

File No.: 04-1000-20-2017-368

October 25, 2017

s.22(1)

Dear s.22(1)

Re: Request for Access to Records under the Freedom of Information and Protection of Privacy Act (the "Act")

I am responding to your request of October 3, 2017 for:

Information regarding a tank pull report containing analytical results for the work completed at 8420 Oak Street, Permit was issued on June 2010.

All responsive records are attached. Some information in the records has been severed, (blacked out), under s.22(1) of the Act. You can read or download this section here: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/96165_00

Under section 52 of the Act you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your request. The Act allows you 30 business days from the date you receive this notice to request a review by writing to: Office of the Information & Privacy Commissioner, info@oipc.bc.ca or by phoning 250-387-5629.

If you request a review, please provide the Commissioner's office with: 1) the request number assigned to your request (#04-1000-20-2017-368); 2) a copy of this letter; 3) a copy of your original request for information sent to the City of Vancouver; and 4) detailed reasons or grounds on which you are seeking the review.

Please do not hesitate to contact the Freedom of Information Office at foi@vancouver.ca if you have any questions.

Yours truly,



Barbara J. Van Fraassen, BA
Director, Access to Information & Privacy

Barbara.vanfraassen@vancouver.ca
453 W. 12th Avenue Vancouver BC V5Y 1V4
Phone: 604.873.7999
Fax: 604.873.7419

Encl.

:kt

CITY OF VANCOUVER

DATE ISSUED JUNE 18, 2010		PERMIT TYPE FIRE PREVENTION DIVISION PERMIT				PERMIT NUMBER P FI 407950	
LEGAL DESCRIPTION BLK B PL 2010 LT I OF 32, DL 319 PLAN 2010 (cont'd)					ADDRESS 8420 OAK ST		
ADDITIONAL ADDRESS INFORMATION					SPECIFICS		
APPLICATION DATE JUN 18, 2010	PURPOSE REMOVAL	PROJECT VALUE	ASSESSED VALUE	PLANS	METRIC NO	PLACE NAME	
TEMPORARY PERMIT DATES		TEMPORARY USE DATES				SUBTYPE	
APPLICANT CONTRACTOR MILLENNIUM TANK & ENVIRONMENTAL 4484 BARKER ST BURNABY BC V5G 3C5					CONTACT 2		
CONTACT 1					CONTACT 3		
TEL 778-230-8743	BUSLICENSE 505518	TEL	BUSLICENSE	TEL	BUSLICENSE		
FAX	CERTIFICATE	FAX	CERTIFICATE	FAX	CERTIFICATE		

PURSUANT TO THE FIRE BY-LAW, THE FOLLOWING WORK IS HEREBY AUTHORIZED:

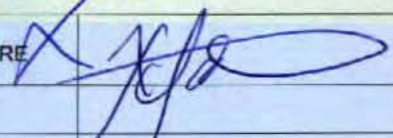
REMOVE ONE PETROLEUM TANK.

PERMIT CONDITIONS AND NOTES:

- 001 THE WORK UNDER THIS PERMIT IS AUTHORIZED PURSUANT TO THE FIRE BY-LAW.
- 010 For fuel dispensing site or known contamination site, clearance from Environmental Protection Branch.
- 025 If the work cannot be completed in the same day, the owner must follow the requirements of Section 8.2 of the Vancouver Building By-law for Protection of the Public and Fire Safety on fencing off construction sites.
- 030 For removal: the tanks, together with connected piping and dispensing equipment, shall have all combustible or flammable liquids removed. The tanks and piping must be removed from the ground and purged of vapours. The pipe ends must be permanently sealed by capping or plugging.
- 040 Tank removal must comply with subsection 4.10.3 of the Vancouver Fire By-law.
- 046 Written verification from applicant after work is completed to:
Attention: Customer Service Lieutenant, 201-456 W Broadway, Vancouver, B.C., V5Y 1R3
- 051 Phone the District Fire Inspector at 604-873-7595 for an inspection prior to backfilling. Please arrange for the inspection at least 24 hours in advance.

GENERAL USE	SPECIFICS/LOCATION	AREA (SF)	OCC	GENERAL USE	SPECIFICS/LOCATION	AREA (SF)	OCC
D30 ONE-FAM DWELLING			C				
ITEM	SPECIFICS/REFERENCE	QTY/AMT		ITEM	SPECIFICS/REFERENCE	QTY/AMT	
2010 OIL TANK		1	GU				
DOCUMENTS REQD BEFORE PERMIT IS COMPLETED INCLUDE :				FIRE COMPLETION			
APPROVALS REQD BEFORE PERMIT IS COMPLETED INCLUDE :				FIRE INSPECTION			

AS OWNER OR OWNERS' AGENT, I HAVE VERIFIED THAT THE INFORMATION CONTAINED WITHIN THIS DOCUMENT AND ASSOCIATED PLANS IS CORRECT, AND DESCRIBES A USE, A BUILDING OR A WORK WHICH COMPLIES WITH ALL RELEVANT BY-LAWS AND STATUTES. I ACKNOWLEDGE THAT RESPONSIBILITY FOR BY-LAW COMPLIANCE RESTS WITH THE OWNER AND THE OWNER'S EMPLOYEES, AGENTS AND CONTRACTORS. I WILL INDEMNIFY AND SAVE HARMLESS THE CITY OF VANCOUVER, ITS OFFICIALS, EMPLOYEES AND AGENTS AGAINST ALL CLAIMS, LIABILITIES AND EXPENSES OF EVERY KIND, IN RESPECT OF ANYTHING DONE OR NOT DONE PURSUANT TO THIS APPLICATION OR FACT SHEET OR ENSUING PERMIT, INCLUDING NEGLIGENCE AND/OR THE FAILURE TO OBSERVE ALL BY-LAWS, ACTS OR REGULATIONS.

FEE	AMOUNT	FEE	AMOUNT	SIGNATURE 
656 TANK - SFD	300.00			
INVOICE : 586614				DATE
TOTAL				ISSUED BY
				FOR THE
				FIRE CHIEF

PSD2000.01 REVISED FEB/08

Address to

Address Activities

Review/Inspection activity group	District	Department/branch responsible	Current status	Date open	Date complete
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Action Details

Date	Action by	Action	Action specifics	Reference
25 Jun 2010	M GURNEY	060 - OPEN GROUP	-	-
25 Jun 2010	M GURNEY	N30 - APPLICATION	01 - ROUTINE	FI - 407950
25 Jun 2010	M GURNEY	N12 - SOIL ASSESSMENT	01 - ROUTINE	-
25 Jun 2010	M GURNEY	R62 - INFORMATION RECVD	- SOIL CONTAMINATION	-
25 Jun 2010	M GURNEY	R32 - FOLLOW-UP REQUIRED	- ENV REPORT	-
25 Jun 2010	M GURNEY	993 - SEE INTERNAL NOTES	-	-
28 Sep 2010	M GURNEY	R62 - INFORMATION RECVD	- ENV REPORT	-
28 Sep 2010	M GURNEY	R90 - ACCEPTED	- REMEDIATED	-

Note Types

Note Type	Number of notes for this permit
 09 - INTERNAL NOTES	1

Notes

Number	Title	Included?	List seq	Updated By	Date Updated
 081	ENV PROTECTION INSPECTION		081	M GURNEY	28 Sep 2010
Phone message received from Xavier of Mellenium stating that the tank nest is contaminated. Env Report req'd.					
Env report recv'd ~ 65T of contaminated soil was removed to Sumas' soil remediation site. The tank nest is < res					
stds.					

**MILLENNIUM TANK AND ENVIRONMENTAL
LTD.**

**RESIDENTIAL UNDERGROUND STORAGE TANK REMOVAL
SUMMARY REPORT**

#
F1407950

s.22(1)

**8420 OAK STREET
VANCOUVER, BC
V6P 4B1**

PERMIT NO. 407 950



2000 L Sumas

UST to ALLIED SALVAGE

65 T to Sumas

< see also

*TU
Domino
4*

RESIDENTIAL UST REMOVAL AND REMEDIATION OF TANK NEST - SUMMARY REPORT

ABSTRACT

An underground storage tank (UST) located at 8420 Oak Street in Vancouver, BC was removed by Millennium Tank And Environmental Ltd. The tank contents were pumped out and taken off-site for treatment and the tank was recycled. There was substantial contamination present in the soil from leaks in the tank, which was almost full. Remedial excavation was undertaken to remove the contaminated soil. Soil samples were then taken to a laboratory, which confirmed that the remaining soils surrounding the former UST meet Contaminated Sites Regulations (CSR) Residential Limits (RL) standards for extractable petroleum hydrocarbons. The tank nest was then back-filled and the site was cleaned up and returned to a state close to its original conditions.

BACKGROUND INFORMATION

Client Name and Site Address

s.22(1) 8420 Oak street, Vancouver, BC (appendix A)

Millennium Project Number 10004

Vancouver Fire Dept Permit Number FI 407 950 (appendix B)

Excavation/Tank Removal Date

Tank removed June 24th, 2010

Excavation completed July 9th, 2010

Reporting Date July 26th, 2010

Scope of Work

Removing a residential furnace oil underground storage tank (UST) and properly disposing of the tank and its contents; excavating the furnace oil-impacted soils from around the UST and collecting confirmatory soil samples of the completed excavation walls and floor and stockpiled suspect contaminated soils. Temporary removal of fence panel and post to allow access for the excavator. Restoration of the yard to usable conditions.

