

File No.: 04-1000-20-2018-393

August 15, 2018

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 July 18, 2018 for:

A copy of the underground storage tank removal/closure report that was completed for 7878 Granville Street (formerly 7894 Granville Street) in 2006.

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, and within 30 business days of receipt of this letter, you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your FOI request 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 (#04-1000-20-2018-393); 2) a copy of this letter; 3) a copy of your original request; and 4) detailed reasons why you are seeking the review.

Yours truly,



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

Barbara.vanfraassen@vancouver.ca
453 W. 12th Avenue Vancouver BC V5Y 1V4

*If you have any questions, please email us at foi@vancouver.ca and we will respond to you as soon as possible. Or you can call the FOI Case Manager at 604.871.6584.

Encl.

:kt

STORMWORKS CONTRACTING LTD.

Certification of Underground Storage Tank Removal

January 18, 2006

To: Property Owner
7894 Granville Street
Vancouver, B.C.



This letter of verification from Stormworks Contracting Ltd. is to certify that one (1) underground oil storage tank (UST) has been removed from the property at 7894 Granville Street, Vancouver. Work was performed under **Vancouver Fire Prevention Division Permit No. FI 404240** issued December 19, 2005.

- Approximately 300 litres of oily water and sludge was removed by Sumas Environmental to their facilities at 4623 Byrne Rd, Burnaby
- The tank was cleaned and removed for recycling to MB Superior Metal Recovery, 1100 Powell Street, Vancouver
- The excavation was refilled with clean sand from Lehigh Northwest Materials Ltd.
- Some suspected contaminated soil was removed to Sumas Remediation Services Inc. at 4623 Byrne Rd. Burnaby (see report from Pacific Environmental Consulting)
- Work was completed December 22, 2005

*letter of
advisement
required.*

(1030 ppm)

25T

Stormworks Contracting Ltd.

cc: Fire Prevention Division
Environmental Protection Branch
Vancouver, B.C.

to DOMINO

#51 - 8415 Granville Street, Vancouver, B.C. V6P 4Z9

Telephone: 604-762-1803

sent X

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

Shipper's No. 1223

(Carrier) Sumas SCAC. _____ Carrier's No. LT-1000
Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

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

at _____, date Dec/20/05 from _____

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 Sumas Environmental

Shipper STORMWORKS Contracting

Street 4623 Byrnes Road

Street 51-8415 Monville St

Destination Burnsville R.C. Zip V55-3H6

Origin 7894 Granville St. Zip V6P-4Z9

Route: Same as above

Delivering Carrier

Sumas

Trailer Initial/Number

5134-GS

U.S. Dot Hazmat Reg. Number


No. of packages	HM	Description of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
1		oil water	N/A	N/A	N/A	300L	N/A	N/A	✓
<p>Reamed 300L 18/12/20/05.</p>									

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.

**PLACARDS
REQUIRED**

N/A

PLACARD:
SUPPLIED

☐ YES ☒ NO - FURNISHED BY CARRIER
DRIVER'S SIGNATURE: 

SPECIAL INSTRUCTIONS:

SHIPPER:

[illegible]

DATE: Dec 18 05

CARRIER: Suncoast Environmental

PER: Michellard

DATE: Dec/30/05

EMERGENCY RESPONSE

TELEPHONE NUMBER: (800) 567-7455

Permanent post office address of shipper

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (\$172,604).

Sumas Remediation Services Inc.
Summary of Soil Arrival

Project Number: 05/412
Contaminated Site Address: 7894 Granville Street, Vancouver, BC
Treatment Facility: 4623 Byrne Road, Burnaby, BC
Contact Information: Steve

Contaminant of Concern: Furnace Oil
Analytical: Pacific

Arrival Date	Hour	Carrier	License Numbers		Weight (Kg)			Tracking Form	Weigh Bill #
			Truck	Trailer	Gross	Tare	>CL		
12/21/2005		Waste Away Disposal	9981EE		20830	11400	9430	5221	5812
		Waste Away Disposal	5215WH		22670	11750	10920	5222	5817
12/22/2005		Waste Away Disposal	9981EE		16370	11400	4970	5223	5822

Project Total:	25320	KG
	25.32	Tonnes

RESIDENTIAL UNDERGROUND STORAGE TANK
REMOVAL – SUMMARY REPORT

BACKGROUND INFORMATION

(Asterisked (*) information was provided by Stormworks Contracting, the project's excavation contractor)

Site Address: 7894 Granville Street
Vancouver, BC

City of Vancouver
Fire Permit No: FI 404240

Pacific Project No: 6279

Tank Excavation
Date: Tank Excavated on December 20, 2005*
Excavation completed (backfilled) on December 28, 2005 *

Reporting Date: January 17, 2006

Client: s.22(1)
C/o Stormworks Contracting
#3 – 8431 Granville Street
Vancouver, BC V6P 4Z9

Phone: 604-762-1803

Site Contact: Steve Kirkpatrick, Stormworks Contracting (Stormworks)
(604-724-3670)

Scope of Work:

- Documenting the removal of an abandoned furnace oil underground storage tank (UST) from the site;
- Sampling some associated excavated "suspect [furnace oil] contaminated" soils that had been placed in a lugger box on the site;
- Collecting confirmatory wall/floor samples from the completed UST excavation to confirm that the associated contaminated soils had been excavated and removed.

RELEVANT SITE INFORMATION

Plan Attached? Y N

Site Description: The subject site is a single-family residential property (house) on the east side of Granville Street between 62nd and 64th Avenues in southwestern Vancouver (See attached Photos 1 and 2). The abandoned UST was in the site's back yard immediately east of the house and partly beneath a deck.

