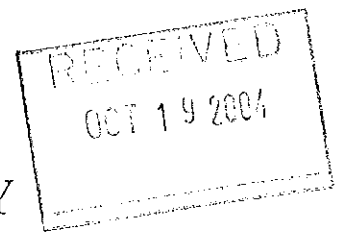


**ENVIRONMENTAL SITE
INVESTIGATION REPORT**



**[REDACTED] FACILITY
BRANTFORD, ONTARIO**



PREPARED FOR:

**[REDACTED]
BRANTFORD, ONTARIO**

PREPARED BY:



W00432

SEPTEMBER 2004

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ENVIRONMENTAL SITE INVESTIGATION REPORT

Tyre Connection Facility

Brantford, Ontario

1.0 INTRODUCTION

1.1 PURPOSE OF REPORT

This Environmental Site Investigation Report has been prepared by Geomatrix Consultants and Engineers Inc. (Geomatrix) for [REDACTED]. Geomatrix was retained by [REDACTED] in May 2004 to conduct an Environmental Site Investigation of soil and groundwater conditions at the [REDACTED] tire recycling facility located at 17 Sydenham Street in Brantford, Ontario (Site), pursuant to the Ministry of the Environment (MOE) Order Number 3153-5YUPE5 (Appendix A). The Order was issued as a result of a fire at the rear of the Site. This report documents the environmental site investigation activities that were completed at the Site by Geomatrix between May 18, 2004 and August 9, 2004.

1.2 BACKGROUND INFORMATION

1.2.1 Site Location

The Site is located on the south side of Sydenham Street, approximately 100 m (i.e., 330 feet) southwest of the Canadian National Railway line. The Site is bordered by commercial property to the east and residential properties to the south and west. It is understood that potable water is supplied to the Site and neighbouring residential homes via the municipal water supply system. There are no water supply wells on the Site. A site plan of existing conditions is presented in Figure 1.1.

1.2.2 Site History

The Site is occupied by an operating tire recycling facility. A fire occurred at the Site in early May 2004. Based on discussions with a [REDACTED] representative, Geomatrix understands that the fire was initiated in the yard at the rear of the main building, in the vicinity of a tire storage area and a truck trailer used for transporting tires. The fire fighting foam and associated runoff was conveyed to an existing natural surface depression at the southeast corner of the Site. The MOE Order, issued as a result of the fire, requires [REDACTED] to perform a soil and groundwater investigation in the vicinity of the depressed area to determine if the soil and/or groundwater have been impacted.

1.2.3 Regional Characteristics

According to the Pleistocene Geology of the Brantford Area (Cowan, 1972), the Grand River Basin Water Management Study (Grand River Implementation Committee (GRIC), 1982), and Water Well Records for Ontario: Brant, Hamilton-Wentworth (MOE, 1946-1979), bedrock in the Brantford area is composed mainly of limestone and dolostone. The depth to bedrock is estimated to range from 9.1 to 24.4 metres below ground surface (m BGS).

Overburden in the Brantford area consists mainly of glacial drift, which is comprised of a variety of unconsolidated soils ranging in grain size from clay to gravel.

2.0 SUMMARY OF SITE INVESTIGATION ACTIVITIES

2.1 SCOPE

The following scope of activities was completed by Geomatrix as part of the Environmental Site Investigation:

- Review of the MOE Order Number 3153-5YUPE5 issued on May 12, 2004;
- Preliminary assessment and initial inspection of the Site on May 18, 2004;
- Advancement of four boreholes (i.e., MW-1 through MW-3, and BH-4) at the Site on August 4, 2004, including the collection of subsurface soil samples using Geoprobe® sampling techniques;
- Field examination of subsurface soils and collection of a minimum of one subsurface soil sample from each borehole location for laboratory analysis of polycyclic aromatic hydrocarbons (PAHs) and oil and grease;
- Installation of groundwater monitoring wells at three of the four borehole locations on August 4, 2004;
- Well development and collection of groundwater samples from the three monitoring wells on August 9, 2003 using Waterra sampling techniques;
- Laboratory analysis of soil and groundwater samples collected from each monitoring well and borehole location for PAHs and oil and grease;
- Surveying of the monitoring wells for vertical control; and
- Measurement of static groundwater levels in each monitoring well on August 9, 2003.

2.2 SITE INSPECTION

Geomatrix reviewed the Order and completed a preliminary inspection of the Site on May 18, 2004. The purpose of the Site inspection was to meet with a representative of [REDACTED] to discuss historical activities at the Site and to observe current site conditions. Photographs taken by Geomatrix during the site inspection are provided in Appendix B - Photographic Log.

The Site is occupied by an operating tire recycling facility (Photo 1). The Site is bordered by Sydenham Street to the north, commercial property to the east, and residential properties to the south and west. A site plan of showing the general conditions of the Site at the time of the inspection is provided on Figure 1.1. The main building is located at the north side of the Site, adjacent to Sydenham Street (Photo 2). Buildings constructed of sheet metal clad are located along the east side of the Site. A 3-sided building and tire storage area is located at the rear of the Site, towards the southeast corner. This building sustained damage from the fire, as seen in Photo 3, where the roof is partially missing on the west end. Behind this building to the south is the Quonset hut. To the west of the Quonset hut is the area under investigation, a low-lying depression to which run-off from the fire fighting activities drained (Photos 4 to 6).

The area to the south and west of the main building is paved. The area west of the tire storage building and Quonset hut is a grassed section. Wooden fencing was observed along the south perimeter of the Site, and chain-link fencing was observed along the west perimeter of the grassed area. Access to the Site is via an open entrance from Sydenham Street. Private driveways belonging to residents back onto the Site along the west side, where the Site is paved. A transport truck trailer was parked on the northwest corner of the grassed area.

2.3 BOREHOLE ADVANCEMENT

A total of four boreholes were advanced into the uppermost water bearing zone of the investigation area at the Site on August 4, 2004. The boreholes were advanced by Strata Drilling Inc. (Strata) of Kitchener, Ontario using a Geoprobe[®] direct push technique drill rig under the direct supervision of Geomatrix's staff consultant. The approximate locations of the four boreholes (i.e., MW-1 through MW-3, and BH-4) are shown on Figure 1.1. As shown on Figure 1.1, MW-1 was advanced in the lowest-lying part of the depressed area just west of the Quonset hut; MW-2 was advanced at the southern edge of the depressed area, southwest of MW-1; MW-3 was advanced at the northern edge of the depressed area, northeast of MW-1; and MW-4 was advanced towards the west edge of the drainage area, west of MW-1.

The boreholes were advanced using Geoprobe[®] sampling techniques and the collection of continuous subsurface soil samples. The subsurface soil samples were examined by Geomatrix's staff consultant and described in accordance with the Unified Soil Classification System (USCS). The stratigraphy encountered in each borehole was recorded in stratigraphic logs provided in Appendix C.

2.4 SUBSURFACE SOIL SAMPLE COLLECTION AND ANALYSIS

One subsurface soil sample was collected by Geomatrix's staff consultant at each borehole location and submitted under chain-of-custody procedures to EnviroTest Laboratories (ETL) of Waterloo, Ontario for laboratory analysis of PAHs and oil and grease. The soil samples were selected from discrete intervals, based on an evaluation of visual impacts and/or stratigraphy. The analytical reports provided by the laboratory and the completed chain-of-custody forms are provided in Appendix D. A summary of the analytical results for the subsurface soils samples is provided in Table 2.1.

2.5 MONITORING WELL INSTALLATIONS

Following advancement of the boreholes and collection of subsurface soil samples, groundwater monitoring wells were installed by Strata in the uppermost water-bearing zone in three of the four boreholes under the direct supervision of Geomatrix's staff consultant. Each monitoring well was constructed of 20-mm diameter PVC riser pipe with a 3.0-m length of PVC slotted well screen. A clean quartz sand pack was placed around the screen and extended to approximately 0.2 m above the top of the screen. A hydraulic seal of bentonite pellets was placed above the sand pack to the ground surface. A flush-mount casing sealed in concrete approximately 0.2 m deep enclosed the well at the surface. The construction details for each of the monitoring wells are summarized in Table 2.2, as well as in the stratigraphic logs provided in Appendix C.

2.6 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Following installation, each of the monitoring wells was developed by purging a minimum of 10 well volumes of groundwater from the wells using Waterra tubing and foot valves. During development, the Waterra tubing with foot valve was placed in the bottom of the monitoring well and was vigorously agitated to remove any fines that may have accumulated in the monitoring well and sandpack during well installation. The parameters of pH, temperature and conductivity were measured during the purging process to ensure that the well water had stabilized before a representative groundwater sample was collected. The monitoring well development activities are summarized in Table 2.3.

Upon stabilization, groundwater samples were collected by Geomatrix's staff consultant from the three monitoring wells using Waterra sampling techniques. Groundwater samples were submitted under chain-of-custody procedures to ETL for laboratory analysis of PAHs and oil and grease. The analytical reports provided by the laboratory and the completed chain-of-

custody forms are provided in Appendix D. A summary of the analytical results for the groundwater samples is provided in Table 2.4.

2.7 SURVEYING OF MONITORING WELL LOCATIONS AND MEASUREMENT OF GROUNDWATER ELEVATIONS

Each monitoring well was surveyed by Geomatrix's staff consultant for vertical control using a vertical reference datum (i.e., southwest corner of paved area) at the Site. Static groundwater levels were measured in each monitoring well by Geomatrix's staff consultant on August 9, 2004 (i.e., approximately 5 days following well installation) to determine the horizontal groundwater flow direction in the vicinity of the Site. Static groundwater levels were obtained by measuring the distance from the top of the well to the top of the water column using an electronic water level indicator. A summary of the static groundwater elevations for each monitoring well is provided in Table 2.2.

3.0 EVALUATION OF SITE CONDITIONS

3.1 GUIDANCE CRITERIA

The applicable guidance criteria for site remediation in Ontario is from the Guideline for Use at Contaminated Sites in Ontario (Guideline), revised in February 1997, published by the MOE. The Guideline provides generic soil and groundwater quality criteria for various contaminants based on agricultural, residential and industrial/commercial land use, and for both potable and non-potable groundwater conditions.

Geomatrix understands that the Site and surrounding areas are serviced by the City of Brantford municipal water treatment and distributions system. As a result, generic criteria for industrial/commercial land use and non-potable groundwater conditions was used to evaluate the subsurface soil and groundwater analytical results for the samples collected at the Site as part of the environmental site investigation.

3.2 HYDROGEOLOGICAL CONDITIONS

Examination of the stratigraphic logs provided in Appendix C indicates that the stratigraphy at the Site is generally observed to consist of approximately 2.1 metres of gravely sand overlying a well-graded to medium sand extending to depths of approximately 3 m BGS. Underlying the sand, a confining layer of clayey silt was encountered at each of the borehole locations.

Saturated conditions were first encountered at an approximate depth of 2.0 m BGS in the gravely sand layer at each of the borehole locations. The static groundwater levels measured in the monitoring wells on August 9, 2004 were approximately 2.0 to 2.2 m BGS.

Groundwater elevations at the Site are summarized in Table 2.2. A review of the static groundwater elevations indicates that the horizontal hydraulic gradient of the area of investigation at the Site is essentially flat. This may be due in part to the fact that the three wells are located in close proximity to each other. Regional groundwater flow direction in the vicinity of the Site is reported to be southwest, towards the Grand River.

3.3 SOIL CONDITIONS

Subsurface soil samples from each borehole were analyzed for PAHs and oil and grease. PAHs are formed during incomplete combustion of carbon-containing materials, and oil and grease are constituents and/or associated compounds with tires and tire recycling operations.

A summary of the analytical results for subsurface soil samples collected on August 4, 2004 is provided in Table 2.1. No PAH compounds were detected in any of the soil samples collected from all sampling locations (i.e., MW-1, MW-2, MW-3, and BH-4). It is noted that oil and grease was detected at a concentration below Guideline criteria (5000 ug/g) in a subsurface soil sample collected at location MW-3 at a depth of 1.5 to 1.8 m BGS (200 ug/g).

3.4 GROUNDWATER CONDITIONS

Groundwater samples from each monitoring well were also analyzed for PAHs and oil and grease. The analytical results for groundwater samples collected on August 9, 2004, are summarized in Table 2.4. Two PAH compounds were detected at concentrations marginally exceeding the Guideline criteria for non-potable groundwater conditions. The groundwater sample collected from MW-1 had a reported concentration of 0.34 ug/L for Benzo(g,h,i)perylene (Guideline criteria is 0.20 ug/L) and a concentration of 0.46 ug/L for Indeno(1,2,3-cd)pyrene (Guideline criteria is 0.27 ug/L). It is noted that PAHs were detected at concentrations below Guideline criteria in groundwater samples collected from all monitoring wells (i.e., MW-1, MW-2, and MW-3).

No oil and grease was detected in any of the groundwater samples collected from all monitoring wells (i.e., MW-1, MW-2, and MW-3).

4.0 SUMMARY OF SITE CONDITIONS

A summary of the Site conditions is provided below, which is based on the site investigation activities conducted between May 18, 2004 and August 9, 2004, and an evaluation of the analytical data for the soil and groundwater samples collected as part of the environmental site investigation:

- The stratigraphy at the Site is generally observed to consist of approximately 2.1 metres of gravely sand overlying a well-graded to medium sand extending to depths of approximately 3 m BGS. Underlying the sand is a confining layer of clayey silt that was encountered at each of the borehole locations;
- Saturated conditions were first encountered at an approximate depth of 2.0 m BGS in the gravely sand layer at each of the borehole locations;
- Static groundwater elevations observed in the monitoring wells at the Site indicate that the horizontal hydraulic gradient in the area of investigation is essentially flat. Regional groundwater flow direction in the vicinity of the Site is reported to be southwest, towards the Grand River;
- PAHs and oil and grease were not detected in any of the soil samples collected at the Site on August 4, 2004 at concentrations greater than the applicable MOE criteria for industrial/commercial land use. These results indicate that there was no significant impact to soil in the area of investigation with respect to the parameters of PAHs and oil and grease.
- Two out of 16 PAH compounds were detected in the groundwater sample collected from MW-1 on August 9, 2004, at concentrations marginally above the respective MOE Guideline criteria for non-potable groundwater conditions. PAHs were not detected in groundwater samples collected from the other two monitoring wells at concentrations greater than the applicable Guideline criteria. Oil and grease was not detected in any of the groundwater samples from the Site.

TABLES

Table 2-1
SUMMARY OF ANALYTICAL RESULTS FOR SUBSURFACE SOIL SAMPLES

~~XXXXXXXXXX~~
Brantford, Ontario

| Parameter | Table D Criteria* (ug/g) | Result (ug/g) | | | |
|------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| | | MW-1, 0.3 to 0.6 m BGS | MW-2, 1.7 to 2.0 m BGS | MW-3, 1.5 to 1.8 m BGS | BH-4, 0.2 to 0.3 m BGS |
| PAHs | | | | | |
| Acenaphthene | 1300 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene | 840 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Anthracene | 28 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(a)anthracene | 170 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(a)pyrene | 7.2 | < 0.02 | < 0.02 | < 0.02 | < 0.02 |
| Benzo(b)fluoranthene | 72 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(g,h,i)perylene | 53 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Benzo(k)fluoranthene | 37 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Chrysene | 72 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Dibenzo(a,h)anthracene | 7.2 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluoranthene | 840 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Fluorene | 350 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Indeno(1,2,3-cd)pyrene | 70 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Naphthalene | 1300 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Phenanthrene | 150 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Pyrene | 250 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Oil and Grease | 5000** | <100 | <100 | 200 | <100 |

Notes:

* Table D Criteria refers to soil remediation criteria for industrial/commercial land use from MOE Guidelines for Use at Contaminated Sites in Ontario (February 1997)

** Criteria is for petroleum hydrocarbons (heavy oils)

BGS means below ground surface

Bold data indicates parameter was detected at a concentration above method detection limit but below Guideline criteria

Table 2-2
MONITORING WELL CONSTRUCTION AND GROUNDWATER ELEVATION SUMMARY

[REDACTED]
 Brantford, Ontario

| Well ID | Ground Elevation (m) | Well Depth | | Screened Interval | | | Measured Water Level (m) | Water Level Elevation* (m) |
|---------|----------------------|------------|----------------|-------------------|------|--------|--------------------------|----------------------------|
| | | (mbgs) | Elevation* (m) | (mbgs) | Top | Bottom | | |
| MW-1 | 99.26 | 3.81 | 95.38 | 0.76 | 3.81 | 95.38 | 2.04 | 97.22 |
| MW-2 | 99.44 | 3.81 | 95.57 | 0.76 | 3.81 | 95.57 | 2.23 | 97.21 |
| MW-3 | 99.39 | 3.81 | 95.50 | 0.76 | 3.81 | 95.50 | 2.18 | 97.21 |

Notes:

*Elevations are relative to an arbitrary datum point on Site. Elevation at datum point was assumed to be 100 m.

