West Vermont 11/26/14

0900 START Hughes + Brodowski
on site to Collect samples from
MW-WVS-10 + 11.
WX cloudy mid 30's wind
from NE @ 5-10 mph KH
No precip KH
105 open wells + gather equipment
measure wells after opening
0925 set up on MW-WVS-10
GPS: 39.777 67504 N.
-86.225 73613 W
0942 Begin purging KH
1015 Collect samples VOCs/MSD
+ Dupe Collected this round
1030 Set equipment on WVS-11.
GPS 039.778 70819 N.
-86.22 633 980 W.
1110 Collected from WVS-11.
Samples will be sent to
CLP LAB Shealy Lab.
1130 START off site

11/26/14

West Vermont 2/6/15

30 START Hughes onsite.
WX: Temp-mid 20's °F wind
from SW @ 8mph Partly Sunny
START to sample WVS-10 & WVS-11
in Olin Park East of West Vermont
Background Sample — 1st
CLP Case# 45073
Open wells measured
1120 Set Equipment on MW-WVS-10
1130 Begin record purge + parameters
1200 Collect Sample ESB H3
Collected MS/MSD + Dupe
- Decon Equipment
Setup on MW-WVS-11
1305 STARTED purging + Parameters
1330 Collected Sample ESB H7
1400 START off site

2/6/15

FIGURE 1 - LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Date/Time of Sample Collection: 2/6/15 / 1300 Project Site/Subsite: West Vermont / Olin Tank
Sample ID: E58 117
Field ID: MW-11 Point Name: WVS-11
Depth to Well Bottom: 54.28 ft. below top of casing (PVC cap)
Depth to Water Level: 18.06 ft. below PVC cap
Depth to Water Level: 18.10 ft. below PVC cap prior to sampling
Method of Purging: Bladder Pump X Submersible Pump ____
Peristaltic Pump ____
Minimum Purge Volume: 2-inch well ____Liters / 4-inch well ____Liters
Control Box Settings: Box # _____ Refill _____ Discharge _____
Throttle _____ psi
Total Purged: _____ Liters (Purge Rate goal = 0.5 Liters/Min.)
Actual Purge Rate: _____ Liters/Min.

Purge Calculations

GPS 39°.778208 19N: -86°.22633980 W

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure in order listed**	Initial Reading									Stabiliz-ation Criteria	Final
Time	1305	1310	1315	1320	1325	1330					1330
pH	6.10	6.35	6.40	6.41	6.41	6.42				+/-0.1	6.42
Temperature (°C)	6.55	6.67	6.66	6.70	6.70	6.71				NC*	6.71
Specific Conductance (µmhos/cm)	0.981	0.970	0.860	0.861	0.871	0.871				+/-3%	0.871
Turbidity (NTU)	—	—	—	—	-	—				+/-10%	—
Dissolved Oxygen (mg/L)	1.11	0.82	0.86	0.85	0.85	0.85				+/-10% or +/-0.3	0.85
ORP (mV)	-2.6	1.1	1.6	1.2	0.9	0.9				+/-10	0.9
Each Volume Purged (L)	.5										
Total Liters Purged											

*NC = No Criteria. **Stabilization criteria listed should be used unless project-specific plans specify alternate stabilization criteria.

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) _____
MS/MSD Sample Collected? No Yes
Sample Remarks (odors, colors, sediment): Colorless Clear No odor detected
Comments: _____
Sample(s) Collected By: KH
Pump System Purge Volume Calc: Length of tubing X 9.6 (ml/ft) + 130 (bladder volume) = Total required purge (liters) before collection of parameters

FIGURE 1 - LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Date/Time of Sample Collection: 2/6/15 / 1200 Project Site/Subsite: West Vermont/Olin Park
Sample ID: ESBH3
Field ID: MW-10 Point Name: WVS-10
Depth to Well Bottom: 45.35 ft. below top of casing (PVC cap)
Depth to Water Level: 12.04 ft. below PVC cap
Depth to Water Level: 12.06 ft. below PVC cap prior to sampling
Method of Purging: Bladder Pump X Submersible Pump ____
Peristaltic Pump ____
Minimum Purge Volume: 2-inch well ____Liters / 4-inch well ____Liters
Control Box Settings: Box # _____ Refill _____ Discharge _____
Throttle _____ psi
Total Purged: _____ Liters (Purge Rate goal = 0.5 Liters/Min.)
Actual Purge Rate: _____ Liters/Min.

GPS 39°.77767504 N; -86°.22573613 W

Purge Calculations

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure in order listed**	Initial Reading									Stabilization Criteria	Final
Time	1130	1135	1140	1145	1150	1155	1200				
pH	5.87	5.99	6.00	6.55	6.53	6.55	6.55			+/-0.1	
Temperature (°C)	10.08	10.19	11.03	11.05	11.03	11.12	11.10			NC*	
Specific Conductance (µmhos/cm)	0.990	.870	.865	.863	.900	.863	.863			+/-3%	
Turbidity (NTU)	—	—	—	—	—	—	—			+/-10%	
Dissolved Oxygen (mg/L)	.95	.90	.88	0.87	0.86	0.86	0.85			+/-10% or +/-0.3	
ORP (mV)	-2.6	-1.5	1.1	1.0	0.90	.99	.95			+/-10	
Each Volume Purged (L)	.5	.5									
Total Liters Purged	.5										

*NC = No Criteria. **Stabilization criteria listed should be used unless project-specific plans specify alternate stabilization criteria.

Duplicate Sample Collected? No Yes (Sample ID of Duplicate) ESBH5
MS/MSD Sample Collected? No Yes
Sample Remarks (odors, colors, sediment): Clear Colorless No Odor
Comments: _____
Sample(s) Collected By: KN
Pump System Purge Volume Calc: Length of tubing X 9.6 (ml/ft) + 130 (bladder volume) = Total required purge (liters) before collection of parameters

FIGURE 1 - LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Date/Time of Sample Collection: 11/26/14 / 1118 Project Site/Subsite: Old Park
Sample ID: _____
Field ID: _____ Point Name: MW-WVS-11
Depth to Well Bottom: 54.28 ft. below top of casing (PVC cap)
Depth to Water Level: 18.58 ft. below PVC cap
Depth to Water Level: 18.58 ft. below PVC cap prior to sampling
Method of Purging: Bladder Pump X Submersible Pump ____
Peristaltic Pump ____
Minimum Purge Volume: 2-inch well ____Liters / 4-inch well ____Liters
Control Box Settings: Box # _____ Refill _____ Discharge _____
Throttle _____ psi
Total Purged: 3 gallons ~~Liters~~ (Purge Rate goal = 0.5 Liters/Min.)
Actual Purge Rate: .5 Liters/Min.

Purge Calculations

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure in order listed**	Initial Reading									Stabilization Criteria	Final
Time	1040	1045	1050	1055	1100	1105	1110				1118
pH	5.36	5.14	5.12	5.00	5.01	5.00	5.00			+/-0.1	5.00
Temperature (°C)	10.36	11.80	12.09	12.14	12.14	12.11	12.11			NC*	12.11
Specific Conductance (µmhos/cm)	.709	.703	.919	1.03	1.07	1.11	1.11			+/-3%	1.11
Turbidity (NTU)	–	–								+/-10%	
Dissolved Oxygen (mg/L)	2.99	2.04	.84	0.67	0.21	0.21	0.21			+/-10% or +/-0.3	0.21
ORP (mV)	-38	-53	-95	-114	-120	-123	-125			+/-10	-125
Each Volume Purged (L)											
Total Liters Purged											

*NC = No Criteria. **Stabilization criteria listed should be used unless project-specific plans specify alternate stabilization criteria.

Duplicate Sample Collected? (No) Yes (Sample ID of Duplicate) _____
MS/MSD Sample Collected? (No) Yes _____
Sample Remarks (odors, colors, sediment): Clear Colorless
Comments: Could NOT get turbidity to work
Sample(s) Collected By: _____
Pump System Purge Volume Calc: Length of tubing X 9.6 (ml/ft) + 130 (bladder volume) = Total required purge (liters) before collection of parameters

FIGURE 1 - LOW-FLOW GROUNDWATER SAMPLING DATA SHEET

Date/Time of Sample Collection: 11/26/14, 1017 Project Site/Subsite: Olin Park
Sample ID: MW-WVS-10
Field ID: _____ Point Name: _____
Depth to Well Bottom: 45.35 ft. below top of casing (PVC cap)
Depth to Water Level: 13.93 ft. below PVC cap
Depth to Water Level: 13.93 ft. below PVC cap prior to sampling
Method of Purging: (Bladder Pump) X Submersible Pump ____
Peristaltic Pump ____
Minimum Purge Volume: 2-inch well ____Liters / 4-inch well ____Liters
Control Box Settings: Box # _____ Refill _____ Discharge _____
Throttle _____ psi
Total Purged: 4 gallons Liters (Purge Rate goal = 0.5 Liters/Min.)
Actual Purge Rate: .5 Liters/Min.

Purge Calculations

PHYSIO-CHEMICAL PARAMETERS DURING PURGING

Measure in order listed**	Initial Reading									Stabilization Criteria	Final
Time	945	950	955	1000	1005	1010	1015				
pH	5.60	537	528	525	5.15	5.11	5.11			+/-0.1	5.11
Temperature (°C)	1240	1247	1254	1255	12.47	12.52	1252			NC*	12.52
Specific Conductance (µmhos/cm)	0.840	0885	0900	0898	0918	0920	0920			+/-3%	0920
Turbidity (NTU)	—	-	-	—	—	—				+/-10%	
Dissolved Oxygen (mg/L)	.95	1.14	1.13	1.11	1.11	1.12	1.12			+/-10% or +/-0.3	1.12
ORP (mV)	-214	-201	-195	-193	-185	-179	-172			+/-10	172
Each Volume Purged (L)											
Total Liters Purged											

*NC = No Criteria. **Stabilization criteria listed should be used unless project-specific plans specify alternate stabilization criteria.

Duplicate Sample Collected? (No) Yes (Sample ID of Duplicate) _____
MS/MSD Sample Collected? (No) Yes _____
Sample Remarks (odors, colors, sediment): Clear Colorless
Comments: Could Not Get turbidity to work
Sample(s) Collected By: _____
Pump System Purge Volume Calc: Length of tubing X 9.6 (ml/ft) + 130 (bladder volume) = Total required purge (liters) before collection of parameters