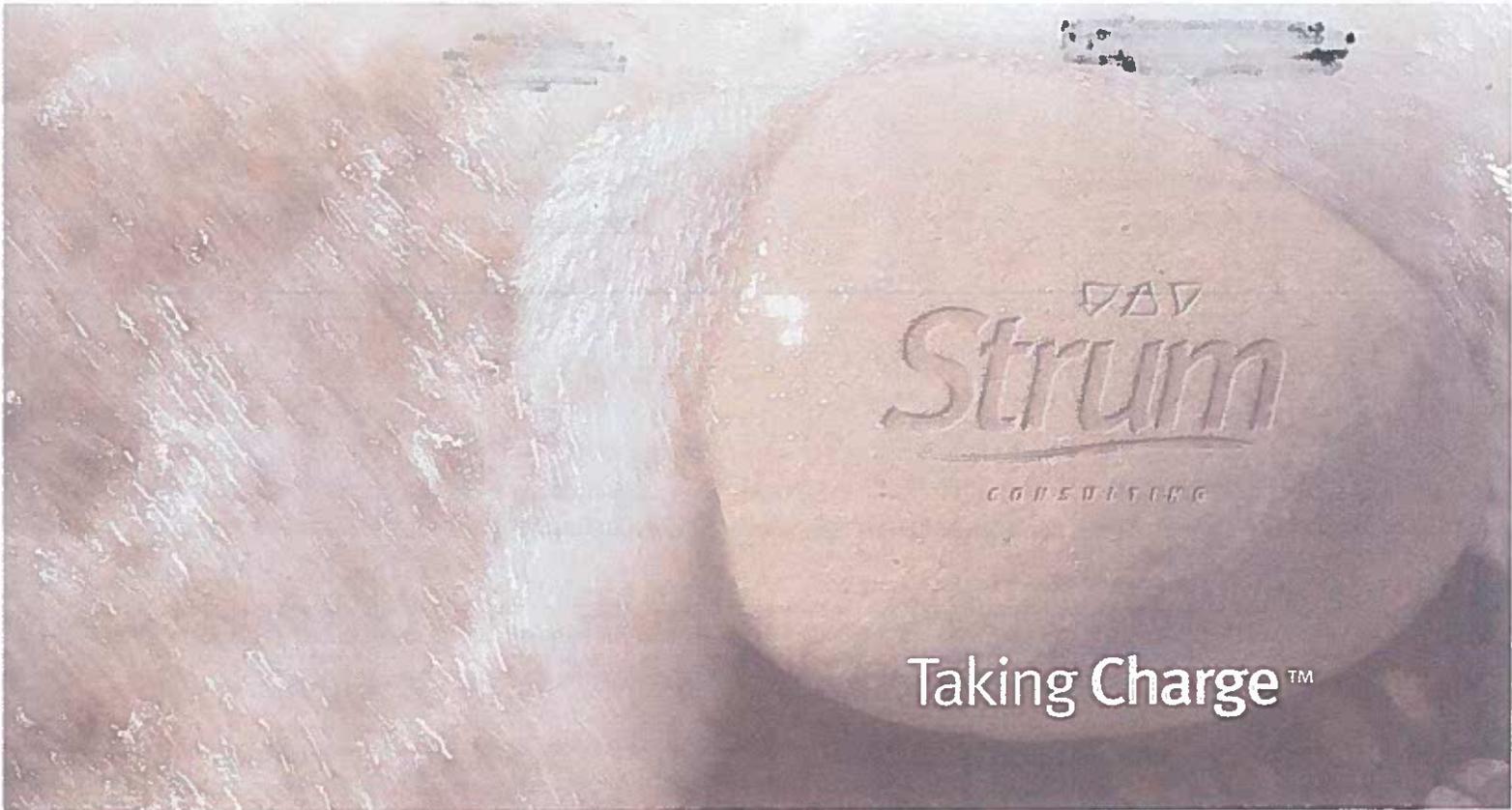




**PHASE I ENVIRONMENTAL SITE ASSESSMENT
True North Crescent
Dartmouth, NS**

December 2, 2019



EXECUTIVE SUMMARY

Strum Consulting was commissioned by Halifax Regional Municipality to conduct a Phase I Environmental Site Assessment (ESA) for five properties located on True North Crescent in Dartmouth, Nova Scotia (PIDs: 40414195, 40414187, 40414179, 40414161, and 40414146). It is understood that the Phase I ESA is being completed for due diligence purposes in advance of a potential property transaction. The properties are currently vacant. Future use of the properties is expected to be residential.

The assessment was completed in November 2019, in accordance with the Canadian Standards Association (CSA) Phase I Environmental Site Assessment Standard Z768-01 (November 2001) and the Nova Scotia Environment Phase I Environmental Site Assessment Protocol document (July 2013). The purpose of the Phase I ESA was to determine whether evidence of actual or potential contamination currently exists on the property.

Main Findings

The Phase I ESA has revealed evidence of potential contamination in soil in relation to the uncontrolled infilling on one of the western sites (PID 40414146). As such, it is recommended that a Phase II ESA (i.e. an intrusive site investigation) should be completed to assess the quality of the infilled material and investigate potential contamination in soil identified during the Phase I ESA.

This Executive Summary provides a brief overview of the main conclusions and recommendations of the Phase I ESA. Complete details are provided in the report and the attached Appendices. The statements made in this Executive Summary are subject to the same limitations as described in Section 7.0.

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2.2.2 Interviews

Interviews were conducted to confirm or obtain information regarding the environmental characteristics of the sites. The results of those discussions are documented throughout the body of the report. Contact was made with Mr. Colin Walsh of Halifax Regional Municipality.

2.2.3 Site Visit

The site visit was completed on November 5, 2019. The qualifications and expertise of the site assessor are provided in Appendix D. The objective of the site visit was to examine the site and accessible areas of the surrounding properties for evidence of actual or potential contamination. Detailed observations of site conditions were noted and recorded.

2.2.4 Access Limitations

All areas of the sites were accessible and visible during the site assessment.

3.0 SITE DESCRIPTION

3.1 The Property

The five properties are located on the northwest and southeast sides of True North Crescent, in Highfield Park in Dartmouth, Nova Scotia. Land use at the sites is designated as residential.

All of the properties are undeveloped and forested.

A copy of the plot plans from the Service Nova Scotia and Municipal Relations Land Information Centre is provided in Appendix A. Representative photos of the sites are provided as Photos 1 – 6 in Appendix B.

A summary of the property information is provided in Table A, below.

Table A: Summary of Property Information

Property Information	
Civic Addresses/PIDs	91 True North Crescent, Dartmouth, NS (PID 40414146) 67 True North Crescent, Dartmouth, NS (PID 40414161) 80 True North Crescent, Dartmouth, NS (PID 40414179) 64 True North Crescent, Dartmouth, NS (PID 40414187) 50 True North Crescent, Dartmouth, NS (PID 40414195)
Property Owner	Halifax Regional Municipality
Land Use	Residential
Property Areas	91 True North Crescent, Dartmouth, NS – 1,178 square metres 67 True North Crescent, Dartmouth, NS – 1,790 square metres 80 True North Crescent, Dartmouth, NS – 2,357 square metres 64 True North Crescent, Dartmouth, NS – 1,998 square metres 50 True North Crescent, Dartmouth, NS – 1,966 square metres
Buildings and Structures	All properties are currently vacant.
Sewer and Water	Currently vacant – sites are expected to be connected to municipal connections along True North Crescent.
Electrical & Communication	Currently vacant – sites are expected to be connected to overhead or underground connections along True North Crescent.

A representative photo of the adjoining properties is provided in Photos 7 and 8 in Appendix B. A summary of adjoining property land use is presented in Table B, below.

Table B: Summary of Adjoining Property Land Use

Boundary Side of Sites	Site Use
North (cross-gradient)	Residential – Residential apartment building; civic number 15 Highfield Park Drive (PID 40414088), residential dwellings; civic numbers 104 True North Crescent (PID 40537714), 102 True North Crescent (PID 40537722), 100 True North Crescent (PID 40537730), and 98 True North Crescent (PID 40537748).
East (down-gradient)	Residential/Commercial - Residential dwellings; civic numbers 96 True North Crescent (PID 40537755), 94 True North Crescent (PID 40537763), 92 True North Crescent (PID 40537771), 90 True North Crescent (PID 40537789), followed by a school (commercial), civic number 62 Leaman Drive (PID 00062596).
South (cross-gradient)	Residential – Residential dwellings; civic numbers 1 Monique Drive (PIDs 40613333 and 40613341), 3 Monique Drive (PIDs 40793515 and 40793523), 5 Monique Drive (PIDs 00101683 and 40763049), 7/7A Monique Drive (PIDs 00101691 and 40114027), 9 Monique Drive (PID 00101709), 11 Monique Drive (PID 40869257), 13 Monique Drive (PID 41073529) and 61 Leaman Drive (PID 00101733).
West (up-gradient)	Residential – Residential dwellings; civic numbers 34, 51, 53, 55, 57, 59, 61, 63 and 65 True North Crescent (combined PID 40414138).

4.0 RECORDS REVIEW FINDINGS

Relevant documents relating to the historical use of the sites and surrounding properties were obtained from a number of sources. The findings of the review of these documents are presented in the following sections.

4.1 Aerial Photographs

A review of the aerial photographs of the sites was undertaken from the years 1964, 1974, 1982, and 1992. Additionally, Google Earth images dated May 2003, October 2010, June 2014, and September 2019 were also reviewed. The aerial photograph from 1964 and the September 2019 Google Earth image are included as Photos 9 – 10 in Appendix B.

The following relevant information was obtained from review of the aerial photographs and Google Earth imagery:

- In the 1964 aerial photo, the five sites and adjoining properties are undeveloped and forested, with the exception of the south-southeastern properties (Monique Avenue) being in the early stages of development/lot clearing.
- In the 1974 and 1982 aerial photos, the five sites remain undeveloped and forested. However, Monique Avenue (including residential dwellings) has been constructed

- 54 True North Crescent (PID 40414138; Owner: [REDACTED])
- 53 True North Crescent (PID 40414138; Owner: [REDACTED])
- 55 True North Crescent (PID 40414138; Owner: [REDACTED])
- 57 True North Crescent (PID 40414138; Owner: [REDACTED])
- 59 True North Crescent (PID 40414138; Owner: [REDACTED])
- 61 True North Crescent (PID 40414138; Owner: [REDACTED])
- 63 True North Crescent (PID 40414138; Owner: [REDACTED])
- 65 True North Crescent (PID 40414138; Owner: [REDACTED])
- 90 True North Crescent, Lot: MM-12H (PID 40537789; Owner: [REDACTED])
- 92 True North Crescent, Lot: MM-12G (PID 40537771; Owner: [REDACTED])
- 94 True North Crescent, Lot: MM-12F (PID 40537763; Owner: [REDACTED])
- 96 True North Crescent, Lot: MM-12E (PID 40537755; Owner: [REDACTED])
- 98 True North Crescent, Lot: MM-12D (PID 40537748; Owner: [REDACTED])
- 100 True North Crescent, Lot: MM-12C (PID 40537730; Owner: [REDACTED])
- 102 True North Crescent, Lot: MM-12B (PID 40537722; Owner: [REDACTED])
- 104 True North Crescent, Lot: MM-12A (PID 40537714; Owner: [REDACTED])
- 15 Highfield Park Drive (PID 40414088; Owner: [REDACTED])
- 61 Leaman Drive, Lot: I-8 (PID 00101733; Owner: [REDACTED])
- 62 Leaman Drive (PID 00062596; Owner: Halifax Regional Municipality and City of Dartmouth)
- 1 Monique Avenue, Lot: I-1Y (PID 40613333; Owner: [REDACTED])
- 1 Monique Avenue, Lot: I-1Z (PID 40613341; Owner: [REDACTED])
- 3 Monique Avenue, Lot: I-2BX (PID 40793515; Owner: [REDACTED])
- 3 Monique Avenue, Lot: I-2BY (PID 40793523; Owner: [REDACTED])
- 5 Monique Avenue, Lot: I-3CB (PID 00101683; Owner: [REDACTED])
- 5 Monique Avenue, Lot: I-3CA (PID 40763049; Owner: [REDACTED])
- 7 Monique Avenue, Lot: I-44 (PID 00101691; Owner: [REDACTED])

- Multiple *Petroleum Storage Tank Registrations* were issued for the property, for two previously existing steel underground fuel oil storage tanks (13,500-litre and 10,000-litre capacity). The tanks were reportedly installed in 1968 and 1990, respectively.
- In September 1990, a *Petroleum Storage Tank Removal Checklist* was completed for the property, in order to remove the 13,500-litre UST which was installed in 1968. It was reported that a new 10,000-litre steel AST was installed in its place during the removal.
- In August 2004, a *Petroleum Storage Tank Work Pre-Notification* was issued for the property and in September 2004 a *Petroleum Storage Tank Removal Checklist* was completed for the property, in order to remove the 10,000-litre UST that was installed in 1990. The UST was removed on September 9, 2004 under supervision of an environmental consultant and was disposed of at a licensed disposal facility.
- In September 2004, a *Petroleum Storage Tank Installation Checklist* was completed in order to install a new 9,092-litre fuel oil AST. The AST was installed by Dana Swinamer.

With respect to the above-noted multiple UST removals from the adjoining 62 Leaman Drive property, records indicated that the USTs were removed under the supervision of an environmental consultant and did not warrant any further investigation. Furthermore, given the down-gradient site orientation in relation to the nearest subject site, it is not expected to represent an environmental concern to the subject sites.

Freedom of Information and Protection of Privacy (FOIPOP) Records

It should be noted that the NSE Environmental Registry records also indicated that additional records, including a PST complaint file (file# 36400-40-BED-4109258), was located for the 7 Monique Avenue adjoining property; however, access to these records would require submission of a Freedom of Information and Protection of Privacy (FOIPOP) application.

Nova Scotia Environment was contacted regarding the above noted FOIPOP records file, and it was indicated that the file contained a one page report detailing the installation of a new tank and there being a very minor amount of fuel oil lost. Investigative activities took place and the NSE inspector considered the fuel oil loss to be minor and that it did not constitute further investigation. As such, the above-noted records for the 7 Monique Avenue are not expected to represent a concern to the subject site. Therefore, an application for the FOIPOP records was not submitted.

4.4 Title Search

A land title search was not completed as part of this assessment.

4.5 Company Records

Company records were requested from the site representative. Company records typically include items such as inventory lists, water quality records, Materials Safety Data Sheets (MSDS), site development plans, survey plans and/or building condition and assessment reports.

5.5 Building Materials and Infrastructure

The age, construction, and condition of building materials and equipment on or adjacent to a property can potentially impact the environmental quality of a site. Various types of building materials and equipment related to the operation of a building – including lighting, heating, cooling, and electrical systems located on or adjacent to a site – can potentially generate, release, or radiate hazardous materials or emissions that can be detrimental to human health and the environment. The most common examples of such materials include Asbestos Containing Materials (ACM), Urea Formaldehyde Foam Insulation (UFFI), lead, mercury, polychlorinated biphenyls (PCB), Ozone Depleting Substances (ODS), Electric and Magnetic Fields (EMF) and excessive noise and vibrations.

The five sites are currently vacant with no permanent or occupied structures present. As such, potentially hazardous building materials such as heating and cooling systems, mechanical equipment, ACM, UFFI, lead, mercury, PCB, and ODS were not identified during the site visit.

There were no high-tension transmission lines or electrical substations that could generate significant EMF identified on or adjacent to the site.

Except for vehicular noise from traffic along True North Crescent, there were no major long-term sources of noise and/or vibration identified on or near the site.

5.6 Air Quality and Emissions

5.6.1 Mould

Evidence of chronic water intrusion inside a building is often associated with the growth of microorganisms. The occurrence of microbial reservoirs and amplification sites in buildings may have the potential to significantly impact air quality within a building.

As the sites are vacant, evidence of mould was not observed during the site visit.

5.6.2 Odours

Strong, pungent, or noxious discharges to air were not detected during the site visit.

