



Northing (ft): 431349.41
 Easting (ft): 861434.13
 Elevation (ft): 9.67
 Total Depth: 50.75 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: PARSONS
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30								
35				1.8	0.000			
40		8-8-9-12		0.0	0.000		Wet, greenish-gray, fine-medium SAND over greenish-gray fine SAND, some silt, clay in thin lenses.	
		8-8-8-13		0.0	0.000		Wet, greenish-gray SILT, little fine sand in lenses, little silty clay in lenses.	
45		7-8-10-11		0.0	0.000		Wet, greenish-gray SILT & CLAY, trace shells, trace sand.	



Northing (ft): 431544.55
 Easting (ft): 861428.17
 Elevation (ft): 10.26
 Total Depth: 51.1 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: PARSONS
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			9-15-20-24				Wet, green-gray fine SAND, little silt, little-trace shells, trace clay.	
			6-19-18-22				Upper 1/2 as above, lower 1/2 wet, greenish-gray fine-medium SAND, trace shells, trace silt.	
			8-15-16-17				As above.	
50			12-12-50/1				Wet, greenish-gray, fine-medium SAND, trace coarse sand-fine gravel. Refusal at 51.1 ft.	
52.0								



Northing (ft): 431246.02
 Easting (ft): 861499.43
 Elevation (ft): 8.73
 Total Depth: 51.0 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 39 feet. pH= 8, VOCs= 0.0, Hg= 0.0	
35				0.0	0.000			
40		10-11-13-15		0.0	0.000		Gray fine to coarse SAND, trace silt.	
		5-6-13-15		0.0	0.000		Gray fine to medium SAND, trace silt, trace shells. No shells in bottom half of sample.	
45		7-10-13-16		0.0	0.000		Gray fine to medium SAND, trace silt, trace shells. Gray SILT, little fine to medium sand, trace shells, bottom 6 inches.	



Northing (ft): 431246.02
 Easting (ft): 861499.43
 Elevation (ft): 8.73
 Total Depth: 51.0 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45	[RECOVERED]						Gray fine to medium SAND, trace silt, trace shells.	[WELL CONSTRUCTION DIAGRAM]
		10-17-32-50/6	0.0	0.000			Gray fine to coarse SAND, trace silt, trace shells.	
		17-22-21-20	0.0	0.000			As above. Bottom inch was variably cemented sandstone.	
50		7-13-22-50/0		0.0	0.000			
51.0								



Northing (ft): 431155.43
 Easting (ft): 861538.58
 Elevation (ft): 8.79
 Total Depth: 49.5 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 39 feet. pH= 8, VOCs= 0.0, Hg= 0.0	
35				0.0	0.000			
40		7-6-9-11		0.0	0.000		Gray fine to medium SAND, trace silt in lenses over gray clayey silt, trace sand.	
		3-6-6-13		0.0	0.000		Gray fine-medium SAND, trace silt over gray SILT, trace sand over Gray SILT and CLAY, stiff in 4-inch alternating layers.	
45		10-6-10-16		0.0	0.000		Gray fine to medium SAND, trace silt, trace shells over fine to medium SAND and SILT, trace shells.	



Northing (ft): 431247.77
 Easting (ft): 861602.24
 Elevation (ft): 8.99
 Total Depth: 48.5 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 40 feet. pH= 8, VOCs= 0.0, Hg= 0.0.	
35				0.0	0.000			
40		3-5-7-4		0.0	0.000		Gray fine to coarse SAND, trace silt. 3-inch gray clayey SILT with trace sand, near bottom of sample.	
		x-11-21-31		0.0	0.000		Gray fine-medium SAND, trace silt over gray SILT, some fine to medium SAND interbedded in the silt.	
45		15-14-15-19		0.0	0.000		Gray fine to medium SAND (44-44.5 feet) over gray clayey SILT and SILT, some fine to medium sand, little shells.	



Northing (ft): 431247.77
 Easting (ft): 861602.24
 Elevation (ft): 8.99
 Total Depth: 48.5 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			15-14-15-19	0.0	0.000		Gray fine to medium SAND (44-44.5 feet) over gray clayey SILT and SILT, some fine to medium sand, little shells.	
			16-24-40-48	0.0	0.000		Gray SILT, some fine to medium sand, little shells over gray fine to medium SAND, trace silt, trace shells.	
48.5			50/6	0.0	0.000		Fine to medium SAND, little silt. 4 inches of cemented sandstone at bottom of sample.	



Northing (ft): 431136.37

Easting (ft): 861661.50

Elevation (ft): 9.39

Total Depth: 48.0 Ft

Driller: Groundwater Protection Inc

Method: Mud Rotary

Consultant: Mutch Associates

Project No: 448517

Datum: NAVD88

Coordinate System:

NAD 1983 State Plane
Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 40 feet. Brown drill mud. pH= 8, VOCs= 0.0, Hg= 0.0.	
35				0.0	0.000			
40			6-5-7-9	0.0	0.000		Gray SILT and CLAY, trace sand over gray SILT, trace fine sand in lenses (40-41 feet). Gray SILT, trace fine sand in lenses (41-42).	
			9-12-15-15	0.0	0.000		Alternating Gray SILT and CLAY, stiff, and medium SAND, trace silt. 4-inch layers.	
45			10-12-10-16	0.0	0.000		Gray fine to medium SAND, little silt, trace shells in bottom of sample.	



Northing (ft): 431136.37
 Easting (ft): 861661.50
 Elevation (ft): 9.39
 Total Depth: 48.0 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			10-12-10-16	0.0	0.000		Gray fine to medium SAND, little silt, trace shells in bottom of sample.	
			8-20-33-50/6	0.0	0.000		Gray fine to medium SAND, trace shells. Refusal at 48 feet.	
48.0								

Location moved 10 feet south due to large tree.



Northing (ft): 431245.75
 Easting (ft): 861717.84
 Elevation (ft): 10.05
 Total Depth: 51.25 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 40 feet. Drill mud brown. pH= 8, VOCs= 0.0, Hg= 0.0.	
35				0.0	0.000			
40		6-5-13-10		0.0	0.000		Gray fine to medium SAND, trace silt.	
		8-12-14-14		0.0	0.000		Gray SILT, little fine to medium SAND, 43-43.5 feet Gray fine to medium SAND, little silt, gray SILT, little fine to medium SAND.	
45		6-13-22-20		0.0	0.000		Fine to medium SAND, interbedded gray silt in 1/2 to 2-inch lenses.	



Northing (ft): 431148.46
 Easting (ft): 861773.81
 Elevation (ft): 9.95
 Total Depth: 50.1 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			12-12-12-10	0.0	0.000			
			12-8-9-12	0.0	0.000			
50.1			9-31-50/1	0.0	0.000			



Northing (ft): 431347.60

Easting (ft): 861773.84

Elevation (ft): 10.08

Total Depth: 51.0 Ft

Driller: Groundwater Protection Inc

Method: Mud Rotary

Consultant: PARSONS

Project No: 448517

Datum: NAVD88

Coordinate System:

NAD 1983 State Plane
Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
0							Hand dug to 5 feet. 5-20 feet pH = 7, VOCs = 0.0, Hg = 0.00. 20-39 feet pH = 8, VOCs = 0.0, Hg = 0.00.	
5								
10				0.0	0.000			
15								



Northing (ft): 431347.60

Easting (ft): 861773.84

Elevation (ft): 10.08

Total Depth: 51.0 Ft

Driller: Groundwater Protection Inc

Method: Mud Rotary

Consultant: PARSONS

Project No: 448517

Datum: NAVD88

Coordinate System:

NAD 1983 State Plane
Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30								
35				0.0	0.000			
40		5-8-13-17		0.0	0.000		Wet, gray, fine to medium SAND, trace coarse sand.	
		15-12-15-15		0.0	0.000		Wet SAND as above grading to fine SAND at bottom of sample.	
45		6-8-10-12		0.0	0.000		Wet, fine SAND, little to some silt. Bottom 8 inches were greenish gray SILT, little fine sand, trace clay.	



Northing (ft): 431248.04
 Easting (ft): 861831.33
 Elevation (ft): 10.41
 Total Depth: 52.5 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			4-8-16-17	0.0	0.000		Gray SILT, some interbedded fine to medium sand. Gray fine to medium SAND, some silt lenses.	
			12-17-9-9	0.0	0.000		Gray fine to medium SAND, trace silt (47-48.5 feet) over fine to medium SAND, little silt lenses, trace shells.	
50			5-6-7-6	0.0	0.000		Brown fine to medium SAND, trace silt, trace shells.	
52.5			12-21-50/4	0.0	0.000		Fine to medium SAND, trace silt (51-51.5 feet) over gray CLAY and SILT (51.5-52.3 feet). Variably cemented SANDSTONE in tip of sampler.	



Northing (ft): 431149.20
 Easting (ft): 861888.30
 Elevation (ft): 10.70
 Total Depth: 51.0 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 40 feet. Brown drill mud. pH= 8, VOCs= 0.0, Hg= 0.0.	
35				0.0	0.000			
40		7-11-17-16		0.0	0.000		Gray fine to medium SAND, trace silt.	
		10-10-10-13		0.0	0.000		Gray, fine to medium SAND, little silt (42-42.5 feet). Gray SILT, little fine to medium SAND (42.5-43.5 feet), fine to medium SAND, little silt.	
45		4-3-4-3		0.0	0.000		Gray SILT, trace sand.	



Northing (ft): 431346.27
 Easting (ft): 861887.52
 Elevation (ft): 10.88
 Total Depth: 51.5 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
45			6-10-9-13	0.0	0.000		Gray fine to medium SAND, little clayey silt in interbedded layers, 1/2 to 2 inches thick.	
			4-10-13-16	0.0	0.000		Gray fine to medium SAND, trace silt in lenses.	
50			16-8-9-8	0.0	0.000		Gray fine to medium SAND, trace silt in lenses, trace shells. Bottom 2 inches were SILT, trace sand, trace shells.	
52.0			9-50/6	0.0	0.000		Gray fine to medium SAND, trace silt lenses (51-51.5). Gray SILT, trace sand, trace shells. Variably cemented SANDSTONE in tip of sampler.	



Northing (ft): 431247.65
 Easting (ft): 861946.87
 Elevation (ft): 10.62
 Total Depth: 53.15 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 41 feet. Drill mud brown. pH= 7, VOCs= 0.0, Hg= 0.0	
35				0.0	0.000			
40				0.0	0.000		Gray fine to medium SAND, trace silt.	
45				0.0	0.000		As above.	



Northing (ft): 431444.33
 Easting (ft): 861945.81
 Elevation (ft): 11.27
 Total Depth: 50.7 Ft

Driller: Groundwater Protection Inc
 Method: Mud Rotary
 Consultant: Mutch Associates
 Project No: 448517

Datum: NAVD88
 Coordinate System:
 NAD 1983 State Plane
 Georgia East / FIPS 1001

Depth Ft	Recov	Sample ID	Blow Count	PID Reading	Mercury	USCS Code	Soil Description	Well Construction Diagram
30							Mud rotary to 42 feet. Drill mud brown. pH= 7, VOCs= 0.0, Hg= 0.0.	
35				0.0	0.000			
40							Gray fine to medium SAND, trace silt.	
45							Gray fine to medium SAND, trace silt over gray fine to medium SAND and SILT.	

Appendix B:

Well Development Logs

Phase 2 Sparge Well Drilling Summary Sheet, LCP Chemicals Site , Brunswick, GA

Well Development Data				Total Number of Wells Developed		80	
Well #	Total Purge Volume (gal)	Sustained Flow Rate (gpm)	Flow-rate after Surge Block	Final pH	Final Conductivity (mS/cm)	Final Turbidity (ntu)	Date Developed
SW-66	70	0.5		11.68	55.25	not measured	9/23/2014
SW-67	60	<0.5	<0.5	10.79	54.43	-0.29	9/22/2014
SW-68	75	0.6		11.48	54.35	-0.28	9/22/2014
SW-69	70	1		9.98	22.81	0.05	9/16/2014
SW-70	48	<0.5	<0.5	9.4	20.48	-55	9/16, 9/19
SW-71	85	0.5	0.75	9.95	35.02	-57	9/22/2014
SW-72	95	0.5	0.75	10.88	28.01	-57	9/23/2014
SW-73	75	0.6		11.28	50.24	-0.34	9/23/2014
SW-74	72	1		11.6	38	-0.33	9/21/2014
SW-75	79	0.8		11.34	33.25	-0.22	9/21/2014
SW-76	75	1		9.76	14.35	0.25	9/16/2014
SW-77	60.8	< 0.5	< 0.5	11.77	>20	775 AU	8/28/2014
SW-78	75	0.6		10.14	82.49	-57	9/23/2014
SW-79	65	0.6	0.7	9.18	63.77	0.12	9/23/2014
SW-80	72	0.75	0.75	11.4	55.73	-0.36	9/23/2014
SW-81	47.75	< 0.5	< 0.5	10.92	27.11	-0.04	9/10/2014
SW-82	42	< 0.5	< 0.5	11.15	25.23	2.35	9/10/2014
SW-83	54.8	<0.3	0.3	7.34	9.548	1.37	9/9/2014
SW-84	69.5	1.3		7.33	15.75	7.91	8/28/2014
SW-85	70	0.5	0.5	11.42	45.63	-35	8/27, 9/19
SW-86	30.15	< 0.5	<0.5	12.08	6.072	2	8/29, 9/20
SW-87	55	0.5	0.5	9.5	73.61	-36	9/24/2014
SW-88	55	<0.5	<0.5	11.18	81.77	16.3	9/24/2014
SW-89	60.5	0.65	0.65	9.03	71.11	0.08	9/24/2014

Phase 2 Sparge Well Drilling Summary Sheet, LCP Chemicals Site , Brunswick, GA

Well Development Data				Total Number of Wells Developed			80
Well #	Total Purge Volume (gal)	Sustained Flow Rate (gpm)	Flow-rate after Surge Block	Final pH	Final Conductivity (mS/cm)	Final Turbidity (ntu)	Date Developed
SW-90	74	0.6	0.6	10.06	46.7	-0.25	9/24/2014
SW-91	69	0.5		9.18	27.22	-32	9/11/2014
SW-92	73	< 0.5	< 0.5	9.54	25.2	3.63	9/11/2014
SW-93	74	0.75		10.56	> 20	-0.25	8/28/2014
SW-94	88	1.25		11.55	49.24	-0.35	9/12/2014
SW-95	70	<0.5	0.5	10.22	38.6	-0.36	9/9/2014
SW-96	70	< 0.5	0.75	9.42	19.73	-0.23	9/9/2014
SW-97	56	0.5	0.75	9.31	96.92	-36	9/24/2014
SW-98	70	0.5		9.61	66.31		9/25/2014
SW-99	55	<0.5	<0.5	9.58	65.72	6.22	9/23/2014
SW-100	69.75	0.75		7.52	49.11	-0.12	9/16/2014
SW-101	115	0.5		8.95	26.46	1.5	9/11/2014
SW-102	60	0.75		9.27	27.76	0.26	9/10/2014
SW-103	74.25	1		10.76	31.92	-0.03	9/6/2014
SW-104	72	not recorded		10.97	26.18	-35	9/7/2014
SW-105	70.5	0.75	<0.5	10.21	20.7	-0.22	9/6, 9/30
SW-106	77	1.25		11.42	48.1	-0.29	9/22/2014
SW-107	55	<0.5	<0.5	10.81	44.37	-0.09	9/22/2014
SW-108	51	<0.5		11.32	52.92	-33	9/16/2014
SW-109	50	<0.5	<0.5	10.98	50.63	-57	9/16, 9/20
SW-110	57	<0.5	<0.5	8.52	65.55	-30	9/17/2014
SW-111	50	<0.5	<0.5	11.92	63.77	-30	9/18/2014
SW-112	57	< 0.5	0.5	11.18	28.11	0.97	9/11/2014
SW-113	71.3	< 0.5		11.78	41.48	0.27	9/8/2014

Phase 2 Sparge Well Drilling Summary Sheet, LCP Chemicals Site , Brunswick, GA

Well Development Data							Total Number of Wells Developed	80
Well #	Total Purge Volume (gal)	Sustained Flow Rate (gpm)	Flow-rate after Surge Block	Final pH	Final Conductivity (mS/cm)	Final Turbidity (ntu)	Date Developed	
SW-114	63	0.5		11.76	51.95	-41	9/4/2014	
SW-115	69	<0.5	0.75	10.6	26.5	-57	9/15, 9/21	
SW-116	78	<0.5	1.4	11.87	47.16	-0.03	9/17/2014	
SW-117	80	0.5	0.75	11.58	11.58	-0.09	9/18/2014	
SW-118	65	1.25		11.31	45.62	0.25	9/17/2014	
SW-119	67.5	0.4		10.85	29.66	8.15	9/5/2014	
SW-120	75	0.75		11.59	56.88	-57	9/4, 9/30	
SW-121	44.75	<0.5	<0.5	11.94	55.91	-36	9/18/2014	
SW-122	71	0.75		11.43	48.62	-0.12	9/17, 9/19	
SW-123	51	<0.5	<0.5	11.42	18.36	1.1	9/17, 9/19, 9/30	
SW-124	95	1.5		9.82	20.23	-57	9/25/2014	
SW-125	68	0.6		10.54	52.38	686 AU	9/25/2014	
SW-126	87	1.25		11.27	37.8	-57	9/25/2014	
SW-127	70	0.8		11.57	70.46	-0.43	9/26/2014	
SW-128	68.5	0.75		10.55	39.13	-57	9/25/2014	
SW-129	68	0.75		11.64	24.83	-0.42	9/24/2014	
SW-130	42.5	<0.5	<0.5	11.45	69.11	15	9/25/2014	
SW-131	74	1		10.87	56.83	-57	9/26/2014	
SW-132	64	0.75		11.53	50.4	-0.42	9/24/2014	
SW-133	74	0.9		11.65	77.18	-0.44	9/26/2014	
SW-134	50	<0.5	<0.5	11.7	73.1	23.7	9/25/2014	
SW-135	70	0.8		9.15	92.07	7.33	9/24/2014	
SW-136	73	1.5		9.7	51.03	12.9	9/25/2014	
SW-137	78	0.8		9.7	51.82	over range	9/26/2014	

Phase 2 Sparge Well Drilling Summary Sheet, LCP Chemicals Site , Brunswick, GA

Well Development Data				Total Number of Wells Developed			80
Well #	Total Purge Volume (gal)	Sustained Flow Rate (gpm)	Flow-rate after Surge Block	Final pH	Final Conductivity (mS/cm)	Final Turbidity (ntu)	Date Developed
SW-138	72	0.75		6.58	36.9	1.17	9/26/2014
SW-139	70	0.6		11.48	96.76	-0.26	9/25/2014
SW-140	72	0.75		8.62	25.4	-56	9/29/2014
SW-141	72	0.75		7.31	30.76	203	9/26/2014
SW-142	74	0.6	0.6	11.23	83.42	-0.23	9/25/2014
SW-143	74	0.65		10.94	77.07	1.13	9/30/2014
SW-144	72	0.6		10.37	48.68	1.36	9/26/2014
SW-145	50	<0.5	0.75	9.99	67.12	0.3	9/26/2014

Appendix C:

Piezometer Construction Diagrams

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 46

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

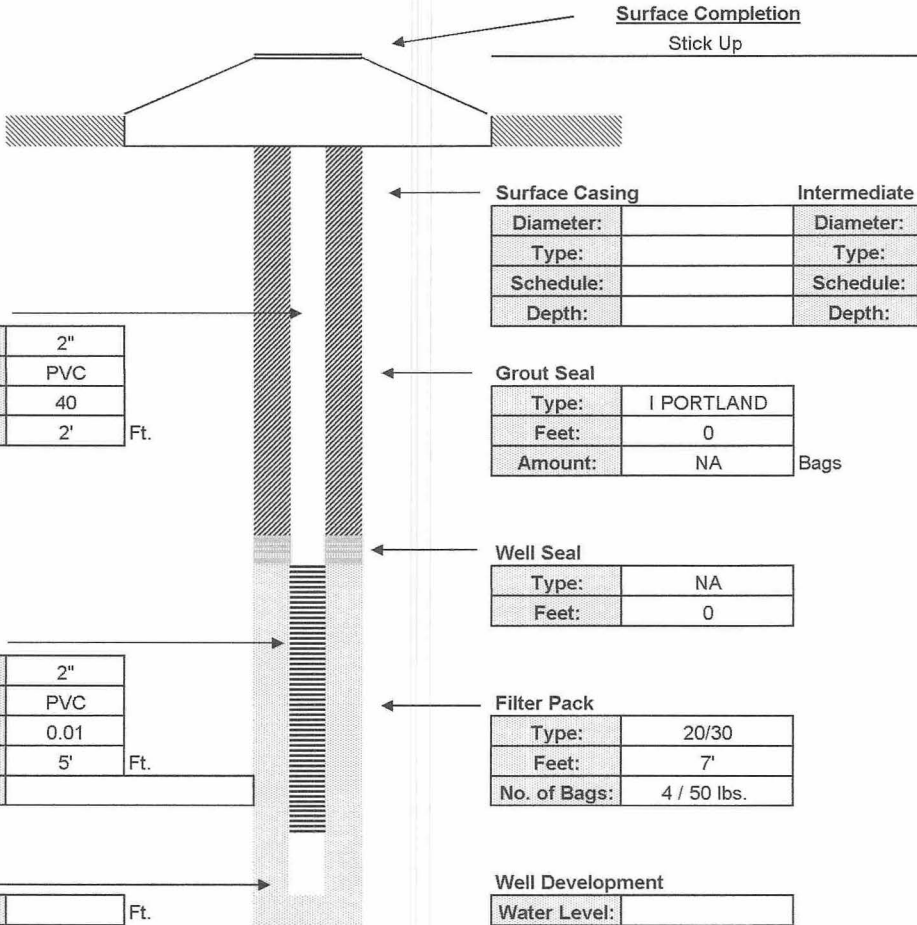
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Surface Casing		Intermediate Casing	
Diameter:		Diameter:	
Type:		Type:	
Schedule:		Schedule:	
Depth:		Depth:	

Grout Seal	
Type:	I PORTLAND
Feet:	0
Amount:	NA

Bags

Well Seal	
Type:	NA
Feet:	0

Filter Pack	
Type:	20/30
Feet:	7'
No. of Bags:	4 / 50 lbs.

Well Development			
Water Level:			
Method:			
Start:		Finish:	
Time:			
GPM:			

Well Casing	
Diameter:	2"
Type:	PVC
Schedule:	40
Length:	2' Ft.

Well Screen	
Diameter:	2"
Type:	PVC
Slot:	0.01
Length:	5' Ft.
Note:	

Sump	
Length:	Ft.
Type:	PVC

Contractor Information	
Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 66

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

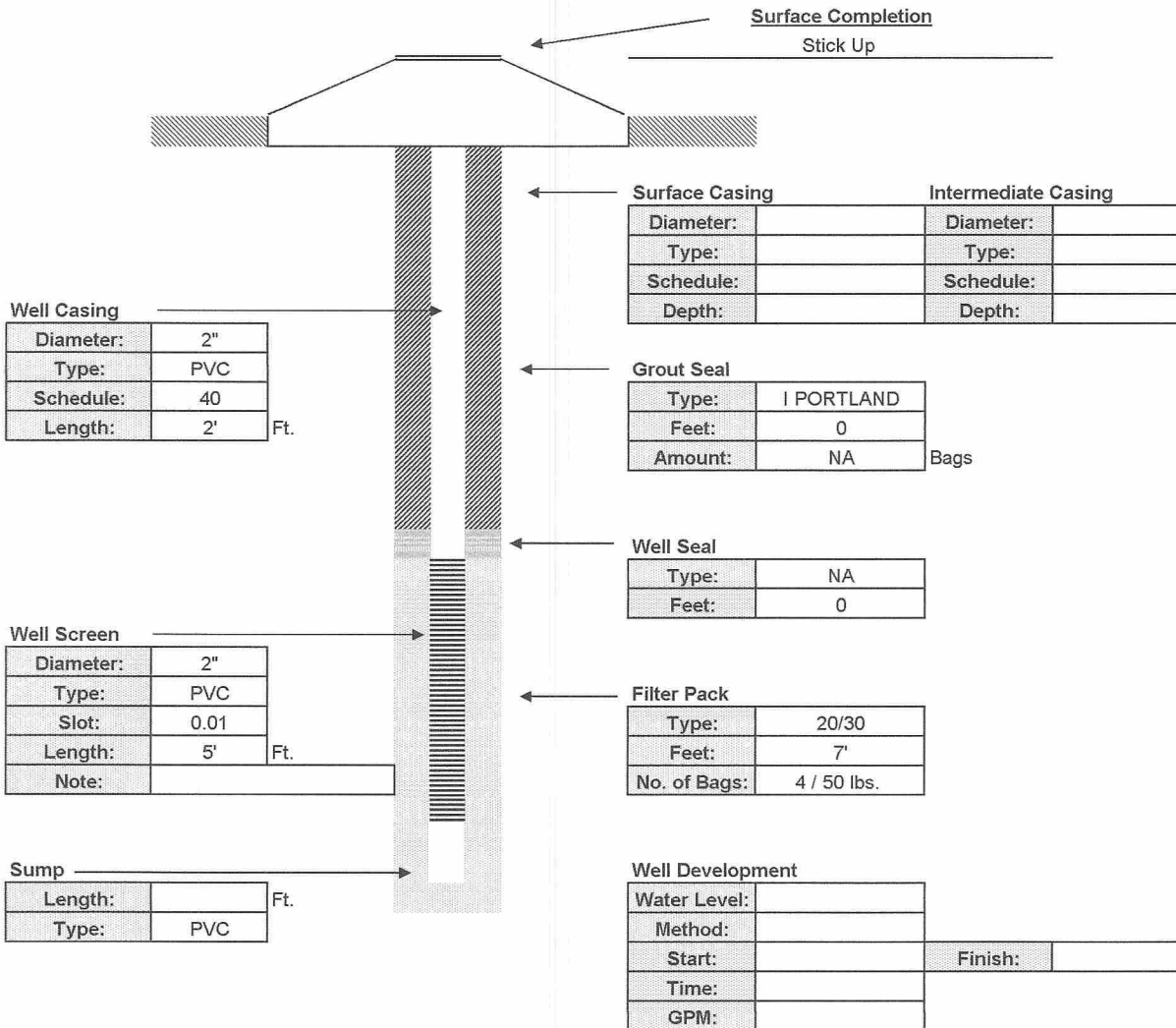
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 67

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

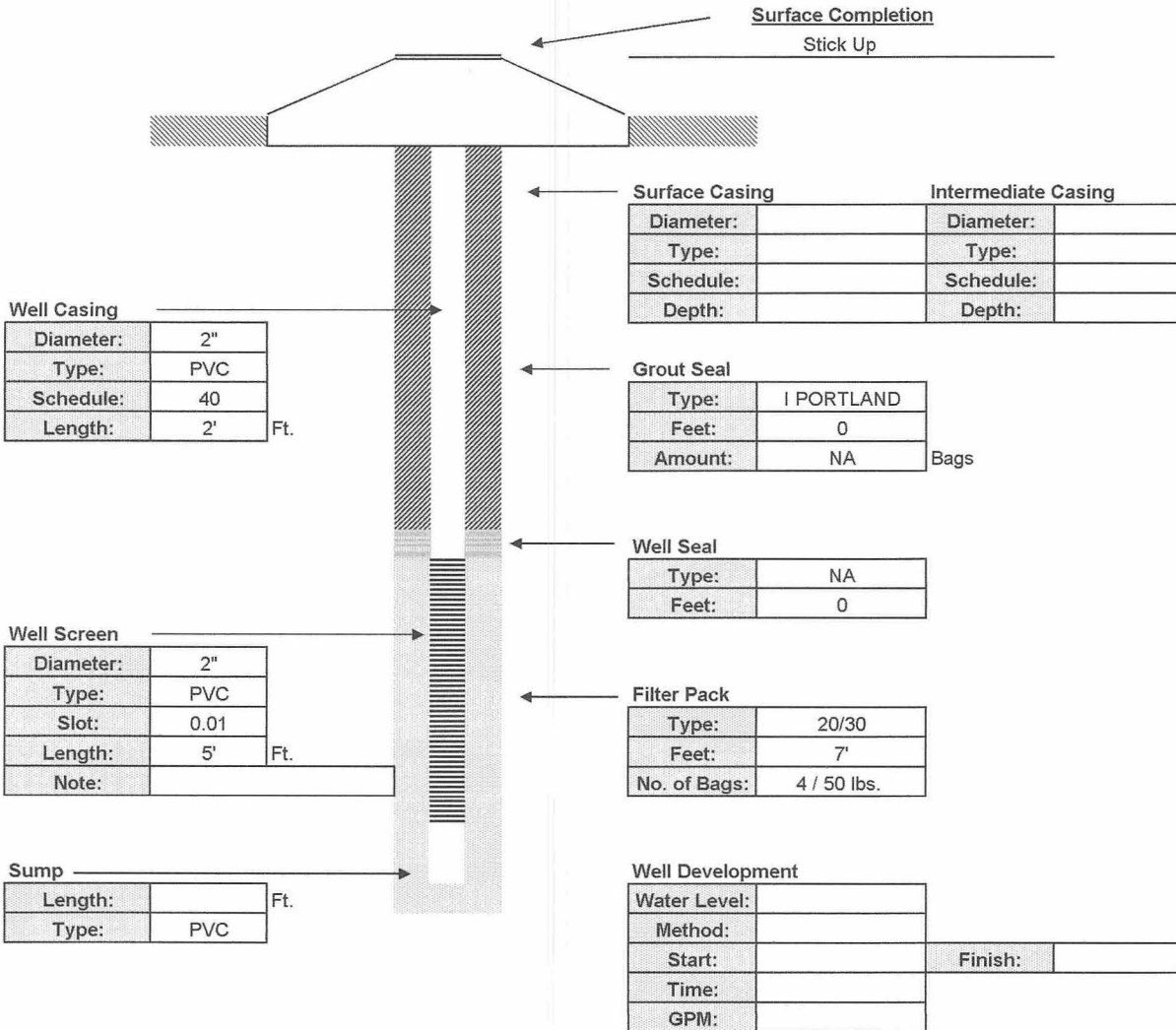
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule	Slot Size: →	0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 71

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

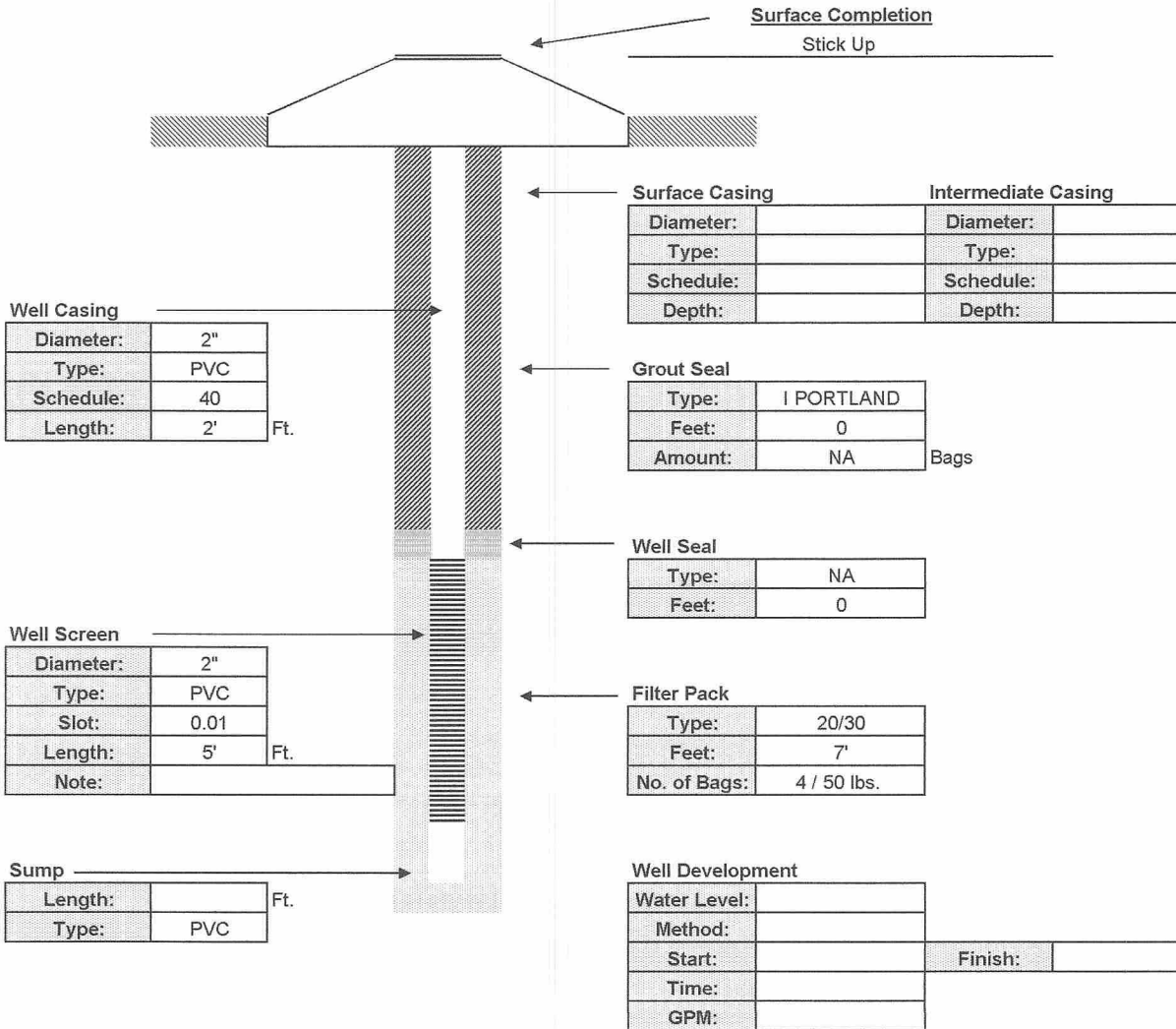
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:
Permit Number:

Work Order: 814048
Type of Well: Piezometer
Well Number: 79
Method Used: H S A
Borehole Diaz: 8"

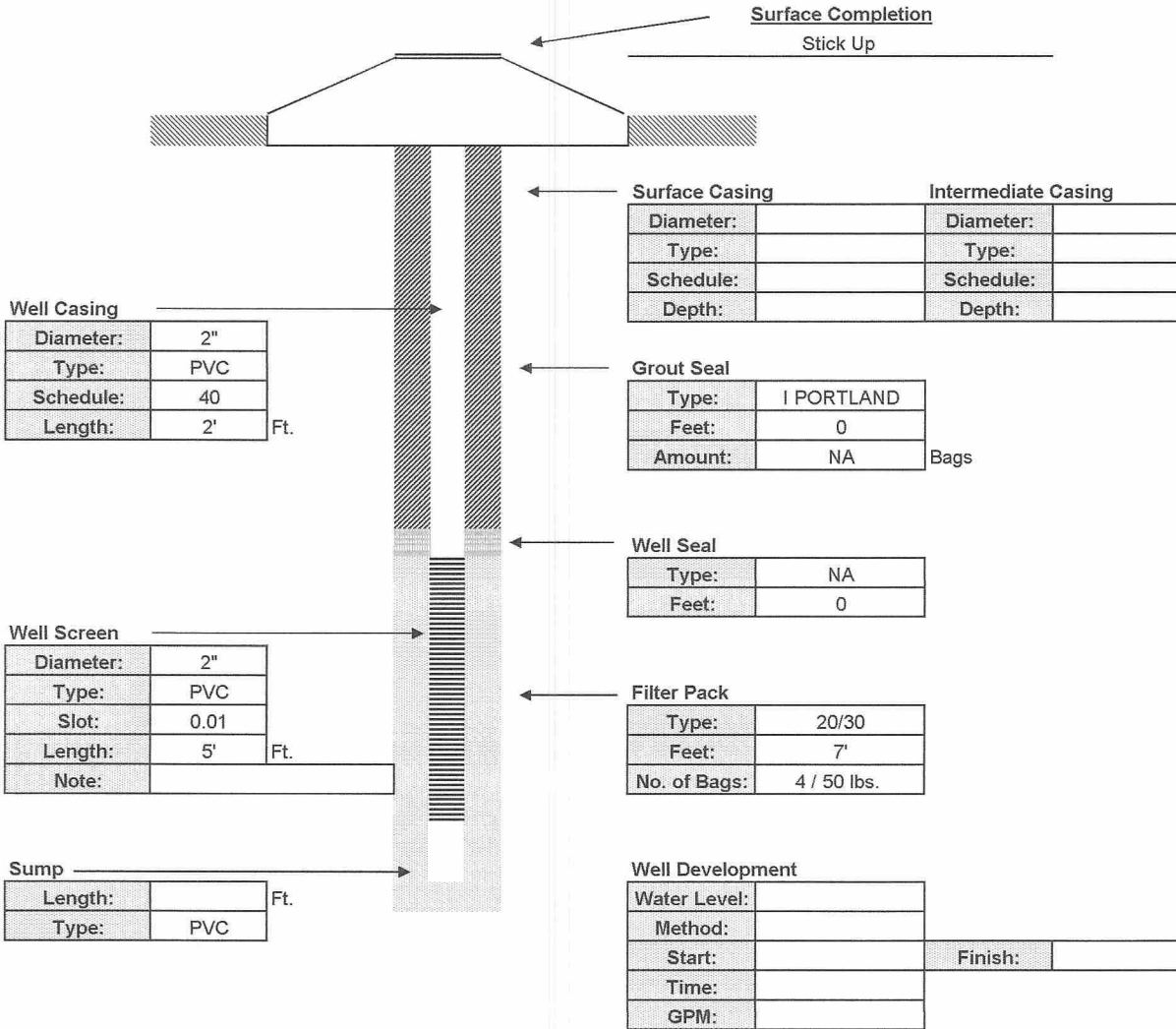
Site Information:

Name: Honeywell
Address:
C,S,Z: Brunswick, GA
S/T/R:

Client / Consultant Information

Consultant: Parsons
Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 89

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

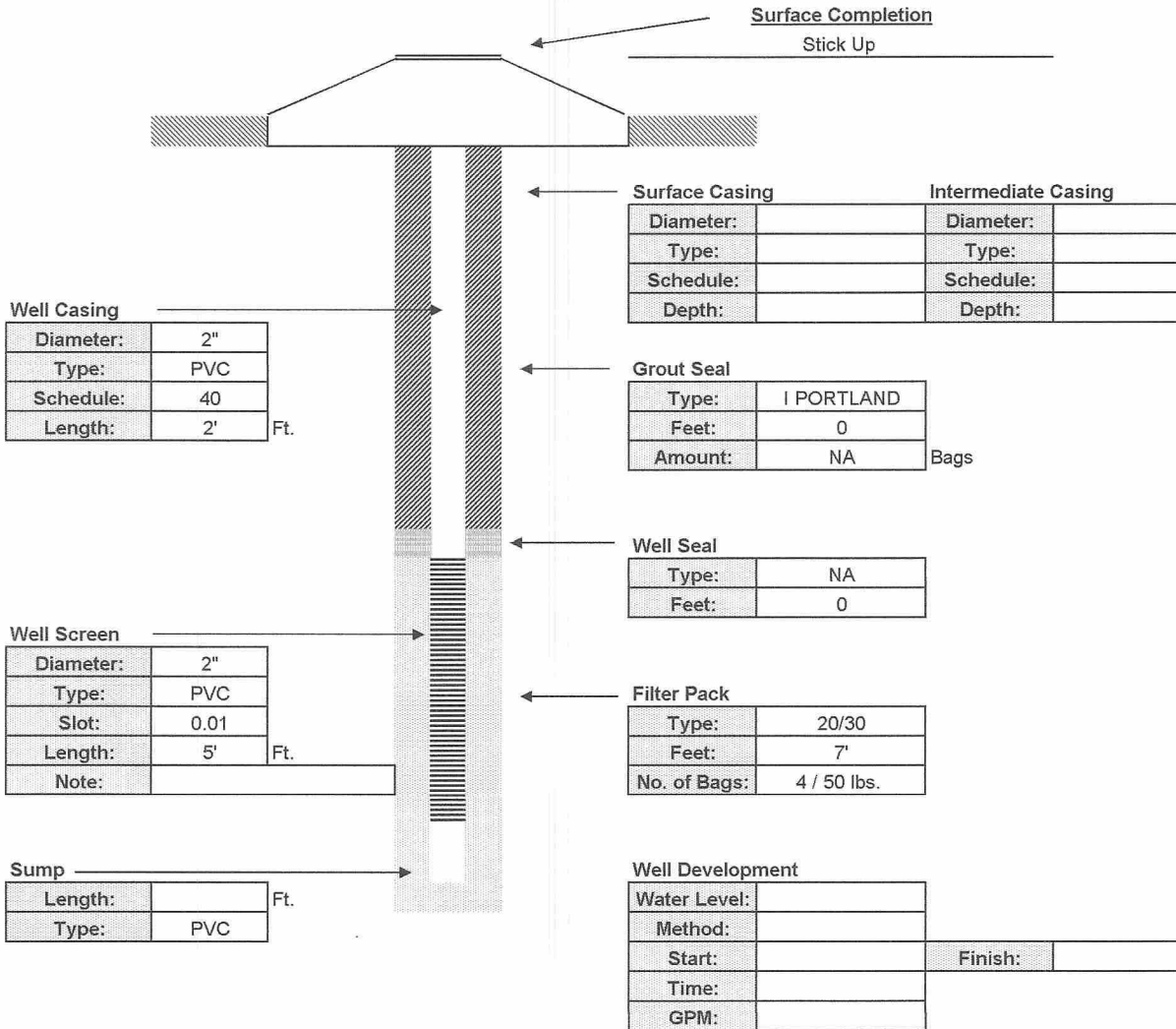
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 96

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

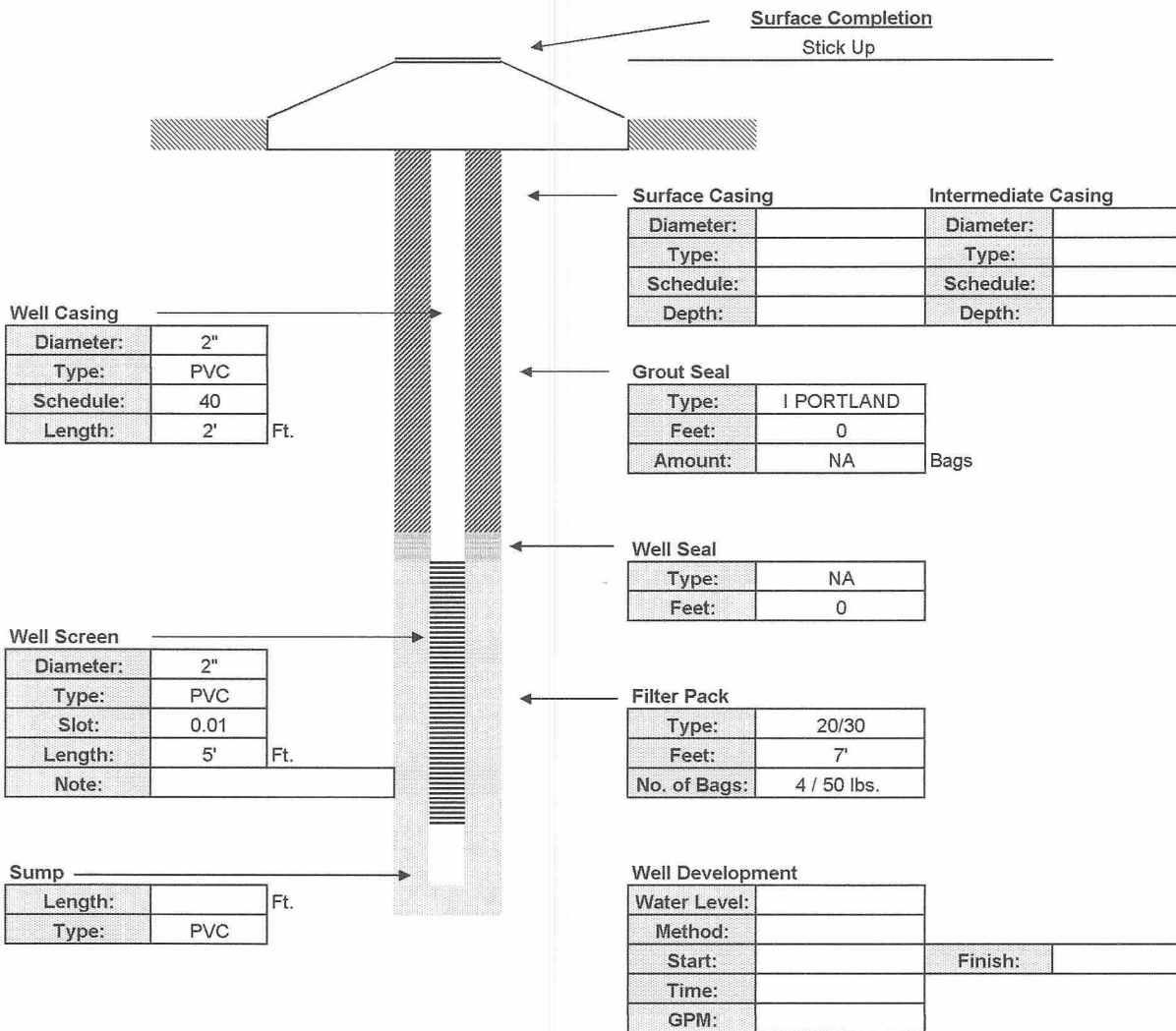
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 106

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

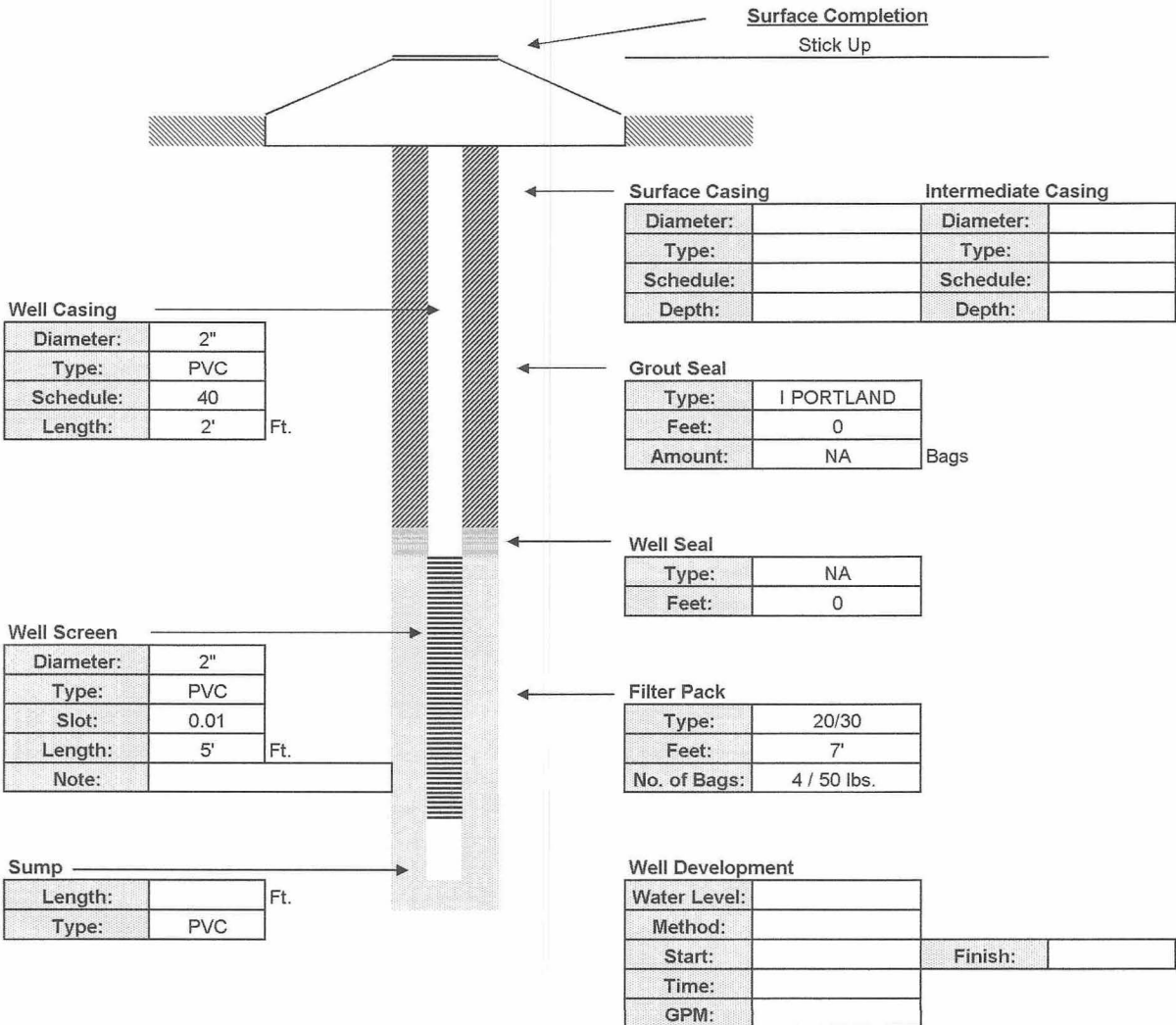
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule	Slot Size: →	0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Well Development	
Water Level:	
Method:	
Start:	Finish:
Time:	
GPM:	

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 112

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

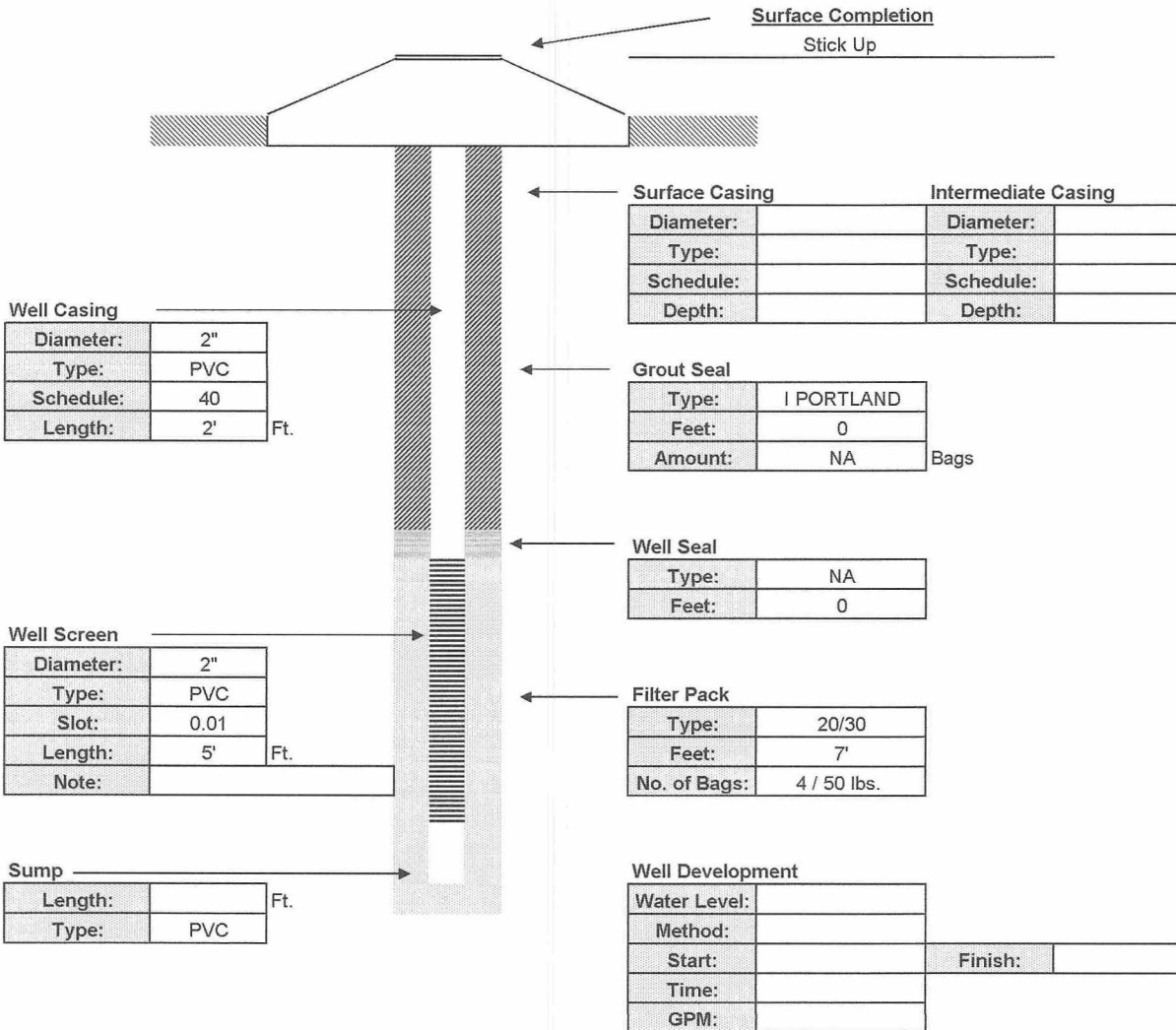
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Well Casing

Diameter:	2"
Type:	PVC
Schedule:	40
Length:	2' Ft.

Surface Casing		Intermediate Casing	
Diameter:		Diameter:	
Type:		Type:	
Schedule:		Schedule:	
Depth:		Depth:	

Grout Seal

Type:	I PORTLAND
Feet:	0
Amount:	NA Bags

Well Seal

Type:	NA
Feet:	0

Well Screen

Diameter:	2"
Type:	PVC
Slot:	0.01
Length:	5' Ft.
Note:	

Filter Pack

Type:	20/30
Feet:	7'
No. of Bags:	4 / 50 lbs.

Sump

Length:		Ft.
Type:	PVC	

Well Development

Water Level:	
Method:	
Start:	Finish:
Time:	
GPM:	

Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:
Permit Number:

Work Order: 814048
Type of Well: Piezometer
Well Number: 114
Method Used: H S A
Borehole Diaz. 8"

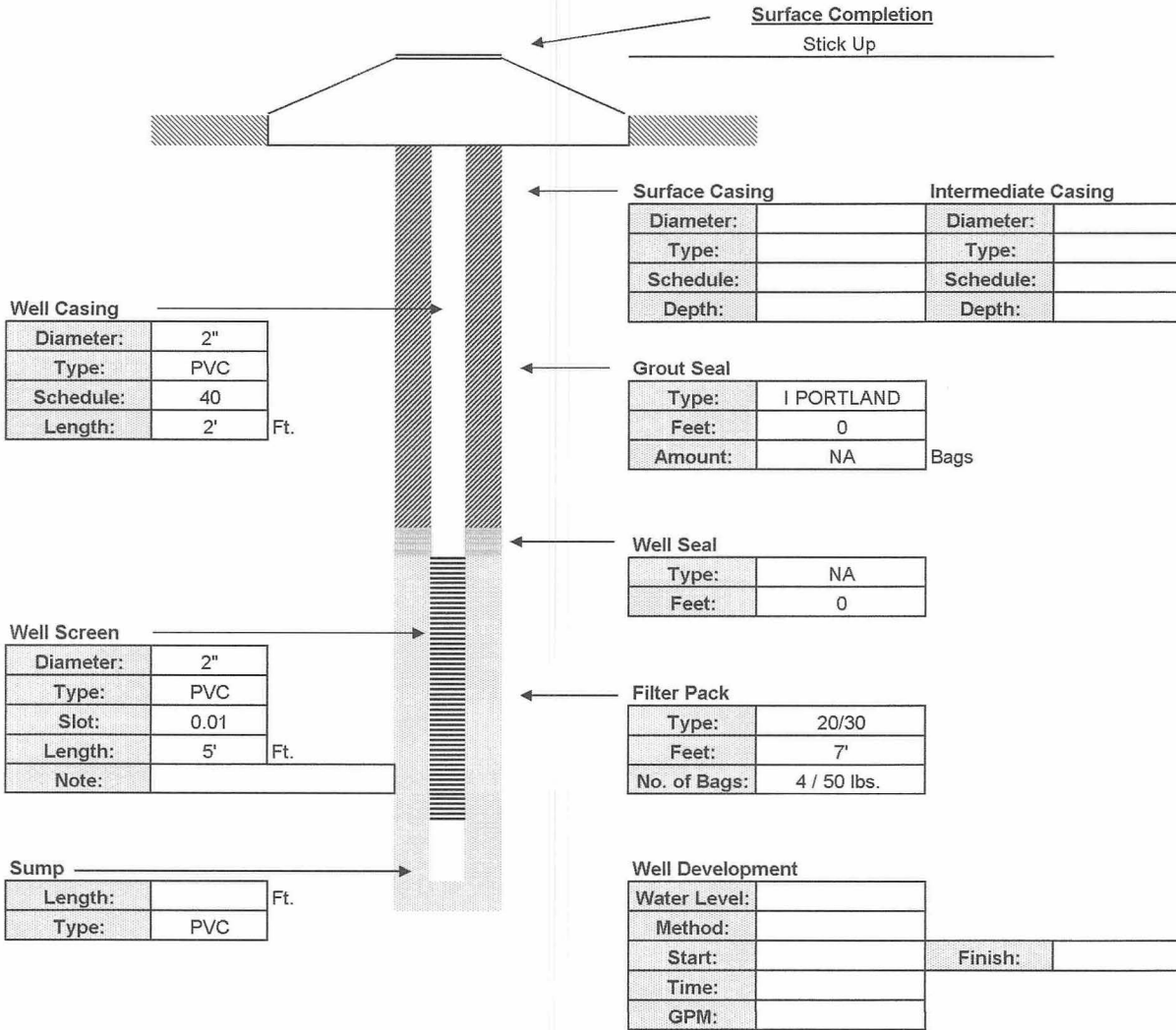
Site Information:

Name: Honeywell
Address:
C,S,Z: Brunswick, GA
S/T/R:

Client / Consultant Information

Consultant: Parsons
Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:
Permit Number:

Work Order: 814048
Type of Well: Piezometer
Well Number: 124
Method Used: H S A
Borehole Diaz. 8"

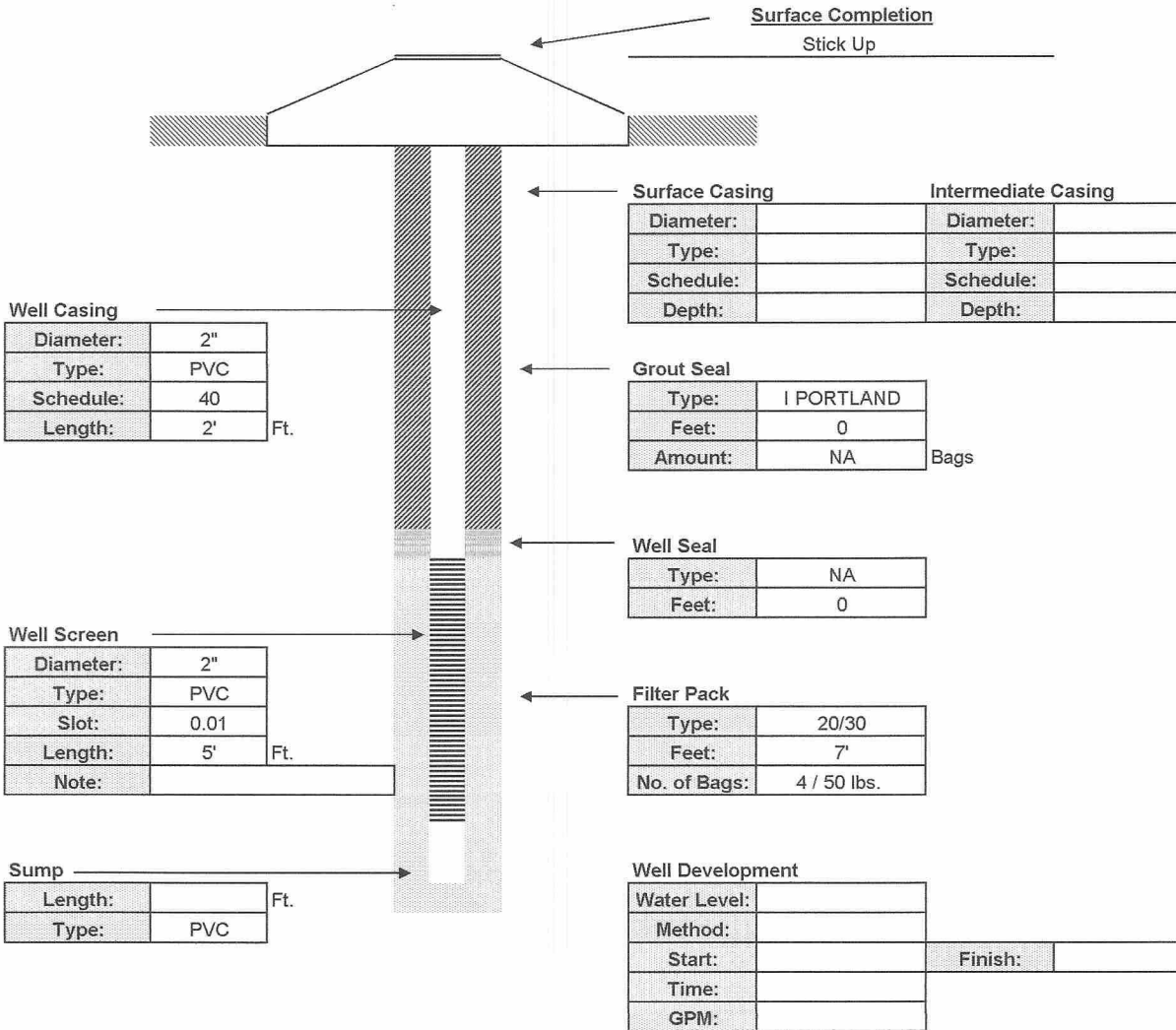
Site Information:

Name: Honeywell
Address:
C,S,Z: Brunswick, GA
S/T/R:

Client / Consultant Information

Consultant: Parsons
Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →	0.01				← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 125

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

S/T/R:

Client / Consultant Information

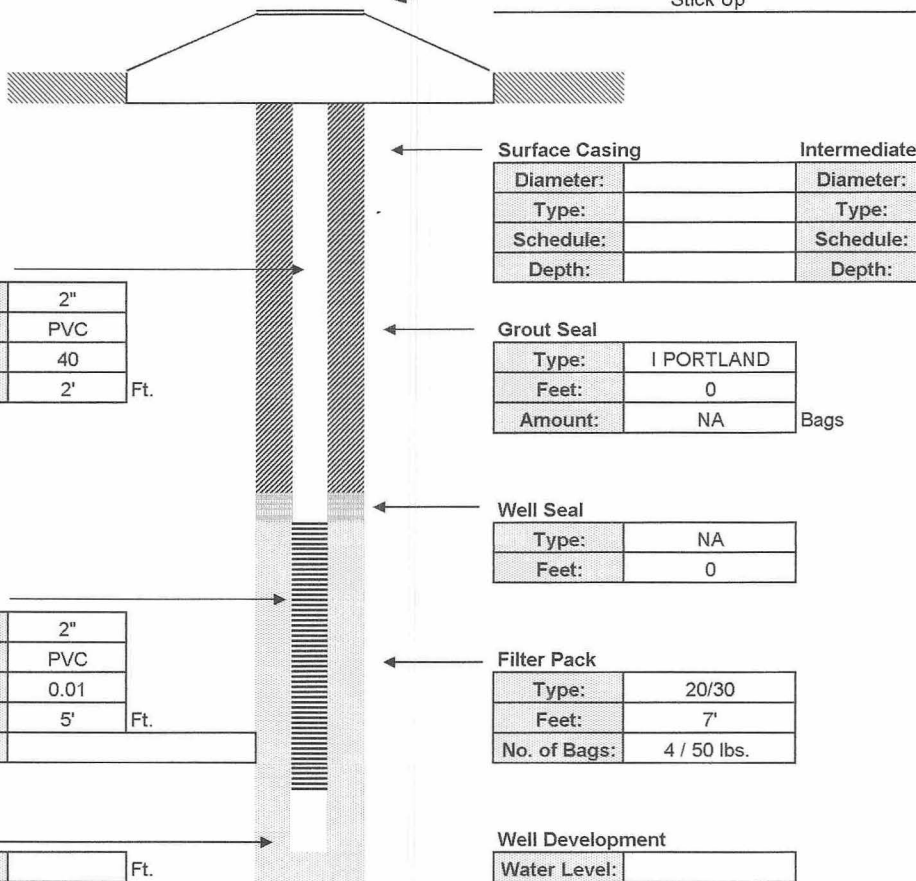
Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule	Slot Size: →	0.01			← Feet →	7'	

Surface Completion

Stick Up



Surface Casing		Intermediate Casing	
Diameter:		Diameter:	
Type:		Type:	
Schedule:		Schedule:	
Depth:		Depth:	

Grout Seal	
Type:	I PORTLAND
Feet:	0
Amount:	NA

Bags

Well Seal	
Type:	NA
Feet:	0

Filter Pack	
Type:	20/30
Feet:	7'
No. of Bags:	4 / 50 lbs.

