# SD&C

PO Box 2071, Kirkland, WA 98083 ts4sdc@hotmail.com

Phone (206) 459-5775

## Quarterly Groundwater and Treatment System Monitoring Report (Quarter #1 – 2015)

## Lake Goodwin Gas Station 4726 Lakewood Road Stanwood, WA

#### **Prepared for:**

Ms. Karen Ryan Lake Goodwin Gas Station 4726 Lakewood Road Stanwood, WA

#### Submitted by:

Slotta Design & Consulting (SD&C) PO Box 2071 Kirkland, WA 98083

April 9, 2015



Timothy S. Slotta

Timothy S. Slotta L.H.G. #2175 Hydrogeologist

### **TABLE OF CONTENTS**

1.0 INTRODUCTION	1
1.1 General 1.2 Site Description	1
1.3 Background 1.4 Scope of Work	1
2.0 FIELD ACTIVITIES	· 2 2
<ul><li>2.1 Replacement of Carbon Vessel.</li><li>2.2 Water Monitoring and Sampling</li></ul>	2
3.0 CHEMICAL ANALYSES AND RESULTS	. 2
<ul><li>3.1 Laboratory Analyses of Water Samples</li><li>3.2 Results of Sample Analyses</li></ul>	. 2
4.0 SUMMARY AND CONCLUSIONS	.3
5.0 LIMITATIONS	3
6.0 REFERENCES	4

#### LIST OF TABLES

1 I aboratory Chemical Analytical Devilter E. C. 1	
1 Laboratory Chemical Analytical Results For Groundwater Samples	5
2 Monitoring Well Elevation Data	6

## LIST OF FIGURES

1 Vicinity Map	-
2 Site Location Map	. 7
3 Treatment System Schematic	. 8
v	. 9

## LIST OF APPENDICES

I Laboratory Reports

#### **1.0 INTRODUCTION**

#### 1.1 General

This report presents the results of the first quarter (Q1-2015) monitoring event conducted by Slotta Design and Consulting (SD&C) at the Lake Goodwin Grocery located in Stanwood, Washington (Figure 1). The groundwater sampling, and monitoring activities were conducted in accordance with the Washington Department of Ecology (Ecology's) Model Toxics Control Act (MTCA) WAC 173-340, Voluntary Cleanup Program (VCP), with the intent of achieving "no further action" (NFA) designation for the site.

#### 1.2 Site Description

The irregular-shaped property located at 4726 Lakewood Road, is situated on the shoreline of Lake Goodwin. The 6.79 acre property is comprised of 13 parcels used as a recreational vehicle resort. The property includes the Lake Goodwin Grocery, a 1926-era convenience store with an office, and a 1998-era gas station canopy with two operational underground storage tanks (USTs). The gas station area is mostly concrete and asphalt paved and used for parking and fuel distribution. The principal site features as they relate to the gas station building are illustrated in Figure 2. The grocery store and fuel distribution canopy are located on the central portion of the site adjacent to Lakewood Road located to the north. The site is generally level and slopes gradually toward Lake Goodwin, which is located directly to the south/southeast. The property is bordered to the west by undeveloped land and east by Snohomish County's Lake Goodwin Park.

#### 1.3 Background

SD&C was contracted on December 19, 2013 to review the site conditions after a gasoline spill occurred. Groundwater in monitoring wells in the vicinity of the release area (MW-4, 5, and 6) contained petroleum hydrocarbon compound (PHC) at concentrations which exceeded MTCA method A cleanup levels. The results of the groundwater samples collected from the wells are included in Table 1, and the elevation data measured from each monitoring well is included in Table 2.

A water level control well (PW-1), located adjacent to the spill, contained 18-inches of freephase PHC product on the water surface. PW-1 is currently operated to create a localized depression of the shallow water table in the area, and lower the water level in the vicinity of the UST compound and the fuel pumps. PW-1 is a 12-inch diameter PVC sewer pipe which was installed during site upgrades in 1987. The water from PW-1 has historically been discharged to the ground surface in a grassy bio-swale south of the fuel distribution area and has not been regulated. The PW-1 discharge has been retrofitted to discharge through parallel 55-gallon carbon filters. An air sparging system is also in operation at PW-1 which is composed of a Rotron-blower connected with subsurface 2" PVC piping to discharge beneath the groundwater surface. A system schematic illustrating the air-sparging, and pumping with carbon treatment is included in Figure 3.