Table 2-3
SUMMARY OF MONITORING WELL DEVELOPMENT

Brantford, Ontario

| Location | Time | Cumulative Volume Purged (L) | pH | Temperature (°C) | Conductivity (µS/cm) | Remarks (colour, turbidity, sediment) |
|----------|-------|------------------------------|------|------------------|----------------------|------------------------------------------|
| MW-1 | 13:15 | 0.0 | 6.98 | 23.4 | 1043 | light brown, very turbid, silty sediment |
| | 13:24 | 2.0 | 7.17 | 16.6 | 1001 | light brown, very turbid, silty sediment |
| | 13:35 | 2.0 | 7.16 | 16.9 | 1003 | light brown, very turbid, silty sediment |
| | 13:45 | 2.0 | 7.15 | 16.5 | 1012 | light brown, very turbid, silty sediment |
| MW-2 | 14:38 | 0.0 | 7.13 | 18.6 | 1012 | light brown, very turbid, silty sediment |
| | 14:41 | 2.0 | 7.13 | 17.3 | 970 | light brown, very turbid, silty sediment |
| | 14:49 | 2.0 | 7.13 | 16.2 | 1005 | light brown, very turbid, silty sediment |
| | 14:54 | 2.0 | 7.12 | 15.3 | 1007 | light brown, very turbid, silty sediment |
| MW-3 | 15:30 | 0.0 | 7.19 | 17.9 | 944 | light brown, very turbid, silty sediment |
| | 15:46 | 2.0 | 7.21 | 15.2 | 956 | light brown, very turbid, silty sediment |
| | 15:50 | 2.0 | 7.27 | 15.2 | 970 | light brown, very turbid, silty sediment |
| | 15:54 | 2.0 | 7.28 | 14.5 | 983 | light brown, very turbid, silty sediment |

Table 2-4
SUMMARY OF ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

~~XXXXXXXXXX~~
Brantford, Ontario

| Parameter | Table B Criteria* (ug/L) | Result (ug/L) | | |
|------------------------|--------------------------------|---------------|--------|--------|
| | | MW-1 | MW-2 | MW-3 |
| PAHs | | | | |
| Acenaphthene | 1700 | 0.08 | < 0.02 | < 0.02 |
| Acenaphthylene | 2000 | 0.08 | < 0.02 | < 0.02 |
| Anthracene | 12 | 0.18 | 0.02 | < 0.02 |
| Benzo(a)anthracene | 5.0 | 0.57 | 0.02 | < 0.02 |
| Benzo(a)pyrene | 1.9 | 0.5 | 0.01 | < 0.01 |
| Benzo(b)fluoranthene | 7.0 | 0.36 | < 0.02 | < 0.02 |
| Benzo(g,h,i)perylene | 0.2 | 0.34 | < 0.02 | < 0.02 |
| Benzo(k)fluoranthene | 0.4 | 0.35 | < 0.02 | < 0.02 |
| Chrysene | 3.0 | 0.6 | 0.06 | 0.03 |
| Dibenzo(a,h)anthracene | 0.25 | 0.11 | < 0.02 | < 0.02 |
| Fluoranthene | 130 | 1.39 | 0.07 | < 0.02 |
| Fluorene | 290 | 0.08 | < 0.02 | < 0.02 |
| Indeno(1,2,3-cd)pyrene | 0.27 | 0.46 | < 0.02 | < 0.02 |
| Naphthalene | 5900 | 0.18 | 0.13 | 0.07 |
| Phenanthrene | 63 | 0.83 | 0.07 | 0.03 |
| Pyrene | 40 | 1.16 | 0.07 | < 0.02 |
| Oil and Grease | NV** | < 2 | < 2 | < 2 |

Notes:

* Table B Criteria refers to non-potable groundwater criteria for industrial/commercial land use from MOE Guidelines for Use at Contaminated Sites in Ontario (February 1997)

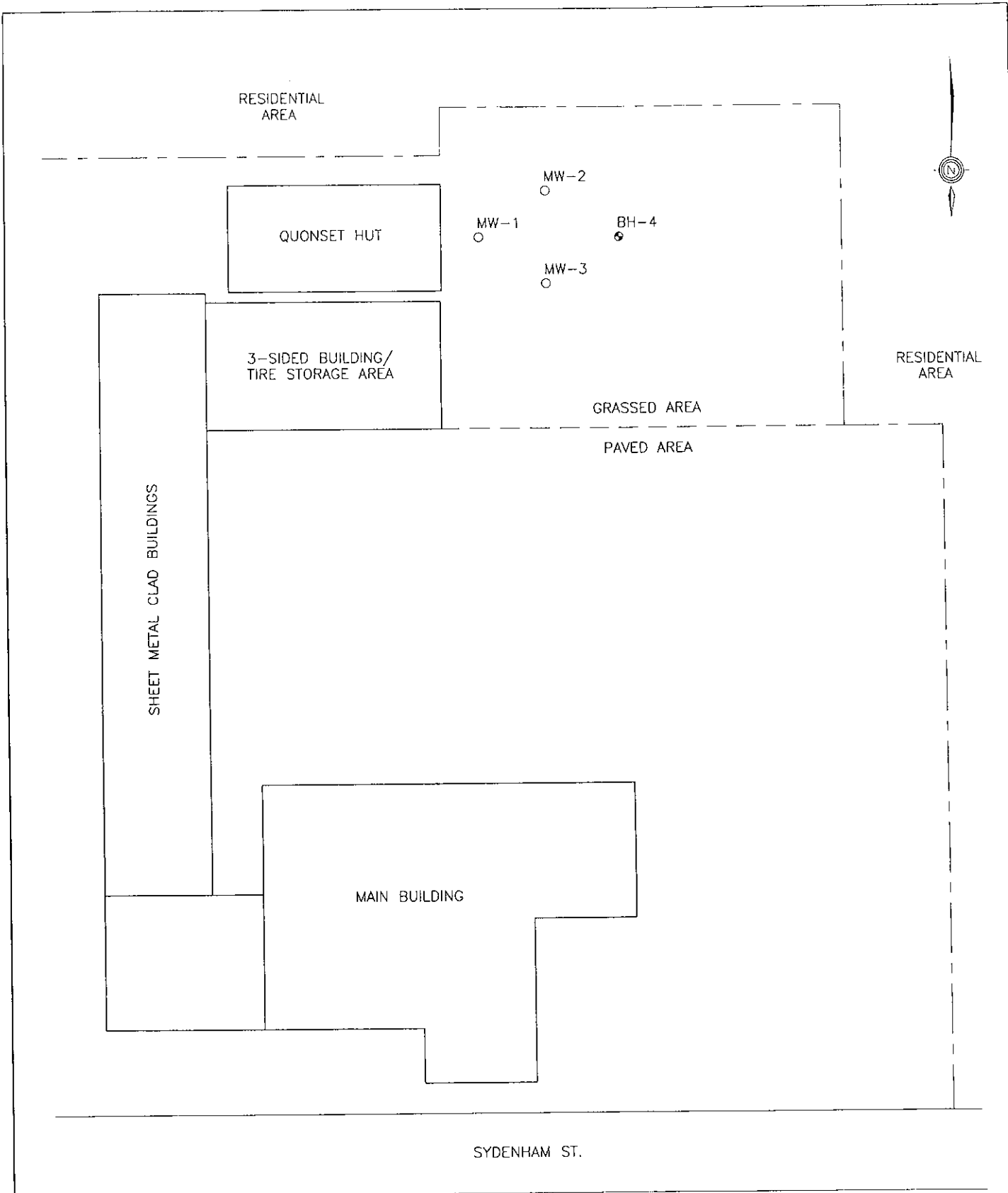
** Criteria is for petroleum hydrocarbons (heavy oils)

NV means no value

Bold data indicates parameter was detected at a concentration above method detection limit but below Guideline criteria

Highlighted data indicates result exceeds Guideline criteria

FIGURES



NOTE:
DRAWING NOT TO SCALE



Geomatrix Consultants, Inc.
420 Weber Street N., Unit G
Waterloo, Ontario

FIGURE
SITE PLAN
EXISTING CONDITIONS

17 SYDENHAM ST. BRANTFORD, ONTARIO

DATE
AUGUST 30, 2004

FILE NO.
W00432-SITE

PROJ. NO.
W00432

DWG NO
F-1.1

APPENDIX A
MOE ORDER 3153-5YUPE5



Ministry of the Environment
Ministère de l'Environnement

Provincial Officer's Order

Environmental Protection Act, R.S.O. 1990, c.E 19 (EPA)
Ontario Water Resources Act, R.S.O. 1990, c. O. 40 (OWRA)
Pesticides Act, R.S.O. 1990, c. P11 (PA)
Safe Drinking Water Act, S.O. 2002, c.32 (SDWA)

Order Number
3153-SYUPE5

To:

[Redacted]
[Redacted]
[Redacted]

Canada

[Redacted]
[Redacted]
[Redacted]

Canada

Site:

17 Sydenham Street
Brantford, County of Brant

Work Ordered

1) [Redacted] (" The Owner") will obtain the services of a qualified environmental consultant and clean-up contractor who has experience in dealing with site contamination resulting from chemical impacts by May 14, 2004. At the same time, the owner will notify the undersigned Provincial Officer as to who the consultant/clean-up contractor is and the assigned project manager.

2) By May 14, 2004, the owner shall notify the undersigned Provincial Officer as to how many tires were recovered from the salvage operation and the location where the tires were disposed of. The owner must provide all documentation relating to the disposal of the tires, including weigh bills, receipts etc.

3) By May 24, 2004, the consultant/clean up contractor obtained in accordance with this order must submit a plan of action to the undersigned Provincial Officer which details how clean up at the site will be done and where waste will be disposed of.

4) By May 24, 2004, the consultant/clean-up contractor obtained in accordance with this order must submit a plan of action to the undersigned Provincial Officer which details how potential contamination at the site will be addressed. This plan

will include but not be limited to,

- a) soil and groundwater sampling which in the professional opinion of the consultant will be necessary to assess site contamination resulting from fire fighting foam and run-off water,
- b) installation of groundwater monitoring wells,
- c) sampling for PAH's, oils and grease and other contaminants which in the professional opinion of the consultant are necessary to determine the extent of contamination taking into consideration the nature of the contaminant and
- d) determining ground water flow.

5) Along with the plan of action required under sections 3 and 4 of this order, the consultant/clean-up contractor must also submit an associated schedule which details when (dates) the work will be completed.


6) By July 30, 2004, a report will be submitted to the undersigned Provincial Officer which details all work completed at the site and the conclusions of the work completed on site.

7) If any part of the work required under sections 3, 4 and 5 of this order requires that the clean-up contractor/consultant go onto private property, permission must be first obtained from owners of these properties before any work is started. If permission is not granted, this information will be documented in the report that will be submitted by the consultant/clean-up contractor.

- A. While this Order is in effect, a copy or copies of this order shall be posted in a conspicuous place.
- B. While this Order is in effect, report in writing, to the District or Area office, any significant changes of operation, emission, ownership, tenancy or other legal status of the facility or operation.

This Order is being issued for the reasons set out in the annexed Provincial Officers Report which forms part of this Order.

Brantford this 12th
Issued at ~~Guelph~~ this ~~11th~~ day of May, 2004.



Hardeep Randhawa
Badge No: 754
Guelph District Office
Tel: (519) 826-4269

APPENDIX B
PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

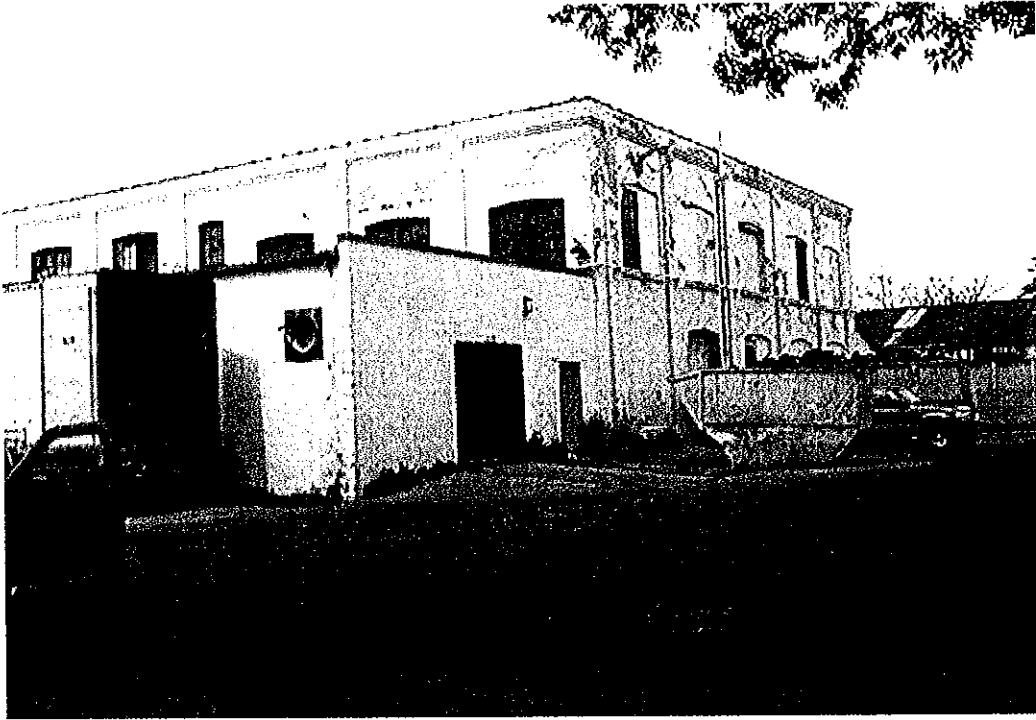


Photo 1. Tire recycling operations at the rear of the main building, looking northeast.



Photo 2. Front of Site, looking southwest along Sydenham Street.

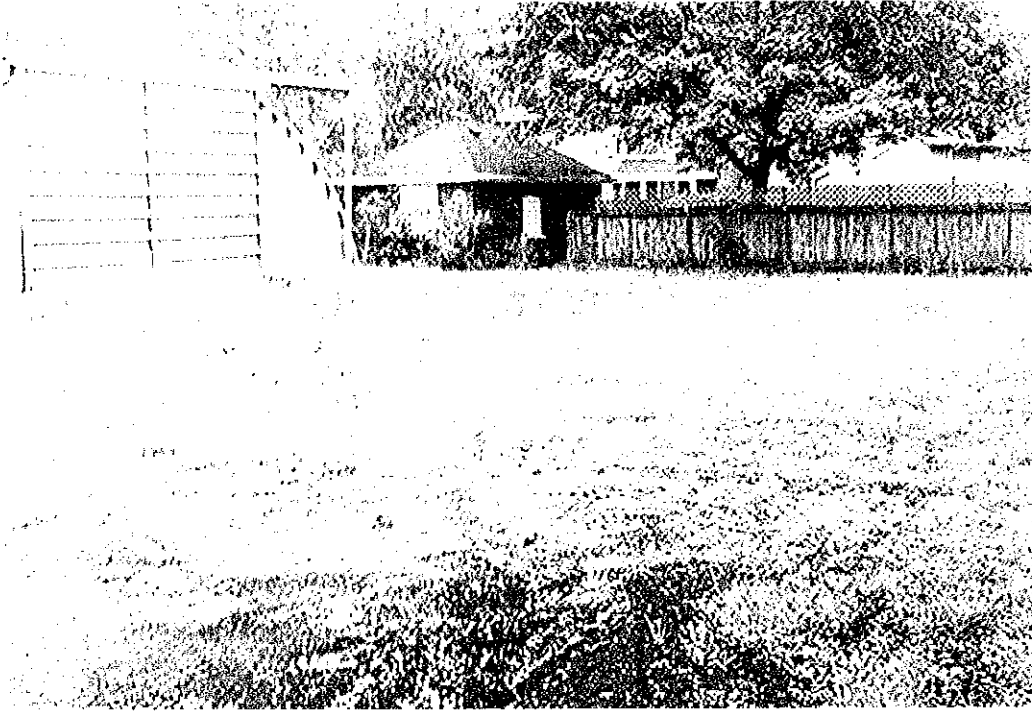


Photo 5. Area under investigation, depressed section west of Quonset hut.

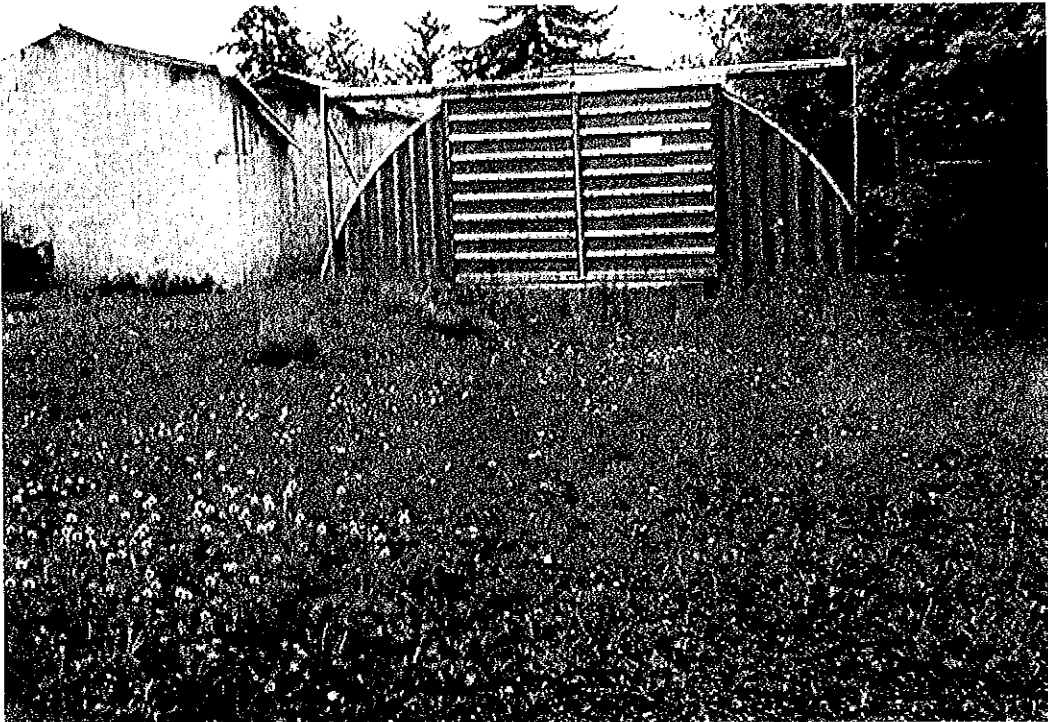


Photo 6. Area under investigation, looking east.

APPENDIX C
STRATIGRAPHIC LOGS

STRATIGRAPHIC LOG

| | |
|-----------------------------------------------------|------------------------|
| PROJECT: ██████████ Facility, Brantford, Ontario | BORING NO. MW-1 |
| DRILLING CONTRACTOR: Strata Drilling Inc. | DATE STARTED: 8/4/04 |
| DRILLING METHOD: Direct Push Technique | DATE FINISHED: 8/4/04 |
| DRILLING EQUIPMENT: Geoprobe 540B | TOTAL DEPTH: 3.8 m BGS |
| SAMPLING METHOD: 4-ft Macrocore PVC Liners, 1.5" ID | LOGGED BY: T. Grygaski |

| DEPTH (m BGS) | SAMPLES No. | SAMPLE Sample Interval (m BGS) | BLOW Count | ANALYSIS Sample Analysis | DESCRIPTION USCS Symbol: NAME, colour, moisture, consistency, plasticity, etc. | WELL CONSTRUCTION DETAILS |
|------------------|----------------|--------------------------------------|---------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 0.0 | 1 | | | | SP: GRAVELY SAND, light gray/brown, moist, loose | Flush-Mount Casing Top of Well End Cap 0.07 m BGS |
| 0.3 | | | | 0.3 PAHs, O&G | - same except POORLY-GRADED SAND, fine to medium sand, trace coarse sand | Sakrete Concrete Seal 0 to 0.3 m BGS Benseal Bentonite Plug 0.3 to 0.6 m BGS |
| 0.6 | | | | 0.6 | - same except GRAVELY SAND | No. 1 Silica Sand Pack 0.6 to 1.5 m BGS |
| 0.9 | | 0.96 | | | | 20-mm PVC Riser Pipe 0 to 0.76 m BGS 20-mm Well Screen No. 10 PVC 0.76 to 3.8 m BGS |
| 1.2 | 2 | | | NA | - same except POORLY-GRADED SAND (as above) - same except GRAVELY SAND - note: 0.1 m lens of WELL-GRADED SAND (SW) at 1.6 m BGS | Natural Sand Pack 1.5 to 3.8 m BGS |
| 1.5 | | | | | | |
| 1.8 | | | | | - same except wet | Depth to Water 2.0 m BGS |
| 2.1 | | 2.2 | | | | |
| 2.4 | 3 | | | NA | SW: WELL-GRADED SAND, some gravel, light gray/brown, wet, loose | 50-mm Borehole |
| 2.7 | | | | | CL: GRAVELY CLAY, some gravel, light brown/gray, wet, soft | |
| 3.0 | | | | | | |
| 3.3 | | 3.4 | | | | |
| 3.6 | | | | | | Expendable Steel Point End of Borehole - 3.8 m BGS |
| 3.9 | | | | | | |
| 4.2 | | | | | | |
| 4.5 | | | | | | |
| 4.8 | | | | | | |
| 5.0 | | | | | | |

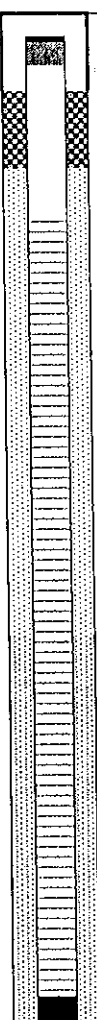
STRATIGRAPHIC LOG

| | |
|-----------------------------------------------------|------------------------|
| PROJECT: [REDACTED] Facility, Brantford, Ontario | BORING NO. MW-2 |
| DRILLING CONTRACTOR: Strata Drilling Inc. | DATE STARTED: 8/4/04 |
| DRILLING METHOD: Direct Push Technique | DATE FINISHED: 8/4/04 |
| DRILLING EQUIPMENT: Geoprobe 540B | TOTAL DEPTH: 3.8 m BGS |
| SAMPLING METHOD: 4-ft Macrocore PVC Liners, 1.5" ID | LOGGED BY: T. Grygaski |

| DEPTH (m BGS) | SAMPLES | | | | | DESCRIPTION USCS Symbol: NAME, colour, moisture, consistency, plasticity, etc. | WELL CONSTRUCTION DETAILS | |
|------------------|---------|--------|----------------------------|------------|-----------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|
| | No. | Sample | Sample Interval (m BGS) | Blow Count | Sample Analysis | | | |
| 0.0 | 1 | | | | NA | SP: GRAVELY SAND, light gray/brown, moist, loose | Flush-Mount Casing Top of Well End Cap 0.07 m BGS | Ground Surface Sakrete Concrete Seal 0 to 0.3 m BGS |
| 0.3 | | | | | | - same except POORLY-GRADED SAND, fine to medium sand, trace coarse sand | | Benseal Bentonite Plug 0.3 to 0.6 m BGS |
| 0.6 | | | | | | - same except GRAVELY SAND | 20-mm PVC Riser Pipe 0 to 0.76 m BGS | No. 1 Silica Sand Pack 0.6 to 1.7 m BGS |
| 0.9 | | | 0.96 | | | | 20-mm Well Screen No. 10 PVC 0.76 to 3.8 m BGS | |
| 1.2 | 2 | | | | NA | - same except some coarse sand | | |
| 1.5 | | | | | 1.7 | | | |
| 1.8 | | | | | PAHs, O&G | - same except wet | | Natural Sand Pack 1.7 to 3.8 m BGS |
| 2.1 | | | 2.2 | | 2.0 | | Depth to Water 2.0 m BGS | |
| 2.4 | 3 | | | | NA | SW: WELL-GRADED SAND, some gravel, light gray/brown, wet, loose | | 50-mm Borehole |
| 2.7 | | | | | | | | |
| 3.0 | | | | | | CL: GRAVELY CLAY, some fine sand, light brown, wet, soft ML: CLAYEY SILT, light gray, wet, stiff | | |
| 3.3 | | | 3.4 | | | | | |
| 3.6 | | | | | | | | |
| 3.9 | | | | | | | Expendable Steel Point End of Borehole - 3.8 m BGS | |
| 4.2 | | | | | | | | |
| 4.5 | | | | | | | | |
| 4.8 | | | | | | | | |
| 5.0 | | | | | | | | |

STRATIGRAPHIC LOG

| | |
|-----------------------------------------------------|------------------------|
| PROJECT: ██████████ Facility, Brantford, Ontario | BORING NO. MW-3 |
| DRILLING CONTRACTOR: Strata Drilling Inc. | DATE STARTED: 8/4/04 |
| DRILLING METHOD: Direct Push Technique | DATE FINISHED: 8/4/04 |
| DRILLING EQUIPMENT: Geoprobe 540B | TOTAL DEPTH: 3.8 m BGS |
| SAMPLING METHOD: 4-ft Macrocore PVC Liners, 1.5" ID | LOGGED BY: T. Grygaski |

| DEPTH (m BGS) | SAMPLES | | | | | DESCRIPTION USCS Symbol: NAME, colour, moisture, consistency, plasticity, etc. | WELL CONSTRUCTION DETAILS | |
|------------------|---------|--------|----------------------------|------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------|
| | No. | Sample | Sample Interval (m BGS) | Blow Count | Sample Analysis | | | |
| 0.0 | 1 | | | | NA | SP: GRAVELY SAND, light gray/brown, moist, loose - same except POORLY-GRADED SAND, fine to medium sand, trace coarse sand and gravel | Flush-Mount Casing | Ground Surface |
| 0.3 | | | | | | | Top of Well End Cap 0.07 m BGS | Sakrete Concrete Seal 0 to 0.3 m BGS |
| 0.6 | | | | | | - same except GRAVELY SAND, some coarse gravel | 20-mm PVC Riser Pipe 0 to 0.76 m BGS | Benseal Bentonite Plug 0.3 to 0.6 m BGS |
| 0.9 | | | 0.96 | | | | 20-mm Well Screen No. 10 PVC 0.76 to 3.8 m BGS | No. 1 Silica Sand Pack 0.6 to 2.4 m BGS |
| 1.2 | 2 | | | | NA | - same except wet |  | 50-mm Borehole |
| 1.5 | | | | | 1.5 PAHs, O&G | | | |
| 1.8 | | | | | 1.8 | | --- Depth to Water --- 2.0 m BGS | |
| 2.1 | | | | | | - same except MEDIUM SAND, trace fine and coarse sand, light gray, wet, loose | | Natural Sand Pack 2.4 to 3.8 m BGS |
| 2.4 | 3 | | 2.2 | | NA | | | |
| 2.7 | | | | | | CL: SANDY/GRAVELY CLAY, graded sand and gravel till, light brown/gray, wet, soft ML: CLAYEY SILT, light brown/gray, wet, stiff | | |
| 3.0 | | | | | | | | |
| 3.3 | | | | | | | | |
| 3.6 | | | 3.4 | | | | Expendable Steel Point | |
| 3.9 | | | | | | | End of Borehole - 3.8 m BGS | |
| 4.2 | | | | | | | | |
| 4.5 | | | | | | | | |
| 4.8 | | | | | | | | |
| 5.0 | | | | | | | | |

STRATIGRAPHIC LOG

| | |
|-----------------------------------------------------|------------------------|
| PROJECT: ██████████ Facility, Brantford, Ontario | BORING NO. BH-4 |
| DRILLING CONTRACTOR: Strata Drilling Inc. | DATE STARTED: 8/4/04 |
| DRILLING METHOD: Direct Push Technique | DATE FINISHED: 8/4/04 |
| DRILLING EQUIPMENT: Geoprobe 540B | TOTAL DEPTH: 3.8 m BGS |
| SAMPLING METHOD: 4-ft Macrocore PVC Liners, 1.5" ID | LOGGED BY: T. Grygaski |

| DEPTH (m BGS) | SAMPLES | | | | | DESCRIPTION USCS Symbol: NAME, colour, moisture, consistency, plasticity, etc. | WELL CONSTRUCTION DETAILS |
|------------------|---------|--------|----------------------------|---------------------|-----------------|------------------------------------------------------------------------------------------|---------------------------|
| | No. | Sample | Sample Interval (m BGS) | Blow Count | Sample Analysis | | |
| 0.0 | 1 | | | | | SP: GRAVELY SAND, light gray/brown, moist, loose - same except FINE SAND | No Well Installation |
| 0.3 | | | | 0.2 PAHs, O&G | | | |
| 0.6 | | | | 0.3 | | | |
| 0.9 | | | 0.90 | | | | |
| 1.2 | 2 | | | | NA | | |
| 1.5 | | | | | | -same except GRAVELY SAND, fine to coarse sand | |
| 1.8 | | | | | | | |
| 2.1 | | | 2.1 | | | | |
| 2.4 | 3 | | | | NA | - same except MEDIUM SAND, trace gravel at 3.0 m BGS, gray, wet, loose | |
| 2.7 | | | | | | | |
| 3.0 | | | | | | ML: CLAYEY SILT, light brown/gray, wet, stiff | |
| 3.3 | | | 3.4 | | | | |
| 3.6 | | | | | | | |
| 3.9 | | | | | | | |
| 4.2 | | | | | | | |
| 4.5 | | | | | | | |
| 4.8 | | | | | | | |
| 5.0 | | | | | | | |

APPENDIX D
LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

GEOMATRIX CONSULTANTS
ATTN: DREW STOLTZ
420 WEBER STREET N UNIT G
WATERLOO ON N2L 4E7

DATE: 13-AUG-04 01:45 PM

Lab Work Order #: L194606

Sampled By:

Date Received: 05-AUG-04

Project P.O. #:

Project Reference: W00432

Comments:

APPROVED BY: 

GLENN A PIKE

Project Manager

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ANY REMAINING SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

LABORATORY ACCREDITATIONS:

- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL) FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)
- AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG)

LABORATORY RECOGNITIONS:

- STANDARDS COUNCIL OF CANADA - GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

ENVIRO-TEST ANALYTICAL REPORT

| Sample Details/Parameters | Result | Qualifier | D.L. | Units | Extracted | Analyzed | By | Batch |
|------------------------------|--------|-----------|--------|-------|-----------|-----------|-----|---------|
| L194606-3 BH3-5-6 | | | | | | | | |
| Sample Date: 04-AUG-04 16:00 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| % Moisture | 3.3 | | 0.5 | % | 10-AUG-04 | 10-AUG-04 | SH | R207462 |
| Oil and Grease, Total | 200 | | 100 | mg/kg | 06-AUG-04 | 10-AUG-04 | ECH | R208541 |
| PAH Compounds in Soil | | | | | | | | |
| Acenaphthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Acenaphthylene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(a)anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(a)pyrene | <0.02 | | 0.02 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(b)fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(g,h,i)perylene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(k)fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Chrysene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Dibenzo(ah)anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Fluorene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Indeno(1,2,3-cd)pyrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Naphthalene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Phenanthrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Pyrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Surr: 2-Fluorobiphenyl | 79 | | 50-150 | % | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Surr: p-Terphenyl d14 | 95 | | 50-150 | % | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| L194606-4 BH4-0.5-1 | | | | | | | | |
| Sample Date: 04-AUG-04 17:00 | | | | | | | | |
| Matrix: SOIL | | | | | | | | |
| % Moisture | 6.3 | | 0.5 | % | 10-AUG-04 | 10-AUG-04 | SH | R207462 |
| Oil and Grease, Total | <100 | | 100 | mg/kg | 06-AUG-04 | 10-AUG-04 | ECH | R208541 |
| PAH Compounds in Soil | | | | | | | | |
| Acenaphthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Acenaphthylene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(a)anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(a)pyrene | <0.02 | | 0.02 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(b)fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(g,h,i)perylene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Benzo(k)fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Chrysene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Dibenzo(ah)anthracene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Fluoranthene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Fluorene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Indeno(1,2,3-cd)pyrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Naphthalene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Phenanthrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Pyrene | <0.05 | | 0.05 | mg/kg | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Surr: 2-Fluorobiphenyl | 77 | | 50-150 | % | 09-AUG-04 | 11-AUG-04 | AS | R207792 |
| Surr: p-Terphenyl d14 | 89 | | 50-150 | % | 09-AUG-04 | 11-AUG-04 | AS | R207792 |

Refer to Referenced Information for Qualifiers (if any) and Methodology:

Reference Information

Methods Listed (if applicable):

| ETL Test Code | Matrix | Test Description | Preparation Method Reference(Based On) | Analytical Method Reference(Based On) |
|---------------|--------|--------------------------------|----------------------------------------|---------------------------------------|
| MOISTURE-WT | Soil | % Moisture | | Gravimetric: Oven Dried |
| OGG-TOT-WT | Soil | Gravimetric Heavy Hydrocarbons | | Contam. Sites |
| PAH-WT | Soil | PAH Compounds in Soil | | SW486 8270 |

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

| Laboratory Definition Code | Laboratory Location | Laboratory Definition Code | Laboratory Location |
|----------------------------|--------------------------------------------------------------|----------------------------|---------------------|
| WT | Enviro-Test Laboratories - Waterloo (Sentinel), Ontario, Can | | |

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.

The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

< - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

Enviro-Test Laboratories has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, Enviro-Test Laboratories assumes no liability for the use or interpretation of the results.

Enviro-Test Quality Control Report

Workorder: L194606

Client: GEOMATRIX CONSULTANTS
420 WEBER STREET N UNIT G
WATERLOO ON N2L 4E7

Contact: DREW STOLTZ

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|-------------|-----------|--------|-----------|-------|-----|--------|-----------|
| MOISTURE-WT | | | | | | | | |
| | <u>Soil</u> | | | | | | | |
| Batch | R207462 | | | | | | | |
| WG210783-1 | DUP | L194606-4 | | | | | | |
| % Moisture | | 6.3 | 7.4 | | % | 16 | 20 | 10-AUG-04 |
| WG210783-2 | MB | | | | | | | |
| % Moisture | | | <0.5 | | % | | 0.5 | 10-AUG-04 |
| OGG-TOT-WT | | | | | | | | |
| | <u>Soil</u> | | | | | | | |
| Batch | R208541 | | | | | | | |
| WG211034-2 | LCS | | | | | | | |
| Oil and Grease, Total | | | 101 | | % | | 70-130 | 10-AUG-04 |
| WG211034-1 | MB | | | | | | | |
| Oil and Grease, Total | | | <100 | | mg/kg | | 100 | 10-AUG-04 |
| PAH-WT | | | | | | | | |
| | <u>Soil</u> | | | | | | | |
| Batch | R207792 | | | | | | | |
| WG212100-1 | CVS | | | | | | | |
| Acenaphthene | | | 118 | | % | | 70-130 | 10-AUG-04 |
| Acenaphthylene | | | 119 | | % | | 70-130 | 10-AUG-04 |
| Anthracene | | | 119 | | % | | 70-130 | 10-AUG-04 |
| Benzo(a)anthracene | | | 147 | G | % | | 70-130 | 10-AUG-04 |
| Benzo(a)pyrene | | | 120 | | % | | 70-130 | 10-AUG-04 |
| Benzo(b)fluoranthene | | | 131 | H | % | | 70-130 | 10-AUG-04 |
| Benzo(g,h,i)perylene | | | 131 | H | % | | 70-130 | 10-AUG-04 |
| Benzo(k)fluoranthene | | | 120 | | % | | 70-130 | 10-AUG-04 |
| Chrysene | | | 130 | | % | | 70-130 | 10-AUG-04 |
| Dibenzo(ah)anthracene | | | 140 | H | % | | 70-130 | 10-AUG-04 |
| Fluoranthene | | | 129 | | % | | 70-130 | 10-AUG-04 |
| Fluorene | | | 126 | | % | | 70-130 | 10-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | 133 | H | % | | 70-130 | 10-AUG-04 |
| Naphthalene | | | 125 | | % | | 70-130 | 10-AUG-04 |
| Phenanthrene | | | 129 | | % | | 70-130 | 10-AUG-04 |
| Pyrene | | | 133 | H | % | | 70-130 | 10-AUG-04 |
| WG211683-2 | LCS | | | | | | | |
| Acenaphthene | | | 79 | | % | | 70-130 | 11-AUG-04 |
| Acenaphthylene | | | 77 | | % | | 70-130 | 11-AUG-04 |
| Anthracene | | | 77 | | % | | 70-130 | 11-AUG-04 |
| Benzo(a)anthracene | | | 86 | | % | | 70-130 | 11-AUG-04 |

Enviro-Test Quality Control Report

Workorder: L194606

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|-------------|-----------|--------|-----------|-------|-----|--------|-----------|
| PAH-WT | Soil | | | | | | | |
| Batch | R207792 | | | | | | | |
| WG211683-2 | LCS | | | | | | | |
| Benzo(a)pyrene | | | 74 | | % | | 70-130 | 11-AUG-04 |
| Benzo(b)fluoranthene | | | 89 | | % | | 70-130 | 11-AUG-04 |
| Benzo(g,h,i)perylene | | | 94 | | % | | 70-130 | 11-AUG-04 |
| Benzo(k)fluoranthene | | | 82 | | % | | 70-130 | 11-AUG-04 |
| Chrysene | | | 83 | | % | | 70-130 | 11-AUG-04 |
| Dibenzo(ah)anthracene | | | 85 | | % | | 70-130 | 11-AUG-04 |
| Fluoranthene | | | 80 | | % | | 70-130 | 11-AUG-04 |
| Fluorene | | | 79 | | % | | 70-130 | 11-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | 89 | | % | | 70-130 | 11-AUG-04 |
| Naphthalene | | | 79 | | % | | 70-130 | 11-AUG-04 |
| Phenanthrene | | | 82 | | % | | 70-130 | 11-AUG-04 |
| Pyrene | | | 82 | | % | | 70-130 | 11-AUG-04 |
| WG211683-1 | MB | | | | | | | |
| Acenaphthene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Acenaphthylene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Anthracene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Benzo(a)anthracene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Benzo(a)pyrene | | | <0.02 | | mg/kg | | 0.02 | 10-AUG-04 |
| Benzo(b)fluoranthene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Benzo(g,h,i)perylene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Benzo(k)fluoranthene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Chrysene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Dibenzo(ah)anthracene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Fluoranthene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Fluorene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Naphthalene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Phenanthrene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |
| Pyrene | | | <0.05 | | mg/kg | | 0.05 | 10-AUG-04 |

Product - Batch and Sample Number Relations:

| | | | | | |
|-------------|---|-----------|-----------|-----------|-----------|
| MOISTURE-WT | 2 | | | | |
| R207462 | | L194606-1 | L194606-2 | L194606-3 | L194606-4 |
| OGG-TOT-WT | 2 | | | | |
| R208541 | | L194606-1 | L194606-2 | L194606-3 | L194606-4 |
| PAH-WT | 2 | | | | |
| R207792 | | L194606-1 | L194606-2 | L194606-3 | L194606-4 |

ENVIRO-TEST QC REPORT

Page 3 of 3

Workorder # L194606

Legend:

Limit 95% Confidence Interval (Laboratory Warning Limits)
DUP Duplicate
RPD Relative Percent Difference
N/A Not Available
LCS Laboratory Control Sample
SRM Standard Reference Materials
MS Matrix Spike
MSD Matrix Spike Duplicate
ADE Average Desorption Efficiency
MB Method Blank
IRM Internal Reference Material
CRM Certified Reference Material
CCV Continuing Calibration Verification
CVS Calibration Verification Standard
LCSD Laboratory Control Sample Duplicate

Qualifier:

RPD-NA Relative Percent Difference Not Available due to result(s) being less than detection limit.
A Method blank exceeds acceptance limit. Blank correction not applied, unless the qualifier "RAMB" (result adjusted for method blank) appears in the Analytical Report.
B Method blank result exceeds acceptance limit, however, it is less than 5% of sample concentration. Blank correction not applied.
E Matrix spike recovery may fall outside the acceptance limits due to high sample background.
F Silver recovery low, likely due to elevated choride levels in sample.
G Outlier - No assignable cause for nonconformity has been determined.
H Result falls within the 99% Confidence Interval (Laboratory Control Limits)
J Duplicate results and limit(s) are expressed in terms of absolute difference.
K The sample referenced above is of a non-standard matrix type; standard QC acceptance criteria may not be achievable.

ANALYTICAL REPORT

GEOMATRIX CONSULTANTS

DATE: 16-AUG-04 04:42 PM

Revision: 1

ATTN: DREW STOLTZ

420 WEBER STREET N UNIT G

WATERLOO ON N2L 4E7

Lab Work Order #: L195708

Sampled By:

Date Received: 10-AUG-04

Project P.O. #:

Project Reference: W00432

Comments:

APPROVED BY: 

GLENN A PIKE

Project Manager

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ANY REMAINING SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

LABORATORY ACCREDITATIONS:

- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN ASSOCIATION FOR ENVIRONMENTAL ANALYTICAL LABORATORIES (CAEAL) FOR SPECIFIC TESTS AS REGISTERED BY THE COUNCIL (EDMONTON, CALGARY, GRANDE PRAIRIE, SASKATOON, WINNIPEG, THUNDER BAY, WATERLOO)
- AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA) IN THE INDUSTRIAL HYGIENE PROGRAM (EDMONTON, WINNIPEG)
- STANDARDS COUNCIL OF CANADA IN COOPERATION WITH THE CANADIAN FOOD INSPECTION AGENCY (CFIA) FOR FERTILIZER AND FEED TESTING (SASKATOON) AND FOR MICROBIOLOGICAL TESTING IN FOOD (WINNIPEG)

LABORATORY RECOGNITIONS:

- STANDARDS COUNCIL OF CANADA - GLP COMPLIANT FACILITY (EDMONTON, OTTAWA)

ENVIRO-TEST ANALYTICAL REPORT

| Sample Details/Parameters | Result | Qualifier | D.L. | Units | Extracted | Analyzed | By | Batch |
|-----------------------------------------------------------------|--------|-----------|--------|-------|-----------|-----------|-----|---------|
| L195708-1 MW-1 Sample Date: 09-AUG-04 13:55 Matrix: WATER | | | | | | | | |
| Oil and Grease, Total | <2 | | 2 | mg/L | 10-AUG-04 | 16-AUG-04 | SAH | R209189 |
| Polyaromatic Hydrocarbons (PAHs) | | | | | | | | |
| Acenaphthene | 0.08 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Acenaphthylene | 0.08 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Anthracene | 0.18 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)anthracene | 0.57 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)pyrene | 0.50 | | 0.01 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(b)fluoranthene | 0.36 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(g,h,i)perylene | 0.34 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(k)fluoranthene | 0.35 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Chrysene | 0.60 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Dibenzo(ah)anthracene | 0.11 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluoranthene | 1.39 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluorene | 0.08 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Indeno(1,2,3-cd)pyrene | 0.46 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Naphthalene | 0.18 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Phenanthrene | 0.83 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Pyrene | 1.16 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Surr: d14-Terphenyl | 49 | H | 50-150 | % | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| L195708-2 MW-2 Sample Date: 09-AUG-04 13:55 Matrix: WATER | | | | | | | | |
| Oil and Grease, Total | <2 | | 2 | mg/L | 10-AUG-04 | 16-AUG-04 | SAH | R209189 |
| Polyaromatic Hydrocarbons (PAHs) | | | | | | | | |
| Acenaphthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Acenaphthylene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Anthracene | 0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)anthracene | 0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)pyrene | 0.01 | | 0.01 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(b)fluoranthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(g,h,i)perylene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(k)fluoranthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Chrysene | 0.06 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Dibenzo(ah)anthracene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluoranthene | 0.07 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluorene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Indeno(1,2,3-cd)pyrene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Naphthalene | 0.13 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Phenanthrene | 0.07 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Pyrene | 0.07 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Surr: d14-Terphenyl | 53 | | 50-150 | % | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| L195708-3 MW-3 Sample Date: 09-AUG-04 13:55 Matrix: WATER | | | | | | | | |
| Oil and Grease, Total | <2 | | 2 | mg/L | 10-AUG-04 | 16-AUG-04 | SAH | R209189 |
| Polyaromatic Hydrocarbons (PAHs) | | | | | | | | |
| Acenaphthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Acenaphthylene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |

ENVIRO-TEST ANALYTICAL REPORT

| Sample Details/Parameters | Result | Qualifier | D.L. | Units | Extracted | Analyzed | By | Batch |
|-------------------------------------------------------------------------|--------|-----------|--------|-------|-----------|-----------|----|---------|
| L195708-3 MW-3 | | | | | | | | |
| Sample Date: 09-AUG-04 13:55 | | | | | | | | |
| Matrix: WATER | | | | | | | | |
| Polyaromatic Hydrocarbons (PAHs) | | | | | | | | |
| Anthracene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)anthracene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(a)pyrene | <0.01 | | 0.01 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(b)fluoranthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(g,h,i)perylene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Benzo(k)fluoranthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Chrysene | 0.03 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Dibenzo(ah)anthracene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluoranthene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Fluorene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Indeno(1,2,3-cd)pyrene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Naphthalene | 0.07 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Phenanthrene | 0.03 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Pyrene | <0.02 | | 0.02 | ug/L | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Surr: d14-Terphenyl | 69 | | 50-150 | % | 11-AUG-04 | 13-AUG-04 | AS | R209114 |
| Refer to Referenced Information for Qualifiers (if any) and Methodology | | | | | | | | |

