APPENDIX A:
WELL PURGE LOGS

APPENDIX B:
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

APPENDIX C:
WASTE DISPOSAL CERTIFICATION

Monitoring Well Purging and Sampling Log

FLD-103
Revision 1.0
Jul-08

ATC Branch: Seattle, WA	Date: 2/29/16	Page 1 of 1
ATC Representative(s): NB	Project: Yarrow Bay Yatch Basin x Marina	
	Location: Kirkland, WA	
Contact Information: 206-781-1449	Project No: Z0760000030	Task No: 4
YB-4-MW1	Contractor: N-A	
	Weather:	Temperature: 50's

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): ET	Interface Probe (Model/ID):
Water Quality Meter (Model/ID): YSI 556	Decontamination Method: Alconox

Purging Method: ____ PVC Bailer ____ Vacuum Truck ____ Submersible Pump ____ Peristaltic Pump Other: ____

3 Well Volumes ____ Low Flow ✓ Micro Purge ____ Intake Depth (feet below TOC) ____

Sampling Method: ____ Teflon Bailer ____ Disposable Bailer ✓ Dedicated Tubing Other: ____

Casing Volume Information	Purging Calculations
Casing Diameter (Circle): (2") 4" 6" Other	Casing Volumes (CV):
Casing Multiplier (CM)(gallons/foot): (0.16) 0.65 1.47	WC ____ x CM ____ = ____ (CV)(gal) x 3.0 CV (gal) = ____ PV

Monitoring Measurements

Depth to LNAPL (feet): ____	Total Well Depth (feet): 15.00
Depth to Water (DTW)(feet): 4.37	Water Column (WC)(feet): ____
LNAPL Thickness (ft): ____	Purging Start Time: 1140

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged (Gallons)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other
1121	4.39	0.11	18.88	108	Clear	2.82	6.15	-29.3	
1124	4.45	0.14	18.92	108	↓	2.81	6.15	-29.0	
1127	4.52	0.17	18.88	107	↓	2.94	6.18	-30.2	
1130	4.69	0.20	18.89	108	↓	2.98	6.15	-34.1	

Sample Data

Sample ID: MW-1	Time of Sample: 1135	Filtered (yes/no)	Preservatives	Analytical Parameters
Container Types, Volumes, & Quantities:				
6 x 40 mL VOA & Amber Jar (1 L)		N	HCL	BTEX & TPH-G,D

Well Recovery Data

Maximum Drawdown (DTW*m*)(feet): 4.69	Approximate Flow Rate (GPM): 0.01
Recovery Type: ____ Fast ____ Slow	% Recovery = 100%

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Monitoring Well Purging and Sampling Log

FLD-103
Revision 1.0
Jul-08

ATC Branch: Seattle, WA | Date: 12-3-2015 | Page 1 of 1

ATC Representative(s): NB | Project: Yarrow Bay Yatch Basin & Marina

Location: Kirkland, WA

Contact Information: 206-781-1449 | Project No: T0760000030 | Task No:

YB-3-MW1 | Contractor: NA

Weather: clear | Temperature: 38° F

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): ET | Interface Probe (Model/ID): —

Water Quality Meter (Model/ID): YSI 556 | Decontamination Method: Alcon. X

Purging Method: ____ PVC Bailer ____ Vacuum Truck ____ Submersible Pump ____ Peristaltic Pump Other: ____

3 Well Volumes ____ ✓ Low Flow ____ Micro Purge ____ Intake Depth (feet below TOC) ____

Sampling Method: ____ Teflon Bailer ____ Disposable Bailer ____ ✓ Dedicated Tubing Other: ____

Casing Volume Information

Casing Diameter (Circle): (2") 4" 6" Other

Casing Multiplier (CM)(gallons/foot): (0.16) 0.65 1.47

Purging Calculations

Casing Volumes (CV):

WC ____ x CM ____ = ____ (CV)(gal) x 3.0 CV (gal) = ____ PV

Monitoring Measurements

Depth to LNAPL (feet): — | Total Well Depth (feet): 15.00

Depth to Water (DTW)(feet): 4.84 | Water Column (WC)(feet): —

LNAPL Thickness (ft): — | Purging Start Time: 9:40

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged (Gallons)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other
9.50	4.84	0.1	14.80	43	clear	3.07	6.9	403.9	
9.53	4.88	0.13	14.79	43		3.08	7.01	404.5	
9.56	4.89	0.16	14.41	42		3.06	7.03	414.6	
9.59	4.92	0.19	14.40	42		3.08	7.5	416.8	

Sample Data

Sample ID: YB-3-MW1 | Time of Sample: 10.00

Container Types, Volumes, & Quantities:	Filtered (yes/no)	Preservatives	Analytical Parameters
4 x 40mL NOA & 1 L Amber	NO	HCL	BTEX & DA, GR, O

Well Recovery Data

Maximum Drawdown (DTWm)(feet): 4.92 | Approximate Flow Rate (GPM): 0.01

Recovery Type: ✓ Fast ____ Slow | % Recovery = 100

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Monitoring Well Purging and Sampling Log

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ATC Branch: Seattle, WA	Date: 09/30/15	Page 1 of 1
ATC Representative(s): NB & MN	Project: Yarrow Bay Match Bank & Marina	
	Location: Kirkland WA	
Contact Information: 206-781-1449	Project No: Z0760000 30	Task No: 4
YB-2-MW1 (YB-02-SD1, YB-02-SD2, YB-02-SD3)	Contractor: NA	
	Weather: clear	Temperature: 40's

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): ET	Interface Probe (Model/ID): —
Water Quality Meter (Model/ID): YSI	Decontamination Method: Alcohol

Purging Method: ____ PVC Bailer ____ Vacuum Truck ____ Submersible Pump X Peristaltic Pump Other: ____

3 Well Volumes ____ Low Flow X Micro Purge ____ Intake Depth (feet below TOC) ____

Sampling Method: ____ Teflon Bailer ____ Disposable Bailer ✓ Dedicated Tubing Other: ____

Casing Volume Information

Casing Diameter (Circle): (2") 4" 6" Other

Casing Multiplier (CM)(gallons/foot): (0.16) 0.65 1.47

Purging Calculations

Casing Volumes (CV): ____

WC ____ x CM ____ = ____ (CV)(gal) x 3.0 CV (gal) = ____ PV

Monitoring Measurements

Depth to LNAPL (feet): —	Total Well Depth (feet): 15.00
Depth to Water (DTW)(feet): 4.11	Water Column (WC)(feet): 10.89
LNAPL Thickness (ft): —	Purging Start Time: 10.35

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged (Gallons)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other
10.50	4.18	0.15	18.82	608	clear	0.55	8.30	-113.80	
10.53	4.19	0.18	18.86	610		0.55	8.29	-111.8	
10.56	4.20	0.21	18.87	610		0.54	8.28	-110.7	
10.59	4.21	0.24	18.84	610		0.51	8.27	-110.0	

Sample Data

Sample ID: YB-2-MW1	Time of Sample: 11:00	Filtered (yes/no)	Preservatives	Analytical Parameters
Container Types, Volumes, & Quantities:				
4 - 40mL VOA's	1 L Amber	N	HCL	GRO/BTEX 8021

Well Recovery Data

Maximum Drawdown (DTWm)(feet): 4.21	Approximate Flow Rate (GPM): 0.01
Recovery Type: ✓ Fast ____ Slow	% Recovery = 100

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Cardno ATC Shaping the Future	Monitoring Well Purging and Sampling Log	FLD-103 Revision 1.0 Jul-08

ATC Branch: Seattle, WA #76	Date: 6/30/15	Page of
ATC Representative(s): M. Newman	Project: ~~Phillips 66 - 2061~~ Yarrow Bay Location: ~~2415 Griffin Avenue, Enumclaw, WA~~	
Contact Information: 206-781-1449	Project No: ~~76.75118.2061~~	Task No:
YB-01-MW1	Contractor: NA Weather: clear	Temperature: ~~65~~ °F

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): Envirotech Water Level Meter	Interface Probe (Model/ID):
Water Quality Meter (Model/ID):	Decontamination Method:

Purging Method: ____ PVC Bailer ____ Vacuum Truck ____ Submersible Pump ____ Peristaltic Pump Other: ____

3 Well Volumes ____ Low Flow ____ Micro Purge ____ Intake Depth (feet below TOC) ____

Sampling Method: ____ Teflon Bailer ____ Disposable Bailer ____ Dedicated Tubing Other: ____

Casing Volume Information	Purging Calculations
Casing Diameter (Circle): 2" 4" 6" Other	Casing Volumes (CV):
Casing Multiplier (CM)(gallons/foot): 0.16 0.65 1.47	WC ____ x CM ____ = ____ (CV)(gal) x 3.0 CV (gal) = ____ PV

Monitoring Measurements

Depth to LNAPL (feet): —	Total Well Depth (feet): 15.00
Depth to Water (DTW)(feet): 3.31	Water Column (WC)(feet): —
LNAPL Thickness (ft): —	Purging Start Time: 14:15

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged (Gallons)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other
14:30	3.39	0.15	23.50	550	clear	0.92	7.66	-103.8	
14:33	3.42	0.18	23.49	563	"	0.79	7.60	-100.4	
14:36	3.44	0.21	23.49	575	"	0.66	7.55	-99.1	
14:39	3.46	0.24	23.54	582	"	0.58	7.51	-98.5	

Sample Data

YB-0630

Sample ID: ~~YB-01-02~~	Time of Sample: 14:40	Filtered (yes/no)	Preservatives	Analytical Parameters
Container Types, Volumes, & Quantities:				
4-40ml VOAs, 1-1L Amber		N	HCl	Sd, Pst, BTEX

Well Recovery Data

Maximum Drawdown (DTWm)(feet): 3.46	Approximate Flow Rate (GPM): 0.61
Recovery Type: ✓ Fast ____ Slow	% Recovery = 100

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Comments: