SD&C
PO Box 2071, Kirkland, WA 98083
ts4sdc@hotmail.com
Phone (206) 459-5775

Quarterly Groundwater and Treatment System Monitoring Report (Quarter #4 – 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

January 12, 2016

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

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1.0 INTRODUCTION

1.1 General

This report presents the results of the Fourth Quarter (Q4-2015) 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 compounds (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.

After the spill the water level control well (PW-1), contained 18-inches of free-phase PHC product. PW-1 is a 12-inch diameter PVC pipe which was installed during site upgrades in 1987. 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. 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 Q4-2015 sampling event was conducted by SD&C on December 3rd and 31st, 2015. This report summarizes the sampling data, collected from the monitoring wells, PW-1, and the water treatment system discharge (DIS-1).

SD&C conducted the following quarterly monitoring activities:

- Maintaining the system operation.
- Measuring the depth to groundwater in each well.
- Collecting water from each of 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 Treatment System Maintenance

During the initial scheduled sampling event on December 3, the depth to water was measured, and samples were collected from each of the monitoring wells with the exception of PW-1. SD&C identified that the PW-1 was not operating properly. A replacement pump was ordered from Granger Industrial Supply, and installed on December 9th. On December 27th the piping to the system was repaired after freezing conditions. On December 31st, the water sample from PW-1 was collected.

The carbon treatment drums were not replenished during the current quarter because the sampling results indicated that there was life in the absorption capacity of the current drum.

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 monitoring wells, PW-1 and DIS-1 did not contain PHCs at concentrations that exceeded the MTCA method A cleanup levels. The sample collected from PW-1 contained gasoline, benzene, and xylenes at low concentrations. The samples collected from MW-6 and the system discharge (Dis-1) contained toluene at low concentrations.

4.0 SUMMARY AND CONCLUSIONS

SD&C conducted this Q4-2015 groundwater monitoring and sampling event at the Lake Goodwin Grocery located in Stanwood, WA on December 3rd and 31st, 2015. 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 Q4-2015 results of the water samples collected from the monitoring wells (MW-4, 5, and 6), PW-1, and DIS-1 did not contain PHCs at concentrations that exceed the MTCA method A cleanup levels. The pump in PW-1 connected with carbon in the treatment system was replaced during quarterly monitoring activities at the site and operates continuously.

On October 15th, 2015 SD&C submitted a *Soil Excavation and Remediation Report,* which summarized the cleanup of soil impacted by PHCs as a result of the December 2013 spill at the site. The results of groundwater samples collected at the site indicate that the PHC concentrations have remained below the cleanup levels for four consecutive quarters. All of the data will be updated in Ecology's EIM data base, and this report will be submitted to the VCP for their review and authorization of an NFA for the site. The operation of the air sparging system and carbon polishing at the pumping well PW-1 will continue, until Ecology has authorized decommissioning of the system.

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.

Table 1 - Laboratory Chemical Analytical Results
Groundwater Samples (Page 1)
Lake Goodwin Grocery - Stanwood, WA

Sample ID	Sample Date	WTPH-G (mg/L, ppm)	Benzene (ug/L, ppb)	Toluene (ug/L, ppb)	Ethyl Benzene (ug/L, ppb)	Xylenes (ug/L, ppb)
Well Water						
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**	**30,000**
PW-1	5-20-14	**15**	**100**	**1,500**	240	**2,300**
PW-1	8-15-14	0.067	<1	1.2	2	8.7
PW-1	12-8-14	**6.8**	**30**	62	92	750
PW-1	3-31-15	0.930	<1	<1	2	30
PW-1	6-19-15	0.120	<1	<1	<1	6.9
PW-1	10-7-15	<0.05	<1	<1	<1	<3
PW-1	12-31-15	0.068	3.6	<1	<1	4.6
MW-4	12-19-13	**17**	**57**	960	350	**2,100**
MW-4	3-5-14	<0.05	<1	<1	<1	<3
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	<1	<3
MW-4	3-31-15	<0.05	<1	<1	<1	<3
MW-4	6-19-15	<0.05	<1	<1	<1	<3
MW-4	10-7-15	<0.05	<1	<1	<1	<3
MW-4	12-3-15	<0.05	<1	<1	<1	<3
MW-5	12-19-13	**1.9**	**15**	180	47	280
MW-5	3-5-14	<0.05	<1	<1	<1	<3
MW-5	5-20-14	<0.05	<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	<3
MW-5	6-19-15	<0.05	<1	<1	<1	<3
MW-5	10-7-15	<0.05	<1	<1	<1	<3
MW-5	12-3-15	<0.05	<1	<1	<1	<3
MW-6	12-19-13	**1.6**	**11**	130	34	220
MW-6	3-5-14	<0.05	**7.1**	<1	<1	<3
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
MW-6	6-19-15	<0.05	<1	<1	<1	<3
MW-6	10-7-15	<0.05	<1	<1	<1	<3
MW-6	12-3-15	<0.05	<1	1.4	<1	<3