#### 1.4 Scope of Work

The Q1-2015 sampling event was conducted by SD&C on March 31, 2015. This report summarizes the sampling data and historical results of samples collected from the monitoring wells, PW-1, and the water treatment system discharge (DIS-1).

SD&C conducted the following quarterly monitoring activities:

- Installing a replacement carbon canister on the treatment system.
- Collecting groundwater from the sampling locations.
- Submitting the samples under chain-of-custody to a laboratory for analysis.
- Evaluating the results of the laboratory analyses of the water samples.
- Preparing this written report to summarize the field data and the laboratory results.

#### 2.0 FIELD ACTIVITIES

#### 2.1 Replacement of Carbon Vessel

The primary carbon vessel, attached in parallel with the secondary vessel at the water treatment system, was replaced using a new 55-gallon drum. The carbon drum was supplied by Evoqua Water Systems and replaced by SD&C on April 3, 2015.

### 2.2 Water Monitoring and Sampling

The monitoring wells (MW-4, 5 and 6) were sampled in accordance with EPA approved protocol using a low flow peristaltic pump directly into laboratory prepared VOA vials. The PW-1 and DIS-1 samples were collected directly from the discharge piping. The water samples were delivered under chain-of-custody to ALS Laboratory of Everett, WA for analysis.

## 3.0 CHEMICAL ANALYSES AND RESULTS

## 3.1 Laboratory Analyses of Water Samples

Copies of the original laboratory reports are included as Appendix I. The water samples were analyzed for the following constituents:

- Total Petroleum Hydrocarbons (TPH)-Volatile Range as Gasoline, using Ecology Method WTPH-Gx; and
- Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX), using EPA Method 8020 modified.

#### 3.2 Results of Sample Analyses

The results of the samples are summarized in Table 1. The samples from all of the motoring wells, and DIS-1 did not contain detectable concentrations of PHCs. The sample from PW-1 contained detectable concentrations of WTPH-G, Ethyl Benzene and Xylenes which did not exceed the MTCA method A cleanup levels.

#### 4.0 SUMMARY AND CONCLUSIONS

SD&C conducted this Q1-2015 groundwater monitoring and sampling event at the Lake Goodwin Grocery located in Stanwood, WA on March 31, 2015. Facility maintenance activities conducted during the quarter included the carbon filter replacement. The quarterly water monitoring and remediation activities were conducted with the intent of achieving an NFA designation with Ecology's VCP. Ecology requires four consecutive quarters of water monitoring data with chemical concentrations below the MTCA method A cleanup levels prior to authorizing a NFA.

The Q1-2015 results of the water samples collected from the monitoring wells (MW-4, 5, and 6) did not contain detectable concentrations of PHCs. PW-1 contained concentrations of WTPH-G and Ethyl Benzene and Xylenes at concentrations which do not exceed the MTCA method A cleanup levels. The concentrations of the chemical of concern decreased below the previous quarterly event.

The carbon in the treatment system was refreshed during this quarterly sampling event and continues to be working properly. The Q1-2015 results of the sample collected from the treatment system discharge DIS-1 did not contain detectable concentrations of PHC. The continued operation of the air sparging system at the pumping well PW-1 appears to be successful in reducing the PHC concentrations in the groundwater. Three additional monitoring events are required to fulfill the MTCA requirements.

#### **5.0 LIMITATIONS**

SD&C's conclusions are based on conditions encountered at the time of field activities, information provided, and the results of qualitative sampling. The opinions expressed in this report are based on an evaluation of the subsurface conditions encountered, and the assumption that the water conditions in proximity to the sample sites do not deviate appreciably from those

examined. Any unusual conditions not identified during this monitoring event should be brought to the attention of SD&C so that modifications may be made if necessary.

SD&C's work was performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

#### **6.0 REFERENCES**

Ecology. October 1992. Guidance for Site Checks and Site Assessments for Underground Storage Tanks. Washington State Department of Ecology, Olympia, Washington. 35 pp.

