



# Low-Flow Groundwater Sampling Log

## (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 10 (U) upper  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): 160'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-17-12 Initial Depth to Water: 9.05' Total Depth: 171.70'  
 Sampling date/time: 10-17-12 @ 1235

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Pumped Vol. (gals)
1125	0.50	Initiate	30	gallon purge (if possible)						
1130	"	18.68								2.5 2.5
1135	"	22.30								2.5 5.0
1140	"	26.80								2.5 7.5
1145	"	32.27'								2.5 9
1150	"	37.60								2.5 11.5
1155	900ml	41.10'								2.5 14
1200	500ml	41.60							↓ Flow	4500ml ~ 15
1205	"	41.65							↓ Flow	2500ml ~ 15.75
1210	"	41.60								2500ml 16.5
1215	"	41.60	7.28	1.14	>999	0.21	15.46	0		2500ml 17.25
1220	"	41.60	7.28	1.14	>999	0.21	15.39	1		2500ml 18

BTOC = Below Top of Casing

Comments: 1210: Reached stable WL @ 41.60', start recording w/ readings

Form Completed By: Bill Buckwalter 10/17/12

Sunny, 65°F

# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 1 D(U) upper

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1225	500mL	41.61	7.28	114	7999	0.21	15.36	1	Parameters Stable
1235-	Sample	MW-1 D U							

Purged vol 50  
2500ml  
18.75

BTOC = Below Top of Casing

Comments: Sampled @ 1235

Form Completed By: \_\_\_\_\_



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 2 D (L) Lower  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): 290'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-17-12 Initial Depth to Water: 7.62' Total Depth: 7300'  
 Sampling date/time: 10/17/12 @ 0955

**FIELD MEASUREMENTS**

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged Vol. (gal)
0850	1.0	Initiate	30	gallon	purge.					
0855	0.50	37.22							↓ Flow	5 5'
0900	"	45.80								2.5 7.5
0905	"	51.91								2.5 9
0910	"	58.62								2.5 11.5
0915	"	66.00								2.5 14
0920		69.45								2.5 16'
0925	300mL	75.55							↓ Flow	2.5 19
0930	"	77.00'	7.52	0.96	7999	0.16	14.06	-221		1500mL
0935	"	77.30	7.53	0.96	7999	0.12	14.00	-227		1500mL
0940	"	78.43	7.53	0.96	7999	0.18	14.12	-227		1500mL
0945	"	81.00	7.53	0.96	7999	0.22	14.43	-230		1500mL 20.5

BTOC = Below Top of Casing

Comments: \* Per Rich marker - well does not seem to yield, water level falling quickly we will collect WR readings for 15-20 min then sample.

Form Completed By: Bill Buckwalter  
Sunny, 50°F

0945: collect 3 consecutive WR readings / end purge to sample.



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Page 1 of 1

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW-25  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): 25.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-17-12 Initial Depth to Water: 5.83' Total Depth: 29.80'  
 Sampling date/time: 10-17-12 @ 1455

10-17-12

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Pumped Vol (gal)
1350	0.50	Initiate 30 gal. purge								
1355	"	8.22'								2.5
1400	"	10.00								2.5
1405	950 mL	11.00						↓ Flow		2.5
1410	"	10.35'								4750 mL
1415	"	10.50								8.5
1420	900 mL	10.63								4700
1425	"	10.80							↓ Flow	9.5
1430	"	10.90								4700
1435	750	10.93	6.78	4.28	7999	0.13	20.91	-181		10.5
1440	750	10.99	6.78	4.23	7999	0.11	21.01	-182	↓ Flow	4500 mL
1445		11.02	6.77	4.11	7999	0.08	21.11	-182		13.5

BTOC = Below Top of Casing

Comments: 1430: WL stable @ 900 mL/min, start WQ readings

\* 1445: WL continues to drop @ lowest purge rate / end purge

Form Completed By: Billie Buckwalter 10-17-12

Sunny, 65°F

1455: Sample MW-15



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 25  
 Sampler: J. Hawkes  
 Pump Depth (BTOC): 25.0'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10/15/12 Initial Depth to Water: 9.98' Total Depth: 28.95'  
 Sampling date/time: 10/15/12

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1555	200ml/min	23.04	6.95	1.27	730.0	0.41	18.84	-18	
1600		23.35	6.96	1.27	698.0	0.50	18.95	-19	
1605		23.38	6.96	1.28	691.0	0.39	18.90	-22	
1606	Sample	—————→							

BTOC = Below Top of Casing

Comments: 1.0310  
Begin purge at 1.5 GPM at 1530. End purge at 1550. Sampled @ 1606

Form Completed By: J. Hawkes



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 2D (Upper)