Well Development			
Water Level:			
Method:			
Start:		Finish:	
Time:			
GPM:			

Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 126

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

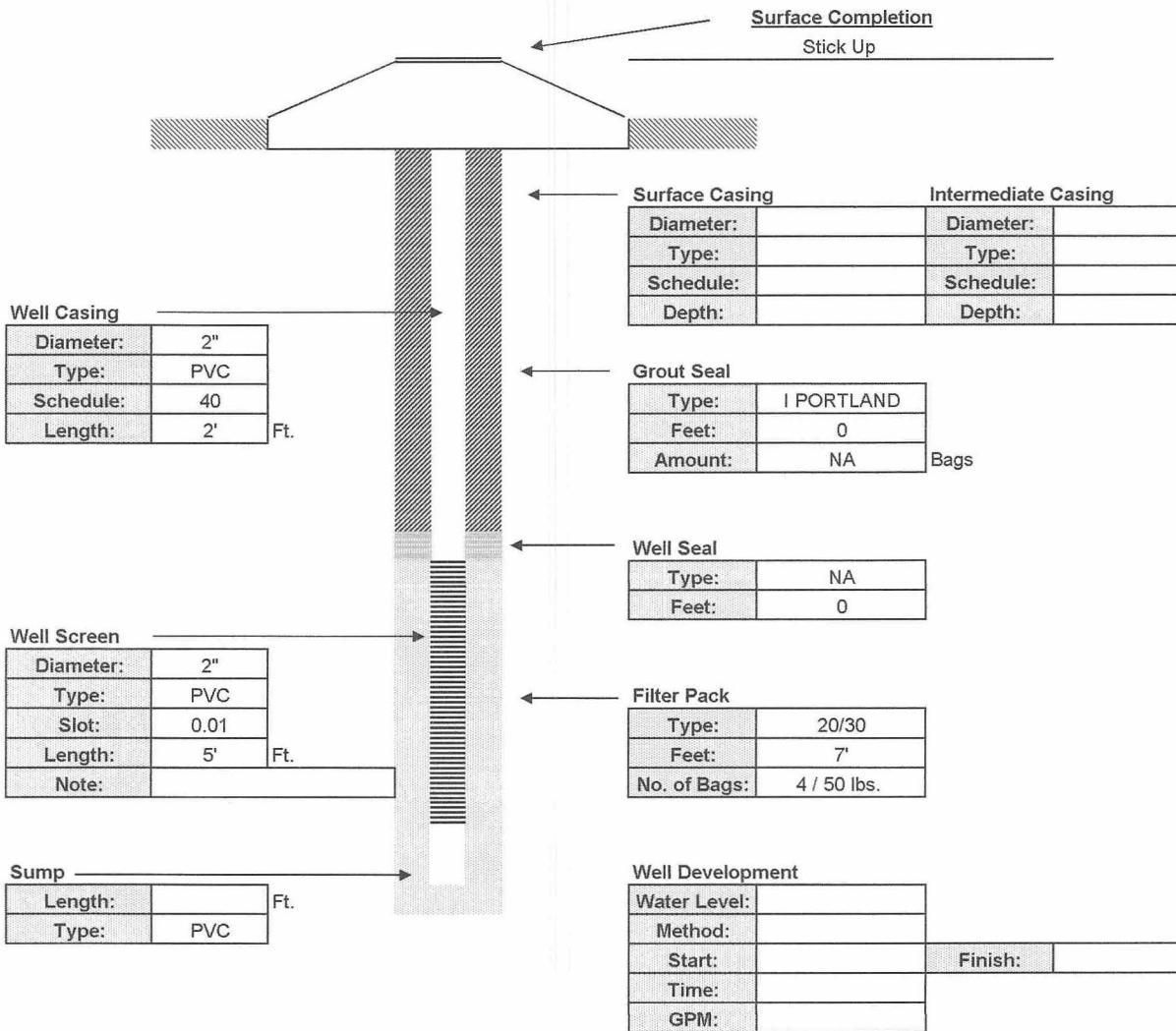
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 127

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

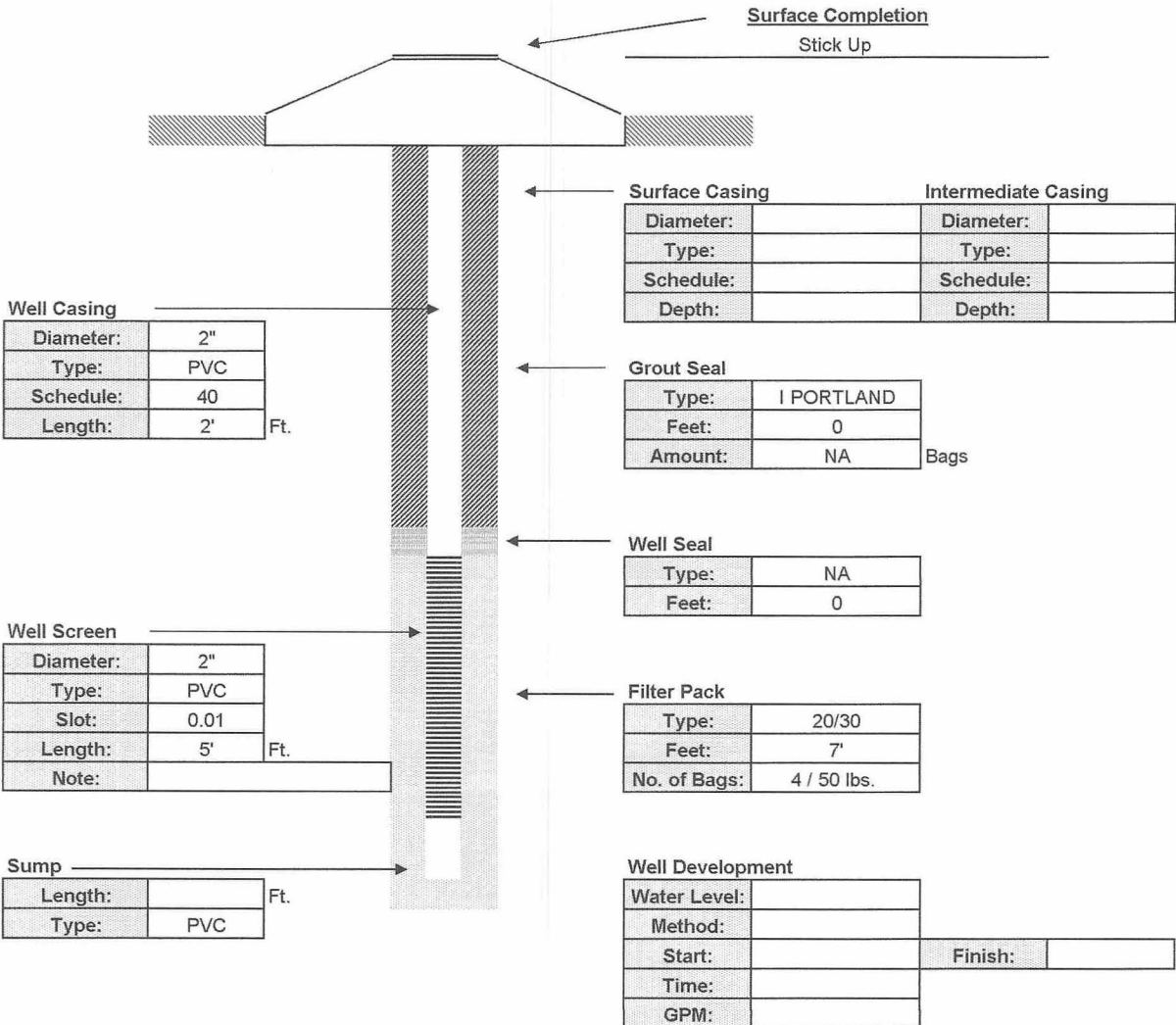
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule	Slot Size: →	0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 128

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

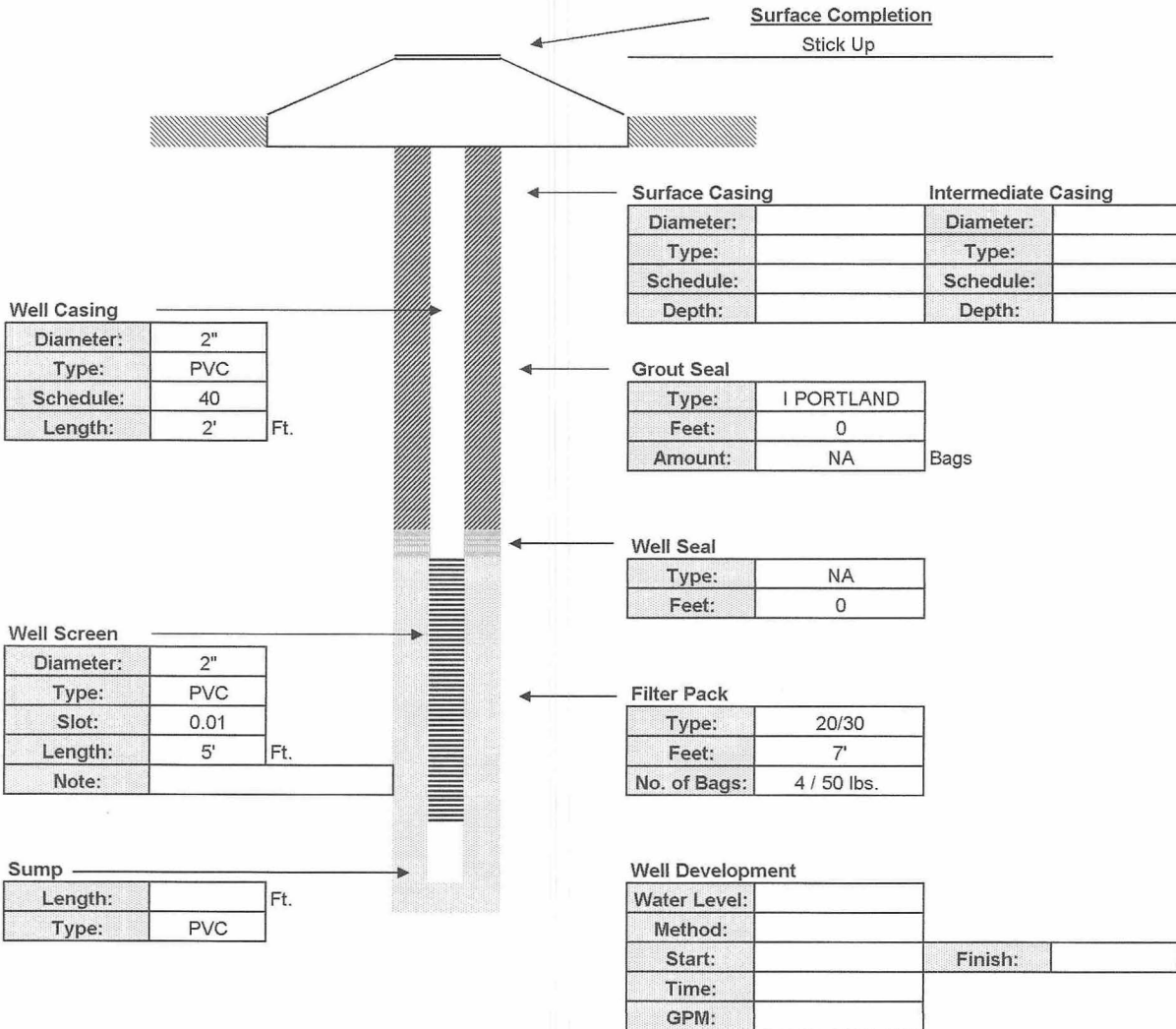
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:
Permit Number:

Work Order: 814048
Type of Well: Piezometer
Well Number: 135
Method Used: H S A
Borehole Diaz: 8"

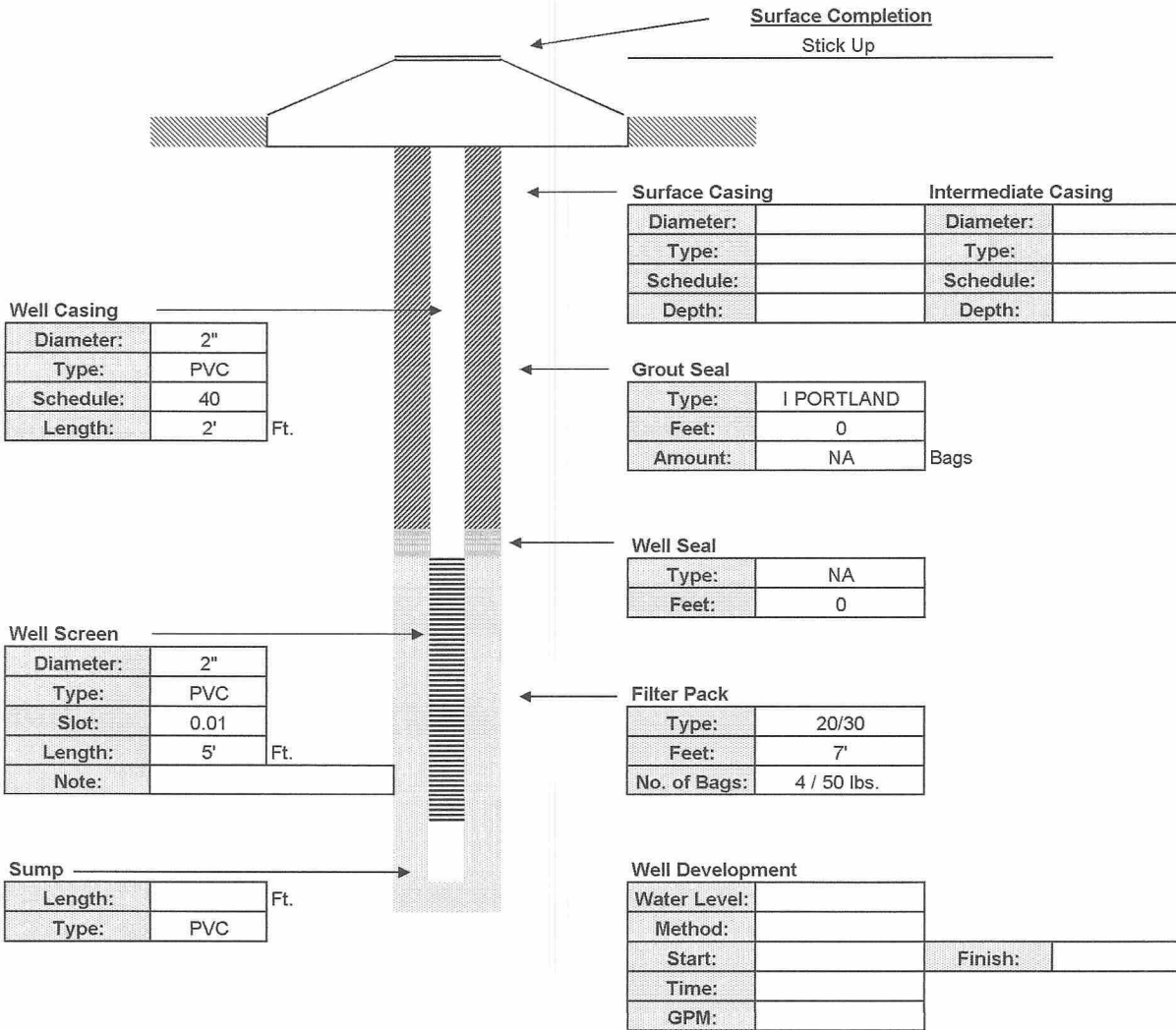
Site Information:

Name: Honeywell
Address:
C,S,Z: Brunswick, GA
S/T/R:

Client / Consultant Information

Consultant: Parsons
Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 138

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

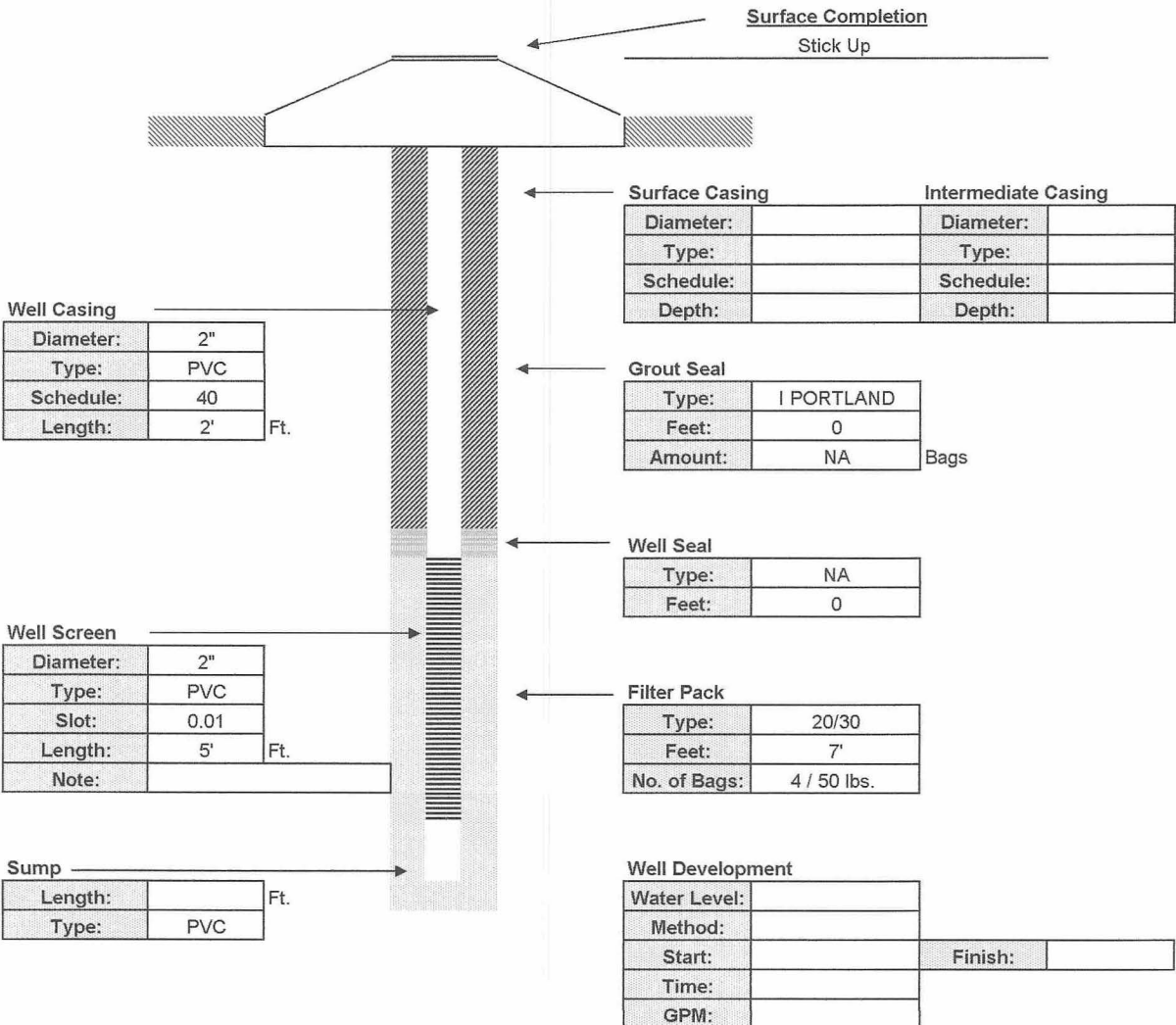
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection		
Address:	2300 Silver Star Road		
C,S,Z:	Orlando, Florida 32804-3310		
Phone/FAX:	(407) 426-7885 / (407) 426-7586		

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 139

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

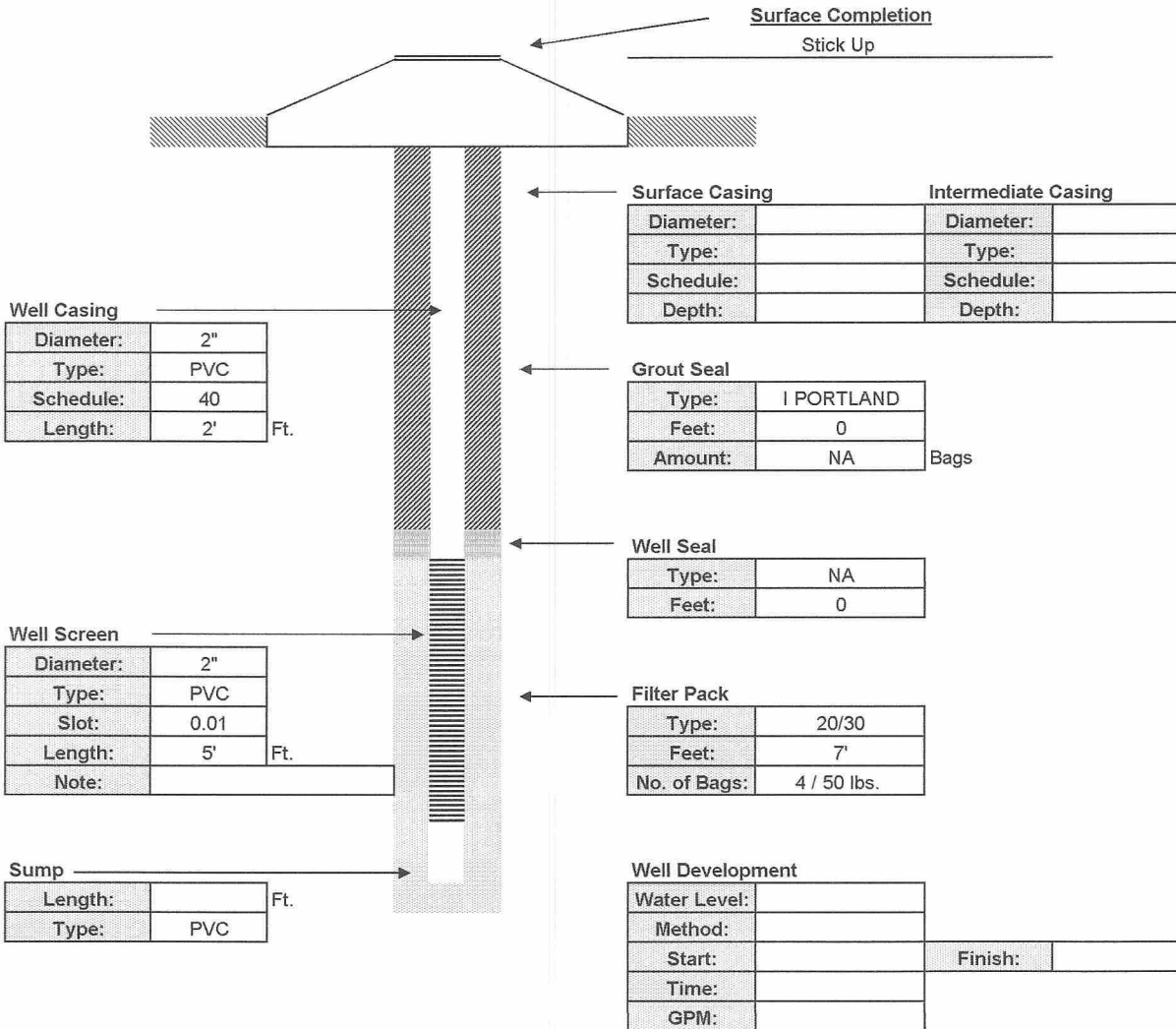
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 140

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

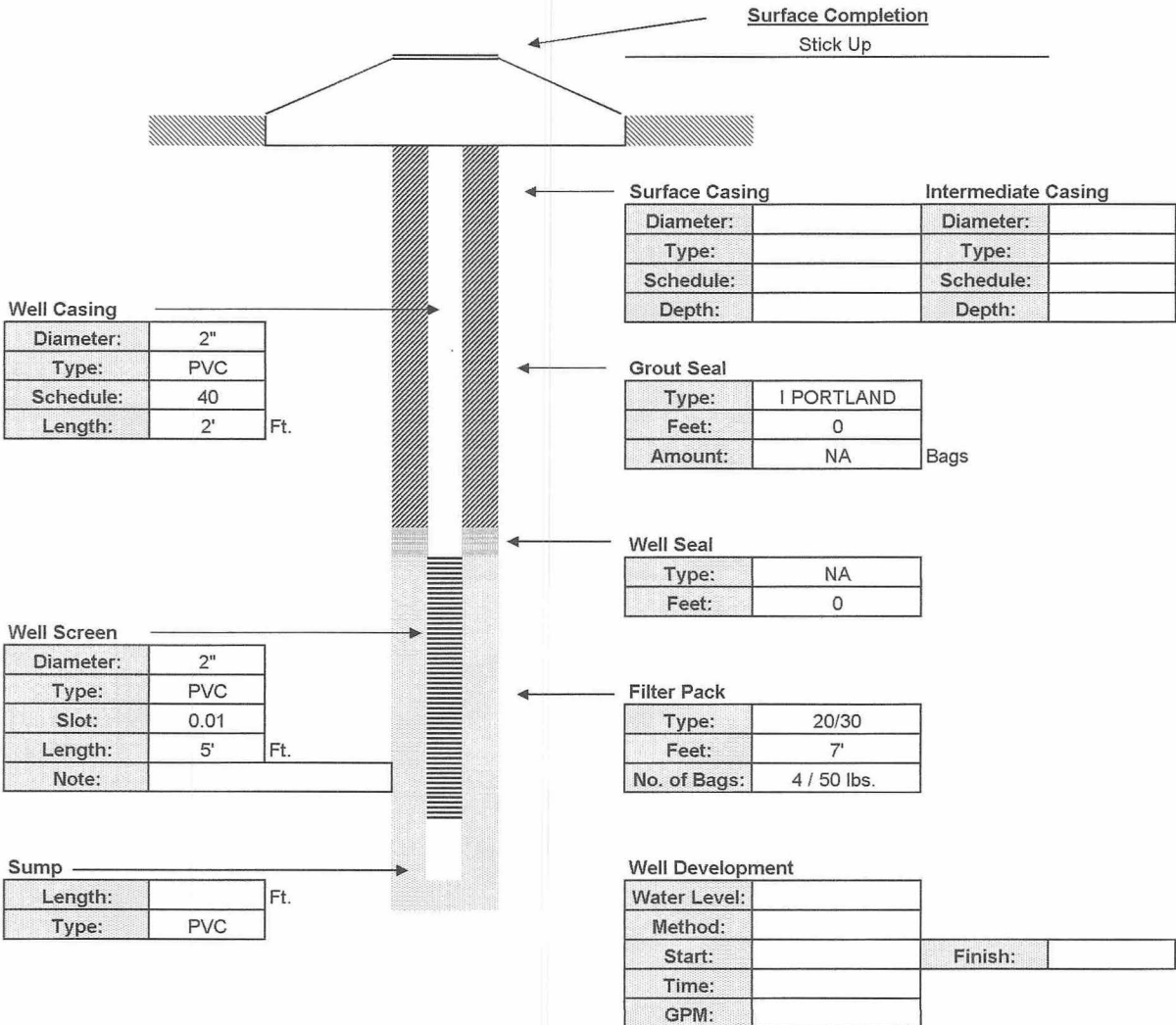
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule	Slot Size: →	0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

WELL COMPLETION LOG

Water Mgmt. Dist.:

Permit Number:

Work Order: 814048

Type of Well: Piezometer

Well Number: 144

Method Used: H S A

Borehole Diaz. 8"

Site Information:

Name: Honeywell

Address:

C,S,Z: Brunswick, GA

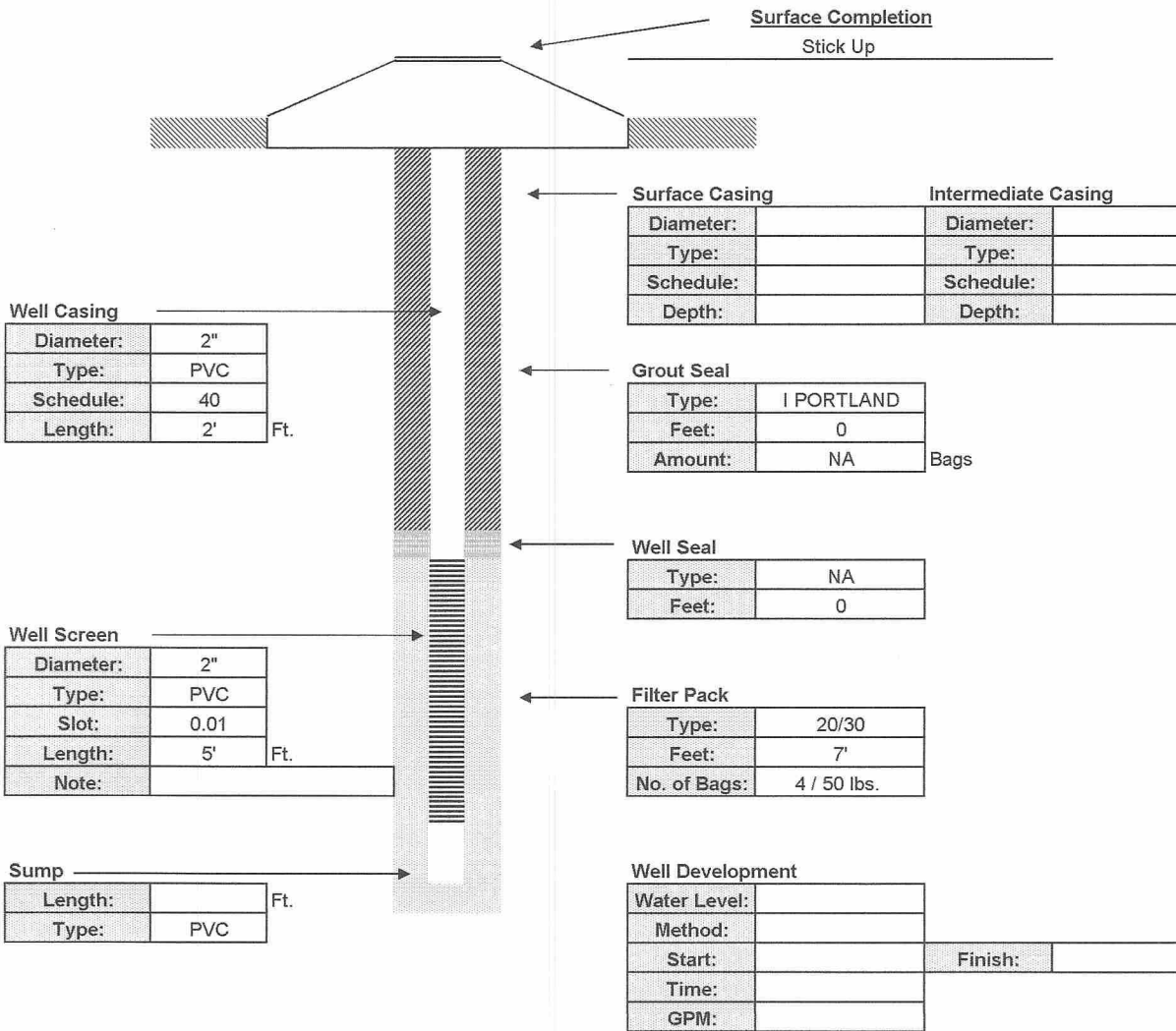
S/T/R:

Client / Consultant Information

Consultant: Parsons

Field Rep: Scott Dillman

Well Diameter	Well Type	Well Depth	Screen Length	Casing Length	Bags Grout	Sand Bags/Weight	Filter Type	Well Seal
2"	PVC	7'	5'	2'	NA	4 / 50 lbs.	20/30	NA
40	← Schedule Slot Size: →		0.01			← Feet →	7'	



Contractor Information

Contractor #:	9311
Completion:	9/23/2014
Driller:	Jeff Zeigler
Lead Hand:	Eric Membreno
3rd Man:	NA
Drill Rig:	D120B

Company:	Drillpro LLC d/b/a Groundwater Protection
Address:	2300 Silver Star Road
C,S,Z:	Orlando, Florida 32804-3310
Phone/FAX:	(407) 426-7885 / (407) 426-7586

Appendix D:

Purge Logs and Well Completion Data

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-1	SAMPLE ID: EW1 DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): n/a	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 44 to 49	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.21 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): ~25		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): ~25		PURGING INITIATED AT: 1140	PURGING ENDED AT: 1253	TOTAL VOLUME PURGED (gallons): 3.46					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1143	0.21	0.21	0.02	n/a	11.00	31.39	5.290	105.0	177	-74.7	
1148	0.25	0.46	0.03	n/a	11.10	31.23	5.279	83.1	61.7	-90.2	
1153	0.25	0.71	0.03	n/a	11.18	31.68	5.284	70.0	34.4	-102.0	
1158	0.25	0.96	0.03	n/a	11.21	32.30	5.289	62.9	28.9	-106.0	
1203	0.25	1.21	0.03	n/a	11.23	32.49	5.295	52.3	25.5	-110.3	
1208	0.25	1.46	0.03	n/a	11.24	32.29	5.308	44.8	24.6	-115.7	
1213	0.25	1.51	0.03	n/a	11.24	31.96	5.288	38.2	25.8	-116.9	
1218	0.25	1.71	0.03	n/a	11.26	31.94	5.297	33.2	24.9	-116.9	
1223	0.25	1.96	0.03	n/a	11.25	31.33	5.284	29.1	24.3	-120.8	
1228	0.25	2.01	0.03	n/a	11.26	31.23	5.295	25.7	25.0	-121.1	
1233	0.25	2.21	0.03	n/a	11.26	30.55	5.283	21.7	25.0	-122.5	
1238	0.25	2.71	0.03	n/a	11.26	29.71	5.273	19.2	24.7	-120.6	
1243	0.25	2.96	0.03	n/a	11.26	28.37	5.259	17.6	25.6	-118.7	
1248	0.25	3.21	0.03	n/a	11.26	28.67	5.257	62.2	24.6	-119.8	
1253	0.25	3.46	0.03	n/a	11.28	29.27	5.267	56.0	25.0	-121.1	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1300		SAMPLING ENDED AT: 1323	
PUMP OR TUBING DEPTH IN WELL (feet): ~25				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EW-1	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
EW-1	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
EW-1	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
EW-1	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
EW-1	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
EW-1	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
EW-1	1	PE	500mL	--	--	--	2540C TDS	APP			
EW-1	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
EW-1	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells. Tubing can only go down about 25 feet.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-2	SAMPLE ID: EW-2 DATE: 9/5/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 32 to 56	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44		PURGING INITIATED AT: 0848	PURGING ENDED AT: 0916	TOTAL VOLUME PURGED (gallons): 1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0851	0.25	0.25	120	n/a	10.02	24.19	7.066	1.5	46.1	-167.6	
0856	0.25	0.5	120	n/a	10.38	23.72	7.074	0.3	40.8	-220.9	
0901	0.25	0.75	120	n/a	10.46	23.82	7.063	0.3	40.1	-205.9	
0906	0.25	1.00	120	n/a	10.50	24.10	7.086	0.3	29.8	-230.7	
0911	0.25	1.25	120	n/a	10.49	24.21	7.091	0.4	39.1	-151.1	
0916	0.25	1.50	120	n/a	10.50	24.27	7.091	0.5	38.6	-161.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 0927		SAMPLING ENDED AT: 1005	
PUMP OR TUBING DEPTH IN WELL (feet): 44				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
EW-2	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
EW-2	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
EW-2	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
EW-2	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
EW-2	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
EW-2	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
EW-2	1	PE	500mL	--	--	--	2540C TDS		APP	
EW-2	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
EW-2	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-3	SAMPLE ID: EW-3 DATE: 9/5/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 39.2 to 42.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 41.2		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 41.2		PURGING INITIATED AT: 0840	PURGING ENDED AT: 0907	TOTAL VOLUME PURGED (gallons): 1.25					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0842	0.25	0.25	0.03	n/a	10.82	25.77	8.017	6.4	25.1	-116.8	
0847	0.20	0.45	0.02	n/a	10.91	25.76	7.817	2.6	23.9	-206.7	
0852	0.10	0.55	0.01	n/a	10.96	25.93	7.837	2.0	26.9	-220.9	
0857	0.20	0.75	0.02	n/a	10.97	25.86	7.853	1.7	24.1	-236.1	
0902	0.25	1.00	0.03	n/a	10.99	25.92	7.881	1.6	26.4	-242.1	
0907	0.25	1.25	0.03	n/a	11.01	25.98	7.923	1.5	22.6	-260.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 0913		SAMPLING ENDED AT: 0934	
PUMP OR TUBING DEPTH IN WELL (feet): 41.2				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
EW-3	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
EW-3	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
EW-3	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
EW-3	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
EW-3	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
EW-3	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
EW-3	1	PE	500mL	--	--	--	2540C TDS		APP	
EW-3	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
EW-3	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-4	SAMPLE ID: EW-4
DATE: 11/21/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 38.2 to 43.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 35.85	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 35.85	PURGING INITIATED AT: 0816	PURGING ENDED AT: 0856	TOTAL VOLUME PURGED (gallons): 2.25
---	---	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0821	0.24	0.24	0.03	n/a	11.48	21.62	15.63	1.3	27.6	-234.6	
0826	0.52	0.75	0.05	n/a	11.50	21.61	15.86	1.1	26.9	-275.9	
0831	0.25	1.00	0.03	n/a	11.52	21.41	16.15	1.0	24.7	-316.9	
0836	0.25	1.25	0.03	n/a	11.53	21.33	16.27	0.9	27.0	-337.9	
0841	0.25	1.5	0.03	n/a	11.53	21.38	16.23	0.8	25.3	-236.3	
0846	0.25	1.75	0.03	n/a	11.53	21.39	16.20	0.7	24.3	-247.8	
0851	0.25	2.0	0.03	n/a	11.53	21.43	16.18	0.8	24.4	-244.1	
0856	0.25	2.25	0.03	n/a	11.53	21.53	16.18	0.6	24.3	-213.1	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0901	SAMPLING ENDED AT: 0932
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 39.85	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-4	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-4	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-4	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-4	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
EW-4	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-4	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-4	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-4	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-4	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.
 Purge water is brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-5	SAMPLE ID: EW-5 DATE: 11/20/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.1 to 51.1	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.23 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 39.1	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 39.1	PURGING INITIATED AT: 1449	PURGING ENDED AT: 1540	TOTAL VOLUME PURGED (gallons): 2.75
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1455	0.23	0.23	0.02	n/a	11.19	21.71	60.22	1.0	7.19	-420.9	
1500	0.52	0.75	0.05	n/a	11.76	21.74	80.82	0.8	6.74	-484.6	
1505	0.25	1.0	0.03	n/a	11.79	21.73	83.44	0.6	4.83	-504.4	
1510	0.25	1.25	0.03	n/a	11.74	21.64	79.66	0.7	5.20	-518.4	
1515	0.25	1.5	0.03	n/a	11.54	21.63	70.57	0.6	6.54	-483.1	
1520	0.25	1.75	0.03	n/a	11.40	21.59	65.32	0.8	5.95	-478.8	
1525	0.25	2.0	0.03	n/a	11.33	21.61	63.67	0.6	6.64	-510.8	
1530	0.25	2.25	0.03	n/a	11.29	21.58	61.80	0.7	6.67	-484.7	
1535	0.25	2.5	0.03	n/a	11.22	21.48	60.05	0.6	6.42	-519.0	
1540	0.25	2.75	0.03	n/a	11.21	21.37	59.27	0.7	6.51	-518.0	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1542	SAMPLING ENDED AT: 1607
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 39.1	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-5	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-5	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-5	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-5	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
EW-5	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-5	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-5	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-5	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-5	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-6	SAMPLE ID: EW-6 DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.2 to 51.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.5		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.5		PURGING INITIATED AT: 0832	PURGING ENDED AT: 0905	TOTAL VOLUME PURGED (gallons):					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0835	0.27	0.27	0.03	n/a	11.95	23.59	39.05	21.5	3.30	-286.6	
0840	0.33	0.6	0.03	n/a	11.47	24.03	39.4	5.3	3.64	-334.0	
0845	0.15	0.75	0.02	n/a	11.55	24.08	39.19	3.5	3.83	-348.6	
0850	0.35	1.1	0.04	n/a	11.61	24.07	39.21	3.0	3.56	-353.7	
0855	0.3	1.4	0.03	n/a	11.72	24.09	39.19	2.3	4.10	-357.4	
0900	0.2	1.6	0.02	n/a	11.77	24.10	39.16	2.0	4.08	-364.3	
0905	0.2	1.8	0.02	n/a	11.75	24.17	38.86	1.9	3.89	-385.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 0905		SAMPLING ENDED AT: 0929	
PUMP OR TUBING DEPTH IN WELL (feet): 42.5				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
EW-6	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
EW-6	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
EW-6	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
EW-6	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
EW-6	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
EW-6	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
EW-6	1	PE	500mL	--	--	--	2540C TDS		APP	
EW-6	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
EW-6	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-8	SAMPLE ID: EW-8 DATE: 11/21/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.6 to 51.6	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44.2	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44.2	PURGING INITIATED AT: 1611	PURGING ENDED AT: 1638	TOTAL VOLUME PURGED (gallons): 1.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1618	0.26	0.26	0.03	n/a	10.84	22.37	24.42	0.6	7.97	-282.4	
1623	0.49	0.75	0.05	n/a	10.88	22.36	25.10	0.6	5.17	-323.7	
1628	0.25	1.0	0.03	n/a	10.88	22.35	25.36	0.6	4.66	-357.7	
1633	0.25	1.25	0.03	n/a	10.90	22.31	25.44	0.5	4.38	-331.2	
1638	0.25	1.50	0.03	n/a	10.91	22.30	25.53	0.5	4.22	-298.7	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1642	SAMPLING ENDED AT: 1704
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 44.2	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-8	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-8	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-8	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-8	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
EW-8	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-8	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-8	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-8	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-8	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-11	SAMPLE ID: EW-11
DATE: 11/21/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 45.5 to 50.5	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 40.6	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 40.6	PURGING INITIATED AT: 1420	PURGING ENDED AT: 1452	TOTAL VOLUME PURGED (gallons): 1.75
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1427	0.26	0.26	0.03	n/a	8.23	22.80	83.97	1.1	9.87	-281.7	
1432	0.49	0.75	0.05	n/a	8.27	22.74	83.90	1.0	7.86	-310.5	
1437	0.25	1.00	0.03	n/a	8.24	22.74	83.81	1.0	7.22	-321.5	
1442	0.25	1.25	0.03	n/a	8.17	22.71	83.45	0.8	6.66	-326.8	
1447	0.25	1.50	0.03	n/a	8.15	22.67	83.22	0.7	6.76	-263.8	
1452	0.25	1.75	0.03	n/a	8.20	22.64	83.38	0.6	6.51	-329.4	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1458	SAMPLING ENDED AT: 1522
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 40.6	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-11	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-11	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-11	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-11	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
EW-11	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-11	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-11	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-11	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-11	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-1A	SAMPLE ID: MW-1A DATE: 9/6/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 18 to 23	STATIC DEPTH TO WATER (ft btoc): 7.7	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.18 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 20.5	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 20.5	PURGING INITIATED AT: 0802	PURGING ENDED AT: 0838	TOTAL VOLUME PURGED (gallons): 1.5							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0808	0.18	0.18	0.02	7.84	5.95	24.45	13.61	22.2	9.28	-124.6	
0813	0.32	0.5	0.03	7.85	5.93	24.48	13.58	10.2	11.5	-155.4	
0813	0.25	0.75	0.03	7.89	5.89	24.45	13.65	5.9	14.4	-174.5	
0823	0.25	1.00	0.03	7.89	5.86	24.48	13.77	4.5	13.0	-188.6	
0828	0.25	1.25	0.03	7.89	5.86	24.53	13.86	4.3	13.5	-196.1	
0833	0.25	1.5	0.03	7.89	5.84	24.54	13.93	3.8	12.8	-201.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 0842		SAMPLING ENDED AT: 0901	
PUMP OR TUBING DEPTH IN WELL (feet): 20.5				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-1A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-1A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-1A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-1A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
MW-1A	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-1A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-1A	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-1A	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-1A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-1B	SAMPLE ID: MW-1B DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 33 to 38	STATIC DEPTH TO WATER (feet btoc): 7.41	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		PURGING INITIATED AT: 1010	PURGING ENDED AT: 1046	TOTAL VOLUME PURGED (gallons): ~3.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1011	0.23	0.23	0.03	7.65	6.14	28.0	8.742	17.9	12.5	-229.7	
1016	0.25	0.48	--Skipped--								
1021	1.25	1.73	--	7.53	6.04	24.61	8.953	3.1	13.9	-189.2	
1026	0.50	2.23	0.05	7.81	6.08	24.93	6.801	2.5	12.0	-181.7	
1031	0.50	2.73	0.05	7.5	6.10	24.95	6.644	2.0	13.4	-165.6	
1036	0.23	2.96	0.03	7.45	6.11	25.62	6.557	1.6	12.8	-155.1	
1041	0.52	3.48	0.05	7.5	6.10	25.90	6.539	1.4	12.6	-153.5	
1046	0.25	3.73	0.03	7.5	6.09	25.93	6.507	1.1	11.6	-145.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1050		SAMPLING ENDED AT: 1108	
PUMP OR TUBING DEPTH IN WELL (feet): 35.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-1B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-1B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-1B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-1B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-1B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-1B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-1B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-1B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-1B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-1C	SAMPLE ID: MW-1C	DATE: 8/30/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48 to 53	STATIC DEPTH TO WATER (feet btoc): 8.95	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		PURGING INITIATED AT: 0924							
				PURGING ENDED AT: 1001							
				TOTAL VOLUME PURGED (gallons): 2.0							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0926	0.27	0.27	0.03	9.5	8.51	24.21	49.78	6.1	15.5	-117.0	
0931	0.23	0.50	0.02	9.45	8.44	24.74	50.24	5.2	5.31	-167.5	
0936	0.25	0.75	0.03	9.45	8.46	24.86	51.37	4.1	4.85	-185.0	
0941	0.25	1.0	0.03	9.45	8.62	24.82	52.17	2.7	3.33	-184.3	
0946	0.25	1.25	0.03	9.45	8.88	24.91	52.51	1.8	3.63	-195.5	
0951	0.25	1.5	0.03	9.45	8.94	24.96	52.74	1.3	3.18	-206.1	
0956	0.25	1.75	0.03	9.45	8.98	24.95	52.90	1.0	2.98	-245.9	
1001	0.25	2.0	0.03	9.45	8.98	25.00	52.94	0.8	3.49	-260.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova/Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1007		SAMPLING ENDED AT: 1030	
PUMP OR TUBING DEPTH IN WELL (feet): 50.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-1C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-1C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-1C	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-1C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-1C	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-1C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-1C	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-1C	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-1C	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2A	SAMPLE ID: MW-2A DATE: 9/6/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 18 to 23	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP								
Tube-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.20 gallons												
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 23		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 23		PURGING INITIATED AT: 0815	PURGING ENDED AT: 0854	TOTAL VOLUME PURGED (gallons): ~2.5						
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)	
0819	0.2	0.2	0.02	7.79	7.07	23.75	7.157	43.1	8.35	-81.9		
0824	0.2	0.4	0.02	7.81	7.07	23.43	7.334	34.5	7.11	-119.7		
0829	0.3	0.7	0.03	7.81	7.09	23.22	7.468	31.5	8.54	-131.5		
0834	0.5	1.2	0.05	--Skipped--					9.54			
0839	0.4	1.6	0.04	7.81	6.73	23.94	8.123	14.4	8.79	-205.4		
0844	0.3	1.9	0.03	7.80	6.77	23.94	7.892	2.0	9.53	-221.3		
0849	0.25	2.15	0.03	7.81	6.82	23.99	7.885	0.8	8.76	-217.8		
0854	0.35	2.5	0.04	7.80	6.84	20.04	7.887	0.8	9.07	-221.0		
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser												
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)												

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0854		SAMPLING ENDED AT: 0915	
PUMP OR TUBING DEPTH IN WELL (feet): 23				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-2A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-2A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-2A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-2A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-2A	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-2A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-2A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-2A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-2A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2B	DATE: 8/30/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 33 to 38	STATIC DEPTH TO WATER (feet btoc): 7.7	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		PURGING INITIATED AT: 1203	PURGING ENDED AT: 1157	TOTAL VOLUME PURGED (gallons): 1.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1127	0.23	0.23	0.02	7.2	6.2	24.00	6.572	14.9	5.21	-75.0	
1132	0.27	0.50	0.03	7.16	6.18	24.01	6.856	3.1	4.46	-103.8	
1137	0.25	0.75	0.03	7.16	6.22	23.93	6.666	0.8	5.69	-122.5	
1142	0.25	1.0	0.03	7.16	6.29	23.94	6.525	0.4	5.67	-134.6	
1147	0.25	1.25	0.03	7.16	6.34	24.07	6.441	0.4	6.62	-140.7	
1152	0.25	1.5	0.03	7.16	6.38	24.24	6.395	0.4	6.47	-145.4	
1157	0.25	1.75	0.03	7.16	6.39	24.19	6.367	0.2	6.57	-150.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1203		SAMPLING ENDED AT: 1219	
PUMP OR TUBING DEPTH IN WELL (feet): 25.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-2B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-2B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-2B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-2B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-2B	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-2B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-2B	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-2B	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-2B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2C	SAMPLE ID: MW-2C DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 48 to 53	STATIC DEPTH TO WATER (feet btoc): 7.1	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		PURGING INITIATED AT: 1529	PURGING ENDED AT: 1559	TOTAL VOLUME PURGED (gallons): ~1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1535	0.27	0.27	0.03	8.9	8.89	25.33	40.85	1.8	27.4	-241.3	
1539	0.25	0.52	0.03	9.9	8.74	27.67	41.11	0.4	9.64	-304.2	
1544	0.25	0.77	0.03	10.38	8.70	27.92	41.33	0.4	8.0	-323.8	
1549	0.25	1.02	0.03	10.8	8.69	27.15	41.37	0.5	8.36	-337.4	
1554	0.25	1.27	0.03	11.1	8.69	28.06	41.31	0.5	9.2	-344.5	
1559	0.25	1.52	0.03	11.35	8.71	28.15	41.47	0.5	8.53	-352.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1604		SAMPLING ENDED AT: 1647	
PUMP OR TUBING DEPTH IN WELL (feet): 50.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-2C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-2C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-2C	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-2C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-2C	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-2C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-2C	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-2C	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-2C	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level could not stabilize, pump was at lowest setting.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-3A	SAMPLE ID: MW-3A DATE: 9/6/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 18 to 23	STATIC DEPTH TO WATER (feet btoc): 8.00	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 20.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 20.5		PURGING INITIATED AT: 0802	PURGING ENDED AT: 0905	TOTAL VOLUME PURGED (gallons): 3.20					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
805	0.20	0.20	0.02	9.05	7.16	24.53	35.06	25.1	64.0	-118.9	
810	0.25	0.45	0.03	9.4	7.20	24.54	35.27	4.2	39.8	-203.1	
815	0.25	0.70	0.03	9.37	7.21	24.64	35.28	2.3	39.4	-217.5	
820	0.25	0.95	0.03	9.35	6.57	24.63	35.21	1.9	33.1	-240.0	
825	0.25	1.20	0.03	9.32	6.64	24.68	35.0	3.8	29.2	-249.2	
830	0.25	1.45	0.03	9.35	6.68	24.70	34.57	4.5	23.9	-256.7	
835	0.25	1.75	0.03	9.3	6.69	24.70	34.22	6.7	21.6	-266.5	
840	0.25	1.95	0.03	9.28	6.70	24.71	33.94	6.8	21.7	-272.6	
845	0.25	2.20	0.03	9.27	7.22	24.76	33.56	8.4	19.9	-280.8	
850	0.25	2.45	0.03	9.26	7.19	24.78	33.12	7.7	19.0	-283.2	
855	0.25	2.70	0.03	9.26	7.16	24.81	32.80	7.9	17.0	-288.5	
900	0.25	2.95	0.03	9.26	7.14	24.87	32.32	7.4	16.9	-291.1	
905	0.25	3.20	0.03	9.26	7.14	24.93	31.82	8.7	n/a	-291.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 910		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 20.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-3A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-3A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-3A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-3A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-3A	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-3A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-3A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-3A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-3A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-105C	SAMPLE ID: MW-105C DATE: 8/30/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 40.0 to 42.5	STATIC DEPTH TO WATER (feet btoc): 5.96	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.5		PURGING INITIATED AT: 1041	PURGING ENDED AT: 1145	TOTAL VOLUME PURGED (gallons):					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1045	0.25	0.25	0.03	6.21	6.37	27.60	3.360	49.0	69.5	-136.9	
1050	0.05	0.3	0.01	6.21	7.74	27.04	3.209	9.0	84.8	-131.7	
1055	0.15	0.45	0.02	6.21	10.83	26.60	3.155	3.4	94.8	-132.7	
1100	0.35	0.8	0.04	6.21	10.91	26.87	3.102	0.9	101.0	-152.5	
1105	0.25	1.05	0.03	6.21	10.95	27.09	3.097	0.6	100.0	-155.8	
1110	0.2	1.25	0.02	6.21	10.96	27.13	3.105	0.4	98.3	-165.4	
1115	0.3	1.55	0.03	6.21	11.0	27.16	3.142	0.3	99.2	-167.9	
1120	0.2	1.75	0.02	6.21	11.02	27.05	3.144	0.3	101.0	-170.9	
1125	0.25	2.00	0.03	6.21	11.03	27.16	3.149	0.4	98.7	-176.6	
1130	0.20	2.20	0.02	6.21	11.04	27.06	3.163	0.3	96.6	-176.6	
1135	0.15	2.35	0.02	6.21	11.05	27.31	3.169	0.3	95.0	-181.0	
1140	0.15	2.50	0.02	6.21	11.06	27.38	3.178	0.3	96.9	-183.5	
1145	0.3	2.90	0.03	6.21	11.08	27.20	3.193	0.4	95.4	-189.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1147		SAMPLING ENDED AT: 1215		
PUMP OR TUBING DEPTH IN WELL (feet): 41.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-105C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-105C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-105C	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-105C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-105C	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-105C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-105C	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-105C	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-105C	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. 7470 Mercury (field filtered) sample collected due to high turbidity (above 50 NTU).												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-105A	DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 9.4 to 19.4	STATIC DEPTH TO WATER (feet btoc): 6.3	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.18 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 14.4	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 14.4	PURGING INITIATED AT: 0912	PURGING ENDED AT: 0959	TOTAL VOLUME PURGED (gallons): 2.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0914	0.32	0.18	0.03	6.37	5.20	26.00	0.543	19.4	1.85	-131.4	
0919	0.25	0.5	0.03	6.37	5.19	26.13	0.541	11.8	1.57	-157.6	
0924	0.25	0.75	0.03	6.37	5.29	26.24	0.536	8.0	0.68	-186.5	
0929	0.24	1.0	0.03	6.37	5.28	26.20	0.530	7.5	0.71	-200.1	
0934	0.25	1.25	0.03	6.37	5.29	26.37	0.527	6.2	0.66	-208.7	
0939	0.25	1.5	0.03	6.37	5.31	26.41	0.522	5.6	0.65	-216.6	
0944	0.25	1.75	0.03	6.37	5.30	26.43	0.521	5.6	0.63	-221.3	
0949	0.25	2.0	0.03	6.37	5.31	26.43	0.518	5.3	0.61	-224.2	
0954	0.25	2.25	0.03	6.37	5.28	26.45	0.515	5.4	0.69	-228.2	
0959	0.25	2.50	0.03	6.37	5.30	26.53	0.514	5.3	0.68	-231.0	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheauer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1007	SAMPLING ENDED AT: 1027
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 14.4	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-105A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-105A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-105A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-105A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-105A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-105A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-105A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-105A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-105A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-105B	SAMPLE ID: MW-105B DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 26.9 to 28.4	STATIC DEPTH TO WATER (feet btoc): 6.13	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.21 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 27.65		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 27.65		PURGING INITIATED AT: 1110	PURGING ENDED AT: 1158	TOTAL VOLUME PURGED (gallons): 2.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1112	0.21	0.21	0.02	6.19	5.37	25.55	0.792	25.7	3.58	-174.4	
1117	0.29	0.5	0.03	6.18	5.66	26.03	0.966	9.1	2.47	-200.0	
1122	0.25	0.75	0.03	6.18	5.62	26.17	1.017	5.8	3.33	-210.7	
1127	0.25	1.0	0.03	6.18	6.44	26.01	1.038	5.5	2.65	-215.3	
1132	0.25	1.25	0.03	6.18	6.43	26.04	1.040	5.3	2.66	-224.4	
1137	0.25	1.5	0.03	6.18	6.42	26.10	1.038	4.7	2.83	-230.3	
1142	0.25	1.75	0.03	6.18	6.44	25.88	1.031	2.0	2.71	-230.9	
1147	0.25	2.0	0.03	6.18	6.44	26.09	1.027	2.7	3.02	-230.9	
1152	0.25	2.25	0.03	6.18	6.43	26.03	1.024	1.8	3.26	-235.9	
1157	0.25	2.50	0.03	6.18	6.44	26.13	1.025	2.3	2.97	-234.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1205		SAMPLING ENDED AT: 1225	
PUMP OR TUBING DEPTH IN WELL (feet): 27.65				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-105B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-105B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-105B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-105B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-105B	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-105B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-105B	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-105B	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-105B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-112C	SAMPLE ID: MW-112C DATE: 9/5/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 45.5 to 47.5	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.5		PURGING INITIATED AT: 0832	PURGING ENDED AT: 0905	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1028	0.26	0.26	0.03	5.92	9.28	22.83	35.58	5.0	8.98	-373.2	
1033	0.24	0.5	0.02	5.93	8.51	22.83	38.23	4.0	10.3	-408.1	
1038	0.3	0.8	0.03	5.94	7.63	22.81	38.46	3.2	11.0	-428.7	
1043	0.45	1.25	0.05	5.94	7.69	22.85	38.25	2.5	11.8	-445.0	
1048	0.45	1.7	0.05	5.99	7.75	22.78	37.63	3.2	12.6	-472.5	
1053	0.4	2.1	0.04	5.98	7.85	22.81	37.17	2.3	12.4	-483.0	
1058	0.5	2.6	0.05	6.02	7.90	22.76	36.75	2.0	13.6	-472.1	
1106	0.5	3.1	0.05	6.03	7.91	22.70	36.16	2.6	11.9	-469.0	
1111	0.5	3.5	0.05	5.92	8.11	22.90	35.77	2.7	12.1	-438.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0905		SAMPLING ENDED AT: 0929	
PUMP OR TUBING DEPTH IN WELL (feet): 47.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-112C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-112C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-112C	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-112C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-112C	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-112C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-112C	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-112C	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-112C	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-113C	DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 46.7 to 48.2	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 48.2		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 46		PURGING INITIATED AT: 1355							
				PURGING ENDED AT: 1425							
TOTAL VOLUME PURGED (gallons):											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1356	0.25	0.26	0.03	5.52	10.21	27.20	2.057	20.6	121	-118.0	
1401											
--Skipped--											
1406	--	1.26	0.03	6.29	11.62	25.26	30.77	19.4	10.0	-130.6	
1411	0.25	1.51	0.03	8.99	12.03	25.90	31.12	3.1	6.72	-136.2	
1416	0.25	1.76	0.03	9.55	12.88	26.95	31.14	2.8	3.31	-155.0	
1421	0.24	2.0	0.03	10.31	12.88	27.41	31.33	3.0	4.26	-149.9	
1426	0.26	2.26	0.03	10.57	12.91	22.10	31.26	2.8	7.10	-163.0	
1431	0.25	2.51	0.03	10.77	12.91	27.57	31.37	2.3	3.18	-166.8	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1435		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 46				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-113C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-113C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-113C	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-113C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-113C	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-113C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-113C	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-113C	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-113C	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115A	SAMPLE ID: MW-115A DATE: 9/6/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 14.4 to 19.4	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.19 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 19.4		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 19.4		PURGING INITIATED AT: 1243	PURGING ENDED AT: 1318	TOTAL VOLUME PURGED (gallons): ~2.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1245	0.19	0.19	0.02	6.92	7.13	24.83	5.739	50.0	5.06	-186.5	
1250	0.41	0.6	0.04	6.86	5.84	24.14	5.160	4.7	5.06	-214.6	
1255	0.4	1.0	0.04	6.89	5.47	23.59	5.226	2.9	4.14	-225.4	
1300	0.4	1.4	0.04	6.91	5.37	23.41	5.228	2.3	7.34	-233.9	
1305	0.3	1.7	0.03	6.87	5.28	23.54	5.254	2.4	6.37	-235.6	
1310	0.4	2.1	0.04	6.86	5.25	23.50	5.285	2.3	8.16	-239.3	
1315	0.4	2.5	0.04	6.86	5.23	23.68	5.335	1.9	5.67	-236.8	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1320		SAMPLING ENDED AT: n/a		
PUMP OR TUBING DEPTH IN WELL (feet): 19.4				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: Yes								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-115A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-115A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-115A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-115A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-115A	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-115A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-115A	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-115A	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-115A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115B	SAMPLE ID: MW-115B DATE: 9/5/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 30.5 to 32	STATIC DEPTH TO WATER (ft btoc): 6.16	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 31.25		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 31.25		PURGING INITIATED AT: 1427	PURGING ENDED AT: 1451	TOTAL VOLUME PURGED (gallons): 1.25					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1430	0.27	0.22	0.03	6.22	9.0	24.30	4.134	18.0	5.47	-90.6	
1435	0.28	0.5	0.03	6.22	8.98	23.48	4.528	0.7	4.88	-147.8	
1440	0.25	0.75	0.03	6.22	9.02	23.24	4.581	0.2	4.81	-136.0	
1445	0.25	1.00	0.03	6.22	9.03	23.29	4.617	0.2	4.82	-136.0	
1450	0.25	1.25	0.03	6.22	9.03	23.35	4.633	0.2	4.84	-137.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1457		SAMPLING ENDED AT: 1516	
PUMP OR TUBING DEPTH IN WELL (feet): 31.25				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-115B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-115B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-115B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-115B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
MW-115B	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-115B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-115B	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-115B	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-115B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115C	SAMPLE ID: MW-115C DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 42.7 to 44.2	STATIC DEPTH TO WATER (feet btoc): 6.69	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43.5		PURGING INITIATED AT: 1531	PURGING ENDED AT: 1605	TOTAL VOLUME PURGED (gallons): 1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1535	0.25	0.25	0.03	7.35	8.59	24.81	49.05	2.5	10.7	-157.8	
1540	0.25	0.5	0.03	7.32	8.59	24.87	48.58	1.8	8.75	-180.0	
1545	0.25	0.75	0.03	7.31	8.77	24.27	48.67	1.5	7.42	-244.9	
1550	0.25	1.0	0.03	7.31	8.89	24.21	48.41	1.8	6.19	-203.0	
1555	0.25	1.25	0.03	7.30	9.02	24.02	48.33	1.5	5.53	-192.7	
1600	0.15	1.4	0.02	7.30	9.08	24.59	48.51	1.6	4.83	-270.0	
1605	0.10	1.5	0.01	7.30	9.07	24.25	48.30	1.0	4.38	-298.1	1.030
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1606		SAMPLING ENDED AT: 1636		
PUMP OR TUBING DEPTH IN WELL (feet): 43.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-115C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-115C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-115C	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-115C	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-115C	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-115C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-115C	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-115C	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-115C	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-352A	SAMPLE ID: MW-352A DATE: 9/5/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 30.4 to 31.9	STATIC DEPTH TO WATER (feet btoc): 6.45	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.15		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.15		PURGING INITIATED AT: 1052	PURGING ENDED AT: 1154	TOTAL VOLUME PURGED (gallons): 3.22					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1054	0.22	0.22	0.03	6.51	9.66	26.27	3.701	14.3	9.28	-52.6	
1059	0.25	0.47	0.03	6.53	11.09	25.80	3.585	2.1	72.8	-119.8	
1104	0.25	0.72	0.03	6.53	11.81	25.94	3.622	1.6	75.4	-447.5	
1109	0.25	0.97	0.03	6.5	12.48	26.90	3.584	1.4	77.1	-181.9	
1114	0.25	1.22	0.03	6.51	12.47	27.40	3.567	1.2	74.9	-188.6	
1119	0.25	1.47	0.03	6.5	12.44	27.64	3.547	1.2	74.7	-216.6	
1124	0.25	1.72	0.03	6.5	12.40	27.46	3.534	1.1	69.8	-238.1	
1129	0.25	1.97	0.03	6.5	12.38	27.44	3.507	1.0	75.4	-255.8	
1134	0.25	2.22	0.03	6.5	12.35	27.33	3.506	0.9	75.3	-266.6	
1139	0.25	2.47	0.03	6.51	12.33	26.99	3.478	0.8	76.2	-274.8	
1144	0.25	2.72	0.03	6.5	12.30	27.16	3.457	0.7	74.4	-280.0	
1149	0.25	2.97	0.03	6.5	12.28	27.54	3.465	0.7	78.4	-284.8	
1154	0.25	3.22	0.03	6.5	12.26	28.14	3.457	0.7	78.2	-285.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1154		SAMPLING ENDED AT: 1255	
PUMP OR TUBING DEPTH IN WELL (feet): 31.15				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-352A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-352A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-352A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-352A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-352A	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-352A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-352A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-352A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-352A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-352B	SAMPLE ID: MW-352B DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 47.3 to 48.8	STATIC DEPTH TO WATER (feet btoc): 7.0	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	--	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 48.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 48.1	PURGING INITIATED AT: 1453	PURGING ENDED AT: 1515	TOTAL VOLUME PURGED (gallons): 1.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1455	0.26	0.26	0.03	7.35	9.51	26.19	18.73	44.0	51.6	-129.4	
1500	0.24	0.5	0.02	7.37	9.16	27.09	42.94	1.0	26.5	-245.5	
1505	0.5	1.0	0.05	7.35	11.50	26.90	52.32	0.1	7.39	-286.6	
1510	0.25	1.25	0.03	7.35	11.58	26.97	52.41	0.1	6.87	-296.8	
1515	0.25	1.5	0.03	7.34	11.53	26.94	52.44	0.1	6.01	-309.5	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1520	SAMPLING ENDED AT: 1543
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 48.1	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-352B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-352B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-352B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-352B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-352B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-352B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-352B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-352B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-352B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-353B	SAMPLE ID: MW-353B DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 42.2 to 43.7	STATIC DEPTH TO WATER (feet btoc): 6.77	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 42.95		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 42.95		PURGING INITIATED AT: 1115	PURGING ENDED AT: 1143	TOTAL VOLUME PURGED (gallons): 2.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1117	0.25	0.25	0.03	6.93	8.0	25.83	22.17	58.1	7.24	-29.7	
1122	0.25	0.50	0.03	7.0	9.90	23.71	45.21	0.2	7.33	-373.2	
1127	0.25	0.75	0.03	7.0	10.05	23.73	46.34	0.0	6.55	-418.8	
1132	0.25	1.0	0.03	7.03	10.09	23.73	46.77	0.0	6.82	-426.2	
1137	0.25	1.25	0.03	7.03	10.12	23.77	47.03	0.0	6.74	-434.6	
1142	0.25	1.5	0.03	7.03	10.14	23.78	47.16	0.0	6.81	-438.1	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1147		SAMPLING ENDED AT: 1203	
PUMP OR TUBING DEPTH IN WELL (feet): 42.95				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-353B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-353B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-353B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-353B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-353B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-353B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-353B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-353B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-353B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-357A	SAMPLE ID: MW-357A DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 40.4 to 41.9	STATIC DEPTH TO WATER (feet btoc): 5.85	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.15	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.15	PURGING INITIATED AT: 1454	PURGING ENDED AT: 1603	TOTAL VOLUME PURGED (gallons): ~1.75
---	---	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1458	0.24	0.24	0.02	6.75	7.24	27.42	11.66	58.2	17.8	-237.9	
1503	0.1	0.34	0.01	7.39	15.48	26.32	16.31	5.7	19.5	-330.9	
1508	0.15	0.49	0.02	8.40	15.94	26.60	15.57	4.1	16.4	-339.7	
1513	0.05	0.54	0.01	8.85	14.16	26.46	15.00	3.7	16.7	-344.9	
1518	0.1	0.64	0.01	9.31	13.69	27.11	14.69	3.4	16.0	-350.0	
1523	0.1	0.74	0.01	9.85	13.83	28.69	14.23	2.8	14.5	-349.4	
1528	0.1	0.84	0.01	10.16	13.42	29.51	14.09	2.6	14.7	-349.1	
1533	0.1	0.94	0.01	10.67	13.72	30.28	13.86	2.1	13.3	-351.0	
1538	0.15	1.09	0.02	10.98	13.51	30.10	13.85	2.0	13.0	-351.8	
1543	0.2	1.29	0.02	11.28	13.56	29.89	13.81	1.9	15.3	-357.9	
1548	0.15	1.44	0.02	11.46	13.30	31.26	13.55	1.6	14.6	-362.7	
1553	0.1	1.54	0.01	11.63	14.55	31.80	14.53	1.4	13.5	-368.9	
1558	0.1	1.64	0.01	11.71	14.23	32.86	14.42	1.3	12.8	-358.4	
1603	0.1	1.74	0.01	11.83	14.01	33.09	14.43	1.4	13.1	-358.2	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1605	SAMPLING ENDED AT: 1657
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 41.15	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y **No** TUBING Y **No (replaced)** DUPLICATE: **No**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-357A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-357A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-357A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-357A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-357A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-357A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-357A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-357A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-357A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level could not stabilize and pump purged as low as it can go.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-357B	SAMPLE ID: MW-357B DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 46.8 to 48.3	STATIC DEPTH TO WATER (feet btoc): 6.59	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.55		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.55		PURGING INITIATED AT: 1147	PURGING ENDED AT: 1231	TOTAL VOLUME PURGED (gallons): ~2.25					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1151	0.26	0.26	0.03	7.08	14.10	25.77	4.410	58.1	24.4	-200.6	
1156	0.26	0.52	0.03	7.11	13.34	25.18	20.95	2.5	10.5	-358.4	
1201	0.24	0.76	0.03	7.08	13.18	24.42	21.34	2.3	7.58	-384.6	
1206	0.25	1.01	0.03	7.08	13.10	24.50	21.50	2.0	6.70	-360.1	
1211	0.25	1.26	0.03	7.08	12.17	25.19	21.32	2.0	7.05	-353.8	
1216	0.25	1.51	0.03	7.08	12.18	25.19	21.36	2.1	5.62	-372.9	
1221	0.25	1.76	0.03	7.08	11.49	25.02	21.37	1.4	6.26	-379.9	
1226	0.25	2.01	0.03	7.08	11.43	24.59	21.40	1.4	5.64	-402.2	
1231	0.25	2.26	0.03	7.08	11.08	24.71	21.40	1.3	5.47	-372.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1233		SAMPLING ENDED AT: 1309		
PUMP OR TUBING DEPTH IN WELL (feet): 47.55				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-357B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-357B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-357B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-357B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-357B	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-357B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-357B	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-357B	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-357B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-501A	SAMPLE ID: MW-501A DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 28.7 to 33.7	STATIC DEPTH TO WATER (feet btoc): 4.57	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.2		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.2		PURGING INITIATED AT: 1342	PURGING ENDED AT: 1516	TOTAL VOLUME PURGED (gallons): 4.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1346	0.22	0.22	0.02	4.62	6.72	27.24	0.771	24.5	n/a	-192.5	
1351	0.28	0.5	0.03	4.62	6.47	25.42	0.744	2.6	777	-180.0	
1356	0.25	0.75	0.03	4.62	6.55	25.27	0.756	4.0	160	-171.6	
1401	0.25	1.0	0.03	4.64	6.60	25.42	0.768	1.4	108	-159.8	
1406	0.25	1.25	0.03	4.63	6.62	25.36	0.777	1.0	129	-152.8	
1411	0.25	1.5	0.03	4.63	6.62	25.23	0.781	1.0	151	-152.7	
1416	0.25	1.75	0.03	4.63	6.64	25.35	0.786	0.7	95.8	-154.5	
1421	0.25	2.0	0.03	4.63	6.65	25.12	0.789	0.4	51.1	-154.2	
1426	0.25	2.25	0.03	4.63	6.66	25.21	0.792	0.3	24.4	-153.6	
1431	0.25	2.5	0.03	4.63	6.67	25.06	0.794	0.3	42.3	-155.5	
1436	0.25	2.75	0.03	4.63	6.68	25.20	0.797	0.0	17.8	-155.0	
1441	0.25	3.0	0.03	4.63	6.69	25.26	0.797	0.4	14.4	-156.6	
1446	0.25	3.25	0.03	4.63	6.71	25.02	0.798	0.4	25.5	-159.9	
1451	0.25	3.5	0.03	4.62	6.68	25.54	0.791	0.6	745	-158.6	
1456	0.25	3.75	0.03	4.62	6.70	25.38	0.799	0.4	25.8	-162.5	
1501	0.25	4.0	0.03	4.62	6.72	25.51	0.805	0.4	26.9	-165.3	
1506	0.25	4.25	0.03	4.62	6.71	25.55	0.805	0.4	17.2	-157.1	
1511	0.25	1.5	0.03	4.61	6.68	25.59	0.805	0.3	12.8	-150.4	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova/Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1520		SAMPLING ENDED AT: 1540		
PUMP OR TUBING DEPTH IN WELL (feet): 31.2				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-501A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-501A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-501A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-501A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-501A	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-501A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-501A	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-501A	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-501A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-501B	DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 40 to 45	STATIC DEPTH TO WATER (feet btoc): 4.71	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		PURGING INITIATED AT: 1437	PURGING ENDED AT: 1545	TOTAL VOLUME PURGED (gallons): ~4.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1438	0.24	0.24	0.03	4.85	13.66	27.13	6.152	40.5	17.4	-71.3	
1443	0.26	0.50	0.03	4.82	9.77	25.16	6.092	10.3	17.7	-27.2	
1448	0.25	0.75	0.03	4.81	8.50	24.39	6.118	6.9	20.1	-24.2	
1453	0.45	1.2	0.05	4.82	12.30	25.12	6.488	3.5	25.7	-57.3	
1458	0.55	1.75	0.05	4.81	12.00	25.35	7.672	2.9	25.8	-81.2	
1503	0.50	2.25	0.05	4.81	10.54	25.48	8.540	2.9	24.0	-67.7	
1508	0.50	2.75	0.05	4.81	12.19	25.41	8.882	2.9	23.5	-95.5	
1513	0.25	3.00	0.03	4.81	10.14	25.31	9.15	2.5	22.7	-94.2	
1518	0.25	3.25	0.03	4.81	7.48	25.39	9.336	2.3	23.0	-91.5	
--Skipped readings to call lab--											
1530	0.5	3.75	0.05	4.81	4.20	25.21	9.610	2.2	22.1	-88.7	
1535	0.25	4.0	0.03	4.81	4.63	25.16	9.675	1.7	22.3	-87.5	
1540	0.25	4.25	0.03	4.81	7.69	25.05	9.797	1.7	22.2	-90.9	
1545	0.5	4.5	0.05	4.81	7.71	24.97	9.799	1.5	22.1	-97.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1547		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 43				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-501B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-501B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-501B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-501B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-501B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-501B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-501B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-501B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-501B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor. 7470 Mercury (field filtered) sample collected due to high turbidity (above 50 NTU).											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-502A	SAMPLE ID: MW-502A DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 24.5 to 29.5	STATIC DEPTH TO WATER (feet btoc): 4.09	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.21 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 27		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 27		PURGING INITIATED AT: 1341	PURGING ENDED AT: 1445	TOTAL VOLUME PURGED (gallons): ~3.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1345	0.21	0.21	0.02	4.19	7.49	32.10	3.023	0.18	56.8	-226.4	
1350	0.2	0.51	0.02	4.19	5.64	30.53	2.705	0.06	59.0	-246.9	
1355	0.25	0.76	0.03	4.19	9.49	28.69	2.562	0.06	58.3	-261.0	
1400	0.25	1.01	0.03	4.19	9.53	29.94	2.566	0.04	59.9	-261.3	
1405	0.2	1.21	0.02	4.19	9.56	29.74	2.577	0.04	59.8	-277.8	
1410	0.2	1.41	0.02	4.19	9.57	30.00	2.601	0.03	60.0	-284.7	
1415	0.25	1.66	0.03	4.19	9.58	28.94	2.606	0.03	59.7	-296.3	
1420	0.15	1.81	0.03	4.19	9.61	30.25	2.609	0.03	62.9	-298.5	
1425	0.25	2.06	0.02	4.19	9.62	30.83	2.596	0.03	61.0	-297.4	
1430	0.15	2.21	0.02	4.19	9.61	30.73	2.576	0.02	60.9	-309.0	
1435	0.25	2.46	0.03	4.19	9.62	30.24	2.546	0.01	59.7	-315.9	
1440	0.2	2.66	0.02	4.19	9.62	30.26	2.542	0.01	60.1	-317.8	
1445	0.25	2.91	0.03	4.19	9.62	30.62	2.525	0.01	62.4	-321.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1447		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 27				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)							DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-502A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP		
MW-502A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP		
MW-502A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP		
MW-502A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP		
MW-502A	1	AG	125mL	--	--	--	SM 5310 DOC	APP		
MW-502A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered	
MW-502A	1	PE	500mL	--	--	--	2540C TDS	APP		
MW-502A	1	PE	250mL	--	--	--	2320B Alkalinity	APP		
MW-502A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. 7470 Mercury (field filtered) sample collected due to high turbidity (above 50 NTU).										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-502B	SAMPLE ID: MW-502B DATE: 8/30/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 36.4 to 41.4	STATIC DEPTH TO WATER (feet btoc): 4.03	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 38.9		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 38.9		PURGING INITIATED AT: 0903	PURGING ENDED AT: 0936	TOTAL VOLUME PURGED (gallons): ~1.85					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0906	0.24	0.24	0.02	4.11	5.55	25.70	2.900	39.2	35.2	11.4	
0911	0.2	0.54	0.02	4.11	11.10	25.11	3.715	2.3	40.8	-101.6	
0916	0.25	0.79	0.03	4.11	11.13	24.96	3.729	2.0	41.0	-116.9	
0921	0.35	1.14	0.04	4.11	11.13	24.87	3.742	1.2	39.6	-134.1	
0926	0.25	1.39	0.03	4.11	11.14	24.92	3.750	1.3	40.3	-153.6	
0931	0.2	1.59	0.02	4.11	11.13	24.99	3.750	1.1	41.7	-164.8	
0936	0.25	1.84	0.03	4.11	11.13	25.08	3.751	1.1	39.1	-171.9	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0938		SAMPLING ENDED AT: 1009	
PUMP OR TUBING DEPTH IN WELL (feet): 38.9				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-502B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-502B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-502B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-502B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-502B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-502B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-502B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-502B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-502B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-503B	SAMPLE ID: MW-503B DATE: 9/03/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 42.1 to 47.1	STATIC DEPTH TO WATER (feet btoc): 5.42	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.6		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.6		PURGING INITIATED AT: 0847	PURGING ENDED AT: 0948	TOTAL VOLUME PURGED (gallons): 5.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0907	0.25	0.25	0.03	6.08	5.91	25.09	4.430	5.1	11.4	11.3	
0912	0.5	0.75	0.05	6.47	5.36	23.00	4.117	1.9	10.7	36.5	
0917	0.5	1.25	0.05	6.3	5.18	23.08	4.160	1.5	5.26	42.0	
0922	0.75	2.0	0.08	6.29	5.03	23.08	4.398	1.4	4.72	45.2	
0927	0.75	2.75	0.08	6.29	4.98	23.09	4.466	1.4	3.24	45.5	
0932	0.75	3.5	0.08	6.29	4.98	23.04	4.609	1.3	3.55	43.7	
0937	0.75	4.25	0.08	6.29	4.96	23.12	4.770	1.2	3.26	42.6	
0942	0.75	5.0	0.08	6.29	4.95	23.12	4.850	1.2	2.98	42.9	
0947	0.5	5.5	0.05	6.29	4.96	23.14	4.923	1.2	3.24	41.8	1.00
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0952		SAMPLING ENDED AT: 1007		
PUMP OR TUBING DEPTH IN WELL (feet): 44.6				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-503B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-503B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-502B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-503B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-503B	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-503B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-503B	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-503B	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-503B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-504A	SAMPLE ID: MW-504A DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 28.8 to 33.8	STATIC DEPTH TO WATER (feet btoc): 4.65	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.22 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.3	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 31.3	PURGING INITIATED AT: 1005	PURGING ENDED AT: 1113	TOTAL VOLUME PURGED (gallons): 4.75
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1008	0.22	0.22	0.02	4.92	7.92	26.46	6.071	17.1	11.1	-107.71	
1013	0.33	0.5	0.03	4.92	7.50	26.05	6.303	1.1	11.3	-159.9	
1018	0.25	0.75	0.03	4.91	7.32	25.95	6.302	1.0	12.2	-194.3	
1023	0.5	1.25	0.05	4.91	7.29	25.94	6.288	3.7	13.2	-211.4	
1028	0.5	1.75	0.05	4.91	7.39	25.98	6.286	2.2	13.4	-224.4	
1033	0.5	2.25	0.05	4.91	7.49	25.96	6.309	1.1	13.0	-231.1	
1038	0.25	2.5	0.03	4.92	7.64	25.91	6.322	0.5	13.1	-238.6	
1043	0.5	3.0	0.05	4.94	7.72	25.72	6.332	0.5	13.1	-241.1	
1048	0.5	3.5	0.05	4.94	7.80	25.64	6.349	0.3	13.6	-247.0	
1053	0.25	3.75	0.03	4.94	8.11	25.87	6.376	0.3	15.7	-250.4	
1058	0.25	4.0	0.03	4.90	8.11	25.99	6.398	0.4	15.8	-255.4	
1103	0.25	4.25	0.03	4.91	8.08	26.13	6.449	0.2	16.8	-260.7	
1108	0.25	4.5	0.03	4.85	8.04	26.31	6.495	0.1	15.5	-262.3	
1113	0.25	4.75	0.03	4.86	8.02	26.37	6.542	0.1	16.2	-264.6	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova/Matt Scheauer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1118	SAMPLING ENDED AT: 1134
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 31.3	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-504A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-504A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-504A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-504A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-504A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-504A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-504A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-504A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-504A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-504B	SAMPLE ID: MW-504B DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 38.8 to 43.8	STATIC DEPTH TO WATER (feet btoc): 4.8	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.3		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.3		PURGING INITIATED AT: 0848	PURGING ENDED AT: 0921	TOTAL VOLUME PURGED (gallons): 2.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0851	0.24	0.24	0.02	4.86	11.10	25.66	9.960	7.0	19.7	-117.6	
0856	0.26	0.50	0.03	4.9	11.41	25.98	11.04	1.8	20.5	-238.3	
0901	0.25	0.75	0.03	4.85	11.22	26.07	11.16	1.5	19.4	-279.0	
0906	0.25	1.0	0.03	4.85	11.10	26.35	11.25	1.6	19.9	-300.6	
0911	0.25	1.25	0.03	4.85	11.21	26.50	11.41	1.9	18.6	-326.8	
0916	0.25	1.5	0.03	4.87	11.17	26.52	11.53	2.2	19.5	-339.6	
0921	0.25	2.0	0.03	4.87	11.20	26.66	11.62	2.3	19.5	-346.7	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova/Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0927		SAMPLING ENDED AT: 0950	
PUMP OR TUBING DEPTH IN WELL (feet): 41.3				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-504B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-504B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-504B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-504B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-504B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-504B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-504B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-504B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-504B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-505A	SAMPLE ID: MW-505A DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 28.1 to 33.1	STATIC DEPTH TO WATER (feet btoc): 4.28	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.22 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 30.6	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 30.6	PURGING INITIATED AT: 0858	PURGING ENDED AT: 1002	TOTAL VOLUME PURGED (gallons): ~2.00
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0902	0.22	0.22	0.02	4.33	8.80	27.01	5.299	27.6	8.80	-44.9	
0907	0.15	0.37	0.02	4.33	9.15	28.87	5.737	1.9	8.89	-150.9	
0912	0.2	0.57	0.02	4.33	9.22	26.88	6.090	1.0	8.51	-206.3	
0917	0.15	0.72	0.02	4.33	9.23	27.20	6.148	1.0	8.47	-214.7	
0922	0.2	0.92	0.02	4.33	9.20	27.16	6.302	0.7	12.9	-250.9	
0927	0.2	1.12	0.02	4.33	9.18	27.25	6.341	0.7	13.1	-257.7	
0932	0.1	1.22	0.01	4.33	9.17	27.31	6.535	0.7	14.7	-269.5	
0937	0.15	1.37	0.02	4.33	9.14	27.66	6.392	0.6	14.5	-283.7	
0942	0.25	1.62	0.03	4.33	9.13	27.68	6.412	0.5	15.6	-291.2	
0947	0.1	1.72	0.01	4.33	9.11	27.81	6.416	0.5	15.3	-299.2	
0952	0.1	1.82	0.01	4.33	9.10	28.05	6.411	0.4	16.9	-288.4	
0957	0.1	1.92	0.01	4.33	9.08	28.39	6.417	0.6	16.6	-292.7	
1002	0.1	2.02	0.01	4.33	9.08	28.54	6.429	0.4	16.8	-302.1	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1004	SAMPLING ENDED AT: 1038
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 30.6	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Y No (replaced)	DUPLICATE: No
--	--------------------------------------	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-505A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-505A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-505A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-505A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-505A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-505A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-505A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-505A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-505A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-505B	SAMPLE ID: MW-505B DATE: 8/29/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 38.6 to 43.6	STATIC DEPTH TO WATER (feet btoc): 4.87	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.1	PURGING INITIATED AT: 1048	PURGING ENDED AT: 1122	TOTAL VOLUME PURGED (gallons): 1.54
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1052	0.24	0.24	0.02	5.18	5.97	28.12	13.40	37.2	28.2	-267.8	
1057	0.30	0.59	0.03	5.18	9.92	27.66	17.63	1.3	31.40	-346.8	
1102	0.2	0.79	0.02	5.18	10.02	27.70	17.76	0.7	27.9	-374.8	
1107	0.15	0.94	0.02	5.18	10.02	27.81	17.77	0.7	26.7	-377.8	
1112	0.24	1.19	0.02	5.18	10.03	27.86	17.80	0.6	29.2	-399.9	
1117	0.2	1.39	0.02	5.18	10.04	27.85	17.78	0.6	27.8	-408.4	
1122	0.15	1.54	0.02	5.18	10.04	27.71	17.76	0.6	28.5	-410.3	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1124	SAMPLING ENDED AT: 1159
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 41.1	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-505B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-505B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-505B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-505B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-505B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-505B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-505B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-505B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-505B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-507B	SAMPLE ID: MW-507B DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 46.3 to 51.3	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51.3		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51.3		PURGING INITIATED AT: 0907	PURGING ENDED AT: 1002	TOTAL VOLUME PURGED (gallons): 2.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
--First 7 readings would not read through flow cell--											
0942	1.6	1.6	--	9.88	11.32	26.15	43.24	1.4	2.08	-195.2	
0947	0.2	1.8	0.02	9.88	11.35	25.94	43.28	2.1	2.00	-239.5	
0952	0.2	2.0	0.02	9.87	11.34	25.82	43.26	1.3	1.32	-276.0	
0957	0.2	2.2	0.02	9.88	11.34	25.78	43.35	1.2	1.71	-297.7	
1002	0.5	2.5	0.05	9.88	11.33	25.93	43.37	1.0	1.40	-311.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1002		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 51.3				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-507B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-507B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-507B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-507B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-507B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-507B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-507B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-507B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-507B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-508B	SAMPLE ID: MW-508B DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 46.2 to 51.2	STATIC DEPTH TO WATER (feet btoc): 6.35	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 58 feet) + 0.13 gallons = **0.28 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 48.7	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 48.7	PURGING INITIATED AT: 1053	PURGING ENDED AT: 1201	TOTAL VOLUME PURGED (gallons): ~3.5
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1056	0.26	0.26	0.03	7.2	4.29	24.19	43.99	22.6	3.81	-240.0	
1101	0.25	0.51	0.03	7.1	4.91	25.27	52.05	0.4	5.43	-339.2	
1106	0.25	0.76	0.03	7.08	6.09	25.7	52.20	0.1	5.16	-368.3	
1111	0.25	1.01	0.03	7.0	6.28	25.74	52.33	0.2	4.84	-392.0	
1116	0.25	1.26	0.03	7.1	6.35	25.14	52.42	0.6	4.58	-405.6	
1121	0.25	1.51	0.03	7.14	6.49	25.12	52.32	0.5	4.47	-408.9	
1126	0.25	1.76	0.03	7.1	6.55	25.21	52.29	0.5	4.61	-404.3	
1131	0.25	2.01	0.03	7.08	6.63	25.43	52.23	0.4	4.33	-403.0	
1136	0.25	2.26	0.03	7.05	6.69	25.48	52.23	0.2	4.42	-442.4	
1141	0.25	2.51	0.03	7.1	6.73	25.14	52.22	0.4	5.0	-442.0	
1146	0.25	2.76	0.03	7.18	6.82	25.29	52.06	0.4	5.54	-420.4	
1151	0.25	3.01	0.03	7.15	6.89	25.25	52.07	0.4	5.13	-424.3	
1156	0.25	3.26	0.03	7.11	6.94	25.43	52.00	0.4	5.01	-427.8	
1201	0.25	3.51	0.03	7.14	6.98	25.43	52.04	0.4	5.06	-439.8	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1447	SAMPLING ENDED AT: n/a
--	--------------------------	---------------------------------------	----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 48.7	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-508B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-508B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-508B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-508B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-508B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-508B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-508B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-508B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-508B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-510B	SAMPLE ID: MW-510B DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 40 to 45	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		PURGING INITIATED AT: 1108	PURGING ENDED AT: 1129	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1109	0.25	0.25	0.03	5.70	10.31	24.63	26.15	3.9	10.7	-288.7	
1114	0.65	0.90	0.07	5.72	10.72	24.92	27.43	1.7	8.81	-358.6	
1119	0.35	1.25	0.04	5.69	10.91	24.85	28.00	1.5	5.31	-395.7	
1124	0.5	1.75	0.05	5.67	11.11	24.94	28.60	1.4	5.77	-420.5	
1129	0.2	1.95	0.02	5.69	11.33	24.75	29.33	1.4	4.81	-435.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1130		SAMPLING ENDED AT: 1150		
PUMP OR TUBING DEPTH IN WELL (feet): 43				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-510B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-510B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-510B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-510B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP			
MW-510B	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-510B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-510B	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-510B	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-510B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-511A	SAMPLE ID: MW-511A DATE: 9/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 31.6 to 36.6	STATIC DEPTH TO WATER (feet btoc): 5.1	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.1		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.1		PURGING INITIATED AT: 0900	PURGING ENDED AT: 0950	TOTAL VOLUME PURGED (gallons): 2.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0905	0.5	0.5	0.05	5.38	9.53	24.17	2.267	0.5	538	-258.1	
0910	0.25	0.75	0.03	5.37	9.59	24.37	2.290	0.6	170	-260.8	
0915	0.25	1.0	0.03	5.36	9.60	24.49	2.308	0.6	97.7	-261.9	
0920	0.25	1.25	0.03	5.36	9.61	24.58	2.350	0.6	69.7	-264.5	
0925	0.25	1.5	0.03	5.36	9.60	24.72	2.377	0.6	59.1	-263.3	
0930	0.25	1.75	0.03	5.37	9.60	24.81	2.393	0.6	53.5	-267.1	
0935	0.25	2.0	0.03	5.36	9.60	24.84	2.413	0.6	52.43	-269.0	
0940	0.25	2.25	0.03	5.38	9.57	24.80	2.437	0.6	45.4	-269.5	
0945	0.25	2.5	0.03	5.37	9.59	25.10	2.458	0.6	43.5	-272.5	
0950	0.25	2.75	0.03	5.37	9.57	25.10	2.468	0.6	43.1	-272.5	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0955		SAMPLING ENDED AT: 1030	
PUMP OR TUBING DEPTH IN WELL (feet): 34.1				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-511A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-511A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-511A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-511A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-511A	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-511A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-511A	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-511A	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-511A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. 7410 Mercury (field filtered) sample collected due to high turbidity.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-511B	DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 43.7 to 48.7	STATIC DEPTH TO WATER (feet btoc): 5.44	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 46.2		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 46.2		PURGING INITIATED AT: 0940							
				PURGING ENDED AT: 932							
TOTAL VOLUME PURGED (gallons): ~1.85											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0853	0.25	0.25	0.03	5.73	12.16	23.92	17.82	2.4	9.67	-73.4	
0858				Readings skipped due to training							
0903											
0908	0.75	1.0	--	5.75	12.29	23.77	19.56	2.0	10.0	-187.4	
0913	0.25	1.25	0.03	5.74	12.27	23.81	21.07	1.9	9.43	-215.8	
0918	0.15	1.4	0.02	5.74	12.25	23.89	21.67	2.0	8.12	-227.5	
0923	0.4	1.80	0.04	5.75	12.20	23.88	21.08	1.6	8.05	-220.3	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova/Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0932		SAMPLING ENDED AT: 1000	
PUMP OR TUBING DEPTH IN WELL (feet): 46.2				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: Yes			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-511B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-511B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-511B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-511B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-511B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-511B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-511B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-511B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-511B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-512A	SAMPLE ID: MW-512A DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 31.4 to 36.4	STATIC DEPTH TO WATER (feet btoc): 4.48	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 33.9	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 33.9	PURGING INITIATED AT: 1122	PURGING ENDED AT: 1238	TOTAL VOLUME PURGED (gallons): ~4.0							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1128	0.22	0.22	0.02	4.75	9.92	25.79	2.113	17.8	67.8	7.5	
1133	0.25	0.47	0.03	4.76	9.83	24.87	2.092	2.4	70.9	-7.3	
1138	0.15	0.62	0.02	4.75	9.84	24.97	2.077	2.4	74.9	-22.1	
1143	0.4	1.02	0.04	4.75	9.86	24.41	2.070	2.0	75.0	-23.7	
1148	0.35	1.37	0.04	4.75	9.87	24.21	2.072	1.9	69.4	-21.9	
1153	0.35	1.72	0.04	4.75	9.91	24.63	2.071	1.8	75.0	-22.7	
1158	0.25	1.97	0.03	4.75	9.92	24.40	2.082	1.6	75.5	-19.3	
1203	0.25	2.22	0.03	4.75	9.88	24.29	2.078	1.5	73.8	-17.9	
1208	0.25	2.47	0.03	4.75	9.91	24.25	2.095	1.4	72.5	-28.7	
1213	0.25	2.72	0.03	4.75	9.88	23.67	2.097	1.4	74.5	-58.4	
1218	0.25	2.97	0.03	4.75	9.90	23.71	2.101	1.8	74.5	-30.9	
1223	0.25	3.22	0.03	4.75	9.90	23.57	2.107	1.6	74.0	-52.5	
1228	0.25	3.47	0.03	4.75	9.92	23.53	2.118	1.2	75.5	-81.8	
1233	0.25	3.72	0.03	4.75	9.94	23.90	2.128	0.8	75.0	-88.0	
1238	0.25	3.97	0.03	4.75	9.95	24.12	2.133	1.4	70.0	-66.5	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1240		SAMPLING ENDED AT: 1306	
PUMP OR TUBING DEPTH IN WELL (feet): 33.9				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-512A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-512A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-512A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-512A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-512A	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-512A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-512A	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-512A	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-512A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. 7470 Mercury (field filtered) sample collected due to high turbidity (above 50 NTU).											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-512B	SAMPLE ID: MW-512B DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 46.8 to 51.8	STATIC DEPTH TO WATER (feet btoc): 4.90	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.27 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.3	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.3	PURGING INITIATED AT: 1129	PURGING ENDED AT: 1201	TOTAL VOLUME PURGED (gallons): ~2.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1131	0.27	0.27	0.03	5.5	11.98	26.51	4.521	40.3	3.73	136.0	
1136	0.25	0.52	0.03	5.47	11.93	27.41	4.517	4.517	1.09	174.6	
1141	0.25	0.77	0.03	5.25	11.98	27.36	6.124	6.124	4.19	49.3	
1146	0.25	1.02	0.03	5.45	11.74	25.88	14.30	14.30	15.5	-76.9	
1151	0.25	1.27	0.03	5.8	11.77	26.11	13.99	13.99	13.3	-151.2	
1156	0.25	1.52	0.03	5.6	11.72	27.27	14.86	14.86	15.3	-212.2	
1201	0.25	1.77	0.03	5.6	11.73	26.94	15.43	15.43	16.6	-252.2	1.025

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1205	SAMPLING ENDED AT: 1239
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 49.3	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Y No (replaced)	DUPLICATE: No
--	--------------------------------------	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-512B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-512B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-512B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-512B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-512B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-512B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-512B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-512B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-512B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-513A	SAMPLE ID: MW-513A DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 32 to 37	STATIC DEPTH TO WATER (feet btoc): 5.52	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 43 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.5		PURGING INITIATED AT: 0900	PURGING ENDED AT: 0938	TOTAL VOLUME PURGED (gallons): 2.32					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0903	0.22	0.22	0.02	5.60	7.17	23.10	2.729	16.0	26.9	-15.5	
0908	0.4	0.62	0.04	5.60	7.15	22.57	2.797	2.7	28.9	-67.4	
0913	0.2	0.72	0.02	5.60	7.15	22.63	2.850	3.0	27.9	-70.9	
0918	0.3	1.12	0.03	5.60	7.18	22.70	3.021	4.7	28.1	-88.8	
0923	0.3	1.42	0.03	5.60	7.18	22.71	3.040	3.0	28.0	-78.4	
0928	0.3	1.72	0.03	5.60	7.18	22.64	3.077	2.7	29.6	-97.9	
0933	0.3	2.02	0.03	5.60	7.18	22.73	3.128	2.4	30.0	-104.3	
0938	0.3	2.32	0.03	5.60	7.18	22.71	3.148	2.4	30.1	-106.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0943		SAMPLING ENDED AT: 1016	
PUMP OR TUBING DEPTH IN WELL (feet): 34.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-513A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-513A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-513A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-513A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-513A	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-513A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP		Field-Filtered	
MW-513A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-513A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-513A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-513B	SAMPLE ID: MW-513B DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 41.2 to 46.2	STATIC DEPTH TO WATER (ft btoc): 5.7	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 50 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 43.7	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 43.7	PURGING INITIATED AT: 0859	PURGING ENDED AT: 0936	TOTAL VOLUME PURGED (gallons): ~1.75
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0902	0.25	0.25	0.03	6.11	11.31	24.55	7.607	1.6	25.1	-91.5	
0907	0.25	0.5	0.03	6.05	11.30	24.53	7.579	0.8	25.5	-148.2	
0912	0.25	0.75	0.03	6.1	11.31	24.50	7.601	0.8	26.6	-180.3	
0917	0.25	1.00	0.03	6.07	11.33	24.44	7.620	0.7	29.5	-220.7	
0922	0.25	1.25	0.03	6.03	11.34	24.51	7.612	0.8	30.7	-250.0	
0927	0.25	1.5	0.03	6.03	11.35	24.48	7.631	0.5	32.1	-272.2	
0932	0.25	1.75	0.03	6.03	11.34	24.65	7.668	0.5	33.8	-295.5	1.01

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0939	SAMPLING ENDED AT: 1015
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 43.7	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-513B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-513B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-513B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-513B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-513B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-513B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-513B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-513B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-513B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-514A	SAMPLE ID: MW-514A	DATE: 9/5/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 30.7 to 35.7	STATIC DEPTH TO WATER (ft btoc): 4.3	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 33.2		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 33.2		PURGING INITIATED AT: 1350							
				PURGING ENDED AT: 1430							
TOTAL VOLUME PURGED (gallons): 2.22											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1355	0.22	0.22	0.02	5.53	11.61	26.80	4.026	18.8	12.9	-18.2	
1400	0.25	0.47	0.03	5.5	11.50	25.37	4.057	3.0	11.9	9.6	
1405	--skipped readings to call lab--										
1410	0.5	0.97	0.05	5.5	11.54	25.47	4.094	3.0	12.4	29.7	
1415	0.25	1.22	0.03	5.5	11.55	25.54	4.067	1.1	12.8	26.4	
1420	0.45	1.67	0.05	5.55	11.55	25.48	4.074	0.5	12.8	17.4	
1425	0.30	1.97	0.03	5.55	11.55	25.40	4.077	0.4	12.1	-5.2	
1430	0.25	2.22	0.03	5.5	11.56	25.61	4.077	0.3	13.4	-29.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1435		SAMPLING ENDED AT: 1454	
PUMP OR TUBING DEPTH IN WELL (feet): 33.2				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-514A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-514A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-514A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-514A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP	
MW-514A	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-514A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-514A	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-514A	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-514A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-514B	SAMPLE ID: MW-514B DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 41.5 to 46.5	STATIC DEPTH TO WATER (ft btoc): 5.28	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 46.5	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 46.5	PURGING INITIATED AT: 1348	PURGING ENDED AT: 1414	TOTAL VOLUME PURGED (gallons): 1.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1351	0.25	0.25	0.03	5.4	7.24	25.38	8.133	19.1	16.5	-50.0	
1356	0.45	0.7	0.05	5.38	10.32	25.19	7.319	2.4	39.8	-84.1	
1401	0.25	0.95	0.03	5.5	10.33	25.41	7.486	1.2	35.6	-90.7	
1406	0.3	1.25	0.03	5.35	10.35	25.20	7.480	0.9	34.1	-94.9	
1411	0.25	1.5	0.03	5.35	10.37	25.73	7.573	0.8	32.9	-96.4	1.00

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1415	SAMPLING ENDED AT: 1435
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 46.5	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-514B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-514B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-514B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-514B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-514B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-514B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-514B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-514B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-514B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-515B	SAMPLE ID: MW-515B DATE: 9/3/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 46.5 to 51.5	STATIC DEPTH TO WATER (feet btoc): 6.8	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49		PURGING INITIATED AT: 1432	PURGING ENDED AT: 1510	TOTAL VOLUME PURGED (gallons): 3.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1434	0.27	0.27	0.03	7.24	11.24	25.94	17.15	5.6	5.63	-227.9	
1439	0.48	0.75	0.05	7.24	11.63	25.45	17.91	0.0	6.57	-247.7	
1444	0.5	1.25	0.05	7.24	11.51	25.45	18.03	-0.1	6.66	-280.8	
1449	0.5	1.75	0.05	7.21	11.40	25.46	18.46	0.1	6.82	-238.9	
1454	0.5	2.25	0.05	7.21	11.33	25.38	18.52	0.0	6.61	-262.2	
1449	0.5	2.75	0.05	7.21	11.28	25.45	18.66	0.0	6.98	-263.0	
1504	0.5	3.25	0.05	7.21	11.26	25.55	18.71	0.0	6.65	-259.9	
1509	0.5	3.75	0.05	7.21	11.24	25.18	18.77	0.0	6.73	-257.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheauer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1515		SAMPLING ENDED AT: 1537	
PUMP OR TUBING DEPTH IN WELL (feet): 49				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-515B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-515B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-515B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-515B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-515B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-515B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-515B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-515B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-515B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-516A	SAMPLE ID: MW-516A	DATE: 8/28/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 32.4 to 37.4	STATIC DEPTH TO WATER (feet btoc): 4.75	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 42 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.9		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.9		PURGING INITIATED AT: 1056	PURGING ENDED AT: 1118	TOTAL VOLUME PURGED (gallons): 1.6					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1058	0.23	0.23	0.2	5.0	7.70	27.50	10.85	4.0	6.38	-239..7	
1103	0.27	0.50	0.3	5.0	8.63	24.05	10.35	3.5	5.96	-257.1	
1108	0.25	0.75	0.3	5.0	8.94	23.75	10.41	3.0	5.58	-257.9	
1113	0.65	1.4	0.06	5.0	8.95	23.65	10.47	2.6	5.38	-221.0	
1118	0.2	1.6	0.02	5.0	8.95	23.65	10.47	2.2	6.22	-206.1	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1120		SAMPLING ENDED AT: 1139	
PUMP OR TUBING DEPTH IN WELL (feet): 34.9				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-516A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-516A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-516A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-516A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-516A	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-516A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-516A	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-516A	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-516A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-516B	SAMPLE ID: MW-516B DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48.2 to 53.2	STATIC DEPTH TO WATER (feet btoc): 6.5	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 54 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.7		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.7		PURGING INITIATED AT: 0853	PURGING ENDED AT: 0915	TOTAL VOLUME PURGED (gallons): 1.65					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0855	0.27	0.27	.03	6.02	7.67	23.64	39.80	9.8	10.3	-96.0	
0900	0.28	0.55	.03	6.07	7.81	23.72	44.94	2.9	4.91	-182.4	
0905	0.45	1.0	.05	6.05	7.73	23.75	41.07	1.9	3.53	-244.2	
0910	0.45	1.45	.05	6.05	7.74	23.78	40.25	1.7	3.37	-279.3	
0915	0.40	1.65	.04	6.05	7.74	23.79	40.23	1.6	3.44	-264.6	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0918		SAMPLING ENDED AT: 0932	
PUMP OR TUBING DEPTH IN WELL (feet): 50.7				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-516B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-516B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-516B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-516B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-516B	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-516B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-516B	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-516B	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-516B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-517A	SAMPLE ID: MW-517A	DATE: 9/5/2013	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 47.4 to 52.4	STATIC DEPTH TO WATER (ft btoc): 6.48	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = **0.27 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 50	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 50	PURGING INITIATED AT: 1058	PURGING ENDED AT: 1121	TOTAL VOLUME PURGED (gallons): 1.25
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1100	0.27	0.27	0.03	6.56	9.51	24.96	7.135	8.3	12.0	-122.3	
1105	0.23	0.5	0.02	6.57	9.45	24.38	7.361	0.2	10.8	-133.8	
1110	0.25	0.75	0.03	6.57	9.37	24.22	7.398	0.2	11.0	-133.8	
1115	0.25	1.00	0.03	6.57	9.33	24.18	7.436	0.3	10.4	-137.2	
1120	0.25	1.25	0.03	6.57	9.31	24.19	7.445	0.3	10.5	-145.4	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1127	SAMPLING ENDED AT: 1147
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 50	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-517A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-517A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-517A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-517A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-517A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-517A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-517A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-517A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-517A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-517B	SAMPLE ID: MW-517B DATE: 8/26/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 47.4 to 52.4	STATIC DEPTH TO WATER (ft btoc): 6.63	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 53 feet) + 0.13 gallons = **0.27 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 49.9	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 49.9	PURGING INITIATED AT: 1514	PURGING ENDED AT: 1548	TOTAL VOLUME PURGED (gallons): 2.0
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1518	.27	.27	.03	6.89	9.77	27.50	18.23	1.15	7.01	-152.8	
1523	.18	0.45	.02	6.89	9.66	25.58	22.28	0.36	7.07	-246.4	
1528	.35	0.8	.04	6.89	9.69	25.38	22.40	0.11	6.63	-277.1	
1533	.4	1.2	.04	6.89	9.67	25.48	22.49	0.12	6.79	-296.8	
1538	.3	1.5	.03	6.89	9.75	25.60	22.58	0.07	7.38	-313.2	
1543	.25	1.75	.03	6.89	9.79	25.23	22.67	0.05	7.46	-325.8	
1548	.25	2.0	.03	6.89	9.81	25.07	22.68	0.04	7.46	-341.5	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1555	SAMPLING ENDED AT: 1616
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 49.9	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: Yes
--	--	-----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-517B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-517B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-517B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-517B	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP	
MW-517B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-517B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-517B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-517B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-517B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-518A	SAMPLE ID: MW-518A DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 32.1 to 37.1	STATIC DEPTH TO WATER (feet btoc): 5.47	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.6		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 34.6		PURGING INITIATED AT: 0850	PURGING ENDED AT: 1001	TOTAL VOLUME PURGED (gallons): ~3.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0901	0.23	0.23	0.02	6.25	11.29	22.10	9.866	6.3	8.61	-173.5	
0906	0.25	0.48	0.03	6.20	9.41	22.10	9.709	3.7	8.15	-248.8	
0911	0.35	0.83	0.04	6.65	8.93	22.58	9.971	3.3	7.45	-244.5	
0916	0.40	1.23	0.04	6.05	8.77	22.81	10.29	3.3	6.8	-271.4	
0921	0.25	1.48	0.03	6.15	8.40	22.35	10.45	3.3	6.99	-307.9	
0926	0.35	1.83	0.04	6.15	8.00	22.28	10.53	3.2	5.88	-299.9	
0931	0.40	2.23	0.04	6.2	7.67	21.84	10.58	2.9	6.11	-277.0	
0936	0.25	2.48	0.03	6.05	7.64	22.52	10.67	2.9	6.78	-304.7	
0941	0.25	2.73	0.03	6.25	7.43	22.24	10.78	2.8	6.31	-346.4	
0946	0.25	2.98	0.03	6.21	7.28	22.33	10.79	2.8	7.22	-359.5	
0951	0.25	3.23	0.03	6.0	7.32	22.73	10.83	2.7	7.37	-326.1	
0956	0.25	3.48	0.03	6.0	7.34	23.04	10.89	2.5	6.31	-324.7	
1001	0.25	3.73	0.03	6.0	7.40	23.15	10.92	2.4	5.97	-318.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1000		SAMPLING ENDED AT: 1040	
PUMP OR TUBING DEPTH IN WELL (feet): 36				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-518A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-518A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-518A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-518A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-518A	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-518A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-518A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-518A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-518A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-518B	SAMPLE ID: MW-518B DATE: 8/28/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 45.3 to 50.3	STATIC DEPTH TO WATER (feet btoc): 6.36	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.8		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 47.8		PURGING INITIATED AT: 0859							
				PURGING ENDED AT: 0933							
TOTAL VOLUME PURGED (gallons): ~1.6											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
903	0.26	0.26	0.03	6.68	10.80	24.93	21.19	13.2	5.13	-229.2	
908	0.26	0.52	0.03	6.68	10.86	24.99	23.14	2.6	6.51	-310.7	
913	0.29	0.81	0.03	6.68	10.87	24.90	23.33	2.4	5.81	-342.0	
918	0.20	1.01	0.03	6.68	10.87	24.82	23.36	3.8	5.61	-354.9	
923	0.25	1.26	0.03	6.68	10.86	23.34	23.35	1.9	n/a	-368.3	
928	0.20	1.46	0.02	6.68	10.87	23.66	23.46	1.6	n/a	-381.7	
933	0.15	1.61	0.01	6.68	10.87	24.55	23.33	1.8	n/a	-388.7	1.030
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Michael Epps				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0935		SAMPLING ENDED AT: 1013	
PUMP OR TUBING DEPTH IN WELL (feet): 47.8				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-518B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-518B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-518B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-518B-	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-518B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-518B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-518B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-518B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-518B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-519A	SAMPLE ID: MW-519A DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 32.5 to 37.5	STATIC DEPTH TO WATER (feet btoc): 6.0	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.22 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35		PURGING INITIATED AT: 1531	PURGING ENDED AT: 1554	TOTAL VOLUME PURGED (gallons): 1.7					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1535	0.22	0.22	0.02	5.9	6.26	25.48	8.958	20.8	10.1	-34.3	
1539	0.48	0.7	0.05	5.95	6.36	25.46	9.028	6.2	8.48	-55.9	
1544	0.3	1.0	0.03	5.95	6.35	25.08	9.061	4.1	5.97	-66.0	
1549	0.45	1.45	0.05	6.0	6.36	25.01	9.063	3.3	4.39	-73.0	
1554	0.25	1.7	0.03	6.0	6.36	25.27	9.069	2.8	6.63	-80.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1555		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 35				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-519A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-519A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-519A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-519A	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate	APP			
MW-519B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-519A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-519A	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-519A	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-519A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-519B	SAMPLE ID: MW-519B DATE: 8/27/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 47.4 to 52.4	STATIC DEPTH TO WATER (feet btoc): 7.0	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 53 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.9		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.9		PURGING INITIATED AT: 1408	PURGING ENDED AT: 1453	TOTAL VOLUME PURGED (gallons): 1.7					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1412	0.27	0.27	0.03	9.00	6.82	30.58	56.04	2.4	n/a	-119.1	
1417	0.5	0.5	0.04	9.93	6.84	27.55	56.07	4.9	70.2	-171.8	
1422	0.2	0.7	0.02	9.90	7.21	28.33	56.29	1.8	41.3	-185.5	
1427	0.2	0.9	0.02	9.80	7.24	28.71	57.95	1.0	22.4	-193.5	
1432	0.2	1.1	0.02	9.85	7.24	28.80	58.81	0.9	10.8	-199.1	
1437	0.35	1.45	0.04	9.85	7.29	28.45	58.80	0.6	11.1	-210.0	
1442	0.3	1.75	0.03	9.85	7.30	28.33	58.80	0.6	4.54	-217.9	
1447	.25	2.0	0.02	9.85	7.35	26.96	60.25	0.5	3.51	-225.5	
1452	.25	2.25	0.02	9.85	7.35	26.67	60.36	0.6	3.40	-226.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Maria Johnson				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1453		SAMPLING ENDED AT: 1511	
PUMP OR TUBING DEPTH IN WELL (feet): 49.9				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-519B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-519B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-519B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-519B-	1	PE	125mL	--	--	--	9056A_28D Chloride & Sulfate		APP		
MW-519B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-519B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-519B-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-519B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-519B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water is brown, sulfur-like odor.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW1	SAMPLE ID: EW1 DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): n/a	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 44 to 49	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
---------------------------------------	---	--	--	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 45 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.7	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.7	PURGING INITIATED AT: 1507	PURGING ENDED AT: 1534	TOTAL VOLUME PURGED (gallons): 1.25
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1512	0.25	0.25	200	n/a	6.28	20.25	9.023	13.5	9.05	-50.7	
1517	0.25	0.50	200	n/a	6.28	20.22	9.482	5.1	8.40	-64.9	
1522	0.25	0.75	200	n/a	6.28	20.24	9.437	4.5	7.35	-67.2	
1527	0.25	1.00	200	n/a	6.27	20.10	9.272	3.9	6.90	-68.5	
1532	0.25	1.25	200	n/a	6.27	20.04	9.218	3.6	5.30	-69.2	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1540	SAMPLING ENDED AT: 1611
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 41.7	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Y No (replaced)	DUPLICATE: No
--	----------------------------------	----------------------

SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
--------------------------------	---------------------	---------------------------------------	-------------------------------	------------------------

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
EW-1	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
EW-1	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-1	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-1	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
EW-1	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-1	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-1	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-1	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-1	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-2	SAMPLE ID: EW-2 DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 32 to 56	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 45 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42		PURGING INITIATED AT: 1313	PURGING ENDED AT: 1351	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1319	0.24	0.24	200	n/a	6.70	20.42	9.412	11.1	11.1	-61.9	
1324	0.24	0.48	200	n/a	6.72	20.44	9.535	2.9	9.94	-75.5	
1329	0.24	0.72	200	n/a	6.67	20.36	9.374	2.1	9.18	-45.1	
1334	0.24	0.96	200	n/a	6.61	20.23	9.196	1.8	9.24	-54.2	
1339	0.24	1.20	200	n/a	6.63	20.29	8.994	1.6	9.83	-74.0	
1344	0.24	1.44	200	n/a	6.58	20.21	8.906	1.5	9.87	-69.5	
1349	0.24	1.68	200	n/a	6.57	20.12	8.874	1.6	9.82	-69.4	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1355		SAMPLING ENDED AT: 1422	
PUMP OR TUBING DEPTH IN WELL (feet): 42				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y TUBING No				TUBING Yes No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EW-2	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP		
EW-2	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
EW-2	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
EW-2	1	PE	125mL	--	--	--	9051 Chloride & 9038 Sulfate		APP		
EW-2	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
EW-2	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
EW-2	1	PE	500mL	--	--	--	2540C TDS		APP		
EW-2	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
EW-2	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings:-**pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-3	SAMPLE ID: EW-3
DATE: 2/27/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 39.2 to 42.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 25 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 21.6		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 21.6		PURGING INITIATED AT: 1000							
				PURGING ENDED AT: 1118							
TOTAL VOLUME PURGED (gallons): ~3.5											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDIT Y (NTUs)	ORP (mV)	SP Gravity (sg)
1003	0.20	0.20	200	n/a	9.40	18.42	22.22	10.1	18.5	-142.2	
1008	0.20	0.40	200	n/a	8.20	18.42	22.30	7.7	14.4	-168.8	
1013	0.20	0.60	200	n/a	5.90	19.34	22.15	5.9	17.7	-135.6	
1018	0.20	0.80	200	n/a	5.10	20.33	22.19	5.0	16.2	-179.7	
1023	0.20	1.0	200	n/a	9.88	20.31	22.25	4.5	14.0	-195.7	
1028	0.20	1.2	200	n/a	9.87	20.26	22.25	4.2	14.7	-177.7	
1033	0.20	1.4	200	n/a	9.86	20.28	22.24	3.8	14.3	-149.0	
1038	0.20	1.6	200	n/a	9.87	20.18	22.25	3.0	13.6	-191.2	
1043	0.20	1.8	200	n/a	9.85	20.31	22.22	2.9	14.4	-128.5	
1048	0.20	2.0	200	n/a	9.85	20.42	22.21	2.3	15.7	-84.2	
1053	0.20	2.2	200	n/a	9.85	20.60	22.23	2.1	16.1	-84.4	
1058	0.20	2.4	200	n/a	9.85	20.34	22.26	2.0	17.2	-171.7	
1103	0.20	2.6	200	n/a	9.86	20.42	22.22	1.8	18.2	-198.9	
1108	0.20	2.8	200	n/a	9.84	20.37	22.23	1.7	17.4	-63.2	
1113	0.20	3.0	200	n/a	9.85	20.28	22.23	1.5	17.6	-103.2	
1118	0.20	3.2	200	n/a	9.84	20.25	22.24	1.5	19.0	-132.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1522		SAMPLING ENDED AT: 1539	
PUMP OR TUBING DEPTH IN WELL (feet): 21.6				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINER S	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EW-3	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg Mercury	APP			
EW-3	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
EW-3	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
EW-3	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
EW-3	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
EW-3	2	PE	250mL	NaOH, Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
EW-3	1	PE	500mL	--	--	--	2540C TDS	APP			
EW-3	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
EW-3	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-4	SAMPLE ID: EW-4 DATE: 2/4/2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 38.2 to 43.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 38 feet) + 0.13 gallons = **0.23 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 35.17	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 35.17	PURGING INITIATED AT: 1142	PURGING ENDED AT: 1349	TOTAL VOLUME PURGED (gallons): ~6
---	---	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1148	0.23	0.23	200	n/a	8.73	18.55	8.661	1.8	30.3	-104.6	
1153	0.23	0.46	200	n/a	8.72	19.09	8.671	1.4	29.1	-241.7	
1158	0.23	0.69	200	n/a	8.71	19.12	8.660	1.1	26.6	-245.5	
1203	0.23	0.92	200	n/a	8.66	19.13	8.631	0.9	26.1	-280.6	
1208	0.23	1.15	200	n/a	8.54	19.19	8.557	0.7	26.2	-266.4	
1213	0.23	1.38	200	n/a	8.47	19.30	8.484	0.8	25.5	-263.3	
1218	0.23	1.61	200	n/a	8.34	19.30	8.441	0.7	25.2	-302.3	
1223	0.23	1.84	200	n/a	8.06	19.24	8.333	0.8	25.2	-286.4	
1228	0.23	2.07	200	n/a	7.86	19.29	8.294	0.8	24.3	-268.8	
1233	0.23	2.30	200	n/a	7.65	19.37	8.234	1.0	24.0	-285.5	
1238	0.23	2.53	200	n/a	7.52	19.40	8.192	0.9	23.6	-287.3	
1243	0.23	2.76	200	n/a	7.39	19.43	8.147	0.7	24.0	-280.7	
1248	0.23	2.99	200	n/a	7.26	19.24	8.100	0.7	24.2	-294.2	
1253	0.23	3.22	200	n/a	7.22	19.22	8.050	0.8	23.0	-287.5	
1258	0.23	3.45	200	n/a	7.15	19.20	7.975	0.8	22.2	-306.5	
1303	0.23	3.68	200	n/a	7.11	19.25	7.943	0.8	22.5	-296.5	
1308	0.23	3.91	200	n/a	7.09	19.31	7.925	0.9	21.5	-316.3	
1313	0.23	4.14	200	n/a	7.07	19.18	7.887	0.9	21.6	-297.7	
1318	0.23	4.37	200	n/a	7.06	19.22	7.875	0.9	22.3	-297.3	
1323	0.23	4.60	200	n/a	7.04	19.16	7.807	0.8	21.8	-290.3	
1328	0.23	4.83	200	n/a	7.02	19.15	7.786	1.0	21.8	-327.4	
1333	0.23	5.06	200	n/a	7.01	19.17	7.756	0.9	20.8	-335.8	
1338	0.23	5.29	200	n/a	7.01	19.20	7.740	1.0	21.4	-308.3	
1343	0.23	5.52	200	n/a	7.00	19.26	7.714	0.9	21.5	-316.3	
1348	0.23	5.75	200	n/a	7.01	19.32	7.725	0.9	20.7	-337.3	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1352	SAMPLING ENDED AT: 1428
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 35.17	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPME N T CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-4	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg Mercury	APP	
EW-4	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-4	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-4	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
EW-4	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-4	2	PE	250mL	NaOH	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-4	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-4	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-4	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-5	SAMPLE ID: EW-5 DATE: 3/5/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.1 to 51.1	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 41.02	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 41.02	PURGING INITIATED AT: 0842	PURGING ENDED AT: 0923	TOTAL VOLUME PURGED (gallons): 2.0
---	---	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0845	0.24	0.24	200	n/a	10.74	18.31	35.05	11.2	183	-449.4	
0850	0.24	0.48	200	n/a	10.76	18.27	35.55	6.2	122	-509.4	
0855	0.24	0.72	200	n/a	10.76	18.53	35.31	4.9	42.8	-445.7	
0900	0.24	0.96	200	n/a	10.75	18.64	35.32	4.0	18.7	-497.8	
0905	0.24	1.20	200	n/a	10.74	18.70	35.32	3.4	12.4	-513.6	
0910	0.24	1.44	200	n/a	10.74	18.60	35.37	3.2	9.18	-472.0	
0915	0.24	1.68	200	n/a	10.74	18.52	35.45	3.0	9.06	-520.2	
0920	0.24	1.92	200	n/a	10.74	18.52	35.45	2.7	9.04	-477.7	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0929	SAMPLING ENDED AT: 0955
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 41.02	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-5	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-5	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-5	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-5	1	PE	125mL	--	--	--	9251 Chloride & 9038Sulfate	APP	
EW-5	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-5	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-5	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-5	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-5	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: EW-6	SAMPLE ID: EW-6	DATE: 2/28/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.2 to 51.2	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 35 feet) + 0.13 gallons = **0.22 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 31.75	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 31.75	PURGING INITIATED AT: 0931	PURGING ENDED AT: 1000	TOTAL VOLUME PURGED (gallons): ~1.5
---	---	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0937	0.22	0.22	200	n/a	7.42	19.54	57.21	13.5	3.47	-94.3	
0942	0.22	0.44	200	n/a	7.43	20.12	57.23	6.7	3.34	-94.2	
0947	0.22	0.66	200	n/a	7.42	20.16	57.31	4.7	3.75	-96.0	
0952	0.22	0.88	200	n/a	7.42	20.44	57.36	3.2	3.60	-104.8	
0957	0.22	1.10	200	n/a	7.41	20.50	57.25	2.8	3.40	-136.6	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1005	SAMPLING ENDED AT: 1025
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 31.75	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-6	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
EW-6	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-6	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-6	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
EW-6	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-6	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-6	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-6	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-6	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-8	SAMPLE ID: EW-8 DATE: 3/3/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 46.6 to 51.6	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	--	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 46 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 43.13	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 43.13	PURGING INITIATED AT: 1345	PURGING ENDED AT: 1525	TOTAL VOLUME PURGED (gallons): 4.75
---	---	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1353	0.25	0.25	200	n/a	9.11	21.94	9.225	1.4	15.4	-219.2	
1357	0.25	0.50	200	n/a	9.11	21.84	9.222	1.4	14.5	-242.0	
1403	0.25	0.75	200	n/a	9.10	22.00	9.209	1.3	14.3	-227.9	
1408	0.25	1.00	200	n/a	9.10	22.06	9.202	1.2	14.4	-219.5	
1413	0.25	1.25	200	n/a	9.10	22.25	9.181	1.3	13.9	-221.9	
1418	0.25	1.50	200	n/a	9.10	22.25	9.177	1.2	13.9	-225.4	
1423	0.25	1.75	200	n/a	9.11	22.02	9.182	1.2	13.1	-242.7	
1428	0.25	2.00	200	n/a	9.10	21.99	9.175	1.1	12.9	-261.9	
1433	0.25	2.25	200	n/a	9.10	22.15	9.182	1.0	12.9	-259.2	
1438	0.25	2.50	200	n/a	9.10	22.25	9.206	0.9	12.9	-270.7	
1443	0.25	2.75	200	n/a	9.09	22.11	9.264	1.0	12.6	-318.7	
1448	0.25	3.00	200	n/a	9.09	22.04	9.281	1.0	12.1	-326.0	
1453	0.25	3.25	200	n/a	9.10	22.07	9.325	0.7	11.1	-334.7	
1458	0.25	3.50	200	n/a	9.09	22.30	9.350	0.8	10.7	-296.7	
1503	0.25	3.75	200	n/a	9.10	22.23	9.420	0.8	10.5	-335.7	
1508	0.25	4.00	200	n/a	9.09	21.88	9.480	0.7	10.3	-361.5	
1513	0.25	4.25	200	n/a	9.09	21.76	9.503	0.7	9.88	-356.7	
1518	0.25	4.50	200	n/a	9.09	21.82	9.512	0.7	9.71	-286.4	
1523	0.25	4.75	200	n/a	9.09	22.00	9.549	0.6	9.69	-265.2	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1527	SAMPLING ENDED AT: 1549
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 43.13	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
EW-8	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg Mercury	APP	
EW-8	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
EW-8	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
EW-8	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
EW-8	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
EW-8	2	PE	250mL	NaOH	--	--	SM4500 Sulfide	APP	Field-Filtered
EW-8	1	PE	500mL	--	--	--	2540C TDS	APP	
EW-8	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
EW-8	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-9	SAMPLE ID: EW-9 DATE: 2/04/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 47 to 52	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44.1		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 44.1		PURGING INITIATED AT: 1045							
				PURGING ENDED AT: 1111							
TOTAL VOLUME PURGED (gallons): 1.50											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0942	0.25	0.25	200	n/a	7.08	18.68	5.723	3.6	8.66	-177.6	
0947	0.25	0.50	200	n/a	7.06	18.57	5.353	2.5	9.04	-198.2	
0952	0.25	0.75	200	n/a	7.06	18.58	5.277	1.8	28.7	-214.7	
0957	0.25	1.00	200	n/a	7.05	18.68	5.370	1.2	36.5	-239.7	
1002	0.25	1.25	200	n/a	7.03	18.78	5.328	0.9	23.0	-248.7	
1007	0.25	1.50	200	n/a	6.98	19.12	5.414	0.6	20.2	-254.4	
1012	0.25	1.75	200	n/a	6.89	19.06	6.006	0.8	11.7	-266.1	
1017	0.25	2.00	200	n/a	6.85	19.01	6.273	0.8	12.4	-265.9	
1022	0.25	2.25	200	n/a	6.75	19.00	6.934	0.9	9.3	-265.6	
1027	0.25	2.50	200	n/a	6.74	19.05	7.051	0.9	8.71	-266.2	
1032	0.25	2.75	200	n/a	6.73	19.13	7.260	1.1	8.7	-268.5	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1035		SAMPLING ENDED AT: 1057	
PUMP OR TUBING DEPTH IN WELL (feet): 44.1				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EW-9	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP			
EW-9	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
EW-9	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
EW-9	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
EW-9	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
EW-9	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
EW-9	1	PE	500mL	--	--	--	2540C TDS	APP			
EW-9	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
EW-9	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-10	SAMPLE ID: EW-10 DATE: 3/03/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 45.3 to 50.3	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 45 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.25		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.25		PURGING INITIATED AT: 1250							
				PURGING ENDED AT: 1314							
TOTAL VOLUME PURGED (gallons): 4.75											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1018	0.25	0.25	200	n/a	7.33	20.84	11.58	7.7	12.2	-121.9	
1023	0.25	0.50	200	n/a	7.35	20.81	11.59	3.1	11.1	-131.7	
1228	0.25	0.75	200	n/a	7.37	20.84	11.55	2.0	11.4	-139.5	
1033	0.25	1.00	200	n/a	7.38	20.88	11.52	1.6	11.2	-156.8	
1038	0.25	1.25	200	n/a	7.38	20.89	11.51	1.5	11.5	-164.9	
1043	0.25	1.50	200	n/a	7.38	20.88	11.51	1.3	12.0	-177.1	
1048	0.25	1.75	200	n/a	7.37	20.97	11.50	1.3	11.6	-168.6	
1053	0.25	2.00	200	n/a	7.37	20.99	11.51	1.2	10.4	-181.8	
1058	0.25	2.25	200	n/a	7.37	20.94	11.51	1.2	10.6	-195.7	
1103	0.25	2.50	200	n/a	7.37	20.94	11.51	1.2	10.4	-192.2	
1108	0.25	2.75	200	n/a	7.37	20.96	11.51	1.1	10.9	-207.3	
1113	0.25	3.00	200	n/a	7.36	21.02	11.52	1.1	10.9	-213.8	
1118	0.25	3.25	200	n/a	7.36	21.10	11.53	0.9	10.6	-216.8	
1123	0.25	3.50	200	n/a	7.36	21.15	11.54	1.1	10.6	-216.9	
1128	0.25	3.75	200	n/a	7.36	21.17	11.55	1.1	10.1	-223.3	
1133	0.25	4.00	200	n/a	7.35	21.21	11.55	1.1	9.98	-227.4	
1138	0.25	4.25	200	n/a	7.35	21.20	11.56	1.1	10.1	-230.0	
1143	0.25	4.50	200	n/a	7.34	21.24	11.56	1.1	10.1	-234.8	
1148	0.25	4.75	200	n/a	7.34	21.28	11.56	1.0	9.95	-238.5	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1152		SAMPLING ENDED AT: 1215	
PUMP OR TUBING DEPTH IN WELL (feet): 42.25				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
EW-10	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP			
EW-10	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
EW-10	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
EW-10	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
EW-10	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
EW-10	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
EW-10	1	PE	500mL	--	--	--	2540C TDS	APP			
EW-10	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
EW-10	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: EW-11	SAMPLE ID: EW-11 DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 45.5 to 50.5	STATIC DEPTH TO WATER (ft btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 46 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.6		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 42.6		PURGING INITIATED AT: 1135							
				PURGING ENDED AT: 1200							
TOTAL VOLUME PURGED (gallons): 1.25											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1138	0.25	0.25	200	n/a	6.55	20.70	35.85	7.6	8.76	-44.7	
1143	0.25	0.50	200	n/a	6.52	21.02	35.66	2.8	4.28	-76.4	
1148	0.25	0.75	200	n/a	6.51	21.13	35.49	2.9	1.71	-89.7	
1153	0.25	1.00	200	n/a	6.50	21.16	35.39	2.6	1.32	-93.9	
1158	0.25	1.25	200	n/a	6.49	21.25	35.44	2.7	1.29	-96.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Scheuer				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1212		SAMPLING ENDED AT: 1242	
PUMP OR TUBING DEPTH IN WELL (feet): 42.6				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: Yes			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
EW-11	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP		
EW-11	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP		
EW-11	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP		
EW-11	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP		
EW-11	1	AG	125mL	--	--	--	SM 5310 DOC	APP		
EW-11	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered	
EW-11	1	PE	500mL	--	--	--	2540C TDS	APP		
EW-11	1	PE	250mL	--	--	--	2320B Alkalinity	APP		
EW-11	1	AG	125mL	HCl	--	--	SM5310 TOC	APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Depth of water cannot be recorded with recovery wells.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-1A	SAMPLE ID: MW-1A	DATE: 2/24/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 19 to 24.4	STATIC DEPTH TO WATER (ft btoc): 8.14	PURGE PUMP TYPE OR BAILER: PP							
 tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 25 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 20.5		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 20.5		PURGING INITIATED AT: 1521							
				PURGING ENDED AT: 1552							
TOTAL VOLUME PURGED (gallons): 2.75											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1526	0.25	0.25	350	8.38	6.27	20.79	16.60	6.3	4.91	-147.7	
1531	0.50	0.75	350	8.38	6.27	20.66	16.70	2.9	3.17	-156.3	
1536	0.50	1.25	350	8.40	6.27	20.66	16.71	2.2	2.74	-166.2	
1541	0.5	1.75	350	8.42	6.27	20.67	16.74	1.8	2.56	-166.7	
1546	0.5	2.25	350	8.43	6.27	20.65	16.75	1.7	2.18	-165.7	
1551	0.5	2.75	350	8.43	6.27	20.59	16.82	1.6	2.24	-170.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Veter				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1555		SAMPLING ENDED AT: 1610	
PUMP OR TUBING DEPTH IN WELL (feet): 20.5				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-1A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-1A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-1A	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-1A	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP	
MW-1A	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-1A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-1A	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-1A	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-1A	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection. Purge water brown, sulfur-like odor.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-1B	SAMPLE ID: MW-1B	DATE: 2/24/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 34.5 to 39.5	STATIC DEPTH TO WATER (feet btoc): 8.3	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 40 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		PURGING INITIATED AT: 1526	PURGING ENDED AT: 1556	TOTAL VOLUME PURGED (gallons): 3.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1530	0.1	0.1	200	8.56	6.78	21.95	7.091	163.4	18.9	-45.1	
1535	0.5	0.6	250	8.5	6.12	21.78	6.588	25.6	17.4	-73.4	
1540	0.9	1.5	300	8.5	6.07	21.64	6.524	19.4	13.2	-72.0	
1545	--skipped due to training--										
1550	1.0	2.5	300	8.5	6.05	22.03	6.095	14.3	13.5	-60.7	
1555	1.0	3.5	300	8.5	6.03	21.52	6.311	13.1	15.2	-65	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1600		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 35.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-1B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-1B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-1B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-1B	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-1B	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-1B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-1B	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-1B	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-1B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-1C	SAMPLE ID: MW-1C DATE: 2/24/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48 to 53	STATIC DEPTH TO WATER (feet btoc): 9.67	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 55 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50.5		PURGING INITIATED AT: 1343	PURGING ENDED AT: 1410	TOTAL VOLUME PURGED (gallons): 2.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1345	0.2	0.2	150	9.82	7.09	22.40	47.99	28.2	3.64	-138.9	
1350	0.2	0.4	150	9.83	6.66	22.09	49.93	10.7	10.7	-161.2	
1355	0.6	1.0	200	9.85	6.65	21.92	50.77	7.9	7.9	-171.8	
1400	0.4	1.0	200	9.83	6.59	21.96	51.04	6.0	6.0	-170.6	
1405	0.5	1.5	200	9.85	6.55	21.90	51.12	5.2	5.2	-194.2	
1410	0.5	2.0	200	9.85	6.64	21.91	51.14	4.8	4.8	-197.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1412		SAMPLING ENDED AT: 1447	
PUMP OR TUBING DEPTH IN WELL (feet): 50.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: Yes			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-1C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-1C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-1C	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-1C	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-1C	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-1C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-1C	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-1C	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-1C	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2A	SAMPLE ID: MW-2A DATE: 3/5/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 18 to 23	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 26 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 21.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 21.5		PURGING INITIATED AT: 0848	PURGING ENDED AT: 0919	TOTAL VOLUME PURGED (gallons): 1.6					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0854	0.2	0.2	230	8.25	7.17	14.16	7.617	27.9	7.58	-164.6	
0859	0.2	0.4	230	8.24	7.18	14.81	7.705	17.3	6.99	-188.5	
0904	0.3	0.7	230	8.24	7.19	14.82	7.743	13.2	n/a	-199.3	
0909	0.3	1.0	230	8.24	7.20	14.91	7.766	9.4	7.14	-210.2	
0914	0.3	1.3	230	8.24	7.21	15.21	7.806	8.0	7.64	-215.6	
0919	0.3	1.6	230	8.24	7.21	14.85	7.828	6.7	7.54	-218.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0919		SAMPLING ENDED AT: 0945	
PUMP OR TUBING DEPTH IN WELL (feet): 21.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-2A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-2A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-2A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-2A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-2A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-2A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-2A-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-2A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-2A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2B	DATE: 3/04/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 34.5 to 39.5	STATIC DEPTH TO WATER (feet btoc): 7.94	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35.5		PURGING INITIATED AT: 1537	PURGING ENDED AT: 1644	TOTAL VOLUME PURGED (gallons): ~6.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1544	0.3	0.3	350	8.04	6.25	19.04	6.281	11.7	11.2	-44.1	
1549	0.45	0.75	275	8.01	6.17	18.81	6.227	9.2	6.56	-45.0	
1554	0.5	1.25	275	8.01	6.15	18.41	6.216	8.8	6.42	-40.8	
1559	0.5	1.75	275	8.03	6.16	18.35	6.197	8.1	7.61	-41.4	
1604	0.5	2.25	275	8.03	6.16	18.49	6.200	7.4	4.90	-42.5	
1609	0.5	2.75	275	8.03	6.16	18.54	6.189	7.0	5.75	-42.0	
1614	0.5	3.25	275	8.03	6.17	18.54	6.190	6.4	6.26	-42.3	
1619	0.5	3.75	275	8.03	6.16	18.39	6.179	6.4	5.37	-42.3	
1624	0.5	4.25	275	8.03	6.16	18.57	6.184	5.7	4.66	-42.9	
1629	0.5	4.75	275	8.03	6.16	18.73	6.187	5.9	4.37	-43.5	
1634	0.5	5.25	275	8.03	6.17	18.42	6.184	5.1	4.47	-41.8	
1639	0.5	5.75	275	8.03	6.17	18.61	6.181	5.3	4.95	-43.0	
1644	0.5	6.25	275	8.03	6.17	18.55	6.171	5.1	4.19	-42.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1644		SAMPLING ENDED AT: 1700	
PUMP OR TUBING DEPTH IN WELL (feet): 35.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-2B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-2B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-2B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-2B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-2B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-2B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-2B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-2B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-2B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-2C	SAMPLE ID: MW-2C DATE: 2/24/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 48.75 to 53.75	STATIC DEPTH TO WATER (feet btoc): 9.08	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 56 feet) + 0.13 gallons = **0.27 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51	PURGING INITIATED AT: 1342	PURGING ENDED AT: 1403	TOTAL VOLUME PURGED (gallons): ~1.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1346	0.1	0.1	120	10.35	6.53	23.04	50.53	5.1	54.2	-43.3	
1351	0.25	0.26	120	10.35	6.52	22.52	50.66	2.2	21.5	-132.3	
1356	0.20	0.46	120	10.35	6.49	22.62	50.95	2.0	21.7	-135.9	
1402	0.20	0.66	120	10.35	6.49	23.02	51.34	1.8	19.9	-138.0	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1405	SAMPLING ENDED AT: 1438
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 51	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-2C	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-2C	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-2C	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-2C	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-2C	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-2C	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-2C	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-2C	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-2C	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-3A	SAMPLE ID: MW-3A DATE: 3/5/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 18 to 23	STATIC DEPTH TO WATER (feet btoc): 8.00	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 26 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 21.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 21.5		PURGING INITIATED AT: 1018	PURGING ENDED AT: 1108	TOTAL VOLUME PURGED (gallons): 1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1023	0.2	0.2	210	9.86	6.61	15.24	38.87	20.0	8.60	-191.3	
1028	0.1	0.3	110	9.99	6.61	15.12	39.19	11.4	14.1	-214.8	
1033	0.15	0.45	110	9.96	6.61	14.57	39.20	9.2	13.2	-220.8	
1038	0.15	0.6	110	9.98	6.60	14.20	39.18	7.8	16.3	-223.8	
1043	0.15	0.75	110	10.00	6.60	14.31	39.15	6.7	13.5	-227.6	
1048	0.15	0.9	110	10.04	6.60	14.07	39.03	6.1	12.9	-229.0	
1053	0.15	1.05	110	10.05	6.59	13.98	38.93	5.7	10.1	-230.0	
1058	0.15	1.2	110	10.07	6.59	14.15	38.71	5.1	9.65	-232.7	
1103	0.15	1.35	110	10.10	6.59	14.24	38.44	4.8	9.71	-234.2	
1108	0.15	1.5	110	10.09	6.58	14.19	38.16	4.3	8.34	-234.4	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1108		SAMPLING ENDED AT: 1150	
PUMP OR TUBING DEPTH IN WELL (feet): 21.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-3A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-3A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-3A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-3A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-3A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-3A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-3A-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-3A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-3A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-105A	DATE: 3/5/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 10.7 to 20.7	STATIC DEPTH TO WATER (feet btoc): 7.41	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 21 feet) + 0.13 gallons = **0.18 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 15.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 15.5	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1010	TOTAL VOLUME PURGED (gallons): ~2.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0945	0.2	0.2	170	7.46	6.03	16.63	0.483	n/a	5.87	-38.2	
0950	0.3	0.5	170	7.46	6.08	16.83	0.465	26.3	4.35	-33.8	
0955	0.3	0.8	170	7.46	5.95	16.69	0.457	12.2	3.60	-25.5	
1000	0.3	1.1	170	7.46	5.97	17.00	0.455	8.3	3.60	-34.3	
1005	0.3	1.4	170	7.46	5.99	17.11	0.454	7.1	4.52	-34.5	
1010	0.3	1.7	170	7.46	5.99	17.21	0.455	5.8	4.30	-43.9	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1015	SAMPLING ENDED AT: ~1050
--	--------------------------	---------------------------------------	------------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 15.5	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-105A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-105A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-105A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-105A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-105A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-105A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-105A-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-105A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-105A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-105B	SAMPLE ID: MW-105B DATE: 3/5/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 26.5 to 31.5	STATIC DEPTH TO WATER (feet btoc): 7.53	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 44 feet) + 0.13 gallons = **0.21 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 30.7	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 30.7	PURGING INITIATED AT: 0816	PURGING ENDED AT: 0855	TOTAL VOLUME PURGED (gallons): ~2.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0820	0.2	0.2	150	7.61	6.62	17.01	1.090	42.3	7.73	-42.9	
0825	0.2	0.4	150	7.61	6.56	16.82	1.199	23.3	4.76	-67.4	
0830	0.2	0.6	150	7.61	6.53	17.48	1.173	13.6	3.95	-66.3	
0835	0.2	0.8	150	7.61	6.42	17.48	1.159	11.9	4.03	-60.4	
0840	0.2	1.0	150	7.61	6.45	17.66	1.160	10.4	3.94	-59.3	
0845	0.3	1.3	150	7.61	6.42	17.71	1.163	9.4	3.84	-53.7	
0850	0.2	1.5	150	7.61	6.42	17.79	1.167	8.8	3.37	-50.5	
0855	0.3	1.8	150	7.61	6.39	17.87	1.168	8.1	3.17	-50.6	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0900	SAMPLING ENDED AT: 0940
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 27.65	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-105B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-105B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-105B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-105B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-105B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-105B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-105B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-105B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-105B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-105C	SAMPLE ID: MW-105C		DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 1/4		WELL SCREEN INTERVAL DEPTH (feet btoc): n/a		STATIC DEPTH TO WATER (feet btoc): 7.62		PURGE PUMP TYPE OR BAILER: PP				
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 49 feet) + 0.13 gallons = 0.26 gallons												
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.8			FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.8			PURGING INITIATED AT: 0907		PURGING ENDED AT: 0942		TOTAL VOLUME PURGED (gallons): ~2.5		
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)	
0912	0.2	0.2	200	7.98	7.51	19.89	5.796	41.1	27.8	67.9		
0917	0.4	0.6	200	n/a	6.71	20.42	6.558	27.2	35.3	-51.1		
0922	0.4	1.0	200	7.95	6.62	20.42	6.703	13.4	5.55	-66.8		
0927	0.4	1.4	200	7.98	6.64	20.42	6.814	10.7	2.28	-64.3		
0932	0.4	1.8	200	7.98	6.65	20.25	6.922	9.2	2.24	-54.4		
0937	0.4	2.2	200	7.98	6.67	20.40	6.993	8.0	2.71	-46.9		
0942	0.4	2.2	200	7.98	6.68	20.54	7.080	7.2	5.14	-48.4	1.01	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser												
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)												

