
Signature:	

01179643.pdf

Ontario

Ministry of the
Environment

OCCURENCE REPORT

Location of Occurence: OTTAWA CITY 1830 TRIM ROAD, CUMBERLAND **Reg: 4 Dist:** OT **Municipality:** 20107		**Source:** LAIDLAW TRANSIT **Sector: Source: SIC:** **UTM:** **N:** [] **E:** [] **Zone:** []	
Entered: 2002/10/30 14:59	**ORIS No.** 9940011751	**Abstracts:** 0	**Diaries:** 0
Received By: TOR RUSTAD		**Batch:** 4551	**I. E. B. No.**
Occurence Type: C	**Subtype:** 99	**Occurence Date:**	
Work Plan:	SM	**Occurence Time:**	
Reported By: JEAN OUELLETTE LAIDLAW TRANSIT.		**Report to MOE :** 2002/10/30 14:45 **MOE at Scene:**	
Telephone No. 613-841-2036 x	**Alternate No.** x	**Assigned To:**	TOR RUSTAD
Address: 1830 TRIM ROAD ORLEANS **Postal Code:**		**ERP Contacted:** **Callout:** [] **ERP Name:**	**NSP:** []

Syn: LAIDLAW TRANSIT- HOLE IN OIL/WATER SEPARATOR ALLOWING OIL TO GROUND

Brief Summary:
CALLER REPORTS THAT A HOLE WAS PUNCTURED IN THE OIL/WATER SEPARATOR ALLOWING WASTE OIL TO ENTER THE GROUND. TO LOCATE THE HOLE, YOU MUST BE NEAR THE FIRST AND SECOND BAY IN THE GARAGE. A MECHANIC WITNESSED OIL GETTING INTO THE GROUND.

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

Followup Action: Abatement IEB Other
BF Date:

File Closed: I Abatement: IEB Other
Suspected Violation:

Report Prepared By:	**Date:**	**IEB Investigator:**	**IEB BF Date**
Approving Officer PAUL KEHOE	**Date:** 08/04/2003	**Reviewing Officer:**	**Date**

Specify number(s) for routing Original [ ] [ ] [ ] [ ] **Continued** [ ] **Yes**
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 _____**

SAC Action Class: 1: 2:

Material 1:	**Code :**
Amount :	**UN No.:**
Material 2:	**Code :**
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:
[v] Controller [v] Owner [N] Other

% Cleaned up: Estimated Cost:
Were Directions or Approval Given Under
EPA Part X [v] Regulation 362 [v] 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 . . :

Ontario

Ministry of the Environment

OCCURENCE REPORT

Location of Occurence: CUMBERLAND TWP. 1830 TRIM ROAD **Reg:** 4 **Dist:** OT **Municipality:** 20601	**Source:** SAFETY KLEEN CANADA LTD **Sector:** CH **Source:** **SIC:** **UTM:** **N:** [] **E:** [] **Zone:** []

Entered: 1997/06/26 10:41	**ORIS No.** 9740001132	**Abstracts:** 0	**Diaries:** 1
Received By: TOR RUSTAD		**Batch:** 2664	**I. E. B. No.**
Occurence Type: N	**Subtype:** 01	**Occurence Date:**	1997/06/26
Work Plan:	18	**Occurence Time:**	

Reported By: MYRA SAFETY KLEEN CANADA	**Report to MOE:** 1997/06/26 10:02 **MOE at Scene:** 97/06/26 13:00
Telephone No. 613-226-1379 x **Alternate No.** x	**Assigned To:** REG DOYLE
Address: 148 BENTLEY AVENUE NEPEAN **Postal Code:**	**ERP Contacted:** **Callout:** [] **NSP:** [] **ERP Name:**

Syn: SAFETY-KLEEN (CANADA) INC.- TRANSFER OF HAZARDOUS WASTE DUE TO DANGER

Brief Summary:
CALLER REPORTS THAT A VACUUM TRUCK DEVELOPED A LEAK AND MAY HAVE DISCHARGED HAZARDOUS WASTES TO THE GROUND. CALLER ASKED FOR INSTRUCTIONS ON PROCEDURES TO FOLLOW. CALLER WAS ADVISED TO: - REPORT THE INCIDENT FORTHWITH TO THE REGIONAL DIRECTOR - RECORD THE TRANSFER ON THE MANIFEST CLEAN UP ANY SPILLAGE 15.000 LITRES OF WASTE OIL WAS CONTAINED ON THE FIRST TRUCK. HALF OF THAT AMOUNT WILL BE TRANSFERRED TO ANOTHER VACUUM TRUCK OPERATING UNVER SAFETY-KLEEN'S WASTE MANAGEMENT SYSTEMS APPROVAL.

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: REG DOYLE	**Date:** 23/01/98	**IEB Investigator:**	**IEB BF Date**
Approving Officer GEORGE CLARKE	**Date:** 27/01/98	**Reviewing Officer:**	**Date**

Specify number(s) for routing Original [ ] [ ] [ ] [ ] **Continued** [ ] Yes
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 _____

SAC Action Class: 1: 2:

Material 1: MOTOR OIL **Amount:** 7500 LTR	**Code:** 14 **UN No.:**
Material 2: **Amount:**	**Code:** **UN No.:**

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

Ontario

Ministry of the Environment

OCCURENCE REPORT

Location of Occurence: OTTAWA CITY **Reg:** 4 **Dist:** OT **Municipality:** 20107		**Source:** LAIDLAW TRANSIT **Sector: Source: SIC:** **UTM:** **N:** [] **E:** [] **Zone:** []	
Entered: 2002/09/17 13:13	**ORIS No.** 9940011484	**Abstracts:** 2	**Diaries:** 1
Received By: TIM OBRIEN		**Batch:** 4419	**I. E. B. No.**
Occurence Type: C	**Subtype:** 99	**Occurence Date:**	2002/09/16
Work Plan:	CS	**Occurence Time:**	12:00
Reported By: BLAIR MCINTOSH CITY OF OTTAWA		**Report to MOE:** 2002/09/17 12:30 **MOE at Scene:** 2002/09/19 15:25	
Telephone No. 613-580-2424 x0000	**Alternate No.** x	**Assigned To:**	TOR RUSTAD
Address: ROPEC EXTENSION 23335 **Postal Code:**		**ERP Contacted:** **Callout:** [] **ERP Name:**	**NSP:** []

Syn: ANONYMOUS CALL TO CITY INDICATED LAIDLAW DISCHARGE OF CONTAMINANT. s.21

Brief Summary:
SEPTEMBER 16, 2002 - ANONYMOUS CALL TO CITY OF OTTAWA
THE FIRM WAS DELIBERATELY CAUSING THE DISCHARGE OF CONTAMINANT ON-SITE. A FUEL(?) STORAGE TANK WAS BEING FILLED WITH WATER AND ALLOWED TO OVER-FLOW TO DILUTE THE CONTENTS AND PERMIT DISCHARGE. NO FURTHER INFORMATION AVAILABLE AT THIS TIME. THURSDAY, SEPTEMBER 19, 2002, 15:25 AT SITE: SPOKE TO MARCEL BERRY, SHOP FOREMAN. MR. BERRY SHOWED THE UNDERSIGNED THE UNDERGROUND HOLDING TANK FOR THE WASTE MOTOR OIL. THERE WAS NO OBVIOUS SIGN OF SPILLAGE OR CONTAMINATION ON THE GRAVEL.

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

Followup Action: X **Abatement IEB Other**
BF Date:
POO #P392034 ISSUED TO LAIDLAW TRANSIT INC ON 7 NOV 02.

File Closed: Y **Abatement: IEB Other**
Suspected Violation: 24

Report Prepared By: TOR RUSTAD	**Date:** 06/11/2002	**IEB Investigator:**	**IEB BF Date**
Approving Officer PAUL KEHOE	**Date:** 13/11/2002	**Reviewing Officer:**	**Date**

Specify number(s) for routing Original [ ] [ ] [ ] [ ] **Continued** [ ] **Yes**
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 _____**

SAC Action Class: 1: 2:

Material 1:	**Code :**
Amount :	**UN No.:**
Material 2:	**Code :**

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:	
[v] Controller [v] Owner [N] Other	
% Cleaned up: Estimated Cost:	
Were Directions or Approval Given Under	
EPA Part X [v] Regulation 362 [v] 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 . . :

Ministry of Environment and Energy

2435 Holly Lane
Ottawa ON K1V 7P2
Telephone: (613) 521-3450
Fax: (613) 521-5437

Ministère de l'Environnement et de l'Énergie

2435 Holly Lane
Ottawa ON K1V 7P2
Téléphone: (613) 521-3450
Télécopieur: (613) 521-5437

Ontario

December 3, 2002

Laidlaw Transit Ltd.,
1830 Trim Road,
Orleans, Ontario.
K4A 3P8

REGISTERED MAIL

Attention: Mr. Colin Doak, Manager

Dear Mr. Doak

Re: Provincial Officers Order P392034

Please find enclosed Director's Order OT-2002-0015 revoking Provincial Officer Order P392034.

Please contact Mr. Paul Kehoe or myself, if you require any clarification in this matter.

Yours truly,

ORIGINAL SIGNED
BY STEVE BURNS

Steve Burns,
District Manager

SB/cb

Attachment

bc: Tor Rustad/P. Kehoe/File

Ministry of the Environment
Ministère de l'Environnement
Ontario

Order Number: **OT-2002-0015**

Director's Order

Section 157.3 Environmental Protection Act, R.S.O. 1990
Section 16.4 Ontario Water Resources Act, R.S.O. 1990
Section 26.3 Pesticides Act, R.S.O. 1990

To

#1 Laidlaw Transit Ltd.
1830 Trim Road
Orleans, Ontario
K4A 3P8

#2 Colin Doak, Manager
1830 Trim Road
Orleans, Ontario
K4A 3P8

Site Location

Laidlaw Transit Ltd.
1830 Trim Road
Orleans, Ontario
K4A 3P8

Response to Request

I have reviewed Provincial Officer Order P392034 as per your faxed requests of November 13 2002,November 14 2002 and submission by your consultant Golder Associates on November 25, 2002 and by this Order revoke Provincial Officers Order P392034.

Reasons for Response

I have reviewed Provincial Officer Order P392034 with the issuing Provincial Officer. I have given full consideration to the information provided to me in the faxes from Bob Yanchis of November 13, 2002 and November 14 2002. I have also reviewed the information provided by Golder Associates on November 25, 2002 that confirms that the maximum sewage flow is less then 10,000 liters/day and that the provisions of section 53 of the Ontario Water Resources Act do not apply.

Director	Signature	Phone
Steve Burns Address 2435 Holly Lane, Ottawa, Ontario, K1V 7P2	dated at Ottawa, December 3, 2002	613-521-3450

Director's Order

Section 157.3 Environmental Protection Act, R.S.O. 1990
Section 16.4 Ontario Water Resources Act, R.S.O. 1990
Section 26.3 Pesticides Act, R.S.O. 1990

Order Number: **OT-2002-0015**

REQUEST FOR HEARING

You may require a hearing before the Environmental Review Tribunal if, within 15 days of service of the confirming order deemed to have been made by the Director, you serve written notice of your appeal on the Environmental Review Tribunal and the Director. Your notice must state the portions of the order for which a hearing is required and the grounds on which you intend to rely at the hearing. Except by leave of the Environmental Review Tribunal, you are not entitled to appeal a portion of the order or to rely on grounds of appeal that are not stated in the notice requiring the hearing. Unless stayed by the Environmental Review Tribunal, the order is effective from the date of service.

Written notice requiring a hearing must be served personally or by mail upon:

The Secretary Environmental Review Tribunal 2300 Yonge Street, Suite 1201 Toronto, Ontario M4P 1E4	and	Director Ministry of the Environment Steve Burns 2435 Holly Lane Ottawa, Ontario, K1V 7P2

Where service is made by mail, it is deemed to be made on the fifth day after the date of mailing and the time for requiring a hearing is not extended by choosing service by mail.

FOR YOUR INFORMATION

- The procedures to request a hearing and other information provided above are intended as a guide. The legislation should be consulted for additional details and accurate reference.

Golder Associates Ltd.

1796 Courtwood Crescent
Ottawa, Ontario, Canada K2C 2B5
Telephone (613) 224-5864
Fax (613) 224-9928

Golder Associates

November 25, 2002 021-2853

By Facsimile: 613-521 5437

Mr. Paul Kehoe
Ministry of the Environment
2378 Holly Lane
Ottawa Ontario K1V 7P1

RE: WORK ORDER ISSUED TO LAIDLAW TRANSIT LTD., TO APPLY FOR A CERTIFICATE OF APPROVAL FOR A SEWAGE WORKS (INDUSTRIAL) – PROVINCIAL OFFICER ORDER (ORIS/IDS NUMBER: 9940011484; NOVEMBER 6, 2002), CUMBERLAND, ONTARIO

Mr. Kehoe:

A staff member of the Ministry of Environment (MOE) from the Ottawa MOE District office visited the Laidlaw Transit Ltd. ("Laidlaw" or the "Company") site in Cumberland on September 19, 2002 in response to a compliant. During his visit, he did not observe any contamination or spillage at the site and spoke with the shop foreman Mr. Martil Baril (i.e., Mr. Berry as referenced in the Provincial Officer Report, November 6, 2002). He learned that a holding tank is used as a "Sewage System" at the Property for the collection and storage of the Company's sewage effluent. The sewage system contains wastewater resulting from washing buses, garage floor drains and sanitary sewer until it is pumped out and removed off-site for its ultimate disposal. During the discussion with the site personnel, he also understood that more than 10,000 litres per day of sewage flows to the holding tank at the Property. He considered that the practice used at the site would be contrary to Subsection 53(1) of the *Ontario Water Resources Act*, Revised Statutes of Ontario 1990, c. O.40, as amended (the "OWRA"). As a result, a work order was issued to the Company asking to prepare a complete application for a Certificate of Approval for a Sewage Works (industrial) and submit it with the supporting documents and fee to the Ministry's Environmental Assessment and Approvals Branch ("EAAB") by January 17, 2003.

50 Best Companies to Work for in Canada

Laidlaw requested Golder Associates Ltd. ("Golder") to assist them to review and verify the observations the basis of the conclusions given in the Provincial Officer Report and investigate alternatives that could replace the present practice. A Golder staff member visited the site on November 14, 2002 and obtained information regarding the daily quantity of sewage effluent entering to the holding tank and activities performed that generate sewage effluent (e.g., number of employees, buses washed on a daily basis, etc.). In addition, the Ottawa Septic System Office was contacted and validity of the existing Use Permit and the Certificate and Approval for the current activities and practices performed at the site was discussed.

Laidlaw has been operating the facility since 1988 and presently employs 16 full-time employees and approximately 170 part-time drivers. At the garage, about 10 to 15 buses are washed daily with the help of an automatic washing system where pressured water is sprayed through brushes. Brushes consist of a total of 36 jets and each jet uses 500 ml water per 15 seconds. Normally, less than 30 jets are operational during a washing process. The brushing process takes about 50 seconds for each bus resulting in a maximum water consumption of 60 L per washing process. Laidlaw holds a Class 5 sewage system Use Permit from the Ottawa Septic Systems Office, which involves in the use of a holding tank for collection/storage of wastewater at the Property. At the time of application for a Certificate of Approval in 1988, Laidlaw clearly described that the sewage system would serve both offices and the garage. Activities and processes to be conducted as to the generation of the sewage effluent and its quantity were detailed in their application documents. A Certificate of Approval and a Use Permit were obtained based on the information and data submitted to MOE in 1988.

Golder's investigations and calculations indicated that, on an average basis, Laidlaw generates a maximum of 4,600 L per day sewage effluents. The maximum daily flow at the site for the last 17 months was 6,998 L. In addition, theoretical calculations indicated that the possible maximum "daily peak" flow could be about 6,350 L which is in good agreement with the actual maximum wastewater discharge rate. The method of determining the "daily peak" flow is provided in the Attachment to this letter. It appears that 10,000 L per day sewage effluent quantity indicated in the Provincial Officer Report might be the result of a misunderstanding due to incorrect information provided to the MOE officer at the time of the visit.

Consultation was held with the Ottawa Septic Systems Office and based on the discussions with staff (Mr. Terry Davidson), it is understood that the existing Use Permit and Certificate of Approval are valid and allow Laidlaw to discharge their combined sewer (i.e., industrial wastewater along with the sanitary sewer) to the holding tank at the Property. Systems that are larger than 10,000 L per day, or not fully contained on the Property, are required to be reviewed as a Sewage Works by the Approvals Branch of the Ministry of the Environment under the Ontario Water Resources Act. Based on the wastewater and sewage throughput, this does not apply to the Laidlaw sewage system. The company hauling the sewage effluent should hold an

appropriate licence to haul industrial wastewater and, currently, Laidlaw has been working with Sewer-Matic Services, a local sewer and wastewater disposal company, for the disposal of their combined sewer. Sewer-Matic Services holds an appropriate licence to handle industrial wastewaters. In summary, Laidlaw holds all necessary documents and meets all necessary requirements to use Class 5 Sewage system at the Property. Laidlaw did not conduct any wrongdoing and did not commit violation of any rules. In conclusion, the basis for the work order is absent.

We respectfully request that the Provincial Officer Order issued to Laidlaw be revoked. Please, do not hesitate to contact the undersigned if you have any questions or concerns. Thank you for your attention to the matter.

Yours truly,

N. Kuyucak

Nural Kuyucak, Ph.D., P.Eng.
Associate/Waste Management and Process Specialist

NK:BJV:ml

N:\Active\2800\021-2853 Laidlaw sewer compliance\MOE ltr-001 25Nov02.doc

ATTACHMENT – CALCULATIONS OF QUANTITY OF WASTEWATER

Flow rates of wastewater generated at the site were calculated with two different methods to obtain reliable data and verify accuracy of calculations. For the first method, records of fees paid to the sewer disposal company in the last 17 months obtained from the accounting department were examined by Golder Associates Ltd. The monthly quantity of wastewater was divided by the number of workdays found in each month where weekends and statuary holidays were subtracted to obtain potential highest ("daily peak") consumption rates. The records indicated that the maximum daily flow rate was 6,998 L only for one month out of 17 months (Table 1). If the total monthly quantity was calculated for a full 30 day-month, the maximum flow rate would be less than 4,600 L per day for the same month. Quantities of wastewater pumped out from the tank and frequency of pumping per month as well as peak flow rates for each month are presented in Table 1.

The second method involved theoretical calculations to determine the possible quantity of water that could be consumed at the site. It is assumed that daily each full-time staff consumes 75 L water and 15 busses are washed using 60 L water per bus which are considered to be the possible maximum values that can be consumed. Although the part-time drivers do not stay at the facility, the use of about 25 L water per day for each driver was allocated. The theoretical calculations also showed that the maximum water consumption (or wastewater generation) at the site could be 6,350 L per day. The theoretical maximum water consumption value is in good agreement with the actual maximum wastewater discharge rate. Accordingly, we believe that the generation of more than 10,000 L/day wastewater flow at the Laidlaw site is not likely based on current site use.

Table 1: Quantity of wastewater pumped out for its disposal and frequency of pumping service held per month at the Laidlaw Site

MONTH / YEAR	MONTHLY QUANTITY (L)	NUMBER OF WORK DAY PER MONTH*	QUANTITY OF FLOW (L/DAY)	FREQUENCY SERVICE/MONTH
October 2002	51,680	22	2,349	N/A
September 2002	50,000	20	2,500	N/A
August 2002	6,965	21	332	N/A
July 2002	49,500 (11,000 gal)	22	2,250	N/A
June 2002	109,800 (24,400 gal)	20	5,490	5
May 2002	130,050 (28,900 gal)	22	5,911	N/A
April 2002	130,500 (29,000 gal)	21	6,214	5
March 2002	84,600 (18,800 gal)	20	4,230	5
February 2002	139,950 (31,100 gal)	20	6,998	5
January 2002	109,350 (24,300 gal)	23	4,754	6
December 2001	119,700 (26,600 gal)	19	6,300	4
November 2001	112,950 (25,100 gal)	22	5,134	N/A
October 2001	114,750 (25,500 gal)	22	5,216	6
August 2001	78,750 (17,500 gal)	22	3,580	3
July 2001	108,000 (24,000 gal)	21	5,143	6
June 2001	125,100 (27,800 gal)	21	5,957	5
May 2001	112,500 (25,000 gal)	22	5,114	5

1 gal = 4.5 L
*weekends and statuary holidays were subtracted to obtain "possible daily peak flow".
N/A: not available

LAIDLAW

LAIDLAW TRANSIT LTD.
O/A LAIDLAW EDUCATION SERVICES
3221 NORTH SERVICE ROAD, P.O. BOX 5028, BURLINGTON, ONTARIO, CANADA L7R 3Y8
Telephone (905)-336-1800
Facsimile (905)-336-4261

November 14, 2002

Check daily flow
- any
- where does it go
- size tank - how often emptied

6,000 gal - pump it
- where does it go
- safety klean
- underdoc pumping
Reg work

Mr. Steve Burns
District Manager
Ministry of the Environment
2435 Holly Lane
Ottawa, Ontario
K1V 7P2

Re: Provincial Officer Order 9940011484
Field Reference Number P392034
Laidlaw Transit Ltd.
1830 Trim Road, Orleans, Ontario K4A 3P8

Dear Mr. Burns:

This letter is further to Laidlaw's November 13th request to appeal the above referenced work order for Laidlaw Transit Ltd. Cumberland facility.

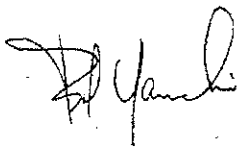
The work order dated November 6, 2002 requires Laidlaw to prepare an application for a C of A for sewage works (Industrial). It is our understanding that according to Septic Systems and Haulage of Sewage Regulation (April 6, 1998) a system that is larger than 10,000 litres per day has to be reviewed as a sewage works by Approval Branch of the Ministry of the Environment under the Water Resources Act. The work order described these requirements for the preparation of an application for a certificate of approval.

The amount of daily sewage flow from the facility is considerable less than 10,000 litres and not as stated in the report. It appears that Mr. Rustad was given incorrect information when he as told that the facility produces greater than 10,000 litres per day. Examination of on site records indicates that the average daily flow is 4,600 litres.

Therefore Laidlaw requests that this order be stayed as the application process prescribed in the order is not applicable to this operation.

If there are any questions, please don't hesitate to contact me at (905)336-1800 ext. 377.

Regards,



Bob Yanchis, P. Eng.
Director, Environmental Management
Laidlaw Education Services

BY/jf

cc. John Giannone
Judy Oswald
Mike Casey
Rick Gilchrist

LAIDLAW
LAIDLAW EDUCATION SERVICES
■ 3221 NORTH SERVICE ROAD ■ BURLINGTON, ONTARIO ■ L7R 3Y6 ■ PH: (905) 336-1800 ■ FX: (905)336-4261

F A X F A X F A X

DATE:	November 14, 2002	**TIME:**	3:45 PM
TO:	Mr. Steve Burns Ministry of the Environment	**FAX NO.:**	613-521-5437
FROM:	Bob Yanchis Director, Environmental Management	**PHONE:**	906-336-1800 ext 377
RE:	1830 Trim Road, Orleans, Ontairo		

Number of pages including cover sheet: 3

Message

Please see the following letter. Original to follow by mail.

F A X F A X F A X

LAIDLAW
LAIDLAW EDUCATION SERVICES
■ 3221 NORTH SERVICE ROAD ■ BURLINGTON, ONTARIO ■ L7R 3Y8 ■ PH: (905) 336-1800 ■ FX: (905)336-4261

FAX FAX FAX

DATE:	November 13, 2002	**TIME:**	3:07 PM
TO:	Mr. Steve Burns Ministry of the Environment	**FAX NO.:**	(613)521-5437
FROM:	Bob Yanchis Director, Environmental Management	**PHONE:**	(905)336-1865 ext 377
RE:	1930 Trim Road, Orleans, Ontario		

Number of pages including cover sheet: 3

Message

Please see the following letter. Original to follow my mail.

FAX FAX FAX

Nov 1 00 00 TR 116

CERTIFICATE OF SERVICE
Environmental Protection Act s.175(1)(b)
Ontario Water Resources Act s.115(1)(b)
Pesticides Act s.51(1)(b)

I Tor Austad (Print), a designated Provincial Officer under the Environmental Protection Act, Ontario Water Resources Act and the Pesticides Act, certify that I served a true copy of Provincial Officer Order 7392034. (IDS and field reference number), on Laidlaw Transit Ltd (person or company), at 1830 Trim Road, City of Ottawa (Orleans) (Address and City), by leaving it with Judy Oswald Branch Manager (Name and Position), on November 7, 2002 (Date of Service). The method of service was Personal. (mail/personal).

Date 02/11/06 (YYYY/MM/DD) Provincial Officer Tor Austad (signature) Badge # 392.

cofservi.wpd September 15, 1999

Ministry of the Environment
Ministère de l'Environnement
Ontario

Provincial Officer Report

9940011484
ORIS/IDS Number

P392034
Field Reference Number

*Version en francais sur demande

Name

(Name of Person(s) or Company. May be multiple parties, include business address (or home address), title, phone and fax)

Laidlaw Transit Ltd. (the "Company") 1830 Trim Road Orleans, ON K4A 3P8	Colin Doak, Manager 1830 Trim Road Orleans, ON K4A 3P8

Site Location

(Include street address, lot, concession, etc.)

1830 Trim Road, City of Ottawa ("Cumberland Ward") (the "Property")

Observations

On September 17, 2002, a person who wished to remain anonymous reported that staff at the Company were adding water to a fuel tank at the Property to cause the fuel to overflow to the ground. Staff from the Ottawa office of the Ministry of the Environment responded to this complaint on September 19, 2002, and could not confirm that this event occurred. No contamination or spillage was observed on the ground near the diesel fuel tanks or where the underground waste motor oil tank is located. The undersigned spoke with the maintenance shop foreman, Mr. Berry, who also noted that the holding tank used to store sewage had not overflowed to ground. Mr. Berry noted that the Company switched to using industrial soap to wash buses at the Property and this caused the concentration of total petroleum hydrocarbons in the Company's sewage effluent to exceed the limits specified in the City of Ottawa's sewer use by-law.

Therefore, the City of Ottawa refuses to allow the contents of the Company's holding tank to be discharged at their sewage treatment plant because the concentration of total petroleum hydrocarbons entering the holding tank at the Property exceeds the limit specified in the City of Ottawa's sewer use by-law. The Company was issued a Certificate of Approval and a Permit of Use to use the holding tank ("Sewage System") at the Property. However, industrial sewage is being held in the Sewage System, namely waste water from an oily water separator (the oil/water separator is owned and operated by the Company at the Property). This is contrary to Subsection 53(1) of the *Ontario Water Resources Act*, Revised Statutes of Ontario 1990, c. O.40, as amended (the "OWRA"). Mr. Berry responded that greater than 10,000 litres per day of sewage flows to the holding tank at the Property. The sewage flowing to the Sewage System includes waste water from an oily water separator and human sewage from toilets at the Property. The Company does not hold a Certificate of Approval for an industrial Sewage Works, as the original Certificate of Approval and Permit of Use only authorizes the Company to hold domestic sewage at the Property.

Contraventions

Identify: statute, regulation, order, permit, approval, licence	Specify: provision, term, condition	Description:
Ontario Water Resources Act, Revised Statutes of Ontario 1990, c. O.40 as amended (the "OWRA")	Subsection 53(1)	Alter sewage works without approval

Ministry of the Environment
Ministère de l'Environnement
Ontario

Provincial Officer Report

9940011484
ORIS/IDS Number

P392034
Field Reference Number

*Version en francais sur demande

Name (Name of Person(s) or Company. May be multiple parties, include business address (or home address), title, phone and fax)

Laidlaw Transit Ltd. (the "Company") 1830 Trim Road Orleans, ON K4A 3P8	Colin Doak, Manager 1830 Trim Road Orleans, ON K4A 3P8

November 6, 2002 Date (YYYY/MM/DD)	Tor Rustad, #392 Officer (print) & Badge #	Signature Tor Rustad

Ministry of the Environment
Ministère de l'Environnement
Ontario

Provincial Officer Order

Environmental Protection Act, s. 157, 157.1, 157.2 R.S.O. 1990, c.E.19, as amended
Ontario Water Resources Act, s. 16, 16.1, 16.2 R.S.O. 1990, c.O.40, as amended
Pesticides Act, s. 26.1, 26.2, R.S.O. 1990, c.P.11, as amended

9940011484
ORIS/IDS Number

P392034
Field Reference Number

*Version en francais sur demande

Name

(Name of Person(s) or Company. May be multiple parties, include business address (or home address), title, phone and fax)

#1	#2
Laidlaw Transit Ltd. 1830 Trim Road Orleans, ON K4A 3P8	Colin Doak, Manager 1830 Trim Road Orleans, ON K4A 3P8

Site Location

(Include street address, lot, concession, etc.)

1830 Trim Road
City of Ottawa (Cumberland Ward) (the "Property")

Work Ordered

No	Description:
	Prepare an application for a Certificate of Approval for a Sewage Works (Industrial). Submit a complete application, supporting documents and the fee to the Ministry's Environmental Assessment and Approvals Branch ("EAAB"). The mailing address is: 2 St. Clair Avenue West, Floor 12A, Toronto, ON M4V 1L5. The completed application must be submitted to EAAB by no later than 4:30 PM on Friday, January 17, 2003. A copy of this Order shall be appended to the application for a sewage works. A copy of the application must also be submitted to the Ministry's Ottawa District Office by Friday, January 17, 2003.
A	While this order is in effect, a copy or copies of this order shall be posted in a conspicuous place.
B	While this order is in effect, report in writing, to the District/Area office, any significant changes of operation, emission and ownership, tenancy or other legal status of the facility or operation.

Provincial Officer (print)	Badge #	Date (YYYY/MM/DD)
Tor Rustad	392	November 6, 2002

Ministry of the Environment
Ministère de l'Environnement
Ontario

Provincial Officer Order

Environmental Protection Act, s. 157, 157.1, 157.2 R.S.O. 1990, c E.19, as amended
Ontario Water Resources Act, s. 16, 16.1, 16.2 R.S.O. 1990, c.O.40, as amended
Pesticides Act, s. 26.1, 26.2, R.S.O 1990, c.P.11, as amended

9940011484
ORIS/IDS Number

P392034
Field Reference Number

*Version en francais sur demande

Name (Name of Person(s) or Company. May be multiple parties, include business address (or home address), title, phone and fax)

#1	#2
Laidlaw Transit Ltd. 1830 Trim Road Orleans, ON K4A 3P8	Colin Doak, Manager 1830 Trim Road Orleans, ON K4A 3P8

Signature	District/Area Office	Phone
Ian Rustad.	Ottawa	(613) 521-3450

REQUEST FOR REVIEW

You may request that this order be reviewed by the Director. Your request must be made in writing (or orally with written confirmation) within seven days of service of this order and sent by mail or fax to the Director at the address below. In the written request or written confirmation you must,

- specify the portions of this order that you wish to be reviewed;
- include any submissions to be considered by the Director with respect to issuance of the order to you or any other person and with respect to the contents of the order;
- apply for a stay of this order, if necessary; and
- provide an address for service by one of the following means:
  - mail
  - fax

The Director may confirm, alter or revoke this order. If this order is revoked by the Director, you will be notified in writing. If this order is confirmed or amended by order of the Director, the Director's order will be served upon you. The Director's order will include instructions for requiring a hearing before the Environmental Review Tribunal.

DEEMED CONFIRMATION OF THIS ORDER

If you do not receive oral or written notice of the Director's decision within seven days of receipt of your request, this order is deemed to be confirmed by order of the Director and deemed to be served upon you.

You may require a hearing before the Environmental Review Tribunal if, within 15 days of service of the confirming order deemed to have been made by the Director, you serve written notice of your appeal on the Environmental Review Tribunal and the Director. Your notice must state the portions of the order for which a hearing is required and the grounds on which you intend to rely at the hearing. Except by leave of the Environmental Review Tribunal, you are not entitled to appeal a portion of the order or to rely on grounds of appeal that are not stated in the notice requiring the hearing. Unless stayed by the Environmental Review Tribunal, the order is effective from the date of service.

Written notice requiring a hearing must be served personally or by mail upon:

The Secretary Environmental Review Tribunal 2300 Yonge Street, Suite 1201 Toronto, Ontario M4P 1E4	and	Steve Burns, District Manager Ministry of the Environment 2435 Holly Lane, Ottawa, Ontario K1V 7P2
	Tel:	(613) 521-3450
	Fax:	(613) 521-5437

Where service is made by mail, it is deemed to be made on the fifth day after the date of mailing and the time for requiring a hearing is not extended by choosing service by mail.

Further information on the Environmental Review Tribunal requirements for an appeal can be obtained directly from the Tribunal by:
Tel: (416) 314-4600 Fax: (416) 314-4506 www.ert.gov.on.ca

FOR YOUR INFORMATION

- Unless stayed by the Director or the Environmental Review Tribunal , this order is effective from the date of service. Non-compliance with the requirements of this order constitutes an offence.

- The requirements of this order are minimum requirements only and do not relieve you from complying with the following:
  - any applicable federal legislation;
  - any applicable provincial requirements that are not addressed in the order; and
  - any applicable municipal law.

- The requirements of this order are severable. If any requirement of this order or the application of any requirement to any circumstance is held invalid, the application of such requirement to other circumstances and the remainder of the order are not affected.

- Further orders may be issued in accordance with the legislation as circumstances require.

- The procedures to request a review by the Director and other information provided above are intended as a guide. The legislation should be consulted for additional details and accurate reference.

***** FACSIMILE COVER SHEET *****

OCT 09 2002 12:20

Message To:

a5215437

Message From:

RUCA OCSSD

08
Pages
Follow This Cover Page

Ottawa Septic System Office
Bureau des systèmes septiques d'Ottawa

Mississippi Valley Conservation
de la vallée Mississippi

Office de protection de la nature de la vallée Rideau
Rideau Valley Conservation Authority

South Nation Conservation
de la Nation Sud

Fax

Name: Tor Rustad

Organization: Ministry of Environment

Fax: 521-3437

Phone: 521-3450

From: Krystal Alexander

Date: Oct. 8/02

Pages:

Subject: Please Find Enclosed a:

- ☐ File Search Request Form
- ☐ Change of Use/Renovation Permit
- ☐ Scarification/Clay Seal Inspection Report
- ☒ Sewage System Application~Permit # 1988-606 (73)
- ☐ Installation Inspection Report
- ☐ Final Grade Inspection Report

Comments: Please find enclosed the sewage system permit # 1988-606. I hope this is helpful!

Thanks,
Krystal.

1127 Mill Street • Box 599 • Manotick, Ontario • K4M 1A5 • Tel. 692-0160 • 1-800-459-5975 • Fax 692-1507

Ministry of the Environment
Ontario

USE PERMIT
FOR CLASS 4, 5, 6 SEWAGE SYSTEMS

APPLICATION No.

INSPECTION DETAILS	TIME	DATE	WEATHER
	1:40pm	Nov 02/03	[illegible]
REPRESENTING:	THE OWNER		THE INSTALLER

1. Work authorized by the Certificate of Approval has been satisfactorily completed and includes:
   a) Septic tank/holding tank of working capacity of [illegible] Imp. Gals. constructed of steel ☐ concrete ☒ [illegible] on site ☐ or prefabricated ☒ to serve [illegible]
   MAKE AND MODEL
   IF PREFABRICATED TANK
   b) Leaching bed of total [illegible] linear feet of [illegible] inch diameter distribution pipe of [illegible] (type and product [illegible] on e.g. manufacturer(s) and material of which pipe [illegible] in [illegible] runs and fed by [illegible] (gravity, siphon, pump).
   c) Proprietary Aerobic System: (Manufacturer) [illegible] (Model)
   d) Other details [illegible]

2. Location
   a) System components installed as shown on application supporting Certificate of Approval ☐
   b) If located other than in (a) use space below for sketch and dimensions from permanent points of [illegible] to facilitate future location of tank and leaching bed including orientation of pipe runs.

3. The following work remains to be completed:–
   ☐ Backfill System and Complete
   ☐ Stabilize All Sloped Surfaces
   ☐ Rough Grading to Shed Runoff and Divert Water [illegible]
   ☐ Other [illegible]

USE PERMIT

Under Section 67 of the Environmental Protection Act and subject to the provisions of the Act and Regulations [illegible] is hereby issued to (Owner) [illegible] LIMITED for the use and operation [illegible] Class 5 sewage system constructed/installed/altered/extended/altered pursuant to the Certificate of Approval [illegible] under the above application number in accordance with the application and Certificate of Approval [illegible] indicated above and located on Lot A Concession 9 Ward/Township/Municipality [illegible]
Region/District/County [illegible] Plan No. [illegible] Sub-Lot No. [illegible]

INSPECTED AND RECOMMENDED BY	PERMIT ISSUED BY	DATE ISSUED
[illegible]	[illegible] DIRECTOR	24 [illegible]

Note: Section 64(a) of the Act provides that no change can be made to any building(s) or structure(s) in connection [illegible] this sewage system is used, if the operation or effectiveness of the sewage system will or is likely to be [illegible] change, unless a new Certificate of Approval is obtained.
Section 121 of the Act provides that an applicant for a permit may appeal a decision to refuse to issue [illegible] notice of appeal must be forwarded to the Director (who refused to issue the permit) and to the Environmental Appeal Board 1 St. Clair Avenue West, Toronto, Ontario, M4V 1K7 within 15 days of receipt of a permit.

WARNING: UNDER NO CIRCUMSTANCES SHOULD A HOMEOWNER ENTER A SEPTIC TANK. NOXIOUS GASES [illegible] HEAVIER THAN AIR REMAIN IN THE TANK AFTER THE TOP IS REMOVED, AND HAVE CAUSED DEATH BOTH [illegible] ORIGINAL VICTIM AND TO THOSE WHO ATTEMPT TO RESCUE HIM FROM THE TANK.

1042 (11/97)

OFFICE COPY

Ministry of the Environment
Ontario

APPLICATION FORM AND CERTIFICATE OF APPROVAL FOR A CLASS 2-6 SEWAGE SYSTEM

(Please Print Clearly)

Application No. 72(A-9) 606
Fee Receipt No. 6244
Date Received 28 July 88

1. Name of Owner	Tel. No.	2. Installer's Name	Tel. No.
Travelways Ltd.-Eastern Region	(613) 741-3600		

Address (No., Street, City, Town, etc.): 1550 Innes Road, Ottawa, Ontario, K1B 3V5

Address (No., Street, City, Town, etc.):

3. Propose to Construct (Construct/Install/Alter/Extend/Enlarge) a Class 5 sewage system to serve Offices & Garage (Facility - e.g. Single Family Dwelling, Motel, etc.)

4. Location — Region, County, District	Ward, Township, Town	Lot No.	Conc. No.	Sub.Lot. No.	Plan No	Area (m²)
Regional Municipality of Ottawa-Carleton	Cumberland	A	IX			

5. State No. of	Bedrooms or Motel Units	People	Flush Toilets	Urinals	Washbasins	Showers and Bathtubs

See attached letter dated May 17, 1988 for design criteria.

6. Water Supply
- Dug or Bored Well ☐
- Drilled Well ☒ Municipal ☐
- Other
- Proposed ☒ or Existing ☐

7. Attach completed sketch on Page 2 — List other attachments

See Plan "Site Plan and Details" Project No. 1989

8. Relationship to Severance if applicable
- ☐ Lot Approval Pending
- ☐ Lot Approved

Under Severance Application No.

9. Directions to Lot:— Highway No., Secondary Roads, Signs to Follow, etc.

Lot located on the west side of Regional Road 57 just north of Innes Road.

10. I certify that the above information is complete and correct and that, if approved, the work will conform with Provincial requirements for sewage systems and local Municipal By-Laws.

Name of Agent: KOSTUCH ENGINEERING LIMITED Tel. No. (613-)744-3965

Address (No., Street, City, Town, etc.): 1481 Cyrville Road, Gloucester, Ont. K1B 3L7

Signature of Owner or Agent: [signature]

Date: JULY 25, 1988

11. INSPECTOR'S REPORT

Inspection Time and Date: 3:00 PM AUG. 4 1988

Weather: CLOUDY RAIN

Representing Owner:

Leaching Bed Design Criteria: Depth to Rock ___ m; Design H.W.T. ___ m

REQUIREMENTS: Length of Distribution Pipe (metres) N/A; Working Capacity of ~~Septic~~ Holding Tank (Litres) 9000 L

Sub-Surface Conditions Encountered: Rock & G.W.T.; Depth (m) 0, 0.25, 0.50, 0.75, 1.00, 1.25, 1.50; Soil Type N/A

Conditions of Approval and Reasons (e.g. fill, grading, drainage improvements, design sewage flows) ☒

OR

Reasons where Proposal not Acceptable (add additional pages if required) ☐

(j) ALARM (EITHER VISUAL OR AUDIBLE) TO BE INSTALLED ON TANK.

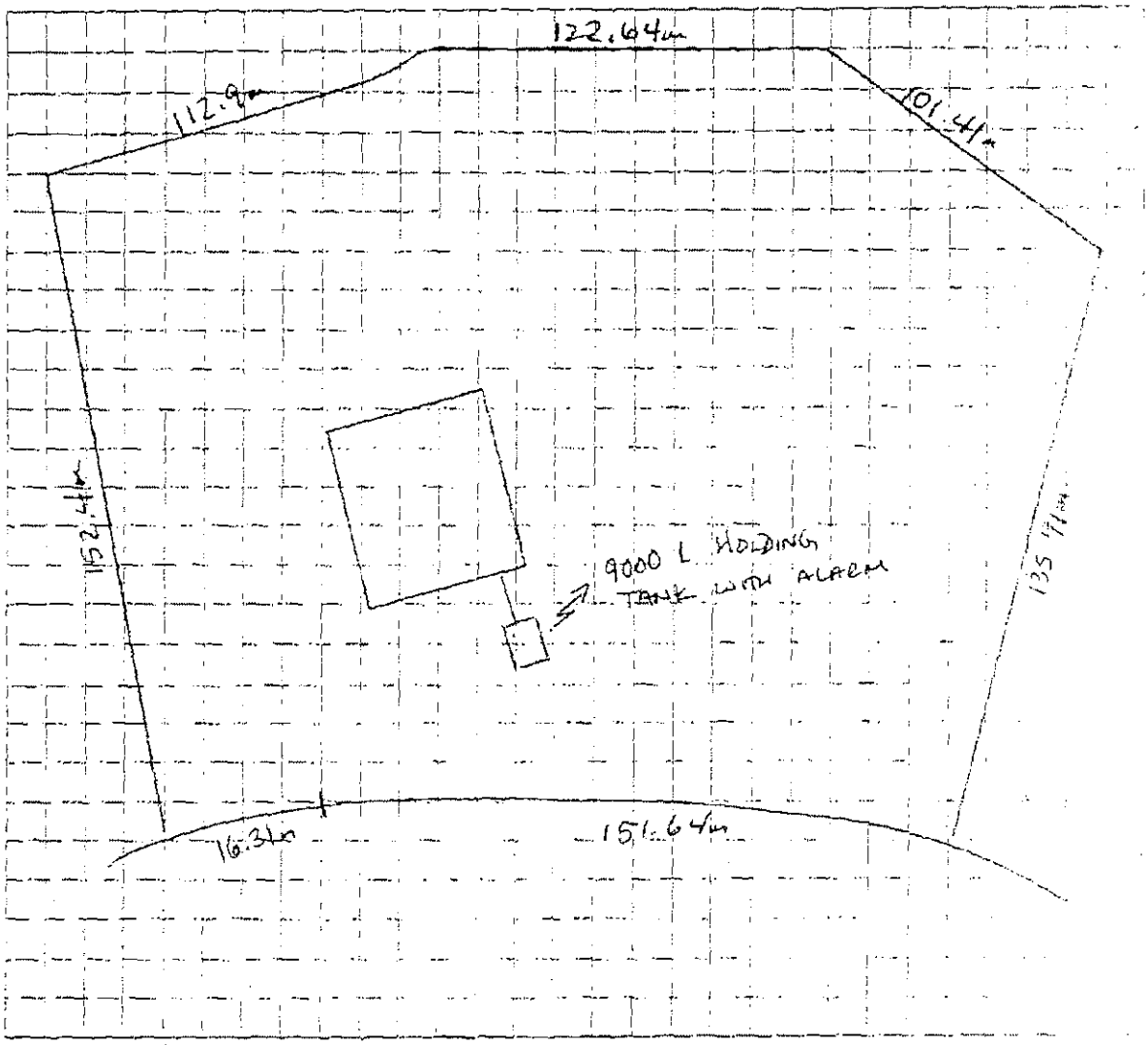
1040 3/82

OFFICE COPY

Ministry of the Environment
Ontario

APPLICATION NO.

12. **LOT DIAGRAM AND SEWAGE SYSTEM PLAN:** — Draw to scale indicating north point and showing:
   a) Location of sewage system components (e.g. tanks, leaching bed). Locate and show horizontal distances from system to adjacent existing or proposed buildings, water supplies (including neighbours), existing on-site sewage systems, driveways, property lines, lakes, rivers, water courses, swimming pools.
   b) Lot dimensions, topographic features (e.g. swamps, steep slopes) near system.
   c) If any part of proposal conforms to a specific standard drawing, give reference number(s).



13. **A Certificate of Approval for this application is refused for the reasons given in Section 11 Page 1**

INSPECTED AND RECOMMENDED BY	REFUSED	DATE
	DIRECTOR	

CERTIFICATE OF APPROVAL

Application approved and this Certificate of Approval under Section 65 of the Environmental Protection Act is hereby issued for the proposal outlined on Pages 1 and 2 of the application and its attachments as amended by the requirements and conditions of Section 11 provided that the sewage system shall be completed and a Use Permit issued within 12 months of the issue date or such extended period as the Director on application allows. DO NOT OPERATE THE SYSTEM UNTIL A USE PERMIT IS ISSUED.

INSPECTED AND RECOMMENDED BY	ISSUED	DATE
	DIRECTOR	August 8, 1988

Under Section 121 of the Environmental Protection Act, an applicant may appeal a decision by writing to the Director and to the Environmental Appeal Board, 1 St. Clair Avenue West, Toronto, Ont., M4V 1K7 within 15 days of receipt of the decision.

1040 3/82 Page 2 of 2

OFFICE COPY

KOSTUCH ENGINEERING LIMITED
CONSULTING ENGINEERS
1481 CYRVILLE ROAD • SUITE 201 • GLOUCESTER, ONTARIO • K1B 3L7 • (613) 744-3965

Fax: 744-8877

July 25, 1988

File: 1989

Ontario Ministry of the Environment,
2378 Holly Lane,
Room 204,
Ottawa, Ontario
K1V 7P1

Attention: Mr. Kirk Hansen

Dear Sir:

Re: Application for Class 5 System,
Travelways Ltd.,
Leonard Creek Industrial Park,
Township of Cumberland.

We are submitting an application for approval of Class 5 sewage system, for the above-noted project.

In addition to the application form we are enclosing the following items:

(a) Cheque for $87.55.

(b) Copy of letter dated May 17, 1988 from the Ministry regarding design criteria i.e. 9,100 l/day.

(c) Drawing, Site Plan and Details - two copies.

The installer of the system will be determined after the project is tendered.

The owner intends to install both sand traps and oil/grease traps in the bus wash area and only exterior body washing will be performed on the vehicles.

Please be advised that the owner intends to use a licensed hauler who will use an approved site for disposal of the wastes.

...2/

The owners are anxious to begin work on the project as early as possible and would appreciate your prompt consideration of this application.

Please call us if you have any questions or require additional information.

Yours very truly,

KOSTUCH ENGINEERING LIMITED

D. W. Lishman, P. Eng.

DWE/hs
Enc.

c.c. Projek Design & Development INc.,
Att: Mr. Bob Guibord

LAIDLAW

LAIDLAW TRANSIT LTD.
O/A LAIDLAW EDUCATION SERVICES
3221 NORTH SERVICE ROAD, P.O. BOX 5028, BURLINGTON, ONTARIO, CANADA L7R 3Y8
Telephone (905)-336-1800
Facsimile (905)-336-4261

November 13, 2002

Mr. Steve Burns
District Manager
Ministry of the Environment
2435 Holly Lane
Ottawa, Ontario
K1V 7P2

Re: Provincial Officer Order 9940011484
Field Reference Number P392034
Laidlaw Transit Ltd.
1930 Trim Road, Orleans, Ontario K4A 3P8

Dear Mr. Burns:

This letter is a request to appeal the above referenced work order for Laidlaw Transit Ltd. Cumberland facility.

The work order dated November 6, 2002 requires Laidlaw to prepare an application for a Certificate of Approval for Sewage Works (Industrial).

Upon review, it is Laidlaws opinion that the order is too restrictive to the type of remedy to correct the present condition. Laidlaw is currently investigating alternative methods of managing the facility's wastewater. These options include connecting to the regional sanitary sewer. Golder Associates of Ottawa has been retained by Laidlaw to provide a feasibility study on the options and are currently working on the project. Golder has advised us that if the option of the sewer connection were selected, it would not be possible to design, contract and install the system prior to January 17, 2003 date as specified in the work order. The completion date for the work order would need to be revised to accommodate the scope of work and schedule as it is completed over the coming months and taking into consideration the upcoming winter season.

In conclusion, Laidlaw Transit requests that the work order be stayed or modified to allow for other corrective actions to be investigated and identified that will be more practical and cost effective than the present system and proposed permit application.

Laidlaw is committed to address and correct the waste water management concerns at the site and I trust the above information if sufficient to make your decision on the appeal.

If there are any questions, please don't hesitate to contact me at (905)336-1800 ext. 377.

Regards,

Bob Yanchis, P.Eng.
Director, Environmental Management
Laidlaw Education Services

BY/jf

cc. John Giannone
Judy Oswald
Mike Casey
Rick Gilchrist

Ministry of the Environment / Ministère de l'Environnement
Ontario

Southeastern Region / Région du Sud-Est

2378 Holly Lane
Ottawa Ontario
K1V 7P1
613/521-3450

2378, Holly Lane
Ottawa (Ontario)
K1V 7P1
613/521-3450

May 17, 1988.

Mr. F.L. Dicaire,
Kostuch Engineering Ltd.,
1481 Cyrville Road,
Suite 201,
Gloucester, Ontario,
K1B 3L7.

Dear Mr. Dicaire,

RE: Township of Cumberland
Leonard Creek Industrial Park
Travelways Ltd. - Design Criteria

We are in receipt of your letter of May 11, 1988 outlining the proposed design criteria for the sewage system.

	Flow Rate (L/day)		Flow Rate (L/day)	
	Kostuch	MOE	Kostuch	MOE
20 permanent employees	50	75	1000	1500
100 casual employees	25	50	2500	5000
20 bus washers	280	400	5600	8000
			9100	14500

If you are satisfied that the flows you provided represent the anticipated flow from such a use, they can be used in the system design. As the daily flow exceeds 4500 litres, the "Reasonable Use" Policy will have to be addressed.

If there are any questions please contact this office.

Yours very truly,

K. Hansen,
Sr. Environmental Officer.

KH/th

26 July 1988

Township of Cumberland
P.O. Box 15
R.R. # 3
NAVAN, Ontario
K4B 1J1

Attention: Mr. P. Mercier

Dear Sir:

Re: Township of Cumberland
Pt. Lot A, Concession IX
Site Plan Application
Travelways Limited
Leonard Creek Business Park

Further to your request of July 20, 1988 for comments on the above site plan application, please be advised that this Ministry will be unable to perform a site inspection for the above proposal; however, the plan will be forwarded to our Ottawa District Office for their information and future reference.

Yours truly,

ORIGINAL SIGNED BY
W. C. STEVENS

W.C. Stevens, Evaluator
Approvals and Planning
Technical Support
Southeastern Region
MLF/mf
bcc: K. Hansen
- MLF
- RF EP-02-05 (Cumberland - General) Attn: L. Fitz/M. Holy

Ministry of Environment and Energy

OCCURRENCE REPORT
PAGE: 1

Entered: 2002/09/17 13:13
Batch : 2002/11/06
Abstracts[02] Diaries[01]

Received By
TIM OBRIEN

ORIS No.
9940011484

I.E.B. No.

Occurrence Type: COMPLAINT
Subtype: OTHER

Work Plan [CS]

Occurrence: Date 2002/09/16 Time 12:00

Reported by (Name/Organization)
BLAIR MCINTOSH
CITY OF OTTAWA
Telephone No. 613-580-2424 X0000
Alternate No. X
Address:
ROPEC
EXTENSION 23335
Postal Code:

Report to MOE: 2002/09/17 12:30
MOE at Scene: 2002/09/19 15:25

Assigned To:
TOR RUSTAD

ERP Contacted:
Callout: [ ] NSP: [ ]
ERP Name:

Location of Occurrence:
OTTAWA CITY

SOUTHEAST OTTAWA
Reg.[4] Dist.[OT] Municipality[20107]

Source:
LAIDLAW TRANSIT

Sector: [ ] Source: [ ] SIC: [ ]
UTM:
N: [ ] E: [ ] Zone: [ ]

Syn:ANONYMOUS CALL TO CITY INDICATED LAIDLAW DISCHARGE OF CONTAMINANT.

Brief Summary:
SEPTEMBER 16, 2002 - ANONYMOUS CALL TO CITY OF OTTAWA INDICATED THE FIRM WAS DELIBERATELY CAUSING THE DISCHARGE OF CONTAMINANT ON-SITE. A FUEL(?) STORAGE TANK WAS BEING FILLED WITH WATER AND ALLOWED TO OVER-FLOW TO DILUTE THE CONTENTS AND PERMIT DISCHARGE. NO FURTHER INFORMATION AVAILABLE AT THIS TIME.
THURSDAY, SEPTEMBER 19, 2002, 15:25 AT SITE: SPOKE TO MARCEL BERRY, SHOP FOREMAN. MR. BERRY SHOWED THE UNDERSIGNED THE UNDERGROUND HOLDING TANK FOR THE WASTE MOTOR OIL. THERE WAS NO OBVIOUS SIGN OF SPILLAGE OR CONTAMINATION ON THE GRAVEL.

s.21

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

Follow-up Action: [·] Abatement [ ] IEB [ ] Other_____ BF Date:

File Closed:
[ ] Abatement [ ] IEB [ ] OTHER

Complainant Contact Code [ ] Date

Suspected [ ] Violation

Report Prepared by: Date

IEB Investigator IEB BF Date

Approving Officer Date
Nov 13/02

Reviewing Officer Date

Specify number(s) for routing original [ ] [ ] [ ] [ ] Continued [ ] Yes
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 _____

SAC Action Class: 1:[ ] 2:[ ]

ORIS No.: 9940011484 IEB No.:

ABSTRACT ENTRIES OT
==========

2002/09/20 10:13 rustadto
ABSTRACT #1, TR
MR. BERRY SHOWED THE UNDERSIGNED THE AREA OF THE PROPERTY WHERE THE UNDERGROUND FUEL TANKS ARE LOCATED. THERE WAS NO OBVIOUS SPILLAGE OR CONTAMINATION. HOWEVER, THERE EXISTS AT THE PROPERTY AN UNDERGROUND HOLDING TANK FOR THE STORAGE OF SEWAGE WASTE FROM TOILETS AND INDUSTRIAL SEWAGE. THE INDUSTRIAL SEWAGE CONSISTS OF WATER FROM THE OIL/WATER SEPARATOR AND DETERGENT FROM THE CLEANING OF BUSES. THAT TANK HAD NOT OVERFLOWED. THE SEWAGE IN THE HOLDING TANK HAD BEEN REMOVED BY LAMOREUX PUMPING AS THEY HOLD A CERTIFICATE OF APPROVAL FOR A WASTE MANAGEMENT SYSTEM TO HAUL SEWAGE. HOWEVER, STAFF AT THE CITY OF OTTAWA SEWAGE TREATMENT PLANT REFUSED TO ACCEPT FURTHER INDUSTRIAL SEWAGE FROM THIS SITE AS THE TOTAL PETROLEUM HYDROCARBON CONCENTRATION EXCEEDED 5 PARTS PER MILLION. THEREFORE, A HAULER LICENSED TO CONVEY LIQUID INDUSTRIAL WASTES WAS HIRED TO REMOVE THE INDUSTRIAL SEWAGE.

2002/11/06 12:07 rustadto
ABSTRACT #2, TR
THURSDAY, OCTOBER 31, 2002, 11:10 AT SITE: DISCUSSED WITH COLIN DOAKS, GENERAL MANAGER THE REQUIREMENT TO HOLD A CERTIFICATE OF APPROVAL FOR AN INDUSTRIAL SEWAGE WORKS. THE WASTEWATER IS INDUSTRIAL SEWAGE AND THEREFORE REQUIRES AN INDUSTRIAL SEWAGE WORKS APPROVAL.

Ponalo, Thandeka (MOECC)

From: Larkin, Lance (MOECC)
Sent: March 18, 2016 8:31 AM
To: Ponalo, Thandeka (MOECC)
Subject: 1830 Trim
Attachments: P150422-33_4.pdf

From: Ranger, Tina [mailto:Tina.Ranger@ottawa.ca]
Sent: May-20-15 3:44 PM
To: Larkin, Lance (MOECC)
Subject: First Student Group - Laboratory Results

Hi Lance,

Thank-you for taking my call. As discussed, attached are the laboratory results collected from the waste originating from First Student Group holding tank waste located at 1830 Trim Rd, Ottawa.

Feel free to contact me if you require any other information.

Tina

Tina Ranger
Compliance Officer - Sewer Use Program
Environmental Services Department
Phone: 613-580-2424 x 22170
Fax: 613-745-9197
Email: Tina.Ranger@Ottawa.ca

800 Green Creek
Ottawa Ontario
K1J 1A6
Tel: (613) 580-2424 x22836

Report Date: 11-May-2015

Project Report
City of Ottawa
Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
BOD	CBOD	mg/L	6 / 3
COD	COD	mg/L	42 / 20
Field	pH-Field	pH units	7.90
	Temp-Field (C)	C	9.3
ICPES WW	Aluminum Extractable	mg/L	0.070 / 0.005
	Antimony Extractable	mg/L	<0.005 / 0.005
	Arsenic Extractable	mg/L	<0.005 / 0.005
	Barium Extractable	mg/L	0.090 / 0.005
	Beryllium Extractable	mg/L	<0.005 / 0.005
	Bismuth Extractable	mg/L	<0.01 / 0.010
	Boron Extractable	mg/L	0.112 / 0.005
	Cadmium Extractable	mg/L	<0.005 / 0.005
	Calcium Extractable	mg/L	100.40 / 5.00

000106

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Report Date: 11-May-2015

Project Report
City of Ottawa
Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
ICPES WW	Chromium Extractable	mg/L	<0.005 / 0.005
	Cobalt Extractable	mg/L	<0.005 / 0.005
	Copper Extractable	mg/L	0.061 / 0.005
	Iron Extractable	mg/L	0.479 / 0.005
	Lead Extractable	mg/L	<0.005 / 0.005
	Magnesium Extractable	mg/L	38.16 / 5.00
	Manganese Extractable	mg/L	0.473 / 0.005
	Molybdenum Extractable	mg/L	<0.005 / 0.005
	Nickel Extractable	mg/L	0.009 / 0.005
	Phosphorus Extractable	mg/L	1.608 / 0.010
	Potassium Extractable	mg/L	14.21 / 5.00
	Selenium Extractable	mg/L	<0.005 / 0.005
	Silver Extractable	mg/L	<0.005 / 0.005

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P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
ICPES WW	Sodium Extractable	mg/L	101.60 / 5.00
	Strontium Extractable	mg/L	1.464 / 0.005
	Thallium Extractable	mg/L	<0.005 / 0.005
	Tin Extractable	mg/L	<0.005 / 0.005
	Titanium Extractable	mg/L	0.007 / 0.005
	Vanadium Extractable	mg/L	<0.005 / 0.005
	Zinc Extractable	mg/L	0.056 / 0.005
OIL&GREASE-A&V	Oil & Grease - Animal-Vegetable	mg/L	1.7 / 0.5
OIL&GREASE-M&S	Oil & Grease - Mineral	mg/L	4.1 / 0.5
OIL&GREASE-TOTAL	Oil & Grease - Total	mg/L	5.8 / 0.5
PHC F1-F4	F2 (C10-C16)	ug/L	<100 / 100
	F3 (C16-C34)	ug/L	3030 / 100
	F4 (C34-C50)	ug/L	1400 / 100

000108

800 Green Creek
Ottawa Ontario
K1J 1A6
Tel: (613) 580-2424 x22836

Report Date: 11-May-2015

Project Report
City of Ottawa
Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
Solids	Total Solids	% by Wt	0.08
	Total Suspended Solids	mg/L	22 / 1
	Volatile Solids	% by Wt	12.39
	Volatile Suspended Solids	mg/L	17
TKNTP	Total Kjeldahl Nitrogen	mg/L	4.7 / 1.0
	Total Phosphorus	mg/L	1.65 / 0.25
TPH(DRO+GRO)	DRO	mg/L	0.9 / 0.1
	GRO	mg/L	<0.2 / 0.2
VOC	1,1,1,2-Tetrachloroethane	ug/L	<0.5 / 0.5
	1,1,1-Trichloroethane	ug/L	<0.5 / 0.5
	1,1,2,2-Tetrachloroethane	ug/L	<0.5 / 0.5
	1,1,2-Trichloroethane	ug/L	<0.5 / 0.5
	1,1-Dichloroethane	ug/L	<0.5 / 0.5

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Project Report
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Laboratory Services

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

P150422-33

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
VOC	1,1-Dichloroethylene	ug/L	<0.5 / 0.5
	1,2-Dibromoethane	ug/L	<0.2 / 0.2
	1,2-Dichlorobenzene	ug/L	<0.5 / 0.5
	1,2-Dichloroethane	ug/L	<0.5 / 0.5
	1,2-Dichloroethylene, total	ug/L	<0.5 / 0.5
	1,2-Dichloropropane	ug/L	<0.5 / 0.5
	1,3-Dichlorobenzene	ug/L	<0.5 / 0.5
	1,3-Dichloropropene, total	ug/L	<0.5 / 0.5
	1,4-Dichlorobenzene	ug/L	2.4 / 0.5
	Acetone	ug/L	<5.0 / 5.0
	Benzene	ug/L	<0.5 / 0.5
	Bromodichloromethane	ug/L	<0.5 / 0.5
	Bromoform	ug/L	<0.5 / 0.5

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Project Report
City of Ottawa
Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
VOC	Bromomethane	ug/L	<0.5 / 0.5
	c-1,2-Dichloroethylene	ug/L	<0.5 / 0.5
	c-1,3-Dichloropropene	ug/L	<0.5 / 0.5
	Carbon Tetrachloride	ug/L	<0.2 / 0.2
	Chlorobenzene	ug/L	<0.5 / 0.5
	Chlorodibromomethane	ug/L	<0.5 / 0.5
	Chloroethane	ug/L	<1.0 / 1.0
	Chloroform	ug/L	<0.5 / 0.5
	Chloromethane	ug/L	<3.0 / 3.0
	Dichlorodifluoromethane	ug/L	<1.0 / 1.0
	Dichloromethane	ug/L	<5.0 / 5.0
	Ethylbenzene	ug/L	<0.5 / 0.5
	Hexane	ug/L	<1.0 / 1.0

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Project Report
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Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
VOC	m/p-Xylene	ug/L	0.9 / 0.5
	Methyl Butyl Ketone (2-Hexanone)	ug/L	<10.0 / 10.0
	Methyl Ethyl Ketone (2-Butanone)	ug/L	<5.0 / 5.0
	Methyl Isobutyl Ketone	ug/L	<5.0 / 5.0
	o-Xylene	ug/L	0.9 / 0.5
	Styrene	ug/L	<0.5 / 0.5
	t-1,2-Dichloroethylene	ug/L	<0.5 / 0.5
	t-1,3-Dichloropropene	ug/L	<0.5 / 0.5
	Tetrachloroethylene	ug/L	<0.5 / 0.5
	Toluene	ug/L	<0.5 / 0.5
	Trichloroethylene	ug/L	<0.5 / 0.5
	Trichlorofluoromethane	ug/L	<1.0 / 1.0
	Vinyl Chloride	ug/L	<0.5 / 0.5

800 Green Creek
Ottawa Ontario
K1J 1A6
Tel: (613) 580-2424 x22836

Report Date: 11-May-2015

Project Report
City of Ottawa
Laboratory Services

P150422-33

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

Analysis Code	Parameter	Units	SU1578306 HAU - H - 22-Apr-2015 12:41 - Grab Result / RDL / Flags
VOC	Xylenes, total	ug/L	1.8 / 0.6

000113

800 Green Creek
Ottawa Ontario
K1J 1A6
Tel: (613) 580-2424 x22836

Report Date: 11-May-2015

Project Report
City of Ottawa
Laboratory Services

FIRST STUDENT previously Laidlaw Transit
Tina Ranger
Tina.Ranger@ottawa.ca
Sewer UseHAULER

P150422-33

Result Flag Legend

F: Calibration check failure; result suspect.
E: Indicated concentration is estimated
D: Duplicate difference higher than desired. Possibly due to sample inhomogeneity.
AI: Spike recovery failure. Analytical interference suspected.
RM: Reference material result outside desired range.

3X: Analytical blank > 3 times and < 10 times undiluted RDL.
10X: Analytical blank > 10 times undiluted RDL.
<: Result is less than the indicated concentration.
>: Result is greater than the indicated concentration.
HT: Analytical hold time exceeded.

General Comment:

1) The City of Ottawa Laboratory Services adheres to ISO/IEC 17025 requirements and is accredited by CALA for parameters listed in the laboratory's scope of testing (<http://www.cala.ca/scopes/2480.pdf>). In addition, the Laboratory is licensed by MOE to provide Drinking Water Testing.
2) Results in this Report relate to the samples as received at Laboratory Services; sampling procedure and equipment may significantly affect the quality of results.
3) Clients should not provide confidential information to Laboratory Services. Any information provided to the Laboratory and any results generated by the Laboratory are accessible by the general public.
4) Results in red indicate they have exceeded the client specified limit.
5) The reference methods and sample reception dates are available to the clients upon request.
6) Analysis Code containing SCPAR and SCMAX indicates analysis performed by Paracel and Maxxam.

Project Comments: M#223628, Strong fuel smell, load refused by TR, HT, ICID-163-160715

Laboratory Comments:

Approved by: **Michael Ziebell**
Laboratory Services Supervisor
Laboratory Services
(613)580-2424 ext 22836
Michael.Ziebell@ottawa.ca

Ponalo, Thandeka (MOECC)

From: Larkin, Lance (MOECC)
Sent: March 18, 2016 8:32 AM
To: Ponalo, Thandeka (MOECC)
Subject: 1830 Trim Road
Attachments: 1528465.26189.pdf

From: Collinson, Steve [mailto:Steve.Collinson@firstgroup.com]
Sent: December-07-15 3:54 PM
To: Larkin, Lance (MOECC)
Subject: FW: Orleans, ON UST Closure Report

Lance,

I apologize, I don't recall if I sent this to you previously.

Please let me know if you have questions.

Thanks,
Steve

Steve Collinson
Director of Real Estate
FirstGroup America
Office: 513.362.4507 | 600 Vine Street, Suite 1400, Cincinnati, Ohio 45202
Mobile: 360.608.5781 | Fax: 360.326.1974
steve.collinson@firstgroup.com
www.firstgroupamerica.com

Ponalo, Thandeka (MOECC)

From: Larkin, Lance (MOECC)
Sent: March 18, 2016 8:32 AM
To: Ponalo, Thandeka (MOECC)
Subject: 1830 Trim Road

From: Collinson, Steve [mailto:Steve.Collinson@firstgroup.com]
Sent: December-08-15 9:41 AM
To: Larkin, Lance (MOECC)
Subject: Re: Orleans, ON UST Closure Report

Lance,

I'll make certain our consultant has or will.

Regards,
Steve

Steve Collinson
Director of Real Estate
First Group America
(360) 608-5781

On Dec 8, 2015, at 6:29 AM, Larkin, Lance (MOECC) <Lance.Larkin@ontario.ca> wrote:

> Thank you Steve,
>
> Has 1st Student provided a copy of the closure report to the Technical Standards & Safety Authority (TSSA), as part of the regulated Fuels Safety Program?
>
> Their contact information can be obtained here: www.tssa.org
>
> Regards,
>
> **Lance Larkin** | Senior Environmental Officer / Agent principal de l'environnement (#723)
>
> Ontario Ministry of the Environment and Climate Change / Ministère de l'environnement et de l'action en matière de changement climatique de l'Ontario
>
> Ottawa District Office / Bureau du district d'Ottawa
>
> 2430 Don Reid Drive / 2430, promenade Don Reid, Ottawa ON K1H 1E1
>
> ☎ 613-521-3450 x229 | 🖷 613-521-5437 | Toll free / sans frais: 1-800-860-2195 | Spill or Emergencies/ déversements ou urgences : 1 800 268-6060 | Pollution Hotline/ Ligne-info antipollution : 1 866 MOE-TIPS (1 866 663-8477)

Ponalo, Thandeka (MOECC)

From: Larkin, Lance (MOECC)
Sent: March 18, 2016 8:33 AM
To: Ponalo, Thandeka (MOECC)
Subject: 1830 Trim Road

From: Larkin, Lance (MOECC)
Sent: January-19-16 11:15 AM
To: Stephen Hoyle (shoyle@tssa.org)
Subject: 1830 Trim Road Ottawa - Owner: 1st Student Groupe, represented by Steven Collinson at 1-360-608-5781

Hi Stephen,

I just wanted to let TSSA know that there was an UST removal at the above noted Site. My contact for the Site, Steven Collinson indicated that TSSA would be notified about the Tank Removal which occurred sometime in 2013-2014. I'm assuming you have a file on this.

Regards,

Lance Larkin | Senior Environmental Officer / Agent principal de l'environnement (#723)

Ontario Ministry of the Environment and Climate Change / Ministère de l'environnement et de l'action en matière de changement climatique de l'Ontario

Ottawa District Office / Bureau du district d'Ottawa

2430 Don Reid Drive / 2430, promenade Don Reid, Ottawa ON K1H 1E1

☎ 613-521-3450 x229 | 🖷 613-521-5437 | Toll free / sans frais: 1-800-860-2195 | Spill or Emergencies/ déversements ou urgences : 1 800 268-6060 | Pollution Hotline/ Ligne-info antipollution : 1 866 MOE-TIPS (1 866 663-8477)

TABLE 3

SOIL LABORATORY RESULTS: METALS

FINAL EXCAVATION LIMITS

FIRST STUDENT FACILITY - 1830 TRIM ROAD, ORLEANS, ONTARIO

(Expressed in mg/kg unless noted otherwise)

Parameter	MOE Standards (1)		Tank Excavation 1				Tank Excavation 2	
			Excavation Floor		Excavation Sidewalls		Excavation Floor	
			T2-F1	T2-F2	T2-N1,7	T2-E1,7	T1-F11	T1-F2
			09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15	09-Jul-15
			Clay	Clay	Clay	Clay	Clay	Clay
	Residential	Commercial	B15-17106-2	B15-17991-3	B15-17106-6	B15-17991-4	B15-17991-1	B15-17991-2
Antimony	7.5	50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic	18	18	1.4	0.8	1.3	0.7	0.6	0.8
Barium	390	670	294	321	331	327	330	267
Beryllium	5	10	0.7	0.7	0.7	0.7	0.7	0.8
Boron	120	120	18.6	6.6	17.9	6.1	5.6	8.8
Boron (Hot Water Soluble)	1.5	2	0.13	0.16	0.15	0.18	0.09	0.39
Cadmium	1.2	1.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	160	160	113	117	112	117	113	106
Chromium (VI)	10	10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cobalt	22	100	28	29	29	29	30	27
Copper	180	300	49	50	50	51	52	49
Lead	120	120	10	8	10	9	9	9
Mercury	1.8	20	0.017	0.007	0.016	0.01	0.008	0.011
Molybdenum	6.9	40	< 1	< 1	< 1	< 1	< 1	< 1
Nickel	130	340	63	65	64	66	64	62
Selenium	2.4	5.5	0.8	0.5	0.7	0.6	0.5	0.6
Silver	25	50	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	1	3.3	0.4	0.4	0.4	0.4	0.4	0.3
Uranium	23	33	0.8	0.7	0.7	0.6	0.8	1.8
Vanadium	86	86	92	95	94	93	97	90
Zinc	340	340	122	128	126	123	128	120

Notes:

1 - Soil, Sediment and Ground Water Standards for Use Under Part XV.1 of the Environmental Protection Act (2011), Ontario Ministry of the Environment - Table 3 Soil Standards for residential and commerical sites with fine-to-medium grained soil and non-potable groundwater use.

Dates presented are sample dates

'---' - no standard or not analyzed

B15-17106-2 - laboratory sample identifier

BOLD - value exceeds commercial and residential standards

BOLD - value exceeds residential standard

APPENDIX F

City of Ottawa Historic Land Use Inventory (HLUI)

File Number: C10-01-16-0035

February 16, 2016

Troy Austrins
Arcadis Canada Inc.
260 Hearst Way, Suite 512,
Ottawa, ON
K2L 3H1

Sent via email [Troy.Austrins@arcadis.com]

Dear Mr. Austrins,

Re: Information Request
1830 Trim Road, Ottawa, Ontario ("Subject Property")

Internal Department Circulation

The Planning and Growth Management Department has the following information in response to your request for information regarding the Subject Property:

- The Sewer Use Program notes that there is information regarding recent reports, violations, approvals, and agreements pursuant to the provisions of the Sewer Use by-law (2003-514). The Sewer Use Program cannot guarantee or make comments on the environmental condition of the subject properties, as the Sewer Use Program does not have the necessary data to make such an evaluation, you may wish to contact the Ministry of Environment.

Search of Historical Land Use Inventory

This acknowledges receipt of the signed Disclaimer regarding your request for information from the City's Historical Land Use Inventory (HLUI 2005) database for the Subject Property.

A search of the HLUI database revealed the following information:

- There is 1 activity associated with the Subject Property: Activity Number 7520

City of Ottawa
Infrastructure Services and Community Sustainability Department
Planning and Growth Management Branch

110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1
Tel: (613) 580-2424 ext. 14743
Fax: (613) 560-6006
www.ottawa.ca

Ville d'Ottawa
Services d'infrastructure et Viabilité des collectivités
Direction de l'approbation des demandes d'aménagement et d'infrastructure

110, avenue Laurier Ouest, 4e étage
Ottawa (Ontario) K1P 1J1
Tél.: (613) 580-2424 ext. 14743
Téléc: (613) 560-6006
www.ottawa.ca

The HLUI database was also searched for activity associated with properties located within 50m of the Subject Property. The search revealed the following:

- There is 1 activity associated with properties located within 50m of the Subject Property: Activity Number 7520

A site map has been included to show the location of the Subject Property as well as the location of all the activities noted above.

Additional information may be obtained by contacting:

Ontario's Environmental Registry

The Environmental Registry found at http://www.ebr.gov.on.ca/ERS-WEB-External/ contains "public notices" about environmental matters being proposed by all government ministries covered by the Environmental Bill of Rights. The public notices may contain information about proposed new laws, regulations, policies and programs or about proposals to change or eliminate existing ones. By using keys words i.e. name of proponent/owner and the address one can ascertain if there is any information on the proponent and address under the following categories: Ministry, keywords, notice types, Notice Status, Acts, Instruments and published date (all years).

The Ontario Land Registry Office

Registration of real property is recorded in the Ontario Land Registry Office through the Land Titles Act or the Registry Act. Documents relating to title and other agreements that may affect your property are available to the public for a fee. It is recommended that a property search at the Land Registry Office be included in any investigation as to the historic use of your property. The City of Ottawa cannot comment on any documents to which it is not a party.

Court House
161 Elgin Street 4th Floor
Ottawa ON K2P 2K1
Tel: (613) 239-1230
Fax: (613) 239-1422

Please note, as per the HLUI Disclaimer, that the information contained in the HLUI database has been compiled from publicly available records and other sources of information. The HLUI may contain erroneous information given that the records used as sources of information may be flawed. For instance, changes in municipal addresses over time may introduce error. Accordingly, all information from the HLUI database 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.

Furthermore, the HLUI database and the results of this search in no way confirm the presence or absence of contamination or pollution of any kind. This information is provided on the assumption that it will not be relied upon by any person for any purpose

whatsoever. The City of Ottawa denies all liability to any persons attempting to rely on any information provided from the HLUI database.

Please note that in responding to your request, the City of Ottawa does not guarantee or comment on the environmental condition of the Subject Property. You may wish to contact the Ontario Ministry of Environment for additional information.

If you have any further questions or comments, please contact Tracy Tang at 613-580-2424 ext. 14743 or HLUI@ottawa.ca

Sincerely,

David Wise, MUP, MCIP, RPP
Program Manager
Development Review (Suburban Services) - West
Planning and Growth Management Department

DW /TT

Attach: 5

cc: File no. C10-01-16-0035

1830 TRIM RD

PIN: 145310715

LEGAL DESCRIPTION / DESCRIPTION OFFICIELLE

PIN	LEGAL DESCRIPTION / DESCRIPTION OFFICIELLE
145310715	CON 9 PT LOT RP 50R-5951;PARTS 1 TO 8

PROPERTY DIMENSIONS / DIMENSIONS DE LA PROPRIÉTÉ

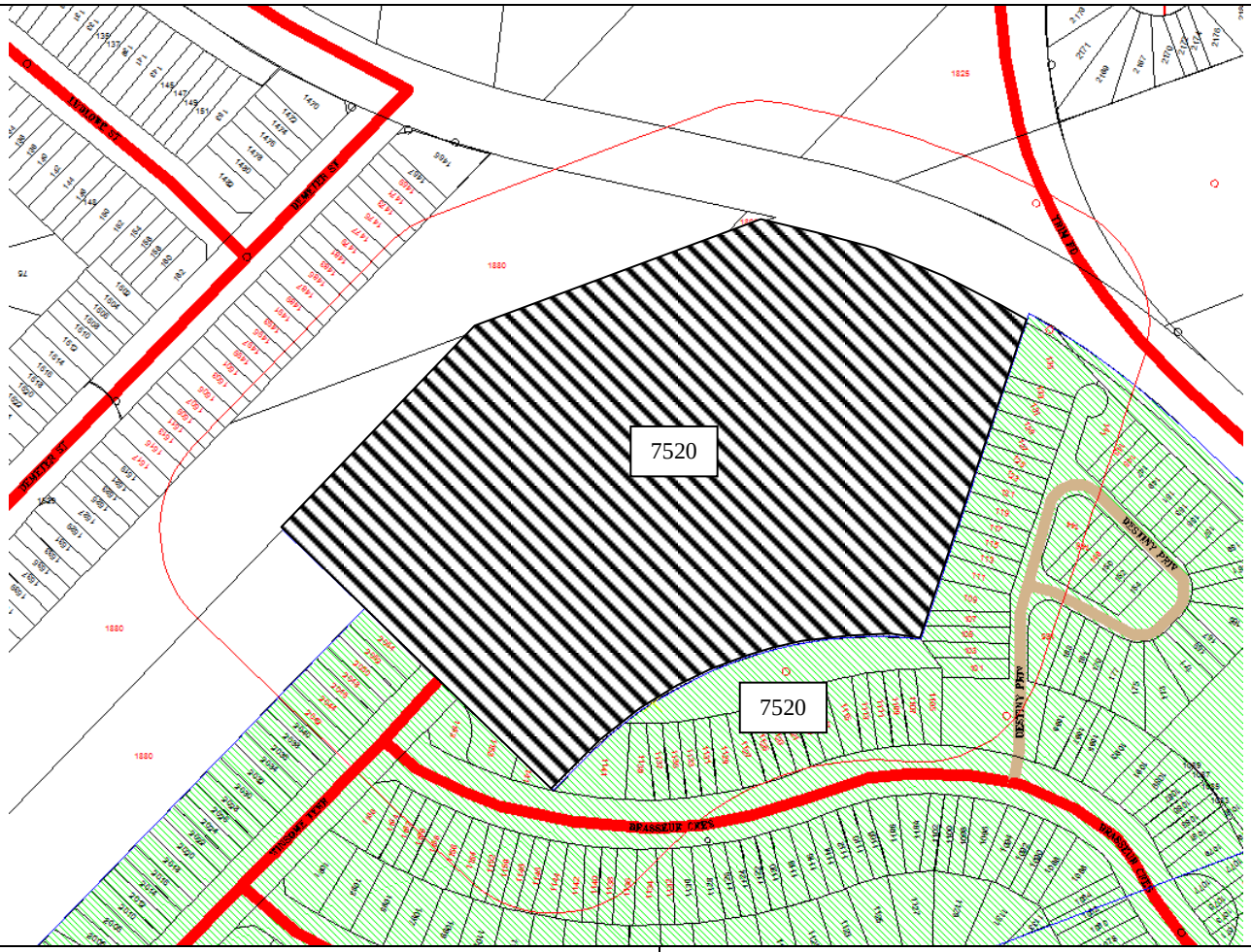
	145310715
FRONTAGE - ft / FAÇADE - pi:	348.65
DEPTH - ft / PRONFONDEUR - pi:	0.00
PROPERTY AREA - acre / SUPERFICIE - acre:	3.0000

SERVICES / SERVICES

PIN	WASTE COLLECTION PICK-UP DAY AND ZONE / JOUR ET ZONE DE LA COLLECTE DES ORDURES
145310715	FRIDAY - Cal. B Zone 5

WARD INFORMATION / INFORMATIONS WARD

PIN	WARD NUMBER / NUMÉRO DU QUARTIER	WARD NAME / NOM DU QUARTIER	COUNCILLOR NAME / NOM DU CONSEILLER - (ÈRE)
145310715	19	CUMBERLAND	Stephen Blais



Scale 1: n/a	1830 Trim Road Ottawa, ON File # C10-01-16-0035 Tracy Tang Ottawa	ID# = Activity Identification Number = Subject Site <u>Overview</u>

CITY OF OTTAWA

HLUI ID: __679GGA

AREA (Square Metres): 40626.584

Report: RPTC_OT_DEV0122

Run On: 01 Feb 2016 at: 10:19:12

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	145310715	Y	N

Activity ID: 7520 **Multiple PINS:** N

PIN Certainty: 1 **Previous Activity ID(s) :** 6195

Related PINS: 145310715

Name: LAIDLAW TRANSIT LIMITED

Address: 1830 TRIM ROAD, CUMBERLAND

Facility Type: Public Passenger Transit Systems Industries

Comments 1:

Comments 2:

Generator Number: ON0222827

Storage Tanks:

HL References 1: MCBED1996, Gloucester Roots -1991

HL References 2:

HL References 3: 2000 PID

NAICS	SIC
485110	457
811121	635
415110	551
485410	457
811119	0
485210	0
488990	457
811199	0
811111	0
415120	551
811121	0
487110	457
415190	551
485210	457
485990	457
811112	0
811119	635
811310	551
485410	0
485510	457
811111	551
811112	635

CITY OF OTTAWA

HLUI ID: __679GGA

AREA (Square Metres): 40626.584

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	145310715	Y	N

Company Name	Year of Operation
LAIDLAW TRANSIT LIMITED	c. 2000
LAIDLAW TRANSIT LIMITED	c. 2003
LAIDLAW TRANSIT LIMITED	c. 2005
Laidlaw Transit Limited	c. 1991-1996
LAIDLAW TRANSIT LIMITED	c. 2001

CITY OF OTTAWA

HLUI ID: __670HL5

AREA (Square Metres): 105195.981

Report: RPTC_OT_DEV0122

Run On: 01 Feb 2016 at: 10:22:21

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	145310212	Y	N

Activity ID: 7520 **Multiple PINS:** N

PIN Certainty: 1 **Previous Activity ID(s) :** 6195

Related PINS: 145310715

Name: LAIDLAW TRANSIT LIMITED

Address: 1830 TRIM ROAD, CUMBERLAND

Facility Type: Public Passenger Transit Systems Industries

Comments 1:

Comments 2:

Generator Number: ON0222827

Storage Tanks:

HL References 1: MCBED1996, Gloucester Roots -1991

HL References 2:

HL References 3: 2000 PID

NAICS	SIC
485110	457
811121	635
415110	551
485410	457
811119	0
485210	0
488990	457
811199	0
811111	0
415120	551
811121	0
487110	457
415190	551
485210	457
485990	457
811112	0
811119	635
811310	551
485410	0
485510	457
811111	551
811112	635

CITY OF OTTAWA

HLUI ID: __670HL5

AREA (Square Metres): 105195.981

Study Year	PIN	Multi-NAIC	Multiple Activities
1998	145310212	Y	N

Company Name	Year of Operation
LAIDLAW TRANSIT LIMITED	c. 2000
LAIDLAW TRANSIT LIMITED	c. 2003
LAIDLAW TRANSIT LIMITED	c. 2005
Laidlaw Transit Limited	c. 1991-1996
LAIDLAW TRANSIT LIMITED	c. 2001

MEMO

To:
City of Ottawa
City Clerk and Solicitor Department
110 Laurier Avenue West,
Ottawa, Ontario
K1P 1J1
Attn: Mr Rick O'Connor, City Clerk

From:
Troy Austrins

ARCADIS Canada Inc.
329 Churchill Ave. North- 2nd Floor
Ottawa
Ontario K1Z 5B8
Tel 613 721-0555
Fax 613 721 0029
www.arcadis.com

ENVIRONMENT

Date:
17 March 2017

ARCADIS Project No.:
450271

Subject:
Environmental Site Assessment; Use of Non-Potable Groundwater Standards,
1830 Trim Road, Ottawa, Ontario

Dear Mr. Rick O'Connor:

Arcadis Canada Inc. (Arcadis) is undertaking an environmental site assessment at the above noted site. Please be advised that it is our intent to assess the property using the non-potable groundwater condition standards, as outlined in O.Reg. 153/04 (as amended).

We would like to request a confirmation from the City of Ottawa that it does not object to the use of this non-potable groundwater condition for use in this site assessment.

If you have any questions or require any additional information, please feel free to contact our office at any time.

Yours truly,

Arcadis Canada Inc.

Troy Austrins, P.Eng., QP_{ESA}
Project Manager

17 March 2017

Mr. Troy Austrins, P.Eng., QP_{ESA}
Arcadis Canada Inc.
329 Churchill Ave. North- 2nd Floor
Ottawa, Ontario
K1Z 5B8

Dear Mr. Austrins,

Re: Environmental Site Assessment – 1830 Trim Road

As per your memo of March 17, 2017 (attached) requesting to use non-potable standards, this is to advise that the City of Ottawa objects to the use of non-potable groundwater standards for the property identified as 1830 Trim Road, Ottawa, ON. There are at least four properties on private drinking water wells within 250 m of the subject land: 1869 Trim, 777, 793 and 805 Safari. Potable groundwater standards must therefore be used.

Best Regards,

Michel Kearney, P.Geo.
Senior Hydrogeologist
Asset Management

Hydrogéologue Sénior
Gestion des actifs

City of Ottawa | Ville d'Ottawa
613.580.2424 ext./poste 22872
ottawa.ca/planning / ottawa.ca/urbanisme

APPENDIX G

Ecolog ERIS

ENVIRONMENTAL RISK INFORMATION SERVICE

DATABASE REPORT

Project Property:	*Phase I & II ESA First Canada Bus Garage, 1830 Trim Rd., Ottawa* *1830 Trim Rd* *Ottawa ON K4A3P8*
P.O. Number:	*562775*
Report Type:	*Standard Report*
Order No:	*20160119099*
Requested by:	*Arcadis Canada Inc.*
Date Completed:	*January 22, 2016*

Ecolog ERIS Ltd.
Environmental Risk Information Service Ltd. (ERIS)
A division of Glacier Media Inc.
P: 1.866.517.5204
E: info@erisinfo.com

www.erisinfo.com

Table of Contents

Executive Summary

Property Information:

Project Property:	*Phase I & II ESA First Canada Bus Garage, 1830 Trim Rd., Ottawa* *1830 Trim Rd Ottawa ON K4A3P8*
P.O. Number:	*562775*

Coordinates:

Latitude:	*45.47427*
Longitude:	*-75.460403*
UTM Northing:	*5,035,741.03*
UTM Easting:	*464,013.80*
UTM Zone:	*UTM Zone 18T*

Elevation:	*279 FT* *85.00 M*

Order Information:

Order No:	*20160119099*
Date Requested:	*January 19, 2016*
Requested by:	*Arcadis Canada Inc.*
Report Type:	*Standard Report*

Additional Products:

City Directory Search	*Subject Site*
Fire Insurance Maps	*Canadian Fire Insurance Maps*
Land Title Search	*Historical Title Search*

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Within 0.25 km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	2	2
CA	Certificates of Approval	Y	0	1	1
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Register	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	1	1
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	0	0
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EXP	List of TSSA Expired Facilities	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FST	Fuel Storage Tank	Y	2	0	2
FSTH	Fuel Storage Tank - Historic	Y	2	0	2
GEN	Ontario Regulation 347 Waste Generators Summary	Y	12	0	12
HINC	TSSA Historic Incidents	Y	0	6	6
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	TSSA Incidents	Y	0	0	0
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0

Database	Name	Searched	Project Property	Within 0.25 km	Total
NDFT	National Defence & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defence & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGW	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	0	0
PINC	TSSA Pipeline Incidents	Y	0	0	0
PRT	Private and Retail Fuel Storage Tanks	Y	1	0	1
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	TSSA Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	0	2	2
		Total:	17	12	29

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
1	FST	LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	-/0.0	0.00	15
1	FST	LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	-/0.0	0.00	15
1	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON	-/0.0	0.00	15
2	FSTH	LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	NNE/27.0	0.00	16
2	FSTH	LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	NNE/27.0	0.00	16
2	GEN	LAIDLAW TRANSIT LTD.	1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD. MARKHAM ON K4A 3P8	NNE/27.0	0.00	17
2	GEN	LAIDLAW TRANSIT LTD. 24-608	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE/27.0	0.00	17
2	GEN	LAIDLAW TRANSIT LTD. 24-608	1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD. MARKHAM ON K4A 3P8	NNE/27.0	0.00	17
2	GEN	LAIDLAW TRANSIT LTD	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE/27.0	0.00	18
2	GEN	LAIDLAW TRANSIT LTD.	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE/27.0	0.00	18
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	19
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	19
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	20
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	20
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	21
2	GEN	FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE/27.0	0.00	21

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
2	PRT	LAIDLAW TRANSIT LTD	1830 TRIM RD CUMBERLAND ON K4A 3P8	NNE/27.0	0.00	21

Executive Summary: Site Report Summary - Surrounding *Properties*

Map Key	*DB*	*Company/Site Name*	*Address*	*Dir/Dist (m)*	*Elev Diff (m)*	*Page Number*
3	CA	1070280 Ontario Inc.	1820 Trim Road Ottawa ON K4A 3P8	NNE/114.6	0.00	22
4	BORE		ON	NE/165.7	0.00	22
4	WWIS		lot A con 9 ON	NE/165.7	0.00	22
5	WWIS		lot A con 9 ON	E/178.0	-1.00	23
6	HINC		177 DESTINY [PRIVATE] ORLEANS ON K4A 0K6	ESE/201.7	-1.00	24
7	HINC		1472 DEMETER STREET ORLEANS ON K4A 5C6	NW/208.2	0.00	24
7	HINC		1472 DEMETER STREET OTTAWA ON K4A 5C6	NW/208.2	0.00	25
8	HINC		1482 DEMETER STREET ORLEANS ON K4A 5C6	NW/212.1	0.00	25
9	HINC		157 DESTINY [PRIVATE] ORLEANS ON K4A 0K6	E/225.7	-1.00	26
10	BORE		ON	E/237.4	-1.00	26
11	ECA	Longwood Building Corporation	1765 Trim Road / Mondavi Street Ottawa ON K4A4R9	NNE/243.1	-0.63	27
12	HINC		1106 LUESBY CRESCENT OTTAWA ON K4A 4Y4	S/246.5	1.00	27

Executive Summary: Summary By Data Source

BORE - Borehole

A search of the BORE database, dated 1875-Jul 2014 has found that there are 2 BORE site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	ON	NE	165.68	4

Lower Elevation	Address	Direction	Distance (m)	Map Key
	ON	E	237.35	10

CA - Certificates of Approval

A search of the CA database, dated 1985-Oct 30, 2011* has found that there are 1 CA site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
1070280 Ontario Inc.	1820 Trim Road Ottawa ON K4A 3P8	NNE	114.62	3

Lower Elevation	Address	Direction	Distance (m)	Map Key

ECA - Environmental Compliance Approval

A search of the ECA database, dated Oct 31, 2011-Jun 2015 has found that there are 1 ECA site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key

Lower Elevation	Address	Direction	Distance (m)	Map Key
Longwood Building Corporation	1765 Trim Road / Mondavi Street Ottawa ON K4A4R9	NNE	243.15	11

FST - Fuel Storage Tank

A search of the FST database, dated 2010-Nov 2014 has found that there are 2 FST site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	-	0.00	1
LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	-	0.00	1

Lower Elevation	Address	Direction	Distance (m)	Map Key

FSTH - Fuel Storage Tank - Historic

A search of the FSTH database, dated Pre-Jan 2010* has found that there are 2 FSTH site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	NNE	27.01	2
LAIDLAW TRANSIT LTD	1830 TRIM RD ORLEANS ON K4A 3P8	NNE	27.01	2

Lower Elevation	Address	Direction	Distance (m)	Map Key

GEN - Ontario Regulation 347 Waste Generators Summary

A search of the GEN database, dated 1986-May 2015 has found that there are 12 GEN site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON	-	0.00	1
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
FirstCanada ULC	1830 TRIM ROAD ORLEANS ON K4A 3P8	NNE	27.01	2
LAIDLAW TRANSIT LTD.	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE	27.01	2
LAIDLAW TRANSIT LTD	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE	27.01	2

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
LAIDLAW TRANSIT LTD. 24-608	1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD. MARKHAM ON K4A 3P8	NNE	27.01	2
LAIDLAW TRANSIT LTD.	1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD. MARKHAM ON K4A 3P8	NNE	27.01	2
LAIDLAW TRANSIT LTD. 24-608	1830 TRIM ROAD CUMBERLAND ON K0A 1S0	NNE	27.01	2

Lower Elevation	Address	Direction	Distance (m)	Map Key

HINC - TSSA Historic Incidents

A search of the HINC database, dated 2006-June 2009* has found that there are 6 HINC site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	1472 DEMETER STREET ORLEANS ON K4A 5C6	NW	208.23	7
	1472 DEMETER STREET OTTAWA ON K4A 5C6	NW	208.23	7
	1482 DEMETER STREET ORLEANS ON K4A 5C6	NW	212.13	8
	1106 LUESBY CRESCENT OTTAWA ON K4A 4Y4	S	246.47	12

Lower Elevation	Address	Direction	Distance (m)	Map Key
	177 DESTINY [PRIVATE] ORLEANS ON K4A 0K6	ESE	201.69	6
	157 DESTINY [PRIVATE] ORLEANS ON K4A 0K6	E	225.68	9

PRT - Private and Retail Fuel Storage Tanks

A search of the PRT database, dated 1989-1996* has found that there are 1 PRT site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
LAIDLAW TRANSIT LTD	1830 TRIM RD CUMBERLAND ON K4A 3P8	NNE	27.01	2

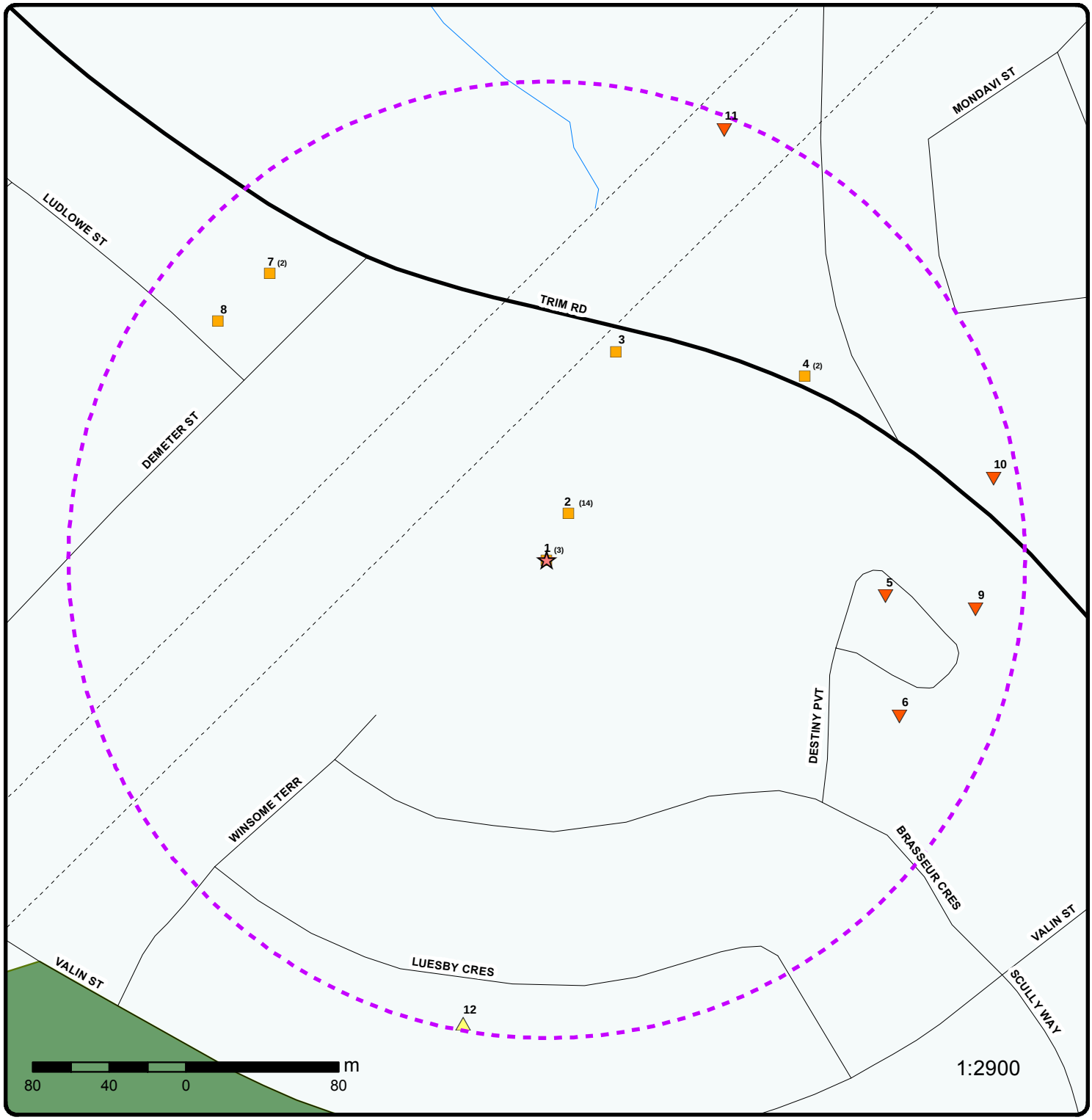
Lower Elevation	Address	Direction	Distance (m)	Map Key

WWIS - Water Well Information System

A search of the WWIS database, dated 1955-Mar 2014 has found that there are 2 WWIS site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	lot A con 9 ON	NE	165.68	4

Lower Elevation	Address	Direction	Distance (m)	Map Key
	lot A con 9 ON	E	178.04	5



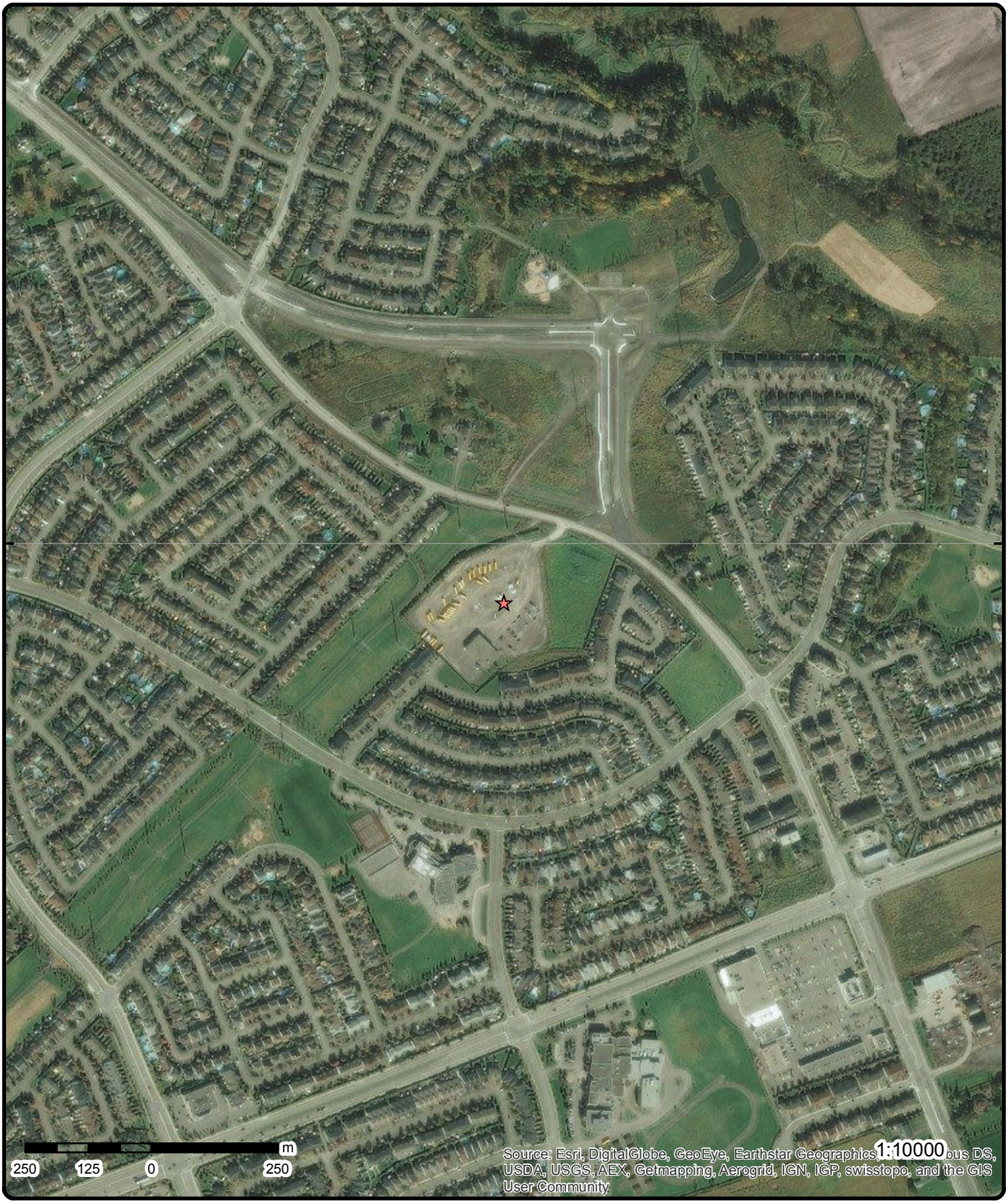
Map

Order No: 20160119099

Address: 1830 Trim Rd, Ottawa, ON, K4A3P8

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Expressway
- Principal Highway
- Secondary Highway
- Major Road
- Local road
- Trail
- Proposed Road
- Ferry Route/Ice Road
- Industrial and Resource - Regions
- Main Line
- Sidetrack
- Transit Line
- Abandoned Line
- Pipelines and Transmission
- National Park
- Provincial or Territorial Park
- Other Park
- Golf Course or Driving Range
- Park or Sports Field
- Other Recreation Area

Source: © 2014 DMTI Spatial Inc.



Aerial

Order No: 20160119099

Address: 1830 Trim Rd, Ottawa, ON, K4A3P8

Source: ESRI World Imagery, Updated October 2014

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
1	1 of 3	-/0.0	85.0	LAIDLAW TRANSIT LTD 1830 TRIM RD ORLEANS ON K4A 3P8	FST

Instance Number:	10716461
Cont Name:	
Instance Type:	FS Liquid Fuel Tank
Fuel Type:	Diesel
Status:	Active
Capacity:	25000
Tank Material:	Steel
Corrosion Protection:	Sacrificial anode
Tank Type:	Single Wall UST
Install Year:	1989
Parent Facility Type:	Fuels Safety Private Fuel Outlet - Self Serve
Facility Type:	FS Liquid Fuel Tank

1	2 of 3	-/0.0	85.0	LAIDLAW TRANSIT LTD 1830 TRIM RD ORLEANS ON K4A 3P8	FST

Instance Number:	10716384
Cont Name:	
Instance Type:	FS Liquid Fuel Tank
Fuel Type:	Gasoline
Status:	Active
Capacity:	25000
Tank Material:	Steel
Corrosion Protection:	Sacrificial anode
Tank Type:	Single Wall UST
Install Year:	1989
Parent Facility Type:	Fuels Safety Private Fuel Outlet - Self Serve
Facility Type:	FS Liquid Fuel Tank

1	3 of 3	-/0.0	85.0	FirstCanada ULC 1830 TRIM ROAD ORLEANS ON	GEN

Generator #:	ON0222827
Approval Yrs:	2013
SIC Code:	485410
SIC Description:	

--- Details ---

Waste Code:	252
Waste Description:	WASTE OILS & LUBRICANTS

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

2	1 of 14	NNE/27.0	85.0	LAIDLAW TRANSIT LTD 1830 TRIM RD ORLEANS ON K4A 3P8	FSTH

License Issue Date: 10/22/1990
Tank Status: Licensed
Tank Status As Of: August 2007
Operation Type: Private Fuel Outlet
Facility Type: Gasoline Station - Self Serve

--- Details ---
Status: Active
Capacity: 25000
Year of Installation: 1989
Corrosion Protection:
Tank Fuel Type: Liquid Fuel Single Wall UST - Gasoline
+
Status: Active
Capacity: 25000
Year of Installation: 1989
Corrosion Protection:
Tank Fuel Type: Liquid Fuel Single Wall UST - Diesel

2	2 of 14	NNE/27.0	85.0	LAIDLAW TRANSIT LTD 1830 TRIM RD ORLEANS ON K4A 3P8	FSTH

License Issue Date: 10/22/1990
Tank Status: Licensed
Tank Status As Of: December 2008
Operation Type: Private Fuel Outlet
Facility Type: Gasoline Station - Self Serve

--- Details ---
Status: Active
Capacity: 25000
Year of Installation: 1989
Corrosion Protection:
Tank Fuel Type: Liquid Fuel Single Wall UST - Gasoline
+
Status: Active
Capacity: 25000
Year of Installation: 1989

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Corrosion Protection:
Tank Fuel Type: Liquid Fuel Single Wall UST - Diesel

2	*3 of 14*	*NNE/27.0*	*85.0*	***LAIDLAW TRANSIT LTD.*** ***1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD.*** ***MARKHAM ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 89,90
SIC Code: 4573
SIC Description: SCHOOL BUS OPER.

--- Details ---
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	*4 of 14*	*NNE/27.0*	*85.0*	***LAIDLAW TRANSIT LTD.*** ***1830 TRIM ROAD*** ***CUMBERLAND ON K0A 1S0***	***24-608***	***GEN***

Generator #: ON0222827
Approval Yrs: 92,93,95,96
SIC Code: 4573
SIC Description: SCHOOL BUS OPER.

--- Details ---
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	*5 of 14*	*NNE/27.0*	*85.0*	***LAIDLAW TRANSIT LTD.*** ***1830 TRIM RD., CUMBERLAND C/O 30 HERITAGE RD.*** ***MARKHAM ON K4A 3P8***	***24-608***	***GEN***

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Generator #: ON0222827
Approval Yrs: 94
SIC Code: 4573
SIC Description: SCHOOL BUS OPER.

--- Details ---
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	6 of 14	NNE/27.0	85.0	LAIDLAW TRANSIT LTD 1830 TRIM ROAD CUMBERLAND ON K0A 1S0	GEN

Generator #: ON0222827
Approval Yrs: 97
SIC Code: 4573
SIC Description: SCHOOL BUS OPER.

--- Details ---
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	7 of 14	NNE/27.0	85.0	LAIDLAW TRANSIT LTD. 1830 TRIM ROAD CUMBERLAND ON K0A 1S0	GEN

Generator #: ON0222827
Approval Yrs: 98,99,00,01,02,03,04,05,06
SIC Code: 4573
SIC Description: SCHOOL BUS OPER.

--- Details ---
Waste Code: 212

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	*8 of 14*	*NNE/27.0*	*85.0*	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: As of May 2015
SIC Code:
SIC Description:

--- Details ---
Waste Code: 221
Waste Description: Light fuels
+
Waste Code: 212
Waste Description: Aliphatic solvents and residues
+
Waste Code: 213
Waste Description: Petroleum distillates
+
Waste Code: 251
Waste Description: Waste oils/sludges (petroleum based)
+
Waste Code: 252
Waste Description: Waste crankcase oils and lubricants

2	*9 of 14*	*NNE/27.0*	*85.0*	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 07,08
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	***10 of 14***	***NNE/27.0***	***85.0***	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 2009
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS

2	***11 of 14***	***NNE/27.0***	***85.0***	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 2010
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 251

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Waste Description: OIL SKIMMINGS & SLUDGES

2	***12 of 14***	***NNE/27.0***	***85.0***	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 2011
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES
+
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS
+
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

2	***13 of 14***	***NNE/27.0***	***85.0***	***FirstCanada ULC*** ***1830 TRIM ROAD*** ***ORLEANS ON K4A 3P8***	***GEN***

Generator #: ON0222827
Approval Yrs: 2012
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 221
Waste Description: LIGHT FUELS
+
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES
+
Waste Code: 212
Waste Description: ALIPHATIC SOLVENTS
+
Waste Code: 252
Waste Description: WASTE OILS & LUBRICANTS
+
Waste Code: 213
Waste Description: PETROLEUM DISTILLATES

2	***14 of 14***	***NNE/27.0***	***85.0***	***LAIDLAW TRANSIT LTD*** ***1830 TRIM RD*** ***CUMBERLAND ON K4A 3P8***	***PRT***

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Location ID:	3681
Type:	private
Expiry Date:	
Capacity (L):	45460.00
Licence #:	0001035935

3	1 of 1	NNE/114.6	85.0	1070280 Ontario Inc. 1820 Trim Road Ottawa ON K4A 3P8	CA

Certificate #:	8861-5GNMMZ
Application Year:	2002
Issue Date:	12/16/2002
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

4	1 of 2	NE/165.7	85.0	ON	BORE

Borehole ID:	616343	**Type:**	Borehole
Use:		**Status:**	
Drill Method:		**UTM Zone:**	18
Easting:	464149	**Northing:**	5035837
Location Accuracy:		**Orig. Ground Elev m:**	86.9
Elev. Reliability Note:		**DEM Ground Elev m:**	88.7
Total Depth m:	28.7	**Primary Name:**	
Township:		**Concession:**	
Lot:		**Municipality:**	
Completion Date:	MAR-1961	**Static Water Level:**	10.7
Primary Water Use:		**Sec. Water Use:**	

--- Details ---

Stratum ID:	218403705	**Top Depth(m):**	27.4
Bottom Depth(m):	28.7	**Stratum Desc:**	GRAVEL. 000949E AT 249.9 FEET.CK. GREY. = 6000. BEDROCK. SEISMIC VELOCITY = 19500.

+

Stratum ID:	218403704	**Top Depth(m):**	0.0
Bottom Depth(m):	27.4	**Stratum Desc:**	CLAY. BLUE.

4	2 of 2	NE/165.7	85.0	lot A con 9 ON	WWIS

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Well ID:	1512776	**Lot:**	A
Concession:	09	**Concession Name:**	CON
County:	OTTAWA-CARLETON	**Municipality:**	CUMBERLAND TOWNSHIP
Easting Nad83:	464148.8	**Northing Nad83:**	5035837
Zone:	18	**Utm Reliability:**	margin of error : 100 m - 300 m
Primary Water Use:	Domestic	**Construction Date:**	30-MAR-61
Sec. Water Use:		**Well Depth:**	94 ft
Pump Rate:	7 GPM	**Static Water Level:**	18 ft
Flow Rate:		**Clear/Cloudy:**	CLEAR
Specific Capacity:		**Final Well Status:**	Water Supply
Construction Method:	Diamond	**Flowing (y/n):**	N
Elevation (m):	88.68	**Elevation Reliability:**	
Depth to Bedrock:		**Overburden/Bedrock:**	Overburden
Water Type:	FRESH	**Casing Material:**	FRESH

--- Details ---

Thickness:	90 ft	**Original Depth:**	90 ft
Material Colour:	BLUE	**Material:**	CLAY
+			
Thickness:	4 ft	**Original Depth:**	94 ft
Material Colour:		**Material:**	GRAVEL

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
5	1 of 1	E/178.0	84.0	lot A con 9 ON	WWIS

Well ID:	1515855	**Lot:**	A
Concession:	09	**Concession Name:**	CON
County:	OTTAWA-CARLETON	**Municipality:**	CUMBERLAND TOWNSHIP
Easting Nad83:	464190.8	**Northing Nad83:**	5035722
Zone:	18	**Utm Reliability:**	margin of error : 30 m - 100 m
Primary Water Use:	Domestic	**Construction Date:**	25-AUG-76
Sec. Water Use:		**Well Depth:**	110 ft
Pump Rate:	40 GPM	**Static Water Level:**	15 ft
Flow Rate:		**Clear/Cloudy:**	CLEAR
Specific Capacity:		**Final Well Status:**	Water Supply
Construction Method:	Rotary (Air)	**Flowing (y/n):**	N
Elevation (m):	87.61	**Elevation Reliability:**	
Depth to Bedrock:	105	**Overburden/Bedrock:**	Bedrock
Water Type:	FRESH	**Casing Material:**	FRESH

--- Details ---

Thickness:	18 ft	**Original Depth:**	18 ft
Material Colour:	YELLOW	**Material:**	CLAY
+			
Thickness:	80 ft	**Original Depth:**	98 ft
Material Colour:	BLUE	**Material:**	CLAY
+			

Thickness:	7 ft	***Original Depth:***	105 ft
Material Colour:	GREY	***Material:***	GRAVEL
+			
Thickness:	5 ft	***Original Depth:***	110 ft
Material Colour:	GREY	***Material:***	LIMESTONE

6	***1 of 1***	***ESE/201.7***	***84.0***	***177 DESTINY [PRIVATE] ORLEANS ON K4A 0K6***	***HINC***

External File Num:	FS INC 0812-07499
Date of Occurrence:	11/12/2008
Fuel Occurrence Type:	Pipeline Strike
Fuel Type Involved:	Natural Gas
Status Desc:	Completed - Causal Analysis(End)
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	Construction Site (pipeline strike)
Service Interruptions:	Yes
Property Damage:	No
Fuel Life Cycle Stage:	Transmission, Distribution and Transportation
Root Cause:	Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:Yes Training:No Management:No Human Factors:No
Reported Details:	
Fuel Category:	Gaseous Fuel
Occurrence Type:	Incident
Affiliation:	Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	
Enter Drainage Syst.:	
Approx. Quant. Unit:	
Environmental Impact:	

7	***1 of 2***	***NW/208.2***	***85.0***	***1472 DEMETER STREET ORLEANS ON K4A 5C6***	***HINC***

External File Num:	FS INC 0707-03403
Date of Occurrence:	6/21/2007
Fuel Occurrence Type:	Pipeline Strike
Fuel Type Involved:	Natural Gas
Status Desc:	Completed - Causal Analysis(End)
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	Construction Site (pipeline strike)
Service Interruptions:	Yes
Property Damage:	No
Fuel Life Cycle Stage:	Transmission, Distribution and Transportation
Root Cause:	Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:No Training:No Management:No Human Factors:No
Reported Details:	
Fuel Category:	Gaseous Fuel
Occurrence Type:	Incident
Affiliation:	Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

Enter Drainage Syst.:
Approx. Quant. Unit:
Environmental Impact:

7	2 of 2	NW/208.2	85.0	1472 DEMETER STREET OTTAWA ON K4A 5C6	HINC

External File Num:	FS INC 0707-03850
Date of Occurrence:	6/21/2007
Fuel Occurrence Type:	Pipeline Strike
Fuel Type Involved:	Natural Gas
Status Desc:	Complete
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	Construction Site (pipeline strike)
Service Interruptions:	Yes
Property Damage:	No
Fuel Life Cycle Stage:	Transmission, Distribution and Transportation
Root Cause:	
Reported Details:	
Fuel Category:	Gaseous Fuel
Occurrence Type:	Incident
Affiliation:	Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	
Enter Drainage Syst.:	
Approx. Quant. Unit:	
Environmental Impact:	

8	1 of 1	NW/212.1	85.0	1482 DEMETER STREET ORLEANS ON K4A 5C6	HINC

External File Num:	FS INC 0708-04689
Date of Occurrence:	
Fuel Occurrence Type:	
Fuel Type Involved:	
Status Desc:	Completed - No Action Required
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	
Service Interruptions:	
Property Damage:	
Fuel Life Cycle Stage:	
Root Cause:	
Reported Details:	Source of CO is undetermined. Enbridge suspects siurce may have been a nearby diesel generator being
Fuel Category:	Unknown
Occurrence Type:	Near-miss
Affiliation:	Emergency Services (Fire, Police,etc)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	
Enter Drainage Syst.:	
Approx. Quant. Unit:	
Environmental Impact:	

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
9	1 of 1	E/225.7	84.0	157 DESTINY [PRIVATE] ORLEANS ON K4A 0K6	HINC

External File Num:	FS INC 0810-06555
Date of Occurrence:	10/9/2008
Fuel Occurrence Type:	Pipeline Strike
Fuel Type Involved:	Natural Gas
Status Desc:	Completed - Causal Analysis(End)
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	Private Dwelling
Service Interruptions:	Yes
Property Damage:	Yes
Fuel Life Cycle Stage:	Utilization
Root Cause:	Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:Yes Training:No Management:No Human Factors:No
Reported Details:	
Fuel Category:	Gaseous Fuel
Occurrence Type:	Incident
Affiliation:	Industry Stakeholder (Licensee/Registration/Certificate Holder, Facility Owner, etc.)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	
Enter Drainage Syst.:	
Approx. Quant. Unit:	
Environmental Impact:	

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
10	1 of 1	E/237.4	84.0	ON	BORE

Borehole ID:	805841	**Type:**	Borehole
Use:	Geotechnical/Geological Investigation	**Status:**	
Drill Method:	Other Method	**UTM Zone:**	18
Easting:	464247.3	**Northing:**	5035783.66
Location Accuracy:		**Orig. Ground Elev m:**	-999.9
Elev. Reliability Note:		**DEM Ground Elev m:**	88.4
Total Depth m:	2.1	**Primary Name:**	AH 01-10
Township:		**Concession:**	
Lot:		**Municipality:**	
Completion Date:	06-DEC-2001	**Static Water Level:**	-999.9
Primary Water Use:		**Sec. Water Use:**	

--- Details ---

Stratum ID:	218586484	**Top Depth(m):**	0.0
Bottom Depth(m):	0.2	**Stratum Desc:**	Concrete
+			
Stratum ID:	218586485	**Top Depth(m):**	0.2
Bottom Depth(m):	0.4	**Stratum Desc:**	Brown Fill-Misc Sand - Gravel
+			
Stratum ID:	218586486	**Top Depth(m):**	0.4
Bottom Depth(m):	1.0	**Stratum Desc:**	Brown Subbase Sand - Gravel

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB

+

Stratum ID:	218586487	**Top Depth(m):**	1.0
Bottom Depth(m):	1.3	**Stratum Desc:**	Dark Black to Grey Silty Clay With: Org M

+

Stratum ID:	218586488	**Top Depth(m):**	1.3
Bottom Depth(m):	2.1	**Stratum Desc:**	Grey-Brown Very Stiff Weathered Crust Silty Clay

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
11	1 of 1	NNE/243.1	84.4	**Longwood Building Corporation** **1765 Trim Road / Mondavi Street** **Ottawa ON K4A4R9**	ECA

CofA Number:	3555-9F5LYQ
Date:	10-JAN-14
Status:	Approved
Project Type:	Municipal and Private Sewage

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
12	1 of 1	S/246.5	86.0	**1106 LUESBY CRESCENT** **OTTAWA ON K4A 4Y4**	HINC

External File Num:	FS INC 0703-01252
Date of Occurrence:	3/16/2007
Fuel Occurrence Type:	CO Release
Fuel Type Involved:	Natural Gas
Status Desc:	Completed - Causal Analysis(End)
Job Type Desc:	Incident/Near-Miss Occurrence (FS)
Oper. Type Involved:	Private Dwelling
Service Interruptions:	Yes
Property Damage:	No
Fuel Life Cycle Stage:	Utilization
Root Cause:	Root Cause: Equipment/Material/Component:No Procedures:Yes Maintenance:No Design:No Training:No Management:Yes Human Factors:Yes
Reported Details:	
Fuel Category:	Unknown
Occurrence Type:	Near-miss
Affiliation:	Emergency Services (Fire, Police,etc)
County Name:	Ottawa
Approx. Quant. Rel:	
Nearby body of water:	
Enter Drainage Syst.:	
Approx. Quant. Unit:	
Environmental Impact:	

Unplottable Summary

Total: 30 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	Cardinal Creek Subdivision Phase 1, Orleans Ward (1)	Trim Road, From Lisbon Street to Street No. 1	Ottawa ON	
CA	City of Ottawa	Trim Road (between proposed Blackburn Extension)	Ottawa ON	
CA		Trim Road Right-of-Way (South of Highway 174)	Ottawa ON	
CA	Trim Road	Trim Road Right-of-Way (South of Highway 174)	Ottawa ON	
CA	City of Ottawa	Trim Road between Blackburn Hamlet Bypass and Innes Rd	Ottawa ON	
CA	Longwood Building Corporation	Part of Lot 6, Between Concession 2 & 3	Ottawa ON	
CA	Longwood Building Corporation	Part of Lot 6 in the Gore Concession between Concessions 2 & 3, Rideau Front	Ottawa ON	
CA	c.M. OF OTTAWA-CARLETON-TRANSPORT. DEPT.	RR # 57(TRIM RD.)/RR # 34	CUMBERLAND TWP. ON	
CA	Fallingbrook South Phase 6	Lot A & B, Concession 9	Ottawa ON	
CA	Fallingbrook South Phase 6	Lot A & B, Concession 9	Ottawa ON	
CA	Cardinal Creek Subdivision Phase 1, Orleans Ward (1)	Trim Road, From Lisbon Street to Street No. 1	Ottawa ON	
CA	1070280 Ontario Inc.		Ottawa ON	
CA	Longwood Building Corporation		Ottawa ON	
CA	TRIM ROAD INC.	PT.LOT 2/CON.9, TRIM RD. SUBD.	CUMBERLAND CITY ON	
CONV	SERVICES ENVIRONNEMENTAUX LAIDLAW PQ LTE		STE. CATHERINE, QC ON	

CONV	LAIDLAW MEDICAL SERVICES LTD.		ON	
ECA	City of Ottawa	Trim Road	City of Ottawa ON	
ECA	Longwood Building Corporation	Block 66, Plan 4M-1288	Ottawa ON	
ECA	Longwood Building Corporation	Ottawa	ON	
GEN	FirstCanada ULC	CYRVILLE RD RIGHT OF WAY 185 METERS SOUTH OF INNES ROAD	OTTAWA ON	K1B 1A9
GEN	OTTAWA-CARLETON, REG.MUN. OF 29-624	LOT 3, CONC.9, TRIM RD., CUMBERLAND TWP C/O 735 INDUSTRIAL AVENUE	OTTAWA ON	K1G 5J1
GEN	Hydro One Networks Inc	Navin DS Trim Road	Ottawa ON	
GEN	Hydro One Networks Inc	Navin DS Trim Road	Ottawa ON	
GEN	Hydro One Networks Inc	Navin DS Trim Road	Ottawa ON	
GEN	Hydro One Networks Inc	Navin DS Trim Road	Ottawa ON	
GEN	OTTAWA-CARLTON, REGIONAL MUNICIPALITY OF	LOT 3, CONCESSION 1, TRIM ROAD CUMBERLAND TOWNSHIP	OTTAWA ON	
SPL	UNKNOWN	REG RD 57	CUMBERLAND TOWNSHIP ON	
SPL	Glen Tay Transportation GP Inc.	and Trim Road	Ottawa ON	
SPL	Hydro One Networks Inc.	Trim Rd, Lot A, Concession 9, Cumberland	Ottawa ON	
WWIS			OTTAWA ON	

Unplottable Report

Site: ***Cardinal Creek Subdivision Phase 1, Orleans Ward (1)***
Trim Road, From Lisbon Street to Street No. 1 Ottawa ON

Database: ***CA***

Certificate #:	7251-5AKQP2
Application Year:	02
Issue Date:	5/29/02
Approval Type:	Municipal & Private sewage
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	Cardinal Creek Developments Inc.
Client Address:	200 Catherine Street
Client City:	Ottawa
Client Postal Code:	K2P 1C3
Project Description:	Construction of extensions to local sanitary and storm sewers to services phase 1 of the cardinal creek subdivision.
Contaminants:	
Emission Control:	

Site: ***City of Ottawa***
Trim Road (between proposed Blackburn Extension) Ottawa ON

Database: ***CA***

Certificate #:	8633-6ENKUM
Application Year:	2005
Issue Date:	7/28/2005
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site:
Trim Road Right-of-Way (South of Highway 174) Ottawa ON

Database: ***CA***

Certificate #:	8720-5ADR94
Application Year:	02
Issue Date:	5/27/02
Approval Type:	Municipal & Private sewage
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	The Corporation of the City of Ottawa
Client Address:	1495 Heron Road, Pavilion 'M'
Client City:	Ottawa
Client Postal Code:	K1V 6A6

Project Description: Approval is sought for the construction of sanitary sewers on Trim Road, City of Ottawa
Contaminants:
Emission Control:

Site: ***Trim Road***
Trim Road Right-of-Way (South of Highway 174) Ottawa ON

Database: ***CA***

Certificate #: 7160-5ADR5U
Application Year: 02
Issue Date: 5/27/02
Approval Type: Municipal & Private water
Status: Approved
Application Type: New Certificate of Approval
Client Name: The Corporation of the City of Ottawa
Client Address: 1495 Heron Road, Pavilion 'M'
Client City: Ottawa
Client Postal Code: K1V 6A6
Project Description: This application is for the construction of watermain and appurtanances on Trim Road and Innes Road.
Contaminants:
Emission Control:

Site: ***City of Ottawa***
Trim Road between Blackburn Hamlet Bypass and Innes Rd Ottawa ON

Database: ***CA***

Certificate #: 3089-87UGQH
Application Year: 2010
Issue Date: 8/10/2010
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Longwood Building Corporation***
Part of Lot 6, Between Concession 2 & 3 Ottawa ON

Database: ***CA***

Certificate #: 6229-6EQGQE
Application Year: 2005
Issue Date: 7/28/2005
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name:
Client Address:
Client City:
Client Postal Code:
Project Description:
Contaminants:
Emission Control:

Site: ***Longwood Building Corporation***
Part of Lot 6 in the Gore Concession between Concessions 2 & 3, Rideau Front Ottawa ON

Database: ***CA***

Certificate #:	7831-6FARGB
Application Year:	2005
Issue Date:	8/26/2005
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***c.M. OF OTTAWA-CARLETON-TRANSPORT. DEPT.***
RR # 57(TRIM RD.)/RR # 34 CUMBERLAND TWP. ON

Database: ***CA***

Certificate #:	3-0857-91-
Application Year:	91
Issue Date:	7/10/1991
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***Fallingbrook South Phase 6***
Lot A & B, Concession 9 Ottawa ON

Database: ***CA***

Certificate #:	7095-4ZUK22
Application Year:	01
Issue Date:	8/24/01
Approval Type:	Municipal & Private sewage
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	1394860 Ontario Limited
Client Address:	111 Colonnade Road North, Unit 200
Client City:	Nepean
Client Postal Code:	K2E 7M3
Project Description:	Construction of Sanitary and Storm Sewers in fallingbrook South Phase 6
Contaminants:	
Emission Control:	

Site: ***Fallingbrook South Phase 6***

Database: ***CA***

Lot A & B, Concession 9 Ottawa ON

Certificate #:	6300-4ZUJT8
Application Year:	01
Issue Date:	8/24/01
Approval Type:	Municipal & Private water
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	1394860 Ontario Limited
Client Address:	111 Colonnade Road North, Unit 200
Client City:	Nepean
Client Postal Code:	K2E 7M3
Project Description:	Construction of Watermains in Fallingbrook South Phase 6
Contaminants:	
Emission Control:	

Site: ***Cardinal Creek Subdivision Phase 1, Orleans Ward (1)***
Trim Road, From Lisbon Street to Street No. 1 Ottawa ON

Database: ***CA***

Certificate #:	1422-5AKQ9W
Application Year:	02
Issue Date:	5/29/02
Approval Type:	Municipal & Private water
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	Cardinal Creek Developments Inc.
Client Address:	200 Catherine Street
Client City:	Ottawa
Client Postal Code:	K2P 1C3
Project Description:	Extension of local watermains to service phase 1 of the cardinal creek subdivision in the City of Ottawa. The work also includes a temporary watermain loop.
Contaminants:	
Emission Control:	

Site: ***1070280 Ontario Inc.***
Ottawa ON

Database: ***CA***

Certificate #:	1577-65RQ2D
Application Year:	2004
Issue Date:	10/15/2004
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***Longwood Building Corporation***
Ottawa ON

Database: ***CA***

Certificate #:	7349-6DRPAJ

Application Year:	2005
Issue Date:	7/27/2005
Approval Type:	Municipal and Private Sewage Works
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***TRIM ROAD INC.***
PT.LOT 2/CON.9, TRIM RD. SUBD. CUMBERLAND CITY ON

Database: ***CA***

Certificate #:	3-1254-99-
Application Year:	99
Issue Date:	11/18/1999
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***SERVICES ENVIRONNEMENTAUX LAIDLAW PQ LTE***
STE. CATHERINE, QC ON

Database: ***CONV***

File No.:	
Crown Brief No.:	
Ministry District:	
Region:	SOUTH EAST REGION
Description:	VIOLATING CONDITIONS OF A C OF A

--- Details ---

Date Charged:	92/09/15
Fine:	2000
Act/Regulation/Section:	EPA-309-146/20(2)(A)
Charge Disposition:	
+	
Date Charged:	92/09/15
Fine:	3000
Act/Regulation/Section:	EPA-309-146/18(1)
Charge Disposition:	
+	
Date Charged:	92/09/15
Fine:	3000
Act/Regulation/Section:	EPA-309-146/21(4)(A)
Charge Disposition:	
+	
Date Charged:	92/09/15

Fine: 3000
Act/Regulation/Section: EPA-309-146/21(7)(A)
Charge Disposition:
+
Date Charged: 92/09/15
Fine: 3000
Act/Regulation/Section: EPA-309-146/21(8)
Charge Disposition:
+
Date Charged: 92/09/15
Fine: 3000
Act/Regulation/Section: EPA-309-146/22(3)(B)
Charge Disposition:
+
Date Charged: 92/09/15
Fine: 3000
Act/Regulation/Section: EPA-309-146/22(4)
Charge Disposition:

Site: ***LAIDLAW MEDICAL SERVICES LTD. ON*** ***Database:*** ***CONV***

File No.:
Crown Brief No.: 93-0167-0283
Ministry District: CORNWALL
Region: EASTERN REGION
Description: NUMEROUS VIOLATIONS INVOLVING NON-COMPLIANCE WITH REGARD TO REG. 347, DEALING WITH MANIFESTS.

--- Details ---
Date Charged: 6/2/97
Fine: $3,000.00
Act/Regulation/Section: EPA-347-21(1}
Charge Disposition: SUSPENDED SENTENCE
+
Date Charged: 6/2/97
Fine: $3,000.00
Act/Regulation/Section: EPA-347-21(1}
Charge Disposition: SUSPENDED SENTENCE
+
Date Charged: 6/2/97
Fine: $3,000.00
Act/Regulation/Section: EPA-347-21(1)
Charge Disposition: SUSPENDED SENTENCE
+
Date Charged: 6/2/97
Fine: $3,000.00
Act/Regulation/Section: EPA-347-21(1}
Charge Disposition: SUSPENDED SENTENCE
+
Date Charged: 6/2/97
Fine: $500.00
Act/Regulation/Section: EPA-347-24 (7) (A)
Charge Disposition: SUSPENDED SENTENCE

Site: ***City of Ottawa Trim Road City of Ottawa ON*** ***Database:*** ***ECA***

CofA Number: 8335-9KDQHS

Date: 6/5/14
Status: Approved
Project Type: Municipal and Private Sewage

Site: ***Longwood Building Corporation***
Block 66, Plan 4M-1288 Ottawa ON

Database: ***ECA***

CofA Number: 6209-8W3HKG
Date: 7/13/2012
Status: Approved
Project Type: Municipal and Private Sewage

Site: ***Longwood Building Corporation***
Ottawa ON

Database: ***ECA***

CofA Number: 4668-8TWQ9X
Date: 5/8/2012
Status: Approved
Project Type: Municipal and Private Sewage

Site: ***FirstCanada ULC***
CYRVILLE RD RIGHT OF WAY 185 METERS SOUTH OF INNES ROAD OTTAWA ON K1B 1A9

Database: ***GEN***

Generator #: ON3227797
Approval Yrs: 07,08
SIC Code: 485410
SIC Description: School and Employee Bus Transportation

--- Details ---
Waste Code: 221
Waste Description: LIGHT FUELS

Site: ***OTTAWA-CARLETON, REG.MUN. OF 29-624***
LOT 3, CONC.9, TRIM RD., CUMBERLAND TWP C/O 735 INDUSTRIAL AVENUE OTTAWA ON K1G 5J1

Database: ***GEN***

Generator #: ON0303123
Approval Yrs: 92,93,94,95,96,97
SIC Code: 8111
SIC Description: DEFENCE SERVICES

--- Details ---
Waste Code: 243
Waste Description: PCB'S

Site: ***Hydro One Networks Inc***
Navin DS Trim Road Ottawa ON

Database: ***GEN***

Generator #: ON2571108
Approval Yrs: 2011
SIC Code: 221122
SIC Description: Electric Power Distribution

--- Details ---

Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

Site: ***Hydro One Networks Inc***
Navin DS Trim Road Ottawa ON

Database: ***GEN***

Generator #: ON2571108
Approval Yrs: 2010
SIC Code: 221122
SIC Description: Electric Power Distribution

--- Details ---
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

Site: ***Hydro One Networks Inc***
Navin DS Trim Road Ottawa ON

Database: ***GEN***

Generator #: ON2571108
Approval Yrs: 2009
SIC Code: 221122
SIC Description: Electric Power Distribution

--- Details ---
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

Site: ***Hydro One Networks Inc***
Navin DS Trim Road Ottawa ON

Database: ***GEN***

Generator #: ON2571108
Approval Yrs: 2012
SIC Code: 221122
SIC Description: Electric Power Distribution

--- Details ---
Waste Code: 251
Waste Description: OIL SKIMMINGS & SLUDGES

Site: ***OTTAWA-CARLTON, REGIONAL MUNICIPALITY OF***
LOT 3, CONCESSION 1, TRIM ROAD CUMBERLAND TOWNSHIP OTTAWA ON

Database: ***GEN***

Generator #: ON0303123
Approval Yrs: 98
SIC Code: 8111
SIC Description: DEFENCE SERVICES

--- Details ---
Waste Code: 243
Waste Description: PCB'S

Site: ***UNKNOWN***
REG RD 57 CUMBERLAND TOWNSHIP ON

Database: ***SPL***

Ref No.: 92704
Incident Dt: 10/24/1993
MOE Reported Dt: 10/24/1993

Contaminant Name:	
Contaminant Quantity:	
Incident Summary:	25 4 L PAILS OF UNKNOWN CHEMICAL LEFT AT SIDE OF ROAD. 1 RUPTURED.
Incident Cause:	OTHER CONTAINER LEAK
Incident Reason:	VANDALISM
Nature of Impact:	Soil contamination
Receiving Medium:	LAND
Environmental Impact:	POSSIBLE

Site: ***Glen Tay Transportation GP Inc. and Trim Road Ottawa ON***

Database: ***SPL***

Ref No.:	5226-9MB49B
Incident Dt:	2014/07/23
MOE Reported Dt:	2014/07/23
Contaminant Name:	SAND/GRAVEL
Contaminant Quantity:	200 kg
Incident Summary:	Glen Tay Transportation: ukn diesel to ditch
Incident Cause:	Collision/Accident
Incident Reason:	Operator/Human Error
Nature of Impact:	Soil Contamination
Receiving Medium:	
Environmental Impact:	Not Anticipated

Site: ***Hydro One Networks Inc. Trim Rd, Lot A, Concession 9, Cumberland Ottawa ON***

Database: ***SPL***

Ref No.:	5374-759KSM
Incident Dt:	
MOE Reported Dt:	7/19/2007
Contaminant Name:	TRANSFORMER OIL (N.O.S.)
Contaminant Quantity:	2 L
Incident Summary:	2 L transformer oil to grnd, contained/cleaned
Incident Cause:	Other Transport Accident
Incident Reason:	
Nature of Impact:	Soil Contmaination
Receiving Medium:	Land
Environmental Impact:	Not Anticipated

Site: ***OTTAWA ON***

Database: ***WWIS***

Well ID:	1536378	***Lot:***	
Concession:		***Concession Name:***	
County:	OTTAWA-CARLETON	***Municipality:***	
Easting Nad83:		***Northing Nad83:***	
Zone:		***Utm Reliability:***	unknown UTM
Primary Water Use:		***Construction Date:***	02-MAY-06
Sec. Water Use:		***Well Depth:***	
Pump Rate:		***Static Water Level:***	
Flow Rate:		***Clear/Cloudy:***	
Specific Capacity:		***Final Well Status:***	
Construction Method:	Other Method	***Flowing (y/n):***	
Elevation (m):		***Elevation Reliability:***	

Depth to Bedrock:

Water Type:

Overburden/Bedrock: No formation data

Casing Material:

Appendix: Database Descriptions

Ecolog Environmental Risk Information Services Ltd (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ***Note:*** *Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Abandoned Aggregate Inventory: Provincial AAGR

The MAAP Program maintains a database of all abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.*

Government Publication Date: Sept 2002*

Aggregate Inventory: Provincial AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Mar 2015

Abandoned Mine Information System: Provincial AMIS

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Government Publication Date: 1800-Jan 2014

Anderson's Waste Disposal Sites: Private ANDR

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the Ontario MOE Waste Disposal Site Inventory, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1860s-Present

Automobile Wrecking & Supplies: Private AUWR

This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Government Publication Date: 2001-Jul 2014

Borehole: Provincial BORE

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc. For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Government Publication Date: 1875-Jul 2014

Certificates of Approval: Provincial CA

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011*

Commercial Fuel Oil Tanks: Provincial CFOT

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with Technical Standards & Safety Authority (TSSA). This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

Government Publication Date: 1948-2014

Chemical Register: Private CHEM

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

Government Publication Date: 1992, 1999-Jul 2014

Inventory of Coal Gasification Plants and Coal Tar Sites: Provincial COAL

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions: Provincial CONV

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Government Publication Date: 1989-Feb 2014

Certificates of Property Use: Provincial CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994-Nov 2015

Drill Hole Database: Provincial DRL

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Government Publication Date: 1886-Jun 2014

Environmental Activity and Sector Registry: Provincial EASR

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Oct 31 2011-Oct 2015

Environmental Registry: Provincial EBR

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994-Nov 2015

Environmental Compliance Approval: Provincial ECA

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 31, 2011-Jun 2015

Environmental Effects Monitoring: Federal EEM

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Government Publication Date: 1992-2007*

ERIS Historical Searches: Private EHS

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Government Publication Date: 1999-Aug 2014

Environmental Issues Inventory System: Federal EIIS

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001*

Emergency Management Historical Event: Provincial EMHE

The Emergency Management Historical Event data class will store the locations of historical occurrences of emergency events. Events captured will include those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance.

Government Publication Date: May 31, 2014

List of TSSA Expired Facilities: Provincial EXP

This is a list of all expired facilities that fall under the TSSA (TSSA Act & Safety Regulations), including the six regulations that exist under the Fuels Safety Division. It will include facilities such as private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc. These tanks have been removed and automatically fall under the expired facilities inventory held by TSSA.

Government Publication Date: Current to Nov 2014

Federal Convictions: Federal FCON

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land: Federal FCS

The Federal Contaminated Sites Inventory includes information on all known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government.

Government Publication Date: June 2000-Oct 2015

Fisheries & Oceans Fuel Tanks: Federal FOFT

Fisheries & Oceans Canada maintains an inventory of all aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Government Publication Date: 1964-Sept 2003

Fuel Storage Tank: Provincial FST

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Government Publication Date: 2010-Nov 2014

Fuel Storage Tank - Historic: Provincial FSTH

The Technical Standards & Safety Authority (TSSA), under the Technical Standards & Safety Act of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary: Provincial GEN

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Government Publication Date: 1986-May 2015

TSSA Historic Incidents: Provincial HINC

This database will cover all incidences recorded by TSSA with their older system, before they moved to their new management system. TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. The TSSA works to protect the public, the environment and property from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from pipelines, diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks: Federal IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of all aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

Government Publication Date: 1950-Aug 2003*

TSSA Incidents: Provincial INC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Includes incidents from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: June 2009-2014

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the ministry compiles new and updated information. The inventory will include small and large landfills. Additionally, each year the ministry will request operators of the larger landfills complete a landfill data collection form that will be used to update LIMO and will include the following information from the previous operating year. This will include additional information such as estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills will include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: 2012

Canadian Mine Locations: Private MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Government Publication Date: 1998-2009*

Mineral Occurrences: Provincial MNR

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Apr 2013

National Analysis of Trends in Emergencies System (NATES): Federal NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Government Publication Date: 1974-1994*

Non-Compliance Reports: Provincial NCPL

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Government Publication Date: 1994-2012

National Defence & Canadian Forces Fuel Tanks: Federal NDFT

The Department of National Defence and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

Government Publication Date: Up to May 2001*

National Defence & Canadian Forces Spills: Federal NDSP

The Department of National Defence and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

Government Publication Date: Mar 1999-Aug 2010

National Defence & Canadian Forces Waste Disposal Sites: Federal NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

Government Publication Date: 2001-Apr 2007*

National Environmental Emergencies System (NEES): Federal NEES

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for all previous Environment Canada spill datasets. NEES is composed of the historic datasets ' or Trends ' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

Government Publication Date: 1974-2003*

National PCB Inventory: Federal NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. All federal out-of-service PCB containing equipment and all PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory: Federal NPRI

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

Government Publication Date: 1993-2013

Oil and Gas Wells: Private OGW

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-2015

Ontario Oil and Gas Wells: Provincial OOGW

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, and well cap date, license No., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Government Publication Date: 1800-2013

Inventory of PCB Storage Sites: Provincial OPCB

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013

Orders: Provincial ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994-Nov 2015

Canadian Pulp and Paper: Private PAP

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Government Publication Date: 1999, 2002, 2004, 2005, 2009

Parks Canada Fuel Storage Tanks: Federal PCFT

Canadian Heritage maintains an inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Government Publication Date: 1920-Jan 2005*

Pesticide Register: Provincial PES

The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

Government Publication Date: 1988-Jun 2013

TSSA Pipeline Incidents: Provincial PINC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. This database will include spills, strike and leaks from recorded by the TSSA.

Government Publication Date: June 2009-2014

Private and Retail Fuel Storage Tanks: Provincial PRT

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Government Publication Date: 1989-1996*

Permit to Take Water: Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994-Nov 2015

Ontario Regulation 347 Waste Receivers Summary: Provincial REC

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Government Publication Date: 1986-2013

Record of Site Condition: Provincial RSC

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use (such as residential) proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up.

RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Nov 2015

Retail Fuel Storage Tanks: Private RST

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Government Publication Date: 1999-Jul 2014

Scott's Manufacturing Directory: Private SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Ontario Spills: Provincial SPL

This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Government Publication Date: 1988-Jun 2015

Wastewater Discharger Registration Database: Provincial SRDS

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Government Publication Date: 1990-2011

Anderson's Storage Tanks: Private TANK

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks: Federal TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 7,530 hectares (18,600 acres) of land in Pickering, Markham, and Uxbridge owned by the Government of Canada since 1972; properties on this land has been leased by the government since 1975, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970-Mar 2007

TSSA Variances for Abandonment of Underground Storage Tanks: Provincial VAR

The TSSA, Under the Liquid Fuels Handling Code and the Fuel Oil Code, all underground storage tanks must be removed within two years of disuse. If removal of a tank is not feasible, you may apply to seek a variance from this code requirement. This is a list of all variances granted for abandoned tanks.

Government Publication Date: Current to Nov 2014

Waste Disposal Sites - MOE CA Inventory: Provincial WDS

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: 1970-Jun 2015

Waste Disposal Sites - MOE 1991 Historical Approval Inventory: Provincial WDSH

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Government Publication Date: Up to Oct 1990*

Water Well Information System: Provincial WWIS

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Government Publication Date: 1955-Mar 2014

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries". All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and were included as reference.

APPENDIX H

Street Directory Information Source

ENVIRONMENTAL RISK INFORMATION SERVICE

Head Office: 80 Valleybrook Dr, Toronto, ON M3B 2S9
Physical Address: 38 Lesmill Rd, Toronto, ON M3B 2T5
Phone: 416-510-5204 • Fax: 416-510-5133
info@erisinfo.com • www.erisinfo.com

City Directory Information Source
Vernon's Ottawa, ON City Directory

PROJECT NUMBER: 20160119099	
Site Address:	1830 Trim Road, (Orleans) Ottawa, Ontario
Year: 2011	
Site Listing:	-First Student Canada

PROJECT NUMBER: 20160119099	
Site Address:	1830 Trim Road, (Orleans) Ottawa, Ontario
Year: 2005/06	
Site Listing:	-Address Not Listed

PROJECT NUMBER: 20160119099	
Site Address:	1830 Trim Road, (Orleans) Ottawa, Ontario
Year: 2001/02	

Site Listing:	-Address Not Listed

PROJECT NUMBER: 20160119099	
Site Address:	1830 Trim Road, (Orleans) Ottawa, Ontario
Year: 1995/96	
Site Listing:	-Address Not Listed

PROJECT NUMBER: 20160119099	
Site Address:	1830 Trim Road, (Orleans) Ottawa, Ontario
Year: 1992	
Site Listing:	-Address Not Listed

-All listings for businesses were listed as they are in the city directory.

-Listings that are residential are listed as “residential” with the number of tenants. The name of the residential tenant is not listed in the above city directory

*****Orleans, ON is listed from 1992 to 2011 within the city directory archives*****

APPENDIX I

TSSA Correspondence

14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
Canada M8X 2X4
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

February 18, 2016

Ms. Susan Kirkpatrick (electronically)
Sr. Environmental Project & Program Manager
First Canada Inc.
600 Vine Street, Suite 1400
Cincinnati, Ohio 45202

Underground Storage Tank Removal – 1830 Trim Road, Orleans, Ontario
TSSA Service Request Number: 1789854

Dear Ms. Kirkpatrick,

Thank you for submitting the following document entitled:

- "Tank Excavation Monitoring, First Student Canada # 31430, 1830 Trim Road, Orleans, ON K4A 3P8, Strata Environmental Project 1528465", prepared by Strata Environmental Services, Inc. (Strata), dated October 29, 2015.

The report informs Fuels Safety Program (FSP) of the removal of two (2) 45,500 L diesel underground storage tanks (USTs) from the above referenced address on July 7, 2015. FSP will update our files accordingly to reflect the removal of the tank system.

The report provides the following information:

- On July 7, 2015, one (1) 2,270 L waste oil UST was also removed from the site. Prior to removal, fluids in USTs were evacuated and the tanks were inerted to remove potentially explosive vapours. Approximately1,104 L of the tank fluids were removed using a vacuum truck by Triangle Pump Services Limited (TPSL) and was transported off site for recycling/disposal at the TPSL facility located at 2565 Delzotto Avenue in Gloucester, Ontario.

- Two (2) excavations were completed to remove diesel USTs and waste oil UST. Strata reported that no groundwater was observed in the excavations.

- Upon removal the single-walled steel diesel USTs were observed to be in good condition with no surface corrosion, pitting or perforations apparent and were transported off site to a metals recycling facility. The waste oil UST was fibreglass with no holes or openings observed.

- Contaminated soil exhibiting vapour concentrations in excess of 5,000 parts per million (ppm) were encountered beneath the east half of diesel UST excavation. This contaminated soil was characterized and classified with the results presented in the *"Waste Classification of Contaminated Soil Material, First Student Facility, 1830 Trim Road, Orleans, Ontario"* report prepared by Strata, dated July 15, 2015. As presented in the report, petroleum constituents in excess of the applicable standards were detected in a representative sample of the contaminated soil. Waste classification indicated that the contaminated soil was deemed non-hazardous under Ontario Regulation 347/558. A total of 380.59 tonnes of contaminated soil was transported on August 11 and 12, 2015 to the GFL Environmental waste disposal facility located at 17335 Allaire Road in Moose Creek, Ontario.

- Fourteen (14) soil samples collected from the final limits of diesel UST excavation were submitted to Caduceon Environmental Laboratories (Caduceon), an accredited laboratory for analysis of benzene, toluene, ethylbenzene, xylenes (BTEX) and petroleum hydrocarbon fractions 1 to 4 (PHC F1-F4). Selected soil samples were also analysed for metals.

- Fourteen (14) soil samples collected from the final limits of waste oil UST excavation were submitted to Caduceon for analysis of one or more of volatile organic compounds (VOCs), PHC F1 to F4 and metals.

- Fill material for tank excavation backfilling was obtained at the Lafarge Aggregate facility in Ottawa, Ontario. Five (5) samples were submitted to Caduceon for analysis of an array of parameter suites including VOCs, PHCs, Polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals, electrical conductivity (EC), sodium adsorption ratio (SAR) and pH.

- Strata selected the Ontario Ministry of the Environment (MOE) (O. Reg. 153/04, as amended) Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non Potable Ground Water Condition for Industry/Commercial/Community property use with medium to fine textured soil as being applicable for the site. The residential land use standards were also selected for the site due to a residential use within 30 m of the site.

- Strata reported that submitted soil samples from the final limits of excavations, segregated soil and imported fill met the site condition standards with the exception of six (6) soil samples T2-F1; T2-F2; T2-N1,7; T2-E1,7; T1-F11 and T1-F2 collected from the excavations, which exceeded vanadium of the Table 3 SCS for commercial property use. The above six (6) soil samples also exceeded cobalt of the Table 3 SCS for residential property use.

- Strata reported that all six (6) soil samples were collected from the native clay formation. All soil samples were devoid of visual and olfactory evidence of anthropogenic impact and none of the samples exhibited detected concentrations of organic constituents related to diesel or waste oil. Due to absence of anthropogenic impacts in these samples, it is Strata's opinion that the elevated cobalt and vanadium concentrations are most likely a naturally occurring characteristic of the local clay formation.

Based on the review of the information provided, TSSA considers the matter resolved.

If you require more information, please contact me directly. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

John Guan, P.Eng.
Fuels Safety Program
Tel. : 416-734-3464
Fax : 416-231-7525
Email : jguan@tssa.org

Cc: Darren Coleman – COLESTAR Environmental Inc. (electronically)

APPENDIX J

Hydro One Correspondence

Erik Lalonde
erik.lalonde@arcadis.com

March 20, 2017

This letter is in response to your information request for polychlorinated biphenyl (PCB) content in the mineral insulating oil of our Ferranti Packard pad-mount transformer, located at 1830 Trim Road, Orleans, ON K4A 3P8.

This unit was manufactured in 1986. Any of our pad-mount of pole-top transformers manufactured in 1985 or later do not contain PCB. Therefore, this unit at 1830 Trim Road, Orleans, ON K4A 3P8 does not contain any PCB in the mineral insulating oil.

I also checked our internal incident management system to verify that no mineral insulating oil spills occurred from this unit since its in-service data in 1986.

If you have any further questions or concerns please do not hesitate to contact me.

Regards,

David Spence
Environmental Planner

Hydro One Networks Inc.
230 Bayview Drive
Barrie, ON, L4N 4Y8

Tel: 705.797.4194
Cell: 416.557.3813
Fax: 705.806.4004
Email: david.spence@hydroone.com

www.HydroOne.com

APPENDIX K

Species at Risk Database Search

Species at Risk Database Search

There are 26 species listed by the "Committee on the Status of Species at Risk in Ontario" for the Ottawa region and in turn might be found at the subject site. A detailed summary of these potential species at risk listed in the OMECC database is provided below.

Of these 26 species, 5 species are listed as "endangered" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Committee on the Status of Species at Risk in Ontario (COSSARO). These species include Henslow's Sparrow, Bogbean Buckmoth, Rusty-Patched Bumble Bee, Eastern Prairie Fringed-Orchid and the Pale-bellied Frost Lichen. These same 5 species are also listed as "imperiled" by the Natural Heritage Information Centre of Ontario.

The subject site's surrounding area is developed with various residential dwellings and there it is unlikely that any of these species might occur regularly within a 250 m radius.

It should be noted that the subject site is adjacent to a power line corridor, which does appear to have a certain amount of greenspace. Some of the bird and insect species could be occasional visitors. Due to the time of year it is difficult to observe the presence of many of these species during a site visit.

POTENTIAL SPECIES AT RISK – OTTAWA, ONTARIO

Common Name	Scientific Name	Taxonomy	SARO	NHIC	COSEWIC	SARA
Barn Swallow	*Hirundo rustica*	Bird	THR	S4B	THR	No Status
Black Tern	*Chlidonias niger*	Bird	SC	S3B	NAR	-
Bobolink	*Dolichonyx oryzivorus*	Bird	THR	S4B	THR	No Status
Chimney Swift	*Chaetura pelagica*	Bird	THR	S4B,S4N	THR	THR
Eastern Meadownlark	*Sturnella magna*	Bird	THR	S4B	THR	No Status
Henslow's Sparrow	*Ammodramus henslowii*	Bird	END	SHB	END	END
Least Bittern	*Ixobrychus exilis*	Bird	THR	S4B	THR	THR
Loggerhead Shrike	*Lanius ludovicianus*	Bird	END	S2B	THR	THR
Short-eared Owl	*Asio flammeus*	Bird	SC	S2N,S4B	SC	No Status
Whip-poor-will	*Caprimulgus vociferus*	Bird	THR	S4B	THR	THR
Yellow Rail	*Coturnicops noveboracensis*	Bird	SC	S4B	SC	SC
Lake Sturgeon	*Acipenser fulvescens*	Fish	SC/THR	S2	SC	No Status
Northern Brook Lamprey	*Ichthyomyzon fossor*	Fish	SC	S3	SC	SC
River Redhorse	*Moxostoma carinatum*	Fish	SC	-	SC	No Status
Bogbean Buckmoth	*Hemileuca sp.*	Insect	END	S1	END	END

Common Name	Scientific Name	Taxonomy	SARO	NHIC	COSEWIC	SARA
Rusty-Patched Bumble Bee	*Bombus affinis*	Insect	END	-	END	END
Eastern Prairie Fringed-Orchid	*Platanthera leucophaea*	Plant	END	S2	END	END
Flooded Jellyskin	*Leptogium rivulare*	Lichen	THR	S3	SC	THR
Pale-bellied Frost Lichen	*Physconia subpallida*	Lichen	END	S2	END	END
Eastern Ribbonsnake	*Thamnophis sauritus*	Reptile	SC	S3	SC	SC
Milksnake	*Lampropeltis triangulum triangulum*	Reptile	SC	S3	SC	SC
Blanding's Turtle	*Emydoidea blandingii*	Reptile	THR	S3	THR	THR
Eastern Musk Turtle	*Sternotherus odoratus*	Reptile	THR	S3	SC	THR
Northern Map Turtle	*Graptemys geographica*	Reptile	SC	S3	SC	SC
Snapping Turtle	*Chelydra serpentina*	Reptile	SC	S3	SC	SC

SARO: Species at Risk in Ontario

COSSARO: Committee on the Status of Species at Risk in Ontario

NHIC: Natural Heritage Information Centre

COSEWIC: Committee on the Status of Endangered Wildlife in Canada

SARA: Species at Risk Act Public Registry

Species at Risk will fall into one of four categories, depending on the degree of risk:

EXP – Extirpated – Lives somewhere in the world, and at one time lived in the wild in Ontario and/or Canada, but no longer lives in the wild.

END – Endangered – Lives in the wild in Ontario and/or Canada but is facing imminent extinction or extirpation

THR – Threatened – Lives in the wild in Ontario and/or Canada, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening it

SC – Special Concern – Lives in the wild in Ontario and/or Canada, is not endangered or threatened, but may become threatened or endangered due to a combination of biological characteristics and identified threats

NHIC Conservation Provincial Status Ranks:

S1 – Critically imperiled
S2 – Imperiled
S3 – Vulnerable
S4 – Apparently secure
S5 – Secure
H- Possibly Extinct (species)/ Eliminated (ecological communities and systems) — Known from only historical occurrences but still some hope of rediscovery. There is evidence that the species may be extinct or the ecosystem may be eliminated throughout its range, but not enough to state this with certainty.

COSEWIC Status Categories

END – **Endangered** – A wildlife species facing imminent extirpation or extinction.

THR – **Threatened** – A wildlife species that is likely to become an endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

SC – Special Concern – A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

Sources:

- Species at Risk in Ontario - http://www.ontario.ca/environment-and-energy/species-risk-ontario-list
- COSEWIC Wildlife Species Search - http://www.cosewic.gc.ca/eng/sct1/index_e.cfm
- Species at Risk Public Registry (Species list advance search) - http://www.sararegistry.gc.ca/
- Natural Heritage Information Centre - https://www.ontario.ca/page/natural-heritage-information-centre

APPENDIX L

Phase One ESA Interview and Site Inspection Checklist

ARCADIS CANADA INC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT INTERVIEW FORM

ARCADIS Project №: 450271-000

Client: First Student

Interview Date & Time: February 2, 2016

Name(s) of Interviewee(s) & Title:
(Current owner/occupant/other) Mike Casey

Contact Information: mike.casey@firstgroup.com 613 220 7909

Interview Method & Location: Face to face 1830 Trim Road

General Site Information

Property Address: 1830 Trim Road, Orleans K4A 3P8

Site Description: Vacant bus garage facility

Interview Questions:

1) How long have you worked/lived at the site?
32 years in March. In Ottawa 1997 to today.

2) What is the site currently used for? What was it used for in the past?
Vacant currently. Formerly used as a bus garage facility.

3) Was a dry cleaning facility ever present at the site or at adjacent properties?
No

4) Was the site ever used as a gasoline service station or for fuel storage or oil and gas refining?

No Gas (maybe in early 90's) Diesel tanks for refuelling of buses and 12 ambulances (Ontario Patient Transfer) (2011-2014)

5) Potentially Contaminating Activities

Item	Column A	
1.	Abrasive blasting	Yes ☐ No ☑
2.	Airstrips or Hangars Operation	Yes ☐ No ☑
3.	Antifreeze Manufacturing, Processing, Use, Bulk Storage, Handling, Disposal or Recycling	Yes ☐ No ☑
4.	Laboratory or Chemical Analysis	Yes ☐ No ☑
5.	Asphalt or Bitumen Manufacture or Bulk Storage	Yes ☐ No ☑
6.	Battery Manufacturing, Recycling or Disposal	Yes ☐ No ☑
7.	Boat Building and Maintenance	Yes ☐ No ☑
8.	Concrete, Cement or Lime Manufacturing	Yes ☐ No ☑
9.	Putrescible Materials Handling, Disposal or Recycling Cemeteries	Yes ☐ No ☑
10.	Chemical Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
11.	Acid or Alkali Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
12.	Adhesives or Resins Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
13.	Cosmetics Manufacturing, Processing, Use, Bulk Storage, Handling or Disposal	Yes ☐ No ☑

14.	Dye Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
15.	Fertilizer Manufacturing, Processing, Use, Bulk Storage, Handling or Disposal	Yes ☐ No ☑
16.	Flocculants Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
17.	Foam or Expanded Foam Manufacturing or Processing	Yes ☐ No ☑
18.	Glass Manufacturing	Yes ☐ No ☑
19.	Landfilling	Yes ☐ No ☑
20.	Paint Manufacturing, Processing, Use, Bulk Storage, Handling or Disposal	Yes ☐ No ☑
21.	Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
22.	Pharmaceutical Manufacturing, Processing or Storage	Yes ☐ No ☑
23.	Photographic Processing	Yes ☐ No ☑
24.	Plastics (including Fibreglass) Manufacturing, Processing, Storage and Disposal	Yes ☐ No ☑
25.	Rubber Manufacturing or Processing	Yes ☐ No ☑
26.	Soap or Detergent Manufacturing, Processing or Bulk Storage	Yes ☐ No ☑
27.	Solvent Manufacturing, Processing, Use, Storage, Handling or Disposal Contained bin, no spills, into drums (Parts cleaner)	Yes ☐ No ☑ *
28.	Drum and Barrel or Tank Reconditioning or Recycling	Yes ☐ No ☑
29.	Dry Cleaning (where chemicals are used)	Yes ☐ No ☑

30.	Electrical Equipment or Transformer Manufacturing, Processing, or Use	Yes ☐ No ☑
31.	Electricity Generation or Transformation or Power Stations	Yes ☐ No ☑
32.	Electronic or Computer Equipment Manufacturing or Reconditioning	Yes ☐ No ☑
33.	Explosives or Ammunition Manufacturing, Production, Use, Bulk Storage, Demolition or Disposal	Yes ☐ No ☑
34.	Fire Training	Yes ☐ No ☑
35.	Fire Retardant Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
36.	Foundry Operations	Yes ☐ No ☑
37.	Fuel Storage and Dispensing	Yes ☐ No ☑
38.	Coal Gasification	Yes ☐ No ☑
39.	Gas Manufacturing, Processing and Storage	Yes ☐ No ☑
40.	Ink Manufacturing, Processing or Storage	Yes ☐ No ☑
41.	Iron and Steel Manufacturing or Processing	Yes ☐ No ☑
42.	Coke Oven Operation	Yes ☐ No ☑
43.	Incinerating or other Thermal Processing	Yes ☐ No ☑
44.	Machine Maintenance and Operation, Metal Fabrication	Yes ☐ No ☑
45.	Metal Treatment or Coating	Yes ☐ No ☑

* Spill kits were on site. * Nothing used for dust control.

46.	Metal Plating or Finishing	Yes ☐ No ☑
47.	Metal Fabrication	Yes ☐ No ☑
48.	Mining, Smelting or Refining; Ore Processing; Tailings Storage	Yes ☐ No ☑
49.	Mining of Coal	Yes ☐ No ☑
50.	Military Exercises	Yes ☐ No ☑
51.	Ordnance Use, Demolition or Disposal	Yes ☐ No ☑
52.	De-icing and Antifreeze Agent Manufacturing, Processing, Use, Storage, Handling or Disposal (Waste coolants taken away in drums)	Yes ☑ No ☐
53.	Salt Manufacturing, Processing, Use, Storage, Handling or Disposal Salt used on site around to deice ground surface.	Yes ☑ No ☐
54.	Oil or Gas Refining and Storage	Yes ☐ No ☑
55.	Oil Production	Yes ☐ No ☑
56.	Discharge of Brine	Yes ☐ No ☑
57.	Heating Oil Manufacturing, Processing, Use, Storage, Handling or Disposal	Yes ☐ No ☑
58.	Motor Vehicle Operation or Maintenance	Yes ☑ No ☐
59.	Port Activities, including Operation and Maintenance of Wharves and Docks	Yes ☐ No ☑
60.	Printing and Duplicating	Yes ☐ No ☑
61.	Pulp, Paper and Paperboard Manufacturing and Processing	Yes ☐ No ☑

62.	Salvage or Junk Yard Operation or both	Yes ☐ No ☑
63.	Scrap Metal Recovery and Auto Wrecking Scrap metal bins picked up. (Salvage yard.)	Yes ☑ No ☐
64.	Sewage Treatment Own/private septic tank	Yes ☑ No ☐
65.	Tanning (and associated trades activities)	Yes ☐ No ☑
66.	Textile Manufacturing or Processing	Yes ☐ No ☑
67.	Wood Treating, Preservation and Storage	Yes ☐ No ☑
68.	Automotive Repair or Maintenance; Autobody Shop Operation; Vehicle Maintenance and Repair Garages (Auto, bus, truck, railcar, marine, aviation vehicles, etc.)	Yes ☑ No ☐
69.	Vehicle Manufacturing and Associated Activities	Yes ☐ No ☑
70.	Waste Disposal or Waste Management — other than the use of biosolids as soil conditioners	Yes ☐ No ☑
71.	Importation of Fill Material of Unknown Quality Gravel (Sunshine maintenance - same as winter maintenance Richard Lalonde)	Yes ☑ No ☐

6) When was the site first developed?

Thinks 1979...??

7) How old is/are the building(s) or other structures on the site?

Building is 25 years old.

- Have there been any additions or major renovations?

Not that he can recall. No renovations.

8) How are the buildings heated and cooled? How were they heated/cooled previously?
Heated with propane
Cooled by electricity (HVAC on roof)

9) Are any ASTs or USTs situated on the site?
No USTs. No ASTs.

- Quantity: —
- Location: —
- Contents: —

10) Have any ASTs or USTs been removed from the site? If so, was any soil verification testing carried out?
Yes. UST's soil verification. AST's removed last year.

11) Are you aware of any leaks or spills associated with the ASTs/USTs or on the overall site?
Not that he can recall. Spill drums kits/ available.

12) Has imported fill ever been placed on the site?
Yes, some gravel. Richard Lalonde.

13) Were pesticides, herbicides, fungicides or anti-fouling agents ever used at the site?
No

14) Have radioactive materials ever been used or stored at the site?
No

15) Has salt ever been stored, used, handled or disposed of on-site?
Yes, for winter use.

16) Have motor vehicle maintenance, operation or repair activities ever been carried out on-site?
Yes, bus maintenance MVIS standards (licence with Province of Ontario)

17) Is garbage or other waste materials, such as old cars, scrap metal or car batteries on the site? No bins existing on the property.

18) Are there any easements on the property?
Utility corridor.
Public has started a trail out front.

19) Are any chemicals stored on the property? Where? Is secondary containment used? Have any leaks or spills occurred?
No chemicals on property.

20) What is the source of potable water at the site? (i.e. municipal or water wells)
Water well but workers always drank bottled water.

- If water wells, how are they constructed? (i.e. bored, dug, drilled)
Unknown.

21) Are there any drinking or monitoring wells present on the property, either operational or non-operational? If so, where are they located?
1 drinking, not operational
No monitoring wells.

22) If potable water wells are present, what type of treatment system is used?
No treatment system.

23) Are any underground utilities present at the site?
Unknown

24) Are any sumps or oil/water separators present on the site?
Yes, oil/water seperator in shop. Unsure of how many.

25) Are you aware of any previous environmental investigations on the site?
No

26) Are or were any hazardous materials used or stored on the site?
No

27) Is any waste generated at the site?
Waste generated at site was salvage, household garbage off buses.

If 'Yes', how is waste removed from the site?
Laidlaw Waste and Canadian Waste Management

28) Are you aware of the presence of asbestos, lead, mould or other designated substances on the property?
Mould (some water damage in building)

- Has a designated substances survey been carried out previously for the site?
No
- Has any abatement work been conducted. If so what was the outcome?
No

29) Is any hydraulic equipment (hoists, lifts, etc.) present on the property?

30) Are any septic tanks situated on the site?
Yes, septic tank on East side.

31) Were PCBs ever stored on the site?
No

32) Are any cisterns on the site to store water?
No

33) Are any ponds or watercourses situated on or adjacent to the property?
No ponds or watercourses.

Additional Information:

Interviewer: Alisha Williamson Sign:

Qualified Person: T Austrins Sign:

Date: 7 March 2016

This form is prepared in accordance with O. Reg. 511/09 for a Phase I Environmental Site Assessment. (Amended O. Reg. 153/04)

ARCADIS CANADA INC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT CHECKLIST

ARCADIS PROJECT N°: 450271-000

CLIENT: First Student (First Group America Inc.)

SITE INSPECTION DATE AND TIME: February 2, 2016 11:00 am

DURATION: 3.5 hours

ARCADIS INSPECTION STAFF: A. Williamson, E. Holden

INTERVIEW/CONTACT NAME, TITLE: Mike Casey

Items needed:

- flashlight
- screwdriver/crowbar
- camera
- site plan
- tape measure
- sample bags/jars
- historical plans showing areas of concern
- interview form

1.0 GENERAL SITE INFORMATION

1.1 PROPERTY INFORMATION

Property Address and Property Identification Number (PIN) if known: 1830 Trim Rd., Orleans
Part Lot A, Con 9 desig as Pts 1-8, 5OR5951
14531-0715 (LT)

Client Contact and Address (if different): U.S.A.

1.2 PROPERTY DESCRIPTION

Site Description: Former bus depot.

NOTE: Note general use, presence of light standards, navigation lights, concrete pads, ramps, ground cover type, etc.

Topography: Generally flat, with one mound on property (man made?)

Area of Property: Approximately 3.14 Ha (hectares)

Site Plans: Site Plans sent by First Group

Areas of evident staining: Staining on wash bay and autobody floors.

Areas of evident stressed vegetation: No evidence of stressed vegetation. However, site was snow/ice covered

Areas of evident fill, debris or disturbance: One mound located east of entrance appears to be a fill pile. Further investigation.

Areas of potentially contaminating activities, unidentified substances: None

Rail lines: No

Rail sidings: No

Roadways: Trim Road, Residential roads (within 250 m study area)

Wharfage: No

Weather Conditions at time of Inspection: Sunny, clear sky, -10°C

2.0 BUILDINGS

2.1 BUILDING DESCRIPTION

No. of Buildings on Site: One (1)

Date(s) of First Use and Current Construction: 1988

Building Plans: Building plans have been sent by FirstGroup

Size of Buildings:

No. of Floors: One (1)

Total Floor Area (m^2): Approx. 1,500 m^2

Building Construction: Building built in 1988

Type of Materials: Wood, brick, siding, cement, metals

Heating System(s): (gas/electric/fuel oil) Propane tank - has been removed from property

Boiler Room? Y (N)

Details of any Additions or Major Renovations (dates): No major renovations

2.2 TENANTS (MAKE ADDITIONAL COPIES AS REQUIRED) No Tenants

(1) Company Name: _____

Date of Occupancy: _____

Type of business activity: _____

Describe processes/operations: _____

(2) Company Name: _____

Date of Occupancy: _____

Type of business activity: _____

Describe processes/operations: _____

2.3 ADJACENT PROPERTIES

Uses of Adjacent Properties: (List occupants, type of business activity and location in relation to the subject site.)

NORTH

Trim Rd., Residential

SOUTH

Residential

EAST

Residential

WEST

Utility Corridor, Residential

History of adjacent land uses?

Agricultural

Environmental Concerns on Adjacent Properties: (e.g., industrial operations, gas stations, USTs, waste storage, etc.)

None

If concerns exist, identify direction and distance from the subject site.

None

2.4 PHASE I ESA STUDY AREA

Describe all properties in the Phase I Study Area with a rationale for including or excluding properties >250 m from the property boundary.

All properties in Phase One Study Area are residential homes. There is a utility corridor located right beside the site (west) with high tension power lines. Residential homes are abutting corridor on its west side.

Observe, identify and locate on a Plan of the Phase I ESA Study Area outside of the Phase I property.

Potentially contaminating activities in and beyond the Phase I Study Area: Y (N)

Water bodies in and beyond this Phase I Study Area: (Y) N

Ottawa River 3.5 km North
Cardinal Creek 400 m Northeast

Areas of natural significance in and beyond the Phase I Study Area: Y (N)

2.5 FILL DEPOSITS

Any evidence of fill materials on or adjacent to the site? (based on elevation of the site in relation to surrounding areas) Describe location, thickness, material type. (Y) N

One (1) presumed fill pile located on north east corner in "heavy vegetation" area.

3.0 FACILITY AUDIT

Is the site an Enhanced Phase I ESA Property – check Table 1. *(Refer to Table 1 attached)*: (Y) N

Identify defining uses: Garage/mechanical facility

Describe all processing and manufacturing activities: None

List products produced or stored on site: Waste oils, previously Antifreeze, previously Diesel fuel, previously

3.1 ASBESTOS

Note presence of and general condition of the following applications.

Friable Materials:

- Pipe Insulation: No —
- Tank Insulation: No —
- Duct and Air Handling Unit Insulation: No —
- Sprayed-on Fireproofing: (Check perimeter beams and immediately under Penthouse) No —
- Acoustic/Texture Spray: (interior/exterior) No —

If friable ACM is present:

- Is there an existing asbestos survey report? Y (N)

Non-friable Materials:

- Cement Board (Transite): No —

- Vinyl Floor Tile or Sheet Flooring: No —

- Ceiling Tile: No —

- Cement Pipe (Roof Drains): No —

- Other: Because of the age of the building, asbestos is assumed to not be present.

3.2 PCBs

Descriptions of interior lighting: (include approximate number, location) Lighting ballasts in the building in excess off 200 +

Ballast nameplate information: (manufacturer, serial Nº, etc.) —

Descriptions of outdoor lighting: (include approximate number, location) Outdoor cover lights and lamp posts in yard.

Capacitors: No —

Transformers: (Note - wet or dry type.) - location Yes, one green (dry) transformer located by hydro pole near southeast corner of building.

(Also note Pole Nº and describe location for pole-mounted transformers.) —

Is there any visible evidence of leakage from transformers or capacitors? Y (N)

Describe locations of leaks. —

Does anyone have knowledge of former transformer locations? Y (N)

Describe locations of leaks. —

Note: Document all nameplate information for wet transformers and capacitors.

PCB Waste Storage On Site: Y (N)
(If yes, complete "PCB Storage Site Compliance Checklist")

Is storage site registered with MOE? Y (N)

Registration Nº: —

3.3 HAZARDOUS MATERIALS HANDLING/CHEMICAL STORAGE

Prepare inventory of chemicals stored on site. Include location, container type and size, label description, amount of chemical in place, any hazards noted on label, manufacturer, if known.

Note also any evidence of leakage, corrosion of containers and presence of drains in vicinity of chemical storage.

Note if chemical product is identified as a "flammable liquid".

No hazardous materials are handled or stored on site as the site is now vacant.

Does the building contain a room which may have been used formerly for the storage of chemical products (and may, therefore, have had a dump tank?) **Y** **N**

If yes, provide details:
(Note: any evidence of floor staining, containment, room construction.)

Floor staining in certain areas.

Any floor drains in chemical storage rooms? **Y** **N**

If yes, where do they drain to?
Any evidence of staining around drain.

Holding tank located on site on north east direction of building.

3.3.1 Flammable Liquids

Are flammable liquids present? No

Note: Flammability classification may be referenced on MSDS or on container labels; record flash point, if available.

If yes:

- Does the volume exceed 235 ☼? **Y** **N**
- Are they in sealed containers? **Y** **N**
- Are they located:
  - outdoors? (If so, where?) **Y** **N**
  - in a building not used for any other purpose? **Y** **N**
  - in a room: **Y** **N**
    - separated from the rest of the building with partitions having,
      - at least a 1-hr fire rating? **Y** **N**
      - self-closing doors, hinged to swing outwardly? **Y** **N**
    - equipped with,
      - a drain connected to a dry sump or holding tank? **Y** **N**
      - liquid-tight seals between interior walls and floor and a liquid-tight ramped sill at any door opening which is not an exterior wall? **Y** **N**
    - having natural ventilation to the outdoors by upper and lower exterior wall gravity louvres? **Y** **N**
    - with explosion venting to outdoors? **Y** **N**
    - with spark-resistant floor? **Y** **N**
  - in facilities having no potential source of ignition? **Y** **N**
- If volume is less than 235 ☼:
  - are containers sealed and less than 23 ℓ capacity each? **Y** **N**
  - are containers stored in metal storage cabinet? **Y** **N**

- Does area where flammable liquids are dispensed have:
  - mechanical ventilation to outdoors? **Y** **N**
  - containers and dispensing equipment bonded and grounded (when liquid is dispensed)? **Y** **N**
- Do portable containers used for dispensing flammable liquids have:
  - spring-loaded caps? **Y** **N**
  - flame arrestors? **Y** **N**

3.4 WASTE MANAGEMENT

Registered Wastestreams: No waste coming from property anymore. See EcoLog ERIS report for previous waste generation.

Recycled Wastes:

Site Registration №. and Company Registered:

List MOE waste classifications: (Review copy of waste manifest, if possible.)

Waste Disposal Contractor/ Firms:

Waste Inventory: (Note how long wastes are stored on site, if possible.)

3.5 CFCs:

Coolant used in A/C systems: (or in refrigeration/cooler equipment). Inspect rooftop units where possible. No —

CFC handling practices (if applicable): —

Name of A/C maintenance contractor: —

3.6 AIR EMISSIONS

Note locations and details of any air emission sources:
(Note - check roof.)
(Include date of installation and whether installed by the owner or by the previous or current tenant.)

None —

Total capacity of boilers (BTU/hr input) or other heaters (e.g., gas-fired unit heaters, roof-mounted HVAC units if supplied by oil or gas): —

Emergency Generators:
(diesel/gas) — None

Have Certificates of Approval been obtained for the above sources? Y (N)

Was Owner requested to provide copies of CofA's. Y (N)

3.7 DISCHARGES TO SEWERS

Provide details of waste water and other discharges, if any:
(where are sewers located?)

Sewage tank located on Southeast side of building.

Note the presence of and describe any accumulations of residues, odours, oil sheen, etc., in drains, trenches, pits or sumps:

Old oil residue in floor traps leading to holding tank.

Is a sewage works or water or waste treatment process present? Y (N)

If yes, describe type, location etc., if reported to be functioning correctly and whether chemicals or solvents treated.

Does the building have oil/water separators? (Y) N

Total number of oil/water separators: One (1)

Note: Review available drawings prior to site inspection.

	Oil/Water Separator 1	Oil/Water Separator 2	Oil/Water Separator 3
Identification Nº	Unknown (Pit Area)		
Location:			
Purpose:			
Installation Date:			
Source of intake:			
Location of out fall:			
Condition:			

Maintenance Record:

Pumping Out Records:

Note: **Inspect, if possible, and mark locations of floor drains, septic fields, sumps, etc., on building plan. Inspect catchbasins for presence of liquid and note if there is any evidence of floating product or discoloration.**

3.8 DISCHARGES TO THE NATURAL ENVIRONMENT

Do any processes or drains discharge to an open body of water or the ground surfaces? Y (N)

Describe the discharge:

Are one or more Septic Systems present? (Y) ~~(N)~~

If yes, describe type, location, etc. and if reported to be functioning properly. Are chemicals or solvents discharged to the septic system?

One (1) septic holding tank on site. Reported to be functioning properly.

Is a sewage works, water or waste treatment process present? Y (N)

If yes describe the type, location etc. and if reported to be functioning correctly. Are chemicals and solvents treated?

Do floor drains discharge to ground surface on or off-site? Y (N)

If yes describe the nature and size of the drains and location of source of discharge.

One (1) holding tank catches all floor drain material from building.

Do storm sewer grates discharge to municipal sewer? Y (N)

If no please describe the size of the drains, locations of the source and discharge.

No municipal sewer drains on site.

Describe the locations and number of storm sewer grates.

Is staining or accumulation of waste evident in the vicinity of floor drain and storm sewer grates. (Y) N

If yes describe the size, nature and location of stains and whether the source is active or historical in nature. Old oil staing in autobody located around the grates.

3.9 HYDRAULIC EQUIPMENT

Is fixed or mobile hydraulic equipment used on site. Y (N)

If yes describe type, location, number and condition of cylinders, accumulators and pumping systems (are hydraulic lines in good shape, is there evidence of leakage or staining, are cylinders installed below ground).

3.10 VEHICLE AND EQUIPMENT MAINTENANCE AREAS INCLUDING MACHINE SHOP

Does the site have one or more vehicle or equipment maintenance facilities, paint shops, machine shops or electronics shops? (Y) N

If yes provide a description of the nature, size and location of each facility. Garage / Shop in building.

Describe the condition of the equipment, the presence or absence of staining, oil or other liquids on the floor and identify the nature, size and location of product and temporary waste storage areas. ~~No~~ All temporary waste storage areas have been decommissioned and removed. Residual staining present on floor of autobody and wash bay floors

3.11 OTHER

Are areas of staining not evidently associated with plant equipment or operations present. Y (N)

If yes describe the nature, location and extent.

Have fires or explosions occurred at the site? Y (N)

If yes describe the occurrence dates and their locations. N/A

Mercury in equipment gauges:
(Check boiler room and fan/mechanical room.) Y N

UREA Formaldehyde Foam Insulation
(wall cavities):
(Note - banned in 1980) Building built in early 90's

- Any evidence of patched nozzle insertion holes (typically ~1" diameter) outside building? Y (N)
- Any evidence of UFFI behind electrical outlet cover plates? Y (N)

Evidence of significant particulate deposition? (Check roof in vicinity of air emission sources.) Y (N)

If yes, please describe: N/A

Lead (paint): Y N

Mercury (thermostats, paint): Y N

Presence of soil fill materials: Y N

Other Designated Substances present including: acrylonitrile, arsenic, benzene, coke oven emissions, ethylene oxide isocyanates, silica and vinyl chloride. Y (N)

- Describe: N/A

Mould (readily evident): (Y) N

- Describe: Black mould in some areas of the office portion of the building.

4.0 PROPERTY EVALUATION

- Snow cover at time of site visit? (Y) 95 % N
- List any inaccessible or restricted areas. None —

4.1 UNDERGROUND STORAGE TANKS

Any USTs on the property? Y (N)

Total Number of USTs. None. Two(2) UST's removed in July 2015.

Note: Review available drawings prior to site inspection.

	Tank 1	Tank 2	Tank 3	Tank 4
tank name:				
Identification No.				
Serial No. and Standard Capacity (☼):				
Contents (gas, diesel fuel oil, process chemicals, waste oil etc.):				
Location:				
Active / abandoned:				
Construction type:				
Single or double wall:				
Installation date:				
Installed by (i.e. owner, previous owner, previous tenant or current tenant):				

- Vacuum-monitored: _____ _____ _____ _____
- Corrosion protection type: _____ _____ _____ _____
- Results of leak tests (if available): _____ _____ _____ _____
- Condition of dispensers: _____ _____ _____ _____

Are fill or breather pipes visible on site? **Y** **N**

If yes, describe and mark location on site plan: (Any evidence of former breather pipes -i.e. wall stains or evidence of wall clips.)

_____
_____
_____
_____

Any evidence of fuel pump pads (concrete)? **Y** **N**

Any evidence of repairs to pavements, fill soil, stressed or inconsistent vegetation which could indicate UST removal? **Y** **N**

If yes, describe:

_____
_____

Have any tanks been removed? **Y** **N**

If yes, provide details for each, including date, type of tank, cleanup work done, available reports or test results:

_____
_____
_____
_____
_____
_____
_____

Note: **All areas must be carefully inspected for the presence of breather and/or fill pipes which may be associated with USTs (pipes may be cut off at ground surface).**

If the tank is subject to requirements of the *Gasoline Handling Act*:

- confirm registration with TSSA _____

- confirm whether owner conducts regular tank dipping to check for leakage (and maintaining records thereof): _____

4.2 ABOVE-GROUND STORAGE TANKS

Are any ASTs present on site? **Y** **N**

If yes, provide details regarding size, type, containment devices (walls, curbs, dykes), locations and identification tags or signs:

	Tank 1	Tank 2	Tank 3
Tank name:			
Identification No.			
Serial No. and Standard:			
Capacity - ☼:			
Contents (gas, diesel, fuel oil, process chemicals, waste, etc.):			
Location:			
Active/abandoned:			
Construction type:			
Single or double wall:			
Condition:			
Installation date:			
Installer (i.e. owner, previous owner, tenant, previous tenant):			
Secondary containment (walls, curbs, dykes):			
Condition of dispensers:			

Evidence of visible staining or spills? **Y** **N**

If yes, describe:

If the tank is subject to requirements of the *Gasoline Handling Act*:

- confirm registration with TSSA
- confirm whether owner conducts regular tank dipping to check for leakage (and maintaining records thereof):

If the tank is used to fuel indoor standby emergency generators:

- is there a gauge for determining liquid level? Y N
- is there a device to indicate, visually or audibly, when tank is full? Y N
- record whether tank is located on lowest floor of the building:

4.3 WASTE STORAGE

4.3.1 Hazardous Wastes

Any hazardous waste materials (subject to requirements of O.Reg. 347) stored on site? Y N

If yes, provide a detailed description: (i.e. acid solutions, alkaline solutions, sludges, solvents, resins and plastics, pesticides/ herbicides, oily wastes, lab wastes.)

Are the materials stored in designated areas? Y N

Formerly, yes!

If yes, provide details of container type (drums, totes, bins, pits, bunkers, stock piles) and storage area size and location:

Are waste storage areas enclosed: Y (N)

If yes describe: Formerly, yes. No waste now.

Is uncontained waste present? Y (N)

If yes describe:

Waste disposal contractor and frequency of waste pickup: No waste.

4.3.2 Non-hazardous Waste

Is non-hazardous waste debris or stored on site? Y (N)

If yes, provide a detailed listing (standard municipal/office wastes, construction and demolition wastes, loose debris, etc.).

Are the materials stored in designated areas?: Y (N)

If yes, provide details of container type and storage area size and location:

Are Waste Storage Areas enclosed? Y (N)

If yes, describe enclosure: _____

Is uncontained debris or waste present? Y (N)

If yes, describe nature, location and amount of waste present: _____

Waste Disposal Contractor: —

Frequency of waste pickup: —

4.4 WATER

Are there any surface water bodies or courses in the vicinity on the property? Y (N)

Describe surface drainage pattern or swale location: Any run off heads N/NE towards Trim Rd.

Is there a potable water supply on site (well, municipal supply) (Y) N

Describe location and type of wells. Artesian well in southeast corner by building.

Are there any wells on adjacent sites? Y (N)

4.5 SENSITIVE SITE CONDITIONS

Do site conditions suggest that this property or adjacent lands that would be classified as a potentially sensitive site as per O.Reg. 153/04?

- adjacent wetlands, ANSI, endangered species habitat, Provincial Park, conservation area, etc. Y (N)
- less than 2 m of overburden over bedrock. Y (N)

- less than 30 m from an open body of water. Y (N)

Describe: N/A

4.6 SITE UTILITY SUMMARY

Utilities	Location/Description		
Hydro		U/G	A/G
Bell		U/G	A/G
Cable		U/G	A/G
Water		U/G	A/G
Sanitary Sewer		U/G	A/G
Storm Sewer		U/G	A/G
Gas Line		U/G	A/G
Oil Line	No	~~U/G~~	~~A/G~~

4.7 PREVIOUS INVESTIGATIONS

Any evidence of previous boreholes, test pits or monitoring wells. Y (N)

Describe: No previous investigations.
UST's removed in July 2015, open excavations.

4.8 SITE PLAN

Mark-up site plan showing location of:

- USTs (include dump tanks);
- fill and breather pipes;
- concrete cover pads;
- above-ground storage tanks;
- heavy staining;
- hazardous materials storage;
- drains, pits and sumps;
- catchbasins;
- drum storage;
- wells;
- septic field;
- utilities lines/pipes;
- surface drainage;
- transformers;
- fill areas;
- existing buildings and structures;
- water bodies;
- areas of natural significance;
- roads with names within study area (250m$^+$ boundary);

- adjacent property uses;
- areas of potential environmental concern;
- areas of potentially contaminating activities.

4.9 PHOTOGRAPHS

Take photos of:

- items of environmental concern such as:
  - hazardous waste storage;
  - storage tanks and breather/fill pipes;
  - asbestos fireproofing;
  - significantly-damaged ACM;
  - gas bars or fuel pumping areas;
  - transformers;
  - outdoor lighting;
  - fill materials;
  - adjacent properties;
  - etc.

4.10 SAMPLING

Obtain samples of:

- surface water on site (creeks, ponds, etc.);
- surficial soil from any mounds of soil present on site.

No samples to be taken.

Samples may or not be submitted for laboratory analysis at the discretion of the Project Manager. (Sampling and analysis is normally beyond the scope of a Phase I Environmental Site Assessment.)

5.0 ADDITIONAL OBSERVATIONS

5.1 SEDIMENT

Is sediment evident on the property? Y (N)

If yes, please describe: No previous reporting. Site is presently snow and ice covered.

5.2 SURFACE WATER

Is there any surface water on the property? (Y) N

If yes, please describe: Mild winter conditions have caused the snow on site to melt and refreeze causing frozen pools of surface water.

Are there any marsh or wetland areas on the site? (Y) N

If yes, please describe: There is a marshy area on the east side of site.

5.3 VEGETATION

Describe vegetation in aquatic /littoral zone (if present): —

Describe vegetation in wetland/marsh areas (if present): Cattails, low lying grasses

Describe vegetation in terrestrial areas (note vegetation types, and species): Cedar trees, grass

Estimate forest and grass covered area. 15-20%

5.4 FISH

Is there any recreational fishing in the area? Y (N)

If yes, provide details: N/A

Is there any commercial fishing activity in the area? Y (N)

If yes, please provide details: N/A

5.5 WILDLIFE

Note any wildlife observed or signs of wildlife: None - winter

6.0 PHOTOGRAPHS

PHOTOGRAPH LOG	
PHOTOGRAPH Nº:	PHOTOGRAPH DESCRIPTION

APPENDIX M

Phase One ESA Contact List

a) Ministry of the Environment and Climate Change (Ontario)

FOI Office- Ms. Jacqueline Gallacher
12 floor; 40 St. Clair Ave. West,
Toronto, ONT.
M4V 1M2
Tel. (416) 314-4075
Fax (416) 314-4285

b) Technical Standards and Safety Authority (TSSA)

Mr. John Guan, P.Eng.
Technical Standards and Safety Authority
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, Ontario
M8X 2X4
1-877-682-TSSA (8772).

c) City of Ottawa

Information Request: David Wise – Planning and Growth Management;

City of Ottawa; Planning and Growth Management
110 Laurier Ave. West, 4th Floor
Ottawa, ONT
K1P 1J1
Tel (613) 580-2424- ext 14743 (general)
Fax (613) 560-6006

d) Interviewee

Mike Casey
Property Manager – Contact Person for FirstGroup America Inc.
mike.casey@firstgroup.com
Tel (613) 220-7909

e) Arcadis Canada Inc.

Troy Austrins, P.Eng., QP ESA
329 Churchill Ave. North- Unit 200
Ottawa, Ontario, K1Z 5B8
Tel. 1-613-230-2405

APPENDIX N

Plan of Survey

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

SURVEYOR'S REAL PROPERTY REPORT – PART 1
PLAN OF
PART OF LOT 'A'
CONCESSION 9
GEOGRAPHIC TOWNSHIP OF CUMBERLAND
Now CITY OF OTTAWA

SCALE 1 : 500
0 10 20 50 metres

FAIRHALL, MOFFATT & WOODLAND LIMITED
ONTARIO LAND SURVEYORS

PLAN 50R-5951
PHASE 1 ESA PROPERTY
PIN 14531-0715
LOT 'A'
CONCESSION 9
PART 1
PART 5
PART 6
PART 7
PART 8
SUBJECT TO EASEMENT INST CU16002
REGISTERED PLAN 4M-1217
BLOCK 173
BLOCK 174
BLOCK 175
BLOCK 176
BLOCK 177
BLOCK 178
BLOCK 179
BLOCK 180
BLOCK 103
BLOCK 102
BLOCK 104
WINSOME TERRACE
BRASSEUR CRESCENT
CONDOMINIUM PLAN No 797
1 Story Building (Date Built)
Borehole
Hydro Tower Base

Phase I property boundary

LEGEND
- ☐ – SURVEY MONUMENT SET
- ■ – SURVEY MONUMENT FOUND
- SIB – STANDARD IRON BAR
- SSIB – SHORT STANDARD IRON BAR
- IB – IRON BAR
- (P) – REGISTERED PLAN 4M-1217
- (P2) – PLAN 4R-20378
- (P3) – PLAN 50R-5951
- (P4) – PLAN 4R-22040
- (P5) – SURVEYOR'S REAL PROPERTY REPORTS BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. O.L.S. DATED AUG. 13, 2007
- (P6) – PLAN 4R-28690
- (S) – SET
- (M) – MEASURED
- (AOG) – ANNIS, O'SULLIVAN, VOLLEBEKK SURVEYING LTD., O.L.S.
- (SG) – STANTEC GEOMATIC INC.
- (857) – FAIRHALL, MOFFATT & WOODLAND LIMITED, O.L.S.
- (1473) – G. A. SIMMONDS, O.L.S.
- PIN – PROPERTY IDENTIFIER NUMBER
- CLF – CHAIN LINK FENCE
- BF – BOARD FENCE
- PT – PART
- UP – UTILITY POLE
- FH – FIRE HYDRANT
- ANCHOR & GUY WIRE
- BOLLARD
- LAMP STANDARD
- ELECTRICAL OUTLET
- PARKING LIGHT
- OVERHEAD UTILITY WIRES

NOTE
BEARINGS ARE GRID DERIVED FROM THE WESTERLY LIMIT OF BLOCK 157 AS SHOWN ON REGISTERED PLAN 4M-1217 AND ARE REFERRED TO THE CENTRAL MERIDIAN 76°30' W LONGITUDE M.T.M. ZONE 9 (NAD 83).

SURVEYOR'S REAL PROPERTY REPORT – PART 2
REPORT SUMMARY

DESCRIPTION OF LAND
PART OF LOT 'A', CONCESSION 9, GEOGRAPHIC TOWNSHIP, OF CUMBERLAND, NOW CITY OF OTTAWA, DESIGNATED AS PARTS 1 TO 8 (INCLUSIVE), 50R-5951 AS IN ALL OF PIN 14531-0715.

REGISTERED EASEMENTS
PART SUBJECT TO EASEMENT INST. CU16002 IN FAVOUR OF HYDRO OTTAWA OVER PART 1, 50R-5951.

REMARKS
NOTE LOCATION OF FENCES AND HEDGES ON SUBJECT PROPERTY. NOTE LOCATION OF OVERHEAD UTILITY.

ZONING
COMPLIANCE WITH ZONING, LAND USE, ENVIRONMENTAL AND BUILDING REGULATIONS NOT CERTIFIED BY THIS REPORT.

THIS REPORT WAS PREPARED FOR
FIRST GROUP AMERICA
THE UNDERSIGNED ACCEPTS NO RESPONSIBILITY FOR USE BY OTHER PARTIES.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON MARCH 4, 2016.

2016/03/04
DATE
JOH H. GUTRI
ONTARIO LAND SURVEYOR

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
1967532

THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR
Regulation 1026, Section 29 (2).

Fairhall Moffatt & Woodland LIMITED
OTTAWA
ONTARIO LAND SURVEYORS
Surveying and Land Information Services
100-800 TERRY FOX DRIVE, KANATA, ONTARIO K2L 4B6
TEL. (613) 591-2580 FAX. (613) 591-1495
www.fmw.on.ca

JOB No. W12550
REFERENCE No. 137 – 9 CUMBERLAND
S:\JOBS\W12500\2655 2016-03-04
SR125K.DWG

APPENDIX O

Curricula Vitae

Alisha Williamson, C. Tech

Environmental Technologist – Field Assessor

Education Environmental

Technician Diploma, Fleming College, 2013.

Environmental Technologist Advanced Diploma, Fleming College, 2013

Years of Experience

Total – 3.5 year(s)

With ARCADIS – 2.5 year(s)

Professional Qualifications

Canadian Red Cross First Aid Standard First Aid + Level C CPR (July 2016)

eRail Safe (Canadian Pacific/CN) (August 2014)

Government Security Clearance – Reliability Status (October 2014)

OBBM-Ontario Benthos Biomonitoring Network (April 2014)

Operation of Conventional Water Treatment Processes (February 2013)

Pleasure Craft Operator Permit (November 2012)

POST Certification (January 2016)

TransCanada Health, Safety and Environment Orientation (September 2016)

Wetland Classification (October 2013)

WHMIS (2016)

Alisha Williamson is a Junior Technologist with ARCADIS. She has acted as lead field staff on ESA and monitoring projects in the Ottawa and Northern Ontario regions. Her Phase I/II/III ESA field experience includes drilling supervision, soil and groundwater sampling, and in-office reporting duties.

Work Experience

- ARCADIS Canada Inc., Ottawa, Ontario (August 2014 to Present),
- City of Kawartha Lakes, Lindsay, Ontario (April 2014),
- Fleming College, Lindsay, Ontario (September 2013-April 2014).

Project Experience

Environmental Site Assessments/Investigations (Phase I, II and III ESAS)

- Phase II Environmental Site Assessment. Ottawa, ON. September 2016.
- Phase I and Phase II Environmental Site Assessments completed to CSA standards, Ottawa, ON. 2015. Ms. Williamson completed the collection of site background information, conducted sample collection, and is currently co-authoring the technical report. Client: Arnon Corporation
- Phase I and Phase II Environmental Site Assessments completed to CSA standards, Ottawa, ON. 2015-current. Ms. Williamson completed the collection of site background information, conducted sample collection, and is currently co-authoring the technical report. Client: Arnon Corporation
- Phase One Environmental Site Assessment completed to O. Reg. 153/04, Brockville, ON. 2014-2015. Ms. Williamson assisted in the collection of information, information placed in the technical report, and final editing of the report. Client: Sanmina-SCI
- Phase III conducted in Indian Head, Saskatchewan. 2014. The objective of this project was to delineate contamination on site. Ms. Williamson was responsible for site visits, groundwater, surface water, soil, and sediment sample collection, and reporting. Client: Public Works and Government Services Canada (PWGSC)
- 18 Modified Phase I Environmental Site Assessments (ESA) conducted at multiple locations in Saskatchewan. 2014. The objective of this project was to complete Modified Canadian Standards Association (CSA) Phase I ESAs at the 18 sites. Ms. Williamson was responsible for conducting the site visits, collecting soil samples, and reporting. Client: Public Works and Government Services Canada (PWGSC)
- Phase III Environmental Site Assessment, Brockville, Ontario. 2014-2015. Ms. Williamson completed the quarterly field work for the project in November of 2014 and January 2015. Field activities included monitoring and sampling groundwater to further delineate the extent of contaminants as well as determine the functionality of the well injection program happening on site. She was responsible for the site inspection, collection of samples, and analytical results analysis. Client: Sanmina-SCI

Environmental Monitoring

- Ongoing site monitoring in, Resolute Bay, Nunavut. August 2016. Ms. Williamson participated in the ongoing monitoring and sampling program to assess ground water conditions at landfill treatment units. Ms. Williamson's responsibilities included groundwater sampling and analytical results analysis. Client: PSPC
- Ongoing site monitoring in, Eureka, Nunavut. August 2015. Ms. Williamson participated in the ongoing monitoring and sampling program to assess ground water conditions at a former tank farm. Ms. Williamson's responsibilities included groundwater sampling, surface water sampling, sediment sampling and soil sampling. Client: PSPC
- Phase III Environmental Site Assessment, Brockville, Ontario. 2014-2015. Ms. Williamson completed the quarterly field work for the project in November of 2014 and January 2015. Field activities included monitoring and sampling groundwater to further delineate the extent of contaminants as well as determine the functionality of the well injection program happening on site. She was responsible for the site inspection, collection of samples, and analytical results analysis. Client: Sanmina-SCI
- Monitoring program for Compressor Station 144, Brockville, ON. October 2014 and October 2016. Ms. Williamson's responsibilities included soil, sediment, and surface water sampling. Ms. Williamson also assisted in writing the technical report for the project. Client: TransCanada PipeLines Ltd.
- Ongoing site monitoring program in Ignace, ON. 2014-2016. Completed activities included the coordination of field activities, collection of quarterly ground water samples and analytical results analysis. Data from the monitoring reports was incorporated into a long term site management strategy, developed for the site. Client: Canadian Pacific Rail
- Ongoing site monitoring program in Chapleau, ON. 2014-2016. Completed activities included the coordination of field activities, collection of semi-annual ground water samples, collection of semi-annual surface water samples, and analytical results analysis. Data from the monitoring reports was incorporated into a long term site management strategy, developed for the site. Client: Canadian Pacific Rail
- Ongoing site monitoring program in Bainsville, Ontario. 2014. Ms. Williamson participated in the ongoing monitoring and sampling program to assess ground water conditions at a former highway travel centre. Ms. Williamson's responsibilities included groundwater sampling and analytical results analysis. Client: Husky Oil Operations Ltd
- Ongoing site monitoring program in Ottawa, ON. 2014. Ms. Williamson was responsible for monitoring and sampling of groundwater. Client: Confidential
- Ongoing site monitoring program of area for saline (salt) concentrations. 2013. Completed activities included collecting and interpreting analytical data. Data from the monitoring project was incorporated into a long term report, whereby future data could be easily added to the ongoing study. Client: Fleming College, Environmental Technician/Technologist Program

Site Remediation

- On Site Remediation. July 2015 to present. Ms. Williamson is involved in the upkeep and monitoring of on-site pumping system for PHC contamination. Client: Confidential.
- Junior Environmental Technologist, Enhanced Bioremediation, Ottawa, Ontario. December 2014.Cleaning solvents (perchloroethylene, PCE) and its breakdown products including vinyl chloride were identified in soil and ground water above Ontario O.Reg. 153/04 Standards underneath and around the dry cleaning facility. Ms. Williamson is currently participating in the enhanced bioremediation program. Client: Confidential

ARCADIS Design & Consultancy for natural and built assets

LENNART DE GROOT, B.Sc., EP

ENVIRONMENTAL PROFESSIONAL

Environmental Professional (EP) with over 9 years' experience in environmental assessments in the private and public sectors.

EDUCATION

Bachelor of Science in Environmental Technology, Saxion University, 2007, Deventer, the Netherlands, Europe

YEARS OF EXPERIENCE

Total – 9 Years
With Arcadis – 3 Years

PROFESSIONAL REGISTRATIONS

Eco Canada –
Environmental Professional (EP)

CORE SKILLS

1. Phase I/II/III Environmental Site Assessments
2. Remedial Action Plans
3. Management of Small Drinking Water Systems
4. Remediation Specifications

ADDITIONAL EDUCATION AND TRAINING

- Transportation of Dangerous Goods, YOW Canada
- eRailSafe Canada, Canadian Railroad Industry
- Operation of Small Drinking Water Systems, Walkerton Clean Water Centre
- Petroleum Orientated Safety Training (POST) 2017
- Workplace Hazardous Materials Information System Training (WHMIS 1988, 2015)
- Station Safety Awareness for External Contractors, Hydro One Networks Inc.
- Emergency First Aid CPR/AED Level A (Canadian Red Cross), April 2017
- Asbestos Awareness Training (National Environmental Trainers inc., Title 29 CFR 1926.1101.)
- Fall Arrest Protection Awareness Training (YOW Canada Inc.)

Mr. de Groot is an intermediate environmental professional (EP) with 9 years of consulting experience. He has acted as lead field staff on environmental site assessments (ESAs) and monitoring projects in Ontario, Quebec and Northwest Territories. Lennart has successfully coordinated numerous Phase I/II/III ESAs, and has extensive field experience in drilling supervision, soil and groundwater sampling, and in-office reporting. Lennart has also conducted numerous Designated Substance Surveys and Hazardous Waste Audits. Since 2016, Lennart is managing and is the lead field engineer for three small drinking water and waste water systems in Ontario.

Lennart is qualified in several aspects of field investigations including project coordination, supervision, borehole drilling (hollow stem, solid stem, geoprobe, sonic, pionjar), test pitting, water sampling (surface water, waste water, groundwater, drinking water, sewer discharge, water treatment systems), indoor air sampling, hazardous materials sampling (lead, PCBs, Asbestos), waste auditing, and soil/groundwater remediation (in-situ and ex-situ). Mr. de Groot has experience corresponding with federal, provincial, municipal and private clients, contractors and laboratories.

Project Experience

Environmental Site Assessments (Phase I, II, & III ESAs)

Limited Phase II ESA (2017)

588 Booth Street, Ottawa, ON

Mr. de Groot was solely responsible for borehole drilling and soil sampling at this test location. Lennart's responsibilities included soil sampling, site surveying, borehole logging, data analysis, and report drafting. ***Client:*** *City of Ottawa*

Phase II ESA (2016)

76 Inverness Avenue, Ottawa, ON

Mr. de Groot was solely responsible for borehole drilling using a handauger and soil sampling for this project. Lennart's responsibilities included soil sampling, site surveying, borehole logging, data analysis, and report drafting. ***Client:*** *City of Ottawa*

Project Experience, Continued

Phase II ESA (2016)

469 Donald Street, Ottawa, ON

Mr. de Groot was responsible for borehole drilling using a track mounted geoprobe and handauger. Some boreholes were completed by installing monitoring wells. Lennart's responsibilities included soil sampling, site surveying, borehole logging, data analysis, and report drafting. ***Client:*** *City of Ottawa*

Follow-up Phase II ESA (2016)

Berens River Wharf, Berens River, Manitoba

Completed an assessment of a water lot as per the Manitoba provincial guidelines. The Follow-Up Phase II ESA included the collection of soil, groundwater, sediment and surface water samples in the vicinity of identified APECs. The sediment samples were collected for toxicity testing and completed for the amphipod Hyalella azteca based on the Environment Canada biological test method Test for survival and growth in sediment and water. Reporting duties included summarizing results of analysis into tables for reporting, writing the Phase II report and producing final electronic and hard copy versions for submission to the client. ***Client:*** *Public Works and Governmental Services on behalf of Transport Canada*

Phase II/III ESA (2014 – 2017)

Rideau Hall, Ottawa, Ontario

Duties included writing of the technical proposal, the supervision of drilling, and conducting of soil and groundwater sampling for the proposed multi-week field investigation. Writing of the Phase II and Phase III ESA reports followed by the writing of Construction Remediation Specifications. ***Client:*** *National Capital Commission*

Phase II ESA (2016)

Pikangikum First Nation Community, Northern Ontario

Completion of a testpit program including the excavation of 65 testpits and soil sampling, followed by groundwater sampling from pre-installed monitoring wells. ***Client****: Public Works and Governmental Services*

Phase I ESAs (2016)

Manitoulin Island and Arnprior, Ontario

The purpose of both Phase I ESAs was to identify any actual or potential environmental liabilities that have resulted from existing and previous land uses or site development activities on and adjacent to the subject property through a detailed records review and site inspection. The records review included aerial photograph search, database search for applicable records, contacting various health authorities and interviews. Mr. de Groot was responsible for all aspects of both Phase I, including site inspection and reporting. The work was completed in accordance to the requirements outlined in the Canadian Standards Association (CSA) standard CSA Z768-01, Phase I Environmental Site Assessment (CSA, 2012). ***Client:*** *Hydro One Networks*

Phase I ESA (2016)

150 - 158 Dalhousie Street, Ottawa, Ontario

A commercial building, vacant residential house with a garage and two parking lots were inspected for the presence of hazardous materials and potentially contaminating activities. Mr. de Groot was responsible for all aspects of the Phase I, including site inspection, an interview with the owner and reporting. The work was completed in accordance to the requirements outlined in the Canadian

Project Experience, Continued

Standards Association (CSA) standard CSA Z768-01, Phase I Environmental Site Assessment (CSA, 2012). ***Client:*** *the Ottawa Beauty Supply Company*

Phase II/III ESA and Benthic Survey (2014)

Portsmouth Olympic Harbour, Kingston, Ontario

Part of a field team collecting sediment, surface water and groundwater samples. Field duties included conducting surface water and sediment sampling using a ponar type grab sample from a rental boat to examine harbour sediment and surface water conditions. ***Client****: Public Works and Governmental Services*

Environmental Site Monitoring

Human Health and Ecological Risk Assessment (HHERA) (2017)

Former Rayrock Mine Site, Northwest Territories

The objective of this assessment was to gather information needed to finalize the HHERA. Assisted with the completion of a Vegetation Assessment, Small Animal Sampling and Collection, Fish Sampling and Collection and a Benthic Survey. Working conditions encountered during the three-week field program were working in harsh weather conditions, protection from predatory animals, following communication procedures on site and off site, following radiation safety and precautions and following helicopter and boat safety procedures. ***Client****: Public Works and Governmental Services Canada, Western Region*

Soil, Groundwater and Air Quality Assessment (2016)

RCMP Detachment, Tulita, Northwest Territories

The objective of this assessment was to determine if the hydrocarbon contamination identified in the soil is present in groundwater and if the impacts are migrating off-site. Indoor air sampling in the detachment building was required to ensure that naphthalene and BTEX/PHC concentrations were not continuously exceeding Health Canada's guideline. Duties included the supervision of drilling and installing of monitoring wells, soil sampling and indoor air sampling and the writing of the ESA report. ***Client****: Public Works and Governmental Services*

Provision of Sanitary and Storm Sewer Water Quality Monitoring (2016 - 2017)

University of Ottawa, Ottawa, Ontario

Monthly sampling of waste water throughout the University. Managing sampling bottles and chain of custody forms for provision to the laboratory as well as reporting of results. ***Client:*** *University of Ottawa*

Groundwater, Surface Water and Methane Monitoring (2014 - 2015)

Former McGee Landfill, Ottawa, Ontario

Groundwater Sampling and Elevation Survey of 14 existing site monitoring wells and surrounded surface water bodies. Included well purging and sampling and surface water sampling, as well as recording of field chemistry parameters. In addition, methane vapour testing was conducted from selected monitoring wells. ***Client:*** *National Capital Commission*

Project Experience, Continued

Groundwater Monitoring Program (2014 - 2015)

16 Tauvette Street, Ottawa, Ontario

Continuation of the Natural Attenuation Monitoring Program through sampling of groundwater from 10 existing well installations. The scope of work included monitoring of groundwater for levels of BTEX/PHCs, recording of field chemistry parameters, preparation of chain of custodies and keeping of detailed work logs for future reference. ***Client:*** *National Capital Commission*

Soil Fill Quality Supervision (2015)

LeBreton Flats, Ottawa, Ontario

Conducted field supervision services during the import of fill to confirm that all soil met applicable Site Condition Standards, a project for which Approximately 25,000 m^3 of soil was imported successfully. ***Client:*** *National Capital Commission*

Drinking Water Sampling Program (2014 - 2015)

Various Schools in the Ottawa, Ontario area

Conducted annual drinking water sampling for the Ottawa District School Board for analysis of lead parameters in drinking water as per Ontario Reg. 243/07. Duties included conducting on site sampling and preparation of chain of custodies; as well as the keeping of detailed work logs for future compliance review by the MOE. ***Client:*** *Ottawa-Carleton District School Board*

Monthly Site Inspections (2014)

PLASCO Waste Facility Plant, Ottawa, Ontario

Carried out monthly site inspections of the Plasco *Energy from Waste* Facility in Ottawa, as well as writing of the monthly engineers report. The site inspection included review of the Operations Hourly Checklist, and Waste Tracking Logbook. The purpose of the monthly inspection was to observe and report on the operations of the site to verify compliance with the requirements of the conditions of the Ontario MOE Environmental Compliance Approval. ***Client:*** *Plasco Energy Group Inc.*

Site Remediation

Co-author for Remedial Specifications Preparation (2016)

Resolute Bay, Nunavut

This project included the design and specifications services (including tendering assistance) for the waste consolidation and capping of a former Transport Canada landfill(s) in Resolute Bay, NU. The project included the engineering design services, site remediation design and tender specifications documentation preparation with a Class A Cost estimate to 100% completion. The project included project scheduling, review of previous reporting, and interpretation of all applicable codes and licences. Mr. de Groot assisted in the specification preparation and drafting of all site plans and construction details using AutoCAD. ***Client:*** *Public Works and Governmental Services on behalf of Transport Canada*

Excavation of PHC Impacted Soils (2015 & 2017)

McDowell Lake, Ontario

The program included the on-site collection of soil and surface water samples and excavation of PHC impacted soils into a Biopile. Duties included soil sampling from treated soil stored in a bio-cell. Work required collaboration with the local First Nation Community. ***Client:*** *Nexacor for Bell Canada.*

Project Experience, Continued

Operation of Small Drinking Water and Waste Water Treatment Systems

Inspection and Maintenance of Small Drinking Water and Waste Water Facilities (2016 - 2017)
Ottawa, Cornwall and Summerstown, Ontario

Acting as the lead field engineer to ensure that the water treatment systems perform correctly and consistently. Mr. de Groot is responsible for weekly inspections of the facilities and keeping the systems running by following general equipment inspection and replacement procedures. Conducting of weekly, monthly, quarterly and annual water sampling. Mr. de Groot is the first contact for emergency call up (24/7) in case of equipment malfunction and performing on-site troubleshooting. ***Client:*** *Suncor for Petro-Canada*

Geotechnical Investigations

362 chemin d'Aylmer, Aylmer, Quebec (2015)

Assisted with a geotechnical investigation program to determine subsurface soil and bedrock conditions and to provide geotechnical comments and recommendations to guide the design and construction of the foundations for a proposed building structure. Work included the supervision of the field investigation program, borehole logging of the geotechnical investigation and writing of a Geotechnical report. ***Client:*** *Private Company*

Kemptville, Ontario (2014)

Assisted with field supervision of drilling for purposes of a geotechnical investigation, description of soil characteristics and conducting of a land elevation survey. ***Client:*** *LA Group Inc.*

140 Springhurst. Ottawa, Ontario (2014)

Assisted with a geotechnical investigation program to provide a report to the City of Ottawa building department requirements. Field work included borehole logging of the geotechnical investigation, as well as preparing samples for pH and corrosivity analysis, moisture content, and grain size analysis. Client: Private Company.

Designated Substances Surveys and Waste Audits

Asbestos Abatement of a Boiler Room (2016)
305 Metcalfe Street. Ottawa, Ontario

The boiler room was surveyed for designated substances (asbestos). Duties for this job included the on-site investigation as well as cataloging samples for laboratory submission, compiling site photographs into reportable formats, as well as general project administration. Sampling was performed using phase contrast microscopy (PCM) methodology. Reporting duties included organizing sample data for completing chain of custody. Clearance air sampling was conducted following completion of the Type 3 asbestos abatement work in the boiler room. ***Client:*** *Hollyburn Properties Ltd.*

Project Experience, Continued

Waste Reduction and Management Program (2014 - 2017)

NAV Canada Centre, Cornwall, Ontario

Conducting an annual waste audit at the NAV Canada Centre (2014, 2015, 2016, 2017). Project duties included cataloging and calculating representative waste volumes and analyzing procedures of waste production and collection for the purposes of creating more environmentally responsible waste management practices. ***Client:*** *NAV Canada*

Pre-demolition Designated Substances Surveys and Waste Audits (2015)

14 National Capital Commission Properties, Gatineau area, Quebec

The project required the surveying of 14 NCC owned properties located in Quebec (Gatineau Park and Lac Phillipe), as well as the conducting of Class D waste estimates for future demolition purposes. As well as being the lead field investigator and sampler for 7 of the properties, duties included creating detailed site plans and report writing of the Designated Substances Survey and Waste Audits. ***Client:*** *National Capital Commission*

Pre-demolition Designated Substances and Hazardous Waste Survey (2017)

1979 Matheson Drive, Smith Falls, Ontario

Project included collection of building material samples such as tiles, paint and suspected asbestos containing materials and inspecting hazardous waste material in an office building/garage. Mr. de Groot was responsible for coordination of field activities, collection of materials samples, inspection of fluorescent light ballasts, and photographic records.

Client: *Valero Energy Corporation.*

Designated Substances Survey (2015)

Residential House, Gatineau, Quebec

Duties for this job included the on-site investigation and cataloguing of samples for laboratory submission, compiling site photographs, as well as general project administration. Reporting the findings of the survey, labeling and organizing sample data for completing chain of custody, and summarizing results of analysis into tables. ***Client:*** *Private Client*

Designated Substances Survey (2015)

1190 Montreal Road, Ottawa, Ontario

Control and Relay Buildings were surveyed for designated substances. Duties for this job included the on-site investigation as well as cataloging samples for laboratory submission, compiling site photographs into reportable formats, as well as general project administration. Reporting duties included organizing sample data for completing chain of custody, and summarizing results of analysis into tables for reporting, writing the report and producing final electronic and hard copy versions for submission to the client. ***Client:*** *Hydro One Networks Inc.*

December 2007 – September 2013

Consultant in soil research and remediation for several Engineering & Consultancy firms and the Provincial Government in the Netherlands, Europe [Geofox-Lexmond (2007-2008), Oranjewoud (2008-2010), Provincial Government of Gelderland (2010-2011), Greenhouse Advies (2012-2013)].

Project Experience, Continued

Selected Publications

Review of Scientific Literature on the Co-Product of Biogas Production (2011)

Provided literature review which was tailored to inform experts from technical organisations and governmental institutions that are dealing with household biogas digesters. The outcomes were published in the following report:

> De Groot, L. and Bogdanski, A. (2013) *Bioslurry = Brown Gold?* United Nations Food and Agriculture Organisation (FAO), Environment and Natural Resources Management Working Paper, number 55.

Responsibilities included: researching, analysing and reporting on various technical aspects of a biodigester, e.g. the production of biogas and bio-slurry, efficiency of the digester, comparisons between biodigesters and a energy balance. Reviewed peer-literature articles regarding the uses of bio-slurry and their implications for small-scale farmers in developing countries and completed a technical paper regarding the use of bio-slurry by small-scale farmers in developing countries.

STEPHANIE JOYCE

ENVIRONMENTAL SCIENTIST

EDUCATION

M.Sc. Environmental Science
University of Alberta, Edmonton
1999

B.Sc.H. Chemistry
Queen's University, Kingston
1997

YEARS OF EXPERIENCE

Total – 12 Years
With Arcadis – 2.5 Years

PROFESSIONAL REGISTRATIONS

Association of the Chemical Profession of Ontario

CORE SKILLS

1. Project Management
2. Environmental Site Assessments
3. Long Term Monitoring
4. Northern Logistics

QUALIFICATIONS

- Certified Project Manager, Arcadis (2015)
- Standard First Aid (2016)
- Petroleum-Oriented Safety Training (2017)

Stephanie is a Project Manager with Arcadis Canada Inc., located in their Ottawa Office. She has over 12 years of experience in environmental consulting, specializing in environmental site assessments, long term monitoring and regulatory applications. She lived and worked in Yellowknife, Northwest Territories for over 8 of her years, becoming familiar with the northern environment, logistics and regulatory processes. Stephanie has completed over 60 Phase I, II and III ESAs, in the Northwest Territories, Nunavut and Ontario. Sites have included eight heli-bases and two air tanker bases across the NWT, abandoned mines in the NWT, two float plane bases in Inuvik, NWT, the ferry landing Fort Providence, NWT, a former gas station in Alberta, an automotive centre in Yellowknife, the Robert O. Pickard Environmental Centre (ROPEC), the wastewater treatment facility for the City of Ottawa, community tank farms in eight Nunavut communities and other commercial, industrial and residential sites. Her clients have included primarily federal, territorial and municipal government departments.

Work Experience

2014-Present	Arcadis Canada Inc.
2013-2014	WCI Environmental Solutions Inc.
2001-2012	Dillon Consulting Limited
1999-2001	Public Works and Government Services Canada (2 6-month contracts)

Selected Project Experience

PHASE I, II and III ENVIRONMENTAL SITE ASSESSMENTS

Environmental Investigations at the Former Rayrock Mine

Former Rayrock Mine, Northwest Territories (2015 – present)

Under contract with PWGSC, environmental investigations were conducted at the former Rayrock mine site in 2015 and 2016. The former Rayrock mine is located approximately 145 km northwest of Yellowknife. There is no overnight accommodation, so the site is accessed daily via float plane from Yellowknife. Investigations included site stabilization activities (e.g. hazardous and non-hazardous material abatement, trail clearing, vent raise assessments), Phase I and II Environmental Site Assessments

Project Experience, Continued

(ESA) of five satellite exploration sites, Sherman Lake camp and the Barge Landing on Marion Lake, Phase III ESA of a 600 m drainage course on the site and a hydrogeology study.

Local labourers were contracted to collected hazardous and non-hazardous wastes. Thirty-five wooden crates were flown into the site and assembled during the 2016 field program. Approximately 80 bags of asbestos-containing materials and hazardous materials were collected, bagged and placed in the wooden crates for storage.
Five satellite exploration sites were accessed via helicopter in 2015 for the purposes of conducting a Phase I/II ESA, in accordance with CSA standards. Two additional sites, the Sherman Lake camp and the Barge landing, were assessed in 2016. During the site visits, Areas of Potential Environment Concern (APEC) were identified. Test pits were advanced in these areas and soil samples were collected and analyzed for contaminants of potential concern. Analytical results were compared to the CCME Canadian Environmental Quality Guidelines and the Canada wide Standard for Petroleum Hydrocarbons in Soil. Surface water samples were collected if present in an APEC. At the Barge Landing, a gamma survey was conducted to measure radiation levels at the site.
An initial test-pitting program was designed in 2015 for the 600 m Mill Creek drainage course. After metal and radionuclide (Lead-210 and Radium -226) impacts were identified, a follow-up investigation was designed for 2016, to delineate and characterize the results and assess contaminant movement along the drainage course. Sediment samples were collected in both the upstream and downstream water bodies, to assist in site characterization and provide data for future risk assessment.
As Project Coordinator, Stephanie was responsible for project planning and preparation, coordination of field logistics, report preparation, budget tracking and client liaison. The complex field programs, involving retention of several sub-contractors, coordination of an aboriginal environmental technician for job shadowing purposes and transportation of equipment and field supplies to site via float plane was planned and executed successfully within a very tight timeframe. Four reports were produced following each field season. Stephanie authored three of the reports each year, coordinating staff in several offices to compile the field data, analyze the results and present the results in concise, accurate reports.

Phase II ESA, Preliminary Quantitative Risk Assessment and Tender Document Preparation for Remediation/Risk Management Activities of St. Laurent Square

Ottawa, Ontario (2015-2016)

A Phase II ESA was conducted on the property located in downtown Ottawa. Contaminants of concern were petroleum hydrocarbons, polycyclic aromatic hydrocarbons and metals. The data were used to prepare a Phase II ESA report as well as a preliminary quantitative risk assessment (PQRA).
Following the PQRA, tender documents were prepared for the remediation and risk management activities planned at the site. Additional tasks included development of a Class “A” cost estimate, completion of groundwater sample collection at the site, revision of the NCSCS score for the site, translation of the drawings and translation review of the specifications. Unique challenges included a changing scope (i.e., addition of several supplemental tasks in short succession), considerable media attention and a very tight schedule for the entire project.

Project Experience, Continued

Phase I ESA of Robert O. Pickard Environmental Centre
Ottawa, Ontario

Project coordinator for conducting the Phase I Environmental Site Assessment of the Robert O. Pickard Environmental Centre (ROPEC), the wastewater treatment facility for the City of Ottawa. ROPEC is located on a 60 hectare area of land that includes 15 buildings, 15 primary clarifiers, eight aeration tanks, 16 secondary clarifiers, three contact chambers, six digesters, an underground tunnel system and the associated piping, pumps and infrastructure.

Phase I/II/III Environmental Site Assessments
Various Sites in Ontario, Northwest Territories and Nunavut

Project manager and/or project coordinator for conducting numerous Phase I, II and III ESAs in the Northwest Territories, Nunavut and Ontario. Sites have included abandoned mines, former gas stations, an automotive centre and other commercial, industrial and residential sites. Clients have ranged from the private sector, a mining company, and various municipal, territorial/provincial and federal government departments.

ENVIRONMENTAL MONITORING

Long Term Monitoring at DEW Line Sites
Various Remote Sites in Nunavut (2015 – present)

Long term monitoring activities were conducted at various Distant Early Warning (DEW) Line sites in both 2015 and 2016 for Indigenous and Northern Affairs Canada (INAC). Four sites were scheduled in 2015 (PIN-B, PIN-D, FOX-C and Cape Christian), however only three were visited due to inclement weather conditions. An additional four sites were visited in 2016 (FOX-C, CAM-D, Roberts Bay, Ennadai Lake), as well as the Former North Rankin Nickel Mine, in Rankin Inlet. The DEW Line sites are located in remote Nunavut, generally accessed by chartered plane from a nearby community.
The DEW Line sites were remediated over several years. Non-hazardous wastes were placed in a Non-Hazardous Waste Landfill (NHWL) designed and built at each site. The focus of the LTM activities is the NHWL and include a visual inspection, photographic record and groundwater and/or surface water sample collection. At Roberts Bay, three thermistor strings equipped with data loggers are installed within the NHWL. Arcadis was responsible for downloading data from the data loggers and replacing the data loggers themselves with new batteries.
The Former North Rankin Nickel Mine was remediated in 1997. Remedial activities included placing all tailings in a deep pond (water was drained), and installing a cover. LTM activities have occurred since that time, but inconsistently. Arcadis was retained to conduct another year of LTM activities and formalize the LTM Plan for future monitoring activities. LTM activities included a visual inspection, photo documentation, surface and sediment sample collection and thermal monitoring. Concerns about the site included the presence of acid-generating material on top of the tailings cover, potential seepage from the tailings cover and the state of the tailings themselves (tailings need to remain frozen to limit contaminant migration).
As Project Manager, Stephanie was responsible for project planning, coordination, field logistics, reporting, budget tracking and client liaison. An aboriginal environmental technician was hired to assist at a few of the sites, gaining hands-on field experience. Logistics were extremely important for this project, as all sub-contractors, equipment, supplies and materials had to be coordinated, with little room for error. Due to inclement

Project Experience, Continued

weather, delays were encountered during the field programs. Stephanie and the field team adapted to the changing conditions, communicating regularly with the client. Following the field program, results were presented in clear, accurate reports, noting changes observed over the years.

Groundwater Monitoring (2016)

Onefour Research Substation, Alberta

Project Manager for groundwater and surface water monitoring at the Onefour Research Substation, located in rural Alberta. Groundwater and surface water samples were collected from designated locations. Analytical results were compared to guidelines and previous monitoring results. Concerns about the site included the identification of a true background sample and whether reported exceedances were a result of impacts from the landfill, or natural background concentrations. Recommendations regarding future monitoring were made and summarized in a report.

Water Quality Monitoring at the Colomac Mine

Former Colomac Mine, Northwest Territories (2005-2006, 2008-2009, 2011-2012)

Colomac is an abandoned gold mine, located approximately 400 km north of Yellowknife. As a condition of its water license, issued by the Wek'eezhii Land and Water Board (WLWB), water monitoring was required as part of the Surveillance Network Program (SNP). INAC contracted an environmental consultant to conduct the routine water quality monitoring monthly during periods of open water and once under ice in the spring.
First as Project Manager (2005-2006) and then Project Advisor (2008-2009, 2011-2012), Stephanie was responsible for project management, coordination and completion of field work, chemical analysis of dissolved phosphate, ammonia nitrogen and thiocyanate in the on-site laboratory, data analysis and report preparation. Water samples were collected from 28 locations, accessed by boat, ATV, snowmobile, float plane and foot. Logistics had to be coordinated between the field team, the air charter company, the on-site contractor and the client. All data was uploaded into a customized database, to facilitate data evaluation. Quarterly monitoring reports were prepared, as well as an Annual SNP Summary report, submitted to the WLWB. This project began in 2005, and continued through to 2012 (although scope was reduced in latter years).

Long Term Monitoring Plan Development – Discovery Mine

Former Discovery Mine, Northwest Territories (2016)

At the request of Indigenous and Northern Affairs Canada, Arcadis prepared a LTM Plan for the former Discovery Mine. Discovery Mine is a former gold mine, located on the west shore of Giauque Lake, approximately 85 km northeast of Yellowknife.
As a Specialist on the project team, Stephanie provided guidance on the groundwater monitoring aspects of the LTM Plan. She reviewed previous reports, compiled data and recommended requirements for the LTM Plan. For each component of the site, LTM Plan requirements were summarized (e.g. activity and frequency), planned maintenance activities were outlined and triggers for contingency actions were developed. A risk management assessment for each component requiring LTM was completed.

Project Experience, Continued

Annual Monitoring and Operating Report for Trail and Nepean Landfill Sites

Ottawa, Ontario

Assisted with the Trail and Nepean Landfill Sites 2010 and 2011 Annual Monitoring and Operating Report. Tasks included data compilation and analysis and report preparation for the surface water monitoring stations.

REMEDIAL ACTION PLAN DEVELOPMENT AND REMEDIATION

Tender Document Preparation for Remediation/Risk Management Activities

St. Laurent Square, Ottawa, Ontario

Project Manager for the preparation of tender documents for remediation and risk management activities planned at St. Laurent Square in downtown Ottawa. Additional tasks included development of a Class “A” cost estimate, completion of groundwater sample collection at the site, revision of the NCSCS score for the site, translation of the drawings and translation review of the specifications. Unique challenges included a changing scope (i.e. addition of several supplemental tasks in short succession), considerable media attention and a very tight time schedule for the entire project.

Remedial Action Plan (RAP): Off-Site Property Impacts of Transformer Station

Ignace, Ontario (2015)

Report author for the remediation action plan addressing off-site property impacts at a transformer station in Ignace, Ontario. Polychlorinated biphenyl concentrations above applicable guidelines were observed in soil samples collected from inside and outside of the property line. The remediation plan detailed the excavation and off-site disposal of the impacted soils. The RAP was in accordance with National Energy Board requirements.

Checkpoint Site Remediation

Checkpoint, Northwest Territories (2009-2010)

The Checkpoint Site is located at the intersection of Highways 1 and 7 in the Northwest Territories. Previously used as a storage depot, remediation of the site was planned. Remedial activities included construction of a landfarm and excavation of hydrocarbon-impacted soil. As Project Manager under contract with the Department of Transportation with the Government of the Northwest Territories, Stephanie oversaw the design and construction of the landfarm. The design followed requirements laid out in the Land Use Permit for the site, issued by the Mackenzie Valley Land and Water Board. Construction occurred over several weeks in the fall. A local construction company was retained as the site contractor. Unique challenges included logistic planning as the site is located approximately 60 km from Fort Simpson, across a ferry/ice road (i.e. no access during periods in the spring and fall). As construction occurred in the fall, work had to be completed before the ferry stopped running for the winter. An environmental technician, a member of the local First Nation, was retained to assist with the field work and gain hands one experience.

Project Experience, Continued

Biopile Remediation, Rankin Inlet Airport
Rankin Inlet, Nunavut

Project manager for the aeration, nutrient addition and sampling of a biopile in Rankin Inlet. The biopile was constructed in 2004, but additional excavation was required in 2005. Confirmatory sampling in 2006 indicated that treatment was complete. Responsibilities included project management, coordination and communication between field technicians, contractor and client, and preparation of report.

GUIDANCE DOCUMENT PREPARATION AND REGULATORY EXPERIENCE

Preparation of Guidance Documents on Investigating and Managing the Impacts of Per- and Polyfluoroalkyl Substances (PFAS)
Ottawa, Ontario (2016- present)

As Project Manager, Stephanie coordinated a team of international experts to prepare guidance documents on investigating PFAS impacts. The client was responsible for numerous sites across the country, where fire fighting activities had occurred and wished to conduct PFAS investigations at all the sites. The guidance documents were prepared so that the investigations were conducted consistently, efficiently and cost-effectively across the country. A general guidance document, with background information on PFAS, was prepared, as well as a statement of requirements, which outlined specific requirements of the investigations.

Update of Cost Estimating, Liability Reporting and Contaminated Sites On-Reserve Program Guides, South of 60°
Ottawa, Ontario (2014-2016)

The purpose of this project was to simplify and standardize INAC's liability reporting for their contaminated sites program. Various guides were updated and spreadsheet tools were developed to assist with cost estimates and liability. Responsibilities included client liaison, design of a remediation cost-estimating tool in Excel, update of associated guide and Contaminated Sites On-Reserve Program guide update.

Water License Applications and Regulatory Submissions
Various Clients in the Northwest Territories and Nunavut (2003-2009)

Project coordinator/manager for community water license applications and other regulatory submissions, presented to the MVLWB, the Sahtu Land and Water Board and the Nunavut Water Board, for communities in the Northwest Territories and Nunavut. The application processes involve considerable liaison between the community, the client(s) and the appropriate water board, to ensure a complete application.

Troy Austrins, P.Eng., PMP, QP_{ESA}

Project Manager; Geo-Environmental Engineer

Education

B.Eng., Civil Engineering, Ryerson Polytechnical University, Toronto, Ontario, 1991

Environmental Science & Engineering Certificate, Ryerson Polytechnical University, Toronto, Ontario, 2002

Years of Experience

Total – 23
With ARCADIS – 14

Professional Affiliations

Professional Engineers of Ontario;
Associate of Professional Engineers (BC)
Ontario Society of Professional Engineers;
Canadian Geotechnical Society
PMI- Ottawa chapter

Additional Education and Training

2015 HAZWOPER –Refresher; Radiation Safety, Gauge Operation, Transportation of Dangerous Goods,
Class 7 Radioactive Radioisotope Licenses and Other Regulatory Requirements, Emergency Procedures- AECBC

2014 Operation of Small Drinking Water systems; Emergency Level 1st Aid/CPR-AED; (updated in 2013)

2007 Fall Arrest; Confined Space; WHMIS Training; Pleasure Craft Operator

2005 40-hour HAZWOPER

2002 Hydro One- Electrical Safety Awareness course, including on-site grounding/bonding instruction; Traffic Control Training

Mr. Austrins is a Project Manager and a Geo-Environmental Engineer in the ARCADIS Canada Inc. Ottawa office. He is responsible for completion of environmental site assessments, hazardous materials surveys and contaminated site remediation projects in addition to landfill monitoring + design, environmental and associated auditing programs. Responsibilities as a project manager include indoor air quality assessments, designated substances surveys (DSS), mould and asbestos assessments, and the design and completion of Phase I, II, & III environmental site audits, waste audits, fuel storage tank compliance auditing and remediation projects. Mr. Austrins is a registered 'Qualified Person' with the Ontario Environment Ministry to review and perform Phase I, Phase II and Phase III ESAs. Mr. Austrins also is involved with projects requiring Geotechnical Investigations or slope stability evaluations.

Project Experience

2001-present – ARCADIS Canada Inc., Ottawa

NCC- former McGee Farm Landfill –site monitoring 2011 through to 2016
Former McGee Farm Landfill Groundwater, Surface Water, and Methane Monitoring Program for the National Capital Commission (NCC). As project manager, Mr. Austrins coordinated all field programs; supervised the PQRA development and biological survey of the former landfill, and completed all semi-annual and annual monitoring reports for years 2011 through 2015. Mr. Austrins provided recommendations for revision and managed revision of all monitoring programs, supervised staff, acted as client liason, as well as reviewed and signed off on all deliverables to the client.

CNL-AECL Chalk River Bulk Materials Landfill project (2006 design, 2010 construction, 2016 Phase 2design, 2017 Phase2construction), completed site construction supervision and review of as-built elements. Reviewed HDPE and geosynthetics supplied to work site. Provided response to construction staff change orders. Evaluated leachate holding tanks and clay liner appropriateness. Provided final commissioning documentation: 2010 Construction Supervision stage. Landfill Design / Design and Operations Manual- 2006/2007: Assisted in initial landfill design and conducted geotechnical investigation to evaluate chosen landfill site appropriateness. Worked closely with landfill construction team to resolve issues with late materials deliveries, sourcing replacement acceptable landfill appurtenances, evaluating issues with compaction and clay source difficulties, responding to same-day requests for site inspections and work progress approvals.

CST Inc. (Ultramar)- Princess Ave.- Kingston, ONT 2014 to present
Mr. Austrins acted as senior reviewer at ARCADIS to oversee an Infrastructure Removal Program and conduct a Phase II ESA and Supplemental Phase II ESA for a CST (Ultramar) property located in Kingston, Ontario (2014). At the time of the Phase II ESA, the site was developed with one single-storey building, petroleum storage and handling equipment (diesel and gasoline pump islands), and a propane storage and handling facility. There were 5 USTs along with gasoline, diesel, and kerosene distribution piping (between the former USTs and the former pump islands) and vent piping. The completed excavation covered an area of approximately 144 m2. Upon completion of the infrastructure removal program ARCADIS advanced

a test pitting program and borehole/monitoring program of 11 boreholes and 3 monitoring wells, conducted to further delineate the identified petroleum impacted soil. A follow-up Phase II ESA was prepared to include coring through the floor of the existing site building. ARCADIS successfully delineated PHC impacted soils, and remedial recommendations were provided. Mr. Austrins oversaw the remediation program for the property and reviewed the need for building shoring/underpinning during excavation and contaminated soil removal operations. ARACADIS acted as General Contractor for the remediation program to arrange for excavation, disposal, site restoration and contract negotiations.

National Capital Commission- Operations Zone Ottawa, ONT 2013 to present
Mr. Austrins acted as Project manager for Phase II/III ESAs at Rideau Hall, Ottawa (2014-2015). ARCADIS was retained by The National Capital Commission to complete Phase II and III ESAs at the NCC Operations Zone, Car Garage, and Sugar Bush project areas. A comprehensive borehole and monitoring well investigation was implemented to successfully meet the difficulties of delineating a PHC contaminant plume within shallow bedrock. Mr. Austrins was also project manager for the Site Specific Risk Assessment (SSRA) prepared for the Sugar Bush Area. In the previous year, Mr. Austrins supervised the preparation of a Geotechnical Investigation report for this same Operations Zone site. All reporting was prepared on time and budget to meet client requirements.

Kingsview Landfill – NCC: Project manager in 2012 Shoreline Erosion Evaluation and 2015 for Phase II ESA. For the investigation of contaminant concentrations in exposed shoreline ash and debris from the former Kinsgview landfill site in Ottawa (closed in 1925): samples were secured from two different depths and at two sampling points for each of 44 sampling locations. Mr. Austrins was project manager for the prepared Erosion Control Plan and PQRA to assess potential contaminant impact. Mr. Austrins also created a Phase II ESA work program and sampling plan in 2015 for the on-going assessment the condition of the previously implemented constructed soil cap, and to identify any potential negative environmental impacts to soil and groundwater at the site by way of 8 borehole and monitoring well installations, and subsequent low flow groundwater sampling.

Plasco Trail Road- monthly environmental monitoring and inspection conducted at Plasco Waste Gasification demonstration project and Proposed Former Landfill Development Site 2010-2014. Plasco Trail Road- monthly environmental monitoring and inspection conducted at Plasco Waste Gasification demonstration project in 2010/2011/2012. Monthly inspections conducted to ensure compliance with MOE guidelines and Certificates of Authorization. Mr. Austrins conducted sampling of landfill leachate at the Plasco Moodie Drive proposed development site, located adjacent to the closed City of Ottawa Nepean landfill.

NCC Groundwater Monitoring project at Mooney's Bay Park/Landfill, Ottawa 2013-2015. Mr. Austrins was project manager for the program to determine site groundwater contaminant impacts resulting from poor quality land fill and debris. Monitoring Recommendations were provided and Mr. Austrins also managed the eventual decommissioning of the on-site monitoring wells.

CST Inc. (Ultramar) - Pembroke, ONT 2014

Senior reviewer for completed Phase II ESA at a planned car rental depot, located in Pembroke, Ontario (2014). Site was used for uncharacterized/unregulated landfilling to significant depths. The ESA was required by the client CST (Ultramar) as part of their environmental assessment protocol prior to the potential acquisition of the site. Mr. Austrins also supervised geotechnical field staff and wrote the geotechnical report for the proposed site infrastructure. Foundation designs required modification to account for the significant mixed fill thickness.

Grant Forest Products Landfill Reporting (2005). Mr. Austrins provided for the review of groundwater monitoring and annual landfill reporting for the Grant Forest Products (Englehart, Ontario) for submission to the MOE over two successive annual reporting periods.

PWGSC – Portsmouth Harbour, Kingston, ONT 2014

Project manager, Portsmouth Harbour– Phase I/II ESA, Kingston, ON. Completed for PWGSC, on behalf of Department of Fisheries and Oceans (2014). Sampling was completed for soil, groundwater, sediment and surface water as well as benthic invertebrates. An assessment of abandoned USTs and existing ASTs was completed. Eleven boreholes were completed along with fifteen sediment sampling locations. NCSCS and ASCS scoring worksheets were completed in addition to Contaminated Site Module forms and third-party reporting. Remedial options and cost estimates to complete recommended programs were provided.

345-349 Booth Street; Ontario numbered company – Ottawa, ONT 2010 - 2014

Principal engineer and project manager for Environmental Site Assessment, Remediation, Record of Site Condition, at former Auto Garage and Auto-body Shop, Booth Street, Ottawa (2010-2012). ARCADIS was retained to complete a Phase I/II ESA for a large property on Booth Street which held both an Auto Service Station and Auto-body repair shop. The Phase I/II was completed in advance of sale of the property. The new owners again retained ARCADIS to complete updated Phase I/II ESA reporting to meet O.Reg. 153/04 requirements. Soil remediation using an excavate and removal protocol was completed to address residual metals and PHC contamination in shallow soil. Site Monitoring Wells were decommissioned by ARCADIS. The new owner required a Record of Site Condition (RSC) to be filed due to the intended change from commercial to residential land use. Mr. Austrins completed the RSC submission and Brownfield Grant applications to the City of Ottawa on behalf of the new property owner.

Infrastructure Ontario- MNR Pembroke, ONT; Phase III ESA 2011

Project manager for Phase II ESA 31 Riverside Drive (MNR building and yard) property in Pembroke, Ontario (2011). The site consisted of a main office building, on-site garage, a works garage, other smaller storage buildings or sheds, a pump house located near the Ottawa River, and other forested areas. Ground penetrating radar (GPR) scanning was undertaken to evaluate for the presence of residual underground storage tanks or other subsurface anomalies. Ten boreholes were advanced and 6 monitoring wells were installed along with advancement of 22 test pits. Soil and groundwater contamination was detected in the vicinity of the arbour (or former gasoline UST location) and in the vicinity of a former aviation fuelling AST with PHC and BTEX parameters above applicable guidelines. One Ottawa River shoreline sand sample also contained concentrations of benzene and xylenes which exceeded the Table 9 Standards. ARCADIS successfully delineated the extent of the PHC contaminants impacting site soil and groundwater. A Remedial/Risk Management Options Feasibility Study (ROFS) was also provided by ARCADIS.

OTHER PROJECTS: 1992-2001 — Bruce A Brown Associates Limited, Toronto, Ontario-

Islington Ave. Landfill Assessment: co-ordination of Passive Methane venting system installation including contractor & landfill arrangement, backfill control, excavation face sampling, laboratory submissions, compaction testing and final reporting for many sites in the Greater Toronto area and Hamilton/Burlington region. Liaison with Ministry of Environment, completed quarterly to bi-annual methane monitoring and checks on the efficacy of the passive venting system.

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