RELEVANT SITE INFORMATION

Site Plan Appendix C

Site Description

The site is a residential property in Vancouver's Marpole area, which is a predominantly residential neighbourhood. Preliminary site observations revealed a filler valve located in the backyard, approximately three metres from the back of the house and two metres from the fence on the south side of the property (photograph 1). No vent pipe was observed attached to the house; however preliminary hand digging revealed a piece of the vent pipe buried just above the tank (photograph 2). Inspection with a magnetic finder indicated an east-west tank orientation, perpendicular to the house. Preliminary hand digging further exposed the filler valve pipe, which

was filled with dirt and debris; moderate hydrocarbon odours were detected, suggesting the tank had leaked significantly. Insertion of a dipstick through the filler valve indicated that the tank was almost completely full.

Topography

The site and surrounding area are located on a south-facing slope.

Area Geology

Typical native soils consisting mainly of stony silt loam (including till-like deposits) and clay loam, with minor amounts of sand and silt. Silt/clay till-like soils are typically almost impermeable. Sand and silt are permeable to moderately permeable.

Surface Drainage

Negligible both to and from the site. Most surface runoff would drain directly into the unpaved ground.

Groundwater Depth and Flow Direction

The groundwater depth is unknown. The inferred flow direction is south, following the topographic slope (appendix D).

SITE WORK

Copies of all relevant invoices and receipts are attached.

UST Removal, Clean up and Disposal

An excavator machine was used to expose and remove the tank, excavate the contaminated soils and back-fill the site. The top of the tank was initially exposed and a reciprocating saw with a metal cutting blade was used to cut off the filler valve pipe so a vacuum hose could be inserted. A vacuum truck from Sumas Environmental Services was contracted to pump out the contents (approximately 2,000 L oily water and sludge), wash the inside of the tank and take the contents to Sumas Environmental Services' Burnaby facility for appropriate treatment (photographs 3 and 4). The empty tank was then extracted with the excavator; some small perforations were observed (photographs 5 and 6). Once the tank was completely out of the ground, the City Fire Prevention Inspector visited the site and identified the need to inspect and confirm the quality of soil surrounding the former UST and to conduct remediation if necessary. The tank was taken to Allied Salvage and Metals Ltd. in Richmond for recycling.

UST Nest Excavation

Visual inspection of the empty tank nest suggested substantial leakage and soil contamination (photograph 7); strong petroleum hydrocarbon odours were detected in the soil surrounding the tank. Staining was very pronounced, particularly on the north and south walls; some areas were saturated and exhibited a sheen normally associated with oil (photograph 8). Based on the staining and the odours, the soil was assessed to be above Residential Level (RL) standards; the impact on the soil appeared to be quite severe. The contaminated soil was excavated out; some plumes were found in areas consistent with the location of the biggest perforations in the tank. The north and south excavation walls had to be undermined approximately one metre in order to remove all contaminated soil. After more than fifty tonnes of soil had been removed, it was determined that it was not practical to continue using the excavator; at this point the staining and odour had decreased dramatically, although evidence of some contamination was still present, in the form of a "vein-like" pattern on the

excavation walls (photograph 9). Hand digging was undertaken to remove the remaining impacted soil (photograph 10)

The suspected contaminated soil was loaded into a steel bin as it was removed and immediately taken to the Sumas Remediation Services facility in Burnaby for treatment and disposal. Groundwater was not encountered during excavation, and based on the low permeability of native soils, groundwater contamination is not expected.

Sample Collection and Field Analysis

After hand digging out a few more tonnes of contaminated soil, field observations of the staining and odours in the excavation walls and floor suggested that clean excavation limits had been achieved. Six soil samples were collected: one from the contaminated soil to be shipped off-site (which was sampled at the beginning of the project so it could be sent to Sumas right away) and five from the walls and base of the excavation (appendix C). Clean stainless steel hand tools were used for sampling, and protocols to avoid sample contamination (factory cleaned glass jars, rubber gloves, rinsing tools between samples, etc.) were followed. The samples were analyzed using a hydrocarbon field portable test kit to more accurately assess the level of contamination in the soil prior to laboratory analysis and to determine whether further excavation was necessary.

The portable testing kit indicated that clean excavation limits had been achieved since the level of contamination was below the prescribed limits. The samples were then packed in an ice cooler and sent to ALS Laboratory Group in Burnaby for analysis of suspect contaminants; the parameter associated with heating oil is EPH (extractable petroleum hydrocarbons). The laboratory test results were all below the limits, confirming that the hydrocarbons present in the soils surrounding the former UST are indeed below RL standards.

RESULTS

Excavated Tank

Length:	2.7 m
Diameter:	1.0 m
Capacity:	~ 2,100 L
Type:	Steel. Taken to Allied Salvage and Metals Ltd. in Richmond for recycling
Condition:	A few small perforations no larger than a quarter inch in diameter and a couple of larger holes, about one inch in diameter.
Piping:	All lines removed and recycled with the UST
Contents:	Approx. 2,000 L of oily water pumped out and taken to Sumas Environmental Services in Burnaby for treatment

Excavation Geology

Excavation Dimensions: 3m deep x 4.3m long x 2.8m wide

To depth (m)	Soil Type	Estimated Permeability	Staining/Odour
0.5	Brown sandy silt, organics	Moderate	No
1.2	Brown-red clay, loam	Low to moderate	No
~ 3	Hard clay, glacial till	Low	Yes

Soil Impacts

The excavated soils below a depth of approximately 1.2m were stained and odorous, indicating contamination from the leaking tank. The soils that remained in place around the completed UST excavation were not stained and did not smell. Appendix C shows confirmatory wall/floor sample locations. Table 1 below summarizes the analytical results, and all the certificates of analysis are attached. As expected, all confirmatory samples tested were below the applicable CSR RL standards except the excavated soils sample.

Contaminated Soil Quantities, Fate and Transport

Approximately 65.21 tonnes of contaminated soil were excavated and removed from the site. The soil was taken to Sumas Remediation Services' Burnaby remediation/disposal facility.

Back-fill

Compacted clean overburden soil that was on top of the tank; clean compacted Sechelt sand. See photograph 11.

Laboratory Analysis

All laboratory analytical reports are attached.

Laboratory: ALS Laboratory Group - Environmental Division, Burnaby.

Table 1: Analytical Results Summary - Soil Samples - LEPH and HEPH

Sample No.	Location (see appendix C)	LEPH (mg/kg)	HEPH (mg/kg)
CSR Residential Limit (RL) Standards		1000	1000
1	Stockpile	<u>4500</u>	690
2	North wall	< 200	< 200
3	South wall	< 200	< 200
4	East wall	< 200	< 200
5	West wall	< 200	< 200
6	Bottom	< 200	<200

Notes

1. LEPH = light extractable petroleum hydrocarbons (C₁₀ to C₁₉),
HEPH = heavy extractable petroleum hydrocarbons (C₁₉ to C₃₂).
2. Standards are BC Contaminated Sites Regulation (CSR) residential land use (RL) generic numerical soil remediation standards.
3. Bold and underlined concentrations exceed residential standards.
4. The numbers for LEPH and HEPH shown are PAH-corrected.

CONCLUSIONS

Millennium Tank and Environmental Ltd., under the supervision of the project manager/environmental consultant, successfully removed the UST and all associated piping. The contents were properly pumped out and shipped off-site for appropriate treatment. Based on the analytical results, field-testing data and visual observations, Millennium concludes that all the furnace oil impacted soils have been removed from the site and the remaining soils surrounding the former UST meet CSR Residential Standards for extractable petroleum hydrocarbons. Groundwater was not encountered during the excavation, and based on the low permeability of native soils, groundwater contamination is not expected.

RECOMMENDATIONS

No further environmental investigations or remediation work related to the excavated UST and associated furnace oil-impacted soils are recommended at this time.

STANDARD LIMITATIONS

Please note the following limitations to this report:

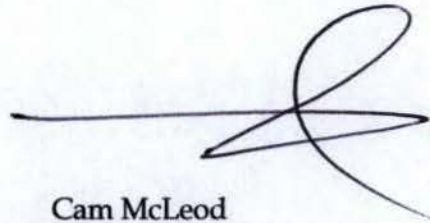
1. This report has been prepared for s.22(1) [REDACTED]. The purpose of this report is to provide our client with a summary of the UST removal work performed and an assessment of the potential for environmental contamination on the subject property due to said tank. This report is neither a condemnation nor an endorsement of the subject property.
2. The findings and conclusions are site-specific and were developed in a manner consistent with that level of care and skill normally exercised by environmental professionals currently practising under similar conditions in the area. No other warranties, expressed or implied, are made. Millennium accepts no responsibility for any damages that may be suffered by third parties as a result of decisions or actions based on this report.
3. Millennium's investigations and assessments of subsurface conditions in the work area are based upon information obtained at the sampling locations and laboratory analysis to detect the indicated contaminants of concern only. As is true for all environmental investigations, potential remains for the presence of unknown, unidentified or unforeseen surface or subsurface contamination. Additional research, inspections and/or testing may be required if other risks are identified.
4. Site conditions documented in this report are those at the time of Millennium's undertaking of this project, and they may change with time, as may regulatory requirements and policy.

MILLENNIUM TANK AND ENVIRONMENTAL LTD.

Per



Xavier Sandoval, B. Sc
Project Manager



Cam McLeod
Principal

ATTACHMENTS

Photographs

Appendices: A - VanMap orthophotograph showing subject property and tank location
B - Fire permit
C - Site plan
D - Inferred groundwater flow direction from topographic slope (VanMap)

Invoices/Receipts

Laboratory Analytical Reports

PHOTOGRAPHS

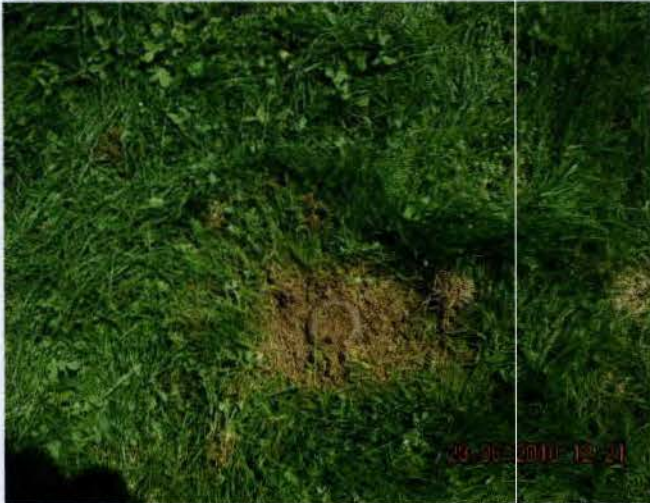


Photo 1 – Filler valve



Photo 2 - Vent pipe



Photo 3 – Pumping out the tank



Photo 4 - Rinsing the tank



Photo 5 - Extracting the tank



Photo 6 - Light can be seen shining through one of the perforations



Photo 7 - Signs of contamination



Photo 8 - Oily sheen



Photo 9 - Impacted soil veins on excavation wall






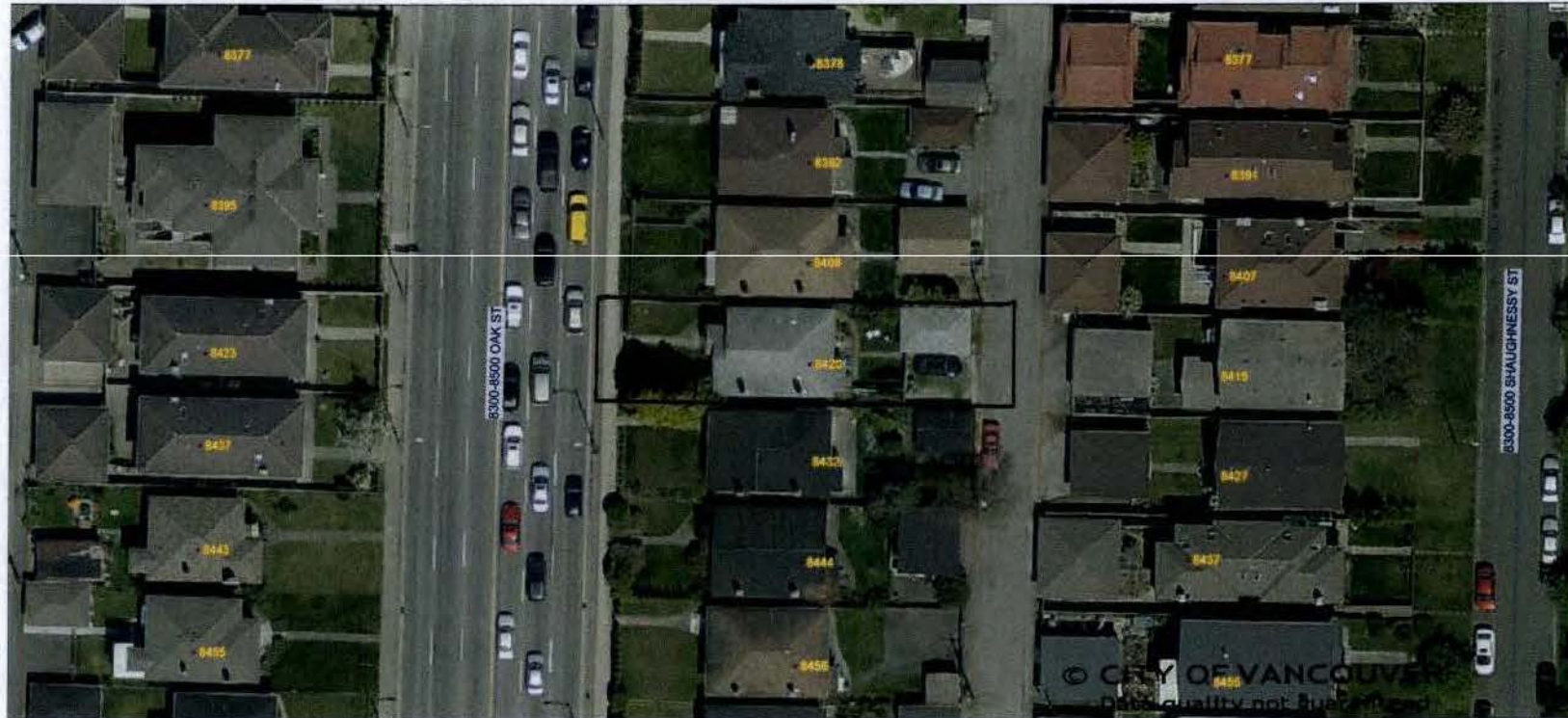
Photo 10 - Hand digging the last remaining impacted soils



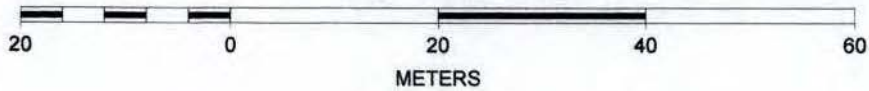
Photo 11 - Backfilling and compacting

Appendix A - 8420 Oak St. Property And Tank Location

- City Boundary
- Canada Lines and Skytrain
- City Streets Network
- Property Information
-  Park Polygons
-  Orthophotos 2009
-  Tank Location



SCALE 1 : 731



CITY OF VANCOUVER

DATE ISSUED JUNE 18, 2010		PERMIT TYPE FIRE PREVENTION DIVISION PERMIT				PERMIT NUMBER P FI 407950	
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APPLICANT CONTRACTOR MILLENNIUM TANK & ENVIRONMENTAL 4484 BARKER ST BURNABY BC V5G 3C5				CONTACT 2		CONTACT 3	
TEL 778-230-8743 FAX	BUS.LICENSE CERTIFICATE 505518	TEL FAX	BUS.LICENSE CERTIFICATE	TEL FAX	BUS.LICENSE CERTIFICATE		

PURSUANT TO THE FIRE BY-LAW, THE FOLLOWING WORK IS HEREBY AUTHORIZED:

REMOVE ONE PETROLEUM TANK.

PERMIT CONDITIONS AND NOTES:

- 001 THE WORK UNDER THIS PERMIT IS AUTHORIZED PURSUANT TO THE FIRE BY-LAW.
- 010 For fuel dispensing site or known contamination site, clearance from Environmental Protection Branch.
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- 051 Phone the District Fire Inspector at 604-873-7595 for an inspection prior to backfilling. Please arrange for the inspection at least 24 hours in advance.

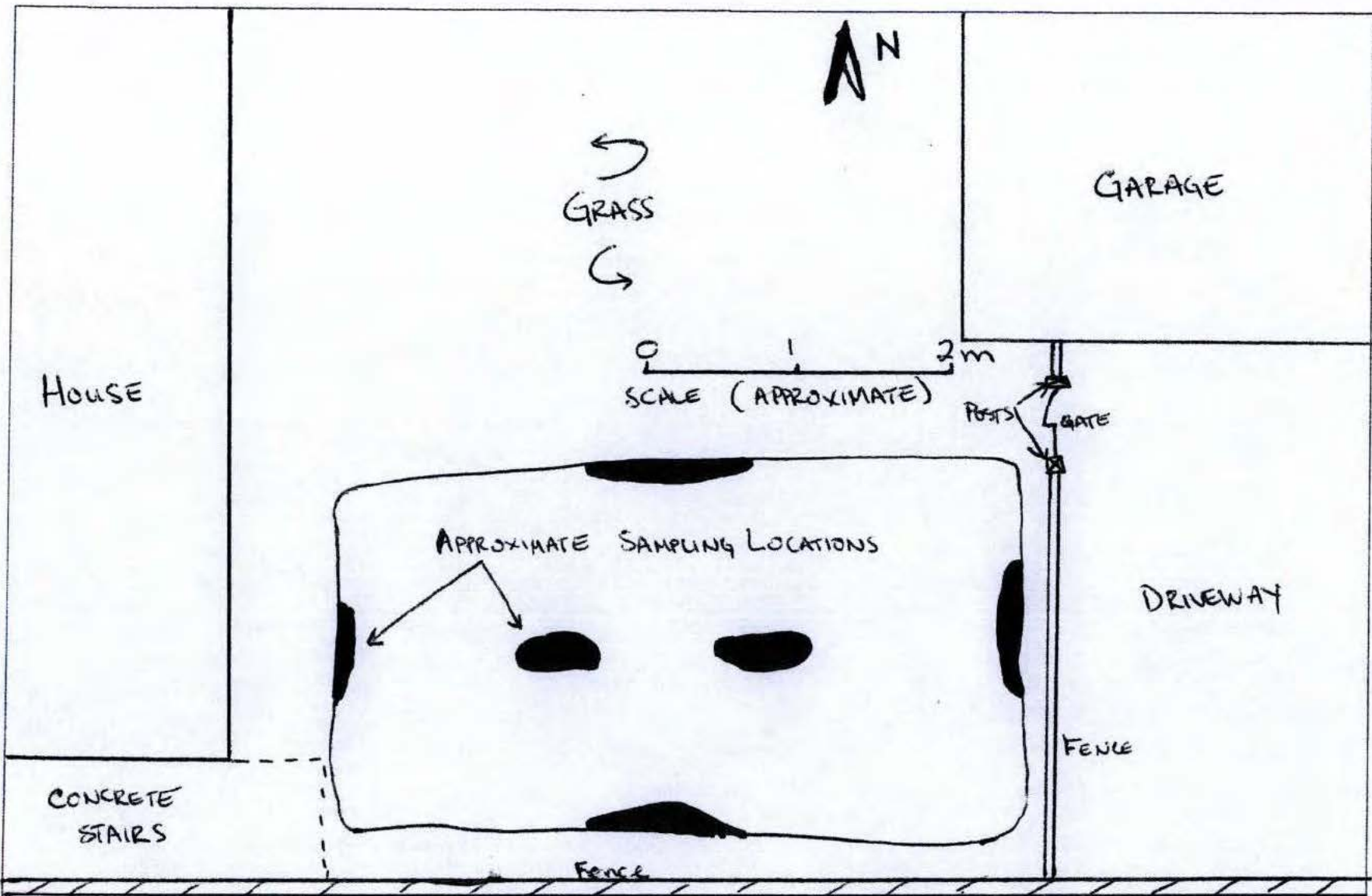
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D30	ONE-FAM DWELLING							
ITEM	SPECIFICS/REFERENCE	QTY/AMT		ITEM	SPECIFICS/REFERENCE	QTY/AMT		
OIL TANK		1 GU						
DOCUMENTS REQD BEFORE PERMIT IS COMPLETED INCLUDE				:	FIRE COMPLETION			
APPROVALS REQD BEFORE PERMIT IS COMPLETED INCLUDE				:	FIRE INSPECTION			

*TANK OUT
CONTRACTOR IS REFERING
TO ENVIRO
LT TIM KENNEDY
[Signature]
03837
JUNE 24 2010
03837*

AS OWNER OR OWNERS' AGENT, I HAVE VERIFIED THAT THE INFORMATION CONTAINED WITHIN THIS DOCUMENT AND ASSOCIATED PLANS IS CORRECT, AND DESCRIBES A USE, A BUILDING OR A WORK WHICH COMPLIES WITH ALL RELEVANT BY-LAWS AND STATUTES. I ACKNOWLEDGE THAT RESPONSIBILITY FOR BY-LAW COMPLIANCE RESTS WITH THE OWNER AND THE OWNER'S EMPLOYEES, AGENTS AND CONTRACTORS. I WILL INDEMNIFY AND SAVE HARMLESS THE CITY OF VANCOUVER, ITS OFFICIALS, EMPLOYERS AND AGENTS AGAINST ALL CLAIMS, LIABILITIES AND EXPENSES OF EVERY KIND, IN RESPECT OF ANYTHING DONE OR NOT DONE PURSUANT TO THIS APPLICATION OR FACT SHEET OR ENSUING PERMIT, INCLUDING NEGLIGENCE AND/OR THE FAILURE TO OBSERVE ALL BY-LAWS, ACTS OR REGULATIONS.

FEE	AMOUNT	FEE	AMOUNT	SIGNATURE		
656 TANK - SFD	300.00				DATE	
					ISSUED BY	M KITANO
					FOR THE	FIRE CHIEF
INVOICE : 586614			TOTAL	\$300.00		

PSD-2000.01 REVISED FEB/08



Client 8420 Oak Street, Vancouver, BC	S.22 (1)	Project 10004	Millennium Tank & Environmental Ltd.
Appendix C Site Plan	Drawn by: XS	Date: 07/23/10	Notes:

Appendix D - Inferred Groundwater Flow Direction From Topographic Slope

-- City Boundary

Contour Lines

1-metre Contours (2002)

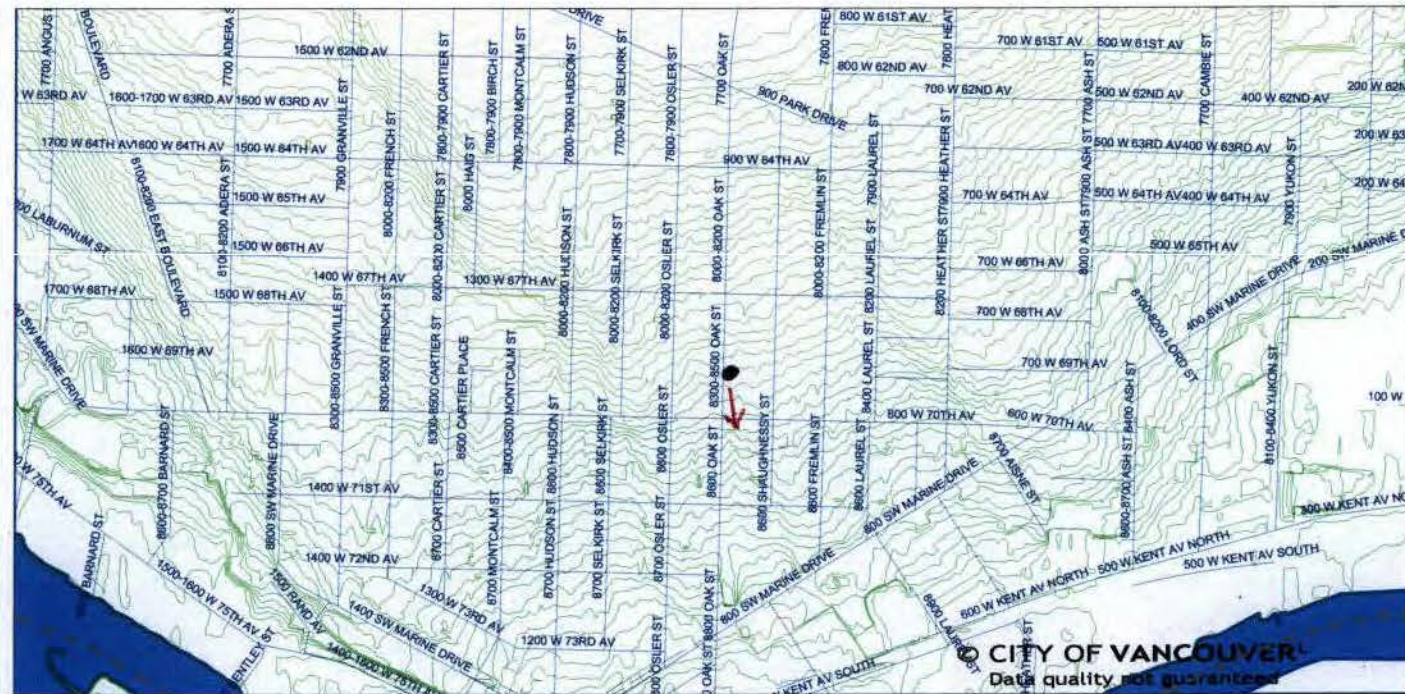
- 10m to Sea Level
- Sea Level to 25m
- 26m - 51m
- 51m - 75m
- 76m - 99m
- 100m or higher

1-metre Contours (2002-NE)

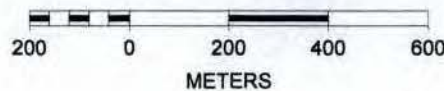
- 10m to Sea Level
- Sea Level to 25m
- 26m - 51m
- 51m - 75m
- 76m - 99m
- 100m or higher

1-metre Contours (2002-SW)

- 10m to Sea Level
- Sea Level to 25m



SCALE 1 : 15,143



● Subject Property

↓ Inferred groundwater flow

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

AA1023386

Shipper's No. 4787

(Carrier) SUNCO'S Energy Serv. SCAC. _____

Carrier's No. LT1000

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at 8420. OAK ST. V6L1V8, date 23/06/10 from Vancouver

the property described below, in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)		FROM:	
Consignee <u>SUNCO'S Energy Serv.</u>		Shipper <u>Milnerius Tank. Serv.</u>	
Street <u>4623 BYRNE Rd.</u>		Street <u>8420. OAK ST.</u>	
Destination <u>Burnaby</u> Zip _____		Origin <u>Vancouver</u> Zip <u>V6L1V8</u>	
Route:			