Reference Information

Sample Parameter Qualifier key listed:

| Qualifier | Description |
|-----------|-----------------------------------------------------------------------------|
| H | Result falls within the 99% Confidence Interval (Laboratory Control Limits) |

Methods Listed (if applicable):

| ETL Test Code | Matrix | Test Description | Preparation Method Reference(Based On) | Analytical Method Reference(Based On) |
|---------------|--------|----------------------------------|----------------------------------------|---------------------------------------|
| OGG-TOT-WT | Water | Oil and Grease, Total | | APHA 5520 B-Hexane Gravimetric |
| PAH-WT | Water | Polyaromatic Hydrocarbons (PAHs) | | SW486 8270 (PAH) |

** Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

| Laboratory Definition Code | Laboratory Location | Laboratory Definition Code | Laboratory Location |
|----------------------------|--------------------------------------------------------------|----------------------------|---------------------|
| WT | Enviro-Test Laboratories - Waterloo (Sentinel), Ontario, Can | | |

GLOSSARY OF REPORT TERMS

Surr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in environmental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds. The reported surrogate recovery value provides a measure of method efficiency. The Laboratory warning units are determined under column heading D.L.

mg/kg (units) - unit of concentration based on mass, parts per million

mg/L (units) - unit of concentration based on volume, parts per million

< - Less than

D.L. - Detection Limit

N/A - Result not available. Refer to qualifier code and definition for explanation

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

UNLESS OTHERWISE STATED, SAMPLES ARE NOT CORRECTED FOR CLIENT FIELD BLANKS.

Although test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

Enviro-Test Laboratories has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by checks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus cannot be guaranteed, Enviro-Test Laboratories assumes no liability for the use or interpretation of the results.

Enviro-Test Quality Control Report

Workorder: L195708

Client: GEOMATRIX CONSULTANTS
 420 WEBER STREET N UNIT G
 WATERLOO ON N2L 4E7

Contact: DREW STOLTZ

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|----------------|------------------|--------|-----------|-------|-----|--------|-----------|
| OJGG-TOT-WT | | | | | | | | |
| | <u>Water</u> | | | | | | | |
| Batch | R209189 | | | | | | | |
| WG212243-4 | DUP | L195810-1 | | | | | | |
| Oil and Grease, Total | | 443 | 363 | | mg/L | 20 | 30 | 16-AUG-04 |
| WG212243-2 | LCS | | | | | | | |
| Oil and Grease, Total | | | 86 | | % | | 70-130 | 16-AUG-04 |
| WG212243-1 | MB | | | | | | | |
| Oil and Grease, Total | | | <2 | | mg/L | | 2 | 16-AUG-04 |
| PAH-WT | | | | | | | | |
| | <u>Water</u> | | | | | | | |
| Batch | R209114 | | | | | | | |
| WG213316-1 | CVS | | | | | | | |
| Acenaphthene | | | 109 | | % | | 70-130 | 13-AUG-04 |
| Acenaphthylene | | | 104 | | % | | 70-130 | 13-AUG-04 |
| Anthracene | | | 111 | | % | | 70-130 | 13-AUG-04 |
| Benzo(a)anthracene | | | 107 | | % | | 70-130 | 13-AUG-04 |
| Benzo(a)pyrene | | | 94 | | % | | 70-130 | 13-AUG-04 |
| Benzo(b)fluoranthene | | | 76 | | % | | 70-130 | 13-AUG-04 |
| Benzo(g,h,i)perylene | | | 108 | | % | | 70-130 | 13-AUG-04 |
| Benzo(k)fluoranthene | | | 113 | | % | | 70-130 | 13-AUG-04 |
| Dibenzo(ah)anthracene | | | 92 | | % | | 70-130 | 13-AUG-04 |
| Fluoranthene | | | 125 | | % | | 70-130 | 13-AUG-04 |
| Fluorene | | | 119 | | % | | 70-130 | 13-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | 77 | | % | | 70-130 | 13-AUG-04 |
| Naphthalene | | | 121 | | % | | 70-130 | 13-AUG-04 |
| Phenanthrene | | | 121 | | % | | 70-130 | 13-AUG-04 |
| Pyrene | | | 123 | | % | | 70-130 | 13-AUG-04 |
| Chrysene | | | 136 | | % | | 70-140 | 13-AUG-04 |
| WG212721-2 | LCS | | | | | | | |
| Acenaphthene | | | 127 | | % | | 70-130 | 13-AUG-04 |
| Benzo(a)pyrene | | | 125 | | % | | 70-130 | 13-AUG-04 |
| Benzo(b)fluoranthene | | | 110 | | % | | 70-130 | 13-AUG-04 |
| Dibenzo(ah)anthracene | | | 121 | | % | | 70-130 | 13-AUG-04 |
| Fluorene | | | 124 | | % | | 70-130 | 13-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | 102 | | % | | 70-130 | 13-AUG-04 |
| Naphthalene | | | 115 | | % | | 70-130 | 13-AUG-04 |
| Phenanthrene | | | 123 | | % | | 70-130 | 13-AUG-04 |

Enviro-Test Quality Control Report

Workorder: L195708

| Test | Matrix | Reference | Result | Qualifier | Units | RPD | Limit | Analyzed |
|------------------------|--------------|-----------|--------|-----------|-------|-----|--------|-----------|
| PAH-WT | Water | | | | | | | |
| Batch | R209114 | | | | | | | |
| WG212721-2 | LCS | | | | | | | |
| Acenaphthylene | | | 139 | | % | | 70-140 | 13-AUG-04 |
| Anthracene | | | 139 | | % | | 70-140 | 13-AUG-04 |
| Benzo(a)anthracene | | | 147 | | % | | 70-150 | 13-AUG-04 |
| Benzo(g,h,i)perylene | | | 139 | | % | | 70-140 | 13-AUG-04 |
| Benzo(k)fluoranthene | | | 143 | | % | | 70-150 | 13-AUG-04 |
| Chrysene | | | 152 | | % | | 70-160 | 13-AUG-04 |
| Fluoranthene | | | 150 | | % | | 70-160 | 13-AUG-04 |
| Pyrene | | | 141 | | % | | 70-150 | 13-AUG-04 |
| WG212721-1 | MB | | | | | | | |
| Acenaphthene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Acenaphthylene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Anthracene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Benzo(a)anthracene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Benzo(a)pyrene | | | <0.01 | | ug/L | | 0.01 | 13-AUG-04 |
| Benzo(b)fluoranthene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Benzo(g,h,i)perylene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Benzo(k)fluoranthene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Chrysene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Dibenzo(ah)anthracene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Fluoranthene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Fluorene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Indeno(1,2,3-cd)pyrene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Naphthalene | | | 0.03 | A | ug/L | | 0.02 | 13-AUG-04 |
| Phenanthrene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |
| Pyrene | | | <0.02 | | ug/L | | 0.02 | 13-AUG-04 |

Product - Batch and Sample Number Relations:

| | | | | |
|------------|---|-----------|-----------|-----------|
| OGG-TOT-WT | 1 | | | |
| R209189 | | L195708-1 | L195708-2 | L195708-3 |
| PAH-WT | 1 | | | |
| R209114 | | L195708-1 | L195708-2 | L195708-3 |

Workorder # L195708

Legend:

- Limit 95% Confidence Interval (Laboratory Warning Limits)
- DUP Duplicate
- RPD Relative Percent Difference
- N/A Not Available
- LCS Laboratory Control Sample
- SRM Standard Reference Materials
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- ADE Average Desorption Efficiency
- MB Method Blank
- IRM Internal Reference Material
- CRM Certified Reference Material
- CCV Continuing Calibration Verification
- CVS Calibration Verification Standard
- LCSD Laboratory Control Sample Duplicate

Qualifier:

- RPD-NA Relative Percent Difference Not Available due to result(s) being less than detection limit.
- A Method blank exceeds acceptance limit. Blank correction not applied, unless the qualifier "RAMB" (result adjusted for method blank) appears in the Analytical Report.
- B Method blank result exceeds acceptance limit, however, it is less than 5% of sample concentration. Blank correction not applied.
- E Matrix spike recovery may fall outside the acceptance limits due to high sample background.
- F Silver recovery low, likely due to elevated chloride levels in sample.
- G Outlier - No assignable cause for nonconformity has been determined.
- H Result falls within the 99% Confidence Interval (Laboratory Control Limits)
- J Duplicate results and limit(s) are expressed in terms of absolute difference.
- K The sample referenced above is of a non-standard matrix type; standard QC acceptance criteria may not be achievable.