Topography: The site and surrounding area slope southerly.

Area Geology: (From Geological Survey of Canada map 1486A): "Glacial drift including: lodgment and minor flow till with lenses and interbeds of glaciofluvial [glacial river-deposited] sand/gravel." Glacial tills are typically almost impermeable (silt/clay tills) to "moderately permeable" (silty tills). Sand/gravel deposits are typically fairly permeable.

Surface Drainage:

From the site: Negligible. Most surface drainage would probably soak into lawns or landscaping before it reached property lines.

Onto the site: Negligible. Adjacent properties have lawns that would probably absorb any surface drainage from them before it reached the subject site. Curbs would divert drainage from Granville Street into the local storm sewer via catch basins.

Groundwater Depth and Inferred Flow Direction:

The local water table depth is unknown. The topographically inferred groundwater flow direction in the area is southerly towards the north arm of the Fraser River, the nearest potential (fresh) surface water receptor, which is approximately 1.3 km south to southwest of the site.

Groundwater usage:

Municipal mains supply potable water and the local groundwater is not a potable water source.

Relevant Nearby Underground Utility Trenches:

A combined sewer line and a water main along Granville Street

History:

The tank installation date is unknown. Terasen records indicate that natural gas was first connected to the property in 1987, which is the likely UST abandonment date.

Stormworks had excavated the tank and associated "suspect contaminated" (furnace oil-stained and/or odorous) soils before Pacific visited the site. Stormworks retained Pacific to collect soil samples and document the UST excavation.

APPLICABLE REMEDIATION STANDARDS

Soils: BC Contaminated Sites Regulation (CSR) Residential Land Use (RL) remediation standards apply to soils within 3 m of the surface. CSR commercial (CL) remediation standards apply to deeper soils.

Groundwater: There is no apparent drinking water or aquatic life groundwater usage and the nearest potentially down gradient (fresh water) aquatic receptor is more than 1 km from the site. CSR standards for volatile hydrocarbons and extractable petroleum hydrocarbons (VHw and EPHw) in groundwater therefore apply to the site. Substances other than VHw and EPHw would only be regulated in groundwater via risk-based standards if they were identified at levels that might pose a threat to human health or the environment.

Contaminant of Concern Other Than Furnace Oil: None

Related CSR-regulated substances in soils other than light and heavy extractable petroleum hydrocarbons (LEPH and HEPH respectively):

Various polycyclic aromatic hydrocarbons (PAHs)

CSR Soil Matrix Standards (if applicable):

For benzo[a]pyrene (a PAH compound): "Toxicity to soil invertebrates and plants" matrix standard applies.

METHODS

**Excavation
Contractor:**

Stormworks Contracting
Site Supervisor: Steve Kirkpatrick (604-724-3670)

**Preparatory
Work:**

Before Pacific arrived on site, Stormworks had located potentially affected underground utilities and excavated the UST, and associated piping and "suspect contaminated" soils. Some "suspect contaminated" soils had been removed from the site. The rest had been placed in a lugger box for imminent removal. The excavated UST had been cut up and stored temporarily on the site (Photo 2).

Sample Collection:

Pacific collected samples using either the excavator's bucket or hand tools. During sampling, protocols to avoid sample contamination (clean sampling tools, factory-cleaned glassware, rubber gloves, washing with detergent and rinsing prior to handling samples, etc.) were followed. Soil samples were kept chilled until they were delivered to the analytical laboratory. Chain-of-custody procedures were followed when transporting the samples.

Analytical Laboratory:

Norwest Labs of Surrey, BC

Analyses:

Four excavation wall and one excavation floor confirmatory soil samples and a sample of the "suspect contaminated" soils for LEPH and HEPH.

One "worst case" (highest LEPH concentration) sample for PAHs.

Most reported LEPH and HEPH concentrations were not corrected for the presence of PAHs (see Table 1, Note 2).

RESULTS

Excavated Tank: Length (m): 2.5
Diameter (m): 0.9
Capacity: 1,590 L (Approximately 350 Imperial gallons)
Type: steel
Cathodic Protection? Y N

Tank Condition: The excavated tank (Photo 3) was heavily corroded with several perforations.

Fuel piping: All fuel lines were removed with the tank*.

Contents: Sumas Environmental Services (Sumas) of North Vancouver (Sumas) pumped approximately 300 L of oily water (less than 3% oil) from the tank and trucked it to their Burnaby BC facility for treatment*.

Excavation Liquids: There was a small amount of water in the excavation's bottom. There was no oil-like sheen on the water.

Generalized Excavation Geology:

<u>To Depth (m)</u>	<u>Soil Type</u>	<u>Visually Estimated Permeability</u>
0.5	Dark brown silt and organics (topsoil) with root fragments.	Moderate
1.3	Orange-brown sand/silt with trace to, some gravel, cobbles and boulders (sand/silt till). Hard, drier than the plastic limit (DTPL – field test).	Low to moderate
3.1 (Bottom)	Grey similar sand/silt till. Hard. DTPL	Low to moderate

A yellowish-grey sand lens exposed on the excavation's west wall (only) between 1.5 and 2.0 m bgs was oil-like odorous and appeared to contain significantly more oil than the surrounding till-like strata.

Photos 4 to 6 are various views of the completed excavation.

Groundwater Conditions:

Water that appeared to be groundwater flowed into the open excavation at approximately 2.5 m bgs. As mentioned previously, there was no oil-like sheen on the water.