Delivering Carrier	Trailer Initial/Number	U.S. Dot Hazmat Reg. Number

HM	Description of material, weight, volume, etc.	Number of Packages	Net Weight (kg)	Gross Weight (kg)	Packing Group	VOLUME (m ³)	Cubic Meters (m ³)	Explosive	Check column
x1	<u>Bulk. Dirty Water < 3% Oil (Sludge)</u>	x	>	x		<u>2000L</u>	-	-	-

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

RECEIVED BY: _____ PLACARDS SUPPLIED: _____

YES NO - FURNISHED BY CARRIER DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: Milnerius Tank CARRIER: SUNCO'S SERV

PER: _____ DATE: 23/06/10 PER: _____ DATE: 23/06/10

EMERGENCY RESPONSE TELEPHONE NUMBER: ()

Permanent post office address of shipper _____

**Sumas Remediation Services
Summary of Soil Arrival**

Project #: 10-413
Contaminated Site Address: 8420 Oak St, Van
Treatment Facility: Biocell-Byrne Road, BBY
Contact Information:

Contaminant of Concern: Hydrocarbons
Analytical: ALS

Arrival Date	Hour	License Numbers		Weight(KG)			Tracking Form	Weigh Bill #
		Truck	Trailer	Gross	Tare	Total		
28-Jun-10	8:09	CE3343		10,250.00	6,300.00	3,950.00	10-413	37558
28-Jun-10	15:54	CD3543		10,080.00	6,270.00	3,810.00	10-413	37594
29-Jun-10	8:05	CE3343		9,890.00	6,300.00	3,590.00	10-413	37596
29-Jun-10	9:26	CE3343		10,290.00	6,300.00	3,990.00	10-413	37603
29-Jun-10	11:46	CE3343		11,160.00	6,150.00	5,010.00	10-413	37614
5-Jul-10	12:33	CE3343		11,080.00	6,300.00	4,780.00	18672	37743
5-Jul-10	14:06	CE3343		10,540.00	6,300.00	4,240.00	18673	37747
5-Jul-10	15:41	CE3343		10,560.00	6,300.00	4,260.00	18674	37758
6-Jul-10	15:00	CE3343		11,860.00	6,300.00	5,560.00	18576	37799
6-Jul-10	13:07	CE3343		11,230.00	6,300.00	4,930.00	18675	37788
7-Jul-10	14:35	CE3343		11,960.00	6,300.00	5,660.00	18578	38009
7-Jul-10	9:22	CE3343		11,190.00	6,300.00	4,890.00	18577	38004

**Sumas Remediation Services
Summary of Soil Arrival**

Project #: 10-413

Contaminant of Concern: Hydrocarbons

Contaminated Site Address: 8420 Oak St, Van

Analytical: ALS

Treatment Facility: Biocell-Byrne Road, BBY

Contact Information:

Arrival Date	Hour	License Numbers		Weight(KG)			Tracking Form	Weigh Bill #
		Truck	Trailer	Gross	Tare	Total		
8-Jul-10	14:32	CE3343		11,970.00	6,300.00	5,670.00	18579	38053
9-Jul-10	12:11	CE3343		11,170.00	6,300.00	4,870.00	18580	38099

Project Total: 65,210.00 Kg

65.21 Tonnes



Lawnboy ENTERPRISES Ltd.

8655 Cambie Street, Vancouver, BC V6P 3J9

Tel: 604.322.8771 GST#858578578RT Date: July 9, 10

Name: _____

Address: _____

1	3 w/ Sealed S	69	
2			
3			
4			
5			
6			
7			
8			
9			
10			
	Delivery		
	Sub-total		

No 006 GST 878
 PST
 Total 7728
Tank OAK backfill



Lawnboy ENTERPRISES Ltd.

8655 Cambie Street, Vancouver, BC V6P 3J9

Tel: 604.322.8771 GST#858578578RT Date: _____

Name: _____ July 9, 10

Address: _____

1			
2	4 rd Sealed S	92	
3			
4			
5			
6			
7			
8			
9			
10			
	Delivery		
	Sub-total		

No 015 GST 1104
 PST
 Total 10384
Seal tank



Lawnboy ENTERPRISES Ltd.

8655 Cambie Street, Vancouver, BC V6P 3J9

Tel: 604.322.8771 GST#858578578RT Date: _____

Name: _____ July 13, 10

Address: _____

1			
2	12 Sealed S	276	
3			
4			
5			
6			
7			
8			
9			
10			
	Delivery		
	Sub-total		

No 002 GST 3312
 PST
 Total 30912



Lawnboy ENTERPRISES Ltd.

8655 Cambie Street, Vancouver, BC V6P 3J9

Tel: 604.322.8771 GST#858578578RT Date: _____

Name: _____ July 13, 10

Address: _____

1			
2	8 rd Sealed S	184	
3			
4			
5			
6			
7			
8			
9			
10			
	Delivery		
	Sub-total		

No 029 GST 2208
 PST
 Total 20608
SAND for OAK ST.

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

Certificate of Analysis

MILLENNIUM TANK AND ENVIRONMENTAL LTD.

ATTN: Xavier Sandoval

PO 71072 - 3552 West 41 Ave.

Vancouver BC V6N 4J9

Report Date: 28-JUN-10 10:53 (MT)

Version: FINAL

Lab Work Order #: **L901968**

Date Received: **25-JUN-10**

Project P.O. #: NOT SUBMITTED

Job Reference: 10004

Legal Site Desc:

CofC Numbers: 10-042195

Other Information:

Comments:


Bryan Mark
Account Manager

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

ALS Canada Ltd.

Part of the **ALS Laboratory Group**
8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9
Phone: +1 604 253 4188 Fax: +1 604 253 6700 www.alsglobal.com
A Campbell Brothers Limited Company

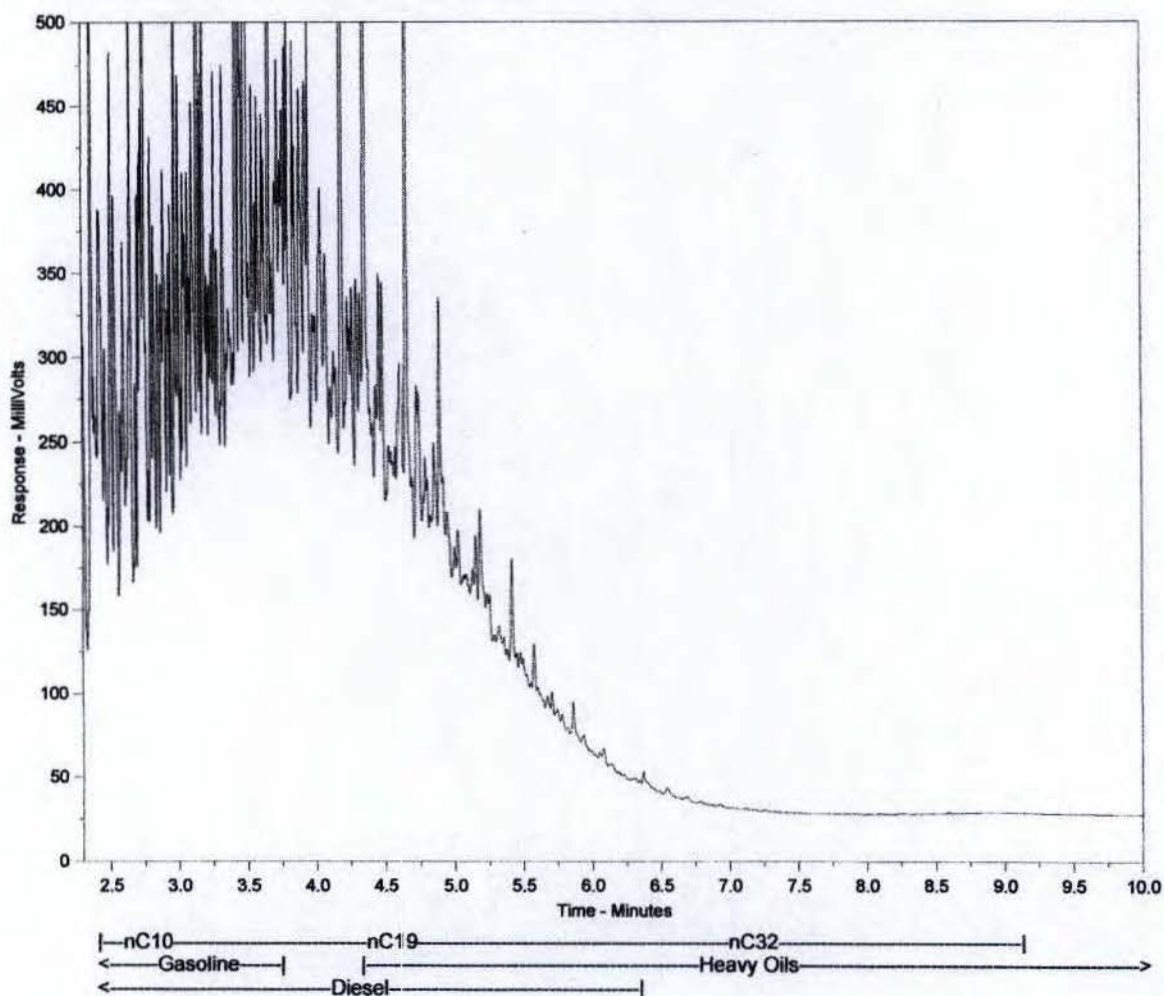
ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L901968-1			
		Description				
		Sample Date	24-JUN-10			
		Sample Time	14:00			
		Client ID	STOCKPILE			
Grouping	Analyte					
SOIL						
Physical Tests	Moisture (%)		17.5			
Hydrocarbons	EPH10-19 (mg/kg)		4510			
	EPH19-32 (mg/kg)		690			
	LEPH (mg/kg)		4500			
	HEPH (mg/kg)		690			
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.60			
	Acenaphthylene (mg/kg)		<0.25			
	Anthracene (mg/kg)		<0.20			
	Benz(a)anthracene (mg/kg)		<0.050			
	Benzo(a)pyrene (mg/kg)		<0.050			
	Benzo(b)fluoranthene (mg/kg)		<0.050			
	Benzo(g,h,i)perylene (mg/kg)		<0.050			
	Benzo(k)fluoranthene (mg/kg)		<0.050			
	Chrysene (mg/kg)		<0.050			
	Dibenz(a,h)anthracene (mg/kg)		<0.050			
	Fluoranthene (mg/kg)		<0.050			
	Fluorene (mg/kg)		1.37			
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.050			
	2-Methylnaphthalene (mg/kg)		15.2			
	Naphthalene (mg/kg)		5.67			
	Phenanthrene (mg/kg)		2.43			
	Pyrene (mg/kg)		<0.050			
	Surrogate: d10-Acenaphthene (SS) (%)		93			
	Surrogate: d12-Chrysene (SS) (%)		82			
	Surrogate: d8-Naphthalene (SS) (%)		89			
Surrogate: d10-Phenanthrene (SS) (%)		88				

Hydrocarbon Distribution Report



ALS Sample ID: L901968-1
Client Sample ID: STOCKPILE



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

Certificate of Analysis

MILLENNIUM TANK AND ENVIRONMENTAL LTD.

ATTN: Xavier Sandoval

PO 71072 - 3552 West 41 Ave.

Vancouver BC V6N 4J9

Report Date: 20-JUL-10 14:58 (MT)

Version: FINAL

Lab Work Order #: **L907383**

Date Received: **12-JUL-10**

Project P.O. #: NOT SUBMITTED

Job Reference: 10 004 ZED HAQQ

Legal Site Desc:

CofC Numbers: 10-041933

Other Information:

Comments:


Bryan Mark
Account Manager

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU
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ALS Canada Ltd.

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A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

		Sample ID	L907383-1	L907383-2	L907383-3	L907383-4	L907383-5
		Description					
		Sample Date	09-JUL-10	09-JUL-10	09-JUL-10	09-JUL-10	09-JUL-10
		Sample Time	15:00	15:00	15:00	15:00	15:00
		Client ID	BOTTOM	NORTH WALL	SOUTH WALL	EAST WALL	WEST WALL
Grouping	Analyte						
SOIL							
Physical Tests	Moisture (%)		11.4	14.5	15.6	13.6	14.0
Hydrocarbons	EPH10-19 (mg/kg)		<200	<200	<200	<200	<200
	EPH19-32 (mg/kg)		<200	<200	<200	<200	<200
	LEPH (mg/kg)		<200	<200	<200	<200	<200
	HEPH (mg/kg)		<200	<200	<200	<200	<200
Polycyclic Aromatic Hydrocarbons	Acenaphthene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Acenaphthylene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Anthracene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Benz(a)anthracene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(a)pyrene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(b)fluoranthene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(g,h,i)perylene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(k)fluoranthene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Chrysene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Dibenz(a,h)anthracene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Fluoranthene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Fluorene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Indeno(1,2,3-c,d)pyrene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	2-Methylnaphthalene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Naphthalene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Phenanthrene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Pyrene (mg/kg)		<0.050	<0.050	<0.050	<0.050	<0.050
	Surrogate: d10-Acenaphthene (SS) (%)		88	91	92	91	91
	Surrogate: d12-Chrysene (SS) (%)		77	77	76	77	76
	Surrogate: d8-Naphthalene (SS) (%)		89	89	89	88	89
	Surrogate: d10-Phenanthrene (SS) (%)		89	87	90	85	88

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
EPH-TUMB-FID-VA	Soil	EPH in Solids by Tumbler and GCFID	BCMELP CSR
<p>Extractable Hydrocarbons in Sediment/Soil This analysis is carried out in accordance with the British Columbia Ministry of Environment, Lands and Parks (BCMELP) Analytical Method for Contaminated Sites "Extractable Petroleum Hydrocarbons in Solids by GC/FID, Version 2.1 July 1999". The procedure, based on EPA 3570, uses a rotary extraction technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene or kept in hexane/acetone and analyzed by capillary column gas chromatography with flame ionization detection (GC/FID). EPH results include Polycyclic Aromatic Hydrocarbons (PAH) and are therefore not equivalent to Light and Heavy Extractable Petroleum Hydrocarbons (LEPH/HEPH).</p> <p>Accuracy target values for Reference Materials used in this method are derived from averages of long-term method performance, as certified values do not exist for the reported parameters.</p>			
LEPH/HEPH-CALC-VA	Soil	LEPHs and HEPHs	BC MOE LABORATORY MANUAL (2005)
<p>Light and Heavy Extractable Petroleum Hydrocarbons in Solids. These results are determined according to the British Columbia Ministry of Environment, Lands, and Parks Analytical Method for Contaminated Sites "Calculation of Light and Heavy Extractable Petroleum Hydrocarbons in Solids or Water". According to this method, LEPH and HEPH are calculated by subtracting selected Polycyclic Aromatic Hydrocarbon results from Extractable Petroleum Hydrocarbon results. To calculate LEPH, the individual results for Naphthalene and Phenanthrene are subtracted from EPH(C10-19). To calculate HEPH, the individual results for Benz(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenz(a,h)anthracene, Indeno(1,2,3-c,d)pyrene, and Pyrene are subtracted from EPH(C19-32). Analysis of Extractable Petroleum Hydrocarbons adheres to all prescribed elements of the BCMELP method "Extractable Petroleum Hydrocarbons in Solids by GC/FID" (Version 2.1, July 20, 1999).</p>			
MOISTURE-VA	Soil	Moisture content	ASTM METHOD D2974-00
<p>This analysis is carried out gravimetrically by drying the sample at: 105 C for a minimum of six hours.</p>			
PAH-SURR-MS-VA	Soil	PAH Surrogates for Soils	EPA METHODS 3570, 3545A & 8270
PAH-TUMB-H/A-MS-VA	Soil	PAH by Tumbler HEX/ACE with GCMS	EPA METHODS 3570 & 8270.
<p>Polycyclic Aromatic Hydrocarbons in Sediment/Soil This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Methods 3570 & 8270, published by the United States Environmental Protection Agency (EPA). The procedure uses a mechanical shaking technique to extract a subsample of the sediment/soil with a 1:1 mixture of hexane and acetone. The extract is then solvent exchanged to toluene. The final extract is analysed by capillary column gas chromatography with mass spectrometric detection (GC/MS). Surrogate recoveries may not be reported in cases where interferences from the sample matrix prevent accurate quantitation.</p>			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

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
VA	ALS LABORATORY GROUP - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

10-041933

GLOSSARY OF REPORT TERMS

Surrogate A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg milligrams per kilogram based on dry weight of sample.

mg/kg wwt milligrams per kilogram based on wet weight of sample.

mg/kg lw milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L milligrams per litre.

< - Less than.

D.L. The reported Detection Limit, also known as the Limit of Reporting (LOR).

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.