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0945		SAMPLING ENDED AT: 0955		
PUMP OR TUBING DEPTH IN WELL (feet): 44.8				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter					
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-105C-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP				
MW-105C-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP				
MW-105C-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP				
MW-105C-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP				
MW-105C-	1	AG	125mL	--	--	--	SM 5310 DOC	APP				
MW-105C-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered			
MW-105C-	1	PE	500mL	--	--	--	2540C TDS	APP				
MW-105C-	1	PE	250mL	--	--	--	2320B Alkalinity	APP				
MW-105C-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP				
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-112C	SAMPLE ID: MW-112C DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 49.6 to 51.6	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 51 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.6		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49.6		PURGING INITIATED AT: 1025	PURGING ENDED AT: 1110	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1037	0.5	0.5	200	6.42	11.23	18.07	39.69	n/a	10.9	-435.7	
1042	0.25	0.75	200	6.43	11.37	18.20	39.65	14.6	10.9	-473.2	
1047	0.25	1.0	200	6.44	11.37	18.15	39.58	8.3	11.1	-484.8	
1052	0.25	1.25	200	6.45	11.36	18.17	39.14	5.9	12.1	-488.2	
1057	0.25	1.5	200	6.46	11.35	18.35	39.22	4.8	12.9	-491.5	
1102	0.25	1.75	200	6.47	11.32	18.36	39.00	4.2	13.6	-494.0	
1107	0.25	2.0	200	6.48	11.29	18.50	38.75	3.7	14.1	-497.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1110		SAMPLING ENDED AT: 1132	
PUMP OR TUBING DEPTH IN WELL (feet): 49.6				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-112C-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-112C-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-112C-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-112C-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-112C-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-112C-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-112C-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-112C-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-112C-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-113C	SAMPLE ID: MW-113C DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 45.2 to 50.2	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 49 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 45		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 45		PURGING INITIATED AT: 0903	PURGING ENDED AT: 0943	TOTAL VOLUME PURGED (gallons): 3.35					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0908	0.25	0.25	250	8.75	9.09	18.71	51.06	9.1	23.6	-180.5	
0913	0.75	1.00	210	9.07	9.11	18.83	51.68	5.3	17.3	-222.8	
0918	0.5	1.50	210	8.89	9.10	18.54	51.70	4.6	13.9	-229.6	
0923	0.5	2.00	210	8.76	9.10	18.28	51.70	3.5	10.5	-167.2	
0928	0.5	2.5	210	8.69	9.09	18.28	51.65	3.2	7.51	-166.8	
0933	0.25	2.75	210	8.62	9.09	18.24	51.64	2.4	6.30	-237.3	
0938	0.35	3.10	210	8.59	9.08	18.29	51.63	2.5	6.08	-246.0	
0943	0.25	3.35	210	8.57	9.08	18.30	51.62	2.5	5.46	-247.1	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0943		SAMPLING ENDED AT: 1032	
PUMP OR TUBING DEPTH IN WELL (feet): 45				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: Yes							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-113C-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-113C-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-113C-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-113C-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-113C-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-113C-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-113C-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-113C-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-113C-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115A	SAMPLE ID: MW-115A DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 17.5 to 22.5	STATIC DEPTH TO WATER (feet btoc): 7.9	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 25 feet) + 0.13 gallons = 0.20 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 20		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 20		PURGING INITIATED AT: 1219	PURGING ENDED AT: 1252	TOTAL VOLUME PURGED (gallons): ~2.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1222	0.2	0.2	170	8.26	8.53	16.83	5.877	134.0	6.71	-146.7	
1227	0.3	0.5	170	8.3	7.88	17.53	5.357	22.9	7.24	-184.9	
1232	0.2	0.7	150	8.23	7.55	17.49	5.067	10.7	6.30	-200.4	
1237	0.3	1.0	170	8.28	7.44	17.70	4.914	7.4	6.48	-222.9	
1242	0.3	1.3	170	8.28	7.40	17.83	4.851	5.5	6.70	-197.3	
1247	0.3	1.6	170	8.3	7.38	17.90	4.843	4.5	7.50	-213.7	
1252	0.4	2.0	170	8.3	7.36	17.64	4.828	4.1	7.34	-200.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1300		SAMPLING ENDED AT: 1307		
PUMP OR TUBING DEPTH IN WELL (feet): 20				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-115A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-115A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-115A-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-115A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-115A-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-115A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-115A-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-115A-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-115A-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115B	SAMPLE ID: MW-115B DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 33.2 to 35.2	STATIC DEPTH TO WATER (ft btoc): 7.45	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 40 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 34.7	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 34.7	PURGING INITIATED AT: 1343	PURGING ENDED AT: 1413	TOTAL VOLUME PURGED (gallons): ~2.0							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1348	0.2	0.2	200	7.53	6.74	18.22	4.365	27.7	8.49	-107.5	
1353	0.4	0.6	200	7.51	6.25	18.45	4.816	14.7	5.45	-123.2	
1358	0.4	1.0	180	7.51	6.16	18.09	4.840	7.4	6.51	-141.3	
1403	0.3	1.3	180	7.51	6.12	18.09	4.823	6.0	4.69	-146.1	
1408	0.3	1.6	180	7.52	6.11	18.29	4.793	5.3	4.01	-153.4	
1413	0.3	2.0	180	7.52	6.08	18.17	4.779	5.2	3.83	-150.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1415		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 34.7				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-115B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-115B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-115B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-115B	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP	
MW-115B	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-115B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-115B	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-115B	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-115B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-115C	SAMPLE ID: MW-115C DATE: 2/24/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 44.9 to 46.9	STATIC DEPTH TO WATER (feet btoc): 8.51	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 50 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 45		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 45		PURGING INITIATED AT: 1504	PURGING ENDED AT: 1522	TOTAL VOLUME PURGED (gallons): ~1.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1506	0.2	0.2	120	9.91	6.75	21.83	48.56	7.9	25.4	-141.4	
1511	0.25	0.27	120	9.91	6.65	21.84	49.02	3.6	18.6	-141.7	
1516	0.23	0.50	120	9.92	6.69	21.75	48.92	2.5	20.0	-139.8	
1521	0.23	0.73	120	9.91	6.68	21.78	48.69	1.8	20.4	-146.2	1.045
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1525		SAMPLING ENDED AT: 1542		
PUMP OR TUBING DEPTH IN WELL (feet): 45				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-115C-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-115C-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-115C-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-115C-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-115C-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-115C-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-115C-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-115C-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-115C-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-352A	SAMPLE ID: MW-352A DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 35.6 to 36.8	STATIC DEPTH TO WATER (feet btoc): 9.50	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 41 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	PURGING INITIATED AT: 1228	PURGING ENDED AT: 1335	TOTAL VOLUME PURGED (gallons): 3.25							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1235	0.25	0.25	250	9.55	6.74	19.86	5.555	12.6	805	-84.4	
1240	0.25	0.5	250	9.60	6.75	20.34	5.714	11.2	580	-114.9	
1245	0.25	0.75	250	9.60	6.63	20.92	5.318	9.5	101	-187.7	
1250	0.25	1.0	250	9.60	6.61	20.96	5.374	7.9	44.8	-187.1	
1255	0.25	1.25	250	9.60	6.59	21.03	5.586	7.0	28.1	-172.3	
1300	0.25	1.5	250	9.60	6.59	21.10	5.631	6.1	26.0	-150.2	
1305	0.25	1.75	250	9.60	6.59	21.13	5.709	5.8	22.3	-132.2	
1310	0.25	2.0	250	9.60	6.59	21.20	5.731	5.3	17.7	-125.2	
1315	0.25	2.25	250	9.60	6.59	21.17	5.742	5.1	29.0	-129.0	
1320	0.25	2.50	250	9.60	6.59	21.17	5.741	4.8	22.6	-132.3	
1325	0.25	2.75	250	9.60	6.59	21.22	5.737	4.7	22.1	-131.9	
1330	0.25	3.0	250	9.60	6.59	21.22	5.725	4.2	16.1	-130.5	
1335	0.25	3.25	250	9.60	6.58	21.75	5.720	4.2	16.8	-128.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1338		SAMPLING ENDED AT: 1400	
PUMP OR TUBING DEPTH IN WELL (feet): 36				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-352A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-352A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-352A-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-352A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-352A-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-352A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-352A-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-352A-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-352A-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-352B	SAMPLE ID: MW-352B DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48.5 to 53.5	STATIC DEPTH TO WATER (feet btoc): 10.03	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 60.5 feet) + 0.13 gallons = 0.28 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52.5		PURGING INITIATED AT: 1044	PURGING ENDED AT: 1113	TOTAL VOLUME PURGED (gallons): 1.75					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1053	0.5	0.5	230	10.54	12.82	18.95	38.72	8.6	6.88	-280.0	
1058	0.25	0.75	230	10.54	12.87	19.01	40.82	5.8	4.58	-302.2	
1103	0.25	1.00	230	10.54	12.87	19.55	41.67	5.6	4.44	-316.6	
1108	0.25	1.25	230	10.54	12.88	19.66	42.00	5.8	3.64	-326.3	
1113	0.25	1.75	230	10.54	12.89	19.47	42.16	5.6	3.33	-329.6	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1115		SAMPLING ENDED AT: 1135		
PUMP OR TUBING DEPTH IN WELL (feet): 52.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-352B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-352B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-352B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-352B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-352B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-352B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-352B-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-352B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-352B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-353B	SAMPLE ID: MW-353B DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 43.5 to 44.5	STATIC DEPTH TO WATER (feet btoc): 7.12	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 48 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43		PURGING INITIATED AT: 1021	PURGING ENDED AT: 1049	TOTAL VOLUME PURGED (gallons): ~ 2.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1023	0.2	0.2	180	7.25	8.98	19.45	34.07	33.9	7.67	-330.3	
1028	0.4	0.6	200	7.3	9.61	19.52	37.88	10.0	7.54	-389.1	
1033	0.4	1.0	200	7.3	9.67	19.65	37.59	6.5	6.82	-409.2	
1038	0.4	1.4	200	7.3	9.69	19.77	37.45	4.8	7.76	-402.2	
1043	0.4	1.8	200	7.3	9.70	19.77	37.44	4.1	7.72	-377.0	
1048	0.4	2.2	200	7.3	9.70	19.75	37.44	3.4	7.72	-436.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1050		SAMPLING ENDED AT: 1120	
PUMP OR TUBING DEPTH IN WELL (feet): 43				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-353B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-353B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-353B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-353B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-353B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-353B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-353B-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-353B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-353B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-357A	SAMPLE ID: MW-357A DATE: 3/3/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 41.3 to 42.8	STATIC DEPTH TO WATER (feet btoc): 6.84	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.5		PURGING INITIATED AT: 1151	PURGING ENDED AT: 1528	TOTAL VOLUME PURGED (gallons):					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1156	0.2	0.2	125	9.98	6.45	22.30	11.53	20.7	12.6	-177.1	
1201	0.2	0.4	125	11.29	6.45	22.47	11.52	20.9	11.7	-194.9	
1206	0.3	0.7	125	11.77	6.45	22.55	11.51	21.0	12.2	-199.3	
1211	0.3	1.0	125	12.70	6.48	22.58	11.53	20.9	13.0	-210.9	
Drawdown exceeds 3 feet. Start Contingent Purge Method, purge to 1 foot above the top of the saturated screen interval (about 5 well volumes = 25.7 gallons). Do not want to purge the well dry so sample was collected although parameters were not stable. 1 Well Volume = (Total Depth – Water Level) * 0.16 5.14 gallons = 39 feet – 6.84 x 0.16 5.14 gallons x 5 = 25.7 gallons											
1528	n/a	n/a	180	17.4	6.54	22.93	11.29	12.2	18.8	-40.5	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1530		SAMPLING ENDED AT: n/a		
PUMP OR TUBING DEPTH IN WELL (feet): 41.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-357A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-357A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-357A-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-357A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-357A-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-357A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-357A-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-357A-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-357A-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level could not stabilize and pump purged as low as it can go.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-357B	SAMPLE ID: MW-357B DATE: 3/03/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48.7 to 50.7	STATIC DEPTH TO WATER (feet btoc): 6.15	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 50 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	PURGING INITIATED AT: 1401	PURGING ENDED AT: 1533	TOTAL VOLUME PURGED (gallons): 2.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1406	n/a	n/a	275	8.99	8.62	22.05	1.775	14.0	7.71	-171.6	
1413	n/a	n/a	275	11.15	6.98	21.78	0.572	8.4	n/a	-122.9	
1418	n/a	n/a	125	11.53	7.08	22.00	1.085	7.6	3.88	-109.2	
1423	n/a	n/a	125	11.76	7.35	22.01	1.793	7.1	2.35	-139.2	
1428	n/a	n/a	125	11.85	7.53	22.04	2.316	6.7	2.37	-152.4	
1433	n/a	n/a	125	11.97	7.83	21.94	3.081	5.7	1.88	-167.9	
1438	n/a	n/a	125	12.02	8.16	22.06	4.183	4.3	1.99	-180.9	
1443	n/a	n/a	125	12.06	8.27	22.07	4.697	3.6	2.25	-188.3	
1448	n/a	n/a	125	12.20	8.42	22.13	5.963	2.9	2.51	-202.7	
1453	n/a	n/a	125	12.22	8.52	22.11	5.956	2.8	2.73	-214.7	
1458	n/a	n/a	125	12.23	8.61	22.08	6.338	2.6	3.28	-223.5	
1503	n/a	n/a	125	12.28	8.68	22.16	6.839	2.5	3.75	-236.8	
1508	n/a	n/a	125	12.32	8.72	22.19	7.287	2.3	3.68	-247.6	
1513	n/a	n/a	125	12.31	8.76	22.19	7.524	2.3	4.09	-253.6	
1518	n/a	n/a	125	12.31	8.79	22.04	7.778	2.3	n/a	-262.0	
1523	n/a	n/a	125	12.29	8.80	21.98	8.042	2.3	4.32	-268.7	
1528	n/a	n/a	125	12.20	8.81	22.07	8.240	2.3	4.01	-273.1	
1533	n/a	n/a	125	12.11	8.82	22.14	8.439	2.2	4.04	-275.4	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailor; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1533	SAMPLING ENDED AT: n/a
--	--------------------------	---------------------------------------	----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 50	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP **Y** **No** TUBING **Y** **No (replaced)** DUPLICATE: **Yes**

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-357B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-357B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-357B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-357B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-357B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-357B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-357B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-357B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-357B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailor; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-358B	SAMPLE ID: MW-358B DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 39.5 to 41.5	STATIC DEPTH TO WATER (feet btoc): 5.93	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 45.7 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40.7		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40.7		PURGING INITIATED AT: 0854	PURGING ENDED AT: 0934	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0905	0.3	0.3	200	6.15	11.20	17.40	31.24	11.6	109	-406.2	
0910	0.25	0.55	200	6.16	11.21	17.51	31.42	8.4	45	-440.4	
0915	0.25	0.8	200	6.18	11.15	17.44	31.56	6.9	37.6	-434.6	
0920	0.25	1.05	200	6.21	11.12	17.54	31.63	6.1	14.7	-438.9	
0925	0.25	1.3	200	6.23	11.10	17.30	31.66	5.5	7.93	-441.9	
0930	0.25	1.55	200	6.27	11.07	17.31	31.71	5.1	7.56	-443.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0934		SAMPLING ENDED AT: 0958	
PUMP OR TUBING DEPTH IN WELL (feet): 40.7				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-358B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-358B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-358B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-358B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-358B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-358B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-358B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-358B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-358B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-501B	SAMPLE ID: MW-501B DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 40 to 45	STATIC DEPTH TO WATER (feet btoc): 4.71	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 55 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40	PURGING INITIATED AT: 0810	PURGING ENDED AT: 0845	TOTAL VOLUME PURGED (gallons): 1.5
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
815	0.25	0.25	200	9.15	6.68	17.94	21.02	21.1	14.8	-180.0	
820	0.25	0.5	150	9.78	6.69	18.28	21.08	13.1	14.1	-188.3	
825	0.25	0.75	150	10.15	6.69	18.20	21.21	10.2	13.4	-192.6	
830	0.25	0.9	100	10.02	6.75	17.12	22.19	8.7	10.9	188.0	
835	0.25	1.1	120	9.95	6.77	16.90	22.34	8.5	12.0	-184.3	
840	0.25	1.3	130	10.0	6.79	16.96	22.30	8.0	98.2	-183.7	
845	0.25	1.5	130	10.1	6.81	17.33	21.25	7.2	14.5	-185.1	1.02

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0905	SAMPLING ENDED AT: 0927
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 40	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-501B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-501B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-501B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-501B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-501B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-501B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-501B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-501B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-501B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-502A	SAMPLE ID: MW-502A DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 27.4 to 32.4	STATIC DEPTH TO WATER (feet btoc): 6.1	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	--	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 34 feet) + 0.13 gallons = **0.22 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 29	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 29	PURGING INITIATED AT: 1005	PURGING ENDED AT: 1040	TOTAL VOLUME PURGED (gallons): ~3.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1008	0.2	0.2	200	6.32	6.41	17.67	6.987	59.0	26.5	-120.9	
1013	0.4	0.6	200	6.3	6.45	20.23	7.171	27.8	18.7	-168.6	
1018	0.5	1.1	200	6.3	6.45	20.25	7.182	18.9	19.0	-173.6	
1023	0.5	1.6	200	6.3	6.44	20.22	7.151	14.5	14.3	-179.3	
1028	0.5	2.1	200	6.3	6.44	20.09	7.095	12.5	11.4	-187.2	
1033	0.5	2.6	200	6.3	6.44	20.12	7.021	11.0	11.5	-189.9	
1038	0.5	3.1	200	6.3	6.44	20.52	6.954	9.9	10.3	-190.1	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1040	SAMPLING ENDED AT: 1050
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 29	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION:	PUMP Y No	TUBING Y No (replaced)	DUPLICATE: No
------------------------	---------------------	----------------------------------	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-502A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-502A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-502A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-502A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-502A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-502A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-502A-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-502A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-502A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-502B	SAMPLE ID: MW-502B
DATE: 2/27/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 38.7 to 43.7	STATIC DEPTH TO WATER (feet btoc): 6.03	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 45 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 40	PURGING INITIATED AT: 0827	PURGING ENDED AT: 0853	TOTAL VOLUME PURGED (gallons): ~1.5							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0830	0.2	0.2	150	6.25	6.29	17.77	4.930	70.4	10.8	8.3	
0835	0.2	0.4	150	6.23	6.45	18.71	7.011	13.6	3.14	-48.1	
0840	0.35	0.75	180	6.25	6.45	19.09	7.263	7.2	1.36	-49.9	
0845	0.35	1.1	180	6.25	6.45	19.37	7.321	5.8	1.18	-56.2	
0850	0.40	1.5	180	6.25	6.45	19.32	7.406	5.0	1.14	-58.4	1.023
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0855		SAMPLING ENDED AT: ~930	
PUMP OR TUBING DEPTH IN WELL (feet): 40				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: Yes			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-502B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-502B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-502B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-502B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-502B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-502B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-502B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-502B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-502B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-503B	SAMPLE ID: MW-503B DATE: 3/03/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 38.8 to 43.8	STATIC DEPTH TO WATER (feet btoc): 7.06	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 47 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.7		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 41.7		PURGING INITIATED AT: 1349	PURGING ENDED AT: 1418	TOTAL VOLUME PURGED (gallons): ~2.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1353	0.2	0.2	200	7.5	6.24	22.62	2.772	26.5	11.1	6.0	
1358	0.2	0.4	180	7.45	5.90	22.49	2.667	10.3	5.11	11.0	
1403	0.3	0.7	200	7.63	5.66	22.29	2.645	6.2	3.39	9.4	
1408	0.3	1.0	180	7.5	5.59	22.45	2.777	4.7	4.04	4.3	
1413	0.3	1.3	180	7.5	5.51	22.33	2.889	4.2	3.04	8.9	
1418	0.3	1.6	180	7.5	5.51	22.48	2.955	3.7	2.25	9.8	1.01
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1420		SAMPLING ENDED AT: ~1450	
PUMP OR TUBING DEPTH IN WELL (feet): 41.7				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-503B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-503B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-503B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-503B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-503B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-503B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-503B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-503B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-503B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-504B	SAMPLE ID: MW-504B DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 31 to 46	STATIC DEPTH TO WATER (feet btoc): 7.06	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 48 feet) + 0.13 gallons = 0.25 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43.5	PURGING INITIATED AT: 0901	PURGING ENDED AT: 0923	TOTAL VOLUME PURGED (gallons): ~2.0							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0903	0.1	0.1	120	7.18	6.55	22.44	16.60	24.0	13.0	-68.9	
0908	0.2	0.3	120	7.18	6.58	22.19	16.54	3.9	5.81	-152.6	
0913	0.5	0.5	120	7.18	6.53	22.35	15.61	2.2	3.68	-152.6	
0918	0.55	1.2	120	7.19	6.52	22.47	15.57	1.9	3.73	-149.0	
0923	0.55	1.75	120	7.19	6.49	22.46	15.34	1.8	3.43	-174.4	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 0925		SAMPLING ENDED AT: 0940			
PUMP OR TUBING DEPTH IN WELL (feet): 43.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter					
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No									
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH							
MW-504B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP				
MW-504B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP				
MW-504B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP				
MW-504B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP				
MW-504B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP				
MW-504B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered		
MW-504B-	1	PE	500mL	--	--	--	2540C TDS		APP				
MW-504B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP				
MW-504B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP				
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.													
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)													
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)													

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-505A	SAMPLE ID: MW-505A	DATE: 2/25/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 32.8 to 37.8	STATIC DEPTH TO WATER (feet btoc): 7.01	PURGE PUMP TYPE OR BAILER: PP
----------------------------------	--------------------------------------	---	--	--------------------------------------

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 40 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35	PURGING INITIATED AT: 0835	PURGING ENDED AT: 0910	TOTAL VOLUME PURGED (gallons): ~3.25
---	---	-----------------------------------	-------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
845	0.5	0.5	400	7.1	6.23	22.91	8.054	4.1	25.4	-156.0	
850	0.5	1.0	400	7.12	6.21	23.24	7.24	2.8	22.3	-152.2	
855	0.75	1.75	400	7.12	6.18	23.26	7.13	2.2	19.5	-152.0	
900	0.75	2.5	400	7.11	6.17	23.01	7.12	1.9	20.4	-155.1	
905	0.75	3.25	400	7.11	6.17	23.08	7.08	2.0	21.5	-156.5	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOC = Below top of casing - feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0910	SAMPLING ENDED AT: 0925
---	--------------------------	------------------------------------	--------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	--	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-505A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-505A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-505A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-505A	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-505A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-505A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-505A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-505A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-505A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: pH: ± 0.1 unit Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 10% saturation; optionally, ± 0.2 mg/L Turbidity: all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-505B		SAMPLE ID: MW-505B	
DATE: 2/25/2014			

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 40.3 to 45.3	STATIC DEPTH TO WATER (feet btoc): 9.1	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	--	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 48 feet) + 0.13 gallons = **0.25 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 43	PURGING INITIATED AT: 0951	PURGING ENDED AT: 1100	TOTAL VOLUME PURGED (gallons): 1.00
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1040	0.5	0.5	200	9.60	6.81	23.65	34.93	16.2	22.5	-175.6	
1045	0.25	0.75	200	9.73	6.81	23.70	35.40	12.7	10.7	-177	
1050	0.25	1.0	200	9.75	6.80	23.71	33.19	11.2	9.06	-175	
1055	0.25	1.25	200	9.88	6.77	23.85	32.19	10.2	7.71	-174.9	
1100	0.25	1.5	200	9.97	6.76	23.83	31.69	9.1	7.58	-176.9	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1105	SAMPLING ENDED AT: 1122
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 43	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-505B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-505B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-505B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-505B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-505B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-505B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-505B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-505B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-505B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-507B	SAMPLE ID: MW-507B DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 49.1 to 54.1	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 56 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 51.5		PURGING INITIATED AT: 1210	PURGING ENDED AT: 1240	TOTAL VOLUME PURGED (gallons): 1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1220	0.5	0.5	200	9.58	10.05	20.36	37.70	10.4	1.97	-297.3	
1225	0.25	0.75	200	9.62	10.08	20.49	38.27	7.2	1.38	-317.1	
1230	0.25	1.0	200	9.62	10.08	20.54	38.38	5.5	1.68	-326.2	
1235	0.25	1.25	200	9.62	10.08	20.69	38.20	4.4	1.65	-330.3	
1240	0.25	1.5	200	9.62	10.07	20.65	37.95	3.7	1.36	-334.8	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1243		SAMPLING ENDED AT: 1310	
PUMP OR TUBING DEPTH IN WELL (feet): 51.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-507B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-507B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-507B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-507B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-507B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-507B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-507B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-507B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-507B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-508B	SAMPLE ID: MW-508B DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 49.7 to 54.7	STATIC DEPTH TO WATER (feet btoc): 8.61	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 **EQUIPMENT VOL.** = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 58 feet) + 0.13 gallons = **0.28 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 53.2	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 53.2	PURGING INITIATED AT: 0923	PURGING ENDED AT: 1001	TOTAL VOLUME PURGED (gallons): ~2.5
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0925	0.25	0.25	180	9.54	9.79	20.02	51.14	6.6	23.1	-389.0	
0930	0.3	0.55	180	9.45	9.87	20.20	51.62	4.0	7.67	-431.4	
0935	0.3	0.85	180	9.42	9.88	20.24	51.78	2.9	5.02	-446.4	
0940	0.3	1.15	180	9.42	9.87	20.34	51.73	2.5	5.53	-454.5	
0945	0.3	1.45	180	9.42	9.84	20.42	51.63	2.0	14.4	-457.7	
0950	0.3	1.75	180	9.41	9.84	20.31	51.70	1.7	8.23	-462.3	
0955	0.3	2.05	180	9.41	9.85	20.45	51.64	1.7	5.50	-465.1	
1000	0.3	2.35	180	9.41	9.86	20.42	51.58	1.4	4.11	-467.9	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1005	SAMPLING ENDED AT: 1040
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 53.2	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Y No (replaced)	DUPLICATE: Yes
---	-------------------------------	-----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-508B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-508B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-508B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-508B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-508B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-508B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-508B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-508B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-508B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-510B	SAMPLE ID: MW-510B DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 40 to 45	STATIC DEPTH TO WATER (feet btoc): n/a	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 495 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.5		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.5		PURGING INITIATED AT: 1440	PURGING ENDED AT: 1542	TOTAL VOLUME PURGED (gallons): ~2					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1441	0.5	0.5	250	7.55	10.85	19.61	26.73	8.3	9.23	-396.1	
1446	0.25	0.75	250	7.54	10.74	19.76	26.32	6.3	6.81	-406.1	
1451	0.25	1.0	250	7.54	10.52	19.86	25.67	4.7	5.99	-407.2	
1456	-- Equipment malfunction. Restart with new pump. --										
1505	-- Equipment malfunction. Restart with new pump. --										
1515	-- Equipment malfunction. Restart with new pump. --										
1522	0.5	1.5	250	7.71	10.46	20.14	25.74	6.2	5.77	-406.1	
1527	0.25	1.75	250	7.72	10.30	20.44	25.24	4.8	4.81	-402.2	
1532	0.25	2.0	250	7.72	10.20	20.39	25.09	3.8	4.16	-430.1	
1537	0.25	2.25	250	7.73	10.20	20.53	25.22	3.2	4.22	-436.7	
1542	0.25	2.5	250	7.75	10.20	20.65	25.35	3.0	4.22	-442.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1545		SAMPLING ENDED AT: 1606	
PUMP OR TUBING DEPTH IN WELL (feet): 44.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-510B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-510B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-510B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-510B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-510B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-510B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-510B-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-510B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-510B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water brown, sulfur-like odor.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-511A	SAMPLE ID: MW-511A DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 31.6 to 36.6	STATIC DEPTH TO WATER (feet btoc): 7.10	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = **0.22 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 32.5	PURGING INITIATED AT: 1112	PURGING ENDED AT: 1308	TOTAL VOLUME PURGED (gallons): 5.35
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1116	0.25	0.25	210	7.26	6.58	17.99	4.564	34.2	28.7	-60.7	
1121	0.15	0.40	210	7.26	6.46	17.93	4.717	23.5	21.3	-63.3	
1126	0.20	0.60	210	7.26	6.41	17.99	4.830	18.4	22.1	-61.5	
1131	0.40	0.80	210	7.26	6.36	17.99	4.909	16.9	17.0	-58.7	
1138	0.20	1.25	210	7.26	6.37	18.13	5.060	15.9	17.3	-57.5	
1143	0.20	1.45	210	7.26	6.36	17.77	5.144	16.1	15.6	-55.0	
1148	0.20	1.65	210	7.26	6.36	17.81	5.244	15.3	14.9	-54.0	
1153	0.20	1.85	210	7.26	6.35	17.74	5.299	15.3	12.3	-53.3	
1158	0.20	2.05	210	7.26	6.35	18.03	5.376	14.9	13.3	-52.8	
1203	0.20	2.25	210	7.26	6.36	18.15	5.419	15.1	11.1	-52.9	
1208	0.20	2.45	210	7.26	6.37	17.87	5.466	14.7	10.7	-51.6	
1213	0.20	2.65	210	7.26	6.35	17.64	5.504	14.6	10.4	-50.2	
1218	0.20	2.85	210	7.26	6.36	17.78	5.543	14.4	10.4	-50.2	
1223	0.25	3.10	210	7.26	6.37	17.98	5.574	14.1	10.5	-50.7	
1228	0.25	3.35	210	7.26	6.36	17.52	5.590	16.1	10.4	-50.8	
1233	0.25	3.60	210	7.26	6.35	17.68	5.643	14.3	10.3	-48.7	
1238	0.25	3.85	210	7.26	6.37	17.94	5.673	14.2	10.6	-49.6	
1243	0.25	4.10	210	7.26	6.35	18.08	5.698	13.5	10.4	-49.1	
1248	0.25	4.35	210	7.26	6.34	17.58	5.715	13.3	10.2	-47.6	
1253	0.25	4.60	210	7.26	6.34	17.80	5.721	13.5	9.72	-42.6	
1258	0.25	4.85	210	7.26	6.36	17.94	5.736	13.0	10.0	-48.5	
1303	0.25	5.10	210	7.26	6.35	18.09	5.752	13.1	10.1	-48.8	
1308	0.25	5.35	210	7.26	6.36	18.22	5.763	13.0	10.1	-49.0	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1308	SAMPLING ENDED AT: 1335
--	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 32.5	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Y No (replaced)	DUPLICATE: No
--	--------------------------------------	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-511A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-511A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-511A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-511A	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-511A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-511A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-511A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-511A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-511A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-511B	SAMPLE ID: MW-511B DATE: 3/4/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 43.7 to 48.7	STATIC DEPTH TO WATER (feet btoc): 5.44	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 49 feet) + 0.13 gallons = 0.26 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 44.5	PURGING INITIATED AT: 1424	PURGING ENDED AT: 1459	TOTAL VOLUME PURGED (gallons): ~1.5							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1429	0.25	0.25	210	7.52	9.86	17.79	25.42	8.6	7.02	-142.2	
1434	0.20	0.45	210	7.53	9.68	18.14	26.82	7.2	5.21	-166.4	
1439	0.20	0.65	210	7.52	9.79	18.16	27.56	6.9	3.54	-177.4	
1444	0.25	0.85	210	7.53	9.81	18.38	27.88	6.5	3.10	-185.3	
1449	0.25	1.10	210	7.53	9.82	18.40	27.98	5.7	2.87	-188.4	
1454	0.25	1.35	210	7.53	9.82	18.64	27.97	5.5	3.13	-191.7	
1459	0.25	1.60	210	7.53	9.81	18.84	27.96	5.5	2.75	-192.3	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ken Stuart				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1459		SAMPLING ENDED AT: 1525	
PUMP OR TUBING DEPTH IN WELL (feet): 44.5				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-511B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-511B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-511B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-511B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-511B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-511B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-511B-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-511B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-511B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-512A	DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 33.2 to 38.2	STATIC DEPTH TO WATER (feet btoc): 6.63	PURGE PUMP TYPE OR BAILER: PP
----------------------------------	--------------------------------------	---	--	--------------------------------------

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 40 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	PURGING INITIATED AT: 1417	PURGING ENDED AT: 1625	TOTAL VOLUME PURGED (gallons): ~7.0
---	---	-----------------------------------	-------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1425	0.2	0.2	150	6.95	8.79	19.61	3.372	32.1	416	-172.7	
1430	0.3	0.5	150	6.95	7.66	20.46	3.205	9.9	338	-222.7	
1435	0.3	0.8	150	6.95	7.5	20.58	3.190	7.3	153	-242.7	
1440	0.4	1.0	180	6.95	7.71	20.54	3.167	6.1	203	-255.9	
1445	0.4	1.4	150	6.93	7.73	20.56	3.136	4.8	105	-259.3	
1450	0.3	1.7	150	6.93	7.82	20.64	3.111	3.8	77.8	-274.6	
1455	0.4	2.1	150	6.92	7.84	20.50	3.070	3.5	65.9	-271.9	
1500	0.5	2.6	150	6.92	8.04	20.74	3.010	3.0	61.9	-283.7	
1505	0.2	2.8	120	6.82	8.11	20.51	2.992	2.5	59.9	-294.5	
1510	0.2	3.1	120	6.81	8.10	20.25	2.979	2.2	64.4	-301.1	
1515	0.2	3.3	120	6.81	8.10	20.24	2.980	2.1	69.4	-306.8	
1520	0.2	3.5	100	6.79	8.17	20.00	2.981	2.0	66.7	-313.5	
1525	0.2	3.7	100	6.77	8.28	19.79	2.976	2.7	60.9	-317.7	
1530	0.2	3.9	100	6.77	8.37	19.61	2.976	1.7	67.9	-319.4	
1535	0.2	4.1	100	6.78	8.29	19.70	2.971	1.5	65.8	-322.8	
1540	0.2	4.3	100	6.77	8.25	19.72	2.971	1.5	60.3	-324.5	
1545	0.2	4.5	100	6.77	8.23	19.69	2.975	1.4	53.6	-319.4	
1550	0.2	4.7	100	6.77	8.23	19.70	2.977	1.3	54.0	-324.7	
1555	0.2	4.9	100	6.77	8.35	19.65	2.984	1.4	61.9	-327.7	
1600	0.2	5.1	100	6.77	8.37	19.60	2.983	1.3	56.4	-332.7	
1605	0.2	5.5	120	6.8	8.53	19.76	2.984	1.2	63.4	-333.7	
1610	0.2	5.7	120	6.8	8.52	19.69	2.992	1.1	55.5	-335.8	
1615	0.3	6.0	120	6.8	8.56	19.67	2.993	1.2	66.1	-265.0	
1620	0.3	6.3	120	6.8	8.58	19.91	2.995	1.2	76.4	-265.8	
1625	0.3	6.6	120	6.8	8.59	20.00	3.005	1.2	69.9	-277.1	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1625	SAMPLING ENDED AT: 1650
--	--------------------------	------------------------------------	--------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 36	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	--	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced) DUPLICATE: No

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-512B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-512B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-512B-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-512B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-512B-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-512B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-512B-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-512B-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-512B-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. 7470 Mercury (field filtered) sample collected due to high turbidity (above 50 NTU).

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 1% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-512B	SAMPLE ID: MW-512B DATE: 2/27/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 49 to 54	STATIC DEPTH TO WATER (feet btoc): 7.61	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 55 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 49	PURGING INITIATED AT: 1250	PURGING ENDED AT: 1331	TOTAL VOLUME PURGED (gallons): 2.5							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1300	0.25	0.25	180	9.3	6.97	18.66	26.25	28.1	22.2	-158.9	
1305	0.25	0.5	180	10.0	6.95	20.33	26.45	13.0	14.6	-188.1	
1310	0.25	0.75	120	10.27	6.95	19.55	26.72	11.4	11.7	-208.6	
1315	1.0	1.75	200	10.27	6.94	19.33	26.50	11.0	9.39	-212.0	
1320	0.25	2.0	140	10.4	6.94	19.58	26.33	10.6	14.3	-218.4	
1325	0.25	2.25	120	10.35	6.94	19.43	26.14	10.5	8.13	-213.2	
1330	0.25	2.5	120	10.3	6.93	19.41	25.63	10.0	8.23	-210.2	1.01
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1335		SAMPLING ENDED AT: n/a	
PUMP OR TUBING DEPTH IN WELL (feet): 49				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-512B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-512B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-512B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-512B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-512B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-512B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-512B-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-512B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-512B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-513A	SAMPLE ID: MW-513A DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 34.5 to 39.5	STATIC DEPTH TO WATER (feet btoc): 7.95	PURGE PUMP TYPE OR BAILER: PP
----------------------------------	--------------------------------------	---	--	--------------------------------------

Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = (0.0026 gallons/foot X 43 feet) + 0.13 gallons = **0.24 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 38.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 38.5	PURGING INITIATED AT: 0949	PURGING ENDED AT: 1018	TOTAL VOLUME PURGED (gallons): 1.0
---	---	-----------------------------------	-------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0954	0.1	0.1	300	8.05	6.23	20.54	4.635	14.0	30.0	-100.8	
1000	0.25	0.26	200	8.05	6.03	20.86	4.402	7.0	30.9	-114.3	
1006	0.25	0.47	220	8.05	6.00	20.89	4.386	5.7	31.8	-120.1	
1012	0.25	0.72	225	8.05	5.99	20.98	4.391	4.6	32.6	-123.0	
1015	0.25	0.97	225	8.05	5.99	21.06	4.401	4.2	31.2	-127.5	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOW = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1020	SAMPLING ENDED AT: 1050
---	--------------------------	------------------------------------	--------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 38.5	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
--	--	--

FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-513A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP	
MW-513A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-513A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-513A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-513A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-513A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-513A-	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-513A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-513A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-513B	SAMPLE ID: MW-513B DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 43.8 to 48.8	STATIC DEPTH TO WATER (ft btoc): 7.53	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 50 feet) + 0.13 gallons = **0.26 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 45.8	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 45.8	PURGING INITIATED AT: 0827	PURGING ENDED AT: 0900	TOTAL VOLUME PURGED (gallons): ~1.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0834	0.1	0.1	100	9.48	6.52	20.40	13.46	13.2	38.3	-158.2	
0841	0.26	0.27	300	9.48	6.44	20.58	12.91	7.2	36.5	-204.7	
0847	0.26	0.53	300	9.48	6.47	20.63	11.86	6.3	21.3	-197.7	
0852	0.26	0.79	300	9.48	6.50	20.59	11.05	6.5	15.7	-200.5	
0857	0.26	1.05	300	9.48	6.51	20.65	10.63	6.53	15.1	-185.0	1.02

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0905	SAMPLING ENDED AT: 0941
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 45.8	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-513B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-513B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-513B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-513B	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-513B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-513B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-513B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-513B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-513B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-514A	SAMPLE ID: MW-514A DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 34.8 to 39.8	STATIC DEPTH TO WATER (ft btoc): 8.84	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 42 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 37.3		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 36		PURGING INITIATED AT: 1237							
				PURGING ENDED AT: 1310							
TOTAL VOLUME PURGED (gallons): 2.00											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1240	0.2	0.2	180	9.25	6.83	20.68	6.031	n/a	5.27	-68.3	
1245	0.3	0.5	180	9.25	6.79	21.39	6.011	23.6	3.98	-78.6	
1250	0.3	0.8	180	9.25	6.83	21.49	5.974	15.4	3.73	-86.5	
1255	0.3	1.1	180	9.25	6.84	21.50	5.942	12.2	4.05	-92.6	
1300	0.3	1.4	180	9.25	6.85	21.44	5.919	10.8	3.92	-97.6	
1305	0.3	1.7	180	9.25	6.86	21.50	5.910	9.8	4.56	-87.6	
1310	0.3	2.0	180	9.25	6.86	21.49	5.903	9.2	4.63	-81.2	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1315		SAMPLING ENDED AT: 11324	
PUMP OR TUBING DEPTH IN WELL (feet): 36				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)				DUPLICATE: No						
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-514A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP		
MW-514A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP		
MW-514A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP		
MW-514A	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP		
MW-514A	1	AG	125mL	--	--	--	SM 5310 DOC	APP		
MW-514A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered	
MW-514A	1	PE	500mL	--	--	--	2540C TDS	APP		
MW-514A	1	PE	250mL	--	--	--	2320B Alkalinity	APP		
MW-514A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP		
REMARKS: Per SOP, parameters stable prior to sample collection.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-514B	SAMPLE ID: MW-514B DATE: 2/28/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 44 to 49	STATIC DEPTH TO WATER (ft btoc): 8.91	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = s (0.0026 gallons/foot X 52 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 47		FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 47		PURGING INITIATED AT: 1118	PURGING ENDED AT: 1142	TOTAL VOLUME PURGED (gallons): 1.5					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1122	0.2	0.2	200	9.4	6.73	19.86	6.031	20.9	16.7	-143.2	
1127	0.2	0.4	180	9.36	6.32	20.56	5.000	11.3	6.95	-118.5	
1132	0.35	0.75	200	9.52	6.28	21.38	5.056	10.3	4.86	-114.2	
1137	0.35	1.20	200	9.52	6.28	21.39	5.362	9.5	3.88	-119.8	
1142	0.35	1.55	200	9.52	6.31	21.52	5.911	8.9	4.39	-120.6	1.01
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):			SAMPLING INITIATED AT: 1145		SAMPLING ENDED AT: 1200	
PUMP OR TUBING DEPTH IN WELL (feet): 47				TUBING MATERIAL CODE: Teflon-lined PE			FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Yes No (replaced)			DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
MW-514B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg		APP	
MW-514B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP	
MW-514B	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP	
MW-514B	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP	
MW-514B	1	AG	125mL	--	--	--	SM 5310 DOC		APP	
MW-514B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered
MW-514B	1	PE	500mL	--	--	--	2540C TDS		APP	
MW-514B	1	PE	250mL	--	--	--	2320B Alkalinity		APP	
MW-514B	1	AG	125mL	HCl	--	--	SM5310 TOC		APP	
REMARKS: Per SOP, parameters stable prior to sample collection.										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)										
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)										

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-515B	SAMPLE ID: MW-515B DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 49.2 to 54.2	STATIC DEPTH TO WATER (feet btoc): 9.0	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 57 feet) + 0.13 gallons = 0.28 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52	PURGING INITIATED AT: 1418	PURGING ENDED AT: 1445	TOTAL VOLUME PURGED (gallons): 2.25							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1424	0.25	0.25	230	9.2	8.75	22.90	15.72	4.6	11.4	-316.2	
1429	0.5	0.75	230	9.21	8.59	22.84	15.71	2.5	9.0	-335.4	
1434	0.5	1.25	230	9.21	8.70	22.75	15.74	1.7	1.7	-360.8	
1439	0.5	1.75	230	9.21	8.73	22.83	15.74	1.5	1.5	-376.0	
1444	0.5	2.25	230	9.24	8.80	22.76	15.33	1.1	1.1	-390.0	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOW = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1445		SAMPLING ENDED AT: n/a		
PUMP OR TUBING DEPTH IN WELL (feet): 52				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-515B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-515B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-515B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-515B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-515B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-515B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-515B-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-515B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-515B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water brown, sulfur-like odor.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-516A	SAMPLE ID: MW-516A DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 34.6 to 39.6	STATIC DEPTH TO WATER (feet btoc): 7.03	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 45 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 37	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 37	PURGING INITIATED AT: n/a	PURGING ENDED AT: 1505	TOTAL VOLUME PURGED (gallons): 3.75							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1440	0.75	0.75	300	7.13	6.25	22.36	9.641	10.0	12.6	-125.7	
1445	0.5	1.25	300	7.15	6.21	22.22	9.731	11.1	14.3	-126	
1450	0.5	1.75	300	7.17	6.19	22.17	9.703	11.2	11.9	-125.6	
1455	0.5	2.25	300	7.17	6.19	22.20	9.816	11.6	16.7	-126.3	
1500	0.5	2.75	300	7.17	6.16	22.18	9.808	11.8	13.6	-126.7	
1505	0.5	3.25	300	7.18	6.15	22.19	9.815	11.8	12.2	-127.1	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1510		SAMPLING ENDED AT: 1525	
PUMP OR TUBING DEPTH IN WELL (feet): 37				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-516A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-516A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-516A-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-516A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-516A-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-516A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-516A-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-516A-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-516A-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-516B	SAMPLE ID: MW-516B DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 50.6 to 55.6	STATIC DEPTH TO WATER (feet btoc): 7.78	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 42 feet) + 0.13 gallons = 0.28 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52.7		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 52.7		PURGING INITIATED AT: 1308	PURGING ENDED AT: 1346	TOTAL VOLUME PURGED (gallons): 2.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1316	0.5	0.5	250	8.30	11.50	22.28	36.52	9.4	5.4	-260.3	
1321	0.25	0.75	250	8.31	11.50	21.91	36.38	7.2	4.04	-288.8	
1326	0.25	1.0	250	8.32	11.49	22.20	36.64	5.7	3.67	-309.4	
1331	0.25	1.25	250	8.35	11.47	22.30	36.77	4.3	3.86	-322.7	
1336	0.25	1.5	250	8.36	11.46	22.34	37.28	3.8	3.40	-331.8	
1341	0.25	1.75	250	8.37	11.48	22.39	37.24	3.3	3.50	-337.2	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1348		SAMPLING ENDED AT: 1405		
PUMP OR TUBING DEPTH IN WELL (feet): 52.7				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-516B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-516B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-516B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-516B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-516B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-516B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-516B-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-516B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-516B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-517A	SAMPLE ID: MW-517A DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 30 - 35	STATIC DEPTH TO WATER (ft btoc): 8.25	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	--	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 38 feet) + 0.13 gallons = **0.23 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 33	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 33	PURGING INITIATED AT: 1402	PURGING ENDED AT: 1420	TOTAL VOLUME PURGED (gallons): ~1.0
--	--	--------------------------------------	----------------------------------	---

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1406	0.1	0.1	250	8.29	6.29	22.02	9.489	12.2	12.1	-75.4	
1410	0.25	0.26	250	8.29	6.08	21.82	9.373	4.9	7.08	-94.2	
1415	0.25	0.51	250	8.29	6.05	21.81	9.277	3.6	9.19	-72.5	
1420	0.25	0.75	250	8.29	6.06	21.81	9.277	3.4	8.5	-71.5	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1425	SAMPLING ENDED AT: 1445
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 33	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No TUBING Yes No (replaced)	DUPLICATE: No
---	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-517A	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-517A	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-517A	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-517A	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-517A	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-517A	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-517A	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-517A	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-517A	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-517B	SAMPLE ID: MW-517B DATE: 2/25/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH(ft btoc): 49.7 to 54.7	STATIC DEPTH TO WATER (ft btoc): 9.47	PURGE PUMP TYPE OR BAILER: PP
-------------------------------------	---	---	---	---

Tubing-in-Screen Interval purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
 = s (0.0026 gallons/foot X 58 feet) + 0.13 gallons = **0.28 gallons**

INITIAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 53	FINAL PUMP OR TUBING DEPTH IN WELL (ft btoc): 53	PURGING INITIATED AT: 1304	PURGING ENDED AT: 1335	TOTAL VOLUME PURGED (gallons): ~1.25
--	--	--------------------------------------	----------------------------------	--

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1309	0.1	0.1	250	10.15	6.48	22.31	30.56	12.9	53.0	-82.1	
1315	0.25	0.26	250	10.25	6.46	22.01	30.64	6.1	57.7	-89.3	
1320	0.25	0.51	250	10.25	6.47	22.43	30.64	4.6	45.9	-96.0	
1325	0.25	0.76	250	10.25	6.49	22.17	30.61	4.2	46.2	-96.0	
1330	0.25	1.01	250	10.25	6.47	22.14	30.58	4.2	46.8	-96.9	
1335	0.25	1.26	250	10.25	6.48	22.16	30.57	4.2	47.8	-96.0	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
BTOC = Below top of casing – feet below top of casing which includes above grade riser

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Rick Butler	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1340	SAMPLING ENDED AT: 1400
---	--------------------------	---------------------------------------	-----------------------------------

PUMP OR TUBING DEPTH IN WELL (feet): 53	TUBING MATERIAL CODE: Teflon-lined PE	FIELD-FILTERED: Yes SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter
---	---	--

FIELD DECONTAMINATION: PUMP Y No	TUBING Yes No (replaced)	DUPLICATE: No
--	--	----------------------

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW-517B	1	PE	250mL	HNO3	--	--	6010B TAL Metals/ 7470A Hg	APP	
MW-517B	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP	
MW-517B	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP	
MW-517B	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP	
MW-517B	1	AG	125mL	--	--	--	SM 5310 DOC	APP	
MW-517B	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered
MW-517B	1	PE	500mL	--	--	--	2540C TDS	APP	
MW-517B	1	PE	250mL	--	--	--	2320B Alkalinity	APP	
MW-517B	1	AG	125mL	HCl	--	--	SM5310 TOC	APP	

REMARKS: Per SOP, parameters stable prior to sample collection. Purge water clear brown, sulfur-like odor.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump;
RFPP = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-518A	SAMPLE ID: MW-518A DATE: 3/3/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc) 35.1 to 40.1	STATIC DEPTH TO WATER (feet btoc): 7.67	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 41 feet) + 0.13 gallons = 0.24 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 36	PURGING INITIATED AT: 1128	PURGING ENDED AT: 1206	TOTAL VOLUME PURGED (gallons): ~3.75							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1131	0.2	0.2	200	8.61	8.76	21.49	7.583	15.4	12.5	-98.6	
1136	0.3	0.5	200	8.75	8.81	21.43	7.368	5.4	10.2	-95.4	
1141	0.3	0.8	170	8.48	8.84	21.36	7.656	3.7	8.96	-171.4	
1146	0.2	1.0	180	8.51	7.66	21.44	7.845	3.4	7.92	-171.3	
1151	0.3	1.3	180	8.5	7.29	21.48	8.038	3.0	7.57	-172.9	
1156	0.3	1.6	180	8.46	7.16	21.52	8.181	2.4	7.08	-176.3	
1201	0.4	2.0	200	8.46	7.12	21.57	8.276	1.8	6.83	-172.8	
1206	0.4	2.4	200	8.46	7.09	21.61	8.370	1.8	6.54	-166.9	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1210		SAMPLING ENDED AT: 1228	
PUMP OR TUBING DEPTH IN WELL (feet): 36				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-518A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-518A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-518A-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-518A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-518A-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-518A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-518A-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-518A-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-518A-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-518B	SAMPLE ID: MW-518B DATE: 3/03/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48.2 to 53.2	STATIC DEPTH TO WATER (feet btoc): 8.25	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 55 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	PURGING INITIATED AT: 0931	PURGING ENDED AT: 0956	TOTAL VOLUME PURGED (gallons): ~1.6							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
0936	0.2	0.2	180	7.15	6.54	19.76	13.49	103.4	9.14	-74.7	
0941	0.3	0.5	180	7.15	6.43	20.09	14.09	14.6	5.68	-75.3	
0946	0.4	0.7	180	7.18	6.40	20.37	14.30	8.1	4.27	-76.9	
0951	0.4	1.2	180	7.18	6.41	20.41	14.38	6.8	4.76	-80.2	
0956	0.4	1.6	180	7.18	6.39	20.50	14.38	6.7	4.72	-82.9	1.02
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1000		SAMPLING ENDED AT: -1030	
PUMP OR TUBING DEPTH IN WELL (feet): 50				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No				TUBING Y No (replaced)				DUPLICATE: No			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-518B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP		
MW-518B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP		
MW-518B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP		
MW-518B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP		
MW-518B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP		
MW-518B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP	Field-Filtered	
MW-518B-	1	PE	500mL	--	--	--	2540C TDS		APP		
MW-518B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP		
MW-518B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP		
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site	SITE LOCATION: Brunswick, GA
WELL NO: MW-519A	SAMPLE ID: MW-519A DATE: 2/24/2014

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 34.75 – 39.75	STATIC DEPTH TO WATER (feet btoc): 8.37	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 37 feet) + 0.13 gallons = 0.23 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35		FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 35		PURGING INITIATED AT: 1340	PURGING ENDED AT: 1410	TOTAL VOLUME PURGED (gallons): 4.0					
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
1342	0.25	0.25	400	8.45	5.94	21.88	7.441	4.7	9.11	-97.2	
1347	0.75	1.0	400	8.45	5.92	21.81	7.442	2.6	5.94	-109	
1352	1.25	2.0	400	8.45	5.93	21.79	7.496	2.6	5.18	-117	
1357	0.75	2.75	400	8.45	5.94	21.78	7.513	2.7	4.72	-119.5	
1402	0.75	3.5	400	8.45	5.94	21.78	7.506	2.8	4.12	-122.5	
1405	0.75	4.0	400	8.45	5.94	21.75	7.546	2.7	3.94	-123.7	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Matt Vetter				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1410		SAMPLING ENDED AT: 1433	
PUMP OR TUBING DEPTH IN WELL (feet): 35				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter			
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No							
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	Additional Comments		
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
MW-519A-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg	APP			
MW-519A-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH	APP			
MW-519A-	1	PE	250mL	--	--	--	6010B Dissolved Silica	APP			
MW-519A-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate	APP			
MW-519A-	1	AG	125mL	--	--	--	SM 5310 DOC	APP			
MW-519A-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide	APP	Field-Filtered		
MW-519A-	1	PE	500mL	--	--	--	2540C TDS	APP			
MW-519A-	1	PE	250mL	--	--	--	2320B Alkalinity	APP			
MW-519A-	1	AG	125mL	HCl	--	--	SM5310 TOC	APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters.											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings: **pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: LCP Chemicals Site		SITE LOCATION: Brunswick, GA	
WELL NO: MW-519B	SAMPLE ID: MW-519B	DATE: 2/24/2014	

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH (feet btoc): 48 to 53	STATIC DEPTH TO WATER (feet btoc): 10.15	PURGE PUMP TYPE OR BAILER: PP							
Tubing-in-Screen Interval Purge: 1 EQUIPMENT VOL. = (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME = (0.0026 gallons/foot X 55 feet) + 0.13 gallons = 0.27 gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	FINAL PUMP OR TUBING DEPTH IN WELL (feet btoc): 50	PURGING INITIATED AT: 950	PURGING ENDED AT: 1015	TOTAL VOLUME PURGED (gallons): 2.0							
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet btoc)	pH (standard units)	TEMP. (°C)	SP COND. (mS/cm)	DISSOLVED OXYGEN (% saturation)	TURBIDITY (NTUs)	ORP (mV)	SP Gravity (sg)
955	0.25	0.25	220	11.86	6.52	21.47	51.23	6.5	7.15	-170.4	
1000	0.25	0.5	220	12.68	6.53	21.41	52.88	6.8	5.7	-188.7	
1005	0.25	1.0	220	12.7	6.54	21.3	53.48	7.1	3.81	-191.8	
1010	0.25	1.5	220	12.7	6.54	21.2	53.15	7.1	3.74	-195.6	
1015	0.25	1.75	220	12.77	6.54	21.29	53.42	7.3	2.64	-190.3	
WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016 BTOC = Below top of casing – feet below top of casing which includes above grade riser											
PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tanya Chuprikova				SAMPLER(S) SIGNATURE(S):				SAMPLING INITIATED AT: 1020		SAMPLING ENDED AT: -1150		
PUMP OR TUBING DEPTH IN WELL (feet): 50				TUBING MATERIAL CODE: Teflon-lined PE				FIELD-FILTERED: Yes/SM 4500 Sulfide FILTER SIZE: 0.45 µm Filtration Equipment Type: In-line filter				
FIELD DECONTAMINATION: PUMP Y No TUBING Y No (replaced)				DUPLICATE: No								
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE		Additional Comments
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH						
MW-519B-	1	PE	250mL	HNO3	--	--	6010B TAL Metals/7470A Hg		APP			
MW-519B-	1	PE	125mL	--	--	--	3500 FE/ 9040B pH		APP			
MW-519B-	1	PE	250mL	--	--	--	6010B Dissolved Silica		APP			
MW-519B-	1	PE	125mL	--	--	--	9251 Chloride & 9038 Sulfate		APP			
MW-519B-	1	AG	125mL	--	--	--	SM 5310 DOC		APP			
MW-519B-	2	PE	250mL	NaOH Zinc Acetate	--	--	SM4500 Sulfide		APP		Field-Filtered	
MW-519B-	1	PE	500mL	--	--	--	2540C TDS		APP			
MW-519B-	1	PE	250mL	--	--	--	2320B Alkalinity		APP			
MW-519B-	1	AG	125mL	HCl	--	--	SM5310 TOC		APP			
REMARKS: Per SOP, parameters stable prior to sample collection. Water level stabilized prior to collecting parameters. Purge water brown, sulfur-like odor.												
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)												
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)												

NOTES: Stabilization Criteria for Range of Variation of Last Three Consecutive Readings:-**pH:** ± 0.1 unit **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 10% saturation; optionally, ± 0.2 mg/L **Turbidity:** all readings ≤ 10 NTU; or ± 10%

Phase 2 CO₂ Sparging Monitoring Program Well Completion Data, LCP Chemicals Site, Brunswick, GA

Well	Easting	Northing	Depth to Top of Screen (ft, bgs)	Depth to Bottom of Screen (ft, bgs)	Ground Elevation (NAVD88, ft)	Top of Casing Elevation (NAVD88, ft)
MW-1A	861711.77	431518.42	12.0	17.0	9.81	13.67
MW-1B	861713.44	431523.74	27.0	32.0	9.89	13.76
MW-1C	861717.45	431526.41	41.9	46.9	9.88	13.76
MW-2A	861719.08	431505.14	12.1	17.1	9.79	13.62
MW-2B	861726.66	431507.07	27.1	32.1	9.82	13.65
MW-2C	861730.19	431511.18	42.1	47.1	9.77	13.66
MW-3A	861687.76	431547.14	12.6	17.6	10.24	13.98
MW-105A	861700.20	432348.73	6.5	16.5	8.90	12.82
MW-105B	861712.53	432346.10	24.5	26.0	9.00	12.99
MW-105C	861725.31	432344.68	38.5	40.0	9.10	13.07
MW-112C	861257.08	431588.31	43.5	45.0	5.60	9.49
MW-113C	861123.64	431209.80	44.0	45.5	6.30	10.07
MW-115A	861746.23	431503.84	12.5	17.5	9.40	13.61
MW-115B	861736.34	431499.23	27.0	29.5	9.20	13.20
MW-115C	861736.03	431510.22	40.0	41.5	9.10	13.12
MW-115D	861736.13	431519.57	71.0	81.0	9.00	11.60
MW-352A	861911.35	432205.49	27.3	28.8	9.30	15.85
MW-352B	861912.46	432199.86	43.6	45.1	9.20	16.14
MW-352D	861915.24	432218.02	73.0	83.0	9.50	12.80
MW-353B	861517.77	432101.08	39.0	40.5	8.40	12.15
MW-357A	861518.32	431846.98	37.5	39.0	8.10	12.10
MW-357B	861517.23	431841.37	44.1	45.6	8.00	11.98
MW-358B	861093.38	431855.28	35.1	36.6	6.50	10.17
MW-360D	861812.14	431786.17	64.5	75.5	10.50	13.10
MW-501A	861875.36	432317.37	27.5	32.5	9.10	13.19
MW-501B	861875.01	432317.39	37.0	42.0	9.10	13.17
MW-502A	861764.76	432277.90	23.0	28.0	8.27	11.73
MW-502B	861764.48	432277.95	35.0	40.0	8.27	11.73
MW-503B	861533.10	432255.73	40.1	45.1	7.89	12.01
MW-504A	861736.56	432091.49	27.0	32.0	8.75	12.49
MW-504B	861736.71	432091.93	37.0	42.0	8.75	12.07
MW-505A	861693.49	432132.97	27.0	32.0	8.81	12.43
MW-505B	861693.17	432132.74	37.0	42.0	8.81	12.45
MW-507B	861328.14	431846.52	44.5	49.5	8.36	12.48 ¹
MW-508B	861444.56	431959.09	44.9	49.9	7.22	11.62
MW-510B	861597.34	432048.81	38.3	43.3	8.38	12.02
MW-511A	861634.09	431950.26	30.0	35.0	8.85	12.53
MW-511B	861634.23	431950.52	42.2	47.2	8.85	12.52

Phase 2 CO₂ Sparging Monitoring Program Well Completion Data, LCP Chemicals Site, Brunswick, GA

Well	Easting	Northing	Depth to Top of Screen (ft, bgs)	Depth to Bottom of Screen (ft, bgs)	Ground Elevation (NAVD88, ft)	Top of Casing Elevation (NAVD88, ft)
MW-512A	861678.98	431889.19	29.6	34.6	8.86	12.52
MW-512B	861678.69	431889.08	45.0	50.0	8.86	12.51
MW-513A	861809.73	431980.80	30.2	35.2	10.01	13.93
MW-513B	861809.82	431980.58	39.4	44.4	10.01	13.92 ¹
MW-514A	861899.09	432138.99	29.3	34.3	10.02	15.08
MW-514B	861898.70	432138.97	40.0	45.0	10.02	15.12
MW-515B	861696.79	431683.61	45.0	50.0	9.98	13.70
MW-516A	861574.47	431724.92	30.5	35.5	8.20	11.93
MW-516B	861574.39	431725.15	46.5	51.5	8.20	11.98
MW-517A	861670.33	431615.67	30.3	35.3	10.04	13.64
MW-517B	861670.59	431615.44	45.6	50.6	10.04	13.74
MW-518A	861473.83	431783.02	30.7	35.7	8.45	12.66
MW-518B	861474.19	431783.00	43.8	48.8	8.45	12.32
MW-519A	861702.78	431531.19	30.6	35.6	9.88	13.75
MW-519B	861703.07	431531.10	45.5	50.5	9.88	13.95
EW-1	861892.05	432251.23	42.0	47.0	9.65	11.77
EW-2	861699.82	432286.42	30.0	54.0	8.09	10.07
EW-3	861737.66	432140.75	38.5	43.5	8.76	9.48
EW-4	861860.78	432030.14	37.0	42.0	9.53	10.74
EW-5	861629.58	432037.30	40.0	50.0	8.74	9.89
EW-6	861755.99	431942.94	45.0	50.0	9.37	10.54
EW-8	861673.92	431844.93	45.2	50.2	9.18	10.55
EW-9	861495.98	431804.53	45.5	50.5	8.58	10.11
EW-10	861643.33	431691.10	44.0	49.0	9.30	10.57
EW-11	861681.98	431552.62	44.0	49.0	10.28	11.67

¹ modified well as described in section 3.3.5 of Phase 2 Report but has yet to be resurveyed. Resurvey will occur Fall 2015.

Well	Easting	Northing	Screen Midpoint Elevation (NAVD88, ft)
HW-East2	861881.58	432219.12	-74.21
HW-East3	861857.39	432005.74	-69.99
HW-East5	861786.70	431441.02	-69.87

Note: Coordinate System for Eastings and Northings: NAD1983 Georgia State Plane East FIPS1001

Appendix E:

Laboratory Analytical Data

Location ID		EW-1		EW-1		EW-1		EW-1		EW-2		EW-2	
Date		09/04/2013		02/27/2014		09/23/2014		04/27/2015		09/05/2013		09/05/2013	
Field Sample ID		EW-01-090413		EW-1-022714		EW-1-092314		EW-1-042715		EW-02-090513		EW-02-090513	
SDG		680-93870-1		680-99043-1		680-105604-2		680-111968-1&2		680-93954-1		680-93954-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG		FD	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	10.3		2500		2400		2100		510	530
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	290		25	U	50	U	25	U	460	470
SM2320B	ALKALINITY, TOTAL	mg/L	N	690		2500		2400		2100		1000	1100
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3500		5700		4700		6800	H	5200	4300
SM3500-FeD	FERROUS IRON	ug/l	N	2900	HF	14000	HF					1500	1700
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	72		32						260	250
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	74		37						230	230
SWG6010	ALUMINIUM	mg/L	N	2.1		0.55		1.6		0.93		12	12
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	20	U	20	U	5.3	5.3
SWG6010	ARSENIC	mg/L	N	0.038		0.0069	J	0.023		0.021		0.024	0.022
SWG6010	BARIUM	mg/L	N	0.2		0.051		0.13		0.097		0.28	0.27
SWG6010	BERYLLIUM	mg/L	N	0.0038	J	0.0042		0.0077		0.0056		0.011	0.011
SWG6010	CADMIUM	mg/L	N	BEA	U	0.005	U	0.005	U	0.005	U	0.002	0.002
SWG6010	CALCIUM	mg/L	N	14		18		14		38		21	21
SWG6010	CHROMIUM	mg/L	N	0.07		0.069		0.086		0.075		0.12	0.11
SWG6010	COBALT	mg/L	N	0.002	J	0.01	U	0.01	U	0.01	U	0.00095	0.00095
SWG6010	COPPER	mg/L	N	0.0087	J	0.02	U	0.0067	J	0.0075	J	0.0019	0.0019
SWG6010	IRON	mg/L	N	5.8		30		14		22		1.1	0.99
SWG6010	LEAD	mg/L	N	0.041		0.0045	J	0.0074	J	0.0072	J	0.0042	0.004
SWG6010	MAGNESIUM	mg/L	N	0.64		5.7		2.7		9.9		1	1.1
SWG6010	MANGANESE	mg/L	N	0.046		0.6		0.32		0.45		0.032	0.033
SWG6010	NICKEL	mg/L	N	0.014	J	0.04	U	0.0065	J	0.0067	J	0.016	0.014
SWG6010	POTASSIUM	mg/L	N	12		13		10		19		5.1	5.2
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	300000		84000		120000		91000		64000	66000
SWG6010	SELENIUM	mg/L	N	0.0064	U	0.02	U	0.0076	J	0.009	J	0.0064	0.0064
SWG6010	SILVER	mg/L	N	0.00089	U	0.01	U	0.01	U	0.01	U	0.00089	0.00089
SWG6010	SODIUM	mg/L	N	1100		2400		2000		2300		1600	1600
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U	0.0088	0.0088
SWG6010	VANADIUM	ug/l	N	110		21		48		40		370	380
SWG6010	ZINC	ug/l	N	43		9.6	J	26		26		15	14
SW7470	MERCURY	ug/l	N	50		0.53		3.8		2.1		60	71
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	10	U	10	U					10	10
SW9038	SULFATE	mg/L	N	25	U	15						100	100
SW9040	pH	S.U.	N			6.83	H	7.13	H	6.66	H	10.2	10.2
SW9056	CHLORIDE	mg/L	N										
SW9056	SULFATE	mg/L	N										
SW9251	CHLORIDE	mg/L	N	1400		2000						1900	1900

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		EW-2		EW-2		EW-2		EW-2		EW-3		EW-3	
Date		02/27/2014		09/23/2014		04/29/2015		04/29/2015		09/05/2013		02/27/2014	
Field Sample ID		EW-2-022714		EW-2-092314		EW-2-042915		EW-2-D-042915		EW-03-090513		EW-3-022714	
SDG		680-99043-1		680-105604-2		680-112022-1&2		680-112022-1&2		680-93954-1		680-99043-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		FD		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2700		340		4400		4400		520	3100
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	5.0	U	25	U	25	U	600	3100
SM2320B	ALKALINITY, TOTAL	mg/L	N	2700		340		4400		4400		1200	6300
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	6200		550		5100		5700		5800	11000
SM3500-FeD	FERROUS IRON	ug/l	N	4200	HF							1000	2200
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	190								350	240
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	140								320	250
SWG6010	ALUMINUM	mg/L	N	7.4		0.55		1.8		1.7		4.2	0.62
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	U	5.3	14
SWG6010	ARSENIC	mg/L	N	0.022		0.02	U	0.02	U	0.02	U	0.025	0.064
SWG6010	BARIUM	mg/L	N	0.23		0.014		0.11		0.11		0.22	0.093
SWG6010	BERYLLIUM	mg/L	N	0.0094		0.004	U	0.002	J	0.0019	J	0.0081	0.0011
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	U	0.002	0.005
SWG6010	CALCIUM	mg/L	N	25		62		52		52		8.6	13
SWG6010	CHROMIUM	mg/L	N	0.15		0.0021	J	0.052		0.041		0.13	0.22
SWG6010	COBALT	mg/L	N	0.001	J	0.01	U	0.01	U	0.01	U	0.00095	0.003
SWG6010	COPPER	mg/L	N	0.0072	J	0.01	J	0.0023	J	0.02	U	0.0019	0.19
SWG6010	IRON	mg/L	N	3.5		1.2		4.5		4.4		1	2.3
SWG6010	LEAD	mg/L	N	0.0099	J	0.01	U	0.01	U	0.01	U	0.0049	0.067
SWG6010	MAGNESIUM	mg/L	N	11		8.5		19		19		0.12	0.17
SWG6010	MANGANESE	mg/L	N	0.16		0.11		0.33		0.32		0.015	0.0083
SWG6010	NICKEL	mg/L	N	0.019	J	0.04	U	0.0046	J	0.0036	J	0.017	0.062
SWG6010	POTASSIUM	mg/L	N	6.5		9.2		15		15		1.4	44
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	67000		22000		56000		56000		29000	330000
SWG6010	SELENIUM	mg/L	N	0.013	J	0.02	U	0.015	J	0.014	J	0.014	0.026
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.00089	0.01
SWG6010	SODIUM	mg/L	N	1800		100		3300		3200		1900	3900
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.0088	0.025
SWG6010	VANADIUM	ug/l	N	240		6.6	J	110		110		460	540
SWG6010	ZINC	ug/l	N	20	U	8.8	J	20	U	20	U	28	66
SW7470	MERCURY	ug/l	N	6.7		0.60		2.7		3.0		7.2	71
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	10	U							10	10
SW9038	SULFATE	mg/L	N	12								100	25
SW9040	pH	S.U.	N	7.00	H	7.64	H	6.82		6.78		10.5	9.82
SW9056	CHLORIDE	mg/L	N										
SW9056	SULFATE	mg/L	N										
SW9251	CHLORIDE	mg/L	N	2100								2400	5900

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		EW-3		EW-3		EW-4		EW-4		EW-4		EW-4		
Date		09/29/2014		04/30/2015		11/21/2013		03/04/2014		09/30/2014		04/27/2015		
Field Sample ID		EW-3-092914		EW-3-043015		EW-4-112113		EW-4-030414		EW-4-093014		EW-4-042715		
SDG		680-105809-1		680-112094-1&2		680-96469-1		680-99155-1		680-105809-1		680-111968-1&2		
Matrix		WATER		WATER		WATER		WATER		WATER		WATER		
Sample Purpose		REG		REG		REG		REG		REG		REG		
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		
Method	Parameter Name	Units	Filtered											
110.2	pH	S.U.	N											
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	3600		4400		110		3500		1800		2600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	2700		50	U	1300		50	U	62		660
SM2320B	ALKALINITY, TOTAL	mg/L	N	6300		4400		1400		3500		1900		3200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	14000		9700		4900		7300		2900		5400
SM3500-FeD	FERROUS IRON	ug/l	N					1900	HF	13000	HF			
SM4500S2-E	SULFIDE	mg/L	N											
SM4500S2-F	SULFIDE	mg/L	N											
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N											
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y					230		170				
SM5310B	TOTAL ORGANIC CARBON	mg/L	N					160		140				
SWG6010	ALUMINIUM	mg/L	N			3		2.2		1.3		0.59		0.44
SWG6010	ANTIMONY	ug/l	N	15	J	20	U	20	U	20	U	20	U	20
SWG6010	ARSENIC	mg/L	N	0.082		0.056		0.068		0.062		0.016	J	0.034
SWG6010	BARIUM	mg/L	N	0.13		0.22		0.33		0.14		0.083		0.11
SWG6010	BERYLLIUM	mg/L	N	0.0012	J	0.0063		0.004		0.0053		0.0018	J	0.00084
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	U	0.005	U	0.005
SWG6010	CALCIUM	mg/L	N	19		24		27		31		20		25
SWG6010	CHROMIUM	mg/L	N	0.32		0.42		0.22		0.21		0.12		0.055
SWG6010	COBALT	mg/L	N	0.0022	J	0.002	J	0.0081	J	0.0017	J	0.01	U	0.01
SWG6010	COPPER	mg/L	N	0.11		0.31		0.028		0.01	J	0.0054	J	0.0092
SWG6010	IRON	mg/L	N	3.6		21		3.7		14		1.2		4.2
SWG6010	LEAD	mg/L	N	0.054		0.066		0.043		0.01		0.01	U	0.009
SWG6010	MAGNESIUM	mg/L	N	0.29	J	7	B	0.21	J	4.6		1.6		4
SWG6010	MANGANESE	mg/L	N	0.011		0.33		0.024		0.21		0.043		0.1
SWG6010	NICKEL	mg/L	N	0.084		0.051		0.046		0.031	J	0.017	J	0.022
SWG6010	POTASSIUM	mg/L	N	67		18		13		12		8.2		15
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	340000		94000		760000		920000		170000		510000
SWG6010	SELENIUM	mg/L	N	0.0074	J	0.016	J	0.02	U	0.021	B	0.02	U	0.011
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01
SWG6010	SODIUM	mg/L	N	6200		6600		1600		2500		1100		2500
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U	0.025
SWG6010	VANADIUM	ug/l	N	790		500		460		360		220		110
SWG6010	ZINC	ug/l	N	78		94	B	110		27		13	J	34
SW7470	MERCURY	ug/l	N	170		40		160		20		30		36
SW7470	MERCURY	ug/l	Y											
SW9034	SULFIDE	mg/L	N					12		10	U			
SW9038	SULFATE	mg/L	N					25	U	160				
SW9040	pH	S.U.	N	9.67	H	7.24	H	11.2	H	7.47	H	8.57	H	9.35
SW9056	CHLORIDE	mg/L	N											
SW9056	SULFATE	mg/L	N											
SW9251	CHLORIDE	mg/L	N					1600		1500				

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		EW-4		EW-5		EW-5		EW-5		EW-5		EW-6	
Date		04/27/2015		11/20/2013		03/05/2014		09/30/2014		04/25/2015		09/05/2013	
Field Sample ID		EW-4-D-042715		EW-5-112013		EW-5-030514		EW-5-093014		EW-5-042515		EW-06-090513	
SDG		680-111968-1&2		680-96469-1		680-99155-1		680-105809-1		680-111968-1&2		680-93954-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		FD		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2500		1500	H	3100		1100		4500	940
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	650		4000	H	6900		96		13000	7100
SM2320B	ALKALINITY, TOTAL	mg/L	N	3200		5700	H	10000		1200		18000	8400
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	5700		12000		25000		3100		44000	34000
SM3500-FeD	FERROUS IRON	ug/l	N			3600	HF	13000	HF				2700
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			800		750					390
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			340		750					300
SWG6010	ALUMINUM	mg/L	N	0.44		1.6		0.56		8.1		3.3	0.54
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	U	53	27
SWG6010	ARSENIC	mg/L	N	0.03		0.21		0.73		0.037		1.1	0.5
SWG6010	BARIUM	mg/L	N	0.11		0.23		0.087		0.031		0.1	0.057
SWG6010	BERYLLIUM	mg/L	N	0.00084	J	0.01		0.0029	J	0.00085	J	0.0032	0.0018
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.002	J	0.005	U	0.05	0.01
SWG6010	CALCIUM	mg/L	N	24		12		15		30		18	5.1
SWG6010	CHROMIUM	mg/L	N	0.051		0.72		1.1		0.088		1.6	0.38
SWG6010	COBALT	mg/L	N	0.01	U	0.004	J	0.006	J	0.01	U	0.1	0.0048
SWG6010	COPPER	mg/L	N	0.0081	J	0.048		0.064		0.55		0.071	0.053
SWG6010	IRON	mg/L	N	4		4.3		6.1		2.9		8.2	5.9
SWG6010	LEAD	mg/L	N	0.0094	J	0.0064	J	0.01	U	0.019		0.1	0.032
SWG6010	MAGNESIUM	mg/L	N	4.2		0.13	J	0.15	J	0.74		0.45	0.1
SWG6010	MANGANESE	mg/L	N	0.1		0.025		0.0066	J	0.04		0.1	0.013
SWG6010	NICKEL	mg/L	N	0.02	J	0.13		0.23		0.016	J	0.35	0.15
SWG6010	POTASSIUM	mg/L	N	15		22		25		14		33	18
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	580000		2100000		2400000		250000		7100000	6300000
SWG6010	SELENIUM	mg/L	N	0.0087	J	0.028		0.063	B	0.0069	J	0.11	0.1
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.1	0.0045
SWG6010	SODIUM	mg/L	N	2500		6900		13000		870		22000	11000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.25	0.044
SWG6010	VANADIUM	ug/l	N	100		1700		3500		180		5000	1400
SWG6010	ZINC	ug/l	N	30		32		52		28		200	44
SW7470	MERCURY	ug/l	N	37		300		180		21		75	430
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N			42		36					10
SW9038	SULFATE	mg/L	N			25	U	130					25
SW9040	pH	S.U.	N	9.32	H	10.8	H	10.5	H	9.04	H	10.8	11.5
SW9056	CHLORIDE	mg/L	N										
SW9056	SULFATE	mg/L	N										
SW9251	CHLORIDE	mg/L	N			7200		13000					12000

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		EW-6		EW-6		EW-6		EW-8		EW-8		EW-8	
Date		02/28/2014		09/29/2014		04/25/2015		11/21/2013		03/03/2014		09/30/2014	
Field Sample ID		EW-6-022814		EW-6-092914		EW-6-042515		EW-8-112113		EW-8-030314		EW-8-093014	
SDG		680-99043-1		680-105809-1		680-111968-1&2		680-96469-1		680-99155-1		680-105809-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	13000		390		8600		420		2500	2800
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	150		5.0	U	50	U	1800		330	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	14000		390		8600		2200		2800	2800
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	42000		510		21000		6400		6600	4600
SM3500-FeD	FERROUS IRON	ug/l	N	1700	HF					1500	HF	1200	HF
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	260						270		250	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	270						230		230	
SWG6010	ALUMINIUM	mg/L	N	0.2	U	0.2	U	0.2	U	0.37		0.92	0.7
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	U	20	20
SWG6010	ARSENIC	mg/L	N	0.057		0.02	U	0.0064	J	0.032		0.032	0.011
SWG6010	BARIUM	mg/L	N	0.096		0.0082	J	0.18		0.11		0.14	0.085
SWG6010	BERYLLIUM	mg/L	N	0.0016	J	0.004	U	0.0014	J	0.0016	J	0.0044	0.0042
SWG6010	CADMIUM	mg/L	N	0.0022	J	0.005	U	0.0021	J	0.005	U	0.005	0.005
SWG6010	CALCIUM	mg/L	N	31		63		90		18		24	28
SWG6010	CHROMIUM	mg/L	N	0.26		0.0028	J	0.28		0.13		0.16	0.13
SWG6010	COBALT	mg/L	N	0.0013	J	0.01	U	0.01	U	0.0016	J	0.01	0.01
SWG6010	COPPER	mg/L	N	0.014	J	0.0095	J	0.0055	J	0.0098	J	0.0068	0.003
SWG6010	IRON	mg/L	N	1.3		3.9		12		0.87		1.2	2
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.01	U	0.0093	J	0.01	0.01
SWG6010	MAGNESIUM	mg/L	N	20		9.7		72		0.036	J	2.5	13
SWG6010	MANGANESE	mg/L	N	0.048		0.34		0.63		0.0055	J	0.029	0.09
SWG6010	NICKEL	mg/L	N	0.043		0.04	U	0.03	J	0.031	J	0.018	0.0067
SWG6010	POTASSIUM	mg/L	N	48		17		57		8.4		11	13
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	53000		57000		90000		860000		160000	95000
SWG6010	SELENIUM	mg/L	N	0.029		0.02	U	0.027		0.015	J	0.021	0.02
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.01	0.01
SWG6010	SODIUM	mg/L	N	13000		140		10000		2800		3000	2000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.025	0.025
SWG6010	VANADIUM	ug/l	N	590		5.2	J	390		260		200	93
SWG6010	ZINC	ug/l	N	15	J	16	J	20	U	16	J	15	20
SW7470	MERCURY	ug/l	N	180		1.2		41		48		2.7	1.6
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	20	U					12		10	U
SW9038	SULFATE	mg/L	N	500	U					56		250	U
SW9040	pH	S.U.	N	7.63	H	7.41	H	7.09	H	10.6	H	9.09	7.89
SW9056	CHLORIDE	mg/L	N										
SW9056	SULFATE	mg/L	N										
SW9251	CHLORIDE	mg/L	N	13000						2800		2200	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		EW-9		EW-9		EW-9		EW-10		EW-10		EW-10	
Date		11/21/2013		03/04/2014		09/30/2014		11/21/2013		03/03/2014		09/30/2014	
Field Sample ID		EW-9-112113		EW-9-030414		EW-9-093014		EW-10-112113		EW-10-030314		EW-10-093014	
SDG		680-96469-1		680-99155-1		680-105809-1		680-96469-1		680-99155-1		680-105809-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	300		2900		3300		550	H	2600	2600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	2400		25	U	50	U	2000	H	50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	2700		2900		3300		2800	H	2700	2600
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	8000		6300		7300		9700		7800	5200
SM3500-FeD	FERROUS IRON	ug/l	N	2600	HF	5700	HF			1400	HF	2800	HF
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	400		200				310		210	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	310		190				250		200	
SWG6010	ALUMINUM	mg/L	N	0.36		0.19	J	0.35		0.26		1.1	1.1
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	U	20	20
SWG6010	ARSENIC	mg/L	N	0.059		0.018	J	0.0076	J	0.042		0.036	0.03
SWG6010	BARIUM	mg/L	N	0.15		0.13		0.097		0.13		0.074	0.065
SWG6010	BERYLLIUM	mg/L	N	0.017		0.011		0.013		0.01		0.015	0.015
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	U	0.005	0.005
SWG6010	CALCIUM	mg/L	N	19		96		48		12		35	32
SWG6010	CHROMIUM	mg/L	N	0.27		0.17		0.2		0.18		0.17	0.16
SWG6010	COBALT	mg/L	N	0.002	J	0.01	U	0.01	U	0.01	U	0.01	0.01
SWG6010	COPPER	mg/L	N	0.014	J	0.0037	J	0.0044	J	0.013	J	0.019	0.015
SWG6010	IRON	mg/L	N	1.7		5.8		2.1		1.2		2.8	1.3
SWG6010	LEAD	mg/L	N	0.011		0.01	U	0.01	U	0.011		0.014	0.011
SWG6010	MAGNESIUM	mg/L	N	0.041	J	19		12		0.026	J	4.3	4.1
SWG6010	MANGANESE	mg/L	N	0.046		1.3		0.68		0.018		0.26	0.24
SWG6010	NICKEL	mg/L	N	0.046		0.016	J	0.015	J	0.038	J	0.023	0.021
SWG6010	POTASSIUM	mg/L	N	4.6		14		12		19		14	14
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	420000		100000		110000		880000		120000	150000
SWG6010	SELENIUM	mg/L	N	0.012	J	0.015	J,B	0.02	U	0.012	J	0.017	0.02
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.01	0.01
SWG6010	SODIUM	mg/L	N	4100		2400		2800		5600		3100	3000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.025	0.025
SWG6010	VANADIUM	ug/l	N	590		210		200		560		330	320
SWG6010	ZINC	ug/l	N	15	J	20	U	20	U	12	J	24	19
SW7470	MERCURY	ug/l	N	120		4.6		21		68		35	32
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	31		10	U			28		10	U
SW9038	SULFATE	mg/L	N	29		27				25	U	120	
SW9040	pH	S.U.	N	10.9	H	6.96	H	7.63	H	11.1	H	7.57	7.70
SW9056	CHLORIDE	mg/L	N										
SW9056	SULFATE	mg/L	N										
SW9251	CHLORIDE	mg/L	N	4800		2300				7000		3300	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		EW-11		EW-11		EW-11		EW-11		EW-11		MW-1A		MW-1A			
Date		10/03/2012		11/21/2013		12/12/2013		02/28/2014		02/28/2014		04/25/2015		10/02/2012		11/28/2012	
Field Sample ID		EW-11-100312		EW-11-112113		EW-11-121213		EW-11-022814		EW-11DUP-022814		EW-11-042515		MW-1A-100212		MW-1A-112812	
SDG		680-83469-1		680-96469-1		680-97103-1		680-99043-1		680-99043-1		680-111968-1&2		680-83469-1		680-85180-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		FD		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered														
110.2	pH	S.U.	N														
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	650	H	4800	H		4400		4400		3900		820	H	1500
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	1800	H	390	H		25	U	25	U	50	U	100	U,H	100
SM2320B	ALKALINITY, TOTAL	mg/L	N	2700	H	5200	H		4500		4400		4000		820	H	1500
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	20000		17000			26000		24000		14000		5000		8200
SM3500-FeD	FERROUS IRON	ug/l	N	2300		2600	HF		7500	HF	7000	HF			1200		370
SM4500S2-E	SULFIDE	mg/L	N														
SM4500S2-F	SULFIDE	mg/L	N	17											7.3		10
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N														
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	1700		260			160		160				230		160
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	280		150			170		130				350		140
SWG6010	ALUMINUM	mg/L	N	0.48		0.13	J		0.2	U	0.2	U	0.2	U	20		6
SWG6010	ANTIMONY	ug/l	N	20	U	20	U		5.3	J	20	U	20	U	20	U	20
SWG6010	ARSENIC	mg/L	N	0.14		0.051			0.02	U	0.0054	J	0.02	U	0.012	J	0.02
SWG6010	BARIUM	mg/L	N	0.052		0.13			0.15		0.16		0.17		0.072		0.034
SWG6010	BERYLLIUM	mg/L	N	0.0043		0.0029	J		0.0018	J	0.0018	J	0.0015	J	0.011		0.0018
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U		0.005	U	0.005	U	0.005	U	0.005	U	0.005
SWG6010	CALCIUM	mg/L	N	17		19			30		31		33		10		14
SWG6010	CHROMIUM	mg/L	N	0.45		0.48			0.16		0.2		0.12		0.078		0.03
SWG6010	COBALT	mg/L	N	0.0035	J	0.0026	J		0.01	U	0.01	U	0.01	U	0.004	J	0.0013
SWG6010	COPPER	mg/L	N	0.022		0.02			0.0021	J	0.0025	J	0.02	U	0.0035	J	0.02
SWG6010	IRON	mg/L	N	2.6		3.1			7.3		7.6		8.1		2.9		0.69
SWG6010	LEAD	mg/L	N	0.01		0.01	U		0.01	U	0.01	U	0.01	U	0.024		0.01
SWG6010	MAGNESIUM	mg/L	N	0.1	J	13			21		21		21		2.5		12
SWG6010	MANGANESE	mg/L	N	0.044		0.26			0.28		0.28		0.18		0.039		0.034
SWG6010	NICKEL	mg/L	N	0.06		0.051			0.0071	J	0.0073	J	0.0072	J	0.01	J	0.0054
SWG6010	POTASSIUM	mg/L	N	9.8		20			22		22		13		6.4		25
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	610000		140000			72000		72000		110000		44000		40000
SWG6010	SELENIUM	mg/L	N	0.027		0.023			0.019	J	0.03		0.016	J	0.012	J	0.02
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U		0.01	U	0.01	U	0.01	U	0.01	U	0.01
SWG6010	SODIUM	mg/L	N	7900		9900			8400		8600		5700		1500		1600
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U		0.025	U	0.025	U	0.025	U	0.025	U	0.025
SWG6010	VANADIUM	ug/l	N	1400		960			140		160		89		120		81
SWG6010	ZINC	ug/l	N	43		11	J		20	U	20	U	20	U	51		15
SW7470	MERCURY	ug/l	N	64		48		23	3.0		3.9		0.95		8.1		1.1
SW7470	MERCURY	ug/l	Y														
SW9034	SULFIDE	mg/L	N			10	U		10	U	10	U					
SW9038	SULFATE	mg/L	N			500	U		5.0	U	5.0	U					
SW9040	pH	S.U.	N	11.1	H	8.62	H		6.80	H	6.83	H	6.70	H	8.42	H	6.76
SW9056	CHLORIDE	mg/L	N	9000											1800		4000
SW9056	SULFATE	mg/L	N	420											100	U	100
SW9251	CHLORIDE	mg/L	N			12000			10000		9700						

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-1A		MW-1A		MW-1B		MW-1B		MW-1B		MW-1B		MW-1C				
Date		09/06/2013		02/24/2014		10/02/2012		11/27/2012		08/30/2013		02/24/2014		10/02/2012				
Field Sample ID		12 MW-1A-090613		MW-1A-022414		MW-1B-100212		MW-1B-112712		MW-1B-083013		MW-1B-022414		MW-1C-100212				
SDG & Z		680-93954-1		680-98941-1		680-83414-1		680-85180-1&2		680-93799-1		680-98941-1		680-83414-1				
Matrix		WATER		WATER		WATER		WATER		WATER		WATER		WATER				
Sample Purpose		REG		REG		REG		REG		REG		REG		REG				
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS				
Method	Parameter Name	Units	Filtered															
110.2	pH	S.U.	N															
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	H	1500		1600		770	H	1400	H	1300		1200		790	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	U,H	10	U		U	100	U,H	100	U,H	50	U	50	U	4300	H
SM2320B	ALKALINITY, TOTAL	mg/L	N	H	1500		1600		780	H	1400	H	1300		1200		5700	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N		8900		9500		8500		5600		6200		4200		48000	
SM3500-FeD	FERROUS IRON	ug/l	N		48	J,HF	77	J,HF	5400		7900		4800	HF	3600	HF	3300	
SM4500S2-E	SULFIDE	mg/L	N															
SM4500S2-F	SULFIDE	mg/L	N	U							10	U						
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N						1.0	U								52
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y		150		130		200		170		170		200		2300	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N		160		150		190		160		180		150		1900	
SWG6010	ALUMINUM	mg/L	N		2.1		3		14		4.6		3.5		5.1		0.28	
SWG6010	ANTIMONY	ug/l	N	U	5.3	U	5.3	J	20	U	20	U	5.3	U	20	U	20	U
SWG6010	ARSENIC	mg/L	N	U	0.0046	U	0.0067	J	0.012	J	0.012	J	0.011	J	0.0056	J	0.32	
SWG6010	BARIUM	mg/L	N		0.025		0.041		0.061		0.026		0.027		0.031		0.021	
SWG6010	BERYLLIUM	mg/L	N	J	0.001	J	0.0011	J	0.01		0.015		0.014		0.016		0.0023	J
SWG6010	CADMIUM	mg/L	N	U	0.002	U	0.005	U	0.005	U	0.005	U	0.002	U	0.005	U	0.0024	J
SWG6010	CALCIUM	mg/L	N		25		31		14		8.2		9.8		9		1.4	
SWG6010	CHROMIUM	mg/L	N		0.018		0.026		0.093		0.13		0.098		0.086		0.5	
SWG6010	COBALT	mg/L	N	J	0.00095	U	0.01	U	0.0011	J	0.01	U	0.00095	U	0.01	U	0.0031	J
SWG6010	COPPER	mg/L	N	U	0.0019	U	0.02	U	0.0041	J	0.0022	J	0.0047	J	0.0019	J	0.031	
SWG6010	IRON	mg/L	N		0.083	J	0.055	J	8.5		7.5		4.8		4.6		2.1	
SWG6010	LEAD	mg/L	N	U	0.004	U	0.01	U	0.016		0.012		0.011		0.019		0.01	U
SWG6010	MAGNESIUM	mg/L	N		19		27		4.2		4.9		7.7		6.7		0.13	J
SWG6010	MANGANESE	mg/L	N		0.089		0.14		0.17		0.11		0.14		0.11		0.0021	J
SWG6010	NICKEL	mg/L	N	J	0.0032	J	0.0051	J	0.0092	J	0.0047	J	0.0052	J	0.0057	J	0.09	
SWG6010	POTASSIUM	mg/L	N		37		46		2.4		2.1		2.6		2.1		14	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y		22000		17000		57000		91000		66000		57000		200000	
SWG6010	SELENIUM	mg/L	N		0.018	J	0.029		0.0089	J	0.0099	J	0.012	J	0.011	J	0.042	
SWG6010	SILVER	mg/L	N	U	0.00089	U	0.01	U	0.01	U	0.01	U	0.0013	J	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N		3400		3700		1300		690		1500		1300		20000	
SWG6010	THALLIUM	mg/L	N	U	0.0088	U	0.025	U	0.025	U	0.025	U	0.0088	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N		79		96		120		140		110		120		2200	
SWG6010	ZINC	ug/l	N	J	8.7	U	20	U	28		49		8.7	U	9.9	J	16	J
SW7470	MERCURY	ug/l	N		0.41		0.46		5.0		3.5		3.2		4.3		110	
SW7470	MERCURY	ug/l	Y															
SW9034	SULFIDE	mg/L	N		10	U	10	U					31		40	U		
SW9038	SULFATE	mg/L	N		10	U	5.0	U					31		29			
SW9040	pH	S.U.	N	H	6.83		6.96	H	8.93	H	6.46	H	6.63		6.59	H	11.2	H
SW9056	CHLORIDE	mg/L	N						1600		1200						19000	
SW9056	SULFATE	mg/L	N	U					100	U	100	U					1300	
SW9251	CHLORIDE	mg/L	N		4700		5100						1600		1500			

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-1C	MW-1C	MW-1C	MW-1C	MW-1C	MW-1C	MW-1C	MW-1C								
Date		11/26/2012	02/04/2013	02/04/2013	05/15/2013	08/30/2013	02/24/2014	02/24/2014									
Field Sample ID		MW-1C-112612	MW-1C-020413	MW-1C2-020413	MW-1C 051513	MW-1C-083013	MW 1C (Duplicate)-022414	MW-1C-022414									
SDG		680-85137-1&2	680-87157-1	680-87157-1	680-90380-1	680-93799-1	680-98941-1	680-98941-1									
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER									
Sample Purpose		REG	REG	FD	REG	REG	FD	REG									
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS									
Method	Parameter Name	Units	Filtered														
110.2	pH	S.U.	N														
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	7800	H	600		610		6500		6300		7400		7300	
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	120	H	5.0	U	5.0	U	410		600		50	U	50	U
SM2320B	ALKALINITY, TOTAL	mg/L	N	7900	H	600		610		6900		6900		7400		7300	
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	48000		42000		42000		43000		43000		28000		17000	
SM3500-FeD	FERROUS IRON	ug/l	N	18000		7300	HF	7600	HF	1400	HF	1800	HF	6800	HF	6700	HF
SM4500S2-E	SULFIDE	mg/L	N							24							
SM4500S2-F	SULFIDE	mg/L	N	22		22		25									
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N														
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	390	B	290		290		280		300		270		280	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	430		270		280		340		1100		290		270	
SWG6010	ALUMINUM	mg/L	N	0.2	U	0.1	U	0.1	U	1	U	0.5	U	0.14	J	0.13	J
SWG6010	ANTIMONY	ug/l	N	20	U	5.3	U	5.3	U	5.3	U	27	U	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.12		0.023		0.019	J	0.046	U	0.023	U	0.02	U	0.1	U
SWG6010	BARIUM	mg/L	N	0.39		0.23		0.23		0.078	J	0.067		0.25		0.25	
SWG6010	BERYLLIUM	mg/L	N	0.0027	J	0.0033	J	0.0033	J	0.0032	J	0.0047	J	0.0031	J	0.003	J
SWG6010	CADMIUM	mg/L	N	0.0037	J	0.0025	J	0.0025	J	0.02	U	0.01	U	0.0034	J	0.0032	J
SWG6010	CALCIUM	mg/L	N	65		29		29		8.7		6		33		33	
SWG6010	CHROMIUM	mg/L	N	0.32		0.42		0.41		0.33		0.53		0.26		0.27	
SWG6010	COBALT	mg/L	N	0.01	U	0.0095	U	0.0095	U	0.0095	U	0.0048	U	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.0049	J	0.012	J	0.013	J	0.019	U	0.016	J	0.0092	J	0.0088	J
SWG6010	IRON	mg/L	N	17		6.8		7		1.1		1.3		7.7		7.8	
SWG6010	LEAD	mg/L	N	0.063		0.004	U	0.004	U	0.04	U	0.02	U	0.01	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	19		11		11		4.4	J	2	J	15		15	
SWG6010	MANGANESE	mg/L	N	0.24		0.094		0.095		0.02	J	0.014	J	0.12		0.1	
SWG6010	NICKEL	mg/L	N	0.016	J	0.033	J	0.031	J	0.027	J	0.045	J	0.013	J	0.01	J
SWG6010	POTASSIUM	mg/L	N	48		34		32		25		26		42		42	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	86000		78000		78000		57000		75000		58000		53000	
SWG6010	SELENIUM	mg/L	N	0.032		0.032		0.036		0.068	J	0.073	J	0.02	U	0.1	U
SWG6010	SILVER	mg/L	N	0.01	U	0.00089	U	0.00089	U	0.0089	U	0.0045	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	8700		14000		14000		15000		15000		13000		13000	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.0088	U	0.0088	U	0.088	U	0.044	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	370		680		670		780		1000		360		360	
SWG6010	ZINC	ug/l	N	9.5	J	15	J	16	J	87	U	44	U	20	U	20	U
SW7470	MERCURY	ug/l	N	21		44		42		53		43		10		11	
SW7470	MERCURY	ug/l	Y														
SW9034	SULFIDE	mg/L	N									35		40	U	40	U
SW9038	SULFATE	mg/L	N									500	U	1100		1100	
SW9040	pH	S.U.	N	6.97	H	7.19	H	7.19	H	8.60	H	8.62	H	7.04	H	7.00	H
SW9056	CHLORIDE	mg/L	N	25000		21000		22000		19000							
SW9056	SULFATE	mg/L	N	1400		1400		1400		1200							
SW9251	CHLORIDE	mg/L	N									17000		15000		15000	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-1C	MW-1C	MW-2A	MW-2A	MW-2A	MW-2A	MW-2A	MW-2B								
Date		09/25/2014	04/21/2015	10/03/2012	11/28/2012	09/06/2013	03/05/2014	10/03/2012									
Field Sample ID		MW-1C-092514	MW-1C-042115	MW-2A-100312	MW-2A-112812	MW-2A-090613	MW-2A-030514	MW-2B-100312									
SDG		680-105703-1	680-111819-2&3	680-83469-1	680-85180-1&2	680-93954-1	680-99155-1	680-83469-1									
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER									
Sample Purpose		REG	REG	REG	REG	REG	REG	REG									
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS									
Method	Parameter Name	Units	Filtered														
110.2	pH	S.U.	N														
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	7000		6000		830	H	1700	H	1400		1700		770	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50	U	100	U,H	100	U,H	50	U	25	U	100	U,H
SM2320B	ALKALINITY, TOTAL	mg/L	N	7100		6000		840	H	1700	H	1500		1700		780	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	24000		25000		5200		5100		5200		4700		4300	
SM3500-FeD	FERROUS IRON	ug/l	N					2200		1200		630	HF	210	HF	1800	
SM4500S2-E	SULFIDE	mg/L	N														
SM4500S2-F	SULFIDE	mg/L	N					5.9		14						14	
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N														
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y					280		200		210		210		280	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N					250		190		240		180		280	
SWG6010	ALUMINIUM	mg/L	N	0.2	U	0.4	U	47		23		13		9.3		4.7	
SWG6010	ANTIMONY	ug/l	N	20	U	40	U	20	U	20	U	5.3	U	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.02	U	0.04	U	0.021		0.0095	J	0.0046	U	0.0091	J	0.012	J
SWG6010	BARIUM	mg/L	N	0.22		0.25		0.2		0.14		0.086		0.069		0.068	
SWG6010	BERYLLIUM	mg/L	N	0.002	J	0.0019	J	0.01		0.0062		0.0032	J	0.0026	J	0.011	
SWG6010	CADMIUM	mg/L	N	0.0024	J	0.01	U	0.005	U	0.005	U	0.002	U	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	35		48		20		13		18		14		14	
SWG6010	CHROMIUM	mg/L	N	0.13		0.13		0.14		0.089		0.044		0.058		0.095	
SWG6010	COBALT	mg/L	N	0.01	U	0.02	U	0.006	J	0.0022	J	0.00095	U	0.0013	J	0.01	U
SWG6010	COPPER	mg/L	N	0.0037	J	0.04	U	0.0053	J	0.0033	J	0.0019	U	0.02	U	0.0031	J
SWG6010	IRON	mg/L	N	5.9		11		6.7		1.9		0.34		0.42		1.8	
SWG6010	LEAD	mg/L	N	0.01	U	0.02	U	0.032		0.017		0.004	U	0.01	U	0.017	
SWG6010	MAGNESIUM	mg/L	N	20		23		3.4		1.4		3.5		3.4		0.81	
SWG6010	MANGANESE	mg/L	N	0.1		0.16		0.3		0.14		0.32		0.21		0.027	
SWG6010	NICKEL	mg/L	N	0.006	J	0.0073	J	0.016	J	0.0079	J	0.0041	J	0.0062	J	0.0097	J
SWG6010	POTASSIUM	mg/L	N	28		37		7.8		8.4		15		11		1.3	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	91000		93000		80000		50000		21000		16000		30000	
SWG6010	SELENIUM	mg/L	N	0.026		0.016	J	0.013	J	0.017	J	0.0064	U	0.02	B	0.01	J
SWG6010	SILVER	mg/L	N	0.01	U	0.02	U	0.01	U	0.01	U	0.00089	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	24		9900		1700		650		1900		1900		1400	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.05	U	0.025	U	0.025	U	0.0088	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	160		130		170		110		93		89		150	
SWG6010	ZINC	ug/l	N	20	U	40	U	48		18	J	8.7	U	20	U	9.5	J
SW7470	MERCURY	ug/l	N	3.7		2.9		11		4.5		3.3		0.63		4.8	
SW7470	MERCURY	ug/l	Y														
SW9034	SULFIDE	mg/L	N									10	U	10	U		
SW9038	SULFATE	mg/L	N									26		16			
SW9040	pH	S.U.	N	6.98	H	6.95	H	8.68	H	7.19		7.61		7.59	H	9.16	H
SW9056	CHLORIDE	mg/L	N					1800		1500						1400	
SW9056	SULFATE	mg/L	N					100	U	100	U					100	U
SW9251	CHLORIDE	mg/L	N									2200		1900			

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-2B		MW-2B		MW-2B		MW-2C		MW-2C		MW-2C			
Date		11/28/2012		08/30/2013		03/04/2014		10/03/2012		11/27/2012		11/27/2012			
Field Sample ID		MW-2B-112812		MW-2B-083013		MW-2B-030414		MW-2C-100312		MW-2C-MID-112712		MW-2C-MID2-112712			
SDG		680-85180-1&2		680-93799-1		680-99155-1		680-83469-1		680-85137-1&2		680-85137-1&2			
Matrix		WATER		WATER		WATER		WATER		WATER		WATER			
Sample Purpose		REG		REG		REG		REG		REG		FD			
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS			
Method	Parameter Name	Units	Filtered												
110.2	pH	S.U.	N												
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1100	H	1400		1300		810	H	5600	H	5700	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	100	U,H	25	U	25	U	4000	H	110	H	100	U,H
SM2320B	ALKALINITY, TOTAL	mg/L	N	1100	H	1400		1300		5300	H	5700	H	5800	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	4800		5500		3500		38000		35000		33000	
SM3500-FeD	FERROUS IRON	ug/l	N	6200		3200	HF	3900	HF	1700		5200		6000	
SM4500S2-E	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE	mg/L	N	19						28		20		20	
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N												
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	210		200		230		1600		410	B	440	B
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	200		200		200		1600		480		470	
SWG6010	ALUMINUM	mg/L	N	6		2.8		3.7		0.47		0.2	U	0.2	U
SWG6010	ANTIMONY	ug/l	N	20	U	5.3	U	20	U	20	U	14	J	19	J
SWG6010	ARSENIC	mg/L	N	0.015	J	0.011	J	0.017	J	0.26		0.039		0.044	
SWG6010	BARIUM	mg/L	N	0.04		0.048		0.046		0.022		0.11		0.13	
SWG6010	BERYLLIUM	mg/L	N	0.013		0.0093		0.011		0.0022	J	0.0021	J	0.0024	J
SWG6010	CADMIUM	mg/L	N	0.005	U	0.002	U	0.005	U	0.0024	J	0.005	U	0.0021	J
SWG6010	CALCIUM	mg/L	N	10		12		10		2.5		12		14	
SWG6010	CHROMIUM	mg/L	N	0.11		0.08		0.098		0.37		0.25		0.32	
SWG6010	COBALT	mg/L	N	0.01	U	0.00095	U	0.01	U	0.0019	J	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.0026	J	0.0019	U	0.0029	J	0.022		0.0089	J	0.011	J
SWG6010	IRON	mg/L	N	6.2		2.8		3.7		1.8		6.1		7.2	
SWG6010	LEAD	mg/L	N	0.013		0.011		0.015		0.01	U	0.01	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	3.1		3.8		3.2		0.12	J	7		8.3	
SWG6010	MANGANESE	mg/L	N	0.081		0.074		0.05		0.0028	J	0.18		0.21	
SWG6010	NICKEL	mg/L	N	0.0077	J	0.0053	J	0.0068	J	0.069		0.027	J	0.033	J
SWG6010	POTASSIUM	mg/L	N	2		3		1.9		14		24		28	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	83000		42000		46000		1900000		180000		190000	
SWG6010	SELENIUM	mg/L	N	0.013	J	0.011	J	0.013	J	0.035		0.023		0.031	
SWG6010	SILVER	mg/L	N	0.01	U	0.0015	J	0.01	U	0.01	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	660		1500		1300		13000		5600		6200	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.0088	U	0.025	U	0.025	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	160		120		140		1700		630		760	
SWG6010	ZINC	ug/l	N	14	J	8.7	U	20	U	16	J	11	J	11	J
SW7470	MERCURY	ug/l	N	4.5		2.7		0.92		110		74		55	
SW7470	MERCURY	ug/l	Y												
SW9034	SULFIDE	mg/L	N			15		10	U						
SW9038	SULFATE	mg/L	N			30		100	U						
SW9040	pH	S.U.	N	6.58	H	7.01		6.73	H	11.3	H	7.81		7.75	
SW9056	CHLORIDE	mg/L	N	1400						17000		18000		17000	
SW9056	SULFATE	mg/L	N	100	U					1000		930		940	
SW9251	CHLORIDE	mg/L	N			1500		1300							

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-2C		MW-2C		MW-2C		MW-2C		MW-2C		MW-2C	
Date		11/27/2012		02/05/2013		05/15/2013		08/27/2013		02/24/2014		09/26/2014	
Field Sample ID		MW-2C-TOP-112712		MW-2C-MID-020513		MW-2C_051513		MW-2C-082713		MW-2C-022414		MW-2C-092614	
SDG		680-85180-1&2		680-87157-1		680-90380-1		680-93690-1		680-98941-1		680-105703-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	6000	H	450		4300		3800		5600	6600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	100	U,H	35		410		510		50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	6000	H	490		4800		4300		5700	6000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	32000		33000		30000		26000		17000	23000
SM3500-FeD	FERROUS IRON	ug/l	N	6900		1100	HF	1100	HF	1300	HF	2300	19000
SM4500S2-E	SULFIDE	mg/L	N					27					
SM4500S2-F	SULFIDE	mg/L	N	22		21							
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	300		320		760		250	B	340	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	270		290		910		340		320	
SWG6010	ALUMINIUM	mg/L	N	0.2	U	0.1	U	1	U	0.1	U	0.13	0.2
SWG6010	ANTIMONY	ug/l	N	9.1	J	37		53	U	89		210	20
SWG6010	ARSENIC	mg/L	N	0.026		0.034		0.046	U	0.028		0.067	0.02
SWG6010	BARIUM	mg/L	N	0.17		0.089		0.092	J	0.079		0.11	0.18
SWG6010	BERYLLIUM	mg/L	N	0.003	J	0.002	J	0.0026	J	0.0031	J	0.0024	0.0024
SWG6010	CADMIUM	mg/L	N	0.0025	J	0.002	U	0.02	U	0.002	U	0.0028	0.0022
SWG6010	CALCIUM	mg/L	N	19		11		12		28		20	31
SWG6010	CHROMIUM	mg/L	N	0.3		0.29		0.18		0.34		0.4	0.17
SWG6010	COBALT	mg/L	N	0.01	U	0.00095	U	0.0095	U	0.0011	J	0.01	0.01
SWG6010	COPPER	mg/L	N	0.0087	J	0.0086	J	0.019	U	0.014	J	0.024	0.0057
SWG6010	IRON	mg/L	N	8.4		0.92		0.64	J	0.83		3.2	5.4
SWG6010	LEAD	mg/L	N	0.01	U	0.004	U	0.04	U	0.004	U	0.01	0.01
SWG6010	MAGNESIUM	mg/L	N	12		5.6		6.2		3.3		4.6	13
SWG6010	MANGANESE	mg/L	N	0.24		0.067		0.044	J	0.038		0.21	0.19
SWG6010	NICKEL	mg/L	N	0.027	J	0.033	J	0.023	U	0.044		0.058	0.012
SWG6010	POTASSIUM	mg/L	N	30		21		12		18		50	44
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	110000		130000		75000		130000		59000	110000
SWG6010	SELENIUM	mg/L	N	0.032		0.031		0.064	U	0.021		0.011	0.028
SWG6010	SILVER	mg/L	N	0.01	U	0.00089	U	0.0089	U	0.027		0.01	0.01
SWG6010	SODIUM	mg/L	N	6300		13000		11000		10000		13000	12000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.0088	U	0.088	U	0.0088	U	0.025	0.025
SWG6010	VANADIUM	ug/l	N	620		730		690		870		950	250
SWG6010	ZINC	ug/l	N	12	J	24		87	U	17	J	23	20
SW7470	MERCURY	ug/l	N	33		41		46		49		34	5.3
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N							13		40	U
SW9038	SULFATE	mg/L	N									1200	
SW9040	pH	S.U.	N	7.20	H	8.58		8.76	H	8.87	H	6.72	7.05
SW9056	CHLORIDE	mg/L	N	16000		19000		14000		13000			
SW9056	SULFATE	mg/L	N	920		920		720		750			
SW9251	CHLORIDE	mg/L	N									15000	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-3A	MW-3A	MW-3A	MW-3A	MW-105A	MW-105A	MW-105B								
Date		10/03/2012	11/28/2012	09/06/2013	03/05/2014	09/04/2013	03/05/2014	09/04/2013								
Field Sample ID		MW-3A-100312	MW-3A-112812	MW-3A-090613	MW-3A-030514	MW-105A-090413	MW-105A-030514	MW-105B-090413								
SDG		680-83469-1	680-85180-1&2	680-93954-1	680-99155-1	680-93870-1	680-99155-1	680-93870-1								
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER								
Sample Purpose		REG	REG	REG	REG	REG	REG	REG								
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS								
Method	Parameter Name	Units	Filtered													
110.2	pH	S.U.	N													
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	4800	H	7200	H	5000	5700	130	130	320				
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	100	H	100	U,H	50	50	U	5.0	5.0	50	U		
SM2320B	ALKALINITY, TOTAL	mg/L	N	4900	H	7200	H	5000	5800	U	130	130	320			
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	30000		30000		20000	18000		370	340	980			
SM3500-FeD	FERROUS IRON	ug/l	N	490		1800		2800	1000	HF	3600	HF	950	HF	240	HF
SM4500S2-E	SULFIDE	mg/L	N													
SM4500S2-F	SULFIDE	mg/L	N	5.1		18										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N													
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	530		330		390	270		34		26		130	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	440		830		320	220		33		25		130	
SWG6010	ALUMINIUM	mg/L	N	16		5.9		20	8.5		0.1	U	0.2	U	12	
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	5.3	5.4	J	5.3	U	20	U	5.3	U
SWG6010	ARSENIC	mg/L	N	0.02		0.013	J	0.016	0.014	J	0.0046	U	0.02	U	0.0077	J
SWG6010	BARIUM	mg/L	N	0.066		0.075		0.14	0.094		0.014		0.015		0.036	
SWG6010	BERYLLIUM	mg/L	N	0.003	J	0.0016	J	0.0023	0.0015	J	0.0002	U	0.004	U	0.00048	J
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.002	0.005	U	0.002	U	0.005	U	0.002	U
SWG6010	CALCIUM	mg/L	N	31		40		40	63		74		72		2.9	
SWG6010	CHROMIUM	mg/L	N	0.092		0.044		0.054	0.071		0.0012	U	0.01	U	0.037	
SWG6010	COBALT	mg/L	N	0.0016	J	0.01	U	0.00095	0.01	U	0.00095	U	0.01	U	0.00095	U
SWG6010	COPPER	mg/L	N	0.0034	J	0.02	U	0.0019	0.02	U	0.0019	U	0.02	U	0.0068	J
SWG6010	IRON	mg/L	N	1.9		1.3		5.7	3.2		3.8		0.88		1	
SWG6010	LEAD	mg/L	N	0.0078	J	0.01	U	0.004	0.01	U	0.004	U	0.01	U	0.053	
SWG6010	MAGNESIUM	mg/L	N	24		28		19	32		14		13		0.84	
SWG6010	MANGANESE	mg/L	N	0.18		0.33		0.49	0.47		0.27		0.23		0.0078	J
SWG6010	NICKEL	mg/L	N	0.026	J	0.019	J	0.018	0.018	J	0.0023	U	0.04	U	0.0065	J
SWG6010	POTASSIUM	mg/L	N	100		120		82	72		6.1		5.5		1.6	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	13000		24000		18000	13000		2800		1900		7100	
SWG6010	SELENIUM	mg/L	N	0.025		0.017	J	0.024	0.037	B	0.0064	U	0.02	U	0.0064	U
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.00089	0.01	U	0.00089	U	0.01	U	0.00089	U
SWG6010	SODIUM	mg/L	N	11000		5500		8700	10000		7.7		13		250	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.0088	0.025	U	0.0088	U	0.025	U	0.0088	U
SWG6010	VANADIUM	ug/l	N	130		97		160	120		2.4	U	10	U	64	
SWG6010	ZINC	ug/l	N	26		12	J	17	11	J	8.7	U	20	U	12	J
SW7470	MERCURY	ug/l	N	0.16	J	0.52		1.5	0.96		0.091	U	0.20	U	7.7	
SW7470	MERCURY	ug/l	Y													
SW9034	SULFIDE	mg/L	N					10	10	U	10	U	10	U	10	U
SW9038	SULFATE	mg/L	N					220	50	U	160		150		13	
SW9040	pH	S.U.	N	8.14	H	7.08		7.35	6.93	H	6.03	H	6.53	H	5.69	H
SW9056	CHLORIDE	mg/L	N	13000		18000										
SW9056	SULFATE	mg/L	N	100	U	100	U									
SW9251	CHLORIDE	mg/L	N					9700	11000		7.5		9.8		160	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-105B		MW-105C		MW-105C	
Date		03/05/2014		08/30/2013		03/04/2014	
Field Sample ID		MW-105B-030514		MW-105C-083013		MW-105C-030414	
SDG		680-99155-1		680-99155-1		680-99155-1	
Matrix		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered				
110.2	pH	S.U.	N				
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	310		170	4200
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	25	U	300	25
SM2320B	ALKALINITY, TOTAL	mg/L	N	310		520	4200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	940		2600	4700
SM3500-FeD	FERROUS IRON	ug/l	N	190	HF	6800	3800
SM4500S2-E	SULFIDE	mg/L	N				
SM4500S2-F	SULFIDE	mg/L	N				
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N				
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	99		86	37
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	85		86	34
SW6010	ALUMINIUM	mg/L	N	5.4		6.6	0.95
SW6010	ANTIMONY	ug/l	N	20	U	27	20
SW6010	ARSENIC	mg/L	N	0.0086	J	0.059	0.0075
SW6010	BARIUM	mg/L	N	0.019		0.36	0.13
SW6010	BERYLLIUM	mg/L	N	0.004	U	0.012	0.0039
SW6010	CADMIUM	mg/L	N	0.005	U	0.01	0.005
SW6010	CALCIUM	mg/L	N	7.2		7.3	2.8
SW6010	CHROMIUM	mg/L	N	0.019		0.09	0.049
SW6010	COBALT	mg/L	N	0.01	U	0.0048	0.01
SW6010	COPPER	mg/L	N	0.0031	J	0.0095	0.02
SW6010	IRON	mg/L	N	0.52		14	6.4
SW6010	LEAD	mg/L	N	0.025		0.039	0.01
SW6010	MAGNESIUM	mg/L	N	1.7		0.38	0.73
SW6010	MANGANESE	mg/L	N	0.012		0.036	0.032
SW6010	NICKEL	mg/L	N	0.0032	J	0.012	0.04
SW6010	POTASSIUM	mg/L	N	1.9		0.68	3
SW6010	RESPIRABLE QUARTZ	ug/l	Y	2900		170000	41000
SW6010	SELENIUM	mg/L	N	0.01	J	0.032	0.011
SW6010	SILVER	mg/L	N	0.01	U	0.0045	0.01
SW6010	SODIUM	mg/L	N	310		720	2200
SW6010	THALLIUM	mg/L	N	0.025	U	0.044	0.025
SW6010	VANADIUM	ug/l	N	38		73	16
SW6010	ZINC	ug/l	N	9.1	J	70	13
SW7470	MERCURY	ug/l	N	0.71		58	2.4
SW7470	MERCURY	ug/l	Y			21	
SW9034	SULFIDE	mg/L	N	10	U	22	10
SW9038	SULFATE	mg/L	N	13		29	10
SW9040	pH	S.U.	N	6.85	H	11.0	7.24
SW9056	CHLORIDE	mg/L	N				
SW9056	SULFATE	mg/L	N				
SW9251	CHLORIDE	mg/L	N	200		630	560

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-105C		MW-105C		MW-112C		MW-112C		MW-112C		MW-112C		MW-113C	
Date		09/29/2014		04/27/2015		09/05/2013		02/28/2014		09/27/2014		04/27/2015		09/03/2013	
Field Sample ID		MW-105C-092914		MW-105C-042715		MW-112C-090513		MW-112C-022814		MW-112C-092714		MW-112C-042715		MW-113C-090313	
SDG		680-105809-1		680-111968-1&2		680-93954-1		680-99043-1		680-105809-1		680-111968-1&2		680-93870-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered												
110.2	pH	S.U.	N												
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	5.0	U	2500		1400		960		1200		990	850
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	5.0	U	5.0	U	2300		2600		3400		3200	140
SM2320B	ALKALINITY, TOTAL	mg/L	N	5.0	U	2500		3800		3700		4700		4400	1000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3800		6400		28000		30000		30000		12000	H 27000
SM3500-FeD	FERROUS IRON	ug/l	N					4300	HF	9500	HF				320
SM4500S2-E	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N												
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y					740		680					690
SM5310B	TOTAL ORGANIC CARBON	mg/L	N					580		1200					710
SWG6010	ALUMINUM	mg/L	N	0.12	J	0.12	J	1.5		0.3		0.43		0.36	J 2.9
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	5.3	U	20	U	20	U	40	U 5.3
SWG6010	ARSENIC	mg/L	N	0.02	U	0.0066	J	0.026		0.021		0.035		0.069	U 0.0069
SWG6010	BARIUM	mg/L	N	0.041		0.064		0.02		0.0065	J	0.0045	J	0.0097	J 1.5
SWG6010	BERYLLIUM	mg/L	N	0.00039	J	0.00081	J	0.0088		0.0015	J	0.0028	J	0.0033	J 0.0083
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.002	U	0.005	U	0.003	J	0.01	U 0.002
SWG6010	CALCIUM	mg/L	N	1.6		3.2		31		7.4		11		14	820
SWG6010	CHROMIUM	mg/L	N	0.0027	J	0.0055	J	0.83		1.1		2.2		2.3	0.26
SWG6010	COBALT	mg/L	N	0.01	U	0.01	U	0.0012	J	0.0032	J	0.0051	J	0.0052	J 0.00095
SWG6010	COPPER	mg/L	N	0.02	U	0.02	U	0.054		0.11		0.22		0.17	0.019
SWG6010	IRON	mg/L	N	3.8		5.6		4.5		3.1		5.9		6.4	0.45
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.0049	J	0.01	U	0.01	U	0.02	U 0.004
SWG6010	MAGNESIUM	mg/L	N	0.44	J	0.98		0.098	J	0.04	J	0.04	J	0.076	J 0.073
SWG6010	MANGANESE	mg/L	N	0.016		0.029		0.056		0.0072	J	0.0092	J	0.0095	J 0.002
SWG6010	NICKEL	mg/L	N	0.04	U	0.04	U	0.069		0.14		0.27		0.29	0.036
SWG6010	POTASSIUM	mg/L	N	2.8		3.7		27		18		49		39	65
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	50000		61000		490000		650000		1100000		690000	3700
SWG6010	SELENIUM	mg/L	N	0.02	U	0.0098	J	0.027		0.04		0.025		0.062	0.039
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.00089	U	0.01	U	0.01	U	0.02	U 0.0059
SWG6010	SODIUM	mg/L	N	1800		2500		13000		5200		10000		11000	8500
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.0088	U	0.025	U	0.025	U	0.05	U 0.0088
SWG6010	VANADIUM	ug/l	N	2.8	J	3.1	J	4400		2700		5100		5400	1300
SWG6010	ZINC	ug/l	N	8.9	J	20	U	22		25		46		57	11
SW7470	MERCURY	ug/l	N	1.6		0.95		14		10		23		27	45
SW7470	MERCURY	ug/l	Y												
SW9034	SULFIDE	mg/L	N					35		15					10
SW9038	SULFATE	mg/L	N					50	U	500	U				400
SW9040	pH	S.U.	N	7.01	H	6.82	H	10.2	H	10.5	H	10.5	H	10.6	H 8.94
SW9056	CHLORIDE	mg/L	N												
SW9056	SULFATE	mg/L	N												
SW9251	CHLORIDE	mg/L	N					13000		14000					14000

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-113C		MW-113C		MW-113C		MW-113C		MW-115A		MW-115A			
Date		03/04/2014		03/04/2014		09/27/2014		04/27/2015		10/03/2012		10/03/2012			
Field Sample ID		MW-113C-030414		MW-113CDUPLICATE-030414		MW-113C-092714		MW-113C-042715		MW-115A-100312		MW-115A2-100312			
SDG		680-99155-1		680-99155-1		680-105809-1		680-111968-1&2		680-83469-1		680-83469-1			
Matrix		WATER		WATER		WATER		WATER		WATER		WATER			
Sample Purpose		REG		FD		REG		REG		REG		FD			
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS			
Method	Parameter Name	Units	Filtered												
110.2	pH	S.U.	N												
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2200		2200		2200		2300		630	H	640	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	610		620		530		590		100	U,H	100	U,H
SM2320B	ALKALINITY, TOTAL	mg/L	N	2800		2800		2800		2900		630	H	640	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	23000		22000		28000		27000		3700		3700	
SM3500-FeD	FERROUS IRON	ug/l	N	2400	HF	2700	HF					190		170	
SM4500S2-E	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE	mg/L	N									4.5		5.8	
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N												
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	1000		1100						240		230	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	970		940						220		210	
SWG6010	ALUMINIUM	mg/L	N	6.8		6.5		7.6		7.9		24		24	
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	11	J	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.026		0.019	J	0.02	U	0.028	J	0.0095	J	0.0086	J
SWG6010	BARIUM	mg/L	N	0.12		0.11		0.12		0.17		0.069		0.07	
SWG6010	BERYLLIUM	mg/L	N	0.018		0.018		0.018		0.023		0.0032	J	0.0032	J
SWG6010	CADMIUM	mg/L	N	0.0023	J	0.0022	J	0.005	U	0.01	U	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	20		18		20		28		17		17	
SWG6010	CHROMIUM	mg/L	N	0.75		0.72		0.65		0.91		0.09		0.089	
SWG6010	COBALT	mg/L	N	0.0036	J	0.0034	J	0.0015	J	0.003	J	0.0014	J	0.0017	J
SWG6010	COPPER	mg/L	N	0.063		0.058		0.062		0.064		0.0065	J	0.0057	J
SWG6010	IRON	mg/L	N	1.2		1.2		1.2		1.6		1.1		1.1	
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.01	U	0.02	U	0.019		0.019	
SWG6010	MAGNESIUM	mg/L	N	0.12	J	0.11	J	0.1	J	0.14	J	3.1		3.1	
SWG6010	MANGANESE	mg/L	N	0.0095	J	0.0095	J	0.01	J	0.013	J	0.35		0.35	
SWG6010	NICKEL	mg/L	N	0.11		0.11		0.096		0.15		0.012	J	0.012	J
SWG6010	POTASSIUM	mg/L	N	83		82		150		130		6.9		7	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	2600		2600		50000		42000		19000		19000	
SWG6010	SELENIUM	mg/L	N	0.064	B	0.065	B	0.019	J	0.064		0.014	J	0.016	J
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.02	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	12000		12000		12000		12000		1200		1200	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.05	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	2700		2600		2600		3000		150		150	
SWG6010	ZINC	ug/l	N	13	J	17	J	16	J	40	U	13	J	12	J
SW7470	MERCURY	ug/l	N	3.1		3.0		17		16		7.2		7.0	
SW7470	MERCURY	ug/l	Y												
SW9034	SULFIDE	mg/L	N	10	U	10	U								
SW9038	SULFATE	mg/L	N	250	U	250	U								
SW9040	pH	S.U.	N	9.13	H	9.14	H	9.07	H	9.08	H	7.66	H	7.69	H
SW9056	CHLORIDE	mg/L	N									1300		1300	
SW9056	SULFATE	mg/L	N									100	U	100	U
SW9251	CHLORIDE	mg/L	N	15000		14000									

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-115A	MW-115A	MW-115A	MW-115A	MW-115B	MW-115B	MW-115B								
Date		11/28/2012	09/05/2013	09/05/2013	03/04/2014	10/03/2012	11/28/2012	09/05/2013								
Field Sample ID		MW-115A-112812	MW-115A-090513	MW-115A2-090513	MW-115A-030414	MW-115B-100312	MW-115B-112812	MW-115B-090513								
SDG		680-85180-1&2	680-93954-1	680-93954-1	680-99155-1	680-83469-1	680-85180-1&2	680-93954-1								
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER								
Sample Purpose		REG	REG	FD	REG	REG	REG	REG								
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS								
Method	Parameter Name	Units	Filtered													
110.2	pH	S.U.	N													
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	800	H	860	840	800	720	H	1400	H	700			
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	100	U,H	50	U	50	U	100	U,H	100	U,H	50		
SM2320B	ALKALINITY, TOTAL	mg/L	N	800	H	870	850	800	730	H	1400	H	730			
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3800		4300	4200	3800	3400		4300		3600			
SM3500-FeD	FERROUS IRON	ug/l	N	210		630	HF	660	HF	480	HF	960	5000	1400		
SM4500S2-E	SULFIDE	mg/L	N													
SM4500S2-F	SULFIDE	mg/L	N	16						6.3		12				
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N													
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	240		210	220	260	230		210		230			
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	220		220	230	230	230		190		230			
SW6010	ALUMINIUM	mg/L	N	27		20	20	23	2.1		5		4			
SW6010	ANTIMONY	ug/l	N	20	U	5.6	J	5.3	U	20	U	20	U	5.3		
SW6010	ARSENIC	mg/L	N	0.0083	J	0.0046	U	0.0051	J	0.014	J	0.011	J	0.016	J	0.012
SW6010	BARIUM	mg/L	N	0.069		0.053		0.054		0.074		0.046		0.031		0.06
SW6010	BERYLLIUM	mg/L	N	0.0036	J	0.0031	J	0.003	J	0.0035	J	0.011		0.013		0.012
SW6010	CADMIUM	mg/L	N	0.005	U	0.002	U	0.002	U	0.005	U	0.005	U	0.005	U	0.002
SW6010	CALCIUM	mg/L	N	16		20		19		18		12		9		15
SW6010	CHROMIUM	mg/L	N	0.087		0.045		0.045		0.089		0.07		0.096		0.076
SW6010	COBALT	mg/L	N	0.0021	J	0.00095	U	0.00095	U	0.0019	J	0.01	U	0.01	U	0.00095
SW6010	COPPER	mg/L	N	0.0064	J	0.0019	U	0.0019	U	0.0069	J	0.0023	J	0.0023	J	0.004
SW6010	IRON	mg/L	N	1.3		0.38		0.36		1.1		0.65		3.8		0.91
SW6010	LEAD	mg/L	N	0.025		0.0042	J	0.0044	J	0.032		0.013		0.015		0.02
SW6010	MAGNESIUM	mg/L	N	2.9		4.1		4		3.6		0.98		7.5		2.6
SW6010	MANGANESE	mg/L	N	0.34		0.39		0.39		0.34		0.0071	J	0.063		0.013
SW6010	NICKEL	mg/L	N	0.013	J	0.0065	J	0.0076	J	0.014	J	0.008	J	0.0062	J	0.0094
SW6010	POTASSIUM	mg/L	N	7.6		8.6		8.4		6.6		0.61	J	1.1		0.69
SW6010	RESPIRABLE QUARTZ	ug/l	Y	28000		17000		17000		17000		18000		110000		22000
SW6010	SELENIUM	mg/L	N	0.015	J	0.0075	J	0.0089	J	0.009	J	0.0083	J	0.012	J	0.0064
SW6010	SILVER	mg/L	N	0.01	U	0.00089	U	0.00089	U	0.01	U	0.01	U	0.01	U	0.00089
SW6010	SODIUM	mg/L	N	470	J	1300		1300		1300		1100		640		1000
SW6010	THALLIUM	mg/L	N	0.025	U	0.0088	U	0.0088	U	0.025	U	0.025	U	0.025	U	0.0088
SW6010	VANADIUM	ug/l	N	140		110		120		150		110		130		130
SW6010	ZINC	ug/l	N	33		9.2	J	8.7	U	10	J	20	U	11	J	15
SW7470	MERCURY	ug/l	N	7.6		5.3		4.1		0.57		5.5		3.9		5.2
SW7470	MERCURY	ug/l	Y													
SW9034	SULFIDE	mg/L	N			10	U	10	U	10	U					10
SW9038	SULFATE	mg/L	N			120		130		110						30
SW9040	pH	S.U.	N	7.70		7.51	H	7.48	H	7.59	H	9.11	H	6.41		8.91
SW9056	CHLORIDE	mg/L	N	1100								1200		1200		
SW9056	SULFATE	mg/L	N	100	U							100	U	100	U	
SW9251	CHLORIDE	mg/L	N			1600		1600		1500						1300

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-115B	
Date		03/04/2014	
Field Sample ID		3 MW-115B-030414	
SDG		680-99155-1	
Matrix		WATER	
Sample Purpose		REG	
Sample Type		GW-GWS	
Method	Parameter Name	Units	Filtered
110.2	pH	S.U.	N
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N
SM2320B	ALKALINITY, TOTAL	mg/L	N
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N
SM3500-FeD	FERROUS IRON	ug/l	N
SM4500S2-E	SULFIDE	mg/L	N
SM4500S2-F	SULFIDE	mg/L	N
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y
SM5310B	TOTAL ORGANIC CARBON	mg/L	N
SW6010	ALUMINUM	mg/L	N
SW6010	ANTIMONY	ug/l	N
SW6010	ARSENIC	mg/L	N
SW6010	BARIUM	mg/L	N
SW6010	BERYLLIUM	mg/L	N
SW6010	CADMIUM	mg/L	N
SW6010	CALCIUM	mg/L	N
SW6010	CHROMIUM	mg/L	N
SW6010	COBALT	mg/L	N
SW6010	COPPER	mg/L	N
SW6010	IRON	mg/L	N
SW6010	LEAD	mg/L	N
SW6010	MAGNESIUM	mg/L	N
SW6010	MANGANESE	mg/L	N
SW6010	NICKEL	mg/L	N
SW6010	POTASSIUM	mg/L	N
SW6010	RESPIRABLE QUARTZ	ug/l	Y
SW6010	SELENIUM	mg/L	N
SW6010	SILVER	mg/L	N
SW6010	SODIUM	mg/L	N
SW6010	THALLIUM	mg/L	N
SW6010	VANADIUM	ug/l	N
SW6010	ZINC	ug/l	N
SW7470	MERCURY	ug/l	N
SW7470	MERCURY	ug/l	Y
SW9034	SULFIDE	mg/L	N
SW9038	SULFATE	mg/L	N
SW9040	pH	S.U.	N
SW9056	CHLORIDE	mg/L	N
SW9056	SULFATE	mg/L	N
SW9251	CHLORIDE	mg/L	N

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-115C		MW-115C		MW-115C		MW-115C		MW-115C	
Date		10/03/2012		11/27/2012		02/05/2013		05/16/2013		08/27/2013	
Field Sample ID		MW-115C-100312		MW-115C-112712		MW-115C-020513		MW-115C_051613		MW-115C-082713	
SDG		680-83469-1		680-85137-1&2		680-87157-1		680-90380-1		680-93690-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	700	H	1700	H	97		1000	1100
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	3500	H	3200	H	340		4000	3700
SM2320B	ALKALINITY, TOTAL	mg/L	N	4700	H	5100	H	450		5100	4900
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	33000		34000		35000		31000	32000
SM3500-FeD	FERROUS IRON	ug/l	N	1300		1500		1600	HF	1700	1600
SM4500S2-E	SULFIDE	mg/L	N							6.3	
SM4500S2-F	SULFIDE	mg/L	N	35		40		69			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	1300		450	B	1300		1400	320
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	1500		560		1100		1400	290
SWG6010	ALUMINIUM	mg/L	N	0.2	U	0.2	U	0.1	U	1	0.1
SWG6010	ANTIMONY	ug/l	N	20	U	14	J	11	J	53	36
SWG6010	ARSENIC	mg/L	N	0.28		0.098		0.18		0.22	0.092
SWG6010	BARIUM	mg/L	N	0.016		0.056		0.026		0.023	0.021
SWG6010	BERYLLIUM	mg/L	N	0.0019	J	0.0019	J	0.0015	J	0.002	0.0017
SWG6010	CADMIUM	mg/L	N	0.002	J	0.0025	J	0.0021	J	0.02	0.002
SWG6010	CALCIUM	mg/L	N	0.56		2.8		0.85		0.96	0.87
SWG6010	CHROMIUM	mg/L	N	0.34		0.34		0.34		0.14	0.16
SWG6010	COBALT	mg/L	N	0.0019	J	0.0018	J	0.0021	J	0.0095	0.00095
SWG6010	COPPER	mg/L	N	0.022		0.02		0.018	J	0.019	0.0026
SWG6010	IRON	mg/L	N	1.5		1.1		1.2		0.98	0.91
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.004	U	0.04	0.004
SWG6010	MAGNESIUM	mg/L	N	0.019	J	0.38	J	0.097	J	0.099	0.052
SWG6010	MANGANESE	mg/L	N	0.01	U	0.0052	J	0.002	U	0.02	0.002
SWG6010	NICKEL	mg/L	N	0.069		0.059		0.067		0.027	0.023
SWG6010	POTASSIUM	mg/L	N	11		19		8		5.5	13
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	2000000		470000		2000000		2000000	1600000
SWG6010	SELENIUM	mg/L	N	0.025		0.036		0.034		0.069	0.034
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.00089	U	0.0089	0.034
SWG6010	SODIUM	mg/L	N	13000		6600		12000		13000	13000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.0088	U	0.088	0.0088
SWG6010	VANADIUM	ug/l	N	1500		1400		1500		1600	1400
SWG6010	ZINC	ug/l	N	15	J	18	J	23		87	38
SW7470	MERCURY	ug/l	N	120		110		110		180	62
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N								11
SW9038	SULFATE	mg/L	N								
SW9040	pH	S.U.	N	11.4	H	9.94		10.7		10.4	10.7
SW9056	CHLORIDE	mg/L	N	15000		18000		17000		16000	15000
SW9056	SULFATE	mg/L	N	950		1100		1000		930	950
SW9251	CHLORIDE	mg/L	N								

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-115C		MW-115C		MW-115C		MW-352A		MW-352A	
Date		02/24/2014		09/25/2014		04/21/2015		09/05/2013		02/27/2014	
Field Sample ID		MW-115C-022414		MW-115C-092514		MW-115C-042115		MW-352A-090513		MW-352A-022714	
SDG		680-98941-1		680-105703-1		680-111819-2&3		680-93954-1		680-99043-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	6200		3100		5300		430	2900
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	55		2600		450		580	25 U
SM2320B	ALKALINITY, TOTAL	mg/L	N	6200		5700		5800		1100	2900
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	16000		19000		21000		3800	5400
SM3500-FeD	FERROUS IRON	ug/l	N	3000	HF					13000	27000 HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	300						360	150
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	310						2600	91
SWG6010	ALUMINIUM	mg/L	N	0.13	J	0.2	U	0.4	U	4.7	16
SWG6010	ANTIMONY	ug/l	N	11	J	20	U	40	U	5.3	20 U
SWG6010	ARSENIC	mg/L	N	0.02	U	0.02	U	0.04	U	0.055	0.0055 J
SWG6010	BARIUM	mg/L	N	0.19		0.031		0.085		0.28	0.078
SWG6010	BERYLLIUM	mg/L	N	0.0028	J	0.0015	J	0.0022	J	0.0051	0.0072
SWG6010	CADMIUM	mg/L	N	0.0025	J	0.005	U	0.01	U	0.0022	0.005 U
SWG6010	CALCIUM	mg/L	N	1.3		1.1		6.6		9.4	5
SWG6010	CHROMIUM	mg/L	N	0.27		0.16		0.28		0.56	0.24
SWG6010	COBALT	mg/L	N	0.01	U	0.01	U	0.02	U	0.023	0.0033 J
SWG6010	COPPER	mg/L	N	0.013	J	0.0063	J	0.04	U	0.064	0.018 J
SWG6010	IRON	mg/L	N	4.4		0.67		1.7		12	17
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.02	U	0.098	0.031
SWG6010	MAGNESIUM	mg/L	N	10		0.26	J	3.8		0.14	0.61
SWG6010	MANGANESE	mg/L	N	0.13		0.0034	J	0.037		0.024	0.087
SWG6010	NICKEL	mg/L	N	0.027	J	0.02	J	0.028	J	0.084	0.021 J
SWG6010	POTASSIUM	mg/L	N	30		15		16		1.4	2.4
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	59000		280000		150000		260000	85000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.038		0.021	J	0.026	0.015 J
SWG6010	SILVER	mg/L	N	0.0014	J	0.01	U	0.02	U	0.00089	0.01 U
SWG6010	SODIUM	mg/L	N	12000		13000		9200		930	1000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.05	U	0.0088	0.025 U
SWG6010	VANADIUM	ug/l	N	510		900		580		350	100
SWG6010	ZINC	ug/l	N	11	J	20	U	40	U	150	36
SW7470	MERCURY	ug/l	N	19		26		24		300	11
SW7470	MERCURY	ug/l	Y							300	
SW9034	SULFIDE	mg/L	N	40	U					10	10 U
SW9038	SULFATE	mg/L	N	1100						250	140 U
SW9040	pH	S.U.	N	7.56	H	9.73	H	8.62	H	10.7	6.81 H
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N	14000						610	460

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-352A	MW-352A	MW-352B	MW-352B	MW-352B
Date		09/24/2014	04/24/2015	09/03/2013	02/27/2014	09/24/2014
Field Sample ID		MW-352A-092414	MW-352A-042415	MW-352B-09032013	MW-352B-022714	MW-352B-092414
SDG		680-105703-1	680-111968-1&2	680-93870-1	680-99043-1	680-105703-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	900	4900	1400
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	510	25	15000
SM2320B	ALKALINITY, TOTAL	mg/L	N	1400	4900	17000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3100	5700	56000
SM3500-FeD	FERROUS IRON	ug/l	N			3000
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			450
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			340
SWG6010	ALUMINUM	mg/L	N	4.9	0.3	1.9
SWG6010	ANTIMONY	ug/l	N	20	20	5.3
SWG6010	ARSENIC	mg/L	N	0.036	0.02	0.79
SWG6010	BARIUM	mg/L	N	0.24	0.053	0.21
SWG6010	BERYLLIUM	mg/L	N	0.0032	0.00047	0.0015
SWG6010	CADMIUM	mg/L	N	0.005	0.005	0.0021
SWG6010	CALCIUM	mg/L	N	11	14	3.6
SWG6010	CHROMIUM	mg/L	N	0.25	0.014	0.053
SWG6010	COBALT	mg/L	N	0.016	0.01	0.00095
SWG6010	COPPER	mg/L	N	0.044	0.02	0.0089
SWG6010	IRON	mg/L	N	10	18	19
SWG6010	LEAD	mg/L	N	0.081	0.01	0.0068
SWG6010	MAGNESIUM	mg/L	N	1.3	2	0.053
SWG6010	MANGANESE	mg/L	N	0.031	0.18	0.0045
SWG6010	NICKEL	mg/L	N	0.048	0.04	0.039
SWG6010	POTASSIUM	mg/L	N	1.9	6.7	34
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	320000	4800	17000000
SWG6010	SELENIUM	mg/L	N	0.019	0.0066	0.04
SWG6010	SILVER	mg/L	N	0.01	0.01	0.00089
SWG6010	SODIUM	mg/L	N	960	2700	13000
SWG6010	THALLIUM	mg/L	N	0.025	0.025	0.0088
SWG6010	VANADIUM	ug/l	N	160	11	200
SWG6010	ZINC	ug/l	N	100	20	54
SW7470	MERCURY	ug/l	N	210	3.3	690
SW7470	MERCURY	ug/l	Y	120		
SW9034	SULFIDE	mg/L	N			10
SW9038	SULFATE	mg/L	N			80
SW9040	pH	S.U.	N	9.97	H	6.95
SW9056	CHLORIDE	mg/L	N			11.5
SW9056	SULFATE	mg/L	N			89
SW9251	CHLORIDE	mg/L	N			15000
						14000

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-352B	MW-352B	MW-353B	MW-353B	MW-353B
Date		04/24/2015	04/24/2015	09/03/2013	03/04/2014	09/27/2014
Field Sample ID		MW-352B-042415	MW-352B-D-042415	MW-353B-090313	MW-353B-030414	MW-353B-092714
SDG		680-111968-1&2	680-111968-1&2	680-93870-1	680-99155-1	680-105809-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	FD	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2200	2100	2600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	16000	16000	1300
SM2320B	ALKALINITY, TOTAL	mg/L	N	19000	19000	4000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	50000	42000	34000
SM3500-FeD	FERROUS IRON	ug/l	N			13000
SM4500S2-E	SULFIDE	mg/L	N			2900
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y		3600	1300
SM5310B	TOTAL ORGANIC CARBON	mg/L	N		4400	1100
SWG6010	ALUMINIUM	mg/L	N	4	2.3	27
SWG6010	ANTIMONY	ug/l	N	200	200	5.3
SWG6010	ARSENIC	mg/L	N	1.8	1	0.087
SWG6010	BARIUM	mg/L	N	0.34	0.21	1.1
SWG6010	BERYLLIUM	mg/L	N	0.0032	0.04	0.046
SWG6010	CADMIUM	mg/L	N	0.05	0.05	0.002
SWG6010	CALCIUM	mg/L	N	11	6.8	22
SWG6010	CHROMIUM	mg/L	N	0.18	0.11	2
SWG6010	COBALT	mg/L	N	0.1	0.1	0.0085
SWG6010	COPPER	mg/L	N	0.025	0.2	0.14
SWG6010	IRON	mg/L	N	57	34	2
SWG6010	LEAD	mg/L	N	0.1	0.1	0.016
SWG6010	MAGNESIUM	mg/L	N	0.16	0.13	0.68
SWG6010	MANGANESE	mg/L	N	0.1	0.1	0.1
SWG6010	NICKEL	mg/L	N	0.18	0.1	0.3
SWG6010	POTASSIUM	mg/L	N	130	65	18
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	9900000	10000000	6400
SWG6010	SELENIUM	mg/L	N	0.19	0.12	0.035
SWG6010	SILVER	mg/L	N	0.1	0.1	0.00089
SWG6010	SODIUM	mg/L	N	36000	22000	11000
SWG6010	THALLIUM	mg/L	N	0.25	0.25	0.0088
SWG6010	VANADIUM	ug/l	N	520	310	3700
SWG6010	ZINC	ug/l	N	120	110	46
SW7470	MERCURY	ug/l	N	470	110	27
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N			91
SW9038	SULFATE	mg/L	N			510
SW9040	pH	S.U.	N	11.4	11.4	9.36
SW9056	CHLORIDE	mg/L	N			9.42
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N			14000

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-353B		MW-357A		MW-357A		MW-357A		MW-357A	
Date		04/25/2015		08/28/2013		03/03/2014		10/01/2014		04/27/2015	
Field Sample ID		MW-353B-042515		MW-357A-082813		MW-357A-030314		MW-357A-100114		MW-357A-042715	
SDG		680-111968-1&2		680-93799-1		680-99155-1		680-105809-1		680-111968-1&2	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2300	850		3700		3300		3300
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	1900	1100		50	U	50	U	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	4200	2000		3700		3300		3300
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	32000	11000		9100		8200		5400
SM3500-FeD	FERROUS IRON	ug/l	N		1300	HF	7300	HF			
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y		270		260				
SM5310B	TOTAL ORGANIC CARBON	mg/L	N		230		210				
SWG6010	ALUMINUM	mg/L	N	17	7.7		1.6		3.3		7.4
SWG6010	ANTIMONY	ug/l	N	20	5.3	U	20	U	20	U	20
SWG6010	ARSENIC	mg/L	N	0.1	0.033		0.036		0.035		0.033
SWG6010	BARIUM	mg/L	N	0.79	0.053		0.11		0.13		0.14
SWG6010	BERYLLIUM	mg/L	N	0.051	0.019		0.034		0.03		0.022
SWG6010	CADMIUM	mg/L	N	0.005	0.002	U	0.005	U	0.005	U	0.005
SWG6010	CALCIUM	mg/L	N	26	11		26		17		19
SWG6010	CHROMIUM	mg/L	N	2.2	0.17		0.34		0.28		0.27
SWG6010	COBALT	mg/L	N	0.01	0.0018	J	0.01	U	0.01	U	0.01
SWG6010	COPPER	mg/L	N	0.11	0.0058	J	0.0054	J	0.0063	J	0.0036
SWG6010	IRON	mg/L	N	2.4	0.84		6.7		6.6		9.8
SWG6010	LEAD	mg/L	N	0.016	0.0077	J	0.0056	J	0.013		0.015
SWG6010	MAGNESIUM	mg/L	N	0.84	0.46	J	13		7		13
SWG6010	MANGANESE	mg/L	N	0.077	0.04		0.079		0.064		0.098
SWG6010	NICKEL	mg/L	N	0.32	0.022	J	0.022	J	0.02	J	0.017
SWG6010	POTASSIUM	mg/L	N	14	3.2		3.7		3.5		4.8
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	77000	30000		110000		73000		10000
SWG6010	SELENIUM	mg/L	N	0.042	0.0081	J	0.011	J,B	0.02	U	0.014
SWG6010	SILVER	mg/L	N	0.01	0.00089	U	0.01	U	0.01	U	0.01
SWG6010	SODIUM	mg/L	N	9900	2200		3900		3000		2400
SWG6010	THALLIUM	mg/L	N	0.025	0.0088	U	0.025	U	0.025	U	0.025
SWG6010	VANADIUM	ug/l	N	4200	320		290		280		190
SWG6010	ZINC	ug/l	N	48	64		20	U	9.7	J	19
SW7470	MERCURY	ug/l	N	6.1	71		4.1		50		13
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N		19		10	U			
SW9038	SULFATE	mg/L	N		160		83				
SW9040	pH	S.U.	N	9.58	H	10.2	H	6.75	H	7.32	H
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N		3200		3600				

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-357B		MW-357B		MW-357B		MW-357B		MW-357B		MW-358B	
Date		08/28/2013		03/03/2014		03/03/2014		10/01/2014		04/25/2015		09/04/2013	
Field Sample ID		MW-357B-082813		MW-357B-030314		MW-357B-030314		MW-357B-100114		MW-357B-042515		MW-358B-090413	
SDG		680-93690-1		680-99155-1		680-99155-1		680-105809-1		680-111968-2		680-93870-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		FD		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	630		2400		2300		4100		310	1100
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	2500		110		120		290		25	1800
SM2320B	ALKALINITY, TOTAL	mg/L	N	3200		2500		2400		4400		310	2900
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	15000		6300		6200		12000		660	23000
SM3500-FeD	FERROUS IRON	ug/l	N	2100	HF	440	HF	410	HF				620
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N										
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	280		100		100					530
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	290		89		91					470
SWG6010	ALUMINUM	mg/L	N	0.13	J	0.14	J	0.15	J	0.11	J	0.61	11
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	20	U	20	U	20	5.3
SWG6010	ARSENIC	mg/L	N	0.047		0.0095	J	0.0052	J	0.0092	J	0.0068	0.037
SWG6010	BARIUM	mg/L	N	0.069		0.11		0.11		0.065		0.043	0.046
SWG6010	BERYLLIUM	mg/L	N	0.0047		0.0028	J	0.0029	J	0.0085		0.0033	0.03
SWG6010	CADMIUM	mg/L	N	0.002	U	0.005	U	0.005	U	0.005	U	0.005	0.002
SWG6010	CALCIUM	mg/L	N	12		40		41		11		49	15
SWG6010	CHROMIUM	mg/L	N	0.19		0.067		0.07		0.22		0.023	1.1
SWG6010	COBALT	mg/L	N	0.0016	J	0.01	U	0.01	U	0.01	U	0.01	0.0026
SWG6010	COPPER	mg/L	N	0.015	J	0.0033	J	0.0032	J	0.0094	J	0.02	0.046
SWG6010	IRON	mg/L	N	1.1		0.65		0.67		1.5		4.6	1.1
SWG6010	LEAD	mg/L	N	0.004	J	0.01	U	0.01	U	0.01	U	0.01	0.0092
SWG6010	MAGNESIUM	mg/L	N	0.062	J	4.5		4.6		1.5		3.8	0.34
SWG6010	MANGANESE	mg/L	N	0.021		0.12		0.12		0.043		0.99	0.086
SWG6010	NICKEL	mg/L	N	0.047		0.013	J	0.012	J	0.031	J	0.0027	0.11
SWG6010	POTASSIUM	mg/L	N	4.8		8.6		9		8.7		2.4	9.1
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	1100000		130000		130000		140000		27000	4800
SWG6010	SELENIUM	mg/L	N	0.019	J	0.029	B	0.031	B	0.0072	J	0.008	0.027
SWG6010	SILVER	mg/L	N	0.0058	J	0.01	U	0.01	U	0.01	U	0.01	0.00089
SWG6010	SODIUM	mg/L	N	4400		2500		2600		4400		210	8400
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U	0.025	0.0088
SWG6010	VANADIUM	ug/l	N	480		120		120		310		17	1800
SWG6010	ZINC	ug/l	N	16	J	20	U	8.9	J	11	J	20	21
SW7470	MERCURY	ug/l	N	180		5.7		5.6		45		2.2	7.1
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	12		16		14	H				23
SW9038	SULFATE	mg/L	N			23		25					100
SW9040	pH	S.U.	N	11.2	H	8.60	H	8.61	H	8.72	H	6.84	5.61
SW9056	CHLORIDE	mg/L	N	5500									
SW9056	SULFATE	mg/L	N	300	J								
SW9251	CHLORIDE	mg/L	N			2600		2700					12000

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-358B	MW-358B	MW-358B	MW-501A						
Date		02/28/2014	09/27/2014	04/27/2015	08/29/2013						
Field Sample ID		MW-358B-022814	MW-358B-092714	MW-358B-042715	MW-501A-082913						
SDG		680-99043-1	680-105809-1	680-111968-1&2	680-93799-1						
Matrix		WATER	WATER	WATER	WATER						
Sample Purpose		REG	REG	REG	REG						
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS						
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	780		1100		880		220	
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	1700		2000		2100		25	U
SM2320B	ALKALINITY, TOTAL	mg/L	N	2600		3200		3200		220	
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	21000		17000		18000	H	840	
SM3500-FeD	FERROUS IRON	ug/l	N	1500	HF					740	HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	540						110	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	500						100	
SWG6010	ALUMINIUM	mg/L	N	7.4		9.6		8.1		1.2	
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	5.3	U
SWG6010	ARSENIC	mg/L	N	0.028		0.034		0.044		0.049	
SWG6010	BARIUM	mg/L	N	0.036		0.049		0.047		0.28	
SWG6010	BERYLLIUM	mg/L	N	0.025		0.031		0.031		0.0028	J
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.002	U
SWG6010	CALCIUM	mg/L	N	12		14		15		9.2	
SWG6010	CHROMIUM	mg/L	N	0.82		1.1		0.94		0.046	
SWG6010	COBALT	mg/L	N	0.0023	J	0.0024	J	0.0016	J	0.0018	J
SWG6010	COPPER	mg/L	N	0.03		0.042		0.026		0.0047	J
SWG6010	IRON	mg/L	N	0.91		1.1		1.1		11	
SWG6010	LEAD	mg/L	N	0.006	J	0.0056	J	0.0085	J	0.036	
SWG6010	MAGNESIUM	mg/L	N	0.3	J	0.33	J	0.4	J	0.087	J
SWG6010	MANGANESE	mg/L	N	0.066		0.081		0.083		0.12	
SWG6010	NICKEL	mg/L	N	0.081		0.11		0.098		0.013	J
SWG6010	POTASSIUM	mg/L	N	6		9.7		8.7		4.3	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	5600		110000		81000		9800	
SWG6010	SELENIUM	mg/L	N	0.027		0.02	U	0.019	J	0.009	J
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.00089	U
SWG6010	SODIUM	mg/L	N	6300		8700		8300		2200	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.0088	U
SWG6010	VANADIUM	ug/l	N	1400		1800		1700		70	
SWG6010	ZINC	ug/l	N	16	J	21		20		45	
SW7470	MERCURY	ug/l	N	3.0		13		12		4.3	
SW7470	MERCURY	ug/l	Y							1.5	
SW9034	SULFIDE	mg/L	N	10	U					22	
SW9038	SULFATE	mg/L	N	250	U					13	
SW9040	pH	S.U.	N	10.4	H	10.3	H	10.4		6.94	H
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N	12000						57	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-501A	MW-501B	MW-501B	MW-501B	MW-501B
Date		02/27/2014	08/29/2013	02/27/2014	09/22/2014	04/29/2015
Field Sample ID		MW-501A-022714	MW-501B-082913	MW-501B-022714	MW-501B-092214	MW-501B-042915
SDG		680-99043-1	680-93799-1	680-99043-1	680-105604-2	680-112022-2
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	540	200	7800
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	25	U	940
SM2320B	ALKALINITY, TOTAL	mg/L	N	540	1300	7900
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	740	8300	14000
SM3500-FeD	FERROUS IRON	ug/l	N	250	HF	8100
SM4500S2-E	SULFIDE	mg/L	N			4900
SM4500S2-F	SULFIDE	mg/L	N			HF
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	42		50
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	42		44
SWG6010	ALUMINUM	mg/L	N	2.6		8.1
SWG6010	ANTIMONY	ug/l	N	20	U	5.3
SWG6010	ARSENIC	mg/L	N	0.02	U	0.0046
SWG6010	BARIUM	mg/L	N	0.015		0.037
SWG6010	BERYLLIUM	mg/L	N	0.004	U	0.00039
SWG6010	CADMIUM	mg/L	N	0.005	U	0.002
SWG6010	CALCIUM	mg/L	N	1.6		1.6
SWG6010	CHROMIUM	mg/L	N	0.0088	J	0.03
SWG6010	COBALT	mg/L	N	0.01	U	0.0017
SWG6010	COPPER	mg/L	N	0.02	U	0.0028
SWG6010	IRON	mg/L	N	0.5		1.8
SWG6010	LEAD	mg/L	N	0.0068	J	0.017
SWG6010	MAGNESIUM	mg/L	N	0.75		0.39
SWG6010	MANGANESE	mg/L	N	0.0091	J	0.015
SWG6010	NICKEL	mg/L	N	0.04	U	0.0036
SWG6010	POTASSIUM	mg/L	N	2.5		1.3
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	6400		680000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.0064
SWG6010	SILVER	mg/L	N	0.01	U	0.00089
SWG6010	SODIUM	mg/L	N	260		230
SWG6010	THALLIUM	mg/L	N	0.025	U	0.0088
SWG6010	VANADIUM	ug/l	N	33		66
SWG6010	ZINC	ug/l	N	20	U	10
SW7470	MERCURY	ug/l	N	1.1		48
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N	10	U	19
SW9038	SULFATE	mg/L	N	10	U	19
SW9040	pH	S.U.	N	6.15	H	11.3
SW9056	CHLORIDE	mg/L	N			7.06
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N	41		2700

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-502A	MW-502A	MW-502A	MW-502A	MW-502B	MW-502B	MW-502B	
Date		08/29/2013	02/27/2014	09/29/2014	05/01/2015	08/30/2013	12/11/2013	02/27/2014	
Field Sample ID		MW-502A-082913	MW-502A-022714	MW-502A-092914	MW-502A-050115	MW-502B-083013	MW-502B-121113	MW-502B-022714	
SDG		680-93799-1	680-99043-1	680-105809-1	680-112094-1&2	680-93799-1	680-97103-1	680-99043-1	
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	
Sample Purpose		REG	REG	REG	REG	REG	REG	REG	
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS	
Method	Parameter Name	Units	Filtered						
110.2	pH	S.U.	N						
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	650	2600	2900	2200	420	3900
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	160	25	U	50	U	670
SM2320B	ALKALINITY, TOTAL	mg/L	N	820	2600	2900	2200	1200	3900
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3200	3800	3600	4100	H	3900
SM3500-FeD	FERROUS IRON	ug/l	N	2100	HF	1700	HF		4900
SM4500S2-E	SULFIDE	mg/L	N						
SM4500S2-F	SULFIDE	mg/L	N						
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N						
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	270	73				320
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	220	70				170
SWG6010	ALUMINUM	mg/L	N	56	1.9		1.8		5.6
SWG6010	ANTIMONY	ug/l	N	5.3	U	7.5	J	20	U
SWG6010	ARSENIC	mg/L	N	0.015	J	0.02	U	0.02	U
SWG6010	BARIUM	mg/L	N	0.36	0.097		0.1		0.12
SWG6010	BERYLLIUM	mg/L	N	0.0048	0.00043	J	0.0003	J	0.00076
SWG6010	CADMIUM	mg/L	N	0.002	U	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	9.9	28		22		8.9
SWG6010	CHROMIUM	mg/L	N	0.14	0.032		0.029		0.059
SWG6010	COBALT	mg/L	N	0.0031	J	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.0032	J	0.02	U	0.02	U
SWG6010	IRON	mg/L	N	3.7	1.9		1.6		4.3
SWG6010	LEAD	mg/L	N	0.038	0.01	U	0.0049	J	0.0071
SWG6010	MAGNESIUM	mg/L	N	0.76	5.7		5.5	B	6.1
SWG6010	MANGANESE	mg/L	N	0.04	0.12		0.088		0.15
SWG6010	NICKEL	mg/L	N	0.019	J	0.003	J	0.003	J
SWG6010	POTASSIUM	mg/L	N	1.6	6.5		5.8		6.9
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	85000	22000		20000		33000
SWG6010	SELENIUM	mg/L	N	0.0064	U	0.02	U	0.0098	J
SWG6010	SILVER	mg/L	N	0.00089	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	730	1500		1400		1700
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	260	46		44		58
SWG6010	ZINC	ug/l	N	31	20	U	20	U	20
SW7470	MERCURY	ug/l	N	69	2.1		4.1		2.3
SW7470	MERCURY	ug/l	Y	88					
SW9034	SULFIDE	mg/L	N	22	40	U			18
SW9038	SULFATE	mg/L	N	100	U	5.0	U		370
SW9040	pH	S.U.	N	9.70	H	6.75	H	6.81	H
SW9056	CHLORIDE	mg/L	N						10.9
SW9056	SULFATE	mg/L	N						
SW9251	CHLORIDE	mg/L	N	400	550				660

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-502B		MW-502B		MW-502B		MW-502B		MW-503B		MW-503B		MW-503B	
Date		02/27/2014		09/29/2014		09/29/2014		05/01/2015		09/03/2013		03/03/2014		09/27/2014	
Field Sample ID		MW-502BDUP-022714		MW-502B-092914		MW-502B-DUP-092914		MW-502B-050115		MW-503B-090313		MW-503B-030314		MW-503B-092714	
SDG		680-99043-1		680-105809-1		680-105809-1		680-112094-1&2		680-93870-1		680-99155-1		680-105809-1	
Matrix		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		FD		REG		FD		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered												
110.2	pH	S.U.	N												
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	4100		3300		3400		3500		95		81	110
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50	U	50	U	50	U	25	U	25	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	4100		3300		3400		3600		95		81	110
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	4800		4700		4500		5800	H	2800		2400	2500
SM3500-FeD	FERROUS IRON	ug/l	N	3400	HF					7100		HF		4400	HF
SM4500S2-E	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE	mg/L	N												
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N												
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	66						100				84	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	69						120				84	
SWG6010	ALUMINIUM	mg/L	N	1.4		3		2.8		1		7.5		5.1	7.9
SWG6010	ANTIMONY	ug/l	N	7.0	J	20	U	20	U	5.3	U	20	U	20	20
SWG6010	ARSENIC	mg/L	N	0.02	U	0.02	U	0.02	U	0.02	U	0.0046	U	0.0049	0.02
SWG6010	BARIUM	mg/L	N	0.027		0.05		0.045		0.039		0.042		0.033	0.043
SWG6010	BERYLLIUM	mg/L	N	0.0029	J	0.0031	J	0.0031	J	0.0026	J	0.0015	J	0.0011	0.0015
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	U	0.002	U	0.005	0.005
SWG6010	CALCIUM	mg/L	N	8.3		7.3		7.5		16		9.2		6.7	5.9
SWG6010	CHROMIUM	mg/L	N	0.036		0.049		0.044		0.045		0.048		0.038	0.047
SWG6010	COBALT	mg/L	N	0.01	U	0.0013	J	0.001	J	0.01	U	0.00095	U	0.01	0.01
SWG6010	COPPER	mg/L	N	0.02	U	0.0027	J	0.0026	J	0.02	U	0.0023	J	0.02	0.02
SWG6010	IRON	mg/L	N	4.8		4.8		4.7		7.4		7.7		4.9	4.2
SWG6010	LEAD	mg/L	N	0.01	U	0.01		0.007	J	0.01	U	0.004	U	0.0048	0.01
SWG6010	MAGNESIUM	mg/L	N	1.8		0.89		0.9		4.3	B	1.8		1.2	1
SWG6010	MANGANESE	mg/L	N	0.062		0.043		0.044		0.1		0.11		0.072	0.06
SWG6010	NICKEL	mg/L	N	0.04	U	0.0046	J	0.0037	J	0.04	U	0.0052	J	0.0041	0.0047
SWG6010	POTASSIUM	mg/L	N	5.7		4.7		4.8		7.3		9.5		6.5	6.4
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	44000		51000		49000		58000		8100		5200	7200
SWG6010	SELENIUM	mg/L	N	0.01	J	0.02	U	0.02	U	0.0091	J	0.016	J	0.013	0.0078
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.00089	U	0.01	0.01
SWG6010	SODIUM	mg/L	N	2000		1900		1900		3000		990		840	800
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.0088	U	0.025	0.025
SWG6010	VANADIUM	ug/l	N	52		43		43		39		89		71	99
SWG6010	ZINC	ug/l	N	20	U	18	J	17	J	20	U	8.7	U	20	20
SW7470	MERCURY	ug/l	N	4.7		18		18		2.9		4.8		0.83	7.7
SW7470	MERCURY	ug/l	Y												
SW9034	SULFIDE	mg/L	N	10	U							10	U	10	U
SW9038	SULFATE	mg/L	N	5.0	U							530		420	
SW9040	pH	S.U.	N	6.85	H	7.04	H	7.06	H	7.04	H	5.86	H	5.76	5.94
SW9056	CHLORIDE	mg/L	N												
SW9056	SULFATE	mg/L	N												
SW9251	CHLORIDE	mg/L	N	650								1400		1100	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-503B		MW-504A		
Date		04/29/2015		08/29/2013		
Field Sample ID		MW-503B-042915		MW-504A-082913		
SDG		680-112094-1&2		680-93799-1		
Matrix		WATER		WATER		
Sample Purpose		REG		REG		
Sample Type		GW-GWS		GW-GWS		
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	110		1200
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	U 50	U	50 U
SM2320B	ALKALINITY, TOTAL	mg/L	N	110		1200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3600		7700
SM3500-FeD	FERROUS IRON	ug/l	N			16000 HF
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			700
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			650
SWG6010	ALUMINUM	mg/L	N	8.3		46
SWG6010	ANTIMONY	ug/l	N	U 20	U	5.3 U
SWG6010	ARSENIC	mg/L	N	U 0.0099	J	0.011 J
SWG6010	BARIUM	mg/L	N	0.074		0.1
SWG6010	BERYLLIUM	mg/L	N	J 0.0022	J	0.0025 J
SWG6010	CADMIUM	mg/L	N	U 0.005	U	0.002 U
SWG6010	CALCIUM	mg/L	N	.10		.16
SWG6010	CHROMIUM	mg/L	N	0.078		0.25
SWG6010	COBALT	mg/L	N	U 0.01	U	0.00095 U
SWG6010	COPPER	mg/L	N	U 0.02	U	0.0019 U
SWG6010	IRON	mg/L	N	6.9		6.9
SWG6010	LEAD	mg/L	N	U 0.0063	J	0.0041 J
SWG6010	MAGNESIUM	mg/L	N	2.3	B	4.4
SWG6010	MANGANESE	mg/L	N	0.11		0.084
SWG6010	NICKEL	mg/L	N	J 0.01	J	0.012 J
SWG6010	POTASSIUM	mg/L	N	9.3		5.5
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	5300		49000
SWG6010	SELENIUM	mg/L	N	J 0.0097	J	0.012 J
SWG6010	SILVER	mg/L	N	U 0.01	U	0.0031 J
SWG6010	SODIUM	mg/L	N	1300		1700
SWG6010	THALLIUM	mg/L	N	U 0.025	U	0.0088 U
SWG6010	VANADIUM	ug/l	N	130		590
SWG6010	ZINC	ug/l	N	U 20	U	13 J
SW7470	MERCURY	ug/l	N	5.5		66
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N			10 U
SW9038	SULFATE	mg/L	N			250 U
SW9040	pH	S.U.	N	H 6.11	H	7.55 H
SW9056	CHLORIDE	mg/L	N			
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N			1700

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-504A	MW-504A	MW-504A	MW-504B	MW-504B
Date		02/25/2014	09/23/2014	04/30/2015	08/29/2013	12/11/2013
Field Sample ID		MW 504 A-022514	MW-504A-092314	MW-504A-043015	MW-504B-082913	MW 504B-121113
SDG		680-98941-1	680-105604-2	680-112094-1&2	680-93799-1	680-97103-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1800	1800	2300
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	1800	1800	2300
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	7000	7700	6700
SM3500-FeD	FERROUS IRON	ug/l	N	8600	HF	4500
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	610		440
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	620		340
SWG6010	ALUMINUM	mg/L	N	62	72	45
SWG6010	ANTIMONY	ug/l	N	20	20	20
SWG6010	ARSENIC	mg/L	N	0.029	0.0094	0.043
SWG6010	BARIUM	mg/L	N	0.48	0.46	0.75
SWG6010	BERYLLIUM	mg/L	N	0.0043	0.0041	0.005
SWG6010	CADMIUM	mg/L	N	0.005	0.005	0.005
SWG6010	CALCIUM	mg/L	N	19	18	20
SWG6010	CHROMIUM	mg/L	N	0.61	0.28	0.56
SWG6010	COBALT	mg/L	N	0.0036	0.01	0.0033
SWG6010	COPPER	mg/L	N	0.026	0.02	0.017
SWG6010	IRON	mg/L	N	7.7	5.2	4.1
SWG6010	LEAD	mg/L	N	0.043	0.01	0.026
SWG6010	MAGNESIUM	mg/L	N	3.8	2.5	3
SWG6010	MANGANESE	mg/L	N	0.14	0.12	0.11
SWG6010	NICKEL	mg/L	N	0.051	0.013	0.063
SWG6010	POTASSIUM	mg/L	N	5.6	4.8	5.2
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	61000	54000	64000
SWG6010	SELENIUM	mg/L	N	0.029	0.016	0.019
SWG6010	SILVER	mg/L	N	0.01	0.01	0.01
SWG6010	SODIUM	mg/L	N	1800	2100	2800
SWG6010	THALLIUM	mg/L	N	0.025	0.025	0.025
SWG6010	VANADIUM	ug/l	N	1000	890	860
SWG6010	ZINC	ug/l	N	28	13	19
SW7470	MERCURY	ug/l	N	32	75	29
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N	10	U	
SW9038	SULFATE	mg/L	N	130		35
SW9040	pH	S.U.	N	6.31	H	6.86
SW9056	CHLORIDE	mg/L	N		H	6.56
SW9056	SULFATE	mg/L	N			H
SW9251	CHLORIDE	mg/L	N	1500		3300

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-504B		MW-504B		MW-504B		MW-504B		MW-505A	
Date		02/25/2014		09/23/2014		04/30/2015		04/30/2015		08/29/2013	
Field Sample ID		MW 504 B-022514		MW-504B-092314		MW-504B-043015		MW-504B-D-043015		MW-505A-082913	
SDG		680-98941-1		680-105604-2		680-112094-1&2		680-112094-1&2		680-93799-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		FD		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	3700		3200		3500		3600	1100
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50	U	50	U	50	92
SM2320B	ALKALINITY, TOTAL	mg/L	N	3700		3200		3500		3600	1200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	6700		6200		6500		4500	6900
SM3500-FeD	FERROUS IRON	ug/l	N	11000	HF						1400
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	190							510
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	200							410
SWG6010	ALUMINUM	mg/L	N	0.78		0.63		0.44		0.33	28
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	5.3
SWG6010	ARSENIC	mg/L	N	0.0066	J	0.01	J	0.0048	J	0.02	0.015
SWG6010	BARIUM	mg/L	N	0.22		0.17		0.073		0.069	0.17
SWG6010	BERYLLIUM	mg/L	N	0.011		0.0081		0.003	J	0.0028	0.0023
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	0.002
SWG6010	CALCIUM	mg/L	N	11		9.7		7.1		6.7	12
SWG6010	CHROMIUM	mg/L	N	0.35		0.19		0.065		0.062	0.27
SWG6010	COBALT	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	0.00095
SWG6010	COPPER	mg/L	N	0.0096	J	0.0037	J,B	0.02	U	0.02	0.0031
SWG6010	IRON	mg/L	N	11		12		9.1		8.5	1.7
SWG6010	LEAD	mg/L	N	0.0076	J	0.0043	J	0.01	U	0.01	0.0052
SWG6010	MAGNESIUM	mg/L	N	7.6		7.4		7.1	B	6.8	0.7
SWG6010	MANGANESE	mg/L	N	0.078		0.072		0.061		0.057	0.08
SWG6010	NICKEL	mg/L	N	0.028	J	0.012	J	0.0045	J	0.0037	0.014
SWG6010	POTASSIUM	mg/L	N	4		2.9		2.4		2.2	3.4
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	68000		84000		85000		83000	19000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.012	J	0.012	J	0.02	0.012
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	0.0028
SWG6010	SODIUM	mg/L	N	4100		3200		3500		3500	1700
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	0.0088
SWG6010	VANADIUM	ug/l	N	300		160		57		54	570
SWG6010	ZINC	ug/l	N	9.0	J	20	U	20	U	20	11
SW7470	MERCURY	ug/l	N	7.7		6.0		2.4		2.5	87
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	40	U						21
SW9038	SULFATE	mg/L	N	5.0	U						55
SW9040	pH	S.U.	N	6.64	H	6.86	H	6.93	H	6.91	9.05
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N	4000							1700

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-505A	MW-505A	MW-505A	MW-505B	MW-505B
Date		02/25/2014	09/23/2014	04/30/2015	08/29/2013	02/25/2014
Field Sample ID		MW-505A-022514	MW-505A-092314	MW-505A-043015	MW-505B-082913	MW-505B-022514
SDG		680-98941-1	680-105604-2	680-112094-1&2	680-93799-1	680-98941-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1900	2500	1800
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	1900	2500	1800
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	4700	5400	7300
SM3500-FeD	FERROUS IRON	ug/l	N	5100		1200
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	260		870
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	220		710
SWG6010	ALUMINUM	mg/L	N	19	7.6	68
SWG6010	ANTIMONY	ug/l	N	20	20	20
SWG6010	ARSENIC	mg/L	N	0.017	0.0084	0.035
SWG6010	BARIUM	mg/L	N	0.25	0.073	1.2
SWG6010	BERYLLIUM	mg/L	N	0.0027	0.0011	0.0074
SWG6010	CADMIUM	mg/L	N	0.005	0.005	0.005
SWG6010	CALCIUM	mg/L	N	16	9.9	47
SWG6010	CHROMIUM	mg/L	N	0.32	0.23	0.64
SWG6010	COBALT	mg/L	N	0.00095	0.0011	0.0028
SWG6010	COPPER	mg/L	N	0.0098	0.0067	0.019
SWG6010	IRON	mg/L	N	5.1	2.1	19
SWG6010	LEAD	mg/L	N	0.012	0.01	0.025
SWG6010	MAGNESIUM	mg/L	N	2.1	1	7.7
SWG6010	MANGANESE	mg/L	N	0.14	0.078	0.5
SWG6010	NICKEL	mg/L	N	0.024	0.014	0.07
SWG6010	POTASSIUM	mg/L	N	7.6	4.5	9.7
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	53000	29000	71000
SWG6010	SELENIUM	mg/L	N	0.014	0.022	0.016
SWG6010	SILVER	mg/L	N	0.01	0.01	0.01
SWG6010	SODIUM	mg/L	N	1700	1700	2500
SWG6010	THALLIUM	mg/L	N	0.025	0.025	0.025
SWG6010	VANADIUM	ug/l	N	460	310	910
SWG6010	ZINC	ug/l	N	20	20	22
SW7470	MERCURY	ug/l	N	37	26	19
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N	10		
SW9038	SULFATE	mg/L	N	43		
SW9040	pH	S.U.	N	6.43	7.24	6.67
SW9056	CHLORIDE	mg/L	N			
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N	1400		

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-505B		MW-505B		MW-507B		MW-507B		MW-507B	
Date		09/23/2014		04/30/2015		09/04/2013		02/28/2014		09/27/2014	
Field Sample ID		MW-505B-092314		MW-505B-043015		MW-507B-090413		MW-507B-022814		MW-507B-092714	
SDG		680-105604-2		680-112094-1&2		680-93870-1		680-99043-1		680-105809-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	6500		3800		1200		1500	1600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50	U	1100		900	780
SM2320B	ALKALINITY, TOTAL	mg/L	N	6500		3800		2300		2400	2400
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	15000		8700		27000		27000	18000
SM3500-FeD	FERROUS IRON	ug/l	N					470	HF	810	HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y					500		540	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N					480		530	
SWG6010	ALUMINIUM	mg/L	N	6.4		5.9		0.53		0.71	0.95
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	5.3	U	8.4	J
SWG6010	ARSENIC	mg/L	N	0.043		0.047		0.0054	J	0.02	U
SWG6010	BARIUM	mg/L	N	0.53		0.49		0.019		0.025	0.029
SWG6010	BERYLLIUM	mg/L	N	0.0084		0.011		0.012		0.018	0.022
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.002	U	0.005	U
SWG6010	CALCIUM	mg/L	N	23		22		3.7		4.9	5.5
SWG6010	CHROMIUM	mg/L	N	0.73		0.56		0.23		0.27	0.33
SWG6010	COBALT	mg/L	N	0.0024	J	0.0016	J	0.00095	U	0.0012	J
SWG6010	COPPER	mg/L	N	0.022		0.013	J	0.0089	J	0.0088	J
SWG6010	IRON	mg/L	N	13		17		0.55		0.64	0.8
SWG6010	LEAD	mg/L	N	0.005	J	0.0092	J	0.004	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	10		7.2	B	0.19	J	0.36	J
SWG6010	MANGANESE	mg/L	N	0.24		0.21		0.0059	J	0.0088	J
SWG6010	NICKEL	mg/L	N	0.066		0.06		0.023	J	0.025	J
SWG6010	POTASSIUM	mg/L	N	10		5.6		9.2		9.4	10
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	77000		82000		38000		22000	110000
SWG6010	SELENIUM	mg/L	N	0.029		0.012	J	0.027		0.043	0.0083
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.00089	U	0.01	U
SWG6010	SODIUM	mg/L	N	8300		6200		11000		11000	9900
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.0088	U	0.025	U
SWG6010	VANADIUM	ug/l	N	880		700		560		640	770
SWG6010	ZINC	ug/l	N	18	J	10	J,B	10	J	20	U
SW7470	MERCURY	ug/l	N	32		14		1.9		2.2	7.9
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N					14		10	U
SW9038	SULFATE	mg/L	N					150		12	
SW9040	pH	S.U.	N	7.05	H	7.01	H	9.70	H	9.59	H
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N					15000		14000	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-507B		MW-508B		MW-508B		MW-508B		MW-508B	
Date		04/27/2015		09/03/2013		02/28/2014		02/28/2014		09/27/2014	
Field Sample ID		MW-507B-042715		MW-508B-090313		MW-508B-022814		MW-508BDUP-022814		MW-508B-092714	
SDG		680-111968-1&2		680-93870-1		680-99043-1		680-99043-1		680-105809-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		FD		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2000		1400		2000		2000	4400
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	600		2900		1600		1700	730
SM2320B	ALKALINITY, TOTAL	mg/L	N	2600		4300		3600		3800	5200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	18000	H	36000		45000		42000	29000
SM3500-FeD	FERROUS IRON	ug/l	N			8700	HF	4100	HF	8100	HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			880		1100		1100	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			690		1100		1100	
SWG6010	ALUMINUM	mg/L	N	1.4		2.6		3.7		7.8	5.7
SWG6010	ANTIMONY	ug/l	N	20	U	7.2	J	5.9	J	20	U
SWG6010	ARSENIC	mg/L	N	0.014	J	0.053		0.021		0.052	0.02
SWG6010	BARIUM	mg/L	N	0.051		0.086		0.11		0.21	0.2
SWG6010	BERYLLIUM	mg/L	N	0.03		0.022		0.031		0.057	0.041
SWG6010	CADMIUM	mg/L	N	0.005	U	0.003	J	0.005	U	0.0021	J
SWG6010	CALCIUM	mg/L	N	9.8		6.7		5.4		10	25
SWG6010	CHROMIUM	mg/L	N	0.34		1.4		1.2		2.2	1.6
SWG6010	COBALT	mg/L	N	0.01	U	0.0044	J	0.0043	J	0.0075	J
SWG6010	COPPER	mg/L	N	0.0048	J	0.12		0.064		0.13	0.084
SWG6010	IRON	mg/L	N	1.1		2.8		1.3		2.4	2.1
SWG6010	LEAD	mg/L	N	0.01	U	0.004	U	0.01	U	0.0055	J
SWG6010	MAGNESIUM	mg/L	N	1.4		0.27	J	0.27	J	0.49	J
SWG6010	MANGANESE	mg/L	N	0.021		0.021		0.017		0.035	0.063
SWG6010	NICKEL	mg/L	N	0.027	J	0.19		0.16		0.3	0.19
SWG6010	POTASSIUM	mg/L	N	8.4		30		17		43	46
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	76000		380000		11000		11000	110000
SWG6010	SELENIUM	mg/L	N	0.02		0.039		0.029		0.066	0.01
SWG6010	SILVER	mg/L	N	0.01	U	0.00089	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	8600		13000		6100		13000	13000
SWG6010	THALLIUM	mg/L	N	0.025	U	0.0088	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	920		3800		2400		4500	3500
SWG6010	ZINC	ug/l	N	9.8	J	41		19	J	36	30
SW7470	MERCURY	ug/l	N	4.8		92		40		35	69
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N			18		59		61	
SW9038	SULFATE	mg/L	N			100	U	1300		1300	
SW9040	pH	S.U.	N	9.16	H	10.2	H	9.69	H	9.70	H
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N			19000		16000		18000	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-508B		MW-510B		MW-510B		MW-510B		MW-510B	
Date		04/28/2015		09/03/2013		02/27/2014		09/30/2014		04/29/2015	
Field Sample ID		MW-508B-042815		MW-510B-090313		MW-510B-022714		MW-510B-093014		MW-510B-042915	
SDG		680-112022-1&2		680-93870-1		680-99043-1		680-105809-1		680-112022-1&2	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	4400		1900		2600		3600	5600
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	500		2500		2100		1300	12000
SM2320B	ALKALINITY, TOTAL	mg/L	N	5000		4500		4700		4900	18000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	21000		23000		25000		21000	37000
SM3500-FeD	FERROUS IRON	ug/l	N			5500	HF	3200	HF		
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			970		1100			
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			780		1100			
SWG6010	ALUMINIUM	mg/L	N	4.8		9.2		1.7		4.6	2.6
SWG6010	ANTIMONY	ug/l	N	13	J	5.3	U	20	U	20	100
SWG6010	ARSENIC	mg/L	N	0.056		0.14		0.074		0.05	0.89
SWG6010	BARIUM	mg/L	N	0.22		0.32		0.2		0.38	0.11
SWG6010	BERYLLIUM	mg/L	N	0.047		0.043		0.014		0.037	0.014
SWG6010	CADMIUM	mg/L	N	0.01	U	0.002	U	0.005	U	0.005	0.025
SWG6010	CALCIUM	mg/L	N	31		25		21		37	9
SWG6010	CHROMIUM	mg/L	N	2.1		0.71		1		0.96	2
SWG6010	COBALT	mg/L	N	0.0065	J	0.0023	J	0.0037	J	0.0023	0.05
SWG6010	COPPER	mg/L	N	0.088		0.038		0.053		0.033	0.064
SWG6010	IRON	mg/L	N	2.6		6.1		2		3.7	13
SWG6010	LEAD	mg/L	N	0.02	U	0.014		0.0045	J	0.01	0.05
SWG6010	MAGNESIUM	mg/L	N	6.8		2.9		6.4		24	2.8
SWG6010	MANGANESE	mg/L	N	0.068		0.2		0.038		0.16	0.018
SWG6010	NICKEL	mg/L	N	0.29		0.091		0.15		0.1	0.31
SWG6010	POTASSIUM	mg/L	N	31		32		17		34	25
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	150000		1600000		380000		250000	7700000
SWG6010	SELENIUM	mg/L	N	0.039	J	0.033		0.036		0.02	0.099
SWG6010	SILVER	mg/L	N	0.02	U	0.00089	U	0.01	U	0.01	0.05
SWG6010	SODIUM	mg/L	N	11000		9000		5500		8500	17000
SWG6010	THALLIUM	mg/L	N	0.05	U	0.0088	U	0.025	U	0.025	0.13
SWG6010	VANADIUM	ug/l	N	4000		2100		2100		2500	5700
SWG6010	ZINC	ug/l	N	30	J	30		29		25	100
SW7470	MERCURY	ug/l	N	6.3		97		72		130	40
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N			10	U	10	U		
SW9038	SULFATE	mg/L	N			50	U	250	U		
SW9040	pH	S.U.	N	8.72	H	10.3	H	9.74	H	9.37	10.8
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N			9500		9000			

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-511A		MW-511A		MW-511B		MW-511B		MW-511B	
Date		09/04/2013		03/04/2014		09/03/2013		09/03/2013		03/04/2014	
Field Sample ID		MW-511A-090413		MW-511A-030414		MW-511B-090313		MW-511B2-090313		MW-511B-030414	
SDG		680-93870-1		680-99155-1		680-93870-1		680-93870-1		680-99155-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		FD		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	720		2600		430		410	3400
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	25	U	3000		2900	2800
SM2320B	ALKALINITY, TOTAL	mg/L	N	750		2700		3700		3700	6200
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	2400		3900		15000		14000	15000
SM3500-FeD	FERROUS IRON	ug/l	N	2500	HF	2300	HF	1200	HF	980	410
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	320		160		120		120	110
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	240		140		120		120	83
SWG6010	ALUMINUM	mg/L	N	8.8		9.5		0.15	J	0.16	0.2
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	5.3	U	5.3	20
SWG6010	ARSENIC	mg/L	N	0.014	J	0.01	J	0.11		0.11	0.038
SWG6010	BARIUM	mg/L	N	0.025		0.018		0.092		0.093	0.062
SWG6010	BERYLLIUM	mg/L	N	0.016		0.0097		0.0016	J	0.0016	0.00068
SWG6010	CADMIUM	mg/L	N	0.002	U	0.005	U	0.002	U	0.002	0.005
SWG6010	CALCIUM	mg/L	N	4.3		3.3		5.4		5.4	4.7
SWG6010	CHROMIUM	mg/L	N	0.1		0.053		0.07		0.069	0.063
SWG6010	COBALT	mg/L	N	0.0021	J	0.01	U	0.0036	J	0.0033	0.01
SWG6010	COPPER	mg/L	N	0.0057	J	0.0031	J	0.014	J	0.016	0.0058
SWG6010	IRON	mg/L	N	4		3.1		1.4		1.4	0.61
SWG6010	LEAD	mg/L	N	0.029		0.011		0.0066	J	0.0074	0.01
SWG6010	MAGNESIUM	mg/L	N	1.8		1.8		0.03	J	0.027	0.56
SWG6010	MANGANESE	mg/L	N	0.013		0.022		0.0085	J	0.0089	0.0029
SWG6010	NICKEL	mg/L	N	0.01	J	0.003	J	0.037	J	0.037	0.029
SWG6010	POTASSIUM	mg/L	N	3.4		9.7		7.7		9	15
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	64000		61000		2500000		2500000	820000
SWG6010	SELENIUM	mg/L	N	0.0064	U	0.0088	J,B	0.016	J	0.012	0.024
SWG6010	SILVER	mg/L	N	0.00089	U	0.01	U	0.00089	U	0.00089	0.01
SWG6010	SODIUM	mg/L	N	740		1400		4400		4600	7100
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.0088	U	0.0088	0.025
SWG6010	VANADIUM	ug/l	N	100		80		230		230	240
SWG6010	ZINC	ug/l	N	22		12	J	21		21	10
SW7470	MERCURY	ug/l	N	3.9		0.28		160		160	82
SW7470	MERCURY	ug/l	Y	3.5							
SW9034	SULFIDE	mg/L	N	10	U	10	U	10	U	10	10
SW9038	SULFATE	mg/L	N	260		50	U	18		19	100
SW9040	pH	S.U.	N	5.69	H	6.95	H	11.5	H	11.5	9.84
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N	410		320		6400		6300	6200

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-511B		MW-511B		MW-511B		MW-512A		MW-512A	
Date		09/30/2014		09/30/2014		04/29/2015		08/27/2013		02/27/2014	
Field Sample ID		MW-511B-093014		MW-511B-DUP-093014		MW-511B-042915		MW-512A-082713		MW-512A-022714	
SDG		680-105809-1		680-105809-1		680-112094-1&2		680-93690-1		680-99043-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		FD		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	7100		7100		4200		390	1500
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	550		540		50	U	370	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	7600		7700		4200		780	1500
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	14000		14000		9000		1800	2400
SM3500-FeD	FERROUS IRON	ug/l	N							3400	2400
SM4500S2-E	SULFIDE	mg/L	N								HF
SM4500S2-F	SULFIDE	mg/L	N								HF
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y							82	65
SM5310B	TOTAL ORGANIC CARBON	mg/L	N							86	66
SWG6010	ALUMINIUM	mg/L	N	0.2	U	0.2	U	0.12	J	7.6	17
SWG6010	ANTIMONY	ug/l	N	5.8	J	20	U	20	U	5.3	20
SWG6010	ARSENIC	mg/L	N	0.02	U	0.02	U	0.02	U	0.011	0.015
SWG6010	BARIUM	mg/L	N	0.17		0.17		0.069		0.02	0.043
SWG6010	BERYLLIUM	mg/L	N	0.00041	J	0.0004	J	0.0017	J	0.0053	0.0053
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.002	0.005
SWG6010	CALCIUM	mg/L	N	18		21		49		4.9	6.9
SWG6010	CHROMIUM	mg/L	N	0.033		0.032		0.042		0.055	0.093
SWG6010	COBALT	mg/L	N	0.01	U	0.01	U	0.01	U	0.011	0.0021
SWG6010	COPPER	mg/L	N	0.02	U	0.02	U	0.02	U	0.0019	0.0037
SWG6010	IRON	mg/L	N	0.16		0.22		7.7		5.6	9.5
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.01	U	0.0065	0.019
SWG6010	MAGNESIUM	mg/L	N	29		31		30	B	1.5	3
SWG6010	MANGANESE	mg/L	N	0.023		0.039		0.061		0.03	0.049
SWG6010	NICKEL	mg/L	N	0.006	J	0.0065	J	0.0047	J	0.006	0.0097
SWG6010	POTASSIUM	mg/L	N	23		23		12		2.1	3.9
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	170000		180000		93000		160000	100000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.015	J	0.02	U	0.0064	0.0081
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.00089	0.01
SWG6010	SODIUM	mg/L	N	8200		7800		3900		500	840
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.0088	0.025
SWG6010	VANADIUM	ug/l	N	49		52		19		71	85
SWG6010	ZINC	ug/l	N	20	U	20	U	20	U	29	42
SW7470	MERCURY	ug/l	N	31		30		1.9		0.80	0.20
SW7470	MERCURY	ug/l	Y							0.63	0.095
SW9034	SULFIDE	mg/L	N							14	10
SW9038	SULFATE	mg/L	N								22
SW9040	pH	S.U.	N	8.67	H	8.65	H	7.10	H	10.2	8.62
SW9056	CHLORIDE	mg/L	N							120	
SW9056	SULFATE	mg/L	N							44	
SW9251	CHLORIDE	mg/L	N								110

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-512B		MW-512B		MW-512B		MW-512B		MW-513A	
Date		08/27/2013		02/27/2014		09/26/2014		04/28/2015		08/27/2013	
Field Sample ID		MW-512B-082713		MW-512B-022714		MW-512B-092614		MW-512B-042815		MW-513A-082713	
SDG		680-93690-1		680-99043-1		680-105809-1		680-112022-1&2		680-93690-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	300		7400		6300		9700	750
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	2300		59		1000		50	25
SM2320B	ALKALINITY, TOTAL	mg/L	N	2800		7500		7300		9700	760
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	9600		12000		14000		12000	3600
SM3500-FeD	FERROUS IRON	ug/l	N	1300	HF	1400	HF				20000
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	130		150					340
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	140		91					410
SWG6010	ALUMINUM	mg/L	N	0.25		0.2	U	0.2	U	0.17	J
SWG6010	ANTIMONY	ug/l	N	5.3	U	6.5	J	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.043		0.015	J	0.02	U	0.0057	J
SWG6010	BARIUM	mg/L	N	0.12		0.12		0.04		0.12	0.23
SWG6010	BERYLLIUM	mg/L	N	0.0018	J	0.0024	J	0.0018	J	0.0034	J
SWG6010	CADMIUM	mg/L	N	0.002	U	0.005	U	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	8.2		46		9.2		52	4
SWG6010	CHROMIUM	mg/L	N	0.071		0.12		0.17		0.13	0.15
SWG6010	COBALT	mg/L	N	0.0045	J	0.01	U	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.011	J	0.0079	J	0.012	J	0.02	U
SWG6010	IRON	mg/L	N	1.2		1.6		0.99		7.8	32
SWG6010	LEAD	mg/L	N	0.014		0.01	U	0.01	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	0.014	J	23		5.5		54	0.42
SWG6010	MANGANESE	mg/L	N	0.01		0.028		0.0023	J	0.12	0.024
SWG6010	NICKEL	mg/L	N	0.03	J	0.025	J	0.034	J	0.012	J
SWG6010	POTASSIUM	mg/L	N	3.2		26		22		32	1.4
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	1800000		62000		200000		8300	55000
SWG6010	SELENIUM	mg/L	N	0.0064	U	0.026		0.0083	J	0.015	J
SWG6010	SILVER	mg/L	N	0.00089	U	0.01	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	2000		6200		6100		8500	760
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	160		200		320		96	350
SWG6010	ZINC	ug/l	N	17	J	13	J	17	J	16	J
SW7470	MERCURY	ug/l	N	85		30		120		17	82
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	10	U	40	U				11
SW9038	SULFATE	mg/L	N			6.9					
SW9040	pH	S.U.	N	11.4	H	7.21	H	8.93	H	7.10	H
SW9056	CHLORIDE	mg/L	N	3400							510
SW9056	SULFATE	mg/L	N	160							39
SW9251	CHLORIDE	mg/L	N			5100					

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-513A	MW-513A	MW-513A	MW-513B	MW-513B
Date		02/25/2014	09/24/2014	04/28/2015	08/27/2013	08/27/2013
Field Sample ID		MW-513A-022514	MW-513A-092414	MW-513A-042815	MW-513B-082713	MW-513B2-082713
SDG		680-98941-1	680-105604-2	680-112022-1&2	680-93690-1	680-93690-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	FD
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1200	870	1000
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	1200	870	1000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3600	3800	4000
SM3500-FeD	FERROUS IRON	ug/l	N	22000		6600
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	300		250
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	270		250
SWG6010	ALUMINIUM	mg/L	N	45	98	100
SWG6010	ANTIMONY	ug/l	N	20	20	20
SWG6010	ARSENIC	mg/L	N	0.04	0.065	0.092
SWG6010	BARIUM	mg/L	N	0.19	0.59	0.47
SWG6010	BERYLLIUM	mg/L	N	0.003	0.0048	0.0066
SWG6010	CADMIUM	mg/L	N	0.005	0.005	0.005
SWG6010	CALCIUM	mg/L	N	3.9	5.6	6.5
SWG6010	CHROMIUM	mg/L	N	0.17	0.34	0.36
SWG6010	COBALT	mg/L	N	0.0035	0.0049	0.0064
SWG6010	COPPER	mg/L	N	0.021	0.037	0.043
SWG6010	IRON	mg/L	N	25	49	55
SWG6010	LEAD	mg/L	N	0.14	0.17	0.25
SWG6010	MAGNESIUM	mg/L	N	0.72	1.3	1.9
SWG6010	MANGANESE	mg/L	N	0.048	0.047	0.085
SWG6010	NICKEL	mg/L	N	0.017	0.028	0.034
SWG6010	POTASSIUM	mg/L	N	2.4	3.3	4.1
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	40000	130000	9600
SWG6010	SELENIUM	mg/L	N	0.014	0.012	0.016
SWG6010	SILVER	mg/L	N	0.01	0.01	0.01
SWG6010	SODIUM	mg/L	N	960	100	930
SWG6010	THALLIUM	mg/L	N	0.025	0.025	0.025
SWG6010	VANADIUM	ug/l	N	300	600	540
SWG6010	ZINC	ug/l	N	42	74	120
SW7470	MERCURY	ug/l	N	32	94	53
SW7470	MERCURY	ug/l	Y			11
SW9034	SULFIDE	mg/L	N	10		
SW9038	SULFATE	mg/L	N	47		
SW9040	pH	S.U.	N	6.31	6.63	6.18
SW9056	CHLORIDE	mg/L	N			1500
SW9056	SULFATE	mg/L	N			42
SW9251	CHLORIDE	mg/L	N	640		

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-513B		MW-513B		MW-513B		MW-513B		MW-514A	
Date		02/25/2014		09/24/2014		09/24/2014		04/28/2015		08/28/2013	
Field Sample ID		MW-513B-022514		MW-513B-092414		MW-513B-DUP-092414		MW-513B-042815		MW-514A-082813	
SDG		680-98941-1		680-105604-2		680-105604-2		680-112022-1&2		680-93690-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		FD		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO3)	mg/L	N	4900		2100		2000		2100	250
SM2320B	ALKALINITY, CARBONATE (AS CaCO3)	mg/L	N	50	U	740		1200		5100	990
SM2320B	ALKALINITY, TOTAL	mg/L	N	4900		2900		3200		7300	1300
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	11000		6800		7000		15000	2500
SM3500-FeD	FERROUS IRON	ug/l	N	17000	HF						760
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	220							49
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	210							50
SWG6010	ALUMINIUM	mg/L	N	3.1		1.4		3.2		0.84	1.1
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	20	5.3
SWG6010	ARSENIC	mg/L	N	0.019	J	0.053		0.081		0.2	0.013
SWG6010	BARIUM	mg/L	N	0.22		0.14		0.18		0.06	0.058
SWG6010	BERYLLIUM	mg/L	N	0.017		0.012		0.012		0.0026	0.00064
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	0.002
SWG6010	CALCIUM	mg/L	N	22		19		17		5.3	2.7
SWG6010	CHROMIUM	mg/L	N	0.27		0.086		0.16		0.11	0.012
SWG6010	COBALT	mg/L	N	0.0021	J	0.01	U	0.0033	J	0.0011	0.00095
SWG6010	COPPER	mg/L	N	0.019	J	0.0019	J,B	0.015	J,B	0.0094	0.0035
SWG6010	IRON	mg/L	N	19		5.5		7		6.9	1.2
SWG6010	LEAD	mg/L	N	0.017		0.0067	J	0.021		0.0049	0.012
SWG6010	MAGNESIUM	mg/L	N	7.2		1.3		1.2		0.43	0.14
SWG6010	MANGANESE	mg/L	N	0.35		0.14		0.13		0.029	0.0087
SWG6010	NICKEL	mg/L	N	0.041		0.013	J	0.035	J	0.054	0.0063
SWG6010	POTASSIUM	mg/L	N	10		9.8		10		30	1.2
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	220000		540000		770000		4500000	610000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.014	J	0.0089	J	0.023	0.0082
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	0.0013
SWG6010	SODIUM	mg/L	N	2500		2900		3000		1800	860
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	0.0088
SWG6010	VANADIUM	ug/l	N	450		340		360		340	44
SWG6010	ZINC	ug/l	N	23		14	J	27		28	10
SW7470	MERCURY	ug/l	N	11		78		100		270	350
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	10	U						10
SW9038	SULFATE	mg/L	N	5.0	U						
SW9040	pH	S.U.	N	6.94	H	9.50	H	9.82	H	11.1	11.4
SW9056	CHLORIDE	mg/L	N								310
SW9056	SULFATE	mg/L	N								250
SW9251	CHLORIDE	mg/L	N	1900							

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-514A	MW-514A	MW-514A	MW-514A	MW-514B
Date		12/11/2013	02/28/2014	09/24/2014	04/28/2015	08/28/2013
Field Sample ID		MW 514A-121113	MW-514A-022814	MW-514A-092414	MW-514A-042815	MW-514B-082813
SDG		680-97103-1	680-99043-1	680-105703-1	680-112022-1&2	680-93690-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	2700	3800	3300 H 240
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	25 U	68	50 U,H 1100
SM2320B	ALKALINITY, TOTAL	mg/L	N	2700	3800	3300 H 1500
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	3700	4500	4200 5300
SM3500-FeD	FERROUS IRON	ug/l	N	2800 HF		2100 HF
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	33		35
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	33		35
SWG6010	ALUMINUM	mg/L	N	0.4	0.17 J	0.18 J 4.4
SWG6010	ANTIMONY	ug/l	N	20 U	20 U	20 U 5.3 U
SWG6010	ARSENIC	mg/L	N	0.0065 J	0.02 U	0.02 U 0.042
SWG6010	BARIUM	mg/L	N	0.025	0.018	0.017 0.23
SWG6010	BERYLLIUM	mg/L	N	0.00049 J	0.0003 J	0.00038 J 0.0023 J
SWG6010	CADMIUM	mg/L	N	0.005 U	0.005 U	0.005 U 0.002 U
SWG6010	CALCIUM	mg/L	N	8.8	6.1	8 7.4
SWG6010	CHROMIUM	mg/L	N	0.017	0.0084 J	0.0089 J 0.045
SWG6010	COBALT	mg/L	N	0.01 U	0.01 U	0.01 U 0.0064 J
SWG6010	COPPER	mg/L	N	0.0027 J	0.02 U	0.02 U 0.011 J
SWG6010	IRON	mg/L	N	5.9	2.3	16 5.1
SWG6010	LEAD	mg/L	N	0.0049 J	0.01 U	0.01 U 0.042
SWG6010	MAGNESIUM	mg/L	N	2.2	2.5	6.5 0.61
SWG6010	MANGANESE	mg/L	N	0.094	0.049	0.22 0.039
SWG6010	NICKEL	mg/L	N	0.04 U	0.04 U	0.04 U 0.02 J
SWG6010	POTASSIUM	mg/L	N	1.8	2.6	1.9 7.6
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	100000	88000	100000 960000
SWG6010	SELENIUM	mg/L	N	0.011 J	0.013 J	0.0077 J 0.0064 U
SWG6010	SILVER	mg/L	N	0.01 U	0.01 U	0.01 U 0.00089 U
SWG6010	SODIUM	mg/L	N	1700	2000	1800 1600
SWG6010	THALLIUM	mg/L	N	0.025 U	0.025 U	0.025 U 0.0088 U
SWG6010	VANADIUM	ug/l	N	23	11	6.2 J 84
SWG6010	ZINC	ug/l	N	20 U	20 U	20 U 39
SW7470	MERCURY	ug/l	N	120 47	21	3.2 40
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N	10 U		10 U
SW9038	SULFATE	mg/L	N	7.5		
SW9040	pH	S.U.	N	7.18 H	8.11 H	6.85 H 11.3 H
SW9056	CHLORIDE	mg/L	N			1600
SW9056	SULFATE	mg/L	N			250 U
SW9251	CHLORIDE	mg/L	N	320		

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-514B		MW-514B		MW-514B		MW-514B		MW-515B	
Date		02/28/2014		09/24/2014		09/24/2014		04/28/2015		09/03/2013	
Field Sample ID		MW-514B-022814		MW-514B-092414		MW-514B-DUP-092414		MW-514B-042815		MW-515B-090313	
SDG		680-99043-1		680-105703-1		680-105703-1		680-112022-1&2		680-93870-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		FD		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1800		1200		1200		1400	950
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	25	U	50	U	50	U	25	1600
SM2320B	ALKALINITY, TOTAL	mg/L	N	1800		1200		1200		1400	2600
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	4200		3400		3500		3500	12000
SM3500-FeD	FERROUS IRON	ug/l	N	27000	HF						1800
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	29							290
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	29							360
SWG6010	ALUMINUM	mg/L	N	0.36		3.3		3.4		0.39	0.47
SWG6010	ANTIMONY	ug/l	N	5.6	J	20	U	20	U	20	5.3
SWG6010	ARSENIC	mg/L	N	0.02	U	0.021		0.018	J	0.02	0.048
SWG6010	BARIUM	mg/L	N	0.02		0.085		0.09		0.024	0.067
SWG6010	BERYLLIUM	mg/L	N	0.00081	J	0.0045		0.0046		0.0017	0.0089
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.005	0.002
SWG6010	CALCIUM	mg/L	N	12		9.6				12	13
SWG6010	CHROMIUM	mg/L	N	0.032		0.071		0.075		0.043	0.27
SWG6010	COBALT	mg/L	N	0.01	U	0.0027	J	0.0031	J	0.01	0.0023
SWG6010	COPPER	mg/L	N	0.02	U	0.0079	J	0.0084	J	0.02	0.018
SWG6010	IRON	mg/L	N	36		21		21		49	1.7
SWG6010	LEAD	mg/L	N	0.01	U	0.019		0.021		0.01	0.014
SWG6010	MAGNESIUM	mg/L	N	3.7		3.5		3.5		6.9	0.029
SWG6010	MANGANESE	mg/L	N	0.78		0.34		0.34		0.64	0.02
SWG6010	NICKEL	mg/L	N	0.04	U	0.011	J	0.012	J	0.04	0.054
SWG6010	POTASSIUM	mg/L	N	5.5		6.4		6.6		5.3	8.4
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	150000		210000		190000		150000	800000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.011	J	0.01	J	0.02	0.0099
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	0.00089
SWG6010	SODIUM	mg/L	N	1300		1400		1400		1300	3800
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	0.0088
SWG6010	VANADIUM	ug/l	N	23		58		60		24	420
SWG6010	ZINC	ug/l	N	20	U	39		40		20	18
SW7470	MERCURY	ug/l	N	4.1		26		9.3		3.7	30
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	10	U						16
SW9038	SULFATE	mg/L	N	18							65
SW9040	pH	S.U.	N	6.75	H	7.32	H	7.37	H	6.44	10.3
SW9056	CHLORIDE	mg/L	N								
SW9056	SULFATE	mg/L	N								
SW9251	CHLORIDE	mg/L	N	1100							4900

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-515B		MW-515B		MW-515B		MW-516A		MW-516A	
Date		02/25/2014		09/27/2014		04/21/2015		08/28/2013		02/25/2014	
Field Sample ID		MW-515B-022514		MW-515B-092714		MW-515B-042115		MW-516A-082813		MW 516 A-022514	
SDG		680-98941-1		680-105809-1		680-111819-2&3		680-93690-1		680-98941-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	3300		2800		3900		740	2400
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	280		880		210		910	50 U
SM2320B	ALKALINITY, TOTAL	mg/L	N	3600		3700		4100		1700	2400
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	9300		7500		8500		6700	6100
SM3500-FeD	FERROUS IRON	ug/l	N	4500	HF					1900	3000 HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	360						210	190
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	310						230	170
SWG6010	ALUMINUM	mg/L	N	0.56		0.26		0.38		0.91	3.1
SWG6010	ANTIMONY	ug/l	N	20	U	20	U	20	U	5.3	20 U
SWG6010	ARSENIC	mg/L	N	0.039		0.036		0.033		0.027	0.034
SWG6010	BARIUM	mg/L	N	0.042		0.033		0.043		0.087	0.13
SWG6010	BERYLLIUM	mg/L	N	0.017		0.012		0.017		0.024	0.02
SWG6010	CADMIUM	mg/L	N	0.005	U	0.005	U	0.005	U	0.002	0.005 U
SWG6010	CALCIUM	mg/L	N	17		11		15		5.6	20
SWG6010	CHROMIUM	mg/L	N	0.31		0.22		0.28		0.062	0.15
SWG6010	COBALT	mg/L	N	0.01	U	0.0012	J	0.01	U	0.00095	0.01 U
SWG6010	COPPER	mg/L	N	0.018	J	0.0089	J	0.0056	J	0.0019	0.0038 J
SWG6010	IRON	mg/L	N	3.3		1.6		2.3		0.67	2.9
SWG6010	LEAD	mg/L	N	0.014		0.0055	J	0.0074	J	0.0076	0.017 J
SWG6010	MAGNESIUM	mg/L	N	2		0.38	J	6.1		0.22	6.5 J
SWG6010	MANGANESE	mg/L	N	0.11		0.034		0.073		0.013	0.064
SWG6010	NICKEL	mg/L	N	0.049		0.03	J	0.027	J	0.011	0.014 J
SWG6010	POTASSIUM	mg/L	N	11		12		13		1.4	2.3
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	180000		220000		130000		16000	51000
SWG6010	SELENIUM	mg/L	N	0.02	U	0.02	U	0.012	J	0.0081	0.013 J
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.00089	0.01 U
SWG6010	SODIUM	mg/L	N	4200		3900		4200		2400	2300
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.0088	0.025 U
SWG6010	VANADIUM	ug/l	N	420		320		260		370	290
SWG6010	ZINC	ug/l	N	12	J	20	U	20	U	12	12 J
SW7470	MERCURY	ug/l	N	10		30		10		16	84
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	10	U					11	10 U
SW9038	SULFATE	mg/L	N	25	U						42
SW9040	pH	S.U.	N	8.81	H	9.32	H	8.62	H	10.2	6.44 H
SW9056	CHLORIDE	mg/L	N							2300	
SW9056	SULFATE	mg/L	N							52	
SW9251	CHLORIDE	mg/L	N	4400							2300

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-516B		MW-516B		MW-516B		MW-516B		MW-517A	
Date		08/28/2013		02/25/2014		09/26/2014		04/24/2015		09/05/2013	
Field Sample ID		MW-516B-082813		MW 516 B-022514		MW-516B-092614		MW-516B-042415		MW-517A-090513	
SDG		680-93690-1		680-98941-1		680-105809-1		680-111919-1&2		680-93954-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	520		960		640		450	H 930
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	3700		3300		3200		2800	H 100
SM2320B	ALKALINITY, TOTAL	mg/L	N	4400		4500		4100		3500	H 1000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	25000		16000		28000		17000	3900
SM3500-FeD	FERROUS IRON	ug/l	N	1400	HF	960	HF				3000 HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	230		240					200
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	240		200					200
SWG6010	ALUMINUM	mg/L	N	0.1	U	0.16	J	0.2	U	0.2	U 0.6
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	6.5	J	20	U 5.3 U
SWG6010	ARSENIC	mg/L	N	0.056		0.019	J	0.016	J	0.041	U 0.019 J
SWG6010	BARIUM	mg/L	N	0.0043	J	0.01	U	0.01	U	0.0046	J 0.18
SWG6010	BERYLLIUM	mg/L	N	0.0011	J	0.0011	J	0.00036	J	0.0007	J 0.02
SWG6010	CADMIUM	mg/L	N	0.002	U	0.0022	J	0.005	U	0.005	U 0.002 U
SWG6010	CALCIUM	mg/L	N	2.8		2.9		3.1		3.8	12
SWG6010	CHROMIUM	mg/L	N	0.19		0.18		0.13		0.22	0.048
SWG6010	COBALT	mg/L	N	0.0011	J	0.01	U	0.01	U	0.01	U 0.00095 U
SWG6010	COPPER	mg/L	N	0.046		0.044		0.022		0.036	0.0019 U
SWG6010	IRON	mg/L	N	1.2		1.1		1.1		1.5	2.4
SWG6010	LEAD	mg/L	N	0.004	U	0.0059	J	0.01	U	0.01	U 0.004 U
SWG6010	MAGNESIUM	mg/L	N	0.026	J	0.02	J	0.014	J	0.025	J,B 2
SWG6010	MANGANESE	mg/L	N	0.002	U	0.01	U	0.01	U	0.01	U 0.03
SWG6010	NICKEL	mg/L	N	0.055		0.053		0.038	J	0.07	0.0065 J
SWG6010	POTASSIUM	mg/L	N	40		32		61		54	1.3
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	1400000		1400000		1800000		1200000	27000
SWG6010	SELENIUM	mg/L	N	0.022		0.01	J	0.012	J	0.024	0.0064 U
SWG6010	SILVER	mg/L	N	0.026		0.001	J	0.01	U	0.01	U 0.00089 U
SWG6010	SODIUM	mg/L	N	9000		8400		8400		8100	1700
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U 0.0088 U
SWG6010	VANADIUM	ug/l	N	900		870		920		1100	270
SWG6010	ZINC	ug/l	N	19	J	26		32		27	8.7 U
SW7470	MERCURY	ug/l	N	34		37		64		55	73
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	16		10	U				10 U
SW9038	SULFATE	mg/L	N			430					64
SW9040	pH	S.U.	N	11.3	H	11.2	H	11.4	H	11.3	H 9.11 H
SW9056	CHLORIDE	mg/L	N	13000							
SW9056	SULFATE	mg/L	N	790							
SW9251	CHLORIDE	mg/L	N			11000					2200

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

Qualifiers:
 U Indicates the analyte was analyzed for but not detected
 J Result is less than the RL but greater than or equal to the MDL and the conce
 H Sample was prepped or analyzed beyond the specified holding time
 HF Field parameter with a holding time of 15 minutes
 F Duplicate RPD exceeds the control limit
 B Compound was found in the blank and sample

Location ID		MW-517A	MW-517A	MW-517A	MW-517A	MW-517B
Date		12/12/2013	02/25/2014	09/25/2014	04/23/2015	08/26/2013
Field Sample ID		MW 517A-121213	MW-517-A-022514	MW-517A-092514	MW-517A-042315	MW-517B-082613
SDG		680-97103-1	680-98941-1	680-105703-1	680-111919-1&2	680-93690-1
Matrix		WATER	WATER	WATER	WATER	WATER
Sample Purpose		REG	REG	REG	REG	REG
Sample Type		GW-GWS	GW-GWS	GW-GWS	GW-GWS	GW-GWS
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1900	1200	1300
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	1900	1200	1300
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	4800	210000	4600
SM3500-FeD	FERROUS IRON	ug/l	N	6300	HF	
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	160		250
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	140		260
SW6010	ALUMINIUM	mg/L	N	2	2.1	2
SW6010	ANTIMONY	ug/l	N	20	U	20
SW6010	ARSENIC	mg/L	N	0.018	J	0.027
SW6010	BARIUM	mg/L	N	0.13		0.18
SW6010	BERYLLIUM	mg/L	N	0.0098		0.019
SW6010	CADMIUM	mg/L	N	0.005	U	0.005
SW6010	CALCIUM	mg/L	N	16		15
SW6010	CHROMIUM	mg/L	N	0.12		0.12
SW6010	COBALT	mg/L	N	0.01	U	0.0011
SW6010	COPPER	mg/L	N	0.0019	J	0.0046
SW6010	IRON	mg/L	N	6.7		4.6
SW6010	LEAD	mg/L	N	0.02		0.031
SW6010	MAGNESIUM	mg/L	N	5		2.5
SW6010	MANGANESE	mg/L	N	0.075		0.038
SW6010	NICKEL	mg/L	N	0.0078	J	0.013
SW6010	POTASSIUM	mg/L	N	2		1.5
SW6010	RESPIRABLE QUARTZ	ug/l	Y	59000		33000
SW6010	SELENIUM	mg/L	N	0.015	J	0.0089
SW6010	SILVER	mg/L	N	0.01	U	0.01
SW6010	SODIUM	mg/L	N	2000		1700
SW6010	THALLIUM	mg/L	N	0.025	U	0.025
SW6010	VANADIUM	ug/l	N	170		300
SW6010	ZINC	ug/l	N	20	U	20
SW7470	MERCURY	ug/l	N	3.4		36
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N	10	U	
SW9038	SULFATE	mg/L	N	26		
SW9040	pH	S.U.	N	6.38	H	8.15
SW9056	CHLORIDE	mg/L	N			6.38
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N	1900		

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-517B		MW-517B		MW-517B		MW-517B		MW-517B	
Date		08/26/2013		02/25/2014		09/25/2014		09/25/2014		04/23/2015	
Field Sample ID		MW-517B2-082613		MW-517-B-022514		MW-517B-092514		MW-517B-DUP-092514		MW-517B-042315	
SDG		680-93690-1		680-98941-1		680-105703-1		680-105703-1		680-111919-2	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		FD		REG		REG		FD		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1400		5000		5200		5200	4400
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	1800		50	U	50	U	50	U
SM2320B	ALKALINITY, TOTAL	mg/L	N	3300		5100		5200		5200	4400
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	13000		13000		11000		11000	14000
SM3500-FeD	FERROUS IRON	ug/l	N	2600	HF	7900	HF				
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	290		240					
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	260		330					
SWG6010	ALUMINIUM	mg/L	N	0.11	J	0.16	J	0.2	U	0.2	U
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.045		0.02	U	0.02	U	0.02	U
SWG6010	BARIUM	mg/L	N	0.042		0.026		0.015		0.015	0.017
SWG6010	BERYLLIUM	mg/L	N	0.0051		0.0047		0.0038	J	0.0039	J
SWG6010	CADMIUM	mg/L	N	0.002	U	0.0023	J	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	13		24		22		23	32
SWG6010	CHROMIUM	mg/L	N	0.36		0.42		0.28		0.28	0.2
SWG6010	COBALT	mg/L	N	0.0017	J	0.01	U	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.02		0.017	J	0.005	J	0.0046	J
SWG6010	IRON	mg/L	N	1.6		9.4		15		16	25
SWG6010	LEAD	mg/L	N	0.011		0.01	U	0.01	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	1		28		23		24	27
SWG6010	MANGANESE	mg/L	N	0.03		0.2		0.22		0.22	0.27
SWG6010	NICKEL	mg/L	N	0.064		0.035	J	0.011	J	0.011	J
SWG6010	POTASSIUM	mg/L	N	11		34		28		30	22
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	370000		69000		120000		120000	94000
SWG6010	SELENIUM	mg/L	N	0.02		0.02	U	0.02		0.024	J
SWG6010	SILVER	mg/L	N	0.0032	J	0.01	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	5500		6900		5900		6100	4800
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	790		620		210		210	270
SWG6010	ZINC	ug/l	N	20		9.1	J	20	U	20	U
SW7470	MERCURY	ug/l	N	35		14		6.9		4.3	16
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	26		40	U				
SW9038	SULFATE	mg/L	N			5.0	U				
SW9040	pH	S.U.	N	9.94	H	6.72	H	7.01	H	7.14	H
SW9056	CHLORIDE	mg/L	N	6000							
SW9056	SULFATE	mg/L	N	330							
SW9251	CHLORIDE	mg/L	N			6900					

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-518A		MW-518A		MW-518A		MW-518B		MW-518B	
Date		08/28/2013		08/28/2013		03/03/2014		08/28/2013		12/11/2013	
Field Sample ID		MW-518A-082813		MW-518A2-082813		MW-518A-030314		MW-518B-082813		MW-518B-121113	
SDG		680-93690-1		680-93690-1		680-99155-1		680-93690-1		680-97103-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		FD		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	4400		4400		2500		800	
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	7000		6900		50	U	2100	
SM2320B	ALKALINITY, TOTAL	mg/L	N	11000		11000		2500		3000	
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	5900		7200		6500		13000	
SM3500-FeD	FERROUS IRON	ug/l	N	690	HF	860	HF	1100	HF	2300	HF
SM4500S2-E	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE	mg/L	N								
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	230		230		230		360	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	240		230		200		380	
SWG6010	ALUMINIUM	mg/L	N	.11		.12		9.1		0.28	
SWG6010	ANTIMONY	ug/l	N	5.3	U	5.3	U	20	U	5.3	U
SWG6010	ARSENIC	mg/L	N	0.025		0.03		0.022		0.044	
SWG6010	BARIUM	mg/L	N	0.046		0.046		0.061		0.086	
SWG6010	BERYLLIUM	mg/L	N	0.017		0.017		0.014		0.013	
SWG6010	CADMIUM	mg/L	N	0.002	U	0.002	U	0.005	U	0.002	U
SWG6010	CALCIUM	mg/L	N	7		7.1		12		15	
SWG6010	CHROMIUM	mg/L	N	0.22		0.22		0.16		0.31	
SWG6010	COBALT	mg/L	N	0.0043	J	0.0039	J	0.0019	J	0.0015	J
SWG6010	COPPER	mg/L	N	0.011	J	0.011	J	0.0061	J	0.016	J
SWG6010	IRON	mg/L	N	0.69		0.64		0.84		1.3	
SWG6010	LEAD	mg/L	N	0.024		0.024		0.014		0.0077	J
SWG6010	MAGNESIUM	mg/L	N	0.16	J	0.16	J	2.6		0.033	J
SWG6010	MANGANESE	mg/L	N	0.025		0.025		0.23		0.021	
SWG6010	NICKEL	mg/L	N	0.032	J	0.032	J	0.021	J	0.05	
SWG6010	POTASSIUM	mg/L	N	2.8		2.8		3.7		5.6	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	15000		15000		25000		370000	
SWG6010	SELENIUM	mg/L	N	0.018	J	0.018	J	0.021	B	0.012	J
SWG6010	SILVER	mg/L	N	0.0014	J	0.0014	J	0.01	U	0.0017	J
SWG6010	SODIUM	mg/L	N	2500		2600		2800		5400	
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.0088	U	0.025	U	0.0088	U
SWG6010	VANADIUM	ug/l	N	270		270		240		670	
SWG6010	ZINC	ug/l	N	8.7	U	9.6	J	20	U	12	J
SW7470	MERCURY	ug/l	N	16		17		4.7		53	73
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N	17		17		18		28	
SW9038	SULFATE	mg/L	N					100	U		
SW9040	pH	S.U.	N	10.3	H	10.3	H	7.32	H	10.7	H
SW9056	CHLORIDE	mg/L	N	2400		2300				5800	
SW9056	SULFATE	mg/L	N	49		25				390	
SW9251	CHLORIDE	mg/L	N					2700			

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-518B		MW-518B		MW-518B		MW-519A		MW-519A			
Date		03/03/2014		09/26/2014		04/23/2015		10/02/2012		11/28/2012			
Field Sample ID		MW-518B-030314		MW-518B-092614		MW-518B-042315		MW-519A-100212		MW-519A-112812			
SDG		680-99155-1		680-105703-1		680-111919-1&2		680-83414-1		680-85180-1&2			
Matrix		WATER		WATER		WATER		WATER		WATER			
Sample Purpose		REG		REG		REG		REG		REG			
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS			
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	3800		6700		3600		820	H	1500	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50	U	50	U	160	H	100	U,H
SM2320B	ALKALINITY, TOTAL	mg/L	N	3800		6700		3700		1000	H	1600	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	8500		23000		7100		5800		5400	
SM3500-FeD	FERROUS IRON	ug/l	N	10000	HF					790		7600	
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N									11	
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N							8.3			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	280						230		170	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	210						390		150	
SWG6010	ALUMINUM	mg/L	N	0.38		0.14	J	0.65		1.3		2.5	
SWG6010	ANTIMONY	ug/l	N	20	U	8.0	J	20	U	20	U	20	U
SWG6010	ARSENIC	mg/L	N	0.031		0.02	U	0.023		0.019	J	0.011	J
SWG6010	BARIUM	mg/L	N	0.15		0.19		0.12		0.057		0.044	
SWG6010	BERYLLIUM	mg/L	N	0.021		0.0023	J	0.015		0.0075		0.011	
SWG6010	CADMIUM	mg/L	N	0.005	U	0.0027	J	0.005	U	0.005	U	0.005	U
SWG6010	CALCIUM	mg/L	N	35		25		29		11		9.1	
SWG6010	CHROMIUM	mg/L	N	0.38		0.23		0.29		0.084		0.11	
SWG6010	COBALT	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
SWG6010	COPPER	mg/L	N	0.0062	J	0.0056	J	0.02	U	0.0042	J	0.02	U
SWG6010	IRON	mg/L	N	9.9		9.3		10		0.55		6.7	
SWG6010	LEAD	mg/L	N	0.01	U	0.01	U	0.006	J	0.014		0.0083	J
SWG6010	MAGNESIUM	mg/L	N	15		15		12	B	0.22	J	4.5	
SWG6010	MANGANESE	mg/L	N	0.14		0.2		0.13		0.0064	J	0.078	
SWG6010	NICKEL	mg/L	N	0.025	J	0.0095	J	0.013	J	0.0093	J	0.0044	J
SWG6010	POTASSIUM	mg/L	N	6.6		38		5.3		0.95	J	1.5	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	75000		88000		100000		30000		84000	
SWG6010	SELENIUM	mg/L	N	0.015	J,B	0.031		0.014	J	0.013	J	0.014	J
SWG6010	SILVER	mg/L	N	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	4500		14000		3000		1600		830	
SWG6010	THALLIUM	mg/L	N	0.025	U	0.025	U	0.025	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	370		280		190		180		160	
SWG6010	ZINC	ug/l	N	20	U	20	U	32		20	U	20	U
SW7470	MERCURY	ug/l	N	4.8		4.5		13		7.9		3.1	
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	10	U								
SW9038	SULFATE	mg/L	N	76									
SW9040	pH	S.U.	N	6.64	H	7.11	H	6.83	H	9.71	H	6.49	
SW9056	CHLORIDE	mg/L	N							2100		1700	
SW9056	SULFATE	mg/L	N							100	U	100	U
SW9251	CHLORIDE	mg/L	N	4700									

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-519A		MW-519A		MW-519B		MW-519B		MW-519B			
Date		08/27/2013		02/24/2014		10/02/2012		11/27/2012		11/27/2012			
Field Sample ID		MW-519A-082713		MW-519A-022414		MW-519B-100212		MW-519B-112712		MW-519B-TOP-112712			
SDG		680-93690-1		680-98941-1		680-83414-1		680-85137-1&2		680-85137-1&2			
Matrix		WATER		WATER		WATER		WATER		WATER			
Sample Purpose		REG		REG		REG		REG		REG			
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS			
Method	Parameter Name	Units	Filtered										
110.2	pH	S.U.	N										
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	1900		1700		780	H	6200	H	7100	H
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	25	U	50	U	3900	H	1200	H	400	H
SM2320B	ALKALINITY, TOTAL	mg/L	N	1900		1700		5200	H	7400	H	7500	H
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	5000		3700		43000		46000		45000	
SM3500-FeD	FERROUS IRON	ug/l	N	2800	HF	4100	HF	2200		2500		4000	
SM4500S2-E	SULFIDE	mg/L	N										
SM4500S2-F	SULFIDE	mg/L	N							43		35	
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N					61					
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	170		180		2100		580	B	550	B
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	180		220		1900		670		630	
SWG6010	ALUMINUM	mg/L	N	1.4		1.8		0.73		0.2	U	0.2	U
SWG6010	ANTIMONY	ug/l	N	5.3	U	20	U	20	U	9.4	J	20	U
SWG6010	ARSENIC	mg/L	N	0.011	J	0.014	J	0.39		0.17		0.13	
SWG6010	BARIUM	mg/L	N	0.031		0.049		0.017		0.11		0.13	
SWG6010	BERYLLIUM	mg/L	N	0.0073		0.01		0.0023	J	0.0024	J	0.0025	J
SWG6010	CADMIUM	mg/L	N	0.002	U	0.005	U	0.0027	J	0.003	J	0.0026	J
SWG6010	CALCIUM	mg/L	N	11		11		1.6		13		13	
SWG6010	CHROMIUM	mg/L	N	0.065		0.085		0.61		0.38		0.39	
SWG6010	COBALT	mg/L	N	0.00095	U	0.01	U	0.003	J	0.0012	J	0.0013	J
SWG6010	COPPER	mg/L	N	0.0019	U	0.02	U	0.037		0.016	J	0.014	J
SWG6010	IRON	mg/L	N	2.5		4.4		2.6		2.3		3.2	
SWG6010	LEAD	mg/L	N	0.004	J	0.0082	J	0.0051	J	0.01	U	0.01	U
SWG6010	MAGNESIUM	mg/L	N	3.2		4.3		0.15	J	3.9		4.2	
SWG6010	MANGANESE	mg/L	N	0.033		0.042		0.0036	J	0.054		0.074	
SWG6010	NICKEL	mg/L	N	0.0032	J	0.0043	J	0.1		0.045		0.041	
SWG6010	POTASSIUM	mg/L	N	1.6		1.5		25		29		29	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	41000		45000		2000000		210000		180000	
SWG6010	SELENIUM	mg/L	N	0.0091	J	0.015	J	0.046		0.032		0.031	
SWG6010	SILVER	mg/L	N	0.0027	J	0.01	U	0.01	U	0.01	U	0.01	U
SWG6010	SODIUM	mg/L	N	2000		1700		19000		7300		8300	
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.025	U	0.025	U	0.025	U	0.025	U
SWG6010	VANADIUM	ug/l	N	150		150		2300		1100		1100	
SWG6010	ZINC	ug/l	N	8.7	U	20	U	18	J	14	J	14	J
SW7470	MERCURY	ug/l	N	2.2		2.9		120		99		89	
SW7470	MERCURY	ug/l	Y										
SW9034	SULFIDE	mg/L	N	17		10	U						
SW9038	SULFATE	mg/L	N			15							
SW9040	pH	S.U.	N	6.72	H	6.72	H	11.2	H	8.78	H	8.26	H
SW9056	CHLORIDE	mg/L	N	2200				19000		24000		25000	
SW9056	SULFATE	mg/L	N	25	U			1300		1400		1300	
SW9251	CHLORIDE	mg/L	N			1700							

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Location ID		MW-519B		MW-519B		MW-519B		MW-519B		MW-519B	
Date		02/05/2013		05/15/2013		08/27/2013		02/24/2014		09/25/2014	
Field Sample ID		MW-519B-MID-020513		MW-519B_051513		MW-519B-082713		MW-519B-022414		MW-519B-092514	
SDG		680-87157-1		680-90380-1		680-93690-1		680-98941-1		680-105703-1	
Matrix		WATER		WATER		WATER		WATER		WATER	
Sample Purpose		REG		REG		REG		REG		REG	
Sample Type		GW-GWS		GW-GWS		GW-GWS		GW-GWS		GW-GWS	
Method	Parameter Name	Units	Filtered								
110.2	pH	S.U.	N								
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	620		8100		6000		7500	3900
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	39		61		78		50	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	660		8200		6100		7500	4000
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	41000		44000		36000		17000	11000
SM3500-FeD	FERROUS IRON	ug/l	N	3300	HF	2600	HF	2800	HF	8000	HF
SM4500S2-E	SULFIDE	mg/L	N			27					
SM4500S2-F	SULFIDE	mg/L	N	41							
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N								
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y	390		350		310		310	
SM5310B	TOTAL ORGANIC CARBON	mg/L	N	460		340		350		320	
SWG6010	ALUMINIUM	mg/L	N	0.1	U	1	U	0.5	U	0.15	J
SWG6010	ANTIMONY	ug/l	N	25		53	U	27	U	20	U
SWG6010	ARSENIC	mg/L	N	0.12		0.046	U	0.023	U	0.1	U
SWG6010	BARIUM	mg/L	N	0.16		0.15		0.12		0.2	
SWG6010	BERYLLIUM	mg/L	N	0.0024	J	0.0028	J	0.0033	J	0.0031	J
SWG6010	CADMIUM	mg/L	N	0.0026	J	0.02	U	0.01	U	0.0038	J
SWG6010	CALCIUM	mg/L	N	18		14		9.6		23	
SWG6010	CHROMIUM	mg/L	N	0.44		0.34		0.26		0.33	
SWG6010	COBALT	mg/L	N	0.0095	U	0.0095	U	0.0048	U	0.01	U
SWG6010	COPPER	mg/L	N	0.014	J	0.019	U	0.0095	U	0.011	J
SWG6010	IRON	mg/L	N	2.2		2.6		2.9		9.3	
SWG6010	LEAD	mg/L	N	0.004	U	0.04	U	0.02	U	0.0063	J
SWG6010	MAGNESIUM	mg/L	N	7.7		10		6.7		13	
SWG6010	MANGANESE	mg/L	N	0.11		0.12		0.082		0.23	
SWG6010	NICKEL	mg/L	N	0.045		0.023	U	0.015	J	0.014	J
SWG6010	POTASSIUM	mg/L	N	29		33		44		44	
SWG6010	RESPIRABLE QUARTZ	ug/l	Y	82000		46000		61000		51000	96000
SWG6010	SELENIUM	mg/L	N	0.04		0.064	U	0.11		0.02	U
SWG6010	SILVER	mg/L	N	0.00089	U	0.0089	U	0.0045	U	0.01	U
SWG6010	SODIUM	mg/L	N	16000		16000		17000		14000	3700
SWG6010	THALLIUM	mg/L	N	0.0088	U	0.088	U	0.044	U	0.025	U
SWG6010	VANADIUM	ug/l	N	1100		470		540		420	190
SWG6010	ZINC	ug/l	N	23		87	U	44	U	20	U
SW7470	MERCURY	ug/l	N	68		28		31		15	
SW7470	MERCURY	ug/l	Y								
SW9034	SULFIDE	mg/L	N					20	U	40	U
SW9038	SULFATE	mg/L	N							1200	
SW9040	pH	S.U.	N	8.22		8.34	H	7.66	H	6.87	H
SW9056	CHLORIDE	mg/L	N	21000		20000		19000			
SW9056	SULFATE	mg/L	N	1400		1200		1300			
SW9251	CHLORIDE	mg/L	N							16000	

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)

- Qualifiers:
- U Indicates the analyte was analyzed for but not detected
 - J Result is less than the RL but greater than or equal to the MDL and the conce
 - H Sample was prepped or analyzed beyond the specified holding time
 - HF Field parameter with a holding time of 15 minutes
 - F Duplicate RPD exceeds the control limit
 - B Compound was found in the blank and sample

Location ID		MW-519B		MW-519B		
Date		04/21/2015		04/21/2015		
Field Sample ID		MW-519B-042115		MW-519B-D-042115		
SDG		680-111819-2&3		680-111819-2&3		
Matrix		WATER		WATER		
Sample Purpose		REG		FD		
Sample Type		GW-GWS		GW-GWS		
Method	Parameter Name	Units	Filtered			
110.2	pH	S.U.	N			
SM2320B	ALKALINITY, BICARBONATE (AS CaCO ₃)	mg/L	N	6700		6500
SM2320B	ALKALINITY, CARBONATE (AS CaCO ₃)	mg/L	N	50	U	50
SM2320B	ALKALINITY, TOTAL	mg/L	N	6700		6500
SM2540C	TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	mg/L	N	24000		23000
SM3500-FeD	FERROUS IRON	ug/l	N			
SM4500S2-E	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE	mg/L	N			
SM4500S2-F	SULFIDE, DISSOLVED	mg/L	N			
SM5310B	DISSOLVED ORGANIC CARBON	mg/L	Y			
SM5310B	TOTAL ORGANIC CARBON	mg/L	N			
SW6010	ALUMINIUM	mg/L	N	0.4	U	0.38
SW6010	ANTIMONY	ug/l	N	40	U	40
SW6010	ARSENIC	mg/L	N	0.04	U	0.04
SW6010	BARIUM	mg/L	N	0.26		0.24
SW6010	BERYLLIUM	mg/L	N	0.0019	J	0.0018
SW6010	CADMIUM	mg/L	N	0.01	U	0.01
SW6010	CALCIUM	mg/L	N	40		37
SW6010	CHROMIUM	mg/L	N	0.17		0.16
SW6010	COBALT	mg/L	N	0.02	U	0.02
SW6010	COPPER	mg/L	N	0.04	U	0.04
SW6010	IRON	mg/L	N	14		14
SW6010	LEAD	mg/L	N	0.02	U	0.02
SW6010	MAGNESIUM	mg/L	N	25		23
SW6010	MANGANESE	mg/L	N	0.29		0.27
SW6010	NICKEL	mg/L	N	0.01	J	0.0079
SW6010	POTASSIUM	mg/L	N	59		53
SW6010	RESPIRABLE QUARTZ	ug/l	Y	90000		89000
SW6010	SELENIUM	mg/L	N	0.027	J	0.03
SW6010	SILVER	mg/L	N	0.02	U	0.02
SW6010	SODIUM	mg/L	N	9500		12000
SW6010	THALLIUM	mg/L	N	0.05	U	0.05
SW6010	VANADIUM	ug/l	N	170		160
SW6010	ZINC	ug/l	N	40	U	40
SW7470	MERCURY	ug/l	N	4.1		5.2
SW7470	MERCURY	ug/l	Y			
SW9034	SULFIDE	mg/L	N			
SW9038	SULFATE	mg/L	N			
SW9040	pH	S.U.	N	6.95	H	6.99
SW9056	CHLORIDE	mg/L	N			
SW9056	SULFATE	mg/L	N			
SW9251	CHLORIDE	mg/L	N			

Analytical Lab was TestAmerica Savannah (5102 LaRoche Avenue, Savannah, GA 31404)
Qualifiers:
U Indicates the analyte was analyzed for but not detected
J Result is less than the RL but greater than or equal to the MDL and the conce
H Sample was prepped or analyzed beyond the specified holding time
HF Field parameter with a holding time of 15 minutes
F Duplicate RPD exceeds the control limit
B Compound was found in the blank and sample

Cr r gpf k'K'

Ur cti kpi 'Hny 'Tcvgu'c'pf 'O cuugu

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-2 Event 1	11/25/2013	9:10	11/25/2013 9:10	57	29			56	0.0				
	11/25/2013	9:12	11/25/2013 9:12	59	32	33	<2	56	0.0		0.0	0.00	0.00
	11/25/2013	9:24	11/25/2013 9:24		31	31.5	3.5	58	7.1		42.7	4.88	4.88
	11/25/2013	9:25	11/25/2013 9:25		32	33	5	58	10.3		8.7	0.99	5.88
	11/25/2013	10:25	11/25/2013 10:25		31	32	8	64	16.2		793.0	90.72	96.60
	11/25/2013	10:28	11/25/2013 10:28		33	34	10.5	64	21.7		56.8	6.49	103.09
	11/25/2013	11:23	11/25/2013 11:23		33	33.5	12	62	23.8		1250.3	143.04	246.13
	11/25/2013	12:08	11/25/2013 12:08		33	33.5	12	65	24.7		1092.1	124.94	371.07
	11/25/2013	12:45	11/25/2013 12:45		33	33	13	65	26.8		953.9	109.13	480.20
	11/25/2013	13:53	11/25/2013 13:53		33	33	14	64	28.9		1894.3	216.71	696.91
	11/25/2013	14:17	11/25/2013 14:17								693.7	79.36	776.27
11/25/2013	14:18	11/25/2013 14:18			28							776.27	
SW-2 Event 2	12/5/2013	8:30	12/5/2013 8:30										776.27
	12/5/2013	8:31	12/5/2013 8:31	56	29	28	<2	68	0.0				776.27
	12/5/2013	8:34	12/5/2013 8:34	56	32	32	3	68	6.1		9.2	1.05	777.31
	12/5/2013	8:46	12/5/2013 8:46	55	32	32	5	69	10.2		97.6	11.16	788.48
	12/5/2013	9:32	12/5/2013 9:32	53	32	32	8.5	76	17.2		628.4	71.88	860.36
	12/5/2013	10:24	12/5/2013 10:24	52	32	31.5	9.5	79	19.1		943.3	107.91	968.27
	12/5/2013	10:37	12/5/2013 10:37	51	32	31	11	81	22.1		267.9	30.65	998.93
	12/5/2013	11:38	12/5/2013 11:38	51	34	32.5	13.5	81	27.7		1519.0	173.77	1172.69
	12/5/2013	13:00	12/5/2013 13:00	54	34	32	14	81	28.7		2313.8	264.69	1437.39
	12/5/2013	13:01	12/5/2013 13:01								28.7	3.29	1440.68
	12/5/2013	13:02	12/5/2013 13:02			26							1440.68
SW-2 Event 3	12/10/2013	13:17	12/10/2013 13:17	53	34	34	<2	81	0.0				1440.68
	12/10/2013	13:43	12/10/2013 13:43	53	32	33	6.2	76	12.5		162.7	18.61	1459.29
	12/10/2013	14:09	12/10/2013 14:09	53	32	32	6.5	72	13.2		333.9	38.20	1497.49
	12/10/2013	15:04	12/10/2013 15:04	52	32	32	8	74	16.2		807.2	92.34	1589.83
	12/10/2013	15:49	12/10/2013 15:49	50	32	31	9	72	18.2		774.4	88.59	1678.43
	12/10/2013	16:26	12/10/2013 16:26	50	32	31	10	76	20.2		710.8	81.32	1759.75
	12/10/2013	17:10	12/10/2013 17:10	50	32	30	11	68	22.4		936.4	107.13	1866.87
	12/10/2013	22:37	12/10/2013 22:37	55	31	29	15	59	30.5		8637.9	988.17	2855.04
	12/10/2013	22:38	12/10/2013 22:38	55	35	32	20	59	42.4		36.4	4.17	2859.21
	12/11/2013	7:49	12/11/2013 7:49	51	34	30	22.5	60	47.1		24658.5	2820.93	5680.14
	SW-2 Event 4	12/19/2013	12:09	12/19/2013 12:09	44	32	32	<2	69	0.0			
12/19/2013		12:21	12/19/2013 12:21	44	30	30	6	72	11.9		71.4	8.16	5688.31
12/19/2013		13:24	12/19/2013 13:24	50	30	29	7	74	13.8		810.8	92.75	5781.06
12/19/2013		13:34	12/19/2013 13:34	50	32	31	12	74	24.3		190.6	21.80	5802.86
12/19/2013		13:35	12/19/2013 13:35	49	34	32.5	14	74	28.9		26.6	3.04	5805.90
12/19/2013		15:52	12/19/2013 15:52	45	34	32	17	68	35.3		4401.4	503.52	6309.42
12/19/2013		16:38	12/19/2013 16:38	45	34	31	17.5	64	36.5		1652.4	189.03	6498.45
12/19/2013		16:39	12/19/2013 16:39								36.5	4.18	6502.63
12/19/2013		16:40	12/19/2013 16:40			26							6502.63
12/19/2013		16:40	12/19/2013 16:40										6502.63
SW-2 Event 5	1/22/2014	8:15	1/22/2014 8:15	56	27	27	<2	42	0.0				6502.63
	1/22/2014	8:16	1/22/2014 8:16	56	31	33	<2	42	0.0		0.0	0.00	6502.63
	1/22/2014	8:18	1/22/2014 8:18	56	31	32	3.5	42	7.2		7.2	0.83	6503.45
	1/22/2014	8:49	1/22/2014 8:49	54	30.5	31	6	47	12.3		302.1	34.56	6538.01
	1/22/2014	8:50	1/22/2014 8:50	54	32	32	8	47	16.6		14.4	1.65	6539.67
	1/22/2014	9:48	1/22/2014 9:48	50	32	32	9	52	18.6		1021.6	116.87	6656.53
	1/22/2014	10:55	1/22/2014 10:55	47	32	32	11.2	57	23.0		1394.9	159.58	6816.11
	1/22/2014	12:00	1/22/2014 12:00	45	31.5	31	12.5	59	25.5		1578.0	180.52	6996.64
	1/22/2014	12:46	1/22/2014 12:46	49	31	30.5	13.8	60	28.0		1230.6	140.79	7137.42

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/22/2014	13:59	1/22/2014 13:59	47	30.5	30	14.5	61	29.2		2087.9	238.86	7376.28
	1/22/2014	14:00	1/22/2014 14:00	47	32	31	18	61	36.9		33.0	3.78	7380.06
	1/22/2014	15:07	1/22/2014 15:07	53	32	31	19.7	62	40.3		2585.8	295.82	7675.88
	1/22/2014	16:00	1/22/2014 16:00	53	32	31	19.8	61	40.6		2143.2	245.19	7921.07
	1/22/2014	16:30	1/22/2014 16:30	52	32	30.5	19.9	58	40.9		1221.7	139.77	8060.84
	1/22/2014	16:31	1/22/2014 16:31			25					40.9	4.68	8065.51
SW-2 Event 6	12/18/2014	7:55	12/18/2014 7:55		23	22	0	50	0.0				8065.51
	12/18/2014	8:08	12/18/2014 8:08		23	22.5	0	52	0.0		0.0	0.00	8065.51
	12/18/2014	8:59	12/18/2014 8:59		24	22	0	56	0.0		0.0	0.00	8065.51
	12/18/2014	9:00	12/18/2014 9:00		28	25	3	56	5.9		3.0	0.34	8065.85
	12/18/2014	10:19	12/18/2014 10:19		28	25	4	63	7.8		541.8	61.98	8127.83
	12/18/2014	10:20	12/18/2014 10:20		32	29	9	63	18.4		13.1	1.50	8129.33
	12/18/2014	11:19	12/18/2014 11:19		32	29	9.5	64	19.4		1115.2	127.58	8256.91
	12/18/2014	11:20	12/18/2014 11:20		38	33	15	64	32.6		26.0	2.97	8259.88
	12/18/2014	12:34	12/18/2014 12:34		38	33	16	68	34.6		2486.0	284.40	8544.29
	12/18/2014	12:44	12/18/2014 12:44		40	34	19	70	41.8		382.1	43.71	8588.00
	12/18/2014	13:26	12/18/2014 13:26		40	34	19.5	73	42.8		1776.3	203.21	8791.21
	12/18/2014	14:47	12/18/2014 14:47		40	33.5	20.5	70	45.1		3559.4	407.19	9198.40
	12/18/2014	15:52	12/18/2014 15:52		40	33	22	66	48.6		3045.4	348.40	9546.79
	12/18/2014	16:48	12/18/2014 16:48		40	33	22	64	48.7		2724.3	311.66	9858.45
	12/18/2014	16:49	12/18/2014 16:49			25.5					48.7	5.57	9864.02
SW-2 Event 7	1/8/2015	8:24	1/8/2015 8:24		28	27	0	42	0.0				9864.02
	1/8/2015	8:35	1/8/2015 8:35		28	27	0	42	0.0		0.0	0.00	9864.02
	1/8/2015	8:36	1/8/2015 8:36		34	32	7	42	14.9		7.5	0.85	9864.87
	1/8/2015	10:26	1/8/2015 10:26		34	31.5	10	52	21.1		1982.9	226.84	10091.72
	1/8/2015	10:27	1/8/2015 10:27		38	33	16	52	35.2		28.1	3.22	10094.94
	1/8/2015	11:35	1/8/2015 11:35		39	32.5	16	52	35.5		2403.3	274.94	10369.88
	1/8/2015	13:00	1/8/2015 13:00		39	32	18	51	40.0		3209.0	367.10	10736.98
	1/8/2015	13:01	1/8/2015 13:01			26					40.0	4.58	10741.56
SW-2 Event 8	2/25/2015	7:58	2/25/2015 7:58		32	33	0	54	0.0				10741.56
	2/25/2015	8:31	2/25/2015 8:31		32	31	6	58	12.3		203.4	23.27	10764.83
	2/25/2015	8:32	2/25/2015 8:32		37	36	11	58	23.8		18.1	2.07	10766.90
	2/25/2015	10:26	2/25/2015 10:26		36	35	13	60	27.8		2941.0	336.45	11103.35
	2/25/2015	11:27	2/25/2015 11:27		36	34	14.5	60	31.0		1793.3	205.15	11308.50
	2/25/2015	12:34	2/25/2015 12:34		36	33	16	61	34.2		2183.4	249.78	11558.28
	2/25/2015	12:35	2/25/2015 12:35			28					34.2	3.91	11562.19
SW-2 Event 9	3/3/2015	12:37	3/3/2015 12:37		31	33	0	76	0.0				11562.19
	3/3/2015	12:52	3/3/2015 12:52		31	31	4	80	8.0		59.7	6.83	11569.02
	3/3/2015	12:53	3/3/2015 12:53		36	36	8.5	80	17.8		12.9	1.47	11570.49
	3/3/2015	15:17	3/3/2015 15:17		35	34	12	79	24.9		3077.9	352.11	11922.61
	3/3/2015	17:13	3/3/2015 17:13		36	33	15	75	31.6		3278.6	375.08	12297.68
	3/3/2015	17:14	3/3/2015 17:14			28					31.6	3.61	12301.30
Total CO ₂ Mass (lbs):												12301.30	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-3 Event 1	11/20/2013	10:00	11/20/2013 10:00	55	27			66	0.0				
	11/20/2013	10:02	11/20/2013 10:02		31	32	<2	66	0.0		0.0	0.00	0.00
	11/20/2013	11:07	11/20/2013 11:07		29	29	5	66	9.9		320.3	36.64	36.64
	11/20/2013	11:09	11/20/2013 11:09		32	31.5	8	66	16.3		26.2	2.99	39.63
	11/20/2013	13:12	11/20/2013 13:12		32	31.5	8.5	66	17.3		2068.5	236.63	276.26
	11/20/2013	14:58	11/20/2013 14:58		32	31.5	9	65	18.4		1891.6	216.40	492.66
	11/20/2013	15:04	11/20/2013 15:04								110.2	12.60	505.27
	11/20/2013	15:05	11/20/2013 15:05			24	24						505.27
SW-3 Event 2	12/5/2013	13:07	12/5/2013 13:07	55	32	31.5	<2	82	0.0				505.27
	12/5/2013	14:26	12/5/2013 14:26	54	31	30.5	4.5	86	8.9		351.5	40.21	545.48
	12/5/2013	14:27	12/5/2013 14:27	54	33	32	8	86	16.2		12.5	1.43	546.91
	12/5/2013	15:32	12/5/2013 15:32	50	33	32	9	80	18.3		1120.0	128.13	675.04
	12/5/2013	16:42	12/5/2013 16:42	50	32	31.5	10.5	73	21.3		1384.3	158.36	833.40
	12/5/2013	17:26	12/5/2013 17:26	55	32	31.5	11	70	22.3		959.0	109.71	943.11
	12/5/2013	17:27	12/5/2013 17:27								22.3	2.56	945.67
	12/5/2013	17:28	12/5/2013 17:28										945.67
SW-3 Event 3	12/11/2013	9:10	12/11/2013 9:10	55	34	33	<2	66	0.0				945.67
	12/11/2013	9:43	12/11/2013 9:43	52.5	32	31	3	68	6.1		100.7	11.52	957.19
	12/11/2013	10:16	12/11/2013 10:16	50	32	31	4	68	8.1		235.0	26.88	984.07
	12/11/2013	10:56	12/11/2013 10:56	50	32	31	5.5	70	11.2		386.1	44.17	1028.24
	12/11/2013	11:40	12/11/2013 11:40	50	32.5	31	8.5	70	17.4		627.4	71.78	1100.01
	12/11/2013	11:41	12/11/2013 11:41	50	35	32	11	70	23.1		20.2	2.31	1102.33
	12/11/2013	12:34	12/11/2013 12:34	50	34	32	11	68	22.9		1216.7	139.19	1241.51
	12/11/2013	13:15	12/11/2013 13:15	50	34	32	11	66	22.9		938.2	107.33	1348.84
	12/11/2013	13:21	12/11/2013 13:21								137.4	15.72	1364.56
	12/11/2013	13:22	12/11/2013 13:22			25							1364.56
SW-3 Event 4	12/17/2013	8:47	12/17/2013 8:47	46	36	30	<2	62	0.0				1364.56
	12/17/2013	9:52	12/17/2013 9:52	45	35	23	<2	66	0.0		0.0	0.00	1364.56
	12/17/2013	9:53	12/17/2013 9:53	45	36	23	<2	66	0.0		0.0	0.00	1364.56
	12/17/2013	10:58	12/17/2013 10:58	42	39	23	<2	72	0.0		0.0	0.00	1364.56
	12/17/2013	11:02	12/17/2013 11:02	42	39	23	<2	72	0.0		0.0	0.00	1364.56
	12/17/2013	13:45	12/17/2013 13:45	45	40	34	21	74	46.0		3751.1	429.12	1793.68
	12/17/2013	14:52	12/17/2013 14:52	45	40	36	17	70	37.4		2794.9	319.74	2113.42
	12/17/2013	14:53	12/17/2013 14:53	45	36	33	8	70	16.9		27.2	3.11	2116.53
	12/17/2013	15:45	12/17/2013 15:45	45	32.5	31	14	68	28.6		1184.9	135.55	2252.08
	12/17/2013	22:20	12/17/2013 22:20	46	32	30	18	60	36.9		12945.4	1480.95	3733.03
	12/18/2013	8:44	12/18/2013 8:44	45	32	28	20.5	62	42.0		24605.4	2814.86	6547.89
	12/18/2013	8:45	12/18/2013 8:45								42.0	4.80	6552.69
	SW-3 Event 5	12/19/2013	15:50	12/19/2013 15:50	45	32.5	32	<2	74	0.0			
12/19/2013		16:28	12/19/2013 16:28	40	32.5	31	7	70	14.3		271.5	31.06	6583.75
12/19/2013		17:07	12/19/2013 17:07	52	32	29.5	5.5	65	11.2		497.5	56.91	6640.66
12/19/2013		17:14	12/19/2013 17:14	31	33	30.5	8	65	16.5		97.0	11.10	6651.76
12/19/2013		22:18	12/19/2013 22:18	50	34	29	13	58	27.3		6655.5	761.39	7413.15
12/20/2013		7:33	12/20/2013 7:33	48	32	27	16.3	56	33.6		16884.5	1931.59	9344.74
12/20/2013		7:34	12/20/2013 7:34								33.6	3.84	9348.58
SW-3 Event 6		1/14/2014	12:06	1/14/2014 12:06	43	30	26	<2	65	0.0			
	1/14/2014	12:08	1/14/2014 12:08	43	37	34	5	65	10.7		10.7	1.23	9349.81
	1/14/2014	13:08	1/14/2014 13:08	45	37	33.5	8	65	17.2		838.0	95.87	9445.67
	1/14/2014	15:53	1/14/2014 15:53	46	36	32	11	65	23.4		3348.8	383.10	9828.77
	1/14/2014	16:24	1/14/2014 16:24	46	36	32	11.2	65	23.8		732.0	83.75	9912.52
	1/14/2014	16:25	1/14/2014 16:25	49	36	32	11.2	65	23.8		23.8	2.73	9915.24