Milligrams per liter (mg/L), parts per million (ppm) Micrograms per liter (µg/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.

Table 1 - Laboratory Chemical Analytical Results
Groundwater Samples (Page 2)
Lake Goodwin Grocery - Stanwood, WA

Sample ID	Sample Date	WTPH-G (mg/L, ppm)	Benzene (ug/L, ppb)	Toluene (ug/L, ppb)	Ethyl Benzene (ug/L, ppb)	Xylenes (ug/L, ppb)
Discharge Water						
Discharge Water Dis-1	1-3-14	<0.05	<1	<1	<1	<3
Discharge Water Dis-1	5-13-14	<0.05	<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-1	6-19-15	<0.05	<1	<1	<1	<3
Discharge Water Dis-1	10-7-15	<0.05	<1	<1	<1	<3
Discharge Water Dis-1	12-3-15	<0.05	<1	1.7	<1	<3
Discharge Water Dis-2	5-13-14	<0.05	<1	<1	<1	<3
Discharge Water Dis-2	8-15-14	<0.05	<1	<1	<1	<3
Storm Water						
SW-1	5-13-14	<0.05	<1	<1	<1	<3
MTCA Method A cleanup level		**1.0**	**5**	**1,000**	**700**	**1,000**
Method Reporting Limit		0.050	1	1	1	1

Milligrams per liter (mg/L), parts per million (ppm) Micrograms per liter (µg/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.

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

Monitoring Well	Date	Casing Elevation	Depth to Groundwater	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-4	6/19/15	342.06	2.03	340.03
MW-4	10/7/15	342.06	2.75	339.31
MW-4	12/3/15	342.06	.87	341.19
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-5	6/19/15	342.87	2.78	340.09
MW-5	10/7/15	342.87	3.84	339.03
MW-5	12/3/15	342.87	1.79	341.08
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
MW-6	6/19/15	342.58	2.58	340.00
MW-6	10/7/15	342.58	3.19	339.39
MW-6	12/3/15	342.58	1.27	341.31

Lake Goodwin Gas Station
and RV Resort
4726 Lakewood Road
Stanwood, WA 98292

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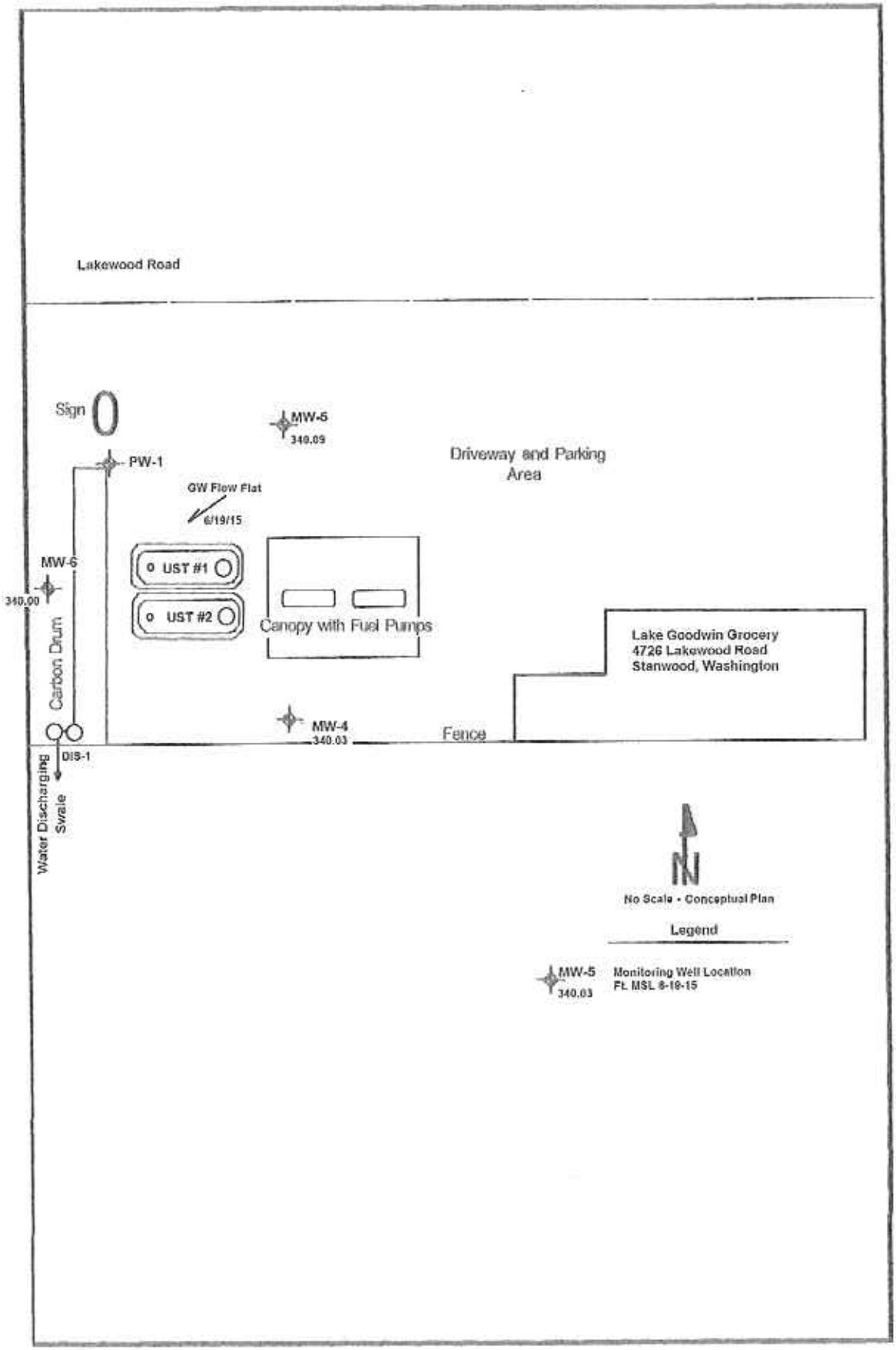
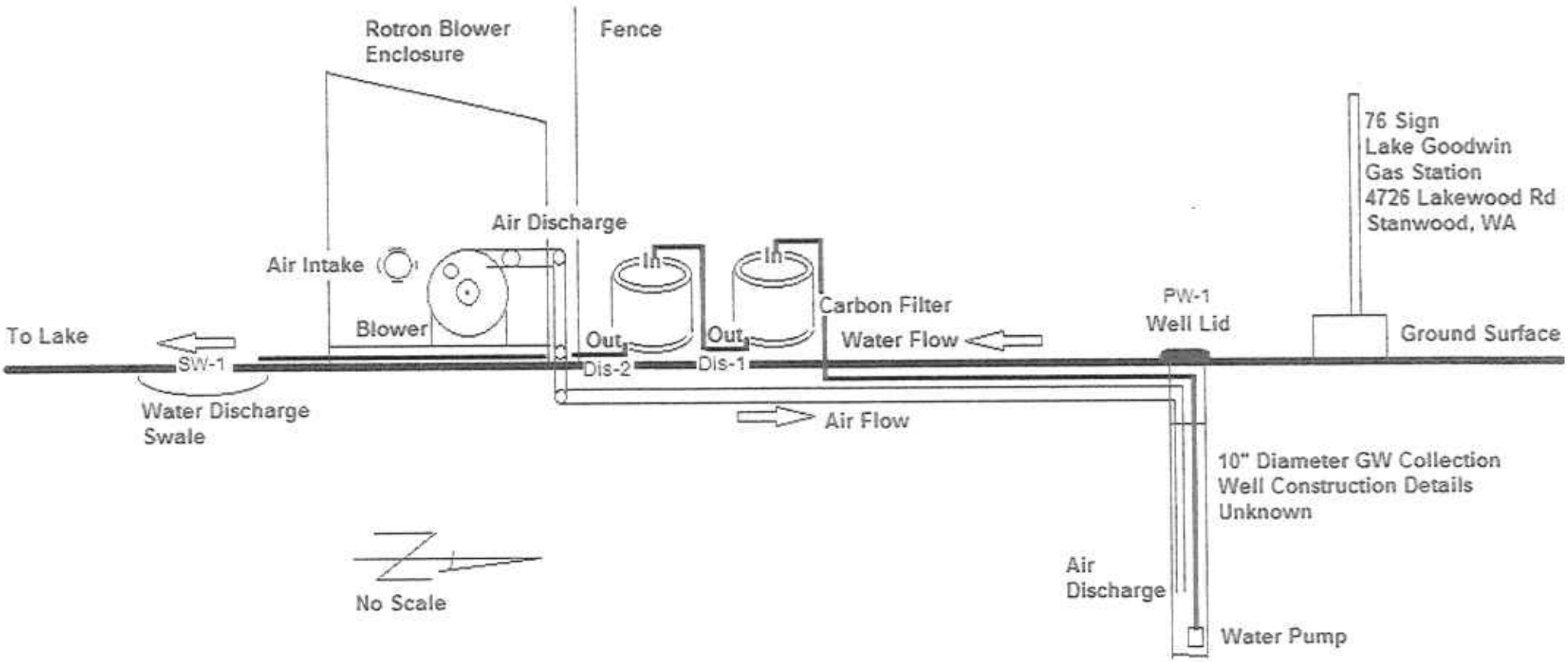
Figure 1. Site Location Maps