Soil Impacts:

The soils that remained in place around the completed excavation's north, east and south walls and floors were not furnace oil odorous. The soils on the excavation's west wall, and the excavated "suspect contaminated" soils in the lugger box, however, were furnace oil odorous.

Figure 1 shows confirmatory wall/floor sample locations. Table 1 summarizes the analytical results. The laboratory's analytical report is also attached. The analytical results (and Pacific's field observations) indicated that the excavated soils typically contained LEPH at CSR "residential (and commercial) plus" concentrations. They also indicated that soils at the excavation's west wall marginally exceeded the CSR's 1,000 ug/g residential (RL) remediation standard for LEPH and are therefore considered "contaminated".

Sample SP1, the sample with the highest EPH₁₀₋₁₉ concentration, was analyzed for PAHs. The sample contained less-than-residential PAH concentrations. The probability that the soils that remain in the work area contain significant ("residential plus") PAH concentrations therefore appears to be very low.

Contaminated Soil Quantities:

25 tonnes of "suspect contaminated" (i.e. furnace oil-stained, odorous and/or locally containing CSR residential or commercial plus LEPH concentrations) soils were excavated, removed from the site and trucked to Sumas's Burnaby BC facility for treatment and disposal*.

Apparent Cause of Contamination:

From the leaking furnace oil UST. An unknown quantity of furnace oil escaped into the subsurface.

Backfill:

The excavation was backfilled with the apparently "clean" (not oil-stained or odorous) near-surface soils that had been excavated to remove the tank and stockpiled temporarily on the site then topped up with clean imported granular material from Lehigh Northwest Materials*.

CONCLUSIONS

Based on Pacific's field observations and the analytical results, The UST and most associated furnace oil contaminated soils appear to have been removed from the work area. There are still some marginally contaminated (CSR "residential plus") soils at and west of the completed excavation's west wall, however that extend beneath the deck and possibly beneath the house.

There was no oil-like sheen on the groundwater that flowed into the open excavation and LEPH/HEPH concentrations were not detected in the apparently low to moderately permeable till-like soils at the excavation's floor. The applicable Vhw and EPHw remediation standards, moreover, are not stringent. Based on the foregoing, the probability that the local groundwater has been significantly impacted by furnace oil from the excavated UST appears to be extremely low. Any groundwater impact, moreover, will decrease with time now that the furnace oil source has been removed.

RECOMMENDATIONS

The marginal LEPH residential exceedance in the sample that Pacific collected from the excavation's west wall infers that the contaminated ("residential plus") soils may not extend much further west. Nevertheless, lending institutions, insurers and/or the City of Vancouver might require they be excavated or otherwise remediated before they finance, insure or allow redevelopment of the property. To avoid these complications, Pacific recommends the remaining "residential plus" soils be removed from the site under its supervision. The most convenient time to remove them would be when the existing house on the site is demolished, which we understand is contemplated in the near future.

ATTACHMENTS

- Figure 1 – Work Area Plan
- Table 1: Analytical Results Summary – Soil Samples – LEPH and HEPH
- Table 2: Analytical Results Summary - PAHs
- Photographs
- Laboratory Analytical Report

LIMITATIONS

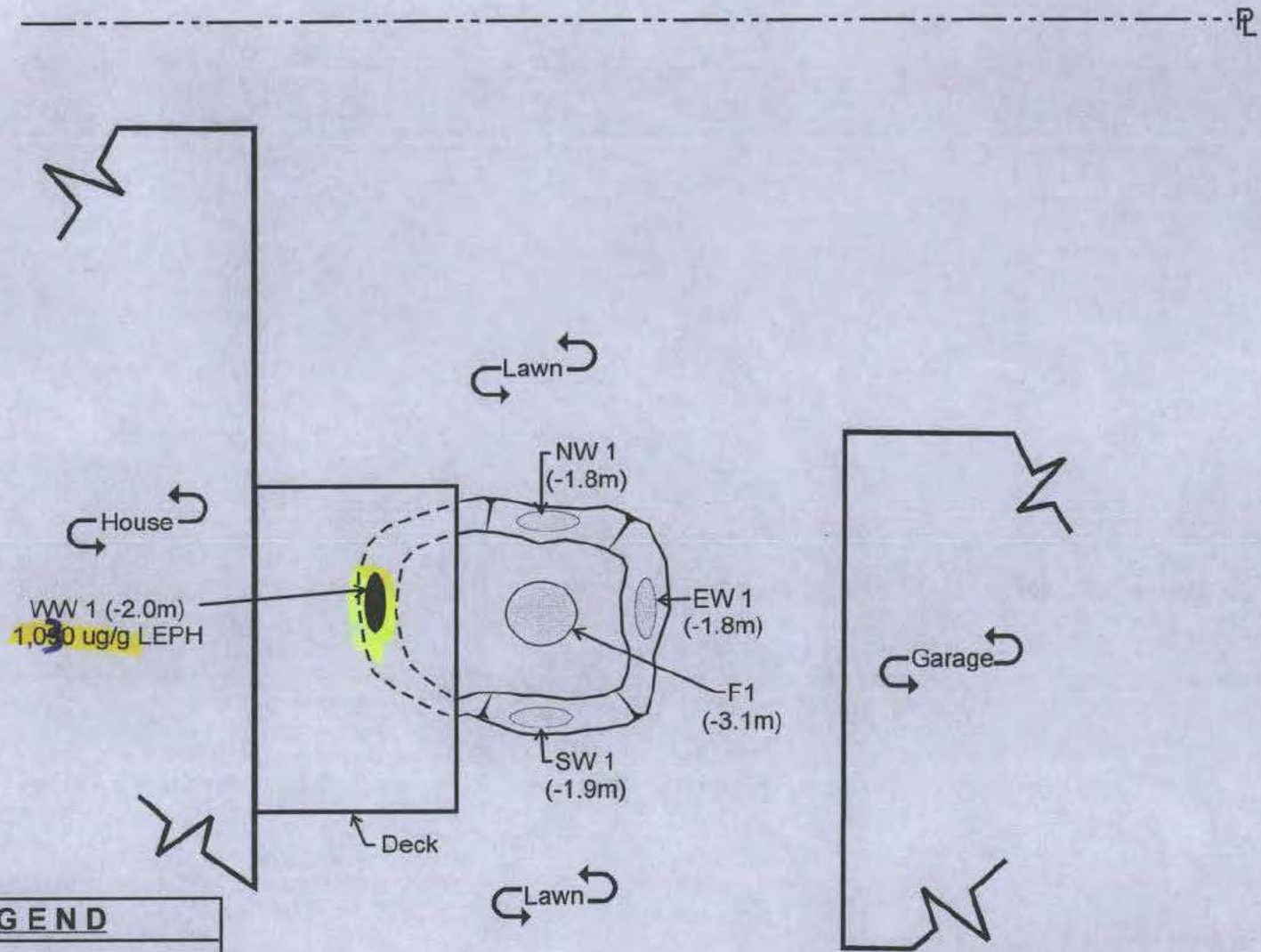
Please note the following limitations to this report:

1. The report's findings and conclusions have been developed in a manner consistent with that level of care and skill normally exercised by qualified professionals currently practising in the jurisdiction. No other warranties, expressed or implied, are made.
2. The findings, conclusions and recommendations of this report are based partly on information provided by others as indicated. Pacific does not take responsibility for inaccuracies in this report resulting from omissions, misrepresentations or mistakes in that information.
3. Pacific's assessment of subsurface conditions in the work area is based upon information obtained at Pacific's soil sampling locations and laboratory analyses to detect the indicated (furnace oil) contaminant of concern only. Subsurface conditions between or beyond the sampling points may be different. Other contaminants may also have impacted the work area. Determining whether or not the rest of the property is contaminated will require additional research, inspections and/or testing.
4. Site conditions documented in this report are those at the time of Pacific's site visit and sampling.

Pacific Environmental Consulting & Occupational Hygiene Services



J.P. Chubb, P. Eng.
Senior Environmental Engineer



LEGEND



Excavation Confirmatory
Sample (wall, floor)

Black samples exceed
CSR Residential (RL)
standards

0 1 2 3m
Scale (approx)

Client: **s.22(1)**
7894 Granville Street, Vancouver, BC
Underground Storage Tank Removal



Environmental Consulting &
Occupational Hygiene Services

Project: 6279

Drawn
By: wgo

Revisions:

Date: December 22, 2005

Scale: as shown

Figure 1: Work Area Plan

Table 1: Analytical Results Summary - Soils – LEPH and HEPH

Sample No.	Location (See Figure 1)	Depth (m)	LEPH (Uncorrected) (ug/g)	HEPH (Uncorrected) (ug/g)
CSR Residential (RL) Standards ²			1,000	1,000
CSR Commercial (CL) Standards ²			2,000	5,000
Excavation Confirmatory Samples				
SWG62 – NW1	North Wall	1.8	42	< 20
SW G62 – EW1	East Wall	1.8	< 20	< 20
SWG62 – WW1	West wall	2.0	1,030	281
SWG62 – SW1	South wall	1.9	< 20	< 20
SWG62 – F1	Floor	3.1	< 20	< 20
"Suspect Contaminated" Soils				
SWG62 – SP1	Lugger box	-	(2,320)	772

Notes:

1. LEPH = light extractable petroleum hydrocarbons (C₁₀ to C₁₉),
HEPH = heavy extractable petroleum hydrocarbons (C₁₉ to C₃₂).

The laboratory reports analytical results as "extractable petroleum hydrocarbons" (EPH). The laboratory reports for "EPH₁₀₋₁₉" and "EPH₁₉₋₃₂" include LEPH and HEPH, respectively, excluding certain PAH compounds, as defined in the October 22, 2004 BC Contaminated Sites Regulation (CSR) plus concentrations of CSR-regulated PAH compounds. The laboratory reports extractable petroleum hydrocarbons as "EPH₁₀₋₁₉" and "EPH₁₉₋₃₂", including PAH compounds, denoted here as LEPH (uncorrected) and HEPH (uncorrected), respectively. Since PAH concentrations in Sample SWG62-SP1, the "worst case" (highest EPH concentrations) sample were low (See Table 2), the PAH correction is not significant and EPH concentrations can be considered the same as LEPH and HEPH concentrations at this site.

2. Standards are BC Contaminated Sites Regulation (CSR) residential land use (RL) soil remediation standards.
3. Standards are BC Contaminated Sites Regulation (CSR) commercial land use (CL) soil remediation standards.
4. **Bold and underlined** concentrations exceed CSR residential standards
5. **Bold, underlined and bracketed** concentrations exceed CSR commercial standards

Table 2 – Analytical Results Summary – Soil Samples – PAHs

PAH Compound	Sample No. SWG62-SP1 Concentrations (ug/g)	CSR Residential (RL) ¹ Standards (ug/g)
Benzo(a)anthracene	0.08	1
Benzo(b)fluoranthene	0.08	1
Benzo[a]pyrene	0.07	1 ³
Benzo(k)fluoranthene	< 0.05	1
Dibenzo(a,h)anthracene	< 0.05	1
Indeno(1,2,3c,d)pyrene	0.06	1
Naphthalene	0.26	5
Phenanthrene	0.84	5
Pyrene	0.32	10

NOTES:

- Standards are Oct. 22, 2004 BC Contaminated Sites Regulation (CSR) residential land use (RL) generic numerical soil remediation standards.
- Standards are CSR commercial land use (CL) generic numerical soil remediation standards.
- Substance is matrix-regulated. "Toxicity to soil invertebrates & plants" matrix standard applies.