Sample ID	Sample Date	WTPH-G (mg/L, ppb)	Benzene (ug/L, ppb)	Toluene (ug/L, ppb)	Ethyl Benzene (ug/L, ppb)	Xylenes
Well Water			(- <u>8</u> -, pps)	(ug L, pp0)	(ug/L, pp0)	(ug/L, ppb)
PW-1	12-19-13	550,000	N/A	N/A	N/A	N/A
PW-1	3-5-14	330	2,400	14,000	3,800	the second se
PW-1	5-20-14	15	100	1,500	240	30,000
PW-1	8-15-14	0.067	<1	1.2	240	2,300
PW-1	12-8-14	6.8	30	62	92	<u>8.7</u> 750
PW-1	3-31-15	0.930	<1	<1	2	30
MW-4	12-19-13	17	57	960	350	2 100
MW-4	3-5-14	< 0.05	<1	<1	<1	2,100
MW-4	5-20-14	< 0.05	<1	<1	<1	<3
MW-4	8-15-14	< 0.05	<1	<1	<1	<3
MW-4	12-8-14	< 0.05	<1	<1		<3
MW-4	3-31-15	< 0.05	<1	<1	<1 <1	<3 <3
MW-5	12-19-13	1.9	15	180	47	200
MW-5	3-5-14	< 0.05	<1	<1	and the second data and the se	280
MW-5	5-20-14	< 0.05	<1	<1	<1 <1	<3
MW-5	8-15-14	< 0.05	<1	<1	<1	<3
MW-5	12-8-14	< 0.05	<1	<1	<1	<3
MW-5	3-31-15	< 0.05	<1	<1 <1	<1	<3 <3
MW-6	12-19-13	1.6	11	130	24	200
MW-6	3-5-14	< 0.05	7.1	<1	34	220
MW-6	5-20-14	<0.05	3.7	<1	<1	<3
MW-6	8-15-14	< 0.05	3.7	<1	<1	<3
MW-6	12-8-14	< 0.05	<1	<1	<1	<3
MW-6	3-31-15	< 0.05	<1	<1	<1	<3
Discharge Water	1			~1	<1	<3
Discharge Water Dis-1	1-3-14	< 0.05	<1	<1		-2
Discharge Water Dis-1	5-13-14	< 0.05	<1	<1	<1 <1	<3
Discharge Water Dis-1	12-8-14	< 0.05	<1	<1	<1	<3
Discharge Water Dis-1	3-31-15	< 0.05	<1	<1	<1	<3
Discharge Water Dis-2	5-13-14	<0.05	<1	<1		<3
Discharge Water Dis-2	8-15-14	<0.05	<1	<1	<1	<3
Storm Water			~1	~1	<1	<3
SW-1	5-13-14	< 0.05	<1	<1	<1	
MTCA Method A clean		1.0	5	1,000	700	<3
Method Reporting Li	mit	0.050	1	1,000	1	<b>1,000</b> 1

### Table 1 - Laboratory Chemical Analytical Results Groundwater Samples Lake Goodwin Grocery - Stanwood, WA

#### Notes:

Milligrams per liter (mg/L), parts per million (ppm) Micrograms per liter ( $\mu$ g/L), parts per billion (ppb).

<1.0 = not detected at or above the method reporting limit. N/A = not analyzed

MTCA Method A cleanup levels for groundwater are from WAC chapter 173-340 revised 2-12-01.

Groundwater sample analysis included: Gasoline by Ecology method NWTPH-Gx, and BTEX by EPA method 8020

Monitoring Well	Date	Casing	Depth to	Groundwater
		Elevation	Groundwater	Elevation
MW-4	5/13/14	342.06	1.16	340.90
MW-4	8/15/14	342.06	2.66	339.40
MW-4	12/15/14	342.06	.92	341.14
MW-4	3/31/15	342.06	1.54	340.52
MW-5	5/13/14	342.87	2.33	340.54
MW-5	8/15/14	342.87	3.75	339.12
MW-5	12/15/14	342.87	1.84	341.03
MW-5	3/31/15	342.87	2.02	340.85
MW-6	5/13/14	342.58	1.66	340.92
MW-6	8/15/14	342.58	3.10	339.48
MW-6	12/15/14	342.58	1.32	341.26
MW-6	3/31/15	342.58	1.63	340.95

## Table 2 Monitoring Well Elevation Data Lake Goodwin Grocery – Stanwood, WA







### **APPENDIX I**

## LABORATORY REPORTS



April 6, 2015

Mr. Tim Slotta SD & C PO Box 2071 Kirkland, WA 98083

Dear Mr. Slotta,

On April 3rd, 5 samples were received by our laboratory and assigned our laboratory project number EV15040022. The project was identified as your Lake Goodwin. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan Laboratory Director

Page 1
ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208
ALS Laboratory Group A Campbell Brothers Limited Company
FAX 425-356-2626

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	SD & C			DATE:	4/6/20-	15	
	PO Box 2071			ALS JOB#:	EV150		
	Kirkland, WA 98083			ALS SAMPLE#:		40022-01	
CLIENT CONTACT:	Tim Slotta		D	ATE RECEIVED:	04/03/2		
CLIENT PROJECT:	Lake Goodwin			LECTION DATE:	3/31/20	015 2:00:00 F	M
CLIENT SAMPLE ID	MW-4		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION	UNITS	ANALYSIS AI DATE	NALYSIS
TPH-Volatile Range	NWTPH-GX	U	50	1	ug/L	04/04/2015	PAB
Benzene	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Toluene	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Ethylbenzene Xylenes	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Aylenes	EPA-8021	U	3.0	1	ug/L	04/04/2015	PAB
						ANALYSIS AM	
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	82.2				04/04/2015	PAB
TFT	EPA-8021	98.9				04/04/2015	PAB

 Page 2

 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208
 PHONE 425-356-2600
 FAX 425-356-2626

 ALS Laboratory Group
 A Campbell Brothers Limited Company
 FAX 425-356-2626

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	SD & C			DATE:	4/0/00	, pm	
	PO Box 2071			ALS JOB#:	4/6/201		
	Kirkland, WA 98083			ALS JOB#.	EV150		
CLIENT CONTACT:	Tim Slotta		D	ATE RECEIVED:	04/03/2	40022-02	
CLIENT PROJECT:	Lake Goodwin			LECTION DATE:		)15 2:30:00 F	N //
CLIENT SAMPLE ID	MW-5			CREDITATION:	C601	/10 2.30.00 F	IVI
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION	UNITS	ANALYSIS A	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	ug/L	04/04/2015	PAB
Benzene	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Toluene	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	ug/L	04/04/2015	PAB
Kylenes	EPA-8021	U	3.0	1	ug/L	04/04/2015	PAB
						ANALYSIS AN	IALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	85.9				04/04/2015	PAB
IFT	EPA-8021	102				04/04/2015	PAB

 Page 3

 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208
 PHONE 425-356-2600
 FAX 425-356-2626

 ALS Laboratory Group
 A Campbell Brothers Limited Company
 FAX 425-356-2626

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS				
CLIENT:	SD & C			4/6/20	15		
	PO Box 2071		040022				
CLIENT CONTACT	Kirkland, WA 98083			ALS SAMPLE#:		40022-03	
CLIENT CONTACT: CLIENT PROJECT:	Tim Slotta			ATE RECEIVED:	04/03/2	2015	
	Lake Goodwin			ECTION DATE:	3/31/20	015 2:45:00 F	M
CLIENT SAMPLE ID	MW-6		WDOE AC	CREDITATION:	C601		
		SAMPLE	DATA RESULTS				
			REPORTING	DILUTION	UNITS	ANALYSIS AN	ALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	0.010	DATE	BY
TPH-Volatile Range	NWTPH-GX	U	50	1	ug/L	04/03/2015	PAB
Benzene	EPA-8021	U	1.0	1	ug/L	04/03/2015	PAB
Toluene	EPA-8021	U	1.0	1	ug/L	04/03/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	ug/L	04/03/2015	PAB
Xylenes	EPA-8021	U	3.0	1	ug/L	04/03/2015	PAB
-						ANALYSIS AN	ALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	112				04/03/2015	PAB
TFT	EPA-8021	100				04/03/2015	PAB

 Page 4

 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208
 PHONE 425-356-2600
 FAX 425-356-2626

 ALS Laboratory Group
 A Campbell Brothers Limited Company
 FAX 425-356-2626

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Environmental 💹



		CERTIFIC	ATE OF ANALYSIS				Shi Shara
CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083			4/6/2015 EV15040022			
CLIENT CONTACT:	Tim Slotta		n	ALS SAMPLE#: ATE RECEIVED:	EV150- 04/03/2	40022-04	
CLIENT PROJECT:	Lake Goodwin			LECTION DATE:		015 )15 3:00:00 P	M
CLIENT SAMPLE ID	PW-1		WDOE AC	CCREDITATION:	C601		
		SAMPLE	DATA RESULTS				
ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION	UNITS	ANALYSIS AN DATE	IALYSIS BY
TPH-Volatile Range	NWTPH-GX	930	50	1	ug/L	04/03/2015	PAB
Benzene	EPA-8021	U	1.0	1	ug/L	04/03/2015	PAB
Toluene	EPA-8021	U	1.0	1	ug/L	04/03/2015	PAB
Ethylbenzene	EPA-8021	2.0	1.0	1	ug/L	04/03/2015	PAB
Xylenes	EPA-8021	30	3.0	1	ug/L	04/03/2015	PAB
						ANALYSIS AN	ALYSIS
SURROGATE	METHOD	%REC				DATE	BY
TFT	NWTPH-GX	123				04/03/2015	PAB
TFT	EPA-8021	113				04/03/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit. Chromatogram indicates that it is likely that sample contains highly weathered gasoline.

