SCHEDULE				
PART	LOT	CON.	INST.No	AREA
1	PART OF 33	I NORTH OF DUNDAS STREET	151912 OAKVILLE	367 sq. ft.
2			517273	2,294 sq. ft.
3	PART OF 33 & 34		REM. OF 22324 (SECONDLY)	2,471,437 sq. ft. 56.737 acres
4				8,069,390 sq. ft. 185.252 acres
5	PART OF 34			11,565 sq. ft.
6	PART OF 33			11,010 sq ft
7			RDAL OF 369534(2NDLY)	10,990 sq. ft.
8			REM OF 223242(2NDLY)	340 sq. ft.

PLAN 20 R-10226
RECEIVED AND DEPOSITED
Date 03 JAN. 1991
Sheila Bell
REGISTRAR FOR THE REGISTRY DIVISION OF HALTON (No. 20)

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE REGISTRY ACT
Date DEC. 19, 1990
A.T.McLAREN, O.L.S.

PART 1 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 151912 OAK.
PART 2 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 517273
PART 5 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 645159
PART 6 IS SUBJECT TO A RIGHT OF WAY AS IN INST. 22324 (SECONDLY)
PART 7 IS TOGETHER WITH A RIGHT OF WAY AS IN INST. 22324 (SECONDLY)

BURNHAMTHORPE ROAD
ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS I AND 2, N.D.S.

PART 8
PART 1
SUBJECT TO A RIGHT OF WAY AS IN INST. 151912 OAK.

PART 4, PLAN 20R-4596

DETAIL 'B' NOT TO SCALE

PART 3
PART 2
PART 1
PART 4, PLAN 20R-4596

PART 1
INSTRUMENT Nº 601057
PART 2
INSTRUMENT Nº 601059
PART 3
PLAN 20R-4596

PLAN 20R-4807

PLAN 1341 MISC.

PART 4
PART 5
PART 7
PART 6

LOT 35
LOT 34
LOT 33
CONCESSION II N.D.S.

PART 1, PLAN 436 MISC.
PART 1, PLAN 439 MISC.
PART 2, PLAN 439 MISC.
PART 3, PLAN 439 MISC.
PART 4, PLAN 439 MISC.
PART 1, PLAN 440 MISC.
PART 5, PLAN 20R-3466

THE KING'S HIGHWAY Nº 5 KNOWN AS DUNDAS STREET

DETAIL 'A' NOT TO SCALE
DETAIL 'C' NOT TO SCALE

PLAN OF SURVEY
OF PART OF
LOTS 33 AND 34
CONCESSION 1, NORTH OF DUNDAS STREET
GEOGRAPHIC
TOWNSHIP OF TRAFALGAR
NOW IN THE
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON
SCALE: 1 inch = 200 feet
A.T. McLAREN, O.L.S. – 1990

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE REGULATIONS MADE THEREUNDER;
2. THE SURVEY WAS COMPLETED ON THE 18th DAY OF DECEMBER, 1990
DEC. 19, 1990
DATE
A.T.McLAREN, O.L.S.

LEGEND:
BH 1 El. 152.4 m — Borehole Location and Identification
BH MW1 El. 150.1 m — Monitoring Well Location and Identification
TP 1 El. 150.1 m — Test Pit Location and Identification

NOTES:
1. The boundaries and soil types have been established only at borehole and test pit locations. Between boreholes and test pits they are assumed and may be subject to considerable error.
2. Soil samples will be retained in storage for 3 months and then destroyed unless client advises that an extended time period is required.
3. This drawing forms part of the report, project number as referenced, and should be used only in conjunction with this report.
4. Topsoil quantities should not be established from the information provided at the borehole and test pit locations.
5. This drawing was reproduced from a site plan supplied by the Client.

N.T.S.

TROW CONSULTING ENGINEERS LTD.
1595 Clark Boulevard
Brampton, Ontario L6T 4V1
Telephone: (905) 793 - 9800
Fax: (905) 793 - 0641

Preliminary Geotechnical and Geo-Environmental Investigation
Pigott Farm Land
Oakville, Ontario

BOREHOLE AND TEST PIT LOCATION PLAN

BRGE00059627A | Date : January 23, 2001 | Drawing No. 1

A.T. McLAREN LIMITED
LEGAL AND ENGINEERING SURVEYS
103 JOHN STREET SOUTH
HAMILTON – ONTARIO
527-0032 – 527-8559

Drawn RBM | Checked TP | Scale 1"=200' | Dwg.No. 25087

TK

Trow

Preliminary Geotechnical and Geo-Environmental Investigation Pigott Farm Land Oakville, Ontario

Prepared for:

Mr. Derek Boyne
Beutel Goodman Real Estate Group
145 King Street West, Suite 200
Toronto, Ontario
M5H 1J8

Trow Consulting Engineers Ltd.

1595 Clark Boulevard
Brampton, Ontario L6T 4V1
Telephone: (905) 793-9800
Facsimile: (905) 793-0641

BRGE0059627A
January 23, 2001

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Appendix A

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1. Introduction

This report presents the results of a preliminary geotechnical and environmental investigation carried out at the site located on the north side of Dundas Street West, between Tremaine Road and Bronte Road (Highway 25) in the City of Oakville, Ontario. The work was authorized by Mr. Derek Boyne of Beutel Goodman Real Estate Group.

It is our understanding that the proposed development will likely involve the construction of low rise commercial/industrial buildings and associated servicing, paved driveways and parking areas. Details pertaining to final site grades and building locations were not provided at the time this investigation was undertaken. In view of this, the comments and recommendations contained in this report should be considered to be preliminary in nature and are intended to provide information for general geotechnical design. Once design plans are formalized, this office should be contacted for further comments.

Environmental testing was carried out in conjunction with the preliminary geotechnical work to address issues revealed through completion of a Phase I ESA (refer to Trow's report BRGE0059627A dated January 9, 2001). The results of the environmental testing are discussed in Section 6 of this report.

The purpose of this investigation was to determine the subsurface soil and groundwater conditions at the site and, based on this information, to provide geotechnical engineering guidelines for the design and construction of the assumed industrial/commercial development. More specifically, recommendations and/or comments regarding foundation type, allowable bearing pressures, groundwater conditions, excavation and backfill, slab-on-grade construction, permanent drainage requirements, earthquake considerations, and pavement structures were to be provided.

The comments and recommendations given in this report are considered to be general in nature for the site currently under investigation. Once final design plans are available, it is recommended that this office be contacted for further comments. If changes are made either in the design phase or during construction, this office must be retained to review these modifications. The result of this review may be a modification of our recommendations or the requirement of additional field or laboratory work to check whether the changes are acceptable from a geotechnical viewpoint.

2. Site Description

The site is located on the north side of Dundas Street West, between Tremaine Road and Bronte Road (Highway 25) in the City of Oakville, Ontario. The municipal address of the Site is 3269-3271 Dundas Street West, Oakville, Ontario. The legal description of the site is Part of Lots 2, 3, 4 and 6, Concession 1, west of Highway 25, Town of Oakville, Regional Municipality of Halton.

The site is divided into two sections designated as Parcel A and Parcel B. Parcel A is approximately 75 hectares (186 acres) in size and is bounded to the south by Dundas Street West and to the north by Highway 407 (under construction). Parcel B is approximately 23 hectares (57 acres) in size and is bounded to the north by Burnhamthorpe Road West and to the south by Highway 407 (under construction).

The majority of the site is currently used for agricultural purposes. Associated farm structures are located in the south portion of Parcel A towards Dundas Street. A pond is located near the southeast portion of Parcel A. Tributaries of Fourteen Mile Creek run through the site. The north portion of the site (Parcel B) is mainly wooded except for agricultural fields immediately off of Burnhamthorpe Road and uncultivated clearings approaching the Highway 407 corridor at the south end. Narrow pedestrian trails wind through the wooded area. The entire site was under thick snow cover at the time of this investigation.

The site is relatively flat. The ground surfaces of the site generally slopes towards the southwest. The site is located in a mixed residential, agricultural and developing commercial neighborhood. Access to the site is available from Dundas Street West and Burnhamthorpe Road West.

3. Procedure

The fieldwork was carried out between January 2 and 11, 2001 A total of forty-eight (48) test pits and forty-five (45) boreholes were put down at the approximate locations shown on the attached Borehole and Test Pit Location Plan (Drawing No. 1).

Test Pits 1 to 15 were excavated in the areas identified in our Phase I ESA as being of potential environmental concern. Test Pits 16 to 43 were excavated at selected locations across the site to determine the thickness of topsoil and to check for the presence/absence of fill material. The test pits were advanced using a rubber tired backhoe owned and operated by a local contractor. All test pits were subsequently backfilled with excavated on-site materials.

Due to restricted access (dense wooded area), no boreholes were drilled on the west side of Parcel B (area north of Highway 407). However, four (4) test pits (Test Pits 44, 45, 46 and 48) were excavated using portable hand equipment to confirm the subsurface conditions.

The boreholes (Boreholes 1 to 41 and MW1 to MW4) were advanced using continuous flight solid stem augering equipment owned and operated by a specialist drilling contractor. In each borehole, samples were recovered using conventional split spoon equipment and standard penetration test methods.

Appropriate precautions were taken and sampling tools decontamination were carried out during the fieldwork to minimize potential cross-examination between samples and boreholes.

Monitoring of flammable gases was carried out in the open boreholes using MSA Model 60 calibrated with methane and a Gastec Tracetechtor calibrated with hexane in the methane elimination mode.

Water level observations were carried out in the open boreholes and test pits during the course of the fieldwork, and in the monitoring wells installed in Boreholes MW1 to MW4.

The monitoring wells consisted of 50 mm diameter PVC pipe with a 3.05 m screened section. The annulus around the screened section was packed with gravel and a bentonite seal above. Details of the installation are included in the appended log of borehole sheets.

The monitoring wells were purged of at least 3 well volumes or bailed dry using a dedicated PVC bailer, and allowed to recharge before representative groundwater samples were retrieved for chemical analysis. The groundwater samples were collected in containers supplied by the laboratory and stored in a field cooler for transport. The analytical results are discussed in Section 6.

The recovered soil samples were brought to Trow's laboratory for detailed visual examinations, soil classification and water content determinations. Any samples exhibiting chemical odours or staining were split. One part was placed in a clean glass containers

with Telfon lined lid and no head space, and stored in field coolers until shipment for chemical analysis. The second part was placed in a sealed plastic bags for headspace analysis with a Gastec Tracetechtor for measuring Total Organic Vapour (TOV) levels in the soil samples. The headspace analysis was to be performed approximately one hour after each sample was placed in a sealable plastic bag.

The fieldwork was supervised throughout by Trow personnel who monitored the test pitting, drilling and sampling operations, and documented the stratigrapghy encountered at the boreholes and test pits, observed the groundwater conditions, measured the soil vapour concentration in the boreholes and recovered soil samples.

A detailed total station survey was completed to tie borehole locations and to obtain ground surface elevations.

zones. The highly weathered zones exhibit characteristics more commonly associated with soil than with the rock. It is difficult to delineate the change to weathered shale from the overlying clayey silt till/sandy silt till. Limestone and shaly limestone interbeds are present within the shale formation in a random fashion.

4.6 Groundwater

Groundwater conditions were assessed in the open boreholes and test pits during the course of the fieldwork. Monitoring wells were installed in Boreholes MW1 to MW4 for subsequent groundwater level readings. Short term groundwater levels are recorded on the attached borehole logs.

Free water was encountered at depths of 2.15 to 4.85 m in Boreholes 1, 6, 13, 17, 27, 34 and 41 upon completion of drilling. No free water was encountered in the remaining boreholes during and upon completion of drilling. No free water was encountered in the test pits during and upon of completion of the excavation. Monitoring wells were installed in Boreholes MW1 to MW4 for subsequently groundwater level readings and sampling.

The groundwater observed in these boreholes likely originates from water perched in the fill or more pervious zones in the till deposit.

On January 4, 2000, groundwater was measured at depths of 3.25, 3.05 and 4.30 m below existing grade in the monitoring wells installed in Boreholes MW1, MW3 and MW4. On January 6, 2000, groundwater was measured at a depth of 4.05 m in the monitoring well installed in Borehole MW2. On January 11, 2000, groundwater was measured at depths of 2.10 to 3.65 m below existing grades in the monitoring well installed in Boreholes MW1 to MW4.

The groundwater levels at the site are subjected to seasonal fluctuations and rainfall patterns and may be influenced by the water level of the Fourteen Mile Creek tributaries running through the site.

No floating product (i.e. gas, diesel, motor oil, etc.) or chemical odour were detected in the water samples retrieved from Boreholes MW1 to MW4.

- All backfilling and compaction operations should be monitored on a full-time basis by a geotechnical engineer to approve material and confirm that the specified degree of compaction has been obtained.

5.3 Building Construction

5.3.1 Foundations Considerations

Generally, favorable founding conditions were encountered across the site. An allowable bearing value of 400 kPa is available for spread and strip foundations at relatively shallow depths below existing grade (~1.0 m depth). The exceptions to this would be in localized areas such as former building areas, tank excavation etc. where disturbed soil extends to varying depths of ~1.5 to 3 m.

Table 1 below shows the highest elevation at borehole locations where the bearing value of 400 kPa can be applied.

Table 1:
Highest Elevation at Borehole Locations Where Bearing Value of 400 kPa Can be Applied

Borehole Number	Elevation (m) (Depth below existing grade) (m)
BHMW1	148.6 (1.5)
BHMW2	148.6 (1.2)
BHMW3	150.0 (1.2)
BHMW4	150.6 (2.2)
BH1	149.9 (2.5)
BH2	148.6 (1.1)
BH3	151.2 (1.0)
BH4	149.3 (1.2)
BH5	149.5 (1.0)
BH6	150.7 (1.0)

Table 1: Continued
Highest Elevation at Borehole Locations Where Bearing Value of 400 kPa Can be Applied

Borehole Number	Elevation (m) (Depth below existing grade) (m)
BH7	150.0 (1.2)
BH8	151.3 (1.0)
BH9	150.9 (1.0)
BH10	151.0 (1.0)
BH11	152.6 (1.0)
BH12	151.9 (1.0)
BH13	151.0 (1.0)
BH14	153.6 (1.0)
BH15	151.8 (1.0)
BH16	152.6 (1.2)
BH17	152.9 (1.0)
BH18	150.2 (1.0)

Borehole Number	Elevation (m) (Depth below existing grade) (m)
BH19	151.5 (1.2)
BH20	153.5 (1.0)
BH21	151.3 (1.3)
BH22	154.9 (1.0)
BH23	155.4 (1.0)
BH24	153.0 (1.0)
BH25	146.9 (1.0)
BH26	152.3 (1.2)
BH27	151.7 (1.0)

Table 1: Continued
Highest Elevation at Borehole Locations Where Bearing Value of 400 kPa Can be Applied

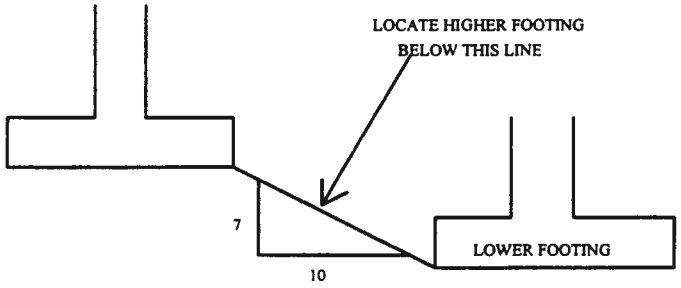
Borehole Number	Elevation (m) (Depth below existing grade) (m)
BH28	154.9 (1.0)
BH29	157.4 (1.0)
BH30	152.9 (1.0)
BH31	155.0 (1.1)
BH32	159.2 (1.0)
BH33	155.7 (1.2)
BH34	156.2 (1.0)
BH35	153.7 (1.2)
BH36	159.6 (1.0)
BH37	156.0 (1.2)
BH38	160.4 (1.0)
BH39	166.1 (1.1)
BH40	167.5 (1.0)
BH41	163.2 (1.8)

As indicated previously, based on the current grades of the site, it is anticipated that some cut and fill operations may be necessary at this site. Alternatively, if required, footings can be founded on engineered fill. Details regarding engineering fill construction can be referenced in Appendix A.