Photo 1: Subject site (looking east).



Photo 2: Work area (looking west).



Photo 3: UST (black dots are perforations).



Photo 4: UST excavation north wall (looking northwest).



Photo 5: UST excavation west wall (looking west).



Photo 6: UST excavation east and south walls (looking southeast).



NORWEST LABS

LOT# 432499

Control Number E 251919

Environmental Sample Information Sheet

NOTE: Proper completion of this form is required in order to proceed with analysis
See reverse for your nearest Norwest location and proper sampling protocol

Billing Address:		Copy of Report To:		Copy of invoice: <input type="checkbox"/>	
Company:		Company:		Mail invoice to this	
Address:		Address:		address for approval <input type="checkbox"/>	
Pacific Environmental Consulting 1336 Main Street North Vancouver, BC V7J 1C3		Pacific Environmental Consulting 1336 Main Street North Vancouver, BC V7J 1C3		Report Result:	
Attention: Wendy Oik		Attention: Wendy Oik		Fax <input checked="" type="checkbox"/>	
Phone: (604) 980-3577		Phone: (604) 980-3577		Mail <input checked="" type="checkbox"/>	
Fax: (604) 980-2188		Fax: (604) 980-2188		Courier <input type="checkbox"/>	
Cell: wendy@pacificenvironmentalbc.com		Cell: wendy@pacificenvironmentalbc.com		e-mail <input checked="" type="checkbox"/>	
e-mail: wendy@pacificenvironmentalbc.com		e-mail: wendy@pacificenvironmentalbc.com		e-service <input checked="" type="checkbox"/>	

Information to be included on Report and Invoice	Project ID: 6279	RUSH Please contact the laboratory to confirm rush dates and times before submitting samples. Upon filling out this section, client accepts that surcharges will be attached to this analysis Required on: all analyses or as indicated <input type="checkbox"/> or <input type="checkbox"/> Date Required: _____ Signature: _____ Norwest Authorization: _____	Sample Custody (Please Print) Sampled by: J. P. Chubb Company: Pacific Signature: J. P. Chubb I authorize Norwest Labs to proceed with the work indicated on this form: Date: _____ Initial: _____ Received by: <input type="checkbox"/> Coolers Waybill # _____ Date <input type="checkbox"/> Boxes Company: _____ Received By: DEC 23 2005 Company: _____ Time: 11:50am
	Project Name: s.22(1) - Granville		
	Project Location:		
	Legal Location:		
	PO#:		
	Proj. Acct. Code:		
Agreement ID: 34270			

Special Instructions / Comments <input type="checkbox"/> Check here if Norwest is required to report results directly to a regulatory body (Please include contact information)
Sample WW1 - 1 1/2 X RUSH Rest - Regular E-mail result for WW1 to s.22(1)

Sample Identification	Location	Depth IN CM M	Date / Time Sampled	Matrix	Sampling Method	Enter tests above (✓ relevant samples below)
1 SWG62 - NW1		- 1.8	22/12/05 5:00	Soil	Grab	✓
2 EW1		- 1.8	05:30			✓
3 WW1		- 2.0				✓ ← RUSH (1 1/2)
4 SW1		- 1.9				✓
5 FI		- 3.1				✓ ← PAH
6 SPI		-	11:00			✓ (add. result)
7		-				
8		-				
9		-				
10		-				
11		-				
12		-				
13		-				
14		-				
15		-				

NOTE: All hazardous samples must be labeled according to WHMIS guidelines.

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##



Analytical Report

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Pacific Environmental Consulting
Report to: Pacific Environmental Consulting
1336 Main Street
North Vancouver, BC, Canada
V7J 1C3
Attn: Wendy Olk
Sampled By: J.P. Chubb
Company: Pacific

Project
ID: 6279
Name: s.22(1) Granville
Location:
LSD:
P.O.:
Acct. Code: (Additional)

NWL Lot ID: 432499
Control Number: E 251919
Date Received: Dec 23, 2005
Date Reported: Jan 05, 2006
Report Number: 801370

Page: 1 of 5

		NWL Number	432499-1	432499-2	432499-3	
		Sample Date	Dec 22, 2005 9:30:00AM	Dec 22, 2005 9:30:00AM	Dec 22, 2005 9:30:00AM	
		Sample Description	SWG62 - NW1 / 1.8	SWG62 - EW1 / 1.8	SWG62 - WW1 / 2.0	
		Matrix	Soil	Soil	Soil	
Analyte		Units	Results	Results	Results	Detection Limit
Extractable Petroleum Hydrocarbons - Soil						
EPHs10-19	Dry Weight	ug/g	42	<20	1030	20
EPHs19-32	Dry Weight	ug/g	<20	<20	281	20
		NWL Number	432499-4	432499-5	432499-6	
		Sample Date	Dec 22, 2005 9:30:00AM	Dec 22, 2005 9:30:00AM	Dec 22, 2005 11:00:00AM	
		Sample Description	SWG62 - SW1 / 1.9	SWG62 - F1 / 3.1	SWG62 - SP1	
		Matrix	Soil	Soil	Soil	
Analyte		Units	Results	Results	Results	Detection Limit
Extractable Petroleum Hydrocarbons - Soil						
EPHs10-19	Dry Weight	ug/g	<20	<20	2320	20
EPHs19-32	Dry Weight	ug/g	<20	<20	772	20
LEPHs	Dry Weight	ug/g	-	-	2320	20
HEPHs	Dry Weight	ug/g	-	-	772	20



**NORWEST
LABS**

Analytical Report

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Pacific Environmental Consulting
Report to: Pacific Environmental Consulting
1336 Main Street
North Vancouver, BC, Canada
V7J 1C3
Attn: Wendy Olk
Sampled By: J.P. Chubb
Company: Pacific

Project
ID: 6279
Name: s.22(1) Granville
Location:
LSD:
P.O.:
Acct. Code: (Additional)

NWL Lot ID: 432499
Control Number: E 251919
Date Received: Dec 23, 2005
Date Reported: Jan 05, 2006
Report Number: 801370

Page: 2 of 5

NWL Number 432499-6
Sample Date Dec 22, 2005
11:00:00AM
Sample Description SWG62 - SP1
Matrix Soil

Analyte	Units	Results	Results	Results	Detection Limit
Polynuclear Aromatic Hydrocarbons - Soil					
Acenaphthene	Dry Weight ug/g	0.16			0.05
Acenaphthylene	Dry Weight ug/g	<0.05			0.05
Anthracene	Dry Weight ug/g	<0.05			0.05
Benzo(a)anthracene	Dry Weight ug/g	0.08			0.05
Benzo(a)pyrene	Dry Weight ug/g	0.07			0.05
Benzo(b)fluoranthene	Dry Weight ug/g	0.08			0.05
Benzo(g,h,i)perylene	Dry Weight ug/g	0.05			0.05
Benzo(k)fluoranthene	Dry Weight ug/g	<0.05			0.05
Chrysene	Dry Weight ug/g	0.12			0.05
Dibenzo(a,h)anthracene	Dry Weight ug/g	<0.05			0.05
Fluoranthene	Dry Weight ug/g	0.16			0.05
Fluorene	Dry Weight ug/g	0.46			0.05
Indeno(1,2,3-c,d)pyrene	Dry Weight ug/g	0.06			0.05
Naphthalene	Dry Weight ug/g	0.26			0.05
Phenanthrene	Dry Weight ug/g	0.84			0.05
Pyrene	Dry Weight ug/g	0.32			0.05
PAH - Soil - Surrogate Recovery					
2-Fluorobiphenyl	PAH - Surrogate %	NA			40-130
Nitrobenzene-d5	PAH - Surrogate %	NA			40-130
p-Terphenyl-d14	PAH - Surrogate %	NA			40-130

Approved by:

Bill Warning, B.Sc.
Lab Operations Manager



Quality Control

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Pacific Environmental Consulting
Report to: Pacific Environmental Consulting
1336 Main Street
North Vancouver, BC, Canada
V7J 1C3
Attn: Wendy Olk
Sampled By: J.P. Chubb
Company: Pacific

Project
ID: 6279
Name: s.22(1) Granville
Location:
LSD:
P.O.:
Acct. Code: (Additional)

NWL Lot ID: 432499
Control Number: E251919
Date Received: Dec 23, 2005
Date Reported: Jan 05, 2006
Report Number: 801370

Page: 3 of 5

Extractable Petroleum Hydrocarbons - Soil

Blanks	Units	Measured	Mean	Lower Limit	Upper Limit	Passed QC
EPHs10-19	ug/g	<20	0	-20	20	✓
EPHs19-32	ug/g	<20	0	-20	20	✓

Material Used: Method Blank - EPH
Date Acquired: Dec 23, 2005
Acquired By: Sandra Chu

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
EPHs10-19	ug/mL	51.1	50	103	80-120	✓
EPHs19-32	ug/mL	51.1	50	103	80-120	✓

Material Used: Calibration Check - EPH
Date Acquired: Dec 23, 2005
Acquired By: Sandra Chu

Replicates	Units	Replicate1	Replicate2	% RSD Criteria	Absolute Criteria	Passed QC
EPHs10-19	ug/g	1030	262	60	100	✓
EPHs19-32	ug/g	281	65	60	100	✓

Material Used: Matrix Spike Duplicate 2 - EPH
Date Acquired: Dec 23, 2005
Acquired By: Sandra Chu

Matrix Spike	Units	Measured	Actual	% Recovery	Criteria (%)	Passed QC
EPHs10-19	ug/g	30	25.58	119	88-128	✓
EPHs19-32	ug/g	30	24.77	119	82-122	✓

Material Used: Matrix Spike - EPH
Date Acquired: Dec 23, 2005
Acquired By: Sandra Chu



NORWEST
LABS

Quality Control

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#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Pacific Environmental Consulting
Report to: Pacific Environmental Consulting
1336 Main Street
North Vancouver, BC, Canada
V7J 1C3
Attn: Wendy Olk
Sampled By: J.P. Chubb
Company: Pacific

Project
ID: 6279
Name: s.22(1) Granville
Location:
LSD:
P.O.:
Acct. Code: (Additional)

NWL Lot ID: 432499
Control Number: E251919
Date Received: Dec 23, 2005
Date Reported: Jan 05, 2006
Report Number: 801370

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Polynuclear Aromatic Hydrocarbons - Soil

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
Acenaphthene	ng/mL	1011.7	1000.00	101.17	79.99-120.01	✓
Acenaphthylene	ng/mL	1010.6	1000.00	101.06	79.99-120.01	✓
Anthracene	ng/mL	1032.1	1000.00	103.21	79.99-120.01	✓
Benzo(a)anthracene	ng/mL	1002.5	1000.00	100.25	79.99-120.01	✓
Benzo(a)pyrene	ng/mL	1039.5	1000.00	103.95	79.99-120.01	✓
Benzo(b)fluoranthene	ng/mL	1033.3	1000.00	103.34	79.99-120.01	✓
Benzo(g,h,i)perylene	ng/mL	1033.2	1000.00	103.32	79.99-120.01	✓
Benzo(k)fluoranthene	ng/mL	1033.6	1000.00	103.36	79.99-120.01	✓
Chrysene	ng/mL	1007.7	1000.00	100.77	79.99-120.01	✓
Dibenzo(a,h)anthracene	ng/mL	1038.8	1000.00	103.88	79.99-120.01	✓
Fluoranthene	ng/mL	1022.0	1000.00	102.20	79.99-120.01	✓
Fluorene	ng/mL	1013.1	1000.00	101.31	79.99-120.01	✓
Indeno(1,2,3-c,d)pyrene	ng/mL	1028.4	1000.00	102.84	79.99-120.01	✓
Naphthalene	ug/mL	1011.7	1000.00	101.17	79.99-120.01	✓
Phenanthrene	ng/mL	1026.3	1000.00	102.63	79.99-120.01	✓
Pyrene	ng/mL	1026.4	1000.00	102.64	79.99-120.01	✓

Material Used: Calibration Check - PAH(Sry)

Date Acquired: Jan 05, 2006

Acquired By: Craig Stehr

PAH - Soil - Surrogate Recovery

Calibration Check	Units	Measured	Target	% Recovery	Criteria (%)	Passed QC
2-Fluorobiphenyl	%	97.8	100	98	80-120	✓
Nitrobenzene-d5	%	90.8	100	91	80-120	✓
p-Terphenyl-d14	%	90.3	100	90	80-120	✓

Material Used: Calibration Check - PAH(Sry)

Date Acquired: Jan 05, 2006

Acquired By: Craig Stehr



**NORWEST
LABS**

Methodology and Notes

Norwest Labs
#104, 19575-55 A Ave.
Surrey, BC. V3S 8P8
Phone: (604) 514-3322
Fax: (604) 514-3323

Bill to: Pacific Environmental Consulting
Report to: Pacific Environmental Consulting
1336 Main Street
North Vancouver, BC, Canada
V7J 1C3
Attn: Wendy Oik
Sampled By: J.P. Chubb
Company: Pacific

Project
ID: 6279
Name: s.22(1) Granville
Location:
LSD:
P.O.:
Acct. Code: (Additional)

NWL Lot ID: 432499
Control Number: E 251919
Date Received: Dec 23, 2005
Date Reported: Jan 05, 2006
Report Number: 801370

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Method of Analysis:

MethodName	Reference	Method	Date Analysis Started	Location
EPH - Soil	B.C. Ministry of WLAP	* EPH in Solids by GC/FID (Dec. 31, 2000), EPH in Solids	23-Dec-05	Norwest Labs Surrey
EPH - Soil	B.C. Ministry of WLAP	* EPH in Solids by GC/FID (Dec. 31, 2000), EPH in Solids	23-Dec-05	Norwest Labs Surrey
PAH - Soil (Surrey)	B.C. Ministry of WLAP	* PAHs in Soil by GC/MS/SIM (November 2002), PAH	13-Dec-05	Norwest Labs Surrey
PAH - Soil (Surrey)	US EPA	* Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry, 8270	13-Dec-05	Norwest Labs Surrey

* Norwest method(s) is based on reference method

References:

B.C. Ministry of WLAP
US EPA

B.C. Ministry of Water, Land and Air Protection
US Environmental Protection Agency Test Methods

Comments:

Surrogate recovery 'NA' indicates that surrogate recovery is not available. PAH analysis was run using existing EPH extract. No surrogate was added.

This report also includes 6 pages of EPH chromatograms.

This report re-issued to include addition of PAH analysis. Report 801370 is an addendum to/replaces report 799183.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted

The test report shall not be reproduced except in full, without the written approval of the laboratory



Vancouver Office:
1336 Main Street
North Vancouver, B.C.
V7J 1C3

Phone: (604) 980-3577
Fax: (604) 980-2188
Contact: *Peter Hansen*

Prince George Office:
Suite 202- 940 Third Ave.
Prince George, B.C.
V2M 1G7

Phone: (250) 562-1145
Fax: (250) 562-1146
Contact: *Glenn Wong*

Nanaimo Office:
PO Box 298
Unit 10-7217 Lantzville Rd.,
Nanaimo, B.C.
V0R 2H0

Phone: (250) 390-1101
Fax: (250) 390-1153
Contact: *Gord Wedman*

Victoria Office:
1933 Lee Avenue
Victoria, B.C.
V8R 4W9

Phone: (250) 380-3911
Fax: (250) 380-1123
Contact: *Tim Salusbury*

Email: info@pacificenvironmentalbc.com
Website: www.pacificenvironmentalbc.com

STORMWORKS CONTRACTING LTD.

Certification of Underground Storage Tank Removal

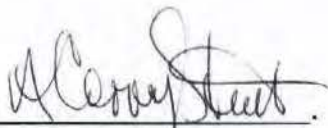
January 18, 2006

ENTERED MAR 15 2006

To: Property Owner
7894 Granville Street
Vancouver, B.C.