Page 5 ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Laboratory Group A Campbell Brothers Limited Company

www.alsglobal.com



		CERTIFIC	ATE OF ANALYSIS						
CLIENT:	SD & C								
	PO Box 2071		DATE:			4/6/2015			
	Kirkland, WA 98083			ALS JOB#:	EV150				
CLIENT CONTACT:	Tim Slotta		_	ALS SAMPLE#:	EV150	40022-05			
CLIENT PROJECT:	Lake Goodwin			ATE RECEIVED:	04/03/2	2015			
CLIENT SAMPLE ID				LECTION DATE:	3/31/20	015 3:15:00 F	PM		
OLILINT SAIVIFLE ID	DIS-1		WDOE AC	CREDITATION:	C601				
		SAMPLE	DATA RESULTS						
			REPORTING	DILUTION	LINITO				
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	ANALYSIS AI	BY		
TPH-Volatile Range	NWTPH-GX	U	50	1	ug/L	04/03/2015	PAB		
Benzene	EPA-8021	U	1.0	1	ug/L	04/03/2015			
Toluene	EPA-8021	U	1.0	1	ug/L		PAB		
Ethylbenzene	EPA-8021	U	1.0	1		04/03/2015	PAB		
Kylenes	EPA-8021	U	3.0	1	ug/L	04/03/2015	PAB		
				1	ug/L	04/03/2015	PAB		
SURROGATE	METHOD					ANALYSIS AN	ALYSIS		
TFT	METHOD	%REC				DATE	BY		
FT	NWTPH-GX	109				04/03/2015	PAB		
	EPA-8021	98.9				04/03/2015	PAB		

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Laboratory Group A Campbell Brothers Limited Company FAX 425-356-2626

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Environmental J



		CERTIFIC	ATE OF ANALYSI	S				
CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083			DATE: ALS SDG#:	4/6/201 EV150			
CLIENT CONTACT: CLIENT PROJECT:	Tim Slotta Lake Goodwin		WDOE ACC	CREDITATION:	C601			
		LABORATO	RY BLANK RESUL	TS			Sector and the	
MBG-033015W3 - Ba	atch 91900 - Water by N	WTPH-GX						
ANALYTE TPH-Volatile Range	METHOD NWTPH-GX	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS A DATE	NALYSIS BY	
	INWIFT-GA	U	50	1	ug/L	03/30/2015	PAB	

## MBG-040115W - Batch 91984 - Water by NWTPH-GX

ANALYTE	METHOD	DEOU! TO	REPORTING	DILUTION		ANALYSIS A	ANALYSIS
TPH-Volatile Range	NWTPH-GX	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY
	NWIPH-GA	U	50	1	ug/L	04/01/2015	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

## MB-033015W3 - Batch 91900 - Water by EPA-8021

ANALYTE Benzene	METHOD	DEDUNITO	REPORTING	DILUTION		ANALYSIS ANALYSIS					
	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY				
Toluene	EPA-8021	U	1.0	1	ug/L	03/30/2015	PAB	3			
	EPA-8021	U	1.0	1	ug/L	03/30/2015	PAB	3			
Ethylbenzene	EPA-8021	U	1.0	1	ug/L	03/30/2015	PAB				
Xylenes	EPA-8021	U	3.0	1							
			010		ug/L	03/30/2015	PAB	1			

U - Analyte analyzed for but not detected at level above reporting limit.

#### MB-040115W - Batch 91984 - Water by EPA-8021

ANALYTE	METHOD	DEALURA	REPORTING	DILUTION		ANALYSIS /		
Benzene		RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	Ĩ.
	EPA-8021	U	1.0	1	ug/L	04/01/2015	PAB	i.
Toluene	EPA-8021	U	1.0	1	ug/L	04/01/2015	PAB	1
Ethylbenzene	EPA-8021	U	1.0	4	277			12
Xylenes	EPA-8021				ug/L	04/01/2015	PAB	I
-	21710021	U	3.0	1	ug/L	04/01/2015	PAB	1

U - Analyte analyzed for but not detected at level above reporting limit.

Page 7

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626

ALS Laboratory Group A Campbell Brothers Limited Company

www.alsglobal.com



#### CERTIFICATE OF ANALYSIS

CLIENT:	SD & C
	PO Box 2071
	Kirkland, WA 98083
CLIENT CONTACT:	Tim Slotta
CLIENT PROJECT:	Lake Goodwin

DATE: 4/6/2015 ALS SDG#: EV15040022 WDOE ACCREDITATION: C601

#### LABORATORY CONTROL SAMPLE RESULTS

## ALS Test Batch ID: 91900 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY	
TPH-Volatile Range - BS	NWTPH-GX	89.4			03/30/2015	PAB	

#### ALS Test Batch ID: 91984 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	97.6			04/01/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	99.2	0			1/ cf. cf. cf. cf. c
		33.2	2		04/01/2015	PAB

#### ALS Test Batch ID: 91900 - Water by EPA-8021

SPIKED COMPOUND Benzene - BS	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
	EPA-8021	93.7			03/30/2015	PAB
Benzene - BSD	EPA-8021	94.8	1		03/30/2015	PAB
Toluene - BS	EPA-8021	94.6			03/30/2015	
Toluene - BSD	EPA-8021	95.6	4			PAB
Ethylbenzene - BS					03/30/2015	PAB
gan an an the and the static and the second static and a	EPA-8021	93.4			03/30/2015	PAB
Ethylbenzene - BSD	EPA-8021	94.2	1		03/30/2015	PAB
Xylenes - BS	EPA-8021	93.3				
Xylenes - BSD	EPA-8021				03/30/2015	PAB
	EPA-8021	94.1	1		03/30/2015	PAB

#### ALS Test Batch ID: 91984 - Water by EPA-8021

SPIKED COMPOUND Benzene - BS	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
	EPA-8021	113			04/01/2015	PAB
Benzene - BSD	EPA-8021	116	3		04/01/2015	PAB
Toluene - BS	EPA-8021	108			04/01/2015	PAB
Toluene - BSD	EPA-8021	110	2		04/01/2015	PAB
Ethylbenzene - BS	EPA-8021	108			04/01/2015	
Ethylbenzene - BSD	EPA-8021	111	3			PAB
Xylenes - BS	EPA-8021	106	0		04/01/2015	PAB
Xylenes - BSD			12		04/01/2015	PAB
	EPA-8021	111	4		04/01/2015	PAB

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626 ALS Laboratory Group A Campbell Brothers Limited Company

Page 8

Environmental 🎾

www.alsglobal.com

ALS Job# (Laboratory Use Only)	EVISOYOOD	3-31-17 Page 1 Of 1	pecify)			]sdia			SHE	INIAT	CON		MBEI		2	2	2	2	N					Janic Analysis Control in Business Days [ ] ] [ ] [ ] [ ] [ ] [ ] ] [ ] ] [ ]			
Chain Of Custody/	Laboratory Analysis Request	Date	ANALYSIS REQUESTED			ר 🗆 2 \$220 \$220	0828 8 A93 8-A93 8-A93 808/1 808/1	260 2808 790 200 200 200 200 200 200 200 200 200 2	(vd zb vd zb nuoc (nafer) (naf	rs by E pound Comp Comp Comp Comp Comp Comp Comp Comp	8021 2021 2021 2021 2022	4-6X y EPA- y EPA- oy EPA Organi O by Ef d by	147794 14		××		XX		XX					Organic, Metals & Inorg	Fuels & Hydrocapbory Analysi	5 3 X Smolar	
100	Fax (425) 356-2600 Fax (425) 356-2626 http://www.alsglobal.com	1 ALV	14/6	COMPANY: YY&C	MANAGER: T, SLOTTA	ADDRESS: P.O, OCX 2071	KIRKLAND, WA 98083	PHONE: 260 459.5775 FAX:		IN SURANCE	ATTENTION: CAROL LYBEER	ADDRESS:	SAMPLE I.D. DATE TIME TYPE LAB#	1. MW-4 3-3(-15 14:00 14,00 1	2. MW -5 2-3(4014:30 11	Mul-lo li intila II		DIALI 1 1.0.00		9.		10.	ame, Company, Date //	1. Relinquished By: 7-7-15	By: A way way way	Received By:	

P