SD&C **Sample Location Map** **Figure 2**



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Treatment System Schematic

Figure 3

APPENDIX I

LABORATORY REPORTS

December 4, 2015

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

Dear Mr. Slotta,

On December 3rd, 5 samples were received by our laboratory and assigned our laboratory project number EV15120041. The project was identified as your Lk 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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	12/4/2015
		ALS JOB#:	EV15120041
		ALS SAMPLE#:	EV15120041-01
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/03/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/3/2015 12:00:00 PM
CLIENT SAMPLE ID	MW-4	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/04/2015	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	12/04/2015	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	92.5	12/04/2015	PAB
TFT	EPA-8021	89.7	12/04/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	12/4/2015
		ALS JOB#:	EV15120041
		ALS SAMPLE#:	EV15120041-02
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/03/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/3/2015 12:30:00 PM
CLIENT SAMPLE ID	MW-5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/04/2015	PAB
Benzene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	12/04/2015	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	12/04/2015	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	97.7	12/04/2015	PAB
TFT	EPA-8021	93.8	12/04/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	12/4/2015
		ALS JOB#:	EV15120041
		ALS SAMPLE#:	EV15120041-03
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/03/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/3/2015 1:00:00 PM
CLIENT SAMPLE ID	MW-6	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/04/2015	PAB
Benzene	EPA 8021	U	1.0	1	UG/L	12/04/2015	PAB
Toluene	EPA 8021	1.4	1.0	1	UG/L	12/04/2015	PAB
Ethylbenzene	EPA 8021	U	1.0	1	UG/L	12/04/2015	PAB
Xylenes	EPA 8021	U	3.0	1	UG/L	12/04/2015	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	103	12/04/2015	PAB
TFT	EPA 8021	94.6	12/04/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	12/4/2015
		ALS JOB#:	EV15120041
		ALS SAMPLE#:	EV15120041-05
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/03/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/3/2015 2:00:00 PM
CLIENT SAMPLE ID	DIS-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	50	1	UG/L	12/04/2015	PAB
Benzene	EPA 8021	U	1.0	1	UG/L	12/04/2015	PAB
Toluene	EPA 8021	1.7	1.0	1	UG/L	12/04/2015	PAB
Ethylbenzene	EPA 8021	U	1.0	1	UG/L	12/04/2015	PAB
Xylenes	EPA 8021	U	3.0	1	UG/L	12/04/2015	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	100	12/04/2015	PAB
TFT	EPA 8021	98.6	12/04/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corporation ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: SD & C
PO Box 2071
Kirkland, WA 98083

CLIENT CONTACT: Tim Slotta
CLIENT PROJECT: Lk Goodwin

DATE: 12/4/2015
ALS SDG#: EV15120041
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-120315W3 - Batch 99530 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	12/03/2015	PAB

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

MB-120315W3 - Batch 99530 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	12/03/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	12/03/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	12/03/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	12/03/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE: ALS SDG#: WDOE ACCREDITATION:	12/4/2015 EV15120041 C601
CLIENT CONTACT:	Tim Slotta		
CLIENT PROJECT:	Lk Goodwin		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 99530 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	91.8			12/04/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	96.7	5		12/04/2015	PAB

ALS Test Batch ID: 99530 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	84.9			12/04/2015	PAB
Benzene - BSD	EPA-8021	90.1	6		12/04/2015	PAB
Toluene - BS	EPA-8021	85.9			12/04/2015	PAB
Toluene - BSD	EPA-8021	91.7	7		12/04/2015	PAB
Ethylbenzene - BS	EPA-8021	86.2			12/04/2015	PAB
Ethylbenzene - BSD	EPA-8021	92.0	6		12/04/2015	PAB
Xylenes - BS	EPA-8021	86.5			12/04/2015	PAB
Xylenes - BSD	EPA-8021	92.2	6		12/04/2015	PAB

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV15120041

Date _____ Page _____ Of _____

PROJECT ID: LK GOODWIN
REPORT TO COMPANY: SDgC
PROJECT MANAGER: T. SLOTTA
ADDRESS: P.O. Box 2071
KIRKLAND, WA 98083
PHONE: (206) 459-5775 FAX:
P.O. #: E-MAIL: TS4SDC@HOTMAIL.COM
INVOICE TO COMPANY: COLONY INSURANCE
ATTENTION: CAROL LYBEER
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-4	12-3-15	12:00	H_2O	1			X	X														
2. MW-5	12-3-15	12:30	"	2			X	X														
3. MW-6	12-3-15	13:00	"	3			X	X														
4. ~~FW-1~~	~~12-3-15~~	~~13:30~~	~~"~~	~~4~~			~~X~~	~~X~~												HOLD		
5. DIS-1	12-3-15	14:00	"	5			X	X														
6.																						
7.																						
8.																						
9.																						
10.																						

LABORATORY COPY

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: TIM SLOTTA, SDgC, 12-3-15 16:00
Received By: [signature] ALS 12/3/15 16:00
2. Relinquished By: _____
Received By: _____

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | Same Day
Fuels & Hydrocarbon Analysis: 5 | 3 | 1 | Same Day
OTHER:
Specify: _____

* Turnaround request less than standard may incur Rush Charges

January 5, 2016

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

Dear Mr. Slotta,

On December 31st, 1 sample was received by our laboratory and assigned our laboratory project number EV15120210. The project was identified as your Lk 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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	1/5/2016
		ALS JOB#:	EV15120210
		ALS SAMPLE#:	EV15120210-01
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/31/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/31/2015 10:30:00 AM
CLIENT SAMPLE ID	PW-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	68	50	1	UG/L	01/04/2016	PAB
Benzene	EPA-8021	3.6	1.0	1	UG/L	01/04/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	01/04/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	01/04/2016	PAB
Xylenes	EPA-8021	4.6	3.0	1	UG/L	01/04/2016	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	85.3	01/04/2016	PAB
TFT	EPA-8021	87.8	01/04/2016	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.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: SD & C
PO Box 2071
Kirkland, WA 98083

CLIENT CONTACT: Tim Slotta
CLIENT PROJECT: Lk Goodwin

DATE: 1/5/2016
ALS SDG#: EV15120210
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-122815W - Batch 100129 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	12/28/2015	PAB

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

MB-122815W - Batch 100129 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	12/28/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS environmental

CERTIFICATE OF ANALYSIS

CLIENT: SD & C
PO Box 2071
Kirkland, WA 98083

CLIENT CONTACT: Tim Slotta
CLIENT PROJECT: Lk Goodwin

DATE: 1/5/2016
ALS SDG#: EV15120210
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 100129 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	83.7			12/28/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	86.9	4		12/28/2015	PAB

ALS Test Batch ID: 100129 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	99.8			12/28/2015	PAB
Benzene - BSD	EPA-8021	99.8	0		12/28/2015	PAB
Toluene - BS	EPA-8021	98.7			12/28/2015	PAB
Toluene - BSD	EPA-8021	98.0	1		12/28/2015	PAB
Ethylbenzene - BS	EPA-8021	99.2			12/28/2015	PAB
Ethylbenzene - BSD	EPA-8021	99.1	0		12/28/2015	PAB
Xylenes - BS	EPA-8021	101			12/28/2015	PAB
Xylenes - BSD	EPA-8021	101	0		12/28/2015	PAB