This letter of verification from Stormworks Contracting Ltd. is to certify that one (1) underground oil storage tank (UST) has been removed from the property at 7894 Granville Street, Vancouver. Work was performed under **Vancouver Fire Prevention Division Permit No. FI 404240 issued December 19, 2005.**

- Approximately 300 litres of oily water and sludge was removed by Sumas Environmental to their facilities at 4623 Byrne Rd, Burnaby
- The tank was cleaned and removed for recycling to MB Superior Metal Recovery, 1100 Powell Street, Vancouver
- The excavation was refilled with clean sand from Lehigh Northwest Materials Ltd.
- Some suspected contaminated soil was removed to Sumas Remediation Services Inc. at 4623 Byrne Rd. Burnaby (see report from Pacific Environmental Consulting)
- Work was completed December 22, 2005



Stormworks Contracting Ltd.

cc: **Fire Prevention Division**
Environmental Protection Branch
Vancouver, B.C.

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

Shipper's No. 1223

(Carrier) Sumas SCAC. _____ Carrier's No. LT-1000
Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____, date Dec/20/05 from _____

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 Sumas Environmental

Shipper STORMWORKS Contracting

Street 4623 Byrne Road

Street 51-8415 Monville St

Destination Burnsville BC Zip V55-3H6

(Site)
Origin 7894 Granville St. Zip V6P-4Z9

Route: Same as above

Delivering Carrier

Sumas

Trailer Initial/Number

5134-G5

U.S. Dot Hazmat Reg. Number

[illegible]

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

PLACARDS REQUIRED

N/A

PLACARDS
SUPPLIED

☐ YES ☒ NO - FURNISHED BY CARRIER
DRIVER'S SIGNATURE: *[Signature]*

SPECIAL INSTRUCTIONS:

SHIPPER:

CARRIER: Suana Environmental

PER:

DATE: Dec 18 05

PER: Michelle

DATE: Dec/20/05

EMERGENCY RESPONSE

TELEPHONE NUMBER: 1 (800) 567-7455

Permanent post office address of shipper

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (5172.604)

Sumas Remediation Services Inc.
Summary of Soil Arrival

Project Number: 05/412
Contaminated Site Address: 7894 Granville Street, Vancouver, BC
Treatment Facility: 4623 Byrne Road, Burnaby, BC
Contact Information: Steve

Contaminant of Concern: Furnace Oil
Analytical: Pacific

Arrival Date	Hour	Carrier	License Numbers		Weight (Kg)			Tracking Form	Weigh Bill #
			Truck	Trailer	Gross	Tare	>CL		
12/21/2005		Waste Away Disposal	9981EE		20830	11400	9430	5221	5812
		Waste Away Disposal	5215WH		22670	11750	10920	5222	5817
12/22/2005		Waste Away Disposal	9981EE		16370	11400	4970	5223	5822

Project Total:	25320	KG
	25.32	Tonnes



CITY OF VANCOUVER
COMMUNITY SERVICES GROUP
Environmental Protection Branch
Licences and Inspections Department

March 30, 2006

s.22(1)

7894 Granville Street
Vancouver, BC
V6P 4Z2

Dear Sir or Madam:

**RE: Underground Storage Tank Removal at 7894 Granville Street
Fire Permit FI-404240**

The Environmental Protection Branch was notified in March, 2006 of plans to remove the underground storage tank (UGST) located on the east side of the property. During the site inspection, the Fire Prevention Officer noted soil contamination potentially caused by the unused UGST which previously contained residential home heating fuel.

An *Underground Storage Tank Removal Report* prepared by Pacific Environmental was submitted to and reviewed by the Environmental Protection Branch. The report showed that contaminated soil remained in the tank nest at west wall under the deck (1030 ug/g LEPH), which marginally exceeded the Ministry of Environment's (MOE) prescribed Residential Standards. The numerical standards for soil and groundwater are pursuant to the Contaminated Sites Regulation, B.C. Reg. 346/2004.

Please be advised that the Fire Permit FI 404240 issued for the tank removal will remain open until the contaminated soil has been remediated to the prescribed residential standards.

If you have any questions, please contact Mary Gurney at 604 873-7122.

Yours truly,


Neil McCreedy
Manager, Environmental Protection Branch
Neil.mccreedy@vancouver.ca
Phone: 604.873.7567

H:\ENVIRON\LETTERS\Mary\UGST-CONTAMINATIONS\7894 Granville1 - FI-404240.doc


cc: Stormworks Contracting Ltd.
51 - 8415 Granville Street
Vancouver, BC V6P 4Z9

Address to

Note Topics

	Topic	Rows
	190 ENVIRONMENTAL PROTECTION	1

Note Numbers

 001 Entered by: M GURNEY On: 20060324 Updated by: M GURNEY On: 20060328

Note


Contaminated soil remains on this property after a removal of an UGST.
 The conmtaminated soil MUST be remediated to < residential standards
 PRIOR to the construction of a new home. An EnvironmentalReport
 including lab analysis of the remediated site must be submitted to this
 office for review and approval. questions? call MArY 7122

Address to

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 Mar 2006
Environmental Report recv'd from Pacific Environmental. 25T of contaminated soil was removed to Sumas Environmental, 300L of oily water was pumped and removed by SWumas Environmental, and the tank was taken to MB Superior Metal Recovery. Contamination remains at the west side of the tank nest , under the deck and near the foundation of the house (1030 ug/g LEPH. Letter of advisement sent to the owner.					