In addition, a much higher bearing value up to 2,500 kPa is available for caissons founded in the underlying shale bedrock.

5.3.2 Foundations General

Footings which are to be placed at different elevations should be located such that the higher footings are set below a line drawn up at 10 horizontal to 7 vertical from the near edge of the lower footing, as indicated on the following sketch:



FOOTINGS AT DIFFERENT ELEVATIONS

All footings exposed to seasonal freezing conditions should be protected from frost action by at least 1.2 m of soil cover or equivalent insulation, depending on the final design requirements.

The total and differential settlements of well designed and constructed footings placed in accordance with the above recommendations, are expected to be less than 25 mm and 20 mm, respectively.

It should be noted that the recommended bearing capacities have been calculated by Trow from the borehole information for the design stage only. The investigation and comments are necessarily ongoing, as new information on underground conditions becomes available. For example, it should be appreciated that modifications to bearing levels may be required if unforeseen subsoil conditions are revealed after the excavation is exposed to full view or if final design decisions differ from those assumed in this report. For this reason this office should be retained to review final foundation drawings and to provide field inspections during the construction stage.

5.3.3 Floor Slab Construction and Permanent Drainage

Slab-on-grade construction is feasible at the site and may be carried out in accordance with the following recommendations.

Prior to slab-on-grade construction, all topsoil, fill and other obviously unsuitable material should be removed from the underfloor area. Following rough grading, the exposed subgrade should be thoroughly proofrolled with a heavy vibratory roller under the full-time supervision of Trow Consulting Engineers Ltd. Any soft spots detected should be sub-excavated and the area brought up to design grade using compactible fill in the manner described in "Site Grading" section of this report.

A 200 mm layer of 19 mm clear stone should be placed between the prepared subgrade and the floor slab to serve as a moisture barrier.

Around the perimeter of the buildings the ground surface should be sloped on a positive grade away from the structure to promote surface water run-off and reduce groundwater infiltration adjacent to the foundations.

5.3.4 Earthquake Considerations

The proposed structure must be designed to resist a minimum earthquake force. The Ontario Building Code (1991) specifies that the structure should be designed in any direction on the structure as per the following expression:

$$V = v.S.I.F.W$$

The terms which are relevant to the geotechnical conditions at this site are the zonal velocity ratio, v, and the foundation factor, F.

The zonal velocity ratio for this area from Table 2.5.1A of the Ontario Building Code is 0.05. The foundation factor, F, which should be applied at this site is 1.0 from Table 4.1.9.C of the same code. These parameters should be reviewed by the structural engineer.

5.4 Watermain and Sewer Installation

5.4.1 Excavation and Groundwater Control

The invert levels of the proposed sewers and watermains have not been established. It is assumed that the invert level will be about 3 to 5 m deep. Based on the results of the investigation, excavation will generally be carried out within the native clayey silt and sandy silt till.

No major groundwater problems are anticipated during construction. Any seepage which may occur from precipitation, from water which may be perched in the fill or more pervious zones in the till can be controlled by pumping from temporary sumps.

It is considered that excavations in the overburden materials can be carried out in open cuts using conventional equipment. It should be noted that cobbles and boulders occur in glacial deposits and their presence may influence the progress of excavation. Consequently, provisions should be made in the contract documents to cover any delays caused by boulder obstructions.

Excavation for the proposed watermain and sewer at shallow depths in the shale (if necessary, depending on design grades) may require the use of rock teeth or rippers. It is

considered that generally the shale may be excavated to a depth of 1.0 m with only minor difficulty using conventional equipment. However, the degree of difficulties with respect to excavating rock by mechanical means will depend on Contractor's equipment. For greater depth into the shale bedrock, standard methods of rock excavation (such as blasting) should be considered to expedite construction.

All construction work must be carried out in accordance with the latest edition of the Occupational Heath and Safety Act (OHSA) and local regulations. With respect to the OHSA, the fill, firm to stiff clayey silt till, compact sandy silt till are considered as Type 3 soils. The very stiff clayey silt till and dense sandy silt till are considered as Type 2 soils. The shale, hard clayey silt till and very dense sandy silt till are considered Type 1 soil.

The OHSA requires that excavation slopes be cut at predetermined inclinations, based on the soil type. Locally, where loose/soft material is encountered, or within zones of persistent seepage at depth, it may be necessary to flatten the side slopes.

Trench boxes may be used to reduce the horizontal extent of the open cut excavation. Where space limitation and the presence of existing services render open cut excavation using the required side slopes impractical, shoring may be required.

Trench slopes should be continually inspected, particularly following periods of heavy rainfall, spring thaw and when the trench has left open for any extended period of time.

5.4.2 Pipe Bedding

The anticipated pipe subgrade materials generally comprise hard clayey silt till, dense to very dense sandy silt till. No bearing capacity problems are anticipated for sewer pipes and watermains founded in the undisturbed native soils. Any unsuitable materials encountered at the proposed founding levels should be removed and replaced with thin lifts of approved materials compacted to 95% SPMDD.

A minimum of 150 mm thick pipe bedding layer of OPSS Granular "A" material is recommended for pipes 450 mm diameter or less. For larger diameter pipes, the thickness should be increased to 200 mm. If the subgrade becomes unduly wet during construction, the thickness of the bedding material should be further increased.

Clear crushed stone may also be used as pipe bedding material on the silt till subgrade. Where sand or silt or other wet material is encountered during excavation, the clear crushed stone should be wrapped with approved geotextile filter fabric (Terrafix 360R or equivalent) to prevent migration of subgrade materials into voids of the bedding materials, with consequent loss of subgrade support.

Sand cover material should be placed as backfill at least 300 mm above the top of the pipe or as per local practice. The material should be placed in thin lifts not more than 200 mm thick and compacted with light equipment to 95% of its SPMDD.

5.4.3 Trench Backfill

The majority of the excavated material will consist of native clayey silt till and sandy silt till. Based on our experience with the similar type of material, it is considered that the excavated native soils are generally suitable for reuse as trench backfill. Some water content adjustment may be required for efficient compaction depending upon weather conditions at the time of construction.

Excavated topsoil should not be used for backfill purposes. This material may be used for landscaping purposes.

Any organic or excessively wet or otherwise deleterious material should not be used for backfill purposes. Any shortfall of suitable on-site excavated material can be made up with imported granular material, OPSS Granular 'B' or equivalent.

Trench backfilling should be carried out as soon as possible following trench excavation and sewer installation to avoid excessive wetting of the subgrade material. Should construction extend to the winter season, particular attention should be given to ensure frozen materials are not used as backfill.

In general, the excavated native soil (clayey silt till and sandy silt till) should not be used in confined areas. Imported granular material conforming OPSS Granular 'B' gradation requirements would be suitable for these purposes as well as in areas where free-draining characteristics are required.

The trench backfill should be placed in lifts not exceeding 200 mm and compacted to 95% SPMDD. Smaller lifts may be required depending on the size of compaction equipment used by the contractor and the moisture content of fill at the time of construction. The upper 600 mm of the trench backfill under the pavement areas should be compacted to at least 98% of the standard Proctor maximum dry density.

All backfill and compaction operations should be monitored by qualified geotechnical personnel to approve materials, to evaluate placement operations, and to verify that the specified degree of compaction is being achieved uniformly throughout the fill.

5.5 Parking Areas and Roadways

The recommended pavement structures provided in Table are based upon an estimate of the subgrade soil properties determined from visual examination and textural classification

of the soil samples. Consequently, the recommended pavement structures should be considered for preliminary design purposes only. A functional design life of eight to ten years has been used to establish the pavement recommendations. This represents the number of years to the first rehabilitation, assuming regular maintenance is carried out. If required, a more refined pavement structure design can be performed based on specific traffic data and design life requirements which will involve specific laboratory tests to determine frost susceptibility and strength characteristics of the subgrade soil, as well as specific data input from the client.

Table 2: Recommended Pavement Structure Thickness

Pavement Layer	Compaction Requirements	Light-Duty Parking (Cars)	Heavy-Duty Parking and Access Road (Trucks)	Local Industrial
Asphaltic Concrete	97% Marshall Density	65 mm HL3	40 mm HL3 over 60 mm HL8	40 mm HL3 over 85 HL8
19 mm Crusher Run Limestone	100% SPMDD*	150 mm	150 mm	150 mm
50 mm Crusher Run Limestone	100% SPMDD*	150 mm	300 mm	375 mm

* Denotes standard Proctor maximum dry density, ASTM-D698

The subgrade should be compacted to 98% SPMDD for at least the upper 600 mm.

The foregoing design assumes that construction is carried out during dry periods and that the subgrade is stable under the load of construction equipment. If construction is carried out during wet weather, and heaving or rolling of the subgrade is experienced, additional thickness of granular material may be required.

The long-term performance of the pavement structure is highly dependent upon the subgrade support conditions. Stringent construction control procedures should be maintained to ensure that uniform subgrade moisture and density conditions are achieved. In addition, the need for adequate drainage cannot be over-emphasized. The finished pavement surface and underlying subgrade should be free of depressions and should be sloped to provide effective surface drainage toward catchbasins. Surface water should not be allowed to pond adjacent to the outside edges of pavement areas.

Additional comments on the construction of parking areas and access roadways are as follows:

1. As part of the subgrade preparation, proposed parking areas and access roadways should be stripped of topsoil and other obviously unsuitable material. Fill required to raise the grades to design elevations should be organic-free and at a moisture content which will permit compaction to the densities indicated. The subgrade should be properly shaped, crowned, then proofrolled in the full-time presence of a representative of this office. Soft or spongy subgrade areas should be subexcavated and properly replaced with suitable approved backfill compacted to 98% SPMDD.

2. The location and extent of subdrainage required within the paved areas should be reviewed by this office in conjunction with the proposed site grading. In view of the silty nature of the subgrade soils, we recommend perimeter subdrains be provided around parking and loading ramp areas and along access roads. In addition, subdrains extending from and between catchbasins should also be installed. This will ensure no water collects in the granular course, which could result in pavement failure during the spring thaw.

3. To minimize the problems of differential movement between the pavement and catchbasins/manhole due to frost action, the backfill around the structures should consist of free-draining granular. In addition, the catchbasin should be perforated just above the drain and the holes screened with filter cloth.

4. The most severe loading conditions on light-duty pavement areas and the subgrade may occur during construction. Consequently, special provisions such as restricted lanes, half-loads during paving, etc., may be required, especially if construction is carried out during unfavorable weather.

5. It is recommended that Trow be retained to review the final pavement structure design and drainage plans prior to construction to ensure that they are consistent with the recommendations of this report.

6. Environmental Considerations

6.1 Objectives

Reference is made to a recently completed Phase I ESA for the property (see Trow Report BRGE0059627A dated January 9, 2001). A summary of the issues of potential environmental concern revealed through completion of the Phase I ESA is given in the following paragraphs.

A total of four (4) Underground Storage Tanks (USTs) was discovered at three (3) locations close to barns at the southern end of the site. Three of these USTs are old railway cars with capacities of approximately 45,000 litres. The fourth UST has was reported to have a capacity of approximately 68,000 litres. The USTs were used to store pig manure.

Evidence of a previously removed UST was discovered adjacent to a shed north of the residence identified as 3269 Dundas Street West. This UST was reportedly used to store gasoline. It was reported that confirmatory testing was not carried out after the gasoline UST was removed from the ground.

Existing fuel oil storage tanks were noted serving the residence 3271 Dundas Street West on site.

Foundations indicative of previously demolished structures were identified at various locations on the site. The potential for the presence of buried rubble in these areas was identified.

Potable water wells and a pond were identified on the property during the site reconnaissance inspection. At the request of the client, the quality of water associated with these sources was to be checked.

This environmental work was carried out to check the current status of soil and groundwater quality at the Site in the vicinities of the storage tank locations and in the areas where previously demolished structures were identified. To meet the objectives, a sampled borehole and groundwater collection program was carried out followed by chemical testing of selected soil and groundwater samples. The borehole investigation was supplemented by excavation of testpits in the areas of concern.

The scope of work carried out was based only on the findings of the Phase I ESA.. As noted in the Phase I ESA report, the site was covered with snow at the time of the investigation. There may be other surficial indications of potential environmental concern which would not have been visible during our site reconnaissance inspection due to the presence of snow. Should such instances arise in the future, this office should be contacted

to assess the situation and provide recommendations for addressing any concerns which might arise.

The Phase II investigation was carried out in conjunction with a Geotechnical investigation of the property by Trow. In addition to the borings carried out for environmental purposes, samples from selected geotechnical boreholes were also recovered for chemical testing.

6.2 Scope of Work

Based on the findings of the Phase I ESA and a review of current Site conditions, the following terms of reference were developed for this assessment:

- the placing of boreholes equipped with monitoring wells in the vicinities of the former gasoline UST (BH MW1) and the in-service fuel oil tanks in 3271 Dundas Street (BH MW2).

- the placing of boreholes equipped with monitoring wells in the vicinities of two of the pig manure storage tank locations (BH MW3 and BH MW4).

- the collection of soil samples and the submission of selected samples for analysis for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Total Petroleum Hydrocarbons (TPH), general soil quality (i.e., inorganic parameters) and Nitrogen group of compounds (Nitrate, Ammonia and Total Kjeldahl Nitrogen (TKN)).

- the collection of groundwater samples and submission for analysis for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Total Petroleum Hydrocarbons (TPH) and Nitrogen group of compounds (Nitrate, Ammonia and Total Kjeldahl Nitrogen).

- the collection of water samples from the potable water wells and pond followed by analysis for Ontario Drinking Water Objectives (ODWO) quick screen and selected inorganic parameters respectively.

6.3 Assessment Criteria

In planning the program, issues related to the assessment of contaminated soils, groundwater, and fuel storage tanks were considered. The following assessment criteria apply to this investigation.

"Guideline for Use at Contaminated Sites in Ontario" Ministry of Environment and Energy (MOE), Revised February, 1997.

"Ontario Drinking Water Objectives" Ministry of Environment and Energy, September, 1993.

"Occupational Health and Safety Act" Ontario Ministry of Labour (MOL).

6.4 Laboratory Testing Program

The laboratory testing program consisted of the following:

- Three (3) soil analyses for Total Petroleum Hydrocarbons (TPH) (light and heavy oils) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) from Boreholes MW1, MW2 and from Borehole 1 where soil exhibiting a slight petroleum odour was discovered;
- One (1) soil analysis for Nitrate, Ammonia and Total Kjeldahl Nitrogen from Borehole MW4;
- Two (2) groundwater analyses for TPH (light and heavy oils) and BTEX from Boreholes MW1 and MW2;
- Two (2) groundwater analyses for Nitrate, Ammonia and Total Kjeldahl Nitrogen from Boreholes MW3 and MW4;
- Twelve (12) soil analyses for general soil quality (inorganic parameters) taken from boreholes selected to provide general site coverage;
- Two (2) water analyses for ODWO Quick Screen, and
- One (1) water analysis for selected inorganic parameters (decommissioning parameters) listed in the Guideline for Use at Contaminated Sites in Ontario" Ministry of Environment and Energy (MOE), Revised February, 1997.

6.5 Gas Vapour Monitoring

Tests for total organic vapours (TOV) using a Tracetechtor Portable Hydrocarbon Vapour Tester were carried out in the soil samples and in the boreholes. The vapour concentrations in most of the soil samples were in general below 50 ppm. However, in Borehole MW1, elevated TOV readings up to 125 ppm associated with hydrocarbon odours were noted in the material used to backfill the previous gasoline tank excavation. Slight hydrocarbon odours were also noted in some soil samples retrieved from Borehole 1. Hydrocarbon odours or other signs of environmental contamination (staining etc.) were not noted at any of the other locations tested.

6.6 MOEE Environmental Sample Analysis

In accordance with the Terms of Reference for this investigation, analytical testing was carried out on selected samples of soil and groundwater recovered from the

boreholes/monitoring wells. Selection of soil samples was based on visual and olfactory characteristics as well as measured vapour concentrations.

Sample location and analytical data (Table B-1) and the results of the chemical testing (Certificates of Analysis) are compiled in Appendix B.

6.7 Comparison to the MOEE "Guideline for Use at Contaminated Sites in Ontario"

A comparison of guidelines in Table B of the MOEE document titled, "Guidelines for Use at Contaminated Sites in Ontario", was selected as being most appropriate for the purpose of this study. The selection of Table B was based on the following Site conditions:

- The surrounding area is supplied with water that is not derived from local groundwater. Although one on-site well is still in use, it will be decommissioned in accordance with current MOE regulations and the future development will be serviced by the municipal water supply.
- Full depth restoration of contamination (if encountered) is assumed.

Based on the anticipated future Site activities (commercial development), Industrial/Commercial criteria under this guideline were considered to be applicable. Soils at the Site were found to be classified as medium to fine textured.

The soil test results of analytical testing for general chemistry i.e., metals, indicate no exceedances of the adopted guideline criteria.

BTEX parameters were detected in the soil samples from Boreholes MW1 and MW2. All measured concentrations were well below the adopted guideline criteria. Concentrations of BTEX parameters in the soil sample from Borehole 1 were below the laboratory method detection limits and thus also met the guideline criteria.

TPH (light oils) were detected in the soil sample from Borehole MW1. However the concentrations were well below the adopted guideline limit. Concentrations of TPH (light oils) in the soil samples from Boreholes MW2 and 1 were below the laboratory method detection limit and thus also meet the guideline criteria.

TPH (heavy oil) was not detected in any of the above mentioned three soil samples.

Nitrate, Ammonia and TKN were detected in the soil sample taken from Borehole MW4. No criteria for these compounds are included in the guidelines. However, no aesthetic indications of impact from pig manure (odours or staining) were evident in any of the boreholes drilled adjacent to the pig manure storage tanks.

BTEX parameters were detected at trace levels in the groundwater sample from Borehole MW2. The BTEX levels were below the laboratory method detection limits for the sample from Borehole MW1. All BTEX results met the guideline criteria.

TPH (light oil) was detected in the groundwater sample from Borehole MW1. In the groundwater sample from Borehole MW2, the TPH(light oil) concentrations were below the laboratory detection limits. TPH (heavy oil) was not detected in either of the two groundwater samples analyzed. No criteria are listed in the guidelines for TPH. However, the groundwater samples exhibited no significant odours and no aesthetic indications of the presence of hydrocarbons were noted in the samples.

Nitrate, Ammonia and TKN were detected in the groundwater samples retrieved from Boreholes MW3 and MW4. No criteria are listed in Table B for these compounds in groundwater. The more stringent Table A criterion for Nitrate (potable groundwater condition) is listed as 10,000 µg/L (10 mg/mL). The measured nitrate concentrations in the groundwater samples were both well below this value. No aesthetic indications of contamination (odours or discoloration) were noted in the groundwater samples from these locations.

Exceedances of the ODWO were recorded for Hardness and Total Dissolved Solids in the sample from Potable Well-1 and for Hardness, Turbidity and Colour in the sample from Potable Well-2. With the exception of Turbidity, the exceedances are either operational guidelines or aesthetic considerations which are not health related. Turbidity is a parameter which is related to both aesthetics and health.

The results of the water sample from the pond indicate conformance with the guideline criteria adopted for the site with no exceedances recorded.

7. Conclusions & Recommendations

Based on the results of the chemical testing program carried out on the site, all soil and groundwater samples met the guideline criteria adopted for the site. No requirement for clean-up of soil or groundwater has been identified at this time. Exceedances of the Ontario Drinking Water Objective criteria were recorded for some parameters in the water samples recovered from the two potable water wells on site. Of the exceedances, only Turbidity in one sample is related to health. It is understood that the wells will be decommissioned prior to redevelopment of the property.

Soil exhibiting hydrocarbon odours was encountered in the vicinities of Borehole MW1 and Borehole 4. Although the soil chemistry indicates conformance with the intended landuse criteria, off-site disposal of such soil may become necessary as part of the development activities. Should this be the case, the soil would have to be disposed of as petroleum impacted soil and premium costs for disposal would be applicable.

It is considered normal practice for pig manure to be spread out at surface on farms. We were unable to establish the quantity of this material stored in the tanks on site. None the less, spreading it out as thinly and over as wide an area as possible remains the most practical option for disposal. Nominal costs associated with pumping the material from the tanks should be anticipated. Alternatively, the pig manure can be taken off-site for disposal by a hauler licensed to carry this class of waste. This would be a more expensive option as the costs are calculated on a per litre basis.

Since the railway cars and tank used to store the pig manure will not be required for use on the developed site, they should be removed from the ground, cut up and taken off site for disposal in accordance with current regulations.

The future development on site will be serviced by the municipal water supply. As such the potable water wells should be properly decommissioned by a licensed contractor.

8. General Comments

Trow Consulting Engineers Ltd. should be retained for a general review of the final design and specifications to verify that this report has been properly interpreted and implemented. If not accorded the privilege of making this review, Trow Consulting Engineers Ltd. will assume no responsibility for interpretation of the recommendations in the report.

This report has been prepared for and is intended for the exclusive use of Beutel Goodman Real Estate Group. Any use which a third party makes of this report, or any part thereof, of any reliance on or decision to be made based on it, are the responsibility of such third parties. Trow Consulting Engineers Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decision made or actions based on this report. The contents of this report should not be relied upon by any other party without the express written consent of Trow Consulting Engineers Ltd. The findings are relevant for the dates of our Site visits and should not be relied upon to represent conditions at later dates.

The scope of work executed for this project was not an audit for the presence of asbestos, lead paint, PCBs, radon and other naturally occurring materials. Comments on environmental soil conditions are based on the limited chemical testing program carried out. This scope was not intended to provide sufficient information to completely establish the quantities and distribution of the occurrence of petroleum contamination and other hazardous materials present at the Site or to determine costs to remediate or develop the Site. Additional work beyond that proposed for this evaluation would be required to provide such information.

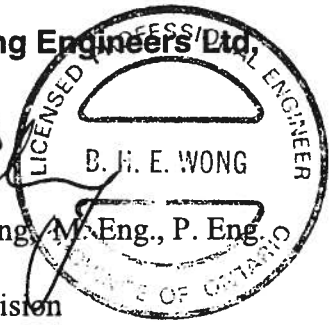
The comments given in this report are intended only for the guidance of design engineers. The number of boreholes required to determine the localized underground conditions between boreholes affecting construction costs, techniques, sequencing, equipment, scheduling, etc. could be greater than has been carried out for design purposes. Contractors bidding on or undertaking the works should, in this light, decide on their own investigations, as well as their own interpretations of the factual borehole results, so that they may draw their own conclusions as to how the subsurface conditions may affect them.

More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during excavation operations. Consequently, during the future development of the property, conditions not observed during this investigation may become apparent; should this occur, Trow Consulting Engineers Ltd. should be contacted to assess the situation, and additional testing and reporting may be required. Trow has qualified personnel to provide assistance in regards to future geotechnical issues related to this property.

We trust that this report is satisfactory for your purposes. Should you have any questions or comments, please do not hesitate to contact this office.

Yours truly,

Trow Consulting Engineers Ltd.



Edward B.H. Wong, M.Eng., P. Eng.
Senior Engineer
Geotechnical Division

David Dennison, P. Eng.
Project Manager
Geotechnical Division

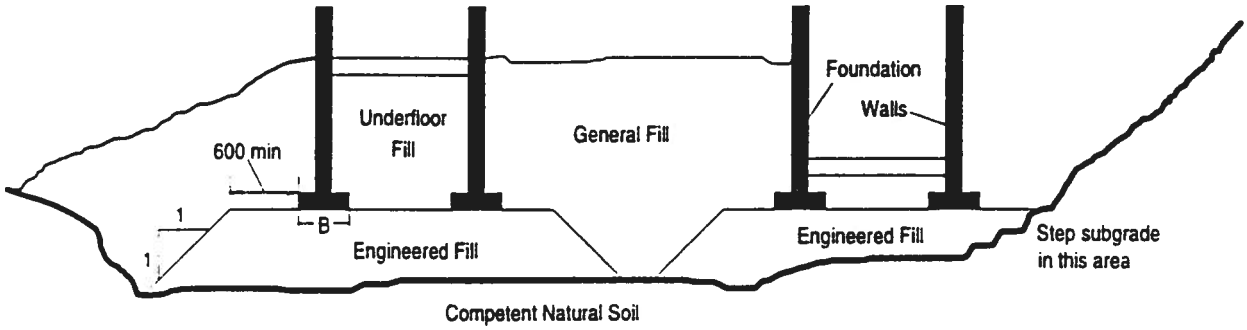
Lloyd Gonsalves, P. Eng.
Manager
Geotechnical Division

Distribution: Client (3)

Appendix A
Engineered Fill

Additional comments with regard to engineered fill are as follows:

- The area must be stripped of all topsoil, existing fill material or other deleterious material and proof-rolled. Soft spots must be dug out. The stripped native subgrade must be examined and approved by a geotechnical engineer prior to placement of fill.
- It is recommended that the entire site be sub-excavated as a continuous operation. In this manner, more efficient placement and compaction of the engineered fill can be achieved.
- The approved engineered fill must be placed in loose lifts not exceeding 200 mm and compacted to a minimum of 100% standard Proctor dry density throughout. Granular fill is preferred.
- Full time geotechnical inspection during placement of engineered fill is required.
- The fill must be placed such that the specified geometry is achieved as follows:.



Foundations on Engineered Fill (schematic)

- The required extent of engineered fill should be determined based on known fixed locations for the structures and adherent of the conditions outlined above. In general, after the fill has been placed, the location of the structure cannot be changed. Accordingly, accurate survey control is essential to the success of engineered fill construction. In this regard, the boundaries of the engineered fill must be laid out by a surveyor in consultation with Trow Consulting Engineers Ltd..
- A minimum footing width of 500 mm (20 inches) is suggested and as a precautionary measure, all footings should be provided with at least nominal steel reinforcement.
- All excavations must be done in accordance with the Occupational Health and Safety Regulations of Ontario.

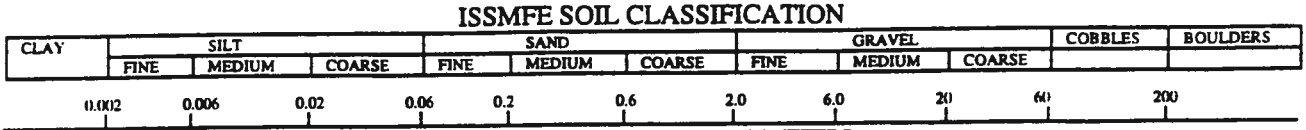
Drawings

Notes On Sample Descriptions

Drawing 1A

1. All sample descriptions included in this report follow the Canadian Foundations Engineering Manual soil classification system. This system follows the standard proposed by the International Society for Soil Mechanics and Foundation Engineering. Laboratory grain size analyses provided by Trow also follow the same system. Different classification systems may be used by others; one such system is the Unified Soil Classification. Please note that, with the exception of those samples where a grain size analysis has been made, all samples are classified visually. Visual classification is not sufficiently accurate to provide exact grain sizing or precise differentiation between size classification systems.

ISSMFE SOIL CLASSIFICATION



EQUIVALENT GRAIN DIAMETER IN MILLIMETERS

UNIFIED SOIL CLASSIFICATION

2. Fill: Where fill is designated on the borehole log it is defined as indicated by the sample recovered during the boring process. The reader is cautioned that fills are heterogeneous in nature and variable in density or degree of compaction. The borehole description may therefore not be applicable as a general description of site fill materials. All fills should be expected to contain obstruction such as wood, large concrete pieces or subsurface basements, floors, tanks, etc., none of these may have been encountered in the boreholes. Since boreholes cannot accurately define the contents of the fill, test pits are recommended to provide supplementary information. Despite the use of test pits, the heterogeneous nature of fill will leave some ambiguity as to the exact composition of the fill. Most fills contain pockets, seams, or layers of organically contaminated soil. This organic material can result in the generation of methane gas and/or significant ongoing and future settlements. Fill at this site may have been monitored for the presence of methane gas and, if so, the results are given on the borehole logs. The monitoring process does not indicate the volume of gas that can be potentially generated nor does it pinpoint the source of the gas. These readings are to advise of the presence of gas only, and a detailed study is recommended for sites where any explosive gas/methane is detected. Some fill material may be contaminated by toxic/hazardous waste that renders it unacceptable for deposition in any but designated land fill sites; unless specifically stated the fill on this site has not been tested for contaminants that may be considered toxic or hazardous. This testing and a potential hazard study can be undertaken if requested. In most residential/commercial areas undergoing reconstruction, buried oil tanks are common and are generally not detected in a conventional geotechnical site investigation.

3. Till: The term till on the borehole logs indicates that the material originates from a geological process associated with glaciation. Because of this geological process the till must be considered heterogeneous in composition and as such may contain pockets and/or seams of material such as sand, gravel, silt or clay. Till often contains cobbles (60 to 200 mm) or boulders (over 200 mm). Contractors may therefore encounter cobbles and boulders during excavation, even if they are not indicated by the borings. It should be appreciated that normal sampling equipment cannot differentiate the size or type of any obstruction. Because of the horizontal and vertical variability of till, the sample description may be applicable to a very limited zone; caution is therefore essential when dealing with sensitive excavations or dewatering programs in till materials.

Project No. BRGE0059627A

Log of Borehole MW1

Dwg No. 2

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		FILL - ~50 mm of brown sand and gravel over ~1,150 mm of brown clayey silt with trace gravel, topsoil inclusions, brown and dark brown, moist.	150.1	0
		slight hydrocarbon odours	149.1	1
		CLAYEY SILT TILL - trace gravel, brown, moist, hard.		
		moderate hydrocarbon odours on samples recovered between 1.5 and 2.0 m and between 2.3 and 2.7 m depths	147.2	3
		SHALE BEDROCK - weathered, reddish brown, damp. (Queenston Formation)	145.6 145.5	4
		End of Borehole		

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   200 ppm (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

10
80
100
125
0
50/25 mm
0

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60
Well	3.25	1/4/01
Well	2.90	1/11/01

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Project No. BRGE0059627A

Log of Borehole MW2

Dwg No. 3

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		FILL - ~50 mm of brown sand and gravel over ~1,150 mm of brown clayey silt with trace gravel, brown, moist.	149.8	0
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, mottled brown and grey, moist, dense.	148.6	1
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	147.5	2
▼			146.2	3
			145.4	4
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	145.2	
		End of Borehole		

N Value: Shear Strength 20 40 60 80 MPa; 50/50 mm; 50/25 mm; 0.1; 0.2

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60
Well	4.05	1/6/01
Well	3.65	1/11/01

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Project No. BRGE0059627A

Log of Borehole MW3

Dwg No. 4

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

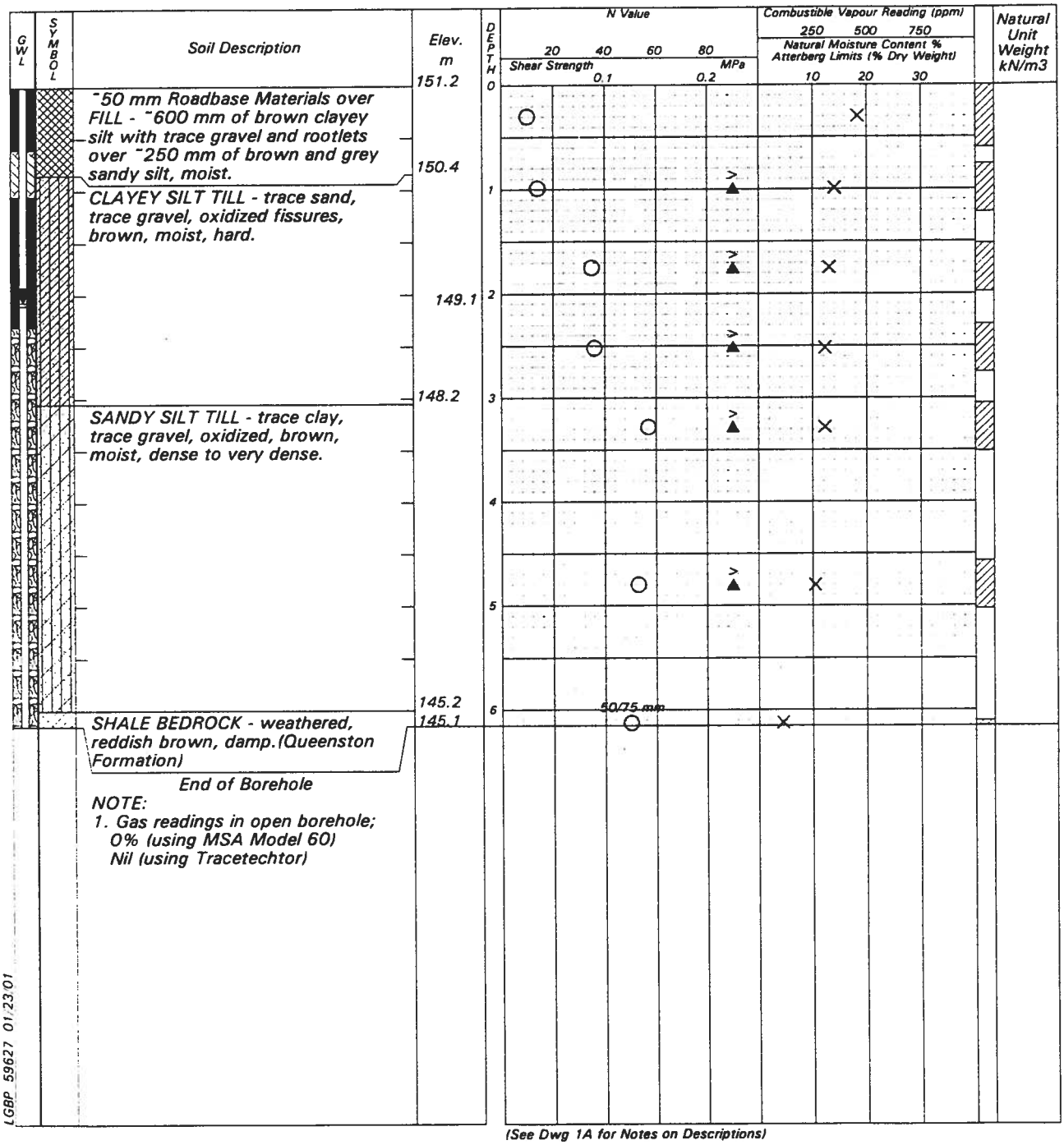
Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer



(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	6.15
Well	3.05	1/4/01
Well	2.10	1/11/01

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Project No. BRGE0059627A

Log of Borehole MW4

Dwg No. 5

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		200 mm Topsoil over FILL - clayey silt, trace sand, trace gravel, brown, moist.	152.8	0
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, mottled brown and grey, moist, compat to very dense.	151.3	1
		occasional shale fragments below 4.6 m depth	150.0	2
		End of Borehole	147.9	3

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

50/150 mm

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.90
Well	4.30	1/04/01
Well	2.85	1/11/01

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Project No. BRGE0059627A

Log of Borehole 1

Dwg No. 6

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m
		~250 mm Topsoil over FILL - clayey silt, trace sand, trace gravel, rootlets, topsoil inclusions, brown, moist.	152.4
		moderate hydrocarbon odours on recovered soil samples between 1.5 and 2.0 m depth	
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	150.1
		moderate hydrocarbon odours on recovered soil sample between 3.0 and 3.5 m depth	
		limestone fragments below ~4.6 m depth	147.7
		End of Borehole	

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   200 ppm (using Tracetechtor)

DEPTH 0 1 2 3 4

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

0
0
100
150
200
60/150 mm

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.30	4.70

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Project No. BRGE0059627A

Log of Borehole 2

Dwg No. 7

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ⊠
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		125 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff to hard.	149.7	0
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, brown, moist, dense to very dense.	147.8	2
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	145.3	3
		End of Borehole	145.1	4

NOTE:
1. Gas readins in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
50/50 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

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Project No. BRGE0059627A

Log of Borehole 3

Dwg No. 8

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test +s

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—⊖
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		600 m Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, occasional shale fragments, brown, moist, hard.	152.2	0
				1
			150.6	
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 1.60 m Depth NOTE: 1. Gas readings in open borehole; 0% (using MSA Model 60) Nil (using Tracetechtor)		

N Value
20 40 60 80
Shear Strength 0.1 0.2 MPa

50/50 mm

Combustible Vapour Reading (ppm)
250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight)
10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	1.50

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LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 4

Dwg No. 9

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		75 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, firm in upper 0.6 m, hard below.	150.5	0
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, very dense.	148.2	2
		occasional shale fragments below 4.5 m depth	145.8	4
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
60/130 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 5

Dwg No. 10

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		125 mm Topsoil over CLAYEY SILT TILL - trace rootlets in upper 0.6 m; trace sand, trace gravel, oxidized, brown, moist, firm to stiff.	150.5	0
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized fissures, mottled brown and grey, moist, compact to very dense.	149.8	1
				2
				3
				4
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	146.1 / 145.9	
		End of Borehole		

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
50/50 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 6

Dwg No. 11

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	151.7	0
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, hard.	151.0	1
				2
				3
				4
		SHALE BEDROCK - weathered, reddish brown, moist. (Queenston Formation)	147.2	
		End of Borehole	147.0	

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

50/150 mm

NOTE:
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.30	4.60

Trow

Project No. BRGE0059627A

Log of Borehole 7

Dwg No. 12

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, hard.	151.2	0			
		SANDY SILT TILL - trace clay, trace gravel, occasional shale and limestone fragments, brown, moist, very dense.	150.0	1	>		
				2	50/150 mm 50/150 mm		
				3	50/100 mm		
				4	50/50 mm		
			146.6				
		End of Borehole					

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 8

Dwg No. 13

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		100 mm Topsoil over CLAYEY SILT TILL - some sand in upper 0.6 m; trace sand, trace gravel, scattered silt and sand seams, oxidized, mottled brown and grey, moist, stiff to hard.	152.3	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, ocasional shale fragments, mottled brown and grey, moist, dense to very dense.	149.4	3
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	147.8	4
		End of Borehole	147.7	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/75 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 9

Dwg No. 14

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~100 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel,scattered silt seams, oxidized, mottled brown and grey, moist, firm to very stiff.	151.9	0
				1
			150.4	
		SANDY SILT TILL - trace clay, trace gravel, scattered silt and sand seams, brown, moist, dense.		2
				3
		encountered boulder at ~3.7 m depth		4
			147.3	
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at ~4.60 m Depth		
		Note: 1. Gas readings in open borehole; 0% (using MSA Model 60) Nil (using Tracetechtor)		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/25 mm
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 10

Dwg No. 15

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		100 mm Topsoil over CLAYEY SILT TILL - trae sand, trace gravel, oxidized, scattered sand seams, brown, moist, hard.	152.0	0
		occasional shale fragments below 3.1 m depth		1
				2
				3
				4
		SANDY SILT TILL - trace clay, trace gravel, occasional shale fragments, brown, moist, very dense.	147.5	
		End of Borehole	147.3	

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
50/50 mm
Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 11

Dwg No. 16

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ⊠
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value 20 40 60 80 / Shear Strength 0.1 0.2 MPa	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, stiff to hard.	153.6	0			
				1			
				2			
				3			
				4			
			148.6	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

LGBP 59627 01/23/01

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.95

Trow

Project No. BRGE0059627A

Log of Borehole 12

Dwg No. 17

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		100 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered silt seams, oxidized, brown, moist, stiff to hard.	152.9	0
			151.4	1
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, oxidized, brown, moist, dense.	150.6	2
		CLAYEY SILT TILL - trace sand, trace gravel, occasional shale and limestone fragments, brown, moist, hard.	148.4	3
				4
		SHALE BEDROCK - weathered, reddish brown, moist. (Queenston Formation)	148.3	
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
50/150 mm
50/75 mm
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 13

Dwg No. 18

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/02/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~75 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, stiff.	152.0	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt seams, mottled brown and grey, moist, dense.	151.4	1
		occasional shale fragments below ~3.0 m depth		2
				3
				4
		SHALE BEDROCK - weathered, reddish brown, damp. (Queenston Formation)	147.5	
		End of Borehole	147.4	

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 MPa 0.2
50/100 mm
50/50 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	3.50	4.50

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 14

Dwg No. 19

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	154.6	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	Combustible Vapour Reading (ppm): 250 500 750; Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30	
				1			
				2			
				3			
				4			
			149.6	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.95

Trow

Project No. BRGE0059627A

Log of Borehole 15

Dwg No. 20

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ⊠
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value 20 40 60 80 / Shear Strength 0.1 0.2 MPa	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		250 mm Topsoil over	152.8	0			
		CLAYEY SILT TILL - some sand, trace gravel, brown, moist, very stiff.	152.2		○ ▲	×	
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, brown, moist, dense.		1	○ >▲	×	
				2	○ >▲	×	
			150.5				
		Borehole Terminated Upon Practical Auger Refusal on Probabale Bedrock at 2.30 m Depth					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	2.20

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 16

Dwg No. 21

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test +S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		150 mm Topsoil over	153.8	0
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, firm.	153.1	
		SANDY SILT TILL - trace clay, trace gravel, oxidized fissures, mottled brown and grey, moist, compact to dense.		1
				2
				3
				4
		occasional shale and limestone fragments below 4.6 m depth	149.0	
		End of Borehole		

N Value: Shear Strength 20 40 60 80 MPa 0.1 0.2

Combustible Vapour Reading (ppm): 250 500 750

Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

50/100 mm

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

Project No. BRGE0059627A

Log of Borehole 17

Dwg No. 22

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/03/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		100 mm Topsoil over SANDY SILT TILL - trace clay, trace gravel, oxidized, mottled brown and grey, moist, loose in upper 0.6 m, compact to dense below.	153.9	0
▼		becoming clayey between 2.3 and 2.7 m depth	151.7	2
		SHALE BEDROCK - weathered, limestone layers, reddish brown, damp. (Queenston Formation)	147.9 147.8	6
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/50 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	2.15	5.95

Trow

Project No. BRGE0059627A

Log of Borehole 18

Dwg No. 23

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm in upper 0.6 m, hard below.	151.2	0			
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, occasional shale fragements, brown, moist, very dense.	149.2	2	50/85 mm; 50/110 mm		
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 4.25 m Depth.	147.0	4			

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 10 20 30

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.15

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 19

Dwg No. 24

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ⊠
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional shale fragments below 1.5 m depth, brown, moist, hard.	152.7	0
				1
				2
			150.4	
		SANDY SILT TILL - trace gravel, occasional shale fragments, brown, moist, very dense.	150.1	
		Borehole Terminated Upon Practical Auger Refusal on Probable Bedrock at 2.60 m Depth		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa

55/125 mm

50/75 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

LGBP 59627 01/23/01

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	2.50

Trow

Project No. BRGE0059627A

Log of Borehole 20

Dwg No. 25

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/05/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ⊠
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test +S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
			154.5	0
		150 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, stiff.	153.9	
		SANDY SILT TILL - trace clay, trace gravel, scattered sand seams, oxidized, brown, moist, dense to very dense.		1
				2
		becoming grey below 3.3 m depth		3
				4
		silty clay layer below 4.6 m depth	149.5	5
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 21

Dwg No. 26

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~400 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, occasional shale fragments below ~3.1 m depth, oxidized, brown, moist, firm in upper 0.6 m, very stiff to hard below.	152.6	0
				1
				2
				3
				4
		SANDY SILT TILL - trace clay, trace gravel, occasional shale and limestone fragments, brown, moist, very dense.	148.1 147.9	
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/150 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readins in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.60

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 23

Dwg No. 28

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional cobbles, oxidized, brown, moist, hard.	156.4	0
				1
				2
				3
				4
			151.4	5
		End of Borehole		

N Value
20 40 60 80
Shear Strength 0.1 0.2 MPa

Combustible Vapour Reading (ppm)
250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight)
10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

Project No. BRGE0059627A

Log of Borehole 25

Dwg No. 30

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○—|
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value (20 40 60 80) / Shear Strength (0.1 0.2 MPa)	Combustible Vapour Reading (ppm) (250 500 750) / Natural Moisture Content % Atterberg Limits (% Dry Weight) (10 20 30)	Natural Unit Weight kN/m3
		300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff.	157.9	0			
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, compact to dense.	157.2	1			
		CLAYEY SILT TILL - some sand, trace gravel, brown, moist, hard.	154.8	3			
		End of Borehole	152.9	5			

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 26

Dwg No. 31

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~350 mm Topsoil CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, occasional cobbles, oxidized, brown, moist, stiff to ~0.6 m, hard below.	153.5	0	N Value 20 40 60 80; Shear Strength 0.1 0.2 MPa	250 500 750; 10 20 30	
		becomng grey below ~3.1 m depth		1			
				2			
				3			
		SANDY SILT TILL - trace clay, trace gravel, grey, moist, very dense.	149.9	4			
			148.8		50/150 mm		
		End of Borehole					

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	4.70

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 29

Dwg No. 34

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	158.4	0
		SANDY SILT TILL - trace clay, trace gravel, oxidized, brown, moist, compact to dense.	157.7	1
				2
		CLAYEY SILT TILL - some sand, trace gravel, brown, moist, hard.	155.8	3
		becoming grey below ~4.5 m depth		4
		End of Borehole	153.4	5

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 30

Dwg No. 35

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value 20 40 60 80 / Shear Strength 0.1 0.2 MPa	Combustible Vapour Reading (ppm) 250 500 750 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Natural Unit Weight kN/m3
		~300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, stiff to hard.	153.9	0			
		becoming motttled brown and grey below ~1.5 m depth		1			
				2			
				3			
				4			
			148.9	5			
		End of Borehole					

NOTE;
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

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Trow

Project No. BRGE0059627A

Log of Borehole 32

Dwg No. 37

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-55

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		250 mm Topsoil over SANDY SILT TILL - trace clay, trace gravel, scatttered sand seams, oxidized, brown, moist, compact to dense.	160.2	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30	
				1			
				2			
				3			
				4			
			155.7				
		CLAYEY SILT TILL - trace sand, trace gravel, oxidized, brown, moist, hard.	155.2	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

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(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

Project No. BRGE0059627A

Log of Borehole 34

Dwg No. 39

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/04/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, firm.	157.2	0
		SANDY SILT TILL - trace clay, trace gravel, scattered silt and sand seams, oxidized, brown, moist, very dense.	156.6	1
▼		occasional shale and limestone fragments below 4.6 m depth	152.5	4
		End of Borehole	152.4	

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
50/125 mm

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	4.85	4.80

Trow

Project No. BRGE0059627A

Log of Borehole 35

Dwg No. 40

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/08/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~500 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, brown, moist, stiff.	154.9	0
		SANDY SILT TILL - trace clay, trace gravel, brown, moist, compact to dense.	154.2	1
		CLAYEY SILT TILL - some sand, trace gravel, oxidized, brown, moist, hard.	152.5	2
		becoming grey below ~4.5 m depth		3
			149.9	4
		End of Borehole		5

N Value: 20, 40, 60, 80
Shear Strength: 0.1, 0.2 MPa
Combustible Vapour Reading (ppm): 250, 500, 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10, 20, 30
Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

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Trow

Project No. BRGE0059627A

Log of Borehole 36

Dwg No. 41

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		350 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized,brown, moist, stiff in the upper 0.6 m, hard below.	160.6	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; 10 20 30	
				1			
				2			
				3			
				4			
			155.6	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

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Project No. BRGE0059627A

Log of Borehole 37

Dwg No. 42

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~300 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	157.2	0
		becomimg grey below ~4.5 m depth	152.2	5
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole:
0% (using MSA Model 60)
Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 38

Dwg No. 43

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		200 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized fissures, brown, moist, hard.	161.4	0	N Value: 20 40 60 80; Shear Strength: 0.1 0.2 MPa	250 500 750; Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30	
				1			
				2			
				3			
				4			
			156.4	5			
		End of Borehole					

NOTE:
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 39

Dwg No. 44

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/10/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH	N Value / Shear Strength (MPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Natural Unit Weight kN/m3
		~225 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, sacttered wet sand seams, oxidized, brown, moist, stiff in upper 0.6 m, hard below.	167.2	0	20 40 60 80 / 0.1 0.2 MPa	250 500 750 / 10 20 30	
				1			
				2			
				3			
				4			
			162.2	5			
		End of Borehole					

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

LGBP 59627 01/23/01

Project No. BRGE0059627A

Log of Borehole 40

Dwg No. 45

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		250 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist, very stiff to hard.	168.5	0
				1
				2
				3
				4
			163.5	5
		End of Borehole		

N Value: 20 40 60 80
Shear Strength: 0.1 0.2 MPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30
Natural Unit Weight kN/m3

NOTE;
1. Gas readings in open borehole:
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	Dry	5.0

Trow

Project No. BRGE0059627A

Log of Borehole 41

Dwg No. 46

Project: Preliminary Geotechnical and Geo-Environmetal Investigation

Sheet No. 1 of 1

Location: Pigott Farm Land, Dundas Street West & Bronte Road, Oakville, Ontario

Date Drilled: 01/09/01

Drill Type: CME-75 Track-Mounted

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

GWL	SYMBOL	Soil Description	Elev. m	DEPTH
		~450 mm Topsoil over CLAYEY SILT TILL - trace sand, trace gravel, scattered sand seams, oxidized, brown, moist to ~2.7 m, wet below, soft to firm in upper ~1.2 m, hard below.	165.0	0
				1
				2
				3
				4
			160.0	5
		End of Borehole		

NOTE:
1. Gas readings in open borehole;
   0% (using MSA Model 60)
   Nil (using Tracetechtor)

N Value
Shear Strength: 20 40 60 80 MPa; 0.1 0.2

Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Natural Unit Weight kN/m3

(See Dwg 1A for Notes on Descriptions)

Time	Water Level (m)	Depth to Cave (m)
On Completion	3.05	5.0

Trow

LGBP 59627 01/23/01

Log of Test Pit No. 1		Ground Surface Elevation : 150.1 m
Depth (m)		Description
0.00	2.00	FILL: ~0.3 m of brown clayey silt with trace gravel over ~1.7 m of dark brown silty clay with topsoil inclusions, brick fragments, wood pieces, boulders, slight hydrocarbon odour, gas reading: 30 ppm.
2.00	2.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of the former 13,600 L gasoline AST on the north side of 3269 Dundas Street West.		

Log of Test Pit No. 2		Ground Surface Elevation : 150.4 m
Depth (m)		Description
0.00	1.40	FILL: mixed clayey silt, sand and gravel, topsoil inclusions and rootlets, brown, moist.
1.40	1.70	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of old emergency generator room on the west side of 3269 Dundas Street West.		

Log of Test Pit No. 3		Ground Surface Elevation : 150.5 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	FILL: ~1.0 m of brown clayey silt with trace gravel over ~0.9 m of brown silty clay with some gravel and topsoil inclusions, moist.
2.00	2.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the south side of two historic houses.		

Log of Test Pit No. 4		Ground Surface Elevation : 150.6 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.80	FILL: clayey silt with trace gravel, topsoil inclusions, brick fragments and rootlets.
1.80	2.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the north side of two historic houses.		

Log of Test Pit No. 5		Ground Surface Elevation : 149.7 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	FILL: clayey silt with trace gravel, topsoil inclusions, brick fragments and rootlets.
1.20	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of corrugated pipes.		

Log of Test Pit No. 6		Ground Surface Elevation : 151.9 m
Depth (m)		Description
0.00	1.20	FILL: ~0.2 m of brown sand and gravel with rootlets over brown silty clay with brick fragments and topsoil inclusions.
1.20	1.70	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the vicinity of 8 nos. 208 L drum - paint ball paint.		

Log of Test Pit No. 7		Ground Surface Elevation : 151.2 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.40	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, boulders and scrap metal.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated on the south side of the 15,000 gal pig manure UST. 3.Metal tank was exposed on the north side of the test pit at ~ 0.65 m depth.		

Log of Test Pit No. 8		Ground Surface Elevation : 151.5 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.50	FILL: sandy silt with trace gravel, rootlets, topsoil inclusions, boulders and scrap metal, brown, moist.
1.50	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of concrete pad for historic silo.		

Log of Test Pit No. 9		Ground Surface Elevation : 151.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	0.65	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, brick fragments, and scrap metal, brown, moist.
0.65	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of historic house (housed fuel tank).		

Log of Test Pit No. 10		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	0.70	FILL: clayey silt with trace gravel, topsoil inclusions, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 11		Ground Surface Elevation : 151.7 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.30	0.60	FILL: clayey silt with trace gravel, topsoil inclusions, rootlets, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated at about 20 m west of existing well.		

Log of Test Pit No. 12		Ground Surface Elevation : 151.8 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	0.40	FILL: silty clay with some gravel, rootlets, brown, moist.
1.40	1.80	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of the 1,000 AST		

Client:	Trow-Brampton
Attention:	Ed Wong
Project:	BRGE0059627A
P.O. :	
Sample Type:	Soil
Date Received:	Jan 08/2001
Date Analysed:	Jan 08 to Jan 11/2001
Date Reported:	Jan 11/2001

Sam Samyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.
(A. VIRAVONG, B.Sc.)

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit 54
Mississauga, ONT L5N 5M3

TEL: (905) 821-1112
FAX: (905) 821-2095

CERTIFICATE OF CHEMICAL ANALYSIS - MOEE SOIL DECOMM. GUIDELINES FOR CONTAMINATED SITES IN ONTARIO (GENL. & INORGANIC)

PARAMETER	Soil Remediation Criteria (µg/g)		Method Detection	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
	Tables A & B Res./And. Comm	Tables C & D Res./And. Comm	Limit (µg/g)	Expected Concentration (µg/g)	Concentration Found (µg/g)	Recovery %	10038 BH 10 2.5-4'	10038 BH 10 2.5-4' Duplicate		
Dry Matter (%)	-	-	-	-	-	-	86.64	86.64		
pH (units)	5 to 9	5 to 11	-	7.41	7.43	100	8.4	8.5		
E C (umhos/cm)	700/1400	N.A./N.A.	-	147.3	149.9	102	70	69		
SAR	5/12	N.A./N.A.	-	-	-	-	0.40	0.46		
Arsenic	20/40	40/N.V.	1	75	71	95	4.4	3.9		
Cadmium *	12/12	41/41	0.5	0.50	0.51	102	<0.5	<0.5		
Chromium (VI) *	8/8	600/1100	1	1	0.93	93	<1	<1		
Chromium (total)	750/750	2500/5000	1	64	61.9	97	16.0	16.1		
Cobalt	40/80	2500/3400	1	28	26.7	95	9.5	8.9		
Copper	225/225	2500/2500	1	690	758	110	24.3	21.6		
Lead *	200/1000	1000/N.V.	2	1.00	1.02	102	9.4	8.5		
Mercury	10/10	57/57	0.05	0.19	0.18	95	<0.05	<0.05		
Molybdenum	40/40	550/550	2	5	4.81	96	<2	<2		
Nickel	150/150	710/710	1	231	213	92	22.3	20.4		
Boron(HWE) *	1.5/2.0	2.0/N.V.	0.02	1	0.943	94	0.03	0.03		
Cyanide Free *	100/100	100/390	0.1	0.20	0.205	103	<0.1	<0.1		
Selenium	10/10	2500/2500	1	1.6	1.53	96	<1	<1		
Silver *	20/40	240/240	0.5	1.00	1.08	108	<0.5	<0.5		
Zinc *	600/600	2500/5000	1	0.50	0.53	106	52	51		
Antimony *	13/20	44/44	1	0.210	0.203	97	<1	<1		
Barium *	750/1500	2500/4100	1	0.50	0.51	102	61.6	70.2		
Beryllium *	1.2/1.2	1.2/3.1	0.5	0.50	0.49	98	0.5	0.5		
Vanadium	200/200	910/910	1	19	19.9	105	25.9	22.2		

a) Table A: Surface soil criteria for a potable groundwater condition
b) Table B: Surface soil criteria for a non-potable groundwater condition
c) Table C: Sub-surface soil criteria for a potable groundwater condition
d) Table D: Sub-surface soil criteria for a non-potable groundwater condition
Sample Disposal: 90 Days from the Reporting Date.
*** Control Sample Unit is µg/mL for the specified parameter instead of µg/g unless otherwise specified.**

All guideline criteria are for coarse textured soil
HWE - Hot water extractable
Sample data and MDL units are in µg/g unless otherwise specified

Analyst(s): EC, SS, AV, JW, CP, JS

Method:
pH: Extraction/Electrometric (EPA 9045)
EC: Extraction/Electrometric (EPA 120.1)
As, Se, Sb: Digestion/HGFAAS (EPA 3050A/7062/7742)
Hg: Digestion/CV-AAS (EPA 7471A/245.5)
SAR: Extraction/ICP-AES (EPA 200.7)
Metals: Digestion/ICP-AES (EPA 3050A/200.7)
Cyanide Free: Extraction/Auto-Color (EPA 335.4)
B (HWE): Extraction/ICP-AES
Cr(VI): Alkaline Digestion/Colorimetry (EPA 3060A/7196)

Client:	Trow-Brampton
Attention:	Ed Wong
Project:	BRGE0059627A
P.O. :	
Sample Type:	Soil
Date Received:	Jan 08/2001
Date Analysed:	Jan 08 to Jan 11/2001
Date Reported:	Jan 11/2001

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit 54
Mississauga, ONT L5N 5M3

TEL: (905) 821-1112
FAX: (905) 821-2095

Sam Sanyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.
(A. Hrabovec, B.Sc)

CERTIFICATE OF CHEMICAL ANALYSIS - MOEE SOIL DECOMM. GUIDELINES FOR CONTAMINATED SITES IN ONTARIO (GENL. & INORGANIC)

PARAMETER	Soil Remediation Criteria (µg/g)		Method Detection Limit (µg/g)	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
	Tables A & B Res./Ind. Comm	Tables C & D Res./Ind. Comm		Expected Concentration (µg/g)	Concentration Found (µg/g)	Recovery %	Blank	10035 BH34, 2.5-4'	10036 BH 23 2.5-4'	10037 BH7, 2.5-4'
Dry Matter (%)	-	-	-	-	-	-	-	89.22	88.00	86.76
pH (units)	5 to 9	5 to 11	-	7.41	7.43	100	-	8.6	8.6	9.0
E C (umhos/cm)	700/1400	N.A./N.A.	-	147.3	149.9	102	-	63	68	94
SAR	5/12	N.A./N.A.	-	-	-	-	-	0.32	0.39	3.31
Arsenic	20/40	40/N.V.	1	75	71	95	<1	4.1	3.8	3.8
Cadmium *	12/12	41/41	0.5	0.50	0.51	102	<0.5	<0.5	<0.5	<0.5
Chromium (VI) *	8/8	600/1100	1	1	0.93	93	<1	<1	<1	<1
Chromium (total)	750/750	2500/5000	1	64	61.9	97	<1	18.6	16.4	15.4
Cobalt	40/80	2500/3400	1	28	26.7	95	<1	12.6	8.4	7.7
Copper	225/225	2500/2500	1	690	758	110	<1	26.6	25.6	9.9
Lead *	200/1000	1000/N.V.	2	1.00	1.02	102	<2	11.1	8.6	9.3
Mercury	10/10	57/57	0.05	0.19	0.18	95	<0.05	<0.05	<0.05	<0.05
Molybdenum	40/40	550/550	2	5	4.81	96	<2	<2	<2	<2
Nickel	150/150	710/710	1	231	213	92	<1	28.1	19.2	17.7
Boron(HWE) *	1.5/2.0	2.0/N.V.	0.02	1	0.943	94	<0.02	0.06	0.03	0.28
Cyanide Free *	100/100	100/390	0.1	0.20	0.205	103	<0.1	<0.1	<0.1	<0.1
Selenium	10/10	2500/2500	1	1.6	1.53	96	<1	<1	<1	<1
Silver *	20/40	240/240	0.5	1.00	1.08	108	<0.5	<0.5	<0.5	<0.5
Zinc *	600/600	2500/5000	1	0.50	0.53	106	<1	80	50	43
Antimony *	13/40	44/44	1	0.210	0.203	97	<1	<1	<1	<1
Barium *	750/1500	2500/4100	1	0.50	0.51	102	<1	86.7	75.4	85.6
Beryllium *	1.2/1.2	1.2/3.1	0.5	0.50	0.49	98	<0.5	0.5	0.5	0.5
Vanadium	200/200	910/910	1	19	19.9	105	<1	24.5	23.0	16.0

a) Table A: Surface soil criteria for a potable groundwater condition
b) Table B: Surface soil criteria for a non-potable groundwater condition
c) Table C: Sub-surface soil criteria for a potable groundwater condition
d) Table D: Sub-surface soil criteria for a non-potable groundwater condition

All guideline criteria are for coarse textured soil
HWE - Hot water extractable
Sample data and MDL units are in µg/g unless otherwise specified
Metals Analysed by AMEC Earth & Environmental Ltd.
Analyst(s): EC, SS, AV, JW, CP, JS

Sample Disposal: 90 Days from the Reporting Date.
** Control Sample Unit is µg/mL for the specified parameter instead of µg/g unless otherwise specified.*

Method:
pH: Extraction/Electrometric (EPA 9045)
EC: Extraction/Electrometric (EPA 120.1)
As, Se, Sb: Digestion/HGFAAS (EPA 3050A/7062/7742)
Hg: Digestion/CV-AAS (EPA 7471A/245.5)
SAR: Extraction/ICP-AES (EPA 200.7)

Metals: Digestion/ICP-AES (EPA 3050A/200.7)
Cyanide Free: Extraction/Auto-Color (EPA 335.4)
B (HWE): Extraction/ICP-AES
Cr(VI): Alkaline Digestion/Colorimetry (EPA 3060A/7196)

Client: Trow-Brampton
Attention: Edward Wong
Project: BRGE00596Z7A
P.O. :
Sample Type: Soil
Date Received: Jan 10/2001
Date Analysed: Jan 10 to Jan 12/2001
Date Reported: Jan 12/2001

Sam Sanyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.
for (A. Vieira, B.Sc.)

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit #4
Mississauga, ONT L5N 5M3

TEL: (905) 821-1112
FAX: (905) 821-2095

CERTIFICATE OF CHEMICAL ANALYSIS - MOEE SOIL DECOMM. GUIDELINES FOR CONTAMINATED SITES IN ONTARIO (GENL. & INORGANIC)

PARAMETER	Soil Remediation Criteria (µg/g)		Method Detection	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
	Tables A & B Res./Ind. Comm	Tables C & D Res./Ind. Comm	Limit (µg/g)	Expected Concentration (µg/g)	Concentration Found (µg/g)	Recovery %	10212 BH 40 2.5-4'	10213 BH 41 2.5-4'	10214 BH 4 2.5-4'	10215 BH13 2.5-4'
Dry Matter (%)	-	-	-	-	-	-	87.47	83.04	86.19	86.17
pH (units)	5 to 9	5 to 11	-	7.41	7.42	100	8.2	8.5	8.5	8.5
E C (umhos/cm)	700/1400	N.A./N.A.	-	147.3	149.7	102	89	94	61	57
SAR	5/12	N.A./N.A.	-	-	-	-	0.38	1.31	0.31	0.48
Arsenic	20/40	40/N.V.	1	75	75	100	3.8	3.9	3.4	3.1
Cadmium	12/12	41/41	0.5	71.1	65.0	91	<0.5	<0.5	<0.5	<0.5
Chromium (VI) *	8/8	600/1100	1	1	0.93	93	<1	<1	<1	<1
Chromium (total)	750/750	2500/5000	1	76.4	70.7	93	20.0	14.8	23.0	18.7
Cobalt	40/60	2500/3400	1	116	109.5	94	7.1	4.7	6.0	6.5
Copper	225/225	2500/2500	1	191	207	108	27.5	23.4	31.4	26.8
Lead	200/1000	1000/N.V.	2	128	114	90	8.3	13.3	5.5	10.4
Mercury	10/10	57/57	0.05	0.28	0.287	103	<0.05	<0.05	<0.05	<0.05
Molybdenum	40/40	550/550	2	77.8	86.2	111	<2	8.1	<2	<2
Nickel	150/150	710/710	1	54	53.0	98	22.8	22.4	22.9	21.1
Boron(HWE) *	1.5/2.0	2.0/N.V.	0.02	1	1.00	100	0.04	<0.02	0.09	0.02
Cyanide Free *	100/100	100/390	0.1	0.20	0.22	110	<0.1	<0.1	<0.1	<0.1
Selenium	10/10	2500/2500	1	1.6	1.52	95	<1	<1	<1	<1
Silver *	20/40	240/240	0.5	0.20	0.196	98	<0.5	<0.5	<0.5	<0.5
Zinc	600/600	2500/5000	1	467	461	99	51	63	61	49
Antimony *	13/40	44/44	1	0.210	0.205	98	<1	<1	<1	<1
Barium	750/1500	2500/4100	1	215	210	98	82.5	52.9	70.9	69.9
Beryllium	1.2/1.2	1.2/3.1	0.5	41.6	37.0	89	<0.5	<0.5	<0.5	<0.5
Vanadium	200/200	910/910	1	34	36.0	106	27.5	31.2	27.1	25.6

a) Table A: Surface soil criteria for a potable groundwater condition
b) Table B: Surface soil criteria for a non-potable groundwater condition
c) Table C: Sub-surface soil criteria for a potable groundwater condition
d) Table D: Sub-surface soil criteria for a non-potable groundwater condition
Sample Disposal: 90 Days from the Reporting Date.

All guideline criteria are for coarse textured soil
HWE - Hot water extractable
Sample data and MDL units are in µg/g unless otherwise specified

Analyst(s): EC, SS, AV, JW, CP, JS

** Control Sample Unit is µg/mL for the specified parameter instead of µg/g unless otherwise specified.*

Method:
pH: Extraction/Electrometric (EPA 9045)
EC: Extraction/Electrometric (EPA 120.1)
As, Se, Sb: Digestion/HGFAAS (EPA 3050A/7062/7742)
Hg: Digestion/CV-AAS (EPA 7471A/245.5)
SAR: Extraction/ICP-AES (EPA 200.7)
Metals: Digestion/ICP-AES (EPA 3050A/200.7)
Cyanide Free: Extraction/Auto-Color (EPA 335.4)
B (HWE): Extraction/ICP-AES
Cr(VI): Alkaline Digestion/Colorimetry (EPA 3060A/7196)

Client: Trow-Brampton
Attention: Edward Wong
Project: BRGE0059627A
P.O. :
Sample Type Soil
Date Received: Jan 10/2001
Date Analysed: Jan 10 to Jan 12/2001
Date Reported Jan 12/2001

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit 64
Mississauga, ONT L5N 5M3

TEL: (905) 821-1112
FAX: (905) 821-2095

Sam Samyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.

CERTIFICATE OF CHEMICAL ANALYSIS - MOEE SOIL DECOMM. GUIDELINES FOR CONTAMINATED SITES IN ONTARIO (GENL. & INORGANIC)

PARAMETER	Soil Remediation Criteria (µg/g)		Method Detection Limit (µg/g)	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
	Tables A & B Res./Ind. Comm	Tables C & D Res./Ind. Comm		Expected Concentration (µg/g)	Concentration Found (µg/g)	Recovery %	Blank	10216 BH26 2.5-4'	10217 BH28 2.5-4'	
Dry Matter (%)	-	-	-	-	-	-	-	87.18	88.77	
pH (units)	5 to 9	5 to 11	-	7.41	7.42	100	-	8.2	8.6	
E C (umhoe/cm)	700/1400	N.A./N.A.	-	147.3	149.7	102	-	208	112	
SAR	5/12	N.A./N.A.	-	-	-	-	-	0.80	0.58	
Arsenic	20/40	40/N.V.	1	75	75	100	<1	5.2	3.4	
Cadmium	12/12	41/41	0.5	71.1	65.0	91	<0.5	<0.5	<0.5	
Chromium (VI) *	8/8	600/1100	1	1	0.93	93	<1	<1	<1	
Chromium (total)	750/750	2500/5000	1	76.4	70.7	93	<1	23.3	16.5	
Cobalt	40/80	2500/3400	1	116	109.5	94	<1	11.1	5.5	
Copper	225/225	2500/2500	1	191	207	108	<1	39.0	23.7	
Lead	200/1000	1000/N.V.	2	126	114	90	<2	11.7	6.0	
Mercury	10/10	57/57	0.05	0.28	0.287	103	<0.05	<0.05	<0.05	
Molybdenum	40/40	550/550	2	77.8	86.2	111	<2	<2	<2	
Nickel	150/150	710/710	1	54	53.0	98	<1	28.0	19.9	
Boron(HWE) *	1.5/2.0	2.0/N.V.	0.02	1	1.00	100	<0.02	0.24	0.03	
Cyanide Free *	100/100	100/390	0.1	0.20	0.22	110	<0.1	<0.1	<0.1	
Selenium	10/10	2500/2500	1	1.6	1.52	95	<1	<1	<1	
Silver *	20/40	240/240	0.5	0.20	0.196	98	<0.5	<0.5	<0.5	
Zinc	600/600	2500/5000	1	467	461	99	<1	58	53	
Antimony *	13/40	44/44	1	0.210	0.205	98	<1	<1	<1	
Barium	750/1500	2500/4100	1	215	210	98	<1	91.1	64.6	
Beryllium	1.2/1.2	1.2/3.1	0.5	41.8	37.0	89	<0.5	<0.5	<0.5	
Vanadium	200/200	910/910	1	34	36.0	106	<1	30.9	22.8	

a) Table A: Surface soil criteria for a potable groundwater condition
b) Table B: Surface soil criteria for a non-potable groundwater condition
c) Table C: Sub-surface soil criteria for a potable groundwater condition
d) Table D: Sub-surface soil criteria for a non-potable groundwater condition

All guideline criteria are for coarse textured soil
HWE - Hot water extractable
Sample data and MDL units are in µg/g unless otherwise specified

Sample Disposal: 90 Days from the Reporting Date.

Analyst(s): EC, SS, AV, JW, CP, JS

** Control Sample Unit is µg/mL for the specified parameter instead of µg/g unless otherwise specified.*

Method:

pH: Extraction/Electrometric (EPA 9045)
EC: Extraction/Electrometric (EPA 120.1)
As, Se, Sb: Digestion/HGFAAS (EPA 3050A/7062/7742)
Hg: Digestion/CV-AAS (EPA 7471A/245.5)
SAR: Extraction/ICP-AES (EPA 200.7)
Metals: Digestion/ICP-AES (EPA 3050A/200.7)
Cyanide Free: Extraction/Auto-Color (EPA 335.4)
B (HWE): Extraction/ICP-AES
Cr(VI): Alkaline Digestion/Colorimetry (EPA 3060A/7196)

ENTECH
A Division of Agri-Service Lab Inc.
6120 Kitimat Rd., Unit 84
Mississauga, ONT L5N 5M3

TEL: (905) 821-1112
FAX: (905) 821-2095

Client: Trow-Brampton
Attention: Edward Wong
Project: BRGE0059627A
P.O.:
Sample Type: Soil
Date Received: Jan 10/2001
Date Analysed: Jan 10 to Jan 12/2001
Date Reported: Jan 12/2001

Sam Samyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.
(A. Viravong, B.Sc)

CERTIFICATE OF CHEMICAL ANALYSIS - MOEE SOIL DECOMM. GUIDELINES FOR CONTAMINATED SITES IN ONTARIO (GENL. & INORGANIC)

PARAMETER	Soil Remediation Criteria (µg/g)		Method Detection Limit (µg/g)	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
	Tables A & B Res./Ind. Comm	Tables C & D Res./Ind. Comm		Expected Concentration (µg/g)	Concentration Found (µg/g)	Recovery %	Blank	10218 BH 1 SS5		
Dry Matter (%)	-	-	-	-	-	-	-	90.29		
pH (units)	5 to 9	5 to 11	-	7.41	7.42	100	-	8.5		
E C (umhos/cm)	700/1400	N.A./N.A.	-	147.3	149.7	102	-	69		
SAR	5/12	N.A./N.A.	-	-	-	-	-	0.38		
Arsenic	20/40	40/N.V.	1	75	75	100	<1	3.4		
Cadmium	12/12	41/41	0.5	71.1	65.0	91	<0.5	<0.5		
Chromium (VI) *	8/8	800/1100	1	1	0.93	93	<1	<1		
Chromium (total)	750/750	2500/5000	1	76.4	70.7	93	<1	16.7		
Cobalt	40/80	2500/3400	1	116	109.5	94	<1	5.8		
Copper	225/225	2500/2500	1	191	207	108	<1	27.9		
Lead	200/1000	1000/N.V.	2	126	114	90	<2	11.0		
Mercury	10/10	57/57	0.05	0.28	0.287	103	<0.05	<0.05		
Molybdenum	40/40	550/550	2	77.8	86.2	111	<2	<2		
Nickel	150/150	710/710	1	54	53.0	98	<1	22.0		
Boron(HWE) *	1.5/2.0	2.0/N.V.	0.02	1	1.00	100	<0.02	0.06		
Cyanide Free *	100/100	100/390	0.1	0.20	0.22	110	<0.1	<0.1		
Selenium	10/10	2500/2500	1	1.6	1.52	95	<1	<1		
Silver *	20/40	240/240	0.5	0.20	0.196	98	<0.5	<0.5		
Zinc	600/600	2500/5000	1	467	461	99	<1	52		
Antimony *	13/40	44/44	1	0.210	0.205	98	<1	<1		
Barium	750/1500	2500/4100	1	215	210	98	<1	56.3		
Beryllium	1.2/1.2	1.2/3.1	0.5	41.6	37.0	89	<0.5	<0.5		
Vanadium	200/200	910/910	1	34	36.0	106	<1	22.7		

a) Table A: Surface soil criteria for a potable groundwater condition
b) Table B: Surface soil criteria for a non-potable groundwater condition
c) Table C: Sub-surface soil criteria for a potable groundwater condition
d) Table D: Sub-surface soil criteria for a non-potable groundwater condition
Sample Disposal: 90 Days from the Reporting Date.

All guideline criteria are for coarse textured soil
HWE - Hot water extractable
Sample data and MDL units are in µg/g unless otherwise specified

Analyst(s): EC, SS, AV, JW, CP, JS

** Control Sample Unit is µg/mL for the specified parameter instead of µg/g unless otherwise specified.*

Method:
pH: Extraction/Electrometric (EPA 9045)
EC: Extraction/Electrometric (EPA 120.1)
As, Se, Sb: Digestion/HGFAAS (EPA 3050A/7062/7742)
Hg: Digestion/CV-AAS (EPA 7471A/245.5)
SAR: Extraction/ICP-AES (EPA 200.7)
Metals: Digestion/ICP-AES (EPA 3050A/200.7)
Cyanide Free: Extraction/Auto-Color (EPA 335.4)
B (HWE): Extraction/ICP-AES
Cr(VI): Alkaline Digestion/Colorimetry (EPA 3060A/7196)

Client:	Trow-Brampton
Attention:	David Dennison
Project:	BRGE0059627-A
Sample Type:	Water
Date Sampled:	N/A
Date Received:	Jan 17/2001
Date Analysed:	Jan 18 & Jan 19/2001
Date Reported:	Jan 22/2001

Sam Samyal, M.Sc., C. Chem.
Manager, Inorganic Analysis.

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit #4
Mississauga, ONT L5N 5M3
TEL: (905) 821-1112
FAX: (905) 821-2095

CERTIFICATE OF ANALYSIS FOR QUICK-SCREEN: WATER PACKAGE (DISSOLVED METALS)

PARAMETER	UNITS	Method Detection Limit (µg/mL)	CONTROL SAMPLE Expected Conc. (µg/mL)	Found Conc. (µg/mL)	Recovery %	SAMPLE DATA 10416 POT-Well-1	10417 POT-Well-2	10417 POT-Well-2 Duplicate	
Sulphate	µg/mL	0.05	121	121.62	101	129	28.4	28.3	
Chloride	µg/mL	0.05	122	128.71	106	50.7	16.7	16.4	
Nitrate	µg/mL	0.05	13.47	13.22	98	15.8	20.5	20.5	
Nitrite	µg/mL	0.05	7.33	6.89	95	<0.05	<0.05	<0.05	
Nitrate(as N)	µg/mL	0.01	3.04	2.96	98	3.56	4.63	4.62	
Nitrite(as N)	µg/mL	0.015	2.22	2.12	95	<0.015	<0.015	<0.015	
Ortho Phosphate	µg/mL	0.1	12	12.07	101	<0.1	<0.1	<0.1	
Fluoride	µg/mL	0.05	14.1	15.67	111	0.21	0.48	0.49	
Carbonate	µg/mL	1	-	-	-	<1	2	2	
Bicarbonate	µg/mL	1	-	-	-	382	227	233	
Total Anions	meq/L	1	-	-	-	11	5	5	
Calcium	µg/mL	0.5	22.1	23.1	105	84.5	67.3	67.9	
Magnesium	µg/mL	0.1	4.83	4.93	102	48.7	9.9	10.0	
Sodium	µg/mL	0.1	21.6	25.1	116	50.4	19.8	17.8	
Potassium	µg/mL	0.5	12.8	14.6	114	13.2	23.8	20.1	
Aluminum	µg/mL	0.05	0.642	0.580	90	<0.05	0.09	0.09	
Lead	µg/mL	0.002	0.421	0.392	93	0.005	<0.002	<0.002	
Iron	µg/mL	0.1	1.40	1.39	99	<0.1	<0.1	<0.1	
Manganese	µg/mL	0.01	0.0779	0.074	95	<0.01	<0.01	<0.01	
Zinc	µg/mL	0.01	1.53	1.53	100	0.04	0.15	0.13	
Total Cations	meq/L	1	-	-	-	11	6	6	
Ion Balance	% Difference	-	-	-	-	0	4	2	
Hardness (CaCO3)	µg/mL	1	-	-	-	411	209	211	
pH	-	-	7.41	7.39	100	7.4	8.0	8.0	
Turbidity	NTU	1	3.36	3.54	105	2	28	29	
Alkalinity (CaCO3)	µg/mL	2	100	101.6	102	383	229	235	
Colour	TCU	5	-	-	-	5	60	60	
Total Dissolved Solids	µg/mL	2	263	254	97	684	357	360	
Langelier Index	-	-	-	-	-	0.02	0.33	0.34	
Conductivity	µmhos/cm	1	147.3	146.1	99	1039	574	579	
Ammonia	µg/mL	0.02	1.35	1.44	107	<0.02	<0.02	<0.02	

Sample Disposal: 90 Days from the Reporting Date.

Analyst(s): AV, CP, EC, JW, SS

Method:

pH - Electrometric (EPA 150.1)
Metals: ICP-AES(PN/USN)(EPA 3005/200.7/200.15)
Anions - Ion Chromatography (EPA 300.0)
Alkalinity - Titrimetric (EPA 310.1)
Electrical Conductivity - Conductivity Meter (EPA 120.1)
Color - Colorimetric (EPA 110.2)
Turbidity - Nephelometric (EPA 180.1)
TDS - Gravimetric (EPA 160.1)
Ammonia-N - Auto-Colorimetry (EPA 350.1)

ENTECH
A Division of Agri-Service Lab Inc.
6320 Kitimat Rd., Unit #4
Mississauga, ONT L5N 6M3
TEL: (905) 821-1112
FAX: (905) 821-2095

Client: Trow-Brampton
Attention: David Dennison
Project : BRGE0059827-A
Sample Type: Water
Date Sampled: N/A
Date Received: Jan 17/2001
Date Analysed: Jan 18, 19, 22 & Jan 23/2001
Date Reported Jan 23/2001

Certificate of Analysis of Groundwater Samples for Clean-Up Criteria (Inorganic)

PARAMETER	Method Detection Limit (µg/L)	Groundwater Criteria (µg/L)		CONTROL SAMPLE DATA			TEST SAMPLE DATA (µg/L)			
		Table A Potable	Table B Non-Potable	Expected (µg/L)	Found (µg/L)	Recovery %	Blank	10418 Pond	10418 Pond Duplicate	
Antimony	1	6	16000	1.6	1.8	113	<1	<1	<1	
Arsenic	1	25	480	1.6	1.5	94	<1	4	4	
Barium	10	1000	23000	889	959	108	<10	61	61	
Beryllium	0.2	4	53	283	279	99	<0.2	<0.2	<0.2	
Boron(Available)	10	5000	50000	731	722	99	<10	85	87	
Cadmium	0.8	5	11	343	324	94	<0.8	<0.8	<0.8	
Chromium	10	50	2000	879	839	95	<10	<10	<10	
Chromium VI	20	50	110	500	493	99	<20	<20	<20	
Cobalt	10	100	100	152	149	98	<10	<10	<10	
Copper	0.5	23	23	374	347	93	<0.5	0.7	<0.5	
Cyanide (Free)	5	52	52	200	192	96	<5	<5	<5	
Lead	2	10	32	421	392	93	<2	<2	<2	
Mercury	0.05	0.12	0.12	3.75	3.72	99	<0.05	<0.05	<0.05	
Molybdenum	20	7300	7300	440	428	97	<20	<20	<20	
Nickel	10	100	1600	1280	1220	95	<10	<10	<10	
Selenium	1	10	50	1.6	1.6	100	<1	<1	<1	
Silver	0.8	1.2	1.2	473	452	96	<0.8	<0.8	<0.8	
Vanadium	10	200	200	356	342	96	<10	<10	<10	
Zinc	10	1100	1100	1530	1530	100	<10	<10	<10	
Chloride	10	250000	NV	122000	128710	106	<10	157800	159460	
Nitrate-N	10	10000	NV	3040.63	2984.20	98	<10	3151	3151	
Nitrite-N	15	1000	2000	2221.21	2118.18	95	<15	<15	<15	
Sodium	100	200000	NV	21600	25100	116	<100	96400	98900	
pH (units)	-	-	-	7.41	7.39	100	-	7.6	7.6	

NOTE: + Exceeds Maximum Allowable Level
Unless otherwise specified, all values are in µg/L.
Sample Disposal: 90 Days from the Reporting Date.
NV : NO Value.
Analyst(s): SS, JS, AV, JW, CP

Metals: ICP-AES(PN/USN)(EPA 3005/200.7/200.15)
Arsenic, Selenium & Antimony: HG-AAS/Digestion(EPA 3005A/7062/7742)
Mercury: CV-AAS(EPA 245.1)
Anions: IC(EPA 300.0)
Free Cyanide: Auto-Colorimetry(EPA 335.1)
Chromium VI: Alkaline Digestion/Colorimetry (EPA 3060A)
pH - Electrometric/pH-Meter (EPA 150.1)

Sam Sanyal, M.Sc., C.Chem.
Manager, Inorganic Analysis.
(A. Viravong, B.Sc.)

As, Se, Sb Analysed by AMEC Earth & Environmental Ltd.

Log of Test Pit No. 13		Ground Surface Elevation :152.4 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.00	FILL: ~0.25 m of brown clayey silt with trace gravel, wood pieces over ~0.60.m of brown silty clay with trace gravel and brick fragments, ,moist.
1.00	1.50	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 14		Ground Surface Elevation :151.1 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.60	FILL: clayey silt with trace gravel, topsoil inclusions, brown, moist.
0.60	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of concrete blocks.		

Log of Test Pit No. 15		Ground Surface Elevation : 152.5 m
Depth (m)		Description
0.00	1.20	FILL:~0.25 m of dark brown silty clay with topsoil inclusions over ~0.95 m of brown clayey silt with trace gravel, rootlets, topsoil inclusions, moist.
1.20	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating. 2. Test pit was excavated in the area of two 10,000 gal pig manure USTs.		

Log of Test Pit No. 16		Ground Surface Elevation : 152.0 m
Depth (m)		Description
0.00	0.75	FILL: clayey silt with trace gravel, rootlets, topsoil inclusions, brick fragments and wood pieces.
0.75	1.40	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 17		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 18		Ground Surface Elevation : 151.0 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 19		Ground Surface Elevation : 149.3 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 20		Ground Surface Elevation : 149.8 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	2.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 21		Ground Surface Elevation : 153.7 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 22		Ground Surface Elevation : 154.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 23		Ground Surface Elevation : 152.9 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 24		Ground Surface Elevation : 153.1 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 25		Ground Surface Elevation : 153.6 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.30	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 26		Ground Surface Elevation : 153.6 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 27		Ground Surface Elevation : 154.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 28		Ground Surface Elevation : 151.4 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 29		Ground Surface Elevation : 153.8 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 30		Ground Surface Elevation : 153.5 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 31		Ground Surface Elevation : 152.7 m
Depth (m)		Description
0.00	0.80	TOPSOIL
0.80	1.30	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 32		Ground Surface Elevation : 157.5 m
Depth (m)		Description
0.00	0.15	TOPSOIL
0.15	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 33		Ground Surface Elevation : 152.7 m
Depth (m)		Description
0.00	0.10	TOPSOIL
0.10	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 34		Ground Surface Elevation :152.1 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.10	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 35		Ground Surface Elevation : 151.7 m
Depth (m)		Description
0.00	0.10	TOPSOIL
0.15	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 36		Ground Surface Elevation : 152.0 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.00	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 37		Ground Surface Elevation : 156.7 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 38		Ground Surface Elevation : 161.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 39		Ground Surface Elevation : 166.8 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 40		Ground Surface Elevation : 166.6 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 41		Ground Surface Elevation : 169.2 m
Depth (m)		Description
0.00	0.25	TOPSOIL
0.25	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 42		Ground Surface Elevation : 169.1 m
Depth (m)		Description
0.00	0.20	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 43		Ground Surface Elevation : 165.7 m
Depth (m)		Description
0.00	0.30	TOPSOIL
0.20	1.20	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, stiff to very stiff.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 44		Ground Surface Elevation : 161.7 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard..
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 45		Ground Surface Elevation : 157.9 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 46		Ground Surface Elevation : 164.4 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 47		Ground Surface Elevation : 167.0 m
Depth (m)		Description
0.00	0.35	TOPSOIL
0.35	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Log of Test Pit No. 48		Ground Surface Elevation : 164.3 m
Depth (m)		Description
0.00	0.40	TOPSOIL
0.40	0.75	CLAYET SILT TILL : trace sand, trace gravel, brown, moist, very stiff to hard.
Remarks: 1. Base was dry, upon completion of excavating.		

Table B-1: Sample Location Data

Sample I.D.	Location	Sample Matrix	Tested for
BH1 SS5	Borehole 1: 3.04 - 3.51m	Soil	BTEX, TPH (light & heavy)
BH MW1 (7.5-9.5)	Borehole MW1: 2.30 - 2.74 m	Soil	BTEX, TPH (light & heavy)
BH MW2	Borehole MW2: 2..30 - 2.74 m	Soil	BTEX, TPH (light & heavy)
BH MW2	Borehole MW2: Well	Water	BTEX, TPH (light & heavy)
BH MW1	Borehole MW1: Well	Water	BTEX, TPH (light & heavy)
BH MW4 (10-11.5)	Borehole MW4: 3.05 - 3.51 m	Soil	Nitrate, Ammonia, TKN
BH MW4	Borehole MW4: Well	Water	Nitrate, Ammonia, TKN
BH10, 2.5-4	Borehole 10: 0.76 - 1.22 m	Soil	Decom
BH31, 2.5-4	Borehole 31: 0.76 - 1.22 m	Soil	Decom
BH23, 2.5-4	Borehole 23: 0.76 - 1.22 m	Soil	Decom
BH7, 2.5-4	Borehole 7: 0.76 - 1.22 m	Soil	Decom
BH40, 2.5-4	Borehole 40: 0.76 - 1.22 m	Soil	Decom
BH41, 2.5-4	Borehole 41: 0.76 - 1.22 m	Soil	Decom
BH4, 2.5-4	Borehole 4: 0.76 - 1.22 m	Soil	Decom
BH12, 2.5-4	Borehole 12: 0.76 - 1.22 m	Soil	Decom
BH26, 2.5-4	Borehole 26: 0.76 - 1.22 m	Soil	Decom
BH28, 2.5-4	Borehole 28: 0.76 - 1.22 m	Soil	Decom
BH1, 2.5-4	Borehole 1: 0.76 - 1.22 m	Soil	Decom
Pot-Well-1	Neighbor	Water	ODWO Quick Screen
Pot-Well-2	Farmhouse/pool	Water	ODWO Quick Screen
Pond	southeast corner of the site	Water	Decom

Client: Trow-Brampton.
Attention: Edward Wong.
Client Reference: Proj: BRGE0059627A
Date Received: Jan. 10, 2001.
Date Analyzed: Jan. 11, 2001.
Date Reported: Jan. 12, 2001.
Sample Type: Soil

ENTECH
A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 6M3
Tel: 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

BTEX/TPH Units are ppm (ug/g)	MDL	Lab Blank	10218 BH 1 SS5	Lab Spike Amount (ug/g)	Lab Spike Recovery (%)
Benzene	0.002	<	<	0.24	128
Toluene	0.002	<	<	0.74	95
Ethylbenzene	0.002	<	<	0.24	98
m&p-Xylenes	0.002	<	<	0.99	105
o-Xylene	0.002	<	<	0.49	109
Surrogate Recoveries					
Toluene-d8	%	70	70	100	92
1,3-Dichlorobutane	%	130	89	100	130
4-Bromofluorobenzene	%	116	78	100	98

MDL = Method Detection Limit; < = Not Detected (less than MDL).
Ref. Methods: EPA 8260B - Purge & Trap/GC/MSD.
Spike and surrogate recovery control limits = 70% - 130%.

Dr. Asit Raksit, Ph. D., C. Chem.
Manager, Organics

Analysts: Nigel Dewsbury, B. Sc.
Stafford B. Tinkew, B.Sc.

Client: Trow (Brampton)
Attention: Ed Wong
Client Reference: Proj: BRGE0059627-A
Date Received: Jan. 8, 2001.
Date Analyzed: Jan. 9, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Soil

ENTECH
A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3
Tel: 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

BTEX/TPH Units are ppm (ug/g)	MDL	Lab Blank	10070 BH MW1 (7.5-9.5)	Lab Spike Amount (ug/g)	Lab Spike Recovery (%)
Benzene	0.002	<	<	0.44	126
Toluene	0.002	<	0.06	1.27	120
Ethylbenzene	0.002	<	0.4	0.32	127
m&p-Xylenes	0.002	<	1.0	1.92	118
o-Xylene	0.002	<	0.2	0.89	81

Surrogate Recoveries

Toluene-d8	%	119	83	100	78
1,3-Dichlorobutane	%	100	80	100	72
4-Bromofluorobenzene	%	116	79	100	114

MDL = Method Detection Limit; < = Not Detected (less than MDL).
Ref. Methods: EPA 8260B - Purge & Trap/GC/MSD.
Spike and surrogate recovery control limits = 70% - 130%.

Dr. Asit Raksit, Ph. D., C. Chem.
Manager, Organics

Analysts: Nigel Dewsbury, B. Sc.

Client: Trow - Brampton
Attention: Ed Wong
Client Reference: Proj: BRGE0059627A
Date Received: Jan. 08, 2001.
Date Analyzed: Jan. 08, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Soil

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6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5N3
Tel: 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

Total Petroleum Hydrocarbons

ENTECH # Sample #	Concentration (ug/g)			Surrogate Recovery (%)	
	gasoline range (C5-C10)	diesel range (>C10-C24)	heavy oil range (>C24-C50	SS1	SS2
MDL	10	10	80	-	-
Lab Blank	<	<	<	103	93
10070 BH MW1 7.5-9.5	220	80	<	124	111
CRM spiked (ug/g)	744	685	2147		
CRM recovered (ug/g)	587(79%)	592(86%)	1886(88%)		

Comments:

MDL = Method Detection Limit; < = Not detected (less than MDL); ug/g = ppm.
Ref. Method: EPA 3550B/EPA 3630C/EPA 8015A - Solvent Extraction GC/FID & HT-GC/FID
CRM (Certified Reference Material) & Surrogate Spike recovery control limits: 70%-130%.
SS1 for gas/diesel; SS2 for heavy oils

Dr. Asit Raksit, Ph.D., C. Chem.
Manager, Organics

Analysts: Saima Johri, B. Sc.
Nigel Dewsbury, B. Sc.

Client: Trow (Brampton)
Attention: Ed Wong
Client Reference: Proj: BRGE0059627-A
Date Received: Jan. 9, 2001.
Date Analyzed: Jan. 9, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Soil

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A Division of
Agri-Service
Laboratory Inc.

Professional
Analytical
Services

6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3

Tel: 905-821-1112

Fax: 905-821-2055

CERTIFICATE OF ANALYSIS

BTEX/TPH Units are ppm (ug/g)	MDL	Lab Blank	10081 BH MW2	Lab Spike Amount (ug/g)	Lab Spike Recovery (%)
Benzene	0.002	<	<	0.44	126
Toluene	0.002	<	0.02	1.27	120
Ethylbenzene	0.002	<	<	0.32	127
m&p-Xylenes	0.002	<	0.01	1.92	118
o-Xylene	0.002	<	<	0.89	81

Surrogate Recoveries

Toluene-d8	%	119	74	100	78
1,3-Dichlorobutane	%	100	74	100	72
4-Bromofluorobenzene	%	116	109	100	114

MDL = Method Detection Limit; < = Not Detected (less than MDL).

Ref. Methods: EPA 8260B - Purge & Trap/GC/MSD.

Spike and surrogate recovery control limits = 70% - 130%.

Dr. Asit Raksit, Ph. D., C. Chem.
Manager, Organics

Analysis: Nigel Dewsbury, B. Sc.

Client: Trow - Brampton
Attention: Ed Wong
Client Reference: Proj: BRGE0059627-A
Date Received: Jan. 09, 2001.
Date Analyzed: Jan. 09, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Soil

ENTECH
A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3
Tel: 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

Total Petroleum Hydrocarbons

ENTECH # / Sample #	Concentration (ug/g)			Surrogate Recovery (%)	
	gasoline range (C5-C10)	diesel range (>C10-C24)	heavy oil range (>C24-C50	SS1	SS2
MDL	10	10	80	-	-
Lab Blank	<	<	<	103	93
10081 BH MW2	<	<	<	130	93
CRM spiked (ug/g)	744	685	2147		
CRM recovered (ug/g)	587(79%)	592(86%)	1886(88%)		

Comments:

MDL = Method Detection Limit; < = Not detected (less than MDL); ug/g = ppm.
Ref. Method: EPA 3550B/EPA 3630C/EPA 8015A - Solvent Extraction GC/FID & HT-GC/FID
CRM (Certified Reference Material) & Surrogate Spike recovery control limits: 70%-130%.
SS1 for gas/diesel; SS2 for heavy oils

Dr. Asit Raksit, Ph.D., C. Chem.
Manager, Organics

Analysts: Saima Johri, B. Sc.
Nigel Dewsbury, B. Sc.

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Agri-Service
Laboratory Inc.

Professional
Analytical
Services

6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3

Tel: 905-821-1112

Fax: 905-821-2095

Client: Trow - Brampton
Attention: Ed Wong
Client Reference: Proj: BRGE0059627A
Date Received: Jan. 08, 2001.
Date Analyzed: Jan. 08, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Water

CERTIFICATE OF ANALYSIS

Total Petroleum Hydrocarbons

ENTECH # Sample #	Concentration (mg/L)			Surrogate Recovery (%)	
	gasoline range (C5-C10)	diesel range (>C10-C24)	heavy oil range (>C24-C50	SS1	SS2
MDL	0.1	0.5	1	-	-
Lab Blank	<	<	<	103	94
10034 BH MW1	0.35	0.67	<	126	103
CRM spiked (ug/g)	744	685	2147		
CRM recovered (ug/g)	587(79%)	592(86%)	1886(88%)		

Comments:

MDL = Method Detection Limit; < = Not detected (less than MDL); mg/L = ppm.
Ref. Method: EPA 3510C/EPA 3630C/EPA 8015A - Solvent Extraction GC/FID & HT-GC/FID
CRM (Certified Reference Material) & Surrogate Spike recovery control limits: 70%-130%.
SS1 for gas/diesel; SS2 for heavy oils

Dr. Asit Raksit, Ph.D., C. Chem.
Manager, Organics

Analysts: Saima Johri, B. Sc.
Nigel Dewsbury, B. Sc.

Client: Trow (Brampton)
Attention: Ed Wong
Client Reference: Proj: BRGE0059627A
Date Received: Jan. 8, 2001.
Date Analyzed: Jan. 8, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Water

ENTECH
A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3
Tel: 905-821-1112
Fax: 905-821-2065

CERTIFICATE OF ANALYSIS

BTEX Units are ppb (ug/L)	MDL	Lab Blank	10034 BH MW1	Lab Spike Amount (ug/L)	Lab Spike Recovery (%)
Benzene	0.2	<	<	2	126
Toluene	0.2	<	<	2	120
Ethylbenzene	0.2	<	<	2	127
m&p-Xylenes	0.2	<	<	4	118
o-Xylene	0.2	<	<	2	81
Surrogate Recoveries					
Toluene-d8	%	119	78	100	78
1,3-Dichlorobutane	%	100	87	100	72
4-Bromofluorobenzene	%	116	78	100	114

MDL = Method Detection Limit; < = Not Detected (less than MDL).
Ref. Method: EPA 8260B - Purge & Trap/GC/MSD.
Spike and surrogate recovery control limits = 70% - 130%.

Dr. Asit Raksit, Ph. D., C. Chem.
Manager, Organics

Analyst: Nigel Dewsbury, B. Sc.

Client: Trow (Brampton)
Attention: Ed Wong
Client Reference: Proj: BRGE0059627A
Date Received: Jan. 9, 2001.
Date Analyzed: Jan. 9, 2001.
Date Reported: Jan. 10, 2001
Sample Type: Water

ENTECH
A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3
Tel. 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

BTEX Units are ppb (ug/L)	MDL	Lab Blank	10080 BH MW2	Lab Spike Amount (ug/L)	Lab Spike Recovery (%)
Benzene	0.2	<	0.4	2	126
Toluene	0.2	<	0.7	2	120
Ethylbenzene	0.2	<	<	2	127
m&p-Xylenes	0.2	<	0.8	4	118
o-Xylene	0.2	<	<	2	81

Surrogate Recoveries

Toluene-d8	%	119	74	100	78
1,3-Dichlorobutane	%	100	74	100	72
4-Bromofluorobenzene	%	116	109	100	114

MDL = Method Detection Limit; < = Not Detected (less than MDL).
Ref. Method: EPA 8260B - Purge & Trap/GC/MSD.
Spike and surrogate recovery control limits = 70% - 130%.

Dr. Asit Raksit, Ph. D., C. Chem.
Manager, Organics

Analyst: Nigel Dewsbury, B. Sc.

Client: Trow - Brampton
Attention: Ed Wong
Client Reference: Proj: BRGE0059627-A
Date Received: Jan. 09, 2001.
Date Analyzed: Jan. 09, 2001.
Date Reported: Jan. 10, 2001.
Sample Type: Water

ENTECH

A Division of Agri-Service Laboratory Inc.
Professional Analytical Services
6820 Kitimat Rd., Unit 4
Mississauga, Ontario
L5N 5M3
Tel: 905-821-1112
Fax: 905-821-2095

CERTIFICATE OF ANALYSIS

Total Petroleum Hydrocarbons

ENTECH # / Sample #	Concentration (mg/L)			Surrogate Recovery (%)	
	gasoline range (C5-C10)	diesel range (>C10-C24)	heavy oil range (>C24-C50	SS1	SS2
MDL	0.1	0.5	1	-	-
Lab Blank	<	<	<	103	94
10080 BH MW2	<	<	<	106	93
CRM spiked (ug/g)	744	685	2147		
CRM recovered (ug/g)	587(79%)	592(86%)	1886(88%)		

Comments:

MDL = Method Detection Limit; < = Not detected (less than MDL); mg/L = ppm.
Ref. Method: EPA 3510C/EPA 3630C/EPA 8015A - Solvent Extraction GC/FID & HT-GC/FID
CRM (Certified Reference Material) & Surrogate Spike recovery control limits: 70%-130%.
SS1 for gas/diesel; SS2 for heavy oils

Dr. Asit Raksit, Ph.D., C. Chem.
Manager, Organics

Analysts: Salma Johri, B. Sc.
Nigel Dewsbury, B. Sc.

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit #4
Mississauga, ONT L5N 5M3
TEL: (905) 821-1112
FAX: (905) 821-2095

Client: Trow-Brampton
Attention: Ed Wong
Project: BRGE0059627A
P.O.:
Sample Type: Water
Date Sampled: Jan 05/2001
Date Received: Jan 08/2001
Date Analysed: Jan 08 to Jan 10/2001
Date Reported: Jan 10/2001

Certificate of Analysis

PARAMETER	Method Detection Limit (µg/mL)	CONTROL SAMPLE			SAMPLE DATA (µg/mL)			
		Expected Conc. (µg/mL)	Found Conc. (µg/mL)	Recovery %	Blank	10032 BH MW4	10033 BH MW3	10033 BH3 Duplicate
Nitrate-N	0.01	3.04	3.12	103	<0.01	1.10	4.22	4.16
Ammonia-N	0.02	1.35	1.42	105	<0.02	0.10	0.08	0.07
TKN	0.25	2.69	3.00	104	<0.25	1.50	0.36	0.35

Sample Disposal: 90 Days from the Reporting Date.
Analyst(s): AV, JW
Method:
Nitrate-N - Ion Chromatography (EPA 300.0)
Ammonia-N - Auto-Colorimetry (EPA 350.1)
TKN - Auto-Color/Digestion (EPA 351.2)

Sam Sanyal, M.Sc., C. Chem.
Manager, Inorganic Analysis.
(A. VIRANOS, A.Sc.)

Client: Trow-Brampton
Attention: Ed Wong
Project: BRGE0059627A
P.O.:
Sample Type: Soil
Date Received: Jan 08/2001
Date Analysed: Jan 08 to Jan 10/2001
Date Reported: Jan 10/2001

ENTECH
A Division of Agri-Service Lab Inc.
6820 Kitimat Rd., Unit 34
Mississauga, ONT L5N 5M3
TEL: (905) 821-1112
FAX: (905) 821-2095

Certificate of Analysis

PARAMETER	Method Detection Limit (µg/g)	CONTROL SAMPLE			SAMPLE DATA (µg/g)			
		Expected Conc. (µg/mL)	Found Conc. (µg/mL)	Recovery %	Blank	10039 BH MW4 10-11.5'	10039 BH5, 10-11.5' Duplicate	
Nitrate	0.25	3.04	3.12	103	<0.25	2.65	2.69	
Ammonia	0.2	1.35	1.42	105	<0.2	15.5	16.0	
TKN	20	2.89	3.00	104	<20	290	272	

Sample Disposal: 90 Days from the Reporting Date.
Analyst(s): AV, JW
Method:
Nitrate - Extraction/Ion Chromatography (EPA 300.0)
Ammonia-N - Extraction/Auto-Colorimetric (EPA 350.1)
TKN - Digestion/Auto-Colorimetry (EPA 351.2)

Sam Sanyal, M.Sc., C. Chem.
Manager, Inorganic Analysis.
(A. Viaanuz, B.Sc.)