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

December 29, 2015

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

Dear Mr. Slotta,

On December 28th, 1 sample was received by our laboratory and assigned our laboratory project number EV15120195. The project was identified as your Lk 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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	SD & C PO Box 2071 Kirkland, WA 98083	DATE:	12/29/2015
		ALS JOB#:	EV15120195
		ALS SAMPLE#:	EV15120195-01
CLIENT CONTACT:	Tim Slotta	DATE RECEIVED:	12/28/2015
CLIENT PROJECT:	Lk Goodwin	COLLECTION DATE:	12/28/2015 11:15:00 AM
CLIENT SAMPLE ID	PW-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	220	50	1	UG/L	12/29/2015	PAB
Benzene	EPA-8021	8.1	1.0	1	UG/L	12/29/2015	PAB
Toluene	EPA-8021	1.2	1.0	1	UG/L	12/29/2015	PAB
Ethylbenzene	EPA-8021	1.5	1.0	1	UG/L	12/29/2015	PAB
Xylenes	EPA-8021	11	3.0	1	UG/L	12/29/2015	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	98.4	12/29/2015	PAB
TFT	EPA-8021	96.6	12/29/2015	PAB

Chromatogram indicates that it is likely that sample contains weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: SD & C
PO Box 2071
Kirkland, WA 98083

CLIENT CONTACT: Tim Slotta
CLIENT PROJECT: Lk Goodwin

DATE: 12/29/2015
ALS SDG#: EV15120195
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-122815W - Batch 100129 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	12/28/2015	PAB

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

MB-122815W - Batch 100129 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Toluene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	12/28/2015	PAB
Xylenes	EPA-8021	U	UG/L	3.0	12/28/2015	PAB

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

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: SD & C
PO Box 2071
Kirkland, WA 98083

CLIENT CONTACT: Tim Slotta
CLIENT PROJECT: Lk Goodwin

DATE: 12/29/2015
ALS SDG#: EV15120195
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 100129 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH GX	83.7			12/28/2015	PAB
TPH-Volatile Range - BSD	NWTPH-GX	86.9	4		12/28/2015	PAB

ALS Test Batch ID: 100129 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	99.8			12/28/2015	PAB
Benzene - BSD	EPA-8021	99.8	0		12/28/2015	PAB
Toluene - BS	EPA-8021	98.7			12/28/2015	PAB
Toluene - BSD	EPA-8021	98.0	1		12/28/2015	PAB
Ethylbenzene - BS	EPA-8021	99.2			12/28/2015	PAB
Ethylbenzene - BSD	EPA-8021	99.1	0		12/28/2015	PAB
Xylenes - BS	EPA-8021	101			12/28/2015	PAB
Xylenes - BSD	EPA-8021	101	0		12/28/2015	PAB

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 PHONE 425-356-2600 FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV15120195

Date 12/28/15 Page 1 Of 1

PROJECT ID: LK GOODWIN
REPORT TO COMPANY: SDSC
PROJECT MANAGER:
ADDRESS: P.O. Box 2071
KIRKLAND, WA 98083
PHONE: (206) 459-5775 FAX:
P.O. #: E-MAIL: TS4SDC@HOTMAIL.COM
INVOICE TO COMPANY:
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by FPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. PW-1	12-28-15	11:15	H_2O	1			X	X													3	
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By:
Received By: ALS 12/28/15 11:35
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (STANDARD) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (STANDARD) | 3 | 1 | SAME DAY

OTHER:
Specify:

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1512 0210

Date 12/31/15 Page 1 Of 1

PROJECT :D: LK GOODWIN
REPORT TO COMPANY: SDGC
PROJECT MANAGER: T. SLOTTA
ADDRESS: P.O. Box 2071
KIRKLAND, WA 98083
PHONE: FAX:
P.O. #: E-MAIL:
INVOICE TO COMPANY: SDGC
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. PW-1	12/31/15	10:30	H_2O	1			X	X													
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

OTHER (Specify)

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: SDGC 12/31/15 11:00
Received By: Shawn Robinson ALS 12/31/15 11:00
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: X Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

ain Of Custody/
ory Analysis Request

ALS Job# (Laboratory Use Only) EV15120195

Date 12/28/15 Page 1 Of 1

NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
X	X																				3	

.35

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis

5 (Standard) 3 1 SAME DAY

OTHER:

Specify: