



Low Flow Groundwater Sampling Form

03/07/17

Troll 9500 Low Flow Sample

Project Information:

Operator Name J KEEFE & A BOUCHE
Company Name WCG
Project Name USS GARY
Site Name CAMU

Pump Information:

Pump Model/Type PERISTALTIC
Tubing Type LDPE
Tubing Diameter 0.38 [in]
Tubing Length 0 [ft]
Pump placement from TOC 0 [ft]

Well Information:

Well Id CAMU-MW08
Well diameter 2 [in]
Well total depth from TOC 10.52 [ft]
Depth to top of screen from TOC 5.85 [ft]
Screen length 120 [in]
Depth to Water from TOC 8.52 [ft]

Pumping information:

Final pumping rate 250 [mL/min]
Sample rate 120 [sec]
Stabilized drawdown 0.36 [in]

Start/End Time:

Start 1:35:30 PM
End 1:50:26 PM
Elapsed Time 0:14:56

Low-Flow Sampling Stabilization Summary

		Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
					+/-3 %		+/-10 %	
Last 5 Readings	13:41:33	52.43	7.54	630.17	3.63	4.83	-5.66	
	13:43:33	52.38	7.52	645.19	3.66	4.88	3.25	
	13:45:34	52.29	7.51	660.14	4.43	4.92	10.14	
	13:47:35	52.29	7.49	671.59	7.83	4.89	15.49	
	13:49:36	52.25	7.49	680.23	4.23	4.86	19.21	
Variance in last 3 readings	13:45:34	-0.09	-0.02	14.96	0.77	0.04	6.89	
	13:47:35	0.00	-0.02	11.44	3.40	-0.03	5.35	
	13:49:36	-0.04	-0.01	8.64	-3.60	-0.03	3.72	

Notes: VOLUME PURGED = 0.92 GAL
FINAL DTW = 8.55 FT
SAMPLE TIME = 1449



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Company Name WCG
Project Name USS GARY
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Pump Information:

Pump Model/Type BLADDER
Tubing Type LDPE
Tubing Diameter 0.38 [in]
Tubing Length 49 [ft]
Pump placement from TOC 43 [ft]

Well Information:

Well Id CAMU-P08
Well diameter 2 [in]
Well total depth from TOC 46.94 [ft]
Depth to top of screen from TOC 40.77 [ft]
Screen length 64.8 [in]
Depth to Water from TOC 8.36 [ft]

Pumping information:

Final pumping rate 250 [mL/min]
Sample rate 120 [sec]
Stabilized drawdown 1.92 [in]

Start/End Time:

Start 2:29:27 PM
End 2:48:28 PM
Elapsed Time 0:19:01

Low-Flow Sampling Stabilization Summary

		Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
					+/-3 %		+/-10 %	
Last 5 Readings		14:39:30	55.49	7.62	998.38	25.93	0.78	-155.64
		14:41:32	55.33	7.64	996.81	24.63	0.55	-158.90
		14:43:32	55.31	7.65	996.35	25.01	0.25	-161.77
		14:45:33	55.26	7.65	995.88	23.31	0.18	-163.66
		14:47:35	55.26	7.66	995.67	27.55	0.16	-164.90
Variance in last 3 readings		14:43:32	-0.02	0.01	-0.46	0.38	-0.30	-2.87
		14:45:33	-0.05	0.01	-0.47	-1.70	-0.07	-1.89
		14:47:35	0.00	0.00	-0.21	4.24	-0.02	-1.24

Notes: VOLUME PURGED = 1.25 GAL
FINAL DTW =8.52 FT
SAMPLE TIME =1448



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Company Name WCG
Project Name USS GARY
Site Name CAMU

Pump Information:

Pump Model/Type BLADDER
Tubing Type LDPE
Tubing Diameter 0.38 [in]
Tubing Length 31 [ft]
Pump placement from TOC 25 [ft]

Well Information:

Well Id CAMU-MW09R
Well diameter 2 [in]
Well total depth from TOC 27.75 [ft]
Depth to top of screen from TOC 18.46 [ft]
Screen length 126 [in]
Depth to Water from TOC 17.04 [ft]

Pumping information:

Final pumping rate 300 [mL/min]
Sample rate 120 [sec]
Stabilized drawdown 0.24 [in]

Start/End Time:

Start 12:27:53 PM
End 1:49:04 PM
Elapsed Time 1:21:11

Low-Flow Sampling Stabilization Summary

		Time	Temp [F]	pH [pH]	Cond [μS/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
				+/-3 %				
Last 5 Readings	13:40:20	61.26	7.34	1074.25	51.13	0.46	-71.34	
	13:42:21	61.50	7.34	1077.16	45.22	0.47	-72.06	
	13:44:21	61.72	7.34	1079.75	36.11	0.48	-72.58	
	13:46:23	61.93	7.34	1082.69	35.02	0.48	-73.05	
	13:48:23	62.15	7.34	1085.32	31.33	0.49	-73.43	
Variance in last 3 readings	13:44:21	0.22	0.00	2.59	-9.11	0.01	-0.51	
	13:46:23	0.21	0.00	2.95	-1.09	0.01	-0.47	
	13:48:23	0.22	0.00	2.63	-3.69	0.01	-0.38	

Notes: VOLUME PURGED = 6.42 GAL
FINAL DTW = 17.06 FT
SAMPLE TIME = 1348



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Company Name WCG
Project Name USS GARY
Site Name CAMU

Pump Information:

Pump Model/Type BLADDER
Tubing Type LDPE
Tubing Diameter 0.38 [in]
Tubing Length 55 [ft]
Pump placement from TOC 49 [ft]

Well Information:

Well Id CAMU-P09
Well diameter 2 [in]
Well total depth from TOC 52.7 [ft]
Depth to top of screen from TOC 48.39 [ft]
Screen length 60 [in]
Depth to Water from TOC 18.06 [ft]

Pumping information:

Final pumping rate 300 [mL/min]
Sample rate 120 [sec]
Stabilized drawdown 1.20 [in]

Start/End Time:

Start 11:38:58 AM
End 12:06:10 PM
Elapsed Time 0:27:12

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-30 +/-3 %	+/-5	+/-0.3 +/-10 %	+/-10
Last 5 Readings	11:57:07	57.16	7.26	825.85	31.96	5.57	-124.23
	11:59:07	57.16	7.27	826.26	20.96	4.40	-123.93
	12:01:07	57.23	7.27	829.96	16.02	3.74	-121.66
	12:03:08	57.26	7.27	829.76	12.70	3.43	-118.37
	12:05:10	57.33	7.27	831.41	11.57	3.43	-115.50
Variance in last 3 readings	12:01:07	0.07	0.00	3.70	-4.94	-0.66	2.27
	12:03:08	0.03	0.00	-0.21	-3.32	-0.31	3.29
	12:05:10	0.07	0.00	1.66	-1.12	0.00	2.87

Notes: VOLUME PURGED = 3.01 GAL
FINAL DTW = 18.16FT
SAMPLE TIME = 1306



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Company Name WCG
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Pump Information:

Pump Model/Type BLADDER
Tubing Type LDPE
Tubing Diameter 0.38 [in]
Tubing Length 47 [ft]
Pump placement from TOC 42 [ft]

Well Information:

Well Id CAMU-P05
Well diameter 2 [in]
Well total depth from TOC 45.36 [ft]
Depth to top of screen from TOC 37.18 [ft]
Screen length 126 [in]
Depth to Water from TOC 9.35 [ft]

Pumping information:

Final pumping rate 270 [mL/min]
Sample rate 120 [sec]
Stabilized drawdown 0 [in]

Start/End Time:

Start 11:37:01 AM
End 11:56:08 AM
Elapsed Time 0:19:07

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.1	+/-30	+/-5	+/-0.3	+/-10
				+/-3 %		+/-10 %	
Last 5 Readings	11:47:05	53.95	7.55	830.76	16.40	1.52	-124.20
	11:49:06	53.94	7.58	832.35	13.13	1.00	-132.80
	11:51:06	53.90	7.60	833.75	13.26	0.73	-137.77
	11:53:07	53.96	7.62	835.56	10.18	0.57	-141.24
	11:55:09	54.03	7.63	837.56	8.41	0.49	-143.77
Variance in last 3 readings	11:51:06	-0.03	0.02	1.40	0.13	-0.27	-4.97
	11:53:07	0.06	0.02	1.81	-3.08	-0.16	-3.47
	11:55:09	0.07	0.01	2.01	-1.78	-0.08	-2.53

Notes: VOLUME PURGED = 1.35 GAL
FINAL DTW = 9.35 FT
SAMPLE TIME = 1156