



Low Flow Groundwater Sampling Form

06/21/17

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 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 20.21 [ft]
Depth to top of screen from TOC 37.18 [ft]
Screen length 126 [in]
Depth to Water from TOC 8.43 [ft]

Pumping information:

Final pumping rate 270 [mL/min]
Sample rate 180 [sec]
Stabilized drawdown 1.2 [in]

Start/End Time:

Start 9:05:51 AM
End 9:21:39 AM
Elapsed Time 0:15:48

Low-Flow Sampling Stabilization Summary

		Time	Temp [C]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
					+/-3 %			
Last 5 Readings		9:08:53	14.86	7.39	914.63	1.29	0.14	7.48
		9:11:54	14.74	7.38	909.56	1.87	0.10	9.96
		9:14:55	14.75	7.37	913.91	3.72	0.07	12.22
		9:17:56	14.87	7.37	918.55	2.22	0.06	14.36
		9:20:56	14.67	7.36	918.30	3.40	0.05	16.76
Variance in last 3 readings		9:14:55	0.01	-0.01	4.35	1.86	-0.03	2.26
		9:17:56	0.13	0.00	4.64	-1.50	-0.01	2.14
		9:20:56	-0.20	-0.01	-0.25	1.18	-0.01	2.39

Notes: VOLUME PURGED = 1.14 GAL
FINAL DTW = 8.53 FT
SAMPLE TIME = 0921



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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 10 [ft]
Pump placement from TOC 0 [ft]

Well Information:

Well Id CAMU-MW08
Well diameter 2 [in]
Well total depth from TOC 10.51 [ft]
Depth to top of screen from TOC 5.85 [ft]
Screen length 120 [in]
Depth to Water from TOC 8.35 [ft]

Pumping information:

Final pumping rate 250 [mL/min]
Sample rate 180 [sec]
Stabilized drawdown 0.6 [in]

Start/End Time:

Start 11:10:02 AM
End 11:26:03 AM
Elapsed Time 0:16:01

Low-Flow Sampling Stabilization Summary

		Time	Temp [C]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
				+/-3 %				
Last 5 Readings		11:13:02	15.35	7.57	1050.94	3.82	0.35	-120.89
		11:16:04	14.31	7.56	947.84	0.90	0.27	-120.22
		11:19:04	14.21	7.52	908.87	0.77	0.28	-120.02
		11:22:05	14.02	7.50	889.98	-0.53	0.27	-116.28
		11:25:07	13.95	7.47	883.24	-0.54	0.28	-110.90
Variance in last 3 readings		11:19:04	-0.11	-0.04	-38.98	-0.12	0.01	0.19
		11:22:05	-0.18	-0.02	-18.89	-1.30	-0.01	3.75
		11:25:07	-0.07	-0.03	-6.73	-0.01	0.01	5.37

Notes: VOLUME PURGED = 0.99 GAL
FINAL DTW = 8.40 FT
SAMPLE TIME = 1125



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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 49 [ft]
Pump placement from TOC 43 [ft]

Well Information:

Well Id CAMU-P08
Well diameter 2 [in]
Well total depth from TOC 47.05 [ft]
Depth to top of screen from TOC 40.77 [ft]
Screen length 64.8 [in]
Depth to Water from TOC 8.19 [ft]

Pumping information:

Final pumping rate 250 [mL/min]
Sample rate 180 [sec]
Stabilized drawdown 0.24 [in]

Start/End Time:

Start 11:04:56 AM
End 11:21:00 AM
Elapsed Time 0:16:04

Low-Flow Sampling Stabilization Summary

		Time	Temp [C]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
				+/-3 %				
Last 5 Readings		11:07:56	17.24	7.63	1098.68	10.42	2.65	-139.16
		11:11:03	16.74	7.65	1110.17	6.45	2.08	-146.90
		11:14:04	16.54	7.66	1111.73	2.78	1.88	-149.11
		11:17:05	16.47	7.67	1110.56	2.07	1.86	-149.66
		11:20:08	16.52	7.67	1116.21	2.05	1.85	-149.35
Variance in last 3 readings		11:14:04	-0.20	0.01	1.55	-3.66	-0.20	-2.22
		11:17:05	-0.07	0.00	-1.17	-0.71	-0.02	-0.55
		11:20:08	0.06	0.00	5.65	-0.03	-0.01	0.31

Notes: VOLUME PURGED = 1.06 GAL
FINAL DTW = 8.21 FT
SAMPLE TIME = 1120



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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 27.96 [ft]
Depth to top of screen from TOC 18.46 [ft]
Screen length 126 [in]
Depth to Water from TOC 17.01 [ft]

Pumping information:

Final pumping rate 300 [mL/min]
Sample rate 180 [sec]
Stabilized drawdown 0.48 [in]

Start/End Time:

Start 9:51:29 AM
End 10:28:52 AM
Elapsed Time 0:37:23

Low-Flow Sampling Stabilization Summary

		Time	Temp [C]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
				+/-3 %				
Last 5 Readings		10:15:39	19.46	7.50	1046.90	19.05	3.31	-106.45
		10:18:40	20.27	7.50	1063.72	18.23	3.60	-104.04
		10:21:41	20.89	7.50	1082.08	18.23	3.81	-102.57
		10:24:42	21.52	7.51	1094.92	18.46	4.00	-100.93
		10:27:44	21.26	7.50	1090.54	13.95	4.01	-101.52
Variance in last 3 readings		10:21:41	0.62	0.00	18.37	0.01	0.21	1.47
		10:24:42	0.63	0.01	12.84	0.23	0.19	1.64
		10:27:44	-0.27	-0.01	-4.38	-4.52	0.01	-0.59

Notes: VOLUME PURGED = 2.93 GAL
FINAL DTW = 17.05 FT
SAMPLE TIME = 1028



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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 52.35 [ft]
Depth to top of screen from TOC 48.39 [ft]
Screen length 60 [in]
Depth to Water from TOC 17.42 [ft]

Pumping information:

Final pumping rate 300 [mL/min]
Sample rate 180 [sec]
Stabilized drawdown 2.4 [in]

Start/End Time:

Start 9:50:40 AM
End 10:07:09 AM
Elapsed Time 0:16:29

Low-Flow Sampling Stabilization Summary

		Time	Temp [C]	pH [pH]	Cond [μ S/cm]	Turb [NTU]	RDO [mg/L]	ORP [mV]
Stabilization Settings				+/-0.1	+/-30	+/-5	+/-0.3	+/-10
					+/-3 %			
Last 5 Readings		9:53:41	16.49	7.43	902.21	29.06	1.27	-112.41
		9:56:43	16.27	7.45	895.78	11.09	0.84	-125.46
		9:59:43	16.15	7.47	890.65	11.37	0.55	-132.52
		10:02:45	16.04	7.47	889.69	8.13	0.39	-136.84
		10:05:45	15.95	7.48	883.92	8.23	0.31	-139.75
Variance in last 3 readings		9:59:43	-0.12	0.01	-5.12	0.28	-0.29	-7.06
		10:02:45	-0.11	0.01	-0.96	-3.24	-0.16	-4.32
		10:05:45	-0.10	0.01	-5.77	0.10	-0.08	-2.91

Notes: VOLUME PURGED = 1.19 GAL
FINAL DTW = 17.62 FT
SAMPLE TIME = 1005