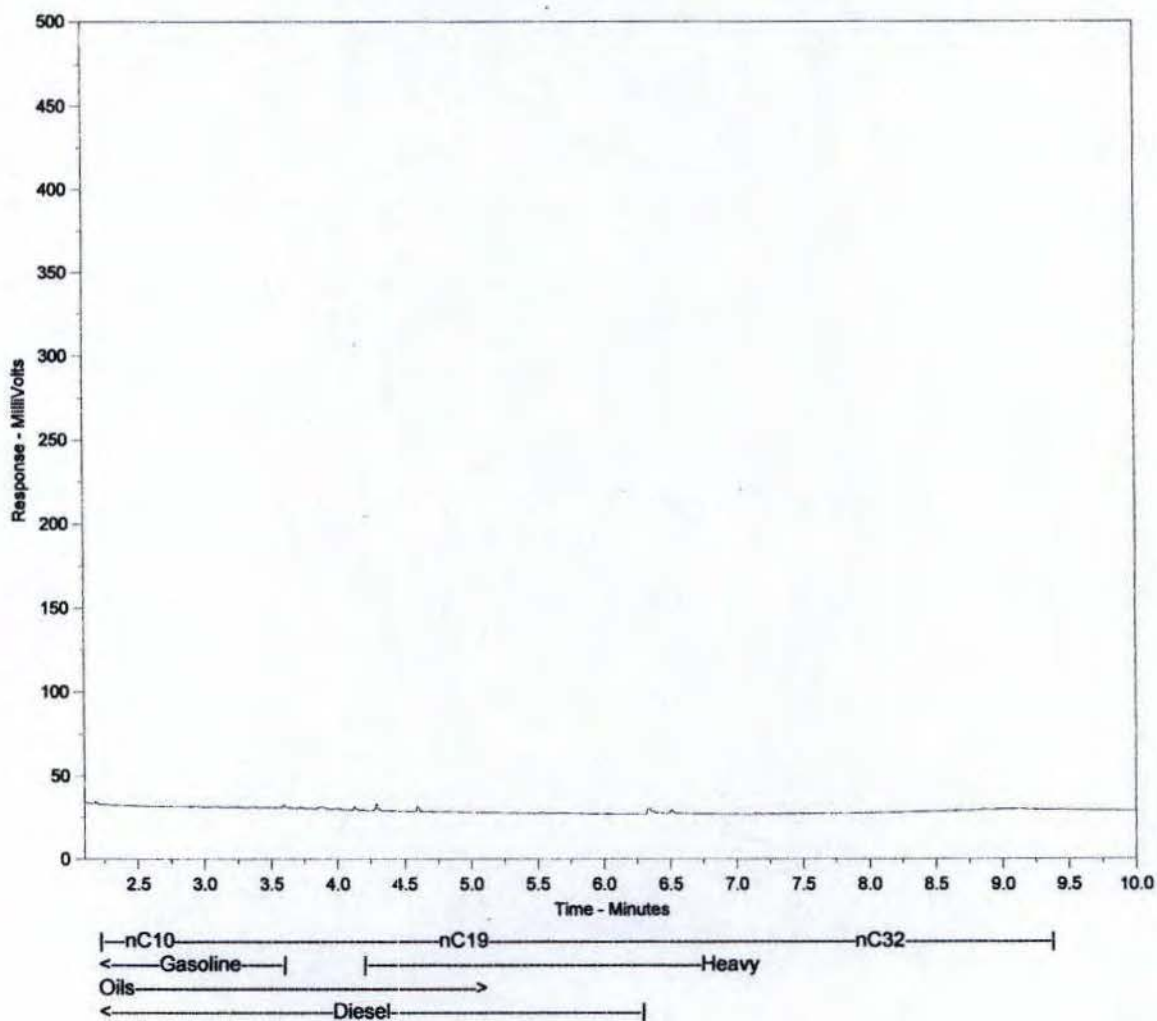
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Hydrocarbon Distribution Report



ALS Sample ID: L907383-1
Client ID: BOTTOM



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

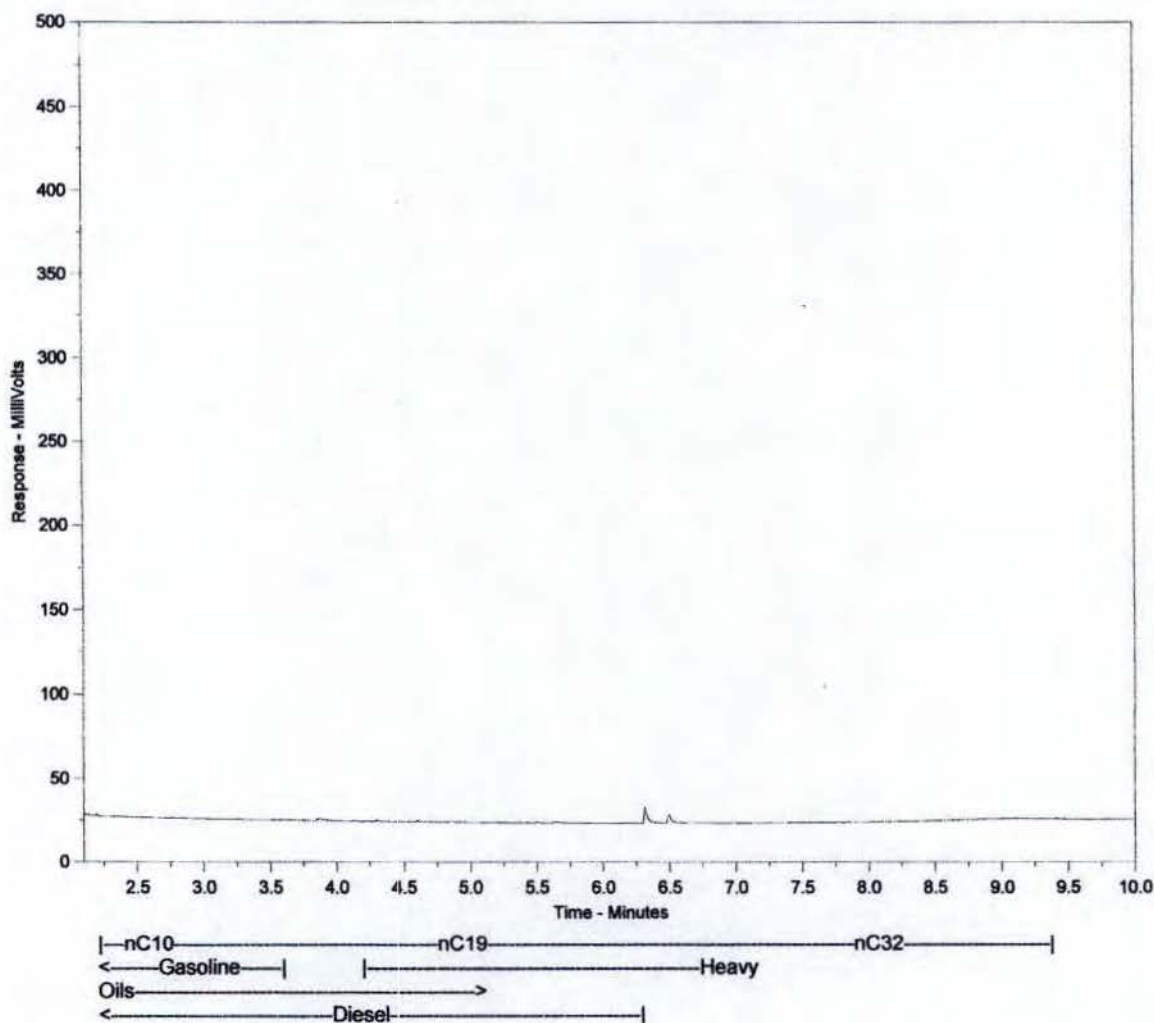
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

Hydrocarbon Distribution Report



ALS Sample ID: L907383-2
Client ID: NORTH WALL



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

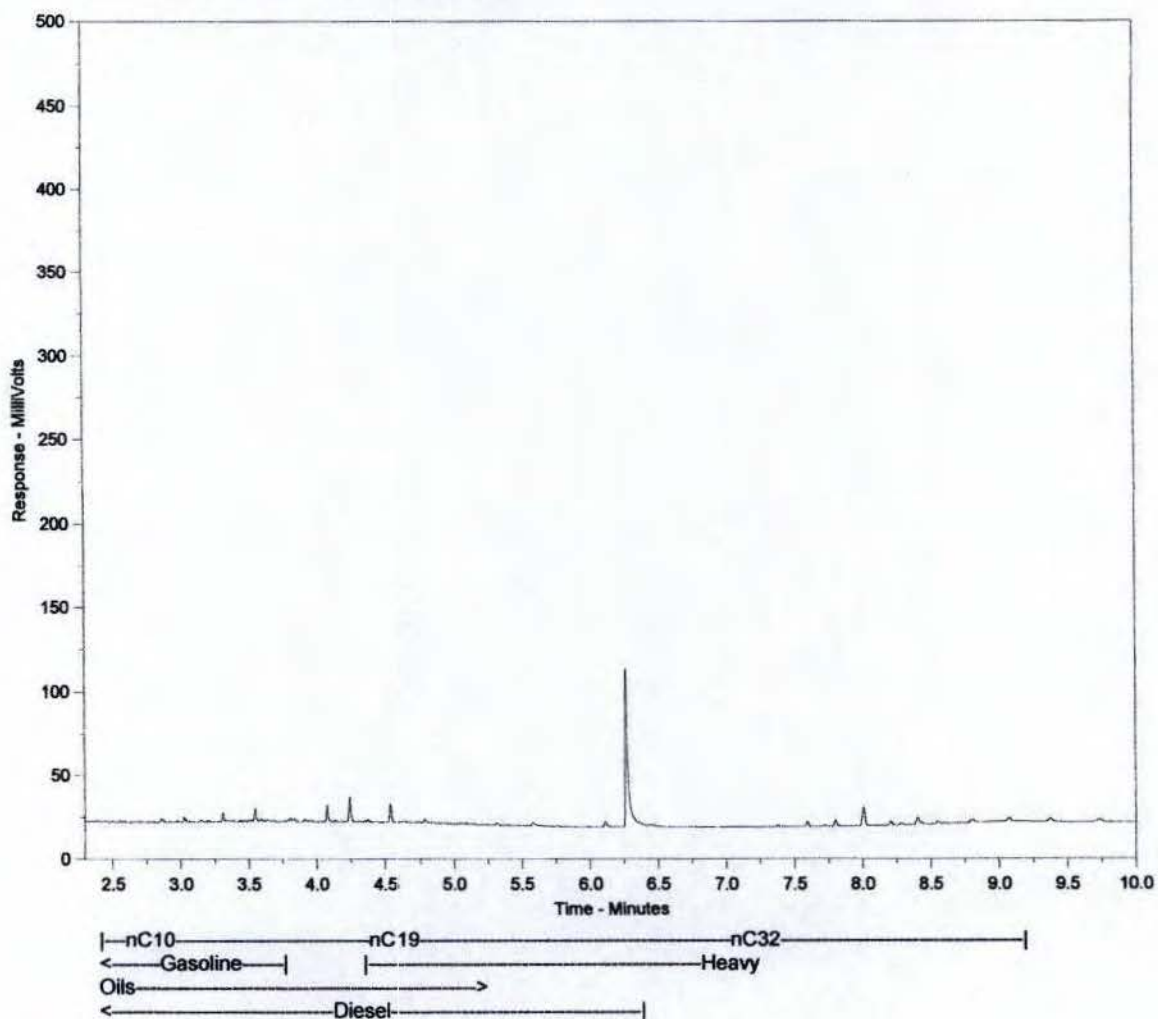
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

Hydrocarbon Distribution Report



ALS Sample ID: L907383-3
Client Sample ID: SOUTH WALL



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

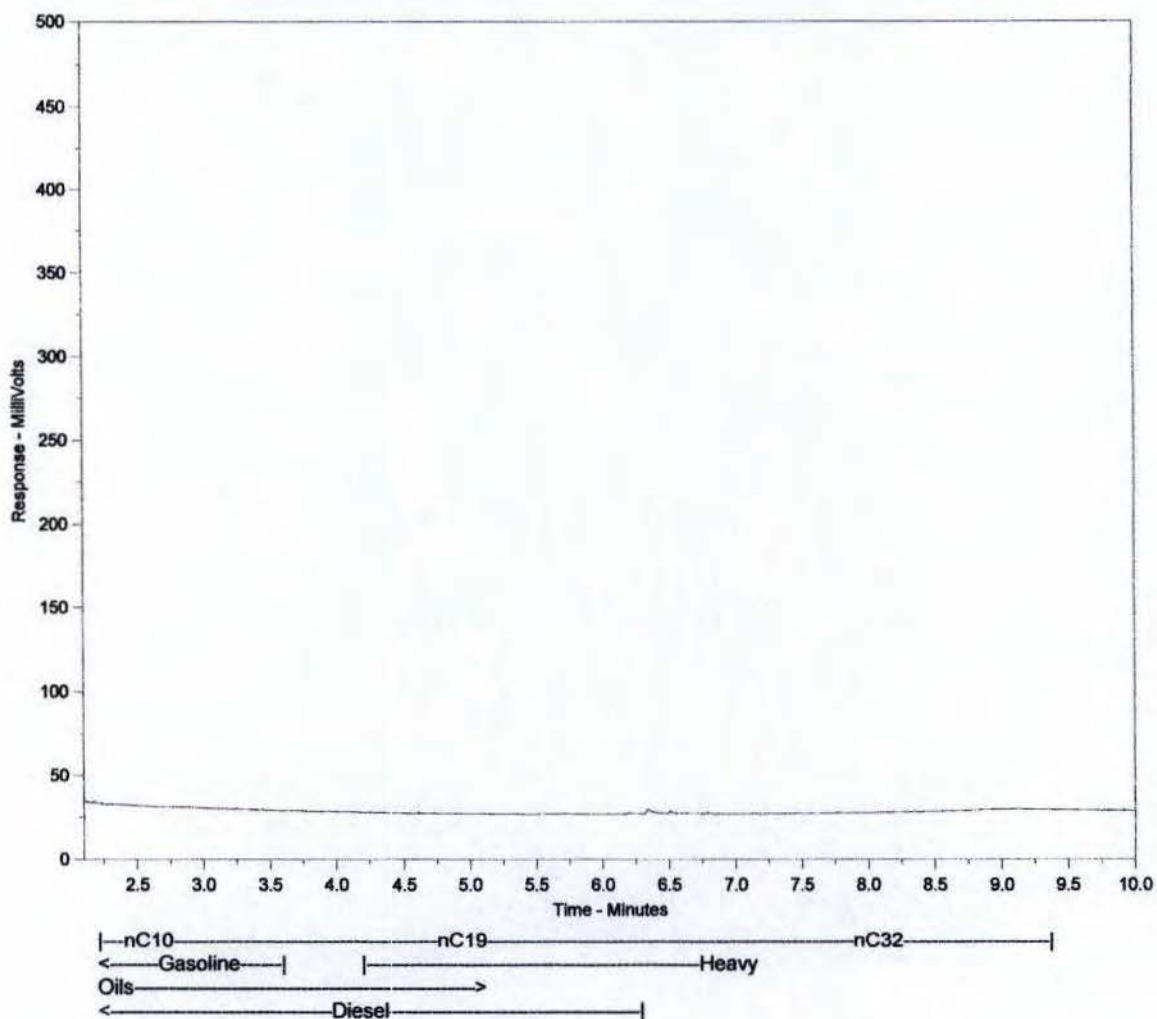
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

Hydrocarbon Distribution Report



ALS Sample ID: L907383-4
Client ID: EAST WALL



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

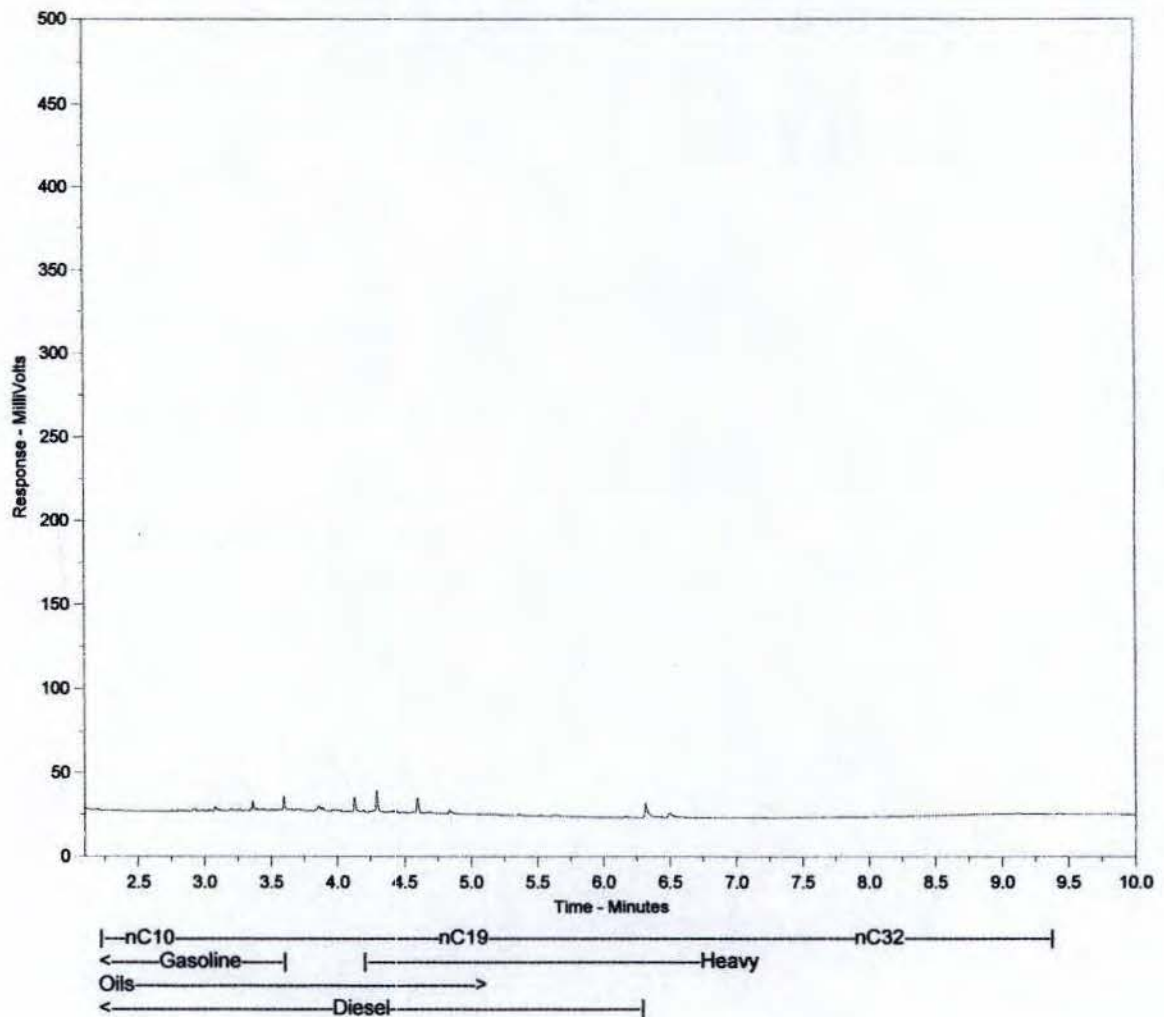
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.

Hydrocarbon Distribution Report



ALS Sample ID: L907383-5
Client ID: WEST WALL



The Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. For further interpretation, a current library of reference products is available upon request.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products, and three n-alkane hydrocarbon marker compounds.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the response scale at the left.