Sampler: Billie Buckwalter (BOW)

Pump Depth (BTOC): ~ 90.00'

Purging Method: Low Flow / Micro Purge

Gauging date: 10/16/12 Initial Depth to Water: 12.57' Total Depth: 115.40'

Sampling date/time: 10/16/12 @ 1045

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purge vol
0915-1015	1.50	42.22							Initiate 30 gal. purge	7.5 gal
0920-1020	"	50.60'							-	
0925-1025	1.10	52.55							↓ Flow	5 gal
0930-1030	"	53.54								5 gal
0935	"	54.20								5 gal
0940	"	54.50								5 gal
0945	"	54.75							revised 33 gal.	5 gal
0950	0.5	55.30	6.99	1.28	7999	0.77	15.9	101	↓ Flow	5 gal.
0955	"	55.30	7.15	1.27	7999	0.40	15.9	54		2.50
1000	"	55.30	7.17	1.27	7999	0.36	16.2	35		2.50
1005	"	55.32	7.20	1.25	610	0.34	16.1	22		2.50
1010	"	55.35	7.20	1.24	400	0.34	16.1	10		2.50

BTOC = Below Top of Casing

Comments: 0910: Initiate 30 gal purge @ 1.50 gpm, 0945: Removed 33 gal (Hock)  
up flow cell for WQ readings

Form Completed By: Bill Buckwalter

P-Sunny, Windy + Cool, 50's °F

Sampled @ 1045

# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 2 D (Upper)

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged Volume
1015	0.5	55.40	7.16	1.24	355	0.33	16.1	6		2.50 50.
1020	"	55.42	7.14	1.24	217	0.32	15.7	4		2.50 52.
<del>1025</del> 1025	"	55.45	7.14	1.24	185	0.33	15.8	3		2.5 55
1030	"	55.45	7.20	1.24	255	0.31	16.0	0		2.5 57.
1035	"	55.45	7.22	1.24	266	0.32	16.0	0	Parameters Stable	2.5 60.
1045-	Sample	MW-2D (U)								

BTOC = Below Top of Casing

Comments: 1035: All Parameters Stable, except Turbidity.

Form Completed By: Billie Buckwalter

Sunny, cool, 55°F



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW-2D (Lower)

Sampler: Bill Buckwalter

Pump Depth (BTOC): 215

Purging Method: Low Flow / Micro Purge

Gauging date: 10/15/12 Initial Depth to Water: 8.80' Total Depth: 224.30'

Sampling date/time: 10/15/12 @ 1620

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1545	1.50	46.20'	7.59	0.677	153	1.10	14.9	17	
1550	"	49.60	7.53	0.665	14.8	0.43	14.6	-50	↓ 1.0 gpm
1555	1.0 gpm	50.95	7.52	0.669	8.4	0.41	14.6	-62	
1600		51.60	7.51	0.671	5.2	0.38	14.6	-67	
1605		52.32	7.51	0.675	2.9	0.36	14.6	-72	
1610		53.00	7.53	0.676	1.5	0.34	14.6	-75	
1615		53.81'	7.53	0.676	1.6	0.35	14.6	-76	Reaches STEEL
1620	Sampled MW-2D @								

BTOC = Below Top of Casing

Comments: 1520. Initial purge @ 1.5 gpm  
1540. Removed 30 gal start w/ readings

Form Completed By: Bill E. Buckwalter  
Barry, 600P

Sampled @ 1620





# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 4D Upper

Sampler: Dimitri Quafis

Pump Depth (BTOC): 105' 695

Purging Method: Low Flow / Micro Purge

Gauging date: 10/17/12 Initial Depth to Water: 14.10 Total Depth: 118' 695

Sampling date/time: 10/17/12 @ 1700

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1615	19pm	14.10							
1620		17.00			Purged ≈ 25 gallons.				
1625		18.03							
1630		18.43							
1635		18.70							
1640		19.10				Begin low flow			
1640	250 mL/min	19.10	7.20	0.776	376	0.99	13.5	101	
1645		18.0	7.20	0.778	267	1.04	13.9	94	
1650		18.03	7.19	0.780	280	1.01	13.8	95	
1655		18.0	7.19	0.773	265	1.02	13.9	77	
1700		----- Sampled -----							

BTOC = Below Top of Casing

Comments: Collect Sample MW-4D U @ 1700

Form Completed By: Dimitri Quafis

Seq# 020 HCL VOL  
 Seq# 119 unpe vol  
 Seq# 219 IL Amk  
 Seq# 219 Metal  
 Seq# 401 PCBs



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 4D Lower

Sampler: Dinitri Quatris

Pump Depth (BTOC): 235' 695

Purging Method: Low Flow / Micro Purge

Gauging date: 10/17/12 Initial Depth to Water: 10.2 Total Depth: 235

Sampling date/time: 10/17/12 @ 1455

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1415	19PM	10.2							
1420	1/2 PM	29.30							Slow rate to 1/2 gpm
1425	300 ml/min	33.90							Slow rate to 300 ml/min
1430		37.00							
1435									Begin low flow due to low yield
1435		38.10	7.10	0.677	6.9	0.56	16.5	-44	
1440		39.50	7.11	0.678	5.2	0.59	16.5	-44	
1445		41.70	7.14	0.682	3.9	0.62	16.1	-40	
1450		44.00	7.16	0.682	4.5	0.64	16.0	-38	
1455	Sample								

BTOC = Below Top of Casing

Comments: Collect Sample MW-4D L @ 1455.  
"Could not stabilize draw down." Seq# 017 Hel von  
 Form Completed By: Dinitri Quatris 116 JN Pinner VOK  
 216 JL Amm  
 316 Metals  
 400 PCB SW



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 0W-4 U (Upper)

Sampler: Bill Buckwalter

Pump Depth (BTOC): 95'

Purging Method: Low Flow Micro Purge

Gauging date: 10/15/12 Initial Depth to Water: 14.87 Total Depth: 127.85'

Sampling date/time: 10/15/12 @ 1330

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1250	900	38.14	8.09	0.542	>999	0.46	14.7	153	
1255	"	38.05	7.92	0.525	>999	0.30	14.6	149	
1300	"	38.05	7.82	0.506	>999	0.29	14.6	143	
1305	"	38.05	7.79	0.503	>999	0.27	14.6	132	
1310	"	38.05	7.77	0.499	>999	0.26	14.7	128	
1315	"	38.05	7.75	0.498	>999	0.28	14.7	122	
1320	"	38.05	7.76	0.496	>999	0.29	14.7	123	Parameters stable
1330-	Sample 0W-4 (U)								

BTOC = Below Top of Casing

Comments: 1125-1145: Purge @ 0.5 gpm, 1150-1220: Stopped purge due to heavy rain.  
1220: Resume purge @ 0.5 gpm, 1225: ↑ Flow to 1 gpm, 1245: Removed ≈ 30 gal.

Form Completed By: Billie Buckwalter

Overcast, Rain, 60°F



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- OW 4 (Lower)

Sampler: 0.11 Buckner

Pump Depth (BTOC): ~ 215'

Purging Method: Low Flow / Micro Purge

Gauging date: 10/15/12 Initial Depth to Water: 5.85' Total Depth: 251.90'

Sampling date/time: 10/15/12 @ 1050

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
0925	700	5.70							Start purge
0930	"	6.20							
0935	"	6.20							
0940	"	6.31							
0945	"	6.55							Purge 3.3 gal.
0950	1 GPM	6.66							↑ 1 GPM
0955	"	7.22							
1000	"	7.34							
1005	"	7.48							
1010	"	8.11							
1015	"	8.20							
1020	"	8.22							purged 30 gal.

BTOC = Below Top of Casing

Comments: 1020: Removed approx 33 gal - Start taking WQ readings.

SAMPLED @ 1050

Form Completed By: B. R. Buckner

# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: ~~MW~~ - OW 4 (Lower)

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1025	16pm	8.60	8.02	0.385	>999	0.45	13.9	89	
1030	"	9.31	7.97	0.387	>999	0.32	13.8	86	
1035	"	9.46	7.88	0.388	>999	0.29	13.7	84	↓ Flow
1040	0.5 <sub>gpm</sub>	9.46	7.86	0.388	>999	0.28	13.8	79	
1045	"	9.46	7.85	0.390	>999	0.27	13.7	75	Parameters Stable
1050-	Sample OW-4 (L)								

BTOC = Below Top of Casing

Comments: Sampled @ 1050

Form Completed By: Billie Buckwalter

overcast, 65°F



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 55

Sampler: Bill Buckwalter

Pump Depth (BTOC): 25.00'

Purging Method: Low Flow/ Micro Purge

Gauging date: 10/16/12 Initial Depth to Water: 6.63' Total Depth: 29.45'

Sampling date/time: 10/16/12 @ 1325

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged Vol.
1220 -	Initial	30 gal	purge @ 1.0 gpm							
1225	1.0	8.65'								5 5.0
1230	"	9.75'								5 10.0
1235	0.5	10.45'								5 15'
1240	"	10.90'								7.5 17.0
1245	"	11.82'								2.5 20'
1250	"	12.55'								2.5 22.0
1255	700 mL	12.55'							↓ Flow	2.5 25.0
1300	"	12.42'	6.32	0.187	4.9 <del>37.7</del>	1.3 14.3	16.97 <del>18.4</del>	171		1.0 26.0
1305	"	12.42'	6.31	0.186	12.7	7.1	18.7	167		1.0 27.0
1310	"	12.42'	6.32	0.183	13.5	7.14	19.1	164		1.0 28.0
1315	"	12.42'	6.32	0.180	10.3	7.34	19.1	165	Parameters Stable	1.0 29.0

BTOC = Below Top of Casing

Comments: 1220 - Initial 30 gal purge @ 1.0 gpm, 1255 - Removed 25 gal + Start WQ readings

Form Completed By: Bill Buckwalter

Sunny, Cool, 55°F

1325: Sample MW-55



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 5D U pp6

Sampler: Dinitri Quafos

Pump Depth (BTOC): 75

Purging Method: Low Flow / Micro Purge

Gauging date: 10/16/12 1415 Initial Depth to Water: 19.43 Total Depth: 95

Sampling date/time: 10/16/12 @ 1515

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1425	150m	15.50	7.24	0.920	-5.0	4.30	13.58	238	
1430		21.20							
1435		21.20							
1440		21.20							
1445		21.20							
1450		21.15							
1450		begin							low flow
1455	<del>150.5</del> 300mL	18.55	7.38	0.909	-5.0	3.55	13.91	199	
1500		18.55	7.40	0.909	-5.0	3.43	14.09	193	
1505		18.55	7.40	0.917	-5.0	3.40	14.04	180	
1510		18.55	7.41	0.907	-5.0	3.37	14.01	184	
1515									Sampled

BTOC = Below Top of Casing

Comments: collect sample mw-5D U seq# 010 HCL vol  
@ 1515 109 Unpreser vol

Form Completed By: Dinitri Quafos 209 12/16/12  
209 metals



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 5D lower

Sampler: Dimitri Quattris

Pump Depth (BTOC): 105

Purging Method: Low Flow / Micro Purge

Gauging date: 10/16/12 Initial Depth to Water: 13.55 Total Depth: 187.55

Sampling date/time: 10/16/12 @ 1310

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1220	1 gpm	10.55							
1225		23.35							
1230		25.80							purge @ 25 gpm
1235		27.40							
1240		27.55							
1245		27.70							
1245	500 (Begin)		low	flow	@	~500 mL/min)			
1250		27.70	7.54	0.625	~5.0	0.10	14.07	-98	
1255		27.80	7.65	0.560	~5.0	0.09	13.97	-97	
1300		27.80	7.70	0.551	~5.0	0.07	13.84	-94	
1305		27.80	7.74	0.544	~5.0	0.07	13.96	-92	
1310		Sampled							

BTOC = Below Top of Casing

Comments: Collect Sample MW-5D L @ 1310

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Seq # 009 HCL Voq

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Form Completed By: Dimitri Quattris 108 un preserved. Voq

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208 2L Am

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208 metals





# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 65

Sampler: Bill Buckwalter

Pump Depth (BTOC): 25.00'

Purging Method: Low Flow / Micro Purge

Gauging date: 10/16/12 Initial Depth to Water: 2.00' Total Depth: 28.90'

Sampling date/time: 10-16-12 @ 1545

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged Volume
1440	Initiate	30 gal.								—
1445	1.0	8.00'								5 5
1450	"	8.85								5 10
1455	"	9.20								5 15
1500	0.50	9.22							↓ Flow	5 20
1505	<del>0.50</del>	9.33								2.5 22.5
1510	"	9.36								2.5 25
1515	"	9.38								2.5 27.5
1520	"	9.40								2.5 30
1525	"	9.43	6.15	0.145	248	8.48	18.0	210		2.5 32.5
1530	"	9.48	6.11	0.141	246	8.50	17.9	212		2.5 35
1535	"		6.10	0.140	228	8.49	17.9	215	Parameters stable	2.5 37.5

BTOC = Below Top of Casing

Comments: 1520: Removed 30 gal. Start recording water readings for stabilization  
Sample @ 1545

Form Completed By: Billie Buckwalter

Sunny, cool, 55°F



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- OW-6 upper

Sampler: J. Hawkes

Pump Depth (BTOC): 85'

Purging Method: Low Flow / Micro Purge

Gauging date: 10/15/12 Initial Depth to Water: 1.88' Total Depth: 129.8'

Sampling date/time: 10/15/12 1331

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1310	200 ml/min	15.81	7.92	0.505	91.8	0.03	13.47	47	
1315	↓	12.82	7.91	0.503	141.0	0.01	13.36	27	
1320		11.83	7.92	0.504	217.0	0.04	13.31	24	
1325		11.85	7.93	0.503	220.0	0.05	13.30	23	
1330		↓	11.58	7.94	0.499	212.0	0.05	13.29	22
1331	Sample	—————→							

BTOC = Below Top of Casing

Comments: Begin purging well at approx 1.5 GPM @ 1250 - 1310 for total of 30 gallons  
Sampled @ 1331

Form Completed By: J. Hawkes



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- OW-6 Lower

Sampler: J. Hawkes

Pump Depth (BTOC): 235'

Purging Method: Low Flow / Micro Purge

Gauging date: 10/15/12 Initial Depth to Water: +4.5' Total Depth: ~~260~~ 260

Sampling date/time: 10/15/12 @ 1141

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1115	200 mL/min	29.49	8.22	0.453	257.0	0.11	13.91	179	
1120		26.63	8.18	0.419	164.0	0.08	13.72	154	
1125		22.83	8.13	0.452	37.6	0.05	13.57	131	
1130		21.60	8.15	0.455	43.6	0.03	13.48	99	
1135		21.02	8.15	0.454	48.8	0.03	13.50	95	
1140	↓	20.94	8.16	0.454	48.5	0.02	13.46	91	
1141	Sample	—————→							

BTOC = Below Top of Casing

Comments: used clear vinyl tubing seal attachment to measure artesian conditions water height above PVC. Purge approx. 50 gallons prior to collecting low flow parameters

Form Completed By: J. Hawkes Purge at 1-2 GPM.

Sampled @ 1141



# Low-Flow Groundwater Sampling Log

## (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 75

Sampler: Bill Buckwalter

Pump Depth (BTOC): 25.00'

Purging Method: Low Flow/ Micro Purge

Gauging date: 10/16/12 Initial Depth to Water: 3.51' Total Depth: 29.35'

Sampling date/time: 10/16/12 @ 1825

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged volume
1710	-	Initial 30 gal.							Purge @ 1.0 gpm	-
1715	1.0 gpm	7.64								5 5'
1720	"	9.29								5 10'
1725	"	10.32								5 15'
1730	"	10.80								5 20'
1735	"	11.25								5 25'
1740	"	11.62							↓ Flow	5 30'
1745	0.5	11.76	6.51	1.19	161	2.70	16.33	261		2.5 32.5'
1750	"	11.91	6.50	1.22	133	2.63	16.24	262		2.5 35'
1755	"	11.98	6.49	1.25	92.6	2.57	16.18	262		2.5 37.5'
1800	"	12.05	6.49	1.27	66.3	2.61	16.16	263		2.5 40'
1805	"	12.12	6.49	1.30	46.0	2.58	16.17	263		

BTOC = Below Top of Casing

Comments: 1745: Start recording wa readings for stabilization  
Stoph @ 1825

Form Completed By: Bill Buckwalter  
Sunny, 65°F

# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 75

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purge Vol (50')
1810	0.5	12.18	6.49	1.32	37.5	2.59	16.18	263		7.5 42.
1815	"	12.21	6.49	1.33	33.4	2.60	16.18	263	Parameters stable	2.5 45
1825 - Sample MW-75										

BTOC = Below Top of Casing

Comments: \_\_\_\_\_

Form Completed By: Bill Buckwalter

P. Sunny, 600P



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 7D Upper

Sampler: Dimitri Quafisi

Pump Depth (BTOC): 120' base

Purging Method: Low Flow / Micro Purge

Gauging date: 10/17/12 835 Initial Depth to Water: +5" Total Depth: 153' base

Sampling date/time: 10/17/12 @ 920

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
835	15 gpm	+5"							
840		3.05							
845		3.05							
850		3.10							
855		3.15							
900		3.20							
900		Begin	low flow						
900	500 mL/min	1.40	7.49	0.686	71.0	0.34	12.8	-85	
905		1.55	7.49	0.685	50.0	0.38	13.7	-86	
910		1.45	7.50	0.694	49.2	0.31	12.7	-85	
915		1.50	7.49	0.694	49.3	0.29	12.7	-85	
920		1.50	7.50	0.693	44.2	0.30	13.7	-87	

BTOC = Below Top of Casing

Comments: Collect Sample MW-7DU @ 920

Form Completed By: Dimitri Quafisi

Seq # 014 HCL vial

113 un preserved vial

213 1L Amber

313 Metals



# Low-Flow Groundwater Sampling Log

(Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 7D Low

Sampler: Dinitro Quatris

Pump Depth (BTOC): 195' bgs

Purging Method: Low Flow / Micro Purge

Gauging date: 10/16/12 1705 Initial Depth to Water: +6.25" Total Depth: 210' bgs

Sampling date/time: 10/16/12 @ 1756

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1710	19m	+6.25"							
1715		16.25							
1720		21.40							
1725		22.40							
1730		23.00							
1735		23.2							
1740	300mL/min		Begin low flow						
1740		11.5	7.45	0.940	36.0	4.52	14.1	141	
1745		11.5	7.42	0.944	26.8	1.09	13.5	137	
1750		11.5	7.41	0.944	27.5	1.08	13.4	136	
1755		11.5	7.41	0.945	16.1	1.04	13.5	136	
1756	Sample								

BTOC = Below Top of Casing

Comments: Collect Sample MW-7D L @ 1756

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Seq #      013      HCl      Vols

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Form Completed By: Dinitro Quatris      112      In Person      Vols

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212      1L      Analy

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312      metals

good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW- 1

Sampler: Audrey Yorlke

Pump Depth (BTOC): 25 ft

Purging Method: Low Flow / Micro Purge

Gauging date: 10/24/12 Initial Depth to Water: 3.40 Total Depth: 29.81

Sampling date/time: 10/24/12 @ 1100

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1035	250	<del>29.81</del> 3.43	6.30	0.933	0.0	1.69	16.34	-97	
1040	250	3.81	6.46	0.930	↓	0.56	16.77	-54	
1045	250	3.92	6.49	0.919	↓	0.57	17.28	-55	
1050	250	3.97	6.50	0.916	↓	0.56	17.92	-55	
1100	Sample collected at MW-1								

BTOC = Below Top of Casing

Comments:

Sample @ 1100

Form Completed By:

Audrey Yorlke



good soil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 2  
 Sampler: B. Buckwalter  
 Pump Depth (BTOC): N/A  
 Purging Method: Low Flow / Micro Purge Hand Bailed (Low Yield)  
 Gauging date: 10-25-12 Initial Depth to Water: 4.90 Total Depth: 6.90  
 Sampling date/time: 10-25-12 @ 0930

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1615-	D-W-L =	4.90	TD =	6.90 (4" well)					
	TD =	6.90							
	D-W-L	4.90							
	Std H <sub>2</sub> O	2.00'	* 0.653 (4" well) = 1.3 gal H <sub>2</sub> O (1 well vol)						
			* 3 (well volumes)						
			3.9 Gallons						
1630	Bailed 2.0 gallons from well (D-W-L = 6.89')								
	- Let recover								
10/25/12 @ 0920	(D-W-L = 6.52')								

BTOC = Below Top of Casing

Comments: \* Well has only 2.0' water column (Low Yield!)  
 \* 0930 (10-25-12) NOT enough recovery water to sample full suite - collect UOA'S ONLY (4)  
 Form Completed By: Bill Buckwalter

Sunny, 75°F

Sampled @ 930

good oil storm



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 4  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): 26.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 12.25' Total Depth: 30.00'  
 Sampling date/time: 10/24/12 @ 1325

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purge Vol
1240	500	13.30	6.80	0.775	603	1.21	15.4	51		
1245	"	14.10	6.75	0.786	120	0.49	15.2	43		2500 ml
1250	"	14.33	6.71	0.792	92.3	0.42	15.3	42		5000 ml
1255	"	14.40	6.69	0.797	66.1	0.37	15.3	43		7500 ml
1300	"	14.50	6.67	0.798	50.2	0.35	15.2	43		10,000 ml
1305	"	14.62	6.67	0.801	40.7	0.33	15.2	43		12,500 ml
<del>1310</del> 1310	"	14.66	6.67	0.802	32.9	0.31	15.2	43		15,000 ml
1315	"	14.71	6.68	0.802	30.4	0.30	15.2	43	Parameter Stable	17,500 ml
1325	Sample MW-4									
										4.6 gal

BTOC = Below Top of Casing

Comments: 1240: Initial Low Flow Purge - Sample @ 1325

Form Completed By: Bill Buckwalter

Sunny, 65°F

good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263

Well Number and Location: MW-5

Sampler: Andrew Yorke

Pump Depth (BTOC): NA - Hand Bawl

Purging Method: Low Flow / Micro Purge

Gauging date: 10-24-12 Initial Depth to Water: 0.0 0.50' Total Depth: 11.30

Sampling date/time: 10/24/12 @ 1830

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
		* HAND Bawl							
		TD = 11.30							
		DWL = 0.50							
STD RD		10.80 * (4" well) = 0.653			7 gal (1 well vol)				
					* 3 well vol.				
					21 gallons				
1825	—	0.92	—	—	—	—	—	—	
1830		Sample collected at			MW-5				By 10/24/12

BTOC = Below Top of Casing

Comments: 1146D9 Removes ~ 25 gallons from well.  
water level remains fairly constant. Slight Shrink

Form Completed By: in pure water.

NA = Not Applicable

Sampled @ 1830

good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW-6  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): N/A  
 Purging Method: Low Flow / Micro-Purge Hand Bailed (Low Yielding)  
 Gauging date: 10-25-12 Initial Depth to Water: 8.05 Total Depth: 12.00'  
 Sampling date/time: 10-25-12 @ 0855

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
		* Hand Bail							
TD=	12.00'								
DTW=	8.05'								
STD H2O	3.95'	* .653 (4" well) =			2.57 ga (1 well valve)				
				x 3					
					7.7 gallons				
10-25-12 @ 0840		D-W-L = 8.22'							

BTOC = Below Top of Casing

Comments: <sup>1130</sup> DP purges ≈ 7.5 gallons from well. Slight sheen becomes apparent after last bailer

Form Completed By: of water.

NA = Not Applicable

Sampled @ 0855

gas oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- MW-7  
 Sampler: Bill Buckwalt  
 Pump Depth (BTOC): 10.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-27-12 Initial Depth to Water: 6.92' Total Depth: 12.05'  
 Sampling date/time: 10/24/12 @ 1130

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Range Vol (gal)
1055	300	7.20'	6.38	0.666	301	2.97	18.6	-64		-
1100	"	7.75'	6.18	0.644	124	0.43	18.3	-68		1500 mL
1105	"	8.20'	6.16	0.640	125	0.37	18.3	-70		3000 mL
1110	"	8.55'	6.15	0.645	106	0.36	18.4	-71		4500 mL
1115	"	8.90'	6.15	0.645	105	0.35	18.4	-72		6000 mL
1120	"	9.02'	6.16	0.644	108	0.32	18.7	-72	Parameters stable	7500 mL
1130	Sample	MW-7								

BTOC = Below Top of Casing

Comments: 1055: Initiate Low Flow Purge Sampled @ 1130

Form Completed By: Bill Buckwalt

Sunny, 60°F

good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 8  
 Sampler: Bill Buckwater  
 Pump Depth (BTOC): 26.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 12.32' Total Depth: 30.10'  
 Sampling date/time: 10/24/12 @ 1525

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged vol	
1440	800 mL	12.32	6.92	0.941	65.5	0.82	14.6	7	Increase Purge		
1445	"	16.60	6.85	0.939	81.7	0.42	15.0	3		4000 ml	
1450	"	17.20	6.86	0.938	81.7	0.55	15.3	3		8000 ml	
1455	"	17.55	6.79	0.932	77.9	0.51	15.6	4		2.2 gal 12000 ml	
1500	"	17.80	6.82	0.933	69.8	0.49	15.8	4		3.1 gal 16000 ml	
1505	"	17.85	6.78	0.925	60.4	0.47	16.3	5		4.2 gal 20000 ml	
1510	"	17.91	6.81	0.930	59.8	0.47	16.3	5		5.3 gal 24000 ml	
1515	"	18.02	6.87	0.928	57.8	0.47	16.4	5		6.3 gal 28000 ml	
1525	Sample MW-4									Parameters Stable	7.3 gal

BTOC = Below Top of Casing

Comments:

\* Purge water = "Drummed" Sampled @ 1525

Form Completed By:

Bill Buckwater

Sunny, 75°F

Good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 9  
 Sampler: Andrey Yorke  
 Pump Depth (BTOC): 26 ft  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 13.65 ft Total Depth: 30.65 ft  
 Sampling date/time: 10/24/12 1330

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1245	250	14.15	7.46	0.828	321.0	1.68	16.89	130	[ 2/11/2012 By 10/24/12 ]
1250	250	15.11	7.41	0.826	313.0	0.47	17.39	120	
1255	250	15.73	7.43	0.829	302.0	0.23	18.16	110	
1300	250	16.05	7.43	0.833	280.0	0.19	18.93	104	
1305	250	16.20	7.43	0.832	261.0	0.48	20.03	102	
1310	250	16.31	7.43	0.828	271.0	0.41	21.78	115	
1315	250	16.38	7.43	0.831	222.0	0.40	22.87	117	
1320	250	16.44	7.44	0.837	193.0	0.41	23.50	120	
1330	Sample collected at MW-9								

BTOC = Below Top of Casing

Comments: Sampled @ 1330

Form Completed By: Andrey Yorke

Good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 10  
 Sampler: Audrey Yorke  
 Pump Depth (BTOC): 6ft  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 3.11 ft Total Depth: 7.21 ft  
 Sampling date/time: 10/24/12 1530

## FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1455	250	3.99	6.66	0.835	0.0	0.37	19.69	-22	10/24/12 AY
1500	250	4.31	6.55	0.848	0.0	0.16	19.87	-21	
1505	250	4.78	6.56	0.861	0.0	0.15	20.62	-30	
1510	250	4.88	6.57	0.867	0.0	0.14	20.97	-38	
1515	250	4.95	6.58	0.869	0.0	0.13	21.23	-40	
1520	250	4.99	6.58	0.872	0.0	0.12	21.35	-42	
1525	250	5.11	6.59	0.882	0.0	0.14	21.24	-42	
1530	Sample collected at MW-10								

BTOC = Below Top of Casing

Comments: Sampled @ 1530

Form Completed By: Audrey Yorke



Good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW- 12  
 Sampler: Andrew Yorklee  
 Pump Depth (BTOC): 8 ft  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 3.54 ft Total Depth: 10.25  
 Sampling date/time: 10/24/12 1730

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes
1645	250	<del>3.69</del> 3.69	6.13	0.398	0.0	1.41	21.54	149	✓ 10/24/12 Andrew Yorklee
1650	250	3.96	5.85	0.395	0.0	1.26	21.34	153	
1655	250	4.09	5.82	0.393	0.0	0.76	21.34	156	
1700	250	4.20	5.80	0.393	0.0	0.55	21.41	157	
1705	250	4.23	5.79	0.393	0.0	0.41	21.45	159	
1710	250	4.28	5.79	0.393	0.0	0.30	21.44	158	
1715	250	4.31	5.79	0.393	0.0	0.27	21.43	158	
1720	250	4.34	5.78	0.392	0.0	0.25	21.36	154	
1725	250	4.36	5.78	0.392	0.0	0.24	21.38	155	
1730	Sample collected at MW-12								

BTOC = Below Top of Casing

Comments: Sampled at 1730

Form Completed By: Andrew Yorklee

Good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW-13  
 Sampler: Billie Buckwalter  
 Pump Depth (BTOC): 19.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: \_\_\_\_\_ Initial Depth to Water: 10.72' Total Depth: 25.10'  
 Sampling date/time: 10/24/12 e

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purged Volume
1650	1000 mL	10.72	6.27	0.700	2.3	2.77	18.6	150	Initiate Purge	
1655	"	11.68	6.05	0.688	1.1	0.75	18.6	152		5000 ml 1.399
1700	"	12.37	5.99	0.683	0.0	0.69	18.9	156		2.6 gal
1705	"	12.70	5.97	0.682	0.8	0.80	19.3	158		3.9 gal
1710	"	12.92	5.97	0.681	2.9	0.97	19.4	158		5.2 gal
1715	"	13.22'	5.97	0.680	4.7	0.99	19.6	158		6.5 gal
1720	"	13.40	5.98	0.679	4.2	0.94	19.8	155	Parameters Stable	7.8 gal
1730	Sample MW-13 / DUP 102412 (Duplicate) @ 1740									

BTOC = Below Top of Casing

Comments: \* 1740: collect Duplicate @ MW-13 (DUP 102412)

Sampled MW-13 @ 1730 #

Form Completed By: Billie Buckwalter

Sunny, 75°F

Good oil well



# Low-Flow Groundwater Sampling Log (Field Sheet)

Project Name and Number: HOFF VC SITE - Perkiomenville PA, GTAC5-1-263  
 Well Number and Location: MW-14  
 Sampler: Bill Buckwalter  
 Pump Depth (BTOC): 14.00'  
 Purging Method: Low Flow / Micro Purge  
 Gauging date: 10-24-12 Initial Depth to Water: 11.45 Total Depth: 14.50  
 Sampling date/time: 10/24/12 @ 1830

### FIELD MEASUREMENTS

Time	Rate (mL/min)	Water Level (BTOC)	pH (Standard Units)	Specific Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temp (°C)	OrP (mV)	Notes	Purge Volume	
1750	500 mL	11.45	6.22	1.41	24.5	2.06	18.7	-25	Initial purge		
1755	"	12.20	6.23	1.40	24.6	0.88	18.7	-31		2500 mL	
1800	"	12.47	6.24	1.41	27.0	0.63	18.9	-34		5000 mL 1.3 gal	
1805		12.86	6.25	1.41	24.2	0.51	19.0	-37		7500 mL 2.0 gal	
1810		13.33	6.24	1.41	12.5	0.35	18.7	-38		10000 mL 2.6 gal	
1815		WELL went Dry / stop purge (D-W-L = 14.00')									
1830	Sample MW-14										

BTOC = Below Top of Casing

Comments: \* well counterchecked @ 500 mL min (2.6 gal)  
Sampled @ 1830

Form Completed By: Bill Buckwalter

Dark, 65°F