5.7 Water Quality, Sewage and Wastewater

5.7.1 Potable Water

Municipal drinking water connections are not currently provided. It is expected that the future site building will be provided potable water via municipal connections.

5.7.2 Watercourses, Ditches, or Standing Water

A man-made drainage ditch was constructed along the northeastern property boundary of PID 40414179 to direct stormwater and run-off away from the up-gradient properties and into the municipal drainage system along Leaman Drive (Photo 11, Appendix D). There were no

5.9 Bedrock Conditions

5.9.1 General Bedrock Conditions

Exposed bedrock outcroppings were observed throughout all five properties during the site visit (Photo 13, Appendix B). Outcroppings appear consistent with the Goldenville Formation.

5.9.2 Sulphide Bearing Materials

Bedrock containing sulphide minerals (e.g., pyrite, pyrrhotite, chalcopyrite, etc.) can potentially generate acid run-off if fresh surfaces are exposed to oxygen and water. The acid run-off (known as Acid Rock Drainage or ARD) can create elevated metals concentrations in nearby surface water bodies or groundwater supply wells.

The Goldenville Formation bedrock underlying the sites consists of thickly bedded and highly fractured meta-greywacke/quartzite, which have not been documented as potentially susceptible to generating ARD, and is therefore not an environmental concern.

5.9.3 Radon

Radon is a naturally-occurring radioactive gas that originates in soils and bedrock as a result of the radioactive decay of uranium. The primary route of exposure for humans is associated with the accumulation of radon gas in buildings, and long-term exposure to radon gas has been linked to an increased incidence of lung cancer. Health Canada has established a guideline limit of 200 Bq/m³ for the average annual radon level in the normal occupancy area of a building.

Although uranium in Nova Scotia is predominantly associated with bedrock such as granite and black shale, "all rocks and soils throughout the province have at least some amount of uranium and, therefore, also have some amount of radon." (O'Reilly, G.A. 2009). In 2013, the Nova Scotia Department of Natural Resources (NSDNR) published updated mapping showing the potential for radon in indoor air in Nova Scotia. A section of the map details areas of the province designated as having high, moderate and low potential to have indoor air concentrations that exceed Health Canada radon guidelines (O'Reilly et al., 2013).

Based on the updated NSDNR mapping, the subject property is located in an area with "low potential" to exceed the Health Canada Guideline of 200 Bq/m³ for radon in air and does not represent an environmental concern.

6.0 CONCLUSIONS AND RECOMMENDATIONS

A Phase I ESA was completed at five properties (PIDs: 40414195, 40414187, 40414179, 40414161, and 40414146) along True North Crescent in Dartmouth, Nova Scotia, to determine whether evidence of actual or potential contamination currently exists on the properties.

7.0 STATEMENT OF QUALIFICATIONS AND LIMITATIONS

This Report (the "Report") has been prepared by Strum Consulting ("Consultant") for the benefit of Halifax Regional Municipality ("Client") in accordance with the agreement between Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations")
- represents Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports
- may be based on information provided to Consultant which has not been independently verified
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued
- must be read as a whole and sections thereof should not be read out of such context
- was prepared for the specific purposes described in the Report and the Agreement
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time

Consultant shall be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

Consultant agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but Consultant makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

The Report is to be treated as confidential and may not be used or relied upon by third parties, except:

- as agreed in writing by Consultant and Client
- as required by law
- for use by governmental reviewing agencies

8.0 REFERENCES

Canadian Standards Association (CSA) Standard Z768-01 for conducting Phase I Environmental Site Assessments. November 2001 (Updated April 2003).

E-Topo 1:50,000 Digital National Topographic Survey (NTS) Map, Halifax, Halifax Regional Municipality, 11D/12 Edition 4, UTM Zone 20, Produced by the Canadian Centre For Mapping, Natural Resources Canada (Current as of 1994, Published 1997).

Keppie, J.D. 2000. DP ME 43, Version 2, 2006, Digital Version of Nova Scotia Department of Natural Resources Map ME 2000-1, Geological Map of the Province of Nova Scotia, scale 1:500,000. Digital product compiled by B.E. Fisher. (Formerly DP ME D00-01).

Nova Scotia Environment, Phase I Environmental Site Assessment Protocol. July 2013.

O'Reilly, G.A. 2009: in Mineral Resources Branch, Report of Activities 2008; Nova Scotia Department of Natural Resources, Report ME 2009-1, p.111-113

O'Reilly, G.A., Goodwin, T.A., McKinnon, J.S., Fisher, B.E., Cowper, S.L., and Drage, J., 2013. Map showing the Potential for Radon in Indoor Air in Nova Scotia. Nova Scotia Department of Natural Resources, Report of Activities 2013, p. 129-131.

Stea, R.R., Conley, H. and Brown, Y. 1992. DP ME 36 Version 2, 2006. Digital Version of Nova Scotia Department of Natural Resources Map ME 1992-3, Surficial Geology Map of the Province of Nova Scotia, 1:500,000. Digital product compiled by B. E. Fisher. (Formerly DP ME D92-03).

Website References

GeoNova – Geographic Gateway to Nova Scotia

https://www.gov.ns.ca/GeoNova/home/products/softpage/data_locator.asp

Nova Scotia Department of Natural Resources (NSDNR) Mineral Resources Branch

<http://gov.ns.ca/natr/meb/pubs/pubs3.htm>

Service Nova Scotia and Municipal Relations

<http://www.gov.ns.ca/snsmr/property/default.asp?mn=282.46.1064>



Property Online Map

Date: Dec 2, 2019 4:18:53 PM



PID: 40414187 **Owner:** HALIFAX REGIONAL MUNICIPALITY **AAN:** 06186092
County: HALIFAX COUNTY **Address:** 64 TRUE NORTH CRESCENT **Value:** \$94,800 (2019 RESIDENTIAL EXEMPT)
LR Status: LAND REGISTRATION **DARTMOUTH** **EXEMPT)**

The Provincial mapping is a graphical representation of property boundaries which approximate the size, configuration and location of parcels. Care has been taken to ensure the best possible quality, however, this map is not a land survey and is not intended to be used for legal descriptions or to calculate exact dimensions or area. The Provincial mapping is not conclusive as to the location, boundaries or extent of a parcel [*Land Registration Act* subsection 21(2)]. THIS IS NOT AN OFFICIAL RECORD.

Property Online version 2.0

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Photo 1: View of PIDs 40414195 and 40414187 looking northeast/east.
Photo taken November 5, 2019.



Photo 2: View of PID 40414179 looking west/southwest.
Photo taken November 5, 2019.



Photo 3: View of PIDs 40414187 and 40414179 (right), True North Crescent (center)
and PID 40414161 (left) looking northeast. Photo taken November 5, 2019.



Photo 4: View of PID 40414145 looking east.
Photo taken November 5, 2019.

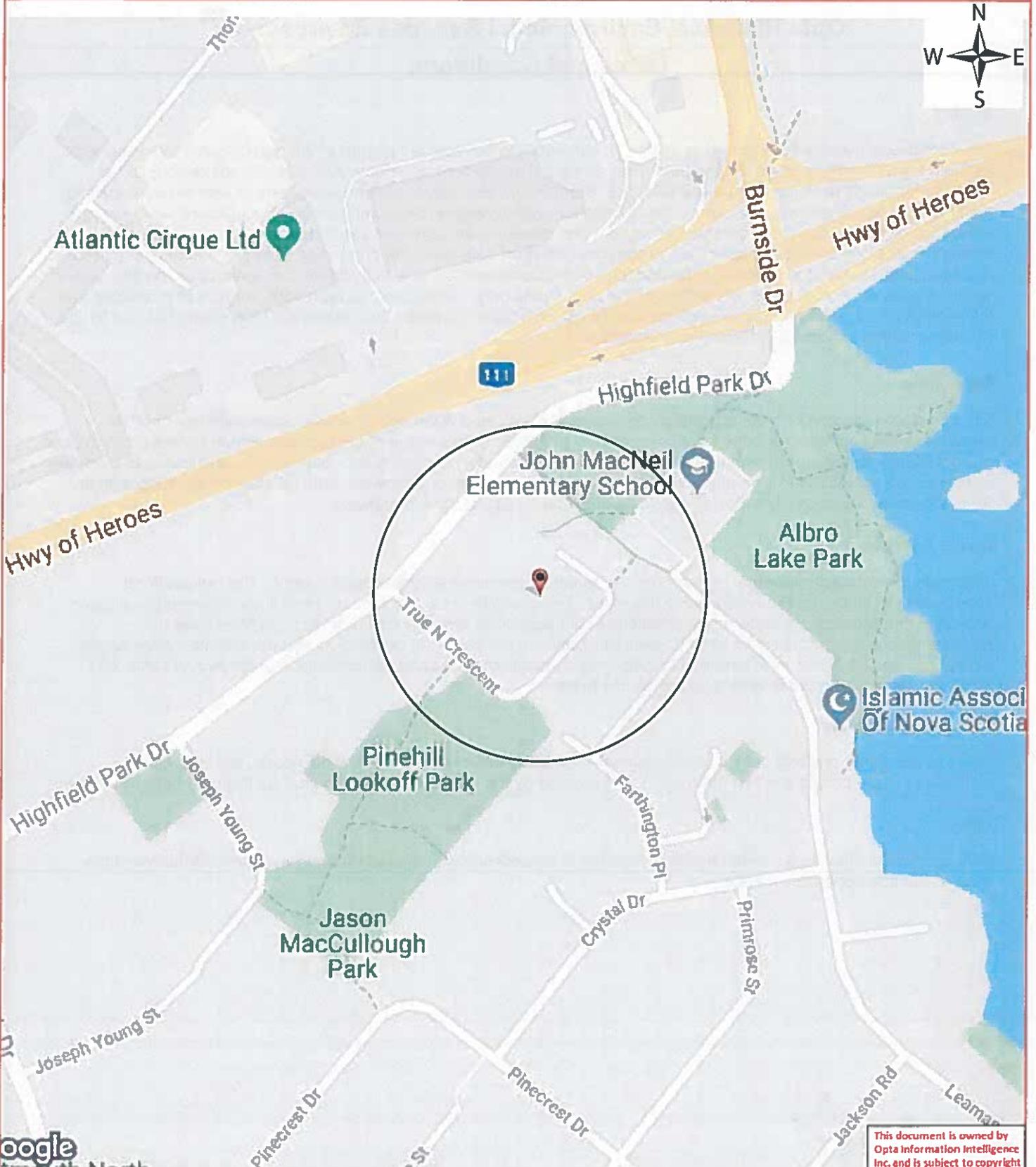


Photo 9: Aerial photograph from 1964. Approximate site boundaries are shown in red.



Photo 10: Google Earth Image from September 2019. Site boundaries are shown in red.

APPENDIX C
SOURCES OF INFORMATION – RECORDS REVIEW



No Records Found



OPTA INFORMATION INTELLIGENCE

Project #: 197094

Requested by:

James Foley

Date Completed: 10/30/2019 09:18:37

No Records Found

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Environment

Information Access
and Privacy

PO Box 442
Halifax, Nova Scotia
B3J 2P8

ph: (902) 424-2549
fax: (902) 424-6925

November 21, 2019

Our file # ENV-2019-3394/3410

Email: tcooper@strum.com

James Foley
Strum Consulting
1355 Bedford Highway
Bedford NS B4A 1C5

Dear Mr. Foley:

RE: 34 True North Cres. (PID 40414203); 51 True North Cres. (PID 40414138); 53 True North Cres. (PID 40414138); 55 True North Cres. (PID 40414138); 57 True North Cres. (PID 40414138); 59 True North Cres. (PID 40414138); 61 True North Cres. (PID 40414138); 63 True North Cres. (PID 40414138); 65 True North Cres. (PID 40414138); 90 True North Cres. Lot MM-12H (PID 40537789); 92 True North Cres. Lot MM-12G (PID 40537771); 94 True North Cres. Lot MM-12F (PID 40537763); 96 True North Cres. Lot MM-12E (PID 40537755); 98 True North Cres. Lot MM-12D (PID 40537748); 100 True North Cres. Lot MM-12C (PID 40537730); 102 True North Cres. Lot MM-12B (PID 40537722); and 104 True North Cres. Lot MM-12A (PID 40537714), Dartmouth

I refer to your enquiry of the Environmental Registry received November 6, 2019. We acknowledge receipt of payment for 17 properties.

No information was located through the Environmental Registry with regards to the above referenced properties.

Nova Scotia Environment makes no representations or warranties on the accuracy or completeness of the information provided.

Sincerely,

A handwritten signature in black ink, appearing to read "Tina Skeir".

Tina Skeir
Information Access Office



Department of
The Environment

TANK REGISTRATION #: CO155 (D)

Petroleum Storage Tank Work Pre-Notification

To be completed by applicant and returned to appropriate address at least 14 days before starting work..
(see list of addresses below) :

Applicant's Name: SAR Petroleum Phone No: 468-4902
 Owner (if different than applicant) Real Star Prop. Ltd Phone No: 416-923-2950
 Mailing Address: 77 Bloor St. West Toronto Ontario
Suite 2000 Postal Code: M5F-1A2
 Location of proposed work: 15 High Field Park Drive
Dorsetmouth NS.
 Installer's Name: SAR Petroleum License # _____ Phone No.: 468-4902

REMOVAL INSTALLATION ALTERATION

Description of proposed work: include number of tanks, tank size, tank type, products to be stored, and attach sketch if necessary).

removal of underground 1000 gal tank
install 2 above ground ROTH tanks

Type of Facility: Bulk Plant Marine Retail Outlet Other
 Farm Government Commercial Apartment Building

Proposed Starting Date: Jan 24 2000

I, the undersigned, understand that work pertaining to the installation, removal, or alteration of a petroleum storage system must be performed by a registered installer as required under Section 15 of the *Petroleum Storage Regulations*. I fully realize that any work pertaining to a petroleum storage tank system must be performed in accordance with the *Nova Scotia Standards for Construction and Installation for Petroleum Storage Tank Systems*. I further understand that the registered tank installer/remover must submit a report (Petroleum Storage Tank System Installation/Removal Report) within 14 days of completing the work and before a tank system is put into service. I fully understand that failure to follow specified practices could result in environmental damage and that I or my contractor may be held responsible under the *Environment Act*. I further understand that I must comply with all *Municipal, Provincial, and Federal Laws and Regulations* and may require separate approval.

Jan 12 2000
Date

Mike Parker
Applicant's Signature

Complete and Send to:

N.S. Department
of the Environment
Suite 224
1585 Bedford Highway
Bedford, N.S. B4A 3Y4
Fax: 424-0587

N.S. Department
of the Environment
PO Box 1240
Midleton, N.S.
B0E 1P0

N.S. Department
of the Environment
PO Box 714
Sydney, N.S.
B1P 6H7

N.S. Department
of the Environment
PO Box 624
Truro, N.S.
B2N 5 J6

FOR NSDOE USE ONLY - Inspector: _____ Date Received: _____

February 4, 2000

PETROLEUM STORAGE TANK REGISTRATION

REGISTRATION # C0155

OWNER OF TANKS

LOCATION OF TANKS

CANADA TRUST CO.
6926 MUMFORD ROAD
HALIFAX, NS
B3L 2H5
454-9183

CANADA TRUST CO.
15 HIGHFIELD PARK DRIVE
DARTMOUTH, NS
B3A 4T2

TYPE OF INSTALLATION: Commercial

TANK NO. 1

INSTALLATION YEAR 1988
STATUS OF TANK Removed
TYPE OF TANK Underground
DYKE NUMBER
EST. CAPACITY (L) 4500
CONST MATERIAL Steel
EXTERNAL PROTECTION Cathodic
INTERNAL PROTECTION Unknown
PIPING Cathodic
SECONDARY CONTAINMENT
SUBSTANCE STORED Fuel oil

EST. DATE LAST USED
EST. QUANTITY REMAINING
FILLED WITH INERT MAT

DATE OF REMOVAL 01/26/00
ANY CONTAMINATION None
HOW MUCH
DISPOSAL SITE

TANK INSTALLER Jacques Whitford

DYKE NUMBER **LENGTH (M)** **WIDTH (M)** **HEIGHT (M)** **CAPACITY (M)** **NUMBER DYKED**

Tank Protection: Sacrificial Anode: _____ Impressed Current: _____ Other: _____

Piping: Black/Bare Steel _____ Galvanized _____ FRP _____ Other Copper

Corrosion Protection Check _____ Protection Measurements(v) _____ Tie Down

Pad _____ No. of Straps _____ Electrical Isolation _____ Spill/Overfill

Protection _____ Leak Detection _____ Secondary

Containment: Dbl Wall Tank Dbl Wall Pipe _____ Impervious

Liner _____ Vault _____ Leak Detection _____ Manufacturer _____

Excavation, Backfill, Disposal

Installation Information:

Backfill Material: Pea Gravel _____ Crushed Stone _____ Sand _____

Crusher Dust: _____ Other (Specify) _____

Geotextile Liner: Yes _____ No _____ Bed Depth _____ Depth to Cover _____

(Remove information)

No. of tanks removed: one Evidence of leakage: Yes _____ No NO

Size of tank and product stored in tank: 20000 L. Ethanol

Tank condition: Corrosion Free: Slightly Pitted: _____

Highly Pitted: _____ Perforated: _____ Soil

Contamination: Yes: _____ No: Volume Removed: _____ Soil

Disposal Site: S.A.R Tank

Disposal Site: _____

Comments: _____



**Department of the Environment
Central Regional Office**

Suite 224, Sunnyside Mall Tel: (902) 424-7773
1595 Bedford Highway (902) 424-3314
Bedford NS B4A 3Y4 Fax: (902) 424-0597

February 19, 1999

Our File Number:

C0155

**CANADA TRUST CO.,
1718 Argyle Street
Halifax, NS B3J 3N6**

To whom it may concern:

Please find enclosed, for your records, the Petroleum Storage Tank Registration Certificate for your various apartments.

Please review this certificate and if any corrections are required, please make note of them on your hard copy, return it to me and our data file will be updated and a revised copy returned to you. Also please note, this department must be advised of any changes to the information contained in this certificate. Please refer to your registration number on any correspondence concerning this site.

Regulation 12(7) of the Petroleum Storage Regulations states that "the owner, operator or person responsible for a storage tank system shall mark or otherwise label the tank registration number on the filling manifold or place it in some other clearly visible and legible location. To ensure compliance with this regulations please post this certificate or ensure it is made available to individuals upon request.

Yours truly,

**Christine Hodgson
Clerk**

**CH/
Enc.**

C0155

Nova Scotia



Department of the Environment

PO Box 2107
Halifax Nova Scotia
B3J 3B7

FORM A

PETROLEUM STORAGE TANK SYSTEM APPLICATION

Under the Petroleum Storage Regulations made under the Dangerous Goods and Hazardous Waste Management Act, underground petroleum storage tanks with a capacity of 2000 litres or greater and aboveground petroleum storage tanks with a capacity of 4000 litres or greater must be registered with the Minister of the Nova Scotia Department of the Environment. Furthermore, any new or altered petroleum storage tanks must receive approval from the Minister prior to the installation of tanks and associated piping. All applicable sections of this form must be completed.

OFFICE USE ONLY
MASTER NUMBER _____ REGISTRATION DATE _____

I. OWNERSHIP OF TANK(S)

II. LOCATION OF TANK(S)

OWNER NAME (Corporation, individual, Public Agency, or Other)
CANADA TRUST CO.
Street Address
1712 ARGYLE STREET
City
HALIFAX
Province
NS Postal Code
B3J 3N6
Area Code
902 Phone Number
492-5302

(if same as Section I, check here)
Street Address
15 HIGHFIELD PARK
County
DART
City
DART
Province
NS Postal Code
B3A 4T2
Area Code
902 Phone Number
492-5302

III. TYPE OF INSTALLATION

Bulk Plant Marine
Service Station Commercial
Farm Government
Residential Other

IV. INSTALLATION DESCRIPTION

Existing
Proposed (new)

Installer: JACQUES WILTFORD ENVIRONMENT LIMITED

Number of tanks at location: _____
GENERAL DESCRIPTION (of proposed alterations)

NEW OWNER'S OF APARTMENTS : PLEASE CHANGE TANK REGISTER TO ABOVE.

V. CONTINGENCY PLAN

A contingency plan is mandatory for bulk plants. Contingency plans for other Petroleum Storage Tank Systems may be required by the Minister. Attach a copy of your contingency plan, if applicable.

Is contingency plan attached? Yes No



Department of Environment & Labour
Environmental Monitoring & Compliance Division
Central Region

Suite 224, Sunnyside Mall
1595 Bedford Highway
Bedford NS B4A 3Y4

Tel: (902) 424-7773
Fax: (902) 424-0597

ELOISE GRAVES

Tel: 424-2383

Fax: 424-0597

October 25, 2004

File Number: 36400-30/BED-657

Halifax Regional School Board
90 Alderney Drive
Dartmouth NS B2Y 5S8

RE: Petroleum Storage Tank Installation

To Whom It May Concern:

Please find enclosed the revision to your Petroleum Storage Tank Registration Certificate inflecting the installation of the fuel oil tank at John MacNeil School, 62 Leaman Drive, Dartmouth.

If this registration certificate does not reflect the current status of your site, please notify us so that we can make the appropriate changes to our database. Please note, these registrations are site specific and this department must be advised of any changes to the information contained in this certificate. Please refer to your registration number #657 on any correspondence concerning this matter.

Yours truly,

A handwritten signature in cursive script that reads "Eloise Graves".

Eloise Graves
/enclosure

c.c. Nancy Harris

PETROLEUM STORAGE TANK INSTALLATION/REMOVAL CHECKLIST

(This form is to be completed by a certified installer and signed by a certified installer)

General Information

Office Use Only

Notification Date:	_____
DOE Staff Contacted:	_____
Approval Date:	_____
EIMAS Number:	_____

CONTRACTOR INFORMATION

Installers Name: I.T.S. Construction Inc.
Address: 25 A SAWLERS ROAD
WAVERLY, N.S. B2R 7G7
Phone Number: 902-8600381 Certification Number: 95051

SITE INFORMATION Existing Tank(s) Master Number _____

New Site
Owner: HAM SCHOUL BOARD
Operator: _____
Site Location: 62 LEONARD DRIVE Civic Address or DARTMOUTH, N.S.
Grid Reference: _____
P.I.D. No. _____
County: HANTAPAX
Proposal: Installation: Alteration: Removal:

Tank Manufacturer

BACKFILL INFORMATION

(Installation Information)

Backfill Material: Pea Gravel Crushed Stone Sand Crusher Dust

Other (Specify) _____

Geotextile Liner: Yes No Bed Depth _____ Depth of Cover _____

REMOVAL INFORMATION

No. of tanks removed: _____ Evidence of leakage: Yes No

Tank(s) condition: Corrosion Free Slightly Pitted Highly Pitted Perforated

Soil Contamination: Yes: No: Volume Removed: _____

Closure Protocol Followed: Yes No

Consultant on Site: Yes No Name of Firm: _____

Soil Disposal Site: _____

Tank Disposal Site: _____

Number of Soil Samples Taken: _____ Collected By: _____

Copy sent to Department of the Environment: Yes No

Site Sketch

SEE ATTACHED DWG

I hereby certify that the information submitted regarding this installation is true to the best of my knowledge.

Signature of Certified Installer: *Dana Swain* Date: 29-SEP-04

September 20, 2004

PETROLEUM STORAGE TANK REGISTRATION

REGISTRATION # 657

OWNER OF TANKS

HALIFAX REGIONAL SCHOOL BOARD
90 ALDERNEY DRIVE
DARTMOUH, NS
B2Y 5S8

LOCATION OF TANKS

JOHN MACNEIL SCHOOL
62 LEAMAN DRIVE
DARTMOUTH, NS
B3A 2K9

TYPE OF INSTALLATION: Government

	TANK NO. 1	TANK NO. 2
INSTALLATION YEAR	1968	1990
STATUS OF TANK	Removed	Removed
TYPE OF TANK	Underground	Underground
DYKE NUMBER		
EST. CAPACITY (L)	13500	10000
CONST MATERIAL	Steel	Steel
EXTERNAL PROTECTION	Unknown	Unknown
INTERNAL PROTECTION	Unknown	Unknown
PIPING	Black/bare steel	Galvanized
SECONDARY CONTAINMENT		Vault
SUBSTANCE STORED	Fuel oil	Fuel oil
EST. DATE LAST USED		
EST. QUANTITY REMAINING		
FILLED WITH INERT MAT		
DATE OF REMOVAL	09/90	09/09/04
ANY CONTAMINATION	None	None
HOW MUCH		
DISPOSAL SITE		
TANK INSTALLER	Unknown	Doug Richards

DYKE NUMBER	LENGTH (M)	WIDTH (M)	HEIGHT (M)	CAPACITY (M)	NUMBER DYKED
--------------------	-------------------	------------------	-------------------	---------------------	---------------------

TAILS OF TANK SYSTEM BEING INSTALLED/REMOVED/ALTERED

Tank Number		1	2	3	4	5	6
Aboveground (AG) or Underground (UG) Tank		UG					
Total capacity of each tank (litres)							
Compartment Tanks	Yes (y) No (n)	1					
	# of compartments						
Products Stored:	Gasoline						
	Fuel Oil	✓					
	Bunker						
	Waste Oil						
	Other (specify)						
Tank Construction	Steel	✓					
	FRP						
	Other						
Tank Protection	Sacrificial Anode						
	Impressed Current						
	Other	NONE					
Piping	Black Iron/Bare Steel	✓					
	Galvanized						
	FRP						
	Other						
Corrosion Protection Check/ Protection Measurements (v)		NONE					
Tie Down Pad # Straps		NONE					
Electrical Isolation							
Spill/Overfill Protection		NONE					
Secondary Containment	Double Wall Tank						
	Vault	YES					
	Leak Detection						
	Double Wall Pipe						
	Impervious Liner						

Nova Scotia



Department of
the Environment & Labour

Suite 224, Sunnyside Mall
1595 Bedford Highway
Bedford, Nova Scotia
B4A 3Y4

Tel: 424-3314
Fax: 424-0597

September 7, 2004

File No.36400-30-/BED-657

Oct 7

ITS Construction
P. O. Box 219
Waverley, NS B0N 2S0

RE: John MacNeil School:

A petroleum storage tank pre-notification was received at this office August 3, 2004 for the above site. Your proposed starting date for the removal was August 6th.

To date we have not received your installation/removal checklist. Please send in your checklist or advise us by return mail if you still intend to do this work. Please refer to the above file number on your correspondence.

Yours truly,

A handwritten signature in cursive script, appearing to read 'CH'.

Christine Hodgson
Clerk

/CH

Nova Scotia



Department of
the Environment

Suite 224, Sunnyside Mall
1595 Bedford Highway
Bedford, Nova Scotia
B4A 3Y4

Tel: 424-7773
Fax: 424-0597

October 4, 1996

File No. 657

DARTMOUTH DISTRICT SCHOOL BOARD
95 Victoria Road
Dartmouth, NS
B3A 1V2

To whom it may concern:

Please find enclosed, for your records, the Petroleum Storage Tank Registration Certificate for John MacNeil School.

Please review this certificate and if any corrections are required, please make note of them on your hard copy, return it to me and our data file will be updated and a revised copy returned to you. Also please note, this department must be advised of any changes to any of the information contained in this certificate. Please refer to your registration number on any correspondence concerning this site. Please contact our regional office in your area for assistance.

Regulation 12(7) of the Petroleum Storage Regulations states that "the owner, operator or person responsible for a storage tank system shall mark or otherwise label the tank registration number on the filling manifold or place it in some other clearly visible and legible location. To ensure compliance with this regulations please post this certificate or ensure it is made available to individuals upon request.

Yours truly,

Christine Hodgson
Clerk

CH/
Enc.
c.c. Regional Office

Petroleum Storage Tank Registration Certificate

October 4, 1996

OWNERSHIP OF TANKS

Name: SCHOOL BOARD OF DARTMOUTH
Addr.: 95 VICTORIA ROAD
County: HAL
Commun: DARTMOUTH
Prov: NS
P Code: B3A 1V2
Phone: 464-2067

LOCATION OF TANKS

JOHN MACNEIL SCH
62 LEAMAN DRIVE
HAL
DARTMOUTH
NS
B3A 2K9
464-2488

Type of installation: Government

Tank 1

Registration # 680657 - 1
Status of Tank Currently in Use
Type of Tank Underground
Dyke Number
Est. Total Capacity (L) 13500
Construction Material Steel
External Protection None
Internal Protection None
Piping Black/Bare Steel
Secondary Containment
Substance Stored Fuel Oil
Est. Date Last Used
Est. Quantity Remaining (L)
Filled with Inert Material no
Installation Year 1968

Installer for Tank 1:

Nova Scotia



Department of the Environment

PO Box 2107
Halifax, Nova Scotia
B3J 3B7

FORM A

PETROLEUM STORAGE TANK SYSTEM APPLICATION

Under the Petroleum Storage Regulations made under the Dangerous Goods and Hazardous Waste Management Act, underground petroleum storage tanks with a capacity of 2000 litres or greater and aboveground petroleum storage tanks with a capacity of 4000 litres or greater must be registered with the Minister of the Nova Scotia Department of the Environment. Furthermore, any new or altered petroleum storage tanks must receive approval from the Minister prior to the installation of tanks and associated piping. All applicable sections of this form must be completed.

OFFICE USE ONLY
MASTER NUMBER _____ REGISTRATION DATE _____

I. OWNERSHIP OF TANK(S)

II. LOCATION OF TANK(S)

DART. DIST. SCHOOL BOARD
Owners name (Corporation, Individual, Public Agency, or Other)

(If same as Section I, check here)

95 VICTORIA ROAD
Street Address

62 LEAMAN DRIVE
Street Address

HALIFAX DARTMOUTH
County City

HALIFAX DARTMOUTH
County City

N.S. B3A 1U2
Province Postal Code

N.S. B3A 2K9
Province Postal Code

(902) 464-2067
Area Code Phone Number

(902) 464-2488
Area Code Phone Number

III. TYPE OF INSTALLATION

Bulk Plant
Service Station
Farm
Residential
Marine
Commercial
Government
Other

IV. INSTALLATION DESCRIPTION

Existing
Proposed (new)

Installer: _____

Number of tanks at location: 1

GENERAL DESCRIPTION (of proposed alterations)

TO REMOVE EXISTING UNDERGROUND OIL STORAGE
TANK AS PER PETROLEUM STORAGE REGULATIONS.
NEW 10,000 LITRE STEEL STORAGE TANK TO BE INSTALLED
IN VAULT.

V. CONTINGENCY PLAN

A contingency plan is mandatory for bulk plants. Contingency plans for other Petroleum Storage Tank Systems may be required by the Minister. Attach a copy of your contingency plan, if applicable.

Is contingency plan attached? Yes No

VII. DESCRIPTION OF TANK(S)

Tank Number (Refer to Drawing VI.)	1	2	3	4	5	6
I. Status of Tank (Mark one only)						
Proposed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Currently in use	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Temporarily out of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permanently out of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Type of Tank (Aboveground or Underground)						
	STEEL					
3. Estimated year of installation						
	1968					
4. Estimated total capacity (litres)						
	13,500					
5. Material of construction						
(A) Underground Tanks						
Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
(B) Aboveground Tanks						
Welded steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Riveted steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
6. External Protection (Mark all that apply)						
Cathodic protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sacrificial anode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impressed current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Zinc reference electrode	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
7. Internal Protection (Mark all that apply)						
Cathodic protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interior lining (e.g. epoxy resins)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
8. Piping (Mark all that apply)						
Black/bare steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Galvanized steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodically protected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
9. Substance currently or last stored						
Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fuel oil	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Kerosene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bunker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Used oil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, please specify						
10. Additional Information (For tanks taken out of service)						
Estimated date last used (m/y)	9/90					
Estimated quantity remaining (litres)						
Filled with inert material (Yes or No)						
OFFICE USE ONLY	Registration					

OWNERSHIP OF TANKS

Name: SCHOOL BOARD OF DARTMOUTH
Addr.: 95 VICTORIA ROAD
County: HAL
Commun: DARTMOUTH
Prov: NS
P Code: B3A 1V2
Phone: 464-2067

LOCATION OF TANKS

JOHN MACHEIL SCH
62 LEAMAN DRIVE
HAL
DARTMOUTH
NS
B3A 2K9
464-2488

Type of installation: Government

Tank 1

Registration # 680657 - 1
Status of Tank Currently in Use
Type of Tank Underground
Est. Total Capacity (L) 13500
Construction Material Steel
External Protection None
Internal Protection None
Piping Black/Barry Steel
Substance Stored Fuel Oil
Est. Date Last Used
Est. Quantity Remaining (L)
Filled with Inert Material False
Installation Year 1968

Installer for Tank 1:

PETROLEUM STORAGE TANK CHECK LIST

200 3 1991

General Information

Master No. _____

Owner/Operator: DART. DIST SCHOOL BOARD

Site Location: 62 LEHMAN DR.

County: HALIFAX

Installer: DOUG RICHARDS

Certified Yes No

Approval Date: VERAAL 9/1990

Notification: Yes No

Inspection Date: N/A

Inspector: _____

Proposal: _____ Installation Alteration _____ Removal

Site Classification: A _____ B _____ C N/A _____

Comments:

Tankage Details

Types & Number of Tanks: A/G x U/G x _____

Products Stored: Gasoline _____ Fuel Oil Bunker _____ Waste Oil _____
Other _____

Tank Construction: Steel FRR _____ Other _____

Tank Manufacturer: STEEL ENGINE

External Features: Sacrificial Anode _____ Impressed Current _____
Coated _____ Galvanic Monitor _____
Isolation Bushings _____ Initial Air Test _____

Comments:

Piping: Black/Bare Steel _____ Galvanized FRP _____ Copper _____
Cathodic Protection _____ Coated _____ Flex Connectors _____

Comments:

Nova Scotia



Department of the Environment

PO Box 2107
Halifax, Nova Scotia
B3J 3B7

FORM A

PETROLEUM STORAGE TANK SYSTEM APPLICATION

Under the Petroleum Storage Regulations made under the Dangerous Goods and Hazardous Waste Management Act, underground petroleum storage tanks with a capacity of 2000 litres or greater and aboveground petroleum storage tanks with a capacity of 4000 litres or greater must be registered with the Minister of the Nova Scotia Department of the Environment. Furthermore, any new or altered petroleum storage tanks must receive approval from the Minister prior to the installation of tanks and associated piping. All applicable sections of this form must be completed.

OFFICE USE ONLY
MASTER NUMBER 657 REGISTRATION DATE JUNE 29 / 88

I. OWNERSHIP OF TANK(S)

II. LOCATION OF TANK(S)

CITY OF DARTMOUTH DISTRICT SCHOOL BOARD
Owner's name (Corporation, Individual, Public Agency, or Other)

(if same as Section I, check here)

JOHN MACBELL SCHOOL - 62 LEAMAN DR.
Street Address

Street Address

HALIFAX DARTMOUTH
County City

County

City

NOVA SCOTIA B3A 2K9
Province Postal Code

Province

Postal Code

(902) 464-2067 OR 2015
Area Code Phone Number

()
Area Code

464 2488
Phone Number

III. TYPE OF INSTALLATION

Bulk Plant	<input type="checkbox"/>	Marine	<input type="checkbox"/>
Service Station	<input type="checkbox"/>	Commercial	<input type="checkbox"/>
Farm	<input type="checkbox"/>	Government	<input type="checkbox"/>
Residential	<input type="checkbox"/>	Other	<input type="checkbox"/>

IV. INSTALLATION DESCRIPTION

Existing
Proposed (new)

Installer: _____

Number of tanks at location: ONE (1)

GENERAL DESCRIPTION (of proposed alterations)

V. CONTINGENCY PLAN

A contingency plan is mandatory for bulk plants. Contingency plans for other Petroleum Storage Tank Systems may be required by the Minister. Attach a copy of your contingency plan, if applicable.

Is contingency plan attached? Yes No

VII. DESCRIPTION OF TANK(S)

Tank Number (Refer to Drawing VI.)	1	2	3	4	5	6
1. Status of Tank (Mark one only)						
Proposed	<input type="checkbox"/>					
Currently in use	<input type="checkbox"/>					
Temporarily out of use	<input type="checkbox"/>					
Permanently out of use	<input type="checkbox"/>					
2. Type of Tank (Aboveground or Underground)						
	<u>UNDER</u>	_____	_____	_____	_____	_____
3. Estimated year of installation						
	<u>1968</u>	_____	_____	_____	_____	_____
4. Estimated total capacity (litres)						
	<u>13,500</u>	_____	_____	_____	_____	_____
5. Material of construction						
(A) Underground Tanks						
Steel	<input type="checkbox"/>					
Fiberglass reinforced plastic	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
(B) Aboveground Tanks						
Welded steel	<input type="checkbox"/>					
Riveted steel	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
6. External Protection (Mark all that apply)						
Cathodic protection	<input type="checkbox"/>					
Sacrificial anode	<input type="checkbox"/>					
Impressed current	<input type="checkbox"/>					
Zinc reference electrode	<input type="checkbox"/>					
None	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
7. Internal Protection (Mark all that apply)						
Cathodic protection	<input type="checkbox"/>					
Interior lining (e.g. epoxy resins)	<input type="checkbox"/>					
None	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
8. Piping (Mark all that apply)						
Black/bare steel	<input type="checkbox"/>					
Galvanized steel	<input type="checkbox"/>					
Fiberglass reinforced plastic	<input type="checkbox"/>					
Cathodically protected	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
9. Substance currently or last stored						
Gasoline	<input type="checkbox"/>					
Fuel oil	<input type="checkbox"/>					
Kerosene	<input type="checkbox"/>					
Bunker	<input type="checkbox"/>					
Used oil	<input type="checkbox"/>					
Unknown	<input type="checkbox"/>					
Other, please specify	_____	_____	_____	_____	_____	_____
10. Additional information (For tanks taken out of service)						
Estimated date last used (m/y)	_____	_____	_____	_____	_____	_____
Estimated quantity remaining (litres)	_____	_____	_____	_____	_____	_____
Filled with inert material (Yes or No)	_____	_____	_____	_____	_____	_____
OFFICE USE ONLY	Registration	_____	_____	_____	_____	_____

PROFESSIONAL ASSOCIATIONS

- TechNova – Certified Engineering Technologist
- Fern Hill Institute of Plant Conservation – Wetland Delineation and Classification

AREAS OF SPECIALIZATION

- Phased Environmental Site Assessment (and Remediation)
- Geotechnical/Environmental Drilling
- Groundwater Monitoring
- Monitoring Well Decommissioning
- Groundwater, Surface Water, Air, and Subfloor Air Sampling
- Field/Project Coordination
- Sample Preparation QA/QC
- Domestic and Transportation Fuel Oil Spills
- Wetland Delineation and Monitoring

EDUCATION

- Environmental Engineering Technology – Water Resources Diploma, NSCC (2014)

TRAINING

- First Aid/CPR (2017)
- WHMIS (2015)
- Maxxam Lab Ops Boot Camp (2015)

RELEVANT EXPERIENCE

Ms. Cecchetto joined the Assessment and Remediation group of Strum Consulting in winter 2015. Assisting in field operations of ongoing projects, Jennifer has gained experience in a number of job specific tasks relating to the consulting services offered by the Strum team. Some projects she has taken part in include, but are not limited, to:

- Ground and surface water sampling and monitoring
- Sub-floor, soil vapor and indoor air sampling
- Well abandonment
- Wetland delineation and monitoring
- Bird/Wildlife surveying
- Geotechnical/Environmental drilling
- Technical data logging
- Reporting

REPRESENTATIVE PROJECTS AND ROLES

Groundwater Monitoring (NS, NB, PEI and NL), 2015 – Present – Field Coordinator: Conducted groundwater monitoring and sampling on various projects ranging from residential to large scale industrial sites.

Geotechnical Borehole Drilling, Wind Turbine Foundations (NS and NB), 2015 – Present – Field Coordinator: Work included drilling supervision of geotechnical boreholes for wind turbine foundations, test pits for data collection to assist road way design, utility checks, representative soil sampling, acid rock drainage sampling, rock quality designation, and site documentation.

Geotechnical Borehole Drilling, Transmission Lines Canso Causeway, (NS), 2015 – Field Coordinator: Work included drilling supervision of geotechnical boreholes, utility checks, representative soil sampling, rock quality designation, and site documentation.

Monitoring Well Abandonment (NS), 2015 – Present – Field Coordinator: Execution of proper well abandonment procedures to conserve aquifer integrity and prevent groundwater contamination.

PROFESSIONAL ASSOCIATIONS

- Association of Professional Geoscientists of Nova Scotia

AREAS OF SPECIALIZATION

- Project Management
- Phase I/II/III Environmental Site Assessments
- Emergency Spill Response
- Remedial Action Planning
- Soil & Groundwater Remediation
- Environmental Monitoring
- Contaminated Site Assessment & Management
- Environmental Risk Assessment & Management

RELEVANT EXPERIENCE

Mr. Foley is a registered Professional Geologist with the Association of Professional Geoscientists of Nova Scotia and has 11 years of experience in the environmental consulting industry. He has worked in various roles from field coordinator to project manager on numerous

environmental projects throughout Atlantic Canada including phased environmental site assessments, emergency spill response, contaminated site remediation, environmental monitoring, risk assessment and management of contaminated sites. Mr. Foley has been responsible for managing and coordinating these projects, completing various field programs including collecting, compiling, and analyzing data, developing mitigative measures/plans, report preparation, and related regulatory paperwork. James has also participated in various wetland delineation and compensation projects, geotechnical investigations, and Level I/II Groundwater Assessments.

In addition to the coordination and management of environmental projects, James is highly experienced in the field with regard to test pit and drilling (borehole/monitor well) programs, including the interpretation of soil and bedrock stratigraphy and evaluation of topography and geology. Such programs often involved soil, sediment, groundwater, surface water, and air sampling.

In the past, Mr. Foley has also worked as a junior geologist in the oil & gas and mineral exploration industries.

REPRESENTATIVE PROJECTS AND ROLES

Assessment and Remediation of a Fuel Oil Spill Affecting Multiple Properties (NS), 2017 - Environmental Coordinator: Responded to a loss of fuel oil across one residential property and the adjacent right-of-way in Pubnico, NS. Completed an initial inspection and assessment at the site. Directed fuel oil containment efforts including removal of free product on the ground surface via hydro-vac and impact delineation. Subsequently developed the remedial action plan. Supervised and project managed remedial activities at the site and the drilling of boreholes, installation of monitoring wells, and collection of soil and groundwater samples to confirm conditions. A Remediation Report and site closure documents were subsequently submitted to the regulator.

Phase I Environmental Site Assessments, Multiple Properties (NS), 2015-2017 - Environmental Coordinator: Completed Phase I ESAs for multiple commercial and residential properties located in Nova Scotia. Phase I ESAs were typically completed as part of a property transaction or for refinancing purposes of various entities. The assessments were completed in accordance with the Canadian Standards Association (CSA) Phase I Environmental Site Assessment Standard and the Nova Scotia Environment Phase I ESAs Protocol document (July 2013). The

EDUCATION

- Hon. B.Sc., Saint Mary's University, Halifax, NS (2008)

TRAINING

- Emergency First Aid "A" CPR & AED (2018)
- Remediation Workshop (2017)
- WHMIS Certificate (2017)
- Difficult Conversations Workshop (2016)
- Conflict Resolution Skills Workshop (2016)
- Transition to Supervisor Seminar (2014)
- Professional Practice Workshop (2012)
- Mining and Exploration Workshop (2012)
- Certificate in Communication Skills (2011)
- Confined Space (2011)
- Contaminated Soil and Groundwater Chemistry Assessment and Remediation Course (2010)
- Oil Tank Essentials Seminar (2010)
- Bear Safety Awareness Course (2008)
- Energy Sector Driver Safety Course (2007)

Mary's, NS. Directed impact delineation at the site including the completion of test pits and boreholes/monitoring wells. Subsequently developed the remedial action plan. Supervised and project managed remedial activities at the site as well as long term monitoring of groundwater. All reports and site closure documents were subsequently submitted to the Regulator and accepted.

Groundwater Assessment for Geotechnical Purposes (NS), 2012 - Environmental Specialist: Coordinated and completed draw-down tests on multiple groundwater monitoring wells at a proposed wind farm in New Ross, NS. Compiled and analyzed field data to determine the hydraulic conductivity of the subsurface.

Assessment and Remediation of a Fuel Oil Spill Affecting Multiple Properties (NS), 2011-2013 - Environmental Specialist: Coordinated and completed various field programs associated with the assessment and remediation of a domestic fuel oil spill at a property located in Halifax, NS. Completed an initial inspection and assessment at the site. Directed impact delineation. Supervised remedial activities at the site and the drilling of boreholes, installation of monitoring wells, and collection of soil and groundwater samples to confirm conditions. Also completed sub-slab air monitoring at the site. A Tier II Risk Assessment was completed and recommendations forwarded to submit for regulatory closure for the site via implementation of a Risk Management Plan. The RMPs and site closure documents were subsequently submitted to the Regulator and accepted.

Domestic Fuel Oil Spill – Residential (NS), 2011 - Environmental Specialist: Responsible for on-site supervision of initial site assessment, site remediation, and multi-phase borehole/monitor well program. Responsible for the collection of soil, groundwater and air sampling, review of analytical data, and the preparation of interim and regulatory reporting. Involved in quantitative and qualitative Ecological and Human Health Risk Evaluation, development/evaluation of a Risk Management Plan (RMP), and development/evaluation of designs, plans, or specifications for remedial or risk management technologies/activities such as a sub-floor Vapor Extraction System.

Gasoline Spill – Commercial (NS), 2010 - Environmental Specialist: Responsible for on-site supervision of the initial site assessment, site remediation, and borehole/monitor well program. Responsible for the collection of soil and groundwater samples, review of analytical data, and the preparation of interim and regulatory reporting.

Oakfield Woods Level II Groundwater Assessment (NS), 2010 - Environmental Specialist: Responsible for supervising the drilling of an observation well, including interpreting the bedrock stratigraphy and collecting depth correlated cuttings samples. Responsible for researching the area geology prior to the drilling program, and collection of site data from the drill crew including water static depth and well yield.

Diesel Fuel Spill - Transportation (NS), 2010 - Environmental Specialist: Responsible for on-site supervision of site remediation, collection of soil, surface water, and domestic well samples, and the review of analytical data and the preparation of regulatory reporting.

Geotechnical Investigation (NS), 2010 - Environmental Specialist: Responsible for on-site supervision of geotechnical borehole drilling program, interpreting soil stratigraphy and depth to groundwater, and the collection of soil samples.

Mineville Wetland Compensation (NS), 2010 - Environmental Specialist: Assisted in the completion of a natural resource inventory at the project site in advance of construction activities for a wetland creation project. Field studies included the collection of groundwater statics, characterization of watercourses, and completion of flora and fauna surveys.

Kingswood North, Phase IV Wetland Alteration (NS), 2010 - Environmental Specialist: Responsible for conducting field investigations of bedrock geology. These investigations consisted of research of area geology and on-site identification of bedrock geology.

McCabe Lake Wetland Compensation Investigation (NS), 2010 - Environmental Specialist: Completed a field investigation to evaluate the project site with respect to its suitability to be a wetland restoration project. Responsible for habitat identification, evaluation of habitat health, identification of on-going and historical impacts to wetland habitat, and collection of GPS data to map potential wetland compensation areas.

Induced Polarization (I.P.) Survey, (BC), 2008 - Junior Geologist: Responsible for coordinating and implementing the field work for an Induced Polarization (I.P.) Geophysical Survey related to mineral exploration.