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/14/2014	16:43	1/14/2014 16:43			25					428.9	49.07	9964.31
SW-3 Event 7	1/7/2015	7:37	1/7/2015 7:37		26	26	0	48	0.0				9964.31
	1/7/2015	7:58	1/7/2015 7:58		26	25.5	<2	50	0.0		0.0	0.00	9964.31
	1/7/2015	9:16	1/7/2015 9:16		26	25	<2	63	0.0		0.0	0.00	9964.31
	1/7/2015	11:23	1/7/2015 11:23		26	24.5	3	72	5.7		360.0	41.19	10005.50
	1/7/2015	11:24	1/7/2015 11:24		32	28	12	72	24.3		15.0	1.72	10007.21
	1/7/2015	13:13	1/7/2015 13:13		32	28.5	10	71	20.3		2430.8	278.08	10285.30
	1/7/2015	13:14	1/7/2015 13:14		40	32	20	71	44.0		32.1	3.67	10288.97
	1/7/2015	15:14	1/7/2015 15:14		40	33	20	70	44.0		5278.1	603.82	10892.79
	1/7/2015	16:58	1/7/2015 16:58		40	32.5	20	64	44.3		4590.3	525.13	11417.92
	1/7/2015	16:59	1/7/2015 16:59			27					44.3	5.06	11422.99
SW-3 Event 8	2/26/2015	8:00	2/26/2015 8:00		30	31.5	0	54	0.0				11422.99
	2/26/2015	8:35	2/26/2015 8:35		30	30	5	56	10.1		176.2	20.16	11443.14
	2/26/2015	8:36	2/26/2015 8:36		34	33	10	56	21.0		15.5	1.78	11444.92
	2/26/2015	9:35	2/26/2015 9:35		34	33	10	58	21.0		1239.6	141.81	11586.73
	2/26/2015	10:45	2/26/2015 10:45		34	33	11	61	23.0		1540.3	176.21	11762.95
	2/26/2015	11:58	2/26/2015 11:58		34	32	12	66	25.0		1752.2	200.46	11963.40
	2/26/2015	13:10	2/26/2015 13:10		34	32	12.5	66	26.0		1836.6	210.10	12173.51
	2/26/2015	13:11	2/26/2015 13:11			26					26.0	2.98	12176.48
Total CO ₂ Mass (lbs):												12176.48	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-4 Event 1	11/22/2013	12:52	11/22/2013 12:52						0.0				
	11/22/2013	12:53	11/22/2013 12:53	56	34	34	<2	84	0.0		0.0	0.00	0.00
	11/22/2013	13:34	11/22/2013 13:34	55	34	33	4	88	8.2		167.2	19.12	19.12
	11/22/2013	14:00	11/22/2013 14:00	54	35	34.5	8	87	16.5		320.4	36.65	55.78
	11/22/2013	14:31	11/22/2013 14:31	52	35	34.5	9	80	18.7		545.2	62.37	118.14
	11/22/2013	15:01	11/22/2013 15:01	50	35	34.5	10	77	20.8		592.4	67.77	185.91
	11/22/2013	15:46	11/22/2013 15:46	50	35	34	11	80	22.8		982.0	112.34	298.25
	11/22/2013	16:42	11/22/2013 16:42	50	35	34	12	76	25.0		1339.2	153.21	451.46
	11/22/2013	17:14	11/22/2013 17:14	50	35	34	12	72	25.1		801.6	91.70	543.16
	11/22/2013	17:15	11/22/2013 17:15								25.1	2.87	546.03
	11/22/2013	17:16	11/22/2013 17:16										546.03
SW-4 Event 2	12/5/2013	12:22	12/5/2013 12:22	52	34	33	<2	84	0.0				546.03
	12/5/2013	14:19	12/5/2013 14:19	52	32	31	3	87	6.0		350.6	40.10	586.14
	12/5/2013	14:20	12/5/2013 14:20	52	36	34	6	87	12.5		9.2	1.06	587.19
	12/5/2013	15:24	12/5/2013 15:24	49	36	34	6.5	83	13.6		834.7	95.48	682.68
	12/5/2013	16:37	12/5/2013 16:37	49	35	34	8	78	16.6		1103.1	126.20	808.88
	12/5/2013	17:42	12/5/2013 17:42	55	35	34	10	72	20.9		1220.4	139.61	948.49
	12/5/2013	21:55	12/5/2013 21:55	55	34	31	15	69	31.1		6585.3	753.36	1701.85
	12/5/2013	22:06	12/5/2013 22:06	54	36	33	19	69	40.3		392.7	44.93	1746.77
	12/6/2013	6:58	12/6/2013 6:58	54	36	31	23	67	48.8		23699.5	2711.22	4457.99
	12/6/2013	9:34	12/6/2013 9:34	44	35	31	23	76	47.9		7546.7	863.34	5321.33
	12/6/2013	9:36	12/6/2013 9:36	42	37	32	26	76	55.3		103.2	11.80	5333.14
	12/6/2013	10:39	12/6/2013 10:39	40	37	32	24.5	80	51.9		3374.9	386.09	5719.23
	12/6/2013	11:34	12/6/2013 11:34	40	37	32	24.5	82	51.8		2850.4	326.09	6045.32
	12/6/2013	11:50	12/6/2013 11:50	45	40	33	28	82	60.9		901.3	103.11	6148.43
	12/6/2013	14:31	12/6/2013 14:31	45	40	33	28	80	61.0		9813.2	1122.63	7271.06
	12/6/2013	15:29	12/6/2013 15:29	45	39	32	28	77	60.6		3527.2	403.51	7674.57
	12/6/2013	17:25	12/6/2013 17:25	45	42	33	32	70	71.7		7674.9	878.00	8552.57
	12/6/2013	17:26	12/6/2013 17:26								71.7	8.20	8560.77
SW-4 Event 3	12/19/2013	12:20	12/19/2013 12:20	44	44	12	10	72.0	18.5				8560.77
	12/19/2013	12:27	12/19/2013 12:27	45	35	34	6.5	74.0	11.0		103.1	11.79	8572.56
	12/19/2013	13:22	12/19/2013 13:22	50	35	33.5	9	74.0	15.2		721.2	82.51	8655.07
	12/19/2013	15:47	12/19/2013 15:47	45	34	32	13	68.0	21.9		2691.7	307.93	8963.01
	12/19/2013	16:37	12/19/2013 16:37	43	34	31	13.5	64.0	22.8		1118.2	127.93	9090.93
	12/19/2013	16:38	12/19/2013 16:38								22.8	2.61	9093.55
	12/19/2013	16:39	12/19/2013 16:39			27							9093.55
SW-4 Event 4	1/16/2014	12:32	1/16/2014 12:32	46	33	31.5	<2	64.0	0.0				9093.55
	1/16/2014	12:33	1/16/2014 12:33	46	35	32.5	5	64.0	8.5		4.3	0.49	9094.03
	1/16/2014	14:37	1/16/2014 14:37	50	33	31.5	9	64.0	15.1		1463.5	167.42	9261.46
	1/16/2014	15:39	1/16/2014 15:39	52	32	31.5	10	64.0	16.6		980.1	112.13	9373.58
	1/16/2014	16:51	1/16/2014 16:51	58	32	34.5	11.9	57.0	19.8		1310.2	149.89	9523.47
	1/16/2014	16:52	1/16/2014 16:52								19.8	2.27	9525.74
SW-4 Event 5	12/16/2014	7:42	12/16/2014 7:42		24	23	0	54	0.0				9525.74
	12/16/2014	7:56	12/16/2014 7:56		24	23	0	56	0.0		0.0	0.00	9525.74
	12/16/2014	7:57	12/16/2014 7:57		28	26.5	4	56	6.4		3.2	0.36	9526.11
	12/16/2014	10:15	12/16/2014 10:15		28	26	8	71	12.6		1307.4	149.57	9675.67
	12/16/2014	10:16	12/16/2014 10:16		33	29	14	71	23.3		17.9	2.05	9677.72
	12/16/2014	11:23	12/16/2014 11:23		33	28.5	14.5	73	24.1		1585.2	181.35	9859.07
	12/16/2014	11:24	12/16/2014 11:24		38	31.5	20	73	34.9		29.5	3.37	9862.44
	12/16/2014	12:21	12/16/2014 12:21		38	31.5	20	73	34.9		1989.2	227.56	10090.00
	12/16/2014	13:52	12/16/2014 13:52		38	31.5	20.5	77	35.6		3209.1	367.12	10457.12

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/16/2014	15:05	12/16/2014 15:05		38	30	22	71	38.5		2704.4	309.39	10766.51
	12/16/2014	15:06	12/16/2014 15:06		42	32.5	26	71	47.2		42.8	4.90	10771.41
	12/16/2014	16:20	12/16/2014 16:20		42	32.5	26	69	47.3		3494.8	399.80	11171.21
	12/16/2014	17:12	12/16/2014 17:12		42	32	27	66	49.2		2509.3	287.07	11458.27
	12/16/2014	17:13	12/16/2014 17:13			26					49.2	5.63	11463.91
SW-4 Event 6	12/18/2014	7:57	12/18/2014 7:57		26	26	0	46	0.0				11463.91
	12/18/2014	8:11	12/18/2014 8:11		36	33	14	50	24.5		171.6	19.63	11483.54
	12/18/2014	9:42	12/18/2014 9:42		36	31	16	58	27.8		2379.4	272.21	11755.74
	12/18/2014	9:43	12/18/2014 9:43		40	33.5	23	58	41.5		34.7	3.96	11759.71
	12/18/2014	11:16	12/18/2014 11:16		40	33	23	62	41.3		3853.2	440.80	12200.51
	12/18/2014	11:17	12/18/2014 11:17		44	35	27	62	50.3		45.8	5.24	12205.75
	12/18/2014	12:16	12/18/2014 12:16		44	35	26	66	48.3		2908.0	332.68	12538.43
	12/18/2014	12:17	12/18/2014 12:17			28					48.3	5.52	12543.95
Total CO ₂ Mass (lbs):												12543.95	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-5 Event 1	11/22/2013	8:35	11/22/2013 8:35						0.0				0.00
	11/22/2013	8:36	11/22/2013 8:36	55	28	28	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:40	11/22/2013 8:40	55	32	30	3.5	70	7.1		14.2	1.63	1.63
	11/22/2013	8:46	11/22/2013 8:46	55	30	30	6.8	70	13.5		61.8	7.07	8.70
	11/22/2013	9:04	11/22/2013 9:04	55	30	29	10	74	19.8		299.6	34.27	42.97
	11/22/2013	9:06	11/22/2013 9:06	55	30	30	11.5	74	22.7		42.5	4.87	47.83
	11/22/2013	10:00	11/22/2013 10:00	53	30	30	12.0	76	23.7		1253.9	143.44	191.28
	11/22/2013	10:34	11/22/2013 10:34	53	30	30	11.75	77	23.2		796.7	91.15	282.43
	11/22/2013	11:04	11/22/2013 11:04	51	31	30	11.75	77	23.4		699.2	79.99	362.41
	11/22/2013	11:34	11/22/2013 11:34	53	31	30	12	77	23.9		710.6	81.29	443.71
	11/22/2013	11:56	11/22/2013 11:56	53	35	33.5	16	81	33.2		628.2	71.87	515.57
	11/22/2013	12:40	11/22/2013 12:40	52	35	33.5	16	81	33.2		1459.7	166.99	682.56
	11/22/2013	12:42	11/22/2013 12:42								66.3	7.59	690.15
11/22/2013	12:44	11/22/2013 12:44										690.15	
SW-5 Event 2	12/12/2013	11:50	12/12/2013 11:50	40	34	32	<2	70	0.0				690.15
	12/12/2013	13:04	12/12/2013 13:04	45	32	29	9	70	18.3		676.1	77.35	767.50
	12/12/2013	16:08	12/12/2013 16:08	45	32	28	11.5	70	23.3		3829.4	438.08	1205.58
	12/12/2013	16:14	12/12/2013 16:14								140.1	16.03	1221.60
	12/12/2013	16:15	12/12/2013 16:15			20							1221.60
SW-5 Event 3	12/13/2013	8:54	12/13/2013 8:54	51	34	35.2	<2	60	0.0				1221.60
	12/13/2013	8:55	12/13/2013 8:55		28	20	<2	60	0.0		0.0	0.00	1221.60
	12/13/2013	8:56	12/13/2013 8:56	51	30	32.6	<2	60	0.0		0.0	0.00	1221.60
	12/13/2013	8:59	12/13/2013 8:59	51	30	32.6	<2	60	0.0		0.0	0.00	1221.60
	12/13/2013	9:24	12/13/2013 9:24	50	30	31	5.8	62	11.6		145.1	16.60	1238.20
	12/13/2013	9:27	12/13/2013 9:27	50	32	32.8	8	62	16.4		42.0	4.80	1243.01
	12/13/2013	10:27	12/13/2013 10:27	45	32	32.4	10	66	20.4		1102.7	126.15	1369.15
	12/13/2013	12:10	12/13/2013 12:10	45	32	30.8	11.5	70	23.3		2252.3	257.66	1626.81
	12/13/2013	12:11	12/13/2013 12:11	42	33	32.4	14	70	28.7		26.0	2.98	1629.79
	12/13/2013	14:19	12/13/2013 14:19	40	33	32.4	15	68	30.8		3813.1	436.21	2066.01
	12/13/2013	15:18	12/13/2013 15:18	50	32	32	16	68	32.6		1870.2	213.95	2279.96
	12/13/2013	15:19	12/13/2013 15:19								32.6	3.72	2283.68
	12/13/2013	15:20	12/13/2013 15:20			23.6							2283.68
SW-5 Event 4	12/19/2013	9:00	12/19/2013 9:00	45	32	33.6	<2	54	0.0				2283.68
	12/19/2013	9:26	12/19/2013 9:26	42	28	28	13.8	62	27.0		350.8	40.13	2323.82
	12/19/2013	9:28	12/19/2013 9:28	42	29	30	14.5	62	28.7		55.7	6.37	2330.19
	12/19/2013	10:05	12/19/2013 10:05	40	29	28	15.5	66	30.5		1095.9	125.37	2455.56
	12/19/2013	11:28	12/19/2013 11:28	40	29	27.2	16	70	31.4		2571.3	294.16	2749.72
	12/19/2013	12:54	12/19/2013 12:54	45	28	27.2	17	72	32.9		2766.2	316.46	3066.17
	12/19/2013	13:00	12/19/2013 13:00								197.5	22.60	3088.77
	12/19/2013	13:01	12/19/2013 13:01			20							3088.77
	SW-5 Event 5	1/7/2014	12:48	1/7/2014 12:48									
1/7/2014		12:49	1/7/2014 12:49	50	33	34.4	3	50	6.3		6.3	0.72	3089.49
1/7/2014		13:57	1/7/2014 13:57	52	31	31.8	9.5	52	19.4		874.0	99.98	3189.47
1/7/2014		13:59	1/7/2014 13:59	52	33	33.2	12	52	25.1		44.5	5.09	3194.56
1/7/2014		15:18	1/7/2014 15:18	50	33	32.8	13	52	27.2		2063.4	236.06	3430.62
1/7/2014		16:26	1/7/2014 16:26	47	32	32.6	14	50	29.0		1909.6	218.45	3649.07
1/7/2014		17:11	1/7/2014 17:11	52	32	32.6	14.5	47	30.1		1330.3	152.19	3801.26
1/7/2014		17:12	1/7/2014 17:12								30.1	3.45	3804.71
1/7/2014		17:13	1/7/2014 17:13			24.8							3804.71
SW-5 Event 6		1/9/2014	8:37	1/9/2014 8:37						0.0			
	1/9/2014	8:38	1/9/2014 8:38	53	36	33	<2	53	0.0		0.0	0.00	3804.71

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/9/2014	8:42	1/9/2014 8:42	53	34	30	7	53	14.8		29.5	3.38	3808.09
	1/9/2014	8:44	1/9/2014 8:44	51	36	30.5	14.5	53	31.2		46.0	5.26	3813.35
	1/9/2014	8:45	1/9/2014 8:45	50	39	33.5	20.5	53	45.5		38.3	4.39	3817.73
	1/9/2014	8:57	1/9/2014 8:57	50	40	35	17	54	38.0		500.8	57.29	3875.02
	1/9/2014	9:40	1/9/2014 9:40	49	40	34	18	54	40.2		1682.5	192.48	4067.51
	1/9/2014	10:15	1/9/2014 10:15	47	40	33.5	19.5	57	43.5		1465.0	167.60	4235.10
	1/9/2014	10:58	1/9/2014 10:58	40	38	31.5	19.5	60	42.5		1848.8	211.50	4446.60
	1/9/2014	10:59	1/9/2014 10:59	40	39	32.5	20.5	60	45.1		43.8	5.01	4451.61
	1/9/2014	12:48	1/9/2014 12:48	38	36	31	20.5	60	43.8		4848.5	554.66	5006.28
	1/9/2014	12:49	1/9/2014 12:49								43.8	5.01	5011.29
	1/9/2014	12:50	1/9/2014 12:50			23.5							5011.29
SW-5 Event 7	1/16/2014	12:09	1/16/2014 12:09	43	26	22	<2	60	0.0				5011.29
	1/16/2014	12:10	1/16/2014 12:10	43	33	30	6	60	12.4		6.2	0.71	5012.00
	1/16/2014	12:11	1/16/2014 12:11	43	35	30	15	60	31.7		22.1	2.53	5014.53
	1/16/2014	12:13	1/16/2014 12:13	43	37.5	33	18	60	39.1		70.8	8.10	5022.63
	1/16/2014	13:05	1/16/2014 13:05	45	39	33.5	16	60	35.2		1931.4	220.96	5243.59
	1/16/2014	14:41	1/16/2014 14:41	46	39	33	17.2	61	37.8		3506.6	401.15	5644.74
	1/16/2014	15:45	1/16/2014 15:45	48	39	33	18.1	61	39.8		2484.4	284.21	5928.95
	1/16/2014	16:10	1/16/2014 16:10	49	39	33	18.5	61	40.7		1006.2	115.11	6044.06
	1/16/2014	16:11	1/16/2014 16:11			25					40.7	4.65	6048.72
SW-5 Event 8	1/17/2014	12:06	1/17/2014 12:06	45	30	27.5	5	68	9.9				6048.72
	1/17/2014	12:07	1/17/2014 12:07	45	35	31.8	6	68	12.6		11.3	1.29	6050.01
	1/17/2014	12:49	1/17/2014 12:49	42	34	30.5	8.5	68	17.7		635.5	72.70	6122.71
	1/17/2014	12:52	1/17/2014 12:52	42	37	33.2	13.2	68	28.3		68.9	7.88	6130.60
	1/17/2014	14:02	1/17/2014 14:02	42	37	33	14.8	67	31.7		2100.5	240.30	6370.90
	1/17/2014	14:37	1/17/2014 14:37	45	37	32.5	15	67	32.2		1118.3	127.93	6498.83
	1/17/2014	16:05	1/17/2014 16:05	53	37	32	16	66	34.3		2926.5	334.79	6833.62
	1/17/2014	16:07	1/17/2014 16:07								68.7	7.86	6841.48
	1/17/2014	16:08	1/17/2014 16:08			25							6841.48
SW-5 Event 9	1/22/2014	12:41	1/22/2014 12:41	48	34	32.3	<2	57	0.0				6841.48
	1/22/2014	12:53	1/22/2014 12:53	47	32	27	11	57	22.6		135.7	15.53	6857.01
	1/22/2014	12:54	1/22/2014 12:54	47	37	30.5	20.5	57	44.4		33.5	3.83	6860.84
	1/22/2014	13:09	1/22/2014 13:09	45	37	30.5	20.8	58	45.0		670.6	76.71	6937.56
	1/22/2014	13:53	1/22/2014 13:53	45	36	29.5	22	59	47.1		2026.0	231.78	7169.33
	1/22/2014	14:59	1/22/2014 14:59	51	35.5	28.5	23.7	59	50.5		3219.2	368.28	7537.61
	1/22/2014	15:20	1/22/2014 15:20	50	38	30.5	27.9	59	60.9		1169.4	133.78	7671.39
	1/22/2014	15:52	1/22/2014 15:52	49	38	30.5	28	59	61.1		1952.3	223.34	7894.73
	1/22/2014	16:51	1/22/2014 16:51	55	38	30.2	29	57	63.4		3674.1	420.32	8315.05
	1/22/2014	16:52	1/22/2014 16:52								63.4	7.26	8322.31
	1/22/2014	16:53	1/22/2014 16:53			22							8322.31
SW-5 Event 10	3/4/2015	7:40	3/4/15 7:40		29	30	6	68	11.8				8322.31
	3/4/2015	7:56	3/4/15 7:56		27	26	10.5	68	20.2		255.8	29.26	8351.57
	3/4/2015	8:00	3/4/15 8:00		32	28.5	16	68	32.6		105.4	12.06	8363.63
	3/4/2015	8:57	3/4/15 8:57		32	27	17	74	34.4		1907.6	218.23	8581.86
	3/4/2015	9:30	3/4/15 9:30		37	29	21	76	44.6		1303.8	149.16	8731.02
	3/4/2015	11:50	3/4/15 11:50		36	29	22	80	46.1		6353.2	726.80	9457.82
	3/4/2015	11:59	3/4/15 11:59		42	31	25	80	55.5		457.2	52.30	9510.12
	3/4/2015	13:51	3/4/15 13:51		42	30.5	26	80	57.7		6337.7	725.03	10235.16
	3/4/2015	15:22	3/4/15 15:22		42	30	26	76	57.9		5260.6	601.81	10836.97
	3/4/2015	17:00	3/4/15 17:00		42	30	26	73	58.1		5684.6	650.32	11487.28

Sparge Well 5

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/4/2015	17:01	3/4/15 17:01			21					58.1	6.65	11493.93
											Total CO ₂ Mass (lbs):	11493.93	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-6 Event 1	11/20/2013	9:08	11/20/2013 9:08	55	27			64	0.0				0.00
	11/20/2013	9:11	11/20/2013 9:11		30	30	<2	64	0.0		0.0	0.00	0.00
	11/20/2013	9:23	11/20/2013 9:23		30	30	<2	64	0.0		0.0	0.00	0.00
	11/20/2013	10:13	11/20/2013 10:13		29	29	<2	66	0.0		0.0	0.00	0.00
	11/20/2013	10:15	11/20/2013 10:15		36	35	5	66	10.6		10.6	1.22	1.22
	11/20/2013	11:00	11/20/2013 11:00		35	34	7	66	14.7		570.5	65.26	66.48
	11/20/2013	12:47	11/20/2013 12:47		35	34	8.0	66	16.8		1688.4	193.15	259.63
	11/20/2013	14:42	11/20/2013 14:42		35	33.5	9.5	65	20.0		2118.2	242.32	501.95
	11/20/2013	15:21	11/20/2013 15:21		35	33	10	65	21.1		800.8	91.61	593.56
11/20/2013	15:22	11/20/2013 15:22			24					21.1	2.41	595.97	
SW-6 Event 2	12/10/2013	8:51	12/10/2013 8:51		35	33.5	<2	72	0.0				595.97
	12/10/2013	8:55	12/10/2013 8:55		35	33.5	<2	73	0.0		0.0	0.00	595.97
	12/10/2013	9:29	12/10/2013 9:29	50	34	32	<2	72	0.0		0.0	0.00	595.97
	12/10/2013	10:02	12/10/2013 10:02	50	34	31	4	73	8.3		136.5	15.61	611.59
	12/10/2013	10:50	12/10/2013 10:50	47.5	34	31	4.5	75	9.3		421.4	48.21	659.80
	12/10/2013	10:56	12/10/2013 10:56	46	34	32	5.5	74	11.4		62.0	7.09	666.89
	12/10/2013	11:42	12/10/2013 11:42	45	34	32	6	74	12.4		546.5	62.52	729.40
	12/10/2013	12:36	12/10/2013 12:36	51	35	31.5	6.5	78	13.5		699.6	80.04	809.44
	12/10/2013	13:03	12/10/2013 13:03	50	34	32	7	76	14.4		377.3	43.17	852.61
	12/10/2013	13:04	12/10/2013 13:04								14.4	1.65	854.26
	12/10/2013	13:05	12/10/2013 13:05			22.5							854.26
	SW-6 Event 3	12/12/2013	15:19	12/12/2013 15:19	45	36	33	<2	68	0.0			
12/12/2013		16:38	12/12/2013 16:38	45	35	32.5	2	66	4.2		166.2	19.01	873.27
12/12/2013		17:39	12/12/2013 17:39	55	35	32.5	4	60	8.5		386.6	44.22	917.49
12/12/2013		22:27	12/12/2013 22:27	52	34	31	8	52	16.9		3651.8	417.77	1335.26
12/13/2013		9:28	12/13/2013 9:28		32	30	12	62	24.6		13699.8	1567.26	2902.52
12/13/2013		10:30	12/13/2013 10:30	45	32	30	12	66	24.5		1519.6	173.84	3076.36
12/13/2013		12:12	12/13/2013 12:12	45	32	29	12	70	24.4		2490.1	284.87	3361.23
12/13/2013		14:20	12/13/2013 14:20	40	32	29	12	68	24.4		3121.8	357.13	3718.36
12/13/2013		14:24	12/13/2013 14:24								97.7	11.17	3729.53
12/13/2013		14:25	12/13/2013 14:25			22							3729.53
SW-6 Event 4		12/20/2013	7:40	12/20/2013 7:40	50	30	32.4	<2	56	0.0			
	12/20/2013	7:49	12/20/2013 7:49	48	30	31.2	<2	56	0.0		0.0	0.00	3729.53
	12/20/2013	7:52	12/20/2013 7:52	48	33	32	4.3	56	8.9		13.4	1.54	3731.07
	12/20/2013	8:12	12/20/2013 8:12	45	32	31.6	6	60	12.3		212.5	24.31	3755.38
	12/20/2013	9:50	12/20/2013 9:50	40	33	32	6.5	68	13.4		1257.8	143.90	3899.28
	12/20/2013	10:37	12/20/2013 10:37	39	32	32	7	72	14.2		647.5	74.07	3973.35
	12/20/2013	11:30	12/20/2013 11:30	39	32	31.6	7.5	74	15.2		777.9	88.99	4062.34
	12/20/2013	11:47	12/20/2013 11:47	42	31	31	8	74	16.0		265.0	30.31	4092.65
	12/20/2013	11:48	12/20/2013 11:48								16.0	1.83	4094.48
	12/20/2013	11:49	12/20/2013 11:49										4094.48
SW-6 Event 5	1/9/2014	8:39	1/9/2014 8:39										4094.48
	1/9/2014	8:40	1/9/2014 8:40	52	34	35.2	<2	53	0.0				4094.48
	1/9/2014	8:47	1/9/2014 8:47	50	33	34	3	53	6.3		21.9	2.51	4096.99
	1/9/2014	8:59	1/9/2014 8:59	50	32.5	33.6	4	54	8.3		87.4	9.99	4106.98
	1/9/2014	9:42	1/9/2014 9:42	49	32.5	33.6	4.5	54	9.3		379.1	43.36	4150.34
	1/9/2014	10:16	1/9/2014 10:16	47	32.5	33.4	5	57	10.3		334.4	38.26	4188.60
	1/9/2014	11:00	1/9/2014 11:00	40	32	32.8	5	60	10.3		453.0	51.83	4240.43
	1/9/2014	12:55	1/9/2014 12:55	45	32	32.4	6	60	12.3		1297.0	148.38	4388.81
	1/9/2014	12:56	1/9/2014 12:56	45	35	35.2	10	60	21.2		16.7	1.91	4390.72
	1/9/2014	14:15	1/9/2014 14:15	37	34	34.4	10	60	20.9		1663.4	190.30	4581.02

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/9/2014	15:55	1/9/2014 15:55	42	35	34.6	12	58	25.4		2319.8	265.39	4846.41
	1/9/2014	17:24	1/9/2014 17:24	55	34	34	12.5	58	26.2		2300.0	263.12	5109.53
	1/9/2014	17:25	1/9/2014 17:25								26.2	3.00	5112.53
	1/9/2014	17:26	1/9/2014 17:26			26.4							5112.53
SW-6 Event 6	1/10/2014	16:16	1/10/2014 16:16										5112.53
	1/10/2014	16:18	1/10/2014 16:18	46	37	34	2	68	4.3		8.6	0.98	5113.51
	1/10/2014	16:36	1/10/2014 16:36	45	35	32	8.5	70	17.8		198.9	22.75	5136.27
	1/10/2014	16:37	1/10/2014 16:37	45	37	33.5	12	70	25.7		21.7	2.49	5138.75
	1/10/2014	17:52	1/10/2014 17:52	45	37	33	12.5	65	26.9		1969.3	225.29	5364.04
	1/10/2014	17:53	1/10/2014 17:53	45	38	33.5	14	65	30.4		28.6	3.27	5367.32
	1/10/2014	21:45	1/10/2014 21:45	44	37	32.5	16	63	34.4		7519.5	860.23	6227.55
	1/10/2014	21:47	1/10/2014 21:47	44	38	34	20	63	43.5		77.9	8.91	6236.46
	1/11/2014	7:59	1/11/2014 7:59	40	37	30	24	64	51.6		29100.7	3329.12	9565.58
	1/11/2014	8:00	1/11/2014 8:00								51.6	5.91	9571.49
	1/11/2014	8:01	1/11/2014 8:01										9571.49
SW-6 Event 7	1/29/2014	8:00	1/29/2014 8:00	51	40	34	12.5	40	28.4				9571.49
	1/29/2014	9:00	1/29/2014 9:00	51	40	34	12.5	40	28.4		1701.5	194.65	9766.14
	1/29/2014	9:30	1/29/2014 9:30	48	39	34	16.5	40	37.1		981.6	112.29	9878.43
	1/29/2014	10:30	1/29/2014 10:30	49	38	34	18	40	40.1		2314.4	264.77	10143.20
	1/29/2014	11:50	1/29/2014 11:50	49	38	34	18	40	40.1		3205.3	366.68	10509.88
	1/29/2014	13:00	1/29/2014 13:00	48	38	34	18	40	40.1		2804.6	320.85	10830.73
	1/29/2014	14:00	1/29/2014 14:00	46	38	34	18	40	40.1		2404.0	275.01	11105.75
	1/29/2014	15:00	1/29/2014 15:00	47	38	34.5	18	40	40.1		2404.0	275.01	11380.76
	1/29/2014	16:30	1/29/2014 16:30	50	39	34.5	18	40	40.5		3623.3	414.51	11795.27
	1/29/2014	16:31	1/29/2014 16:31			24							11795.27
SW-6 Event 8	2/4/2014	9:40	2/4/2014 9:40	55	35	33	<2	60	0.0				11795.27
	2/4/2014	9:44	2/4/2014 9:44	55	35	33	2.5	60	5.3		10.6	1.21	11796.48
	2/4/2014	10:00	2/4/2014 10:00	53	34	32	5.8	60	12.1		139.5	15.96	11812.44
	2/4/2014	10:05	2/4/2014 10:05	53	35	31	8.3	60	17.6		74.3	8.50	11820.94
	2/4/2014	11:42	2/4/2014 11:42	50	35	32	10	64	21.1		1874.4	214.43	12035.37
	2/4/2014	11:44	2/4/2014 11:44	50	36	32	12	64	25.6		46.6	5.34	12040.71
	2/4/2014	12:39	2/4/2014 12:39	49	35	32	11.9	64	25.1		1392.6	159.32	12200.03
	2/4/2014	13:22	2/4/2014 13:22	49	35	32	11.9	64	25.1		1078.7	123.40	12323.43
	2/4/2014	14:15	2/4/2014 14:15	48	38	32	12	62	26.1		1356.8	155.22	12478.65
	2/4/2014	14:16	2/4/2014 14:16			25					26.1	2.99	12481.64
SW-6 Event 9	2/6/2014	8:07	2/6/2014 8:07	54	33	33.4	<2	50	0.0				12481.64
	2/6/2014	8:12	2/6/2014 8:12	52	33	33	4	50	8.4		20.9	2.40	12484.03
	2/6/2014	8:41	2/6/2014 8:41	50	31	32	7	54	14.3		328.5	37.59	12521.62
	2/6/2014	8:44	2/6/2014 8:44	50	32	32.8	8	54	16.5		46.2	5.28	12526.90
	2/6/2014	10:36	2/6/2014 10:36	48	32	32.2	9.2	60	18.9		1980.7	226.59	12753.49
	2/6/2014	10:40	2/6/2014 10:40			27					75.5	8.63	12762.12
SW-6 Event 10	2/10/2014	8:57	2/10/2014 8:57	54	33	33	<2	53	0.0				12762.12
	2/10/2014	9:53	2/10/2014 9:53	47	30	30	9	53	18.2		508.9	58.22	12820.35
	2/10/2014	9:54	2/10/2014 9:54	49	33	32	11	65	22.7		20.4	2.34	12822.68
	2/10/2014	11:40	2/10/2014 11:40	47	32	31	12.8	75	25.9		2573.2	294.37	13117.05
	2/10/2014	11:42	2/10/2014 11:42	47	34	32.5	15.8	75	32.6		58.5	6.69	13123.74
	2/10/2014	13:20	2/10/2014 13:20	46	34	32.5	15.5	77	31.9		3162.6	361.80	13485.54
	2/10/2014	14:55	2/10/2014 14:55	45	34	32	16	78	32.9		3080.8	352.44	13837.99
	2/10/2014	16:41	2/10/2014 16:41	45	34	32	17.2	71	35.6		3634.1	415.74	14253.73
	2/10/2014	17:39	2/10/2014 17:39	49	33.5	32	17.8	65	36.9		2103.9	240.68	14494.41
	2/10/2014	17:42	2/10/2014 17:42								110.7	12.67	14507.08

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-6 Event 11	2/11/2014	8:08	2/11/2014 8:08	54	33	32.2	<2	54	0.0				14507.08
	2/11/2014	10:03	2/11/2014 10:03	52	30	29.5	9.5	60	19.1		1095.5	125.33	14632.40
	2/11/2014	10:04	2/11/2014 10:04	52	33	32	13.5	60	28.0		23.5	2.69	14635.09
	2/11/2014	10:35	2/11/2014 10:35	51	33	32	13.5	66	27.8		864.9	98.94	14734.04
	2/11/2014	11:53	2/11/2014 11:53	50	33	32	13.5	62	27.9		2174.0	248.70	14982.74
	2/11/2014	12:48	2/11/2014 12:48	45	33	32	13.9	63	28.7		1557.9	178.23	15160.97
	2/11/2014	14:08	2/11/2014 14:08	45	33	32	14.2	60	29.4		2326.4	266.14	15427.10
	2/11/2014	17:00	2/11/2014 17:00	45	33	32	15.5	55	32.3		5308.2	607.26	16034.36
	2/11/2014	17:22	2/11/2014 17:22	52	33	32	15.5	54	32.3		710.7	81.31	16115.67
	2/11/2014	17:23	2/11/2014 17:23			26					32.3	3.70	16119.36
SW-6 Event 12	3/5/2015	7:58	3/5/2015 7:58		24	25	0	71	0.0				16119.36
	3/5/2015	8:22	3/5/2015 8:22		24	25	0	71	0.0		0.0	0.00	16119.36
	3/5/2015	8:23	3/5/2015 8:23		26	29	<2	71	0.0		0.0	0.00	16119.36
	3/5/2015	8:51	3/5/2015 8:51		28	28	3.5	73	6.8		94.8	10.84	16130.21
	3/5/2015	8:54	3/5/2015 8:54		36	35	11	73	23.2		45.0	5.15	16135.35
	3/5/2015	10:28	3/5/2015 10:28		36	34.5	11.5	77	24.2		2227.7	254.85	16390.20
	3/5/2015	11:49	3/5/2015 11:49		36	34	12	77	25.2		2001.1	228.93	16619.13
	3/5/2015	13:04	3/5/2015 13:04		36	33	13	80	27.3		1968.2	225.16	16844.29
	3/5/2015	13:05	3/5/2015 13:05		40	36	17	80	37.0		32.1	3.68	16847.97
	3/5/2015	14:30	3/5/2015 14:30		40	35	16.5	84	35.8		3096.4	354.23	17202.19
	3/5/2015	14:31	3/5/2015 14:31		42	36.5	19	84	42.0		38.9	4.45	17206.64
	3/5/2015	15:50	3/5/2015 15:50		42	36	19	82	42.1		3321.2	379.95	17586.59
	3/5/2015	17:00	3/5/2015 17:00		42	35.5	20	84.4	44.2		3019.6	345.44	17932.04
3/5/2015	17:01	3/5/2015 17:01			26.5					44.2	5.06	17937.09	
SW-6 Event 13	3/11/2015	8:11	3/11/2015 8:11		32	34	0	67	0.0				17937.09
	3/11/2015	8:42	3/11/2015 8:42		32	32.5	5	70	10.2		157.4	18.00	17955.09
	3/11/2015	8:44	3/11/2015 8:44		38	36.5	9	70	19.4		29.6	3.38	17958.48
	3/11/2015	10:00	3/11/2015 10:00		38	36	12	77	25.7		1716.2	196.33	18154.81
	3/11/2015	10:59	3/11/2015 10:59		38	35.6	12	80	25.7		1516.0	173.43	18328.23
	3/11/2015	11:00	3/11/2015 11:00			26					25.7	2.94	18331.17
Total CO ₂ Mass (lbs):												18331.17	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-7 Event 1	11/23/2013	8:19	11/23/2013 8:19	49	28			70	0.0				
	11/23/2013	8:21	11/23/2013 8:21	54	31	31	<2	70	0.0		0.0	0.00	0.00
	11/23/2013	8:35	11/23/2013 8:35		30	30	<2	72.5	0.0		0.0	0.00	0.00
	11/23/2013	8:37	11/23/2013 8:37		34	33.5	4.5	75	9.3		9.3	1.06	1.06
	11/23/2013	9:24	11/23/2013 9:24		34	33	6	80	12.3		507.9	58.10	59.17
	11/23/2013	10:24	11/23/2013 10:24		33	33	6.5	84	13.2		764.6	87.47	146.63
	11/23/2013	10:25	11/23/2013 10:25		36	35	8.5	84	17.8		15.5	1.77	148.40
	11/23/2013	11:27	11/23/2013 11:27		35	35	8.0	83	16.6		1063.5	121.67	270.07
	11/23/2013	11:30	11/23/2013 11:30		37	36.5	10	83	21.1		56.5	6.46	276.53
	11/23/2013	12:40	11/23/2013 12:40	50	37	36.5	10	82	21.1		1477.9	169.07	445.60
	11/23/2013	12:47	11/23/2013 12:47								147.9	16.92	462.53
11/23/2013	12:48	11/23/2013 12:48										462.53	
SW-7 Event 2	12/6/2013	12:42	12/6/2013 12:42	51	35	33.5	<2	85	0.0				462.53
	12/6/2013	13:40	12/6/2013 13:40	47	34	33	<2	83	0.0				462.53
	12/6/2013	14:38	12/6/2013 14:38	46	33	32.5	3	80	6.1		176.8	20.23	482.76
	12/6/2013	15:58	12/6/2013 15:58	45	33	32	4	73	8.2		571.3	65.36	548.12
	12/6/2013	16:27	12/6/2013 16:27	45	33	32	4	72	8.2		237.5	27.17	575.29
	12/6/2013	16:48	12/6/2013 16:48	45	33	32	4	71	8.2		172.1	19.69	594.98
	12/6/2013	16:49	12/6/2013 16:49								8.2	0.94	595.92
	12/6/2013	16:50	12/6/2013 16:50			25							595.92
SW-7 Event 3	12/11/2013	13:53	12/11/2013 13:53	50	31	31	<2	69	0.0				595.92
	12/11/2013	13:55	12/11/2013 13:55	50	32	32	<2	69	0.0				595.92
	12/11/2013	14:22	12/11/2013 14:22	50	32.5	32	<2	68	0.0				595.92
	12/11/2013	14:24	12/11/2013 14:24	50	32.5	33	<2	68	0.0				595.92
	12/11/2013	15:16	12/11/2013 15:16	50	34	33	<2	68	0.0				595.92
	12/11/2013	16:36	12/11/2013 16:36	45	32.5	32	4	65	8.2		328.2	37.55	633.47
	12/11/2013	17:26	12/11/2013 17:26	45	32.5	32	5	64	10.3		461.8	52.83	686.30
	12/11/2013	22:15	12/11/2013 22:15	51	32	31	8	62	16.4		3849.4	440.37	1126.68
	12/12/2013	8:05	12/12/2013 8:05	50	32	30	12	58	24.7		12103.3	1384.62	2511.29
	12/12/2013	9:02	12/12/2013 9:02								1405.4	160.78	2672.07
	12/12/2013	9:03	12/12/2013 9:03										2672.07
SW-7 Event 4	12/18/2013	8:03	12/18/2013 8:03	58	33	34	<2	48	0.0				2672.07
	12/18/2013	9:04	12/18/2013 9:04	45	30	31	7	62	14.0		427.3	48.89	2720.96
	12/18/2013	9:10	12/18/2013 9:10	48	32	33	10	62	20.5		103.4	11.83	2732.79
	12/18/2013	9:54	12/18/2013 9:54	44	34	33	10	64	20.9		909.2	104.02	2836.81
	12/18/2013	10:05	12/18/2013 10:05								229.5	26.26	2863.06
SW-7 Event 5	12/19/2013	8:45	12/19/2013 8:45	54	32	33	<2	45	0.0				2863.06
	12/19/2013	8:49	12/19/2013 8:49	50	29	30	7	58	13.9		27.8	3.18	2866.24
	12/19/2013	8:51	12/19/2013 8:51	49	33	33	10	58	20.8		34.7	3.97	2870.21
	12/19/2013	9:16	12/19/2013 9:16	45	34	33	11	64	23.0		546.5	62.52	2932.73
	12/19/2013	9:49	12/19/2013 9:49	45	32	32	11	68	22.4		747.9	85.56	3018.29
	12/19/2013	11:37	12/19/2013 11:37	44	33	34	11	72	22.5		2425.2	277.44	3295.73
	12/19/2013	12:42	12/19/2013 12:42	48	33	32	11.5	72	23.6		1497.9	171.36	3467.09
	12/19/2013	12:43	12/19/2013 12:43								23.6	2.69	3469.78
	12/19/2013	12:44	12/19/2013 12:44										3469.78
SW-7 Event 6	1/9/2014	8:18	1/9/2014 8:18	53	34	33.5	<2	56	0.0				3469.78
	1/9/2014	8:24	1/9/2014 8:24	53	33.5	33	4	56	8.4		25.1	2.87	3472.65
	1/9/2014	8:53	1/9/2014 8:53	52	33	32.5	6.5	56	13.5		317.5	36.32	3508.97
	1/9/2014	9:33	1/9/2014 9:33	52	33	32.5	7	56	14.6		561.9	64.28	3573.26
	1/9/2014	10:06	1/9/2014 10:06	52	33	31.5	7.5	59	15.6		497.1	56.87	3630.13
	1/9/2014	10:07	1/9/2014 10:07	50	34	33	11	59	23.1		19.3	2.21	3632.34

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/9/2014	11:07	1/9/2014 11:07	42	34	33	11	61	23.0		1382.5	158.16	3790.50
	1/9/2014	12:32	1/9/2014 12:32	41	33.5	32	11.5	62	23.9		1994.7	228.20	4018.70
	1/9/2014	12:33	1/9/2014 12:33	41	35	33	14	62	29.6		26.7	3.06	4021.76
	1/9/2014	14:20	1/9/2014 14:20	39	33.5	32.5	14.5	60	30.2		3198.6	365.92	4387.68
	1/9/2014	16:03	1/9/2014 16:03	45	37	34	16	60	34.6		3335.4	381.57	4769.25
	1/9/2014	17:08	1/9/2014 17:08	49	38	34	17	60	37.1		2327.7	266.29	5035.54
	1/9/2014	17:09	1/9/2014 17:09								37.1	4.24	5039.78
	1/9/2014	17:10	1/9/2014 17:10			27							5039.78
SW-7 Event 7	1/10/2014	17:24	1/10/2014 17:24										5039.78
	1/10/2014	17:25	1/10/2014 17:25	46	32.5	34	<2	66	0.0				5039.78
	1/10/2014	17:39	1/10/2014 17:39	46	31	31.5	5	66	10.1		70.6	8.07	5047.85
	1/10/2014	17:40	1/10/2014 17:40	46	34	33.5	8	66	16.7		13.4	1.53	5049.38
	1/10/2014	21:55	1/10/2014 21:55	46	33	32.5	10	64	20.6		4756.2	544.11	5593.49
	1/10/2014	21:57	1/10/2014 21:57	45	33.5	33	11.5	64	23.9		44.5	5.09	5598.58
	1/11/2014	8:24	1/11/2014 8:24	45	32.5	32	15	64	30.8		17139.3	1960.74	7559.32
	1/11/2014	8:25	1/11/2014 8:25								30.8	3.52	7562.85
	1/11/2014	8:26	1/11/2014 8:26			26							7562.85
SW-7 Event 8	1/21/2014	13:06	1/21/2014 13:06	49	31.5	31.5	<2	70	0.0				7562.85
	1/21/2014	13:07	1/21/2014 13:07	49	33	32	3.5	70	7.2		3.6	0.41	7563.26
	1/21/2014	14:15	1/21/2014 14:15	50	31.5	30	11	68	22.3		1001.0	114.51	7677.77
	1/21/2014	14:17	1/21/2014 14:17	49	33.5	31.8	15.2	68	31.4		53.7	6.14	7683.91
	1/21/2014	16:00	1/21/2014 16:00	50	33.5	31.5	15.2	66	31.5		3239.8	370.63	8054.54
	1/21/2014	17:09	1/21/2014 17:09	53	33	31	15.5	64	32.0		2190.3	250.56	8305.10
	1/21/2014	17:10	1/21/2014 17:10			26					32.0	3.66	8308.77
SW-7 Event 9	12/17/2014	7:43	12/17/2014 7:43			27	0	46	0.0				8308.77
	12/17/2014	8:01	12/17/2014 8:01			27	0	50	0.0		0.0	0.00	8308.77
	12/17/2014	9:22	12/17/2014 9:22			26	0	67	0.0		0.0	0.00	8308.77
	12/17/2014	9:23	12/17/2014 9:23			30	6	67	11.9		6.0	0.68	8309.45
	12/17/2014	11:23	12/17/2014 11:23			30	6	72	11.9		1430.5	163.65	8473.10
	12/17/2014	11:24	12/17/2014 11:24			35	34	72	29.3		20.6	2.36	8475.45
	12/17/2014	12:49:00	12/17/2014 12:49			35	34.5	71	25.1		2312.2	264.51	8739.97
	12/17/2014	14:11	12/17/2014 14:11			35	34.5	74	25.0		2057.1	235.33	8975.30
	12/17/2014	15:22	12/17/2014 15:22			35	34	74	25.0		1778.5	203.46	9178.76
	12/17/2014	17:01	12/17/2014 17:01			35	34	66	27.4		2593.8	296.73	9475.49
	12/17/2014	17:02	12/17/2014 17:02			28					27.4	3.13	9478.62
SW-7 Event 10	1/7/2015	7:44	1/7/2015 7:44			28	0	48	0.0				9478.62
	1/7/2015	8:04	1/7/2015 8:04			28	0	50	0.0		0.0	0.00	9478.62
	1/7/2015	9:18	1/7/2015 9:18			28	0	64	0.0		0.0	0.00	9478.62
	1/7/2015	11:28	1/7/2015 11:28			26	27.5	70	0.0		0.0	0.00	9478.62
	1/7/2015	11:29	1/7/2015 11:29			33	32	70	20.5		10.3	1.17	9479.79
	1/7/2015	13:19	1/7/2015 13:19			33	33	69	20.5		2258.7	258.40	9738.19
	1/7/2015	13:20	1/7/2015 13:20			36	35	69	25.4		23.0	2.63	9740.82
	1/7/2015	15:19	1/7/2015 15:19			36	35	72	25.4		3021.5	345.66	10086.48
	1/7/2015	17:02	1/7/2015 17:02			36	35	68	27.6		2725.8	311.83	10398.32
	1/7/2015	17:03	1/7/2015 17:03			28					27.6	3.15	10401.47
SW-7 Event 11	1/13/2015	8:05	1/13/2015 8:05			29	0	64	0.0				10401.47
	1/13/2015	8:19	1/13/2015 8:19			37	13	65	27.9		195.5	22.37	10423.84
	1/13/2015	9:36	1/13/2015 9:36			37	16	65	34.4		2399.0	274.44	10698.28
	1/13/2015	11:37	1/13/2015 11:37			37	35	64	35.5		4227.0	483.56	11181.85
	1/13/2015	13:53	1/13/2015 13:53			37	35	66	38.6		5040.6	576.64	11758.49
	1/13/2015	15:50	1/13/2015 15:50			37	35	66	38.6		4520.6	517.16	12275.65

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/13/2015	17:22	1/13/2015 17:22		37	35	18	64	38.7		3558.2	407.06	12682.71
	1/13/2015	17:23	1/13/2015 17:23			26					38.7	4.43	12687.13
SW-7 Event 12	2/2/2015	8:01	2/2/2015 8:01		28	29	0	66	0.0				12687.13
	2/2/2015	8:39	2/2/2015 8:39		28	28	6	66	11.7		222.1	25.40	12712.54
	2/2/2015	8:40	2/2/2015 8:40		36	35	16	66	34.0		22.8	2.61	12715.15
	2/2/2015	9:49	2/2/2015 9:49		36	35	16	66	34.0		2346.4	268.42	12983.57
	2/2/2015	11:26	2/2/2015 11:26		36	34	16	65	34.0		3300.1	377.54	13361.11
	2/2/2015	13:55	2/2/2015 13:55		37	34	16	70	34.2		5084.5	581.67	13942.77
	2/2/2015	14:55	2/2/2015 14:55		37	33.5	17	70	36.3		2116.7	242.15	14184.92
	2/2/2015	16:55	2/2/2015 16:55		36	33	18	64	38.3		4480.7	512.60	14697.52
	2/2/2015	16:56	2/2/2015 16:56			28					38.3	4.39	14701.91
SW-7 Event 13	2/9/2015	7:50	2/9/2015 7:50		29	30	0	54	0.0				14701.91
	2/9/2015	8:25	2/9/2015 8:25		28	27	6	62	11.7		205.3	23.49	14725.40
	2/9/2015	8:26	2/9/2015 8:26		36	34	14	62	29.9		20.8	2.38	14727.78
	2/9/2015	9:46	2/9/2015 9:46		37	34	15	68	32.1		2480.3	283.75	15011.52
	2/9/2015	11:14	2/9/2015 11:14		36	34	15	71	31.7		2809.7	321.43	15332.96
	2/9/2015	12:33	2/9/2015 12:33		36	34	15	66	31.9		2512.3	287.41	15620.37
	2/9/2015	14:24	2/9/2015 14:24		36	34	15	66	31.9		3538.7	404.82	16025.19
	2/9/2015	15:52	2/9/2015 15:52		36	34	15	68	31.8		2802.7	320.62	16345.81
	2/9/2015	16:53	2/9/2015 16:53		36	34	15	65	31.9		1943.7	222.36	16568.17
	2/9/2015	16:54	2/9/2015 16:54			29					31.9	3.65	16571.82
SW-7 Event 14	2/13/2015	7:48	2/13/2015 7:48		28	28.5	0	42	0.0				16571.82
	2/13/2015	8:17	2/13/2015 8:17		26	27	4	47	7.7		112.4	12.86	16584.68
	2/13/2015	8:18	2/13/2015 8:18		38	36	16	47	35.4		21.6	2.47	16587.15
	2/13/2015	9:31	2/13/2015 9:31		38	34.5	18	55	39.4		2730.4	312.35	16899.50
	2/13/2015	10:54	2/13/2015 10:54		38	34.5	18	60	39.3		3266.1	373.64	17273.14
	2/13/2015	11:07	2/13/2015 11:07		38	34.5	18	60	39.3		510.3	58.37	17331.51
	2/13/2015	11:08	2/13/2015 11:08			27					39.3	4.49	17336.00
SW-7 Event 15	2/16/2015	12:45	2/16/2015 12:45		30	31	0	74	0.0				17336.00
	2/16/2015	12:58	2/16/2015 12:58		29	29.5	5	73	9.8		63.6	7.28	17343.28
	2/16/2015	12:59	2/16/2015 12:59		37	35	12	73	25.6		17.7	2.02	17345.30
	2/16/2015	13:58	2/16/2015 13:58		37	34	16	70	34.2		1763.8	201.78	17547.08
	2/16/2015	16:45	2/16/2015 16:45		37	34	16.5	66	35.4		5813.9	665.11	18212.19
	2/16/2015	16:46	2/16/2015 16:46			28					35.4	4.05	18216.24
SW-7 Event 16	2/19/2015	7:58	2/19/2015 7:58		31	31	0	40	0.0				18216.24
	2/19/2015	8:21	2/19/2015 8:21		31	30.5	7	46	14.4		165.6	18.94	18235.19
	2/19/2015	8:22	2/19/2015 8:22		39	36	16	46	35.7		25.1	2.87	18238.05
	2/19/2015	10:02	2/19/2015 10:02		38	34	17	55	37.3		3649.5	417.51	18655.56
	2/19/2015	12:03	2/19/2015 12:03		38	34	17	58	37.1		4501.4	514.96	19170.52
	2/19/2015	14:11	2/19/2015 14:11		39	34	18	60	39.6		4913.5	562.10	19732.62
	2/19/2015	16:14	2/19/2015 16:14		39	33.5	19	57	42.0		5017.5	574.00	20306.62
	2/19/2015	16:55	2/19/2015 16:55		39	33.5	19	55	42.0		1722.0	196.99	20503.61
	2/19/2015	16:56	2/19/2015 16:56			28					42.0	4.81	20508.42
Total CO ₂ Mass (lbs):													20508.42

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-8 Event 1	11/22/2013	8:26	11/22/2013 8:26						0.0				
	11/22/2013	8:27	11/22/2013 8:27	57.5	30	30	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:28	11/22/2013 8:28		32		<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:56	11/22/2013 8:56		35	35	4	72	8.4		117.1	13.40	13.40
	11/22/2013	8:58	11/22/2013 8:58	57.5	34	33	3.5	74	7.2		15.6	1.78	15.18
	11/22/2013	10:08	11/22/2013 10:08	53	34	33.2	4	76	8.2		541.8	61.98	77.16
	11/22/2013	10:42	11/22/2013 10:42	55	34	33.5	4.0	77	8.2		280.3	32.07	109.23
	11/22/2013	11:11	11/22/2013 11:11	55	34	33.5	4.50	76	9.3		254.0	29.06	138.29
	11/22/2013	11:42	11/22/2013 11:42	55	34	33.5	4.5	78	9.3		287.4	32.88	171.17
	11/22/2013	12:05	11/22/2013 12:05	55	35	35	6.6	82	13.7		263.7	30.17	201.34
	11/22/2013	13:10	11/22/2013 13:10	60	35	35	6.5	80	13.5		882.7	100.99	302.32
	11/22/2013	13:42	11/22/2013 13:42	56	35	35	7	82	14.5		447.8	51.23	353.55
	11/22/2013	14:04	11/22/2013 14:04	55	35	35	8	81	16.6		342.0	39.12	392.67
	11/22/2013	14:35	11/22/2013 14:35	53	35	35	8	76	16.7		515.4	58.97	451.64
	11/22/2013	15:05	11/22/2013 15:05	51	35	35	8	74	16.7		500.5	57.26	508.90
	11/22/2013	15:49	11/22/2013 15:49	50	35	35	8	76	16.7		734.1	83.98	592.88
	11/22/2013	16:44	11/22/2013 16:44	50	35	35	8	71	16.7		918.9	105.13	698.00
	11/22/2013	17:18	11/22/2013 17:18	55	35	35	8	70	16.8		569.7	65.18	763.18
	11/22/2013	17:20	11/22/2013 17:20								33.5	3.84	767.02
	11/22/2013	17:21	11/22/2013 17:21			26							767.02
SW-8 Event 2	12/6/2013	8:32	12/6/2013 8:32	54	33	32	<2	73	0.0				767.02
	12/6/2013	9:06	12/6/2013 9:06	48	32	31.5	<2	75	0.0		0.0	0.00	767.02
	12/6/2013	9:07	12/6/2013 9:07	47	35	33.5	3	75	6.3		3.1	0.36	767.37
	12/6/2013	10:25	12/6/2013 10:25	42	35	34	3	78	6.2		487.3	55.75	823.12
	12/6/2013	11:20	12/6/2013 11:20	41	35	34	3	80	6.2		342.8	39.21	862.33
	12/6/2013	12:31	12/6/2013 12:31	50	35	34	4	82	8.3		515.2	58.94	921.27
	12/6/2013	12:32	12/6/2013 12:32								8.3	0.95	922.21
	12/6/2013	12:33	12/6/2013 12:33			26							922.21
SW-8 Event 3	12/12/2013	13:27	12/12/2013 13:27	50	33	33	<2	72	0.0				922.21
	12/12/2013	14:44	12/12/2013 14:44	46	32	32	<2	70	0.0		0.0	0.00	922.21
	12/12/2013	14:45	12/12/2013 14:45	45	32.5	32.5	3.5	70	7.1		3.6	0.41	922.62
	12/12/2013	15:26	12/12/2013 15:26	44	32	32.5	4	70	8.1		313.0	35.80	958.43
	12/12/2013	16:33	12/12/2013 16:33	45	32.5	32.5	5.5	70	11.2		648.2	74.15	1032.58
	12/12/2013	17:27	12/12/2013 17:27	57	32.5	32	6	60	12.4		637.1	72.89	1105.47
	12/12/2013	22:18	12/12/2013 22:18	55	32	31	11	54	22.7		5101.7	583.63	1689.10
	12/13/2013	9:39	12/13/2013 9:39	50	31		15	64	30.3		18044.6	2064.30	3753.40
	12/13/2013	10:34	12/13/2013 10:34	47.5	31	29.5	15	67	30.2		1664.1	190.38	3943.78
	12/13/2013	10:35	12/13/2013 10:35	47.5	32	30	17	67	34.6		32.4	3.71	3947.48
	12/13/2013	12:32	12/13/2013 12:32	45	32	30	16.5	70	33.5		3985.1	455.89	4403.37
	12/13/2013	15:09	12/13/2013 15:09	50	32	30	17	68	34.6		5344.8	611.44	5014.82
	12/13/2013	15:10	12/13/2013 15:10								34.6	3.96	5018.78
	12/13/2013	15:11	12/13/2013 15:11			25							5018.78
SW-8 Event 4	12/18/2013	12:43	12/18/2013 12:43	50	32	31	<2	75	0.0				5018.78
	12/18/2013	13:08	12/18/2013 13:08	55	32	30.5	3	76	6.1		75.7	8.66	5027.44
	12/18/2013	13:09	12/18/2013 13:09	55	32.5	32.5	6	76	12.2		9.1	1.04	5028.48
	12/18/2013	14:12	12/18/2013 14:12	49	32.5	32.5	6	70	12.2		769.4	88.02	5116.50
	12/18/2013	15:59	12/18/2013 15:59	40	32.5	31	9.5	64	19.5		1699.0	194.36	5310.86
	12/18/2013	16:57	12/18/2013 16:57	45	32	31	11	60	22.6		1219.9	139.55	5450.42
	12/18/2013	17:17	12/18/2013 17:17	42	34	33	14	60	29.3		518.8	59.35	5509.77
	12/18/2013	17:58	12/18/2013 17:58	50	35	33	14	55	29.8		1211.7	138.62	5648.39
	12/18/2013	17:59	12/18/2013 17:59								29.8	3.41	5651.80

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/18/2013	18:00	12/18/2013 18:00			26							5651.80
SW-8 Event 5	1/11/2013	8:40	1/11/2013 8:40										5651.80
	1/11/2013	8:42	1/11/2013 8:42	45	34	35	<2	66	0.0		0.0	0.00	5651.80
	1/11/2013	8:54	1/11/2013 8:54	45	34	34	3	66	6.2		37.5	4.29	5656.08
	1/11/2013	10:50	1/11/2013 10:50	41	33.5	34	5.5	70	11.3		1020.5	116.75	5772.83
	1/11/2013	11:12	1/11/2013 11:12	41	33	34	6.5	70	13.3		271.6	31.07	5803.90
	1/11/2013	11:37	1/11/2013 11:37	48	33	34	8	72	16.4		371.6	42.51	5846.41
	1/11/2013	11:38	1/11/2013 11:38								16.4	1.87	5848.28
	1/11/2013	11:39	1/11/2013 11:39			28							5848.28
SW-8 Event 6	1/13/2014	12:01	1/13/2014 12:01						0.0				5848.28
	1/13/2014	12:02	1/13/2014 12:02	50	34	33	3	72	6.2		3.1	0.36	5848.64
	1/13/2014	12:12	1/13/2014 12:12	50	33	32	7	72	14.3		102.7	11.75	5860.39
	1/13/2014	12:13	1/13/2014 12:13	50	35	34	10	72	20.9		17.6	2.02	5862.41
	1/13/2014	12:40	1/13/2014 12:40	49	35	34	10.5	70	22.0		579.4	66.28	5928.69
	1/13/2014	13:53	1/13/2014 13:53	44	35	34	11.5	68	24.1		1684.5	192.71	6121.40
	1/13/2014	14:42	1/13/2014 14:42	42	35	33.5	11.5	68	24.1		1183.2	135.36	6256.76
	1/13/2014	16:01	1/13/2014 16:01	41	34	33	12	66	25.0		1940.8	222.03	6478.79
	1/13/2014	17:02	1/13/2014 17:02	42	34	33.5	13.5	64	28.2		1621.2	185.47	6664.26
	1/13/2014	21:39	1/13/2014 21:39	52	34	32	16	62	33.4		8533.8	976.26	7640.52
	1/13/2014	21:42	1/13/2014 21:42	52	35	33	18.5	62	39.1		108.8	12.45	7652.97
	1/14/2014	8:30	1/14/2014 8:30	47	35	32	22	64	46.4		27687.5	3167.45	10820.41
	1/14/2014	8:31	1/14/2014 8:31								46.4	5.31	10825.72
	1/14/2014	8:32	1/14/2014 8:32			25							10825.72
SW-8 Event 7	1/15/2014	9:15	1/15/2014 9:15	52	31	31	4.8	62	9.7				10825.72
	1/15/2014	9:17	1/15/2014 9:17	52	32.5	31.5	9.5	62	19.5		29.3	3.35	10829.07
	1/15/2014	9:31	1/15/2014 9:31	46	31	30	14	64	28.3		334.8	38.30	10867.37
	1/15/2014	10:17	1/15/2014 10:17	43	31	30	15	66	30.2		1346.0	153.99	11021.35
	1/15/2014	11:24	1/15/2014 11:24	41	30	29.8	15	69	29.8		2012.0	230.17	11251.52
	1/15/2014	12:38	1/15/2014 12:38	45	33	30	15	67	30.9		2245.6	256.90	11508.42
	1/15/2014	12:40	1/15/2014 12:40			25					61.8	7.06	11515.49
SW-8 Event 8	1/17/2014	7:35	1/17/2014 7:35	55	32	32	6	40	12.6				11515.49
	1/17/2014	7:37	1/17/2014 7:37	55	32	32	8.2	40	17.2		29.7	3.40	11518.88
	1/17/2014	8:53	1/17/2014 8:53	50	30	30.5	11	60	22.1		1490.4	170.50	11689.39
	1/17/2014	8:54	1/17/2014 8:54	50	32	31.5	14	60	28.7		25.4	2.90	11692.29
	1/17/2014	10:30	1/17/2014 10:30	47	32	31.5	15.2	66	31.0		2865.2	327.78	12020.07
	1/17/2014	11:38	1/17/2014 11:38	45	32	30	16	67	32.6		2161.2	247.25	12267.32
	1/17/2014	11:40	1/17/2014 11:40	45	33	31.5	19	67	39.1		71.7	8.20	12275.52
	1/17/2014	12:36	1/17/2014 12:36	46	33	31.5	18.5	68	38.0		2160.3	247.14	12522.66
	1/17/2014	13:02	1/17/2014 13:02	45	33	31	18.5	68	38.0		989.1	113.16	12635.82
	1/17/2014	14:14	1/17/2014 14:14	45	33	31	19	68	39.1		2776.1	317.59	12953.41
	1/17/2014	15:35	1/17/2014 15:35	50	33	31	20.5	66	42.2		3293.1	376.73	13330.14
	1/17/2014	15:36	1/17/2014 15:36								42.2	4.83	13334.97
	1/17/2014	15:37	1/17/2014 15:37			25							13334.97
SW-8 Event 9	1/8/2015	8:26	1/8/2015 8:26		29	29	0	42	0.0				13334.97
	1/8/2015	8:37	1/8/2015 8:37		29	29	0	42	0.0		0.0	0.00	13334.97
	1/8/2015	10:24	1/8/2015 10:24		29	28	<2	52	0.0		0.0	0.00	13334.97
	1/8/2015	10:25	1/8/2015 10:25		34	34	10	52	21.1		10.6	1.21	13336.18
	1/8/2015	11:34	1/8/2015 11:34		35	34	9	52	19.2		1391.1	159.14	13495.31
	1/8/2015	13:04	1/8/2015 13:04		34	34	10	51	21.1		1815.4	207.68	13702.99
	1/8/2015	15:04	1/8/2015 15:04		34	33.5	12	52	25.3		2788.8	319.04	14022.03
	1/8/2015	16:54	1/8/2015 16:54		34	33	12	53	25.3		2786.1	318.73	14340.76

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/8/2015	16:55	1/8/2015 16:55			28					25.3	2.90	14343.65
SW-8 Event 10	2/18/2015	8:10	2/18/2015 8:10		31	31	0	50	0.0				14343.65
	2/18/2015	8:37	2/18/2015 8:37		30	31	<2	53	0.0		0.0	0.00	14343.65
	2/18/2015	8:38	2/18/2015 8:38		36	36.5	8	53	17.2		8.6	0.99	14344.64
	2/18/2015	10:29	2/18/2015 10:29		36	36	10	63	21.3		2139.1	244.72	14589.35
	2/18/2015	12:12	2/18/2015 12:12		36	35	12	66	25.5		2411.3	275.85	14865.20
	2/18/2015	13:53	2/18/2015 13:53		36	34	14	67	29.7		2789.1	319.07	15184.27
	2/18/2015	15:38	2/18/2015 15:38		36	34	14	67	29.7		3121.1	357.06	15541.33
	2/18/2015	17:11	2/18/2015 17:11		36	33	15	62	32.0		2870.5	328.39	15869.72
	2/18/2015	17:12	2/18/2015 17:12			28					32.0	3.66	15873.38
SW-8 Event 11	3/10/2015	8:07	3/10/2015 8:07		32	33.5	0	62	0.0				15873.38
	3/10/2015	9:08	3/10/2015 9:08		32	32	4	68	8.1		248.2	28.39	15901.77
	3/10/2015	9:09	3/10/2015 9:09		36	36	9	68	19.1		13.6	1.56	15903.33
	3/10/2015	10:28	3/10/2015 10:28		36	36	10	77	21.0		1584.6	181.27	16084.61
	3/10/2015	11:50	3/10/2015 11:50		36	35.5	12	80	25.2		1893.5	216.62	16301.22
	3/10/2015	13:00	3/10/2015 13:00		36	34.5	14	80	29.4		1907.8	218.25	16519.48
	3/10/2015	13:01	3/10/2015 13:01			26					29.4	3.36	16522.83
Total CO ₂ Mass (lbs):												16522.83	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-9 Event 1	11/25/2013	9:08	11/25/2013 9:08	57	29			56	0.0				
	11/25/2013	9:10	11/25/2013 9:10	59	33	32.3	<2	56	0.0		0.0	0.00	0.00
	11/25/2013	9:22	11/25/2013 9:22		33	31.5	<2	58	0.0		0.0	0.00	0.00
	11/25/2013	9:23	11/25/2013 9:23		35	33	2	58	4.2		2.1	0.24	0.24
	11/25/2013	10:26	11/25/2013 10:26		33	32	5.5	64	11.4		491.3	56.20	56.45
	11/25/2013	10:27	11/25/2013 10:27		35	34	7.5	63	15.8		13.6	1.55	58.00
	11/25/2013	11:24	11/25/2013 11:24		35	34	8	62	16.9		932.7	106.70	164.70
	11/25/2013	12:09	11/25/2013 12:09		35	34	9	65	19.0		806.7	92.28	256.98
	11/25/2013	12:46	11/25/2013 12:46		35	34	8	65	16.8		662.3	75.77	332.75
	11/25/2013	13:54	11/25/2013 13:54		35	34	9	64	19.0		1217.9	139.33	472.08
	11/25/2013	14:15	11/25/2013 14:15								398.4	45.58	517.66
	11/25/2013	14:16	11/25/2013 14:16			27							517.66
SW-9 Event 2	12/5/2013	8:26	12/5/2013 8:26										517.66
	12/5/2013	8:28	12/5/2013 8:28	56	29	28.5	<2	68.0	0.0				517.66
	12/5/2013	8:32	12/5/2013 8:32	56	33	32.5	<2	68	0.0				517.66
	12/5/2013	8:35	12/5/2013 8:35	56	37	32.5	<2	68	0.0				517.66
	12/5/2013	8:44	12/5/2013 8:44	55	34	32.5	<2	69.0	0.0		0.0	0.00	517.66
	12/5/2013	9:33	12/5/2013 9:33	53	34	33	2	76.0	4.1		101.0	11.56	529.22
	12/5/2013	10:25	12/5/2013 10:25	52	34	33	3	79	6.2		267.6	30.61	559.83
	12/5/2013	11:40	12/5/2013 11:40	51	34	32.5	4	81	8.2		539.1	61.68	621.51
	12/5/2013	11:42	12/5/2013 11:42	51	35	34	7	81	14.5		22.7	2.60	624.11
	12/5/2013	13:10	12/5/2013 13:10	55	35	34	7	82	14.5		1276.6	146.04	770.15
	12/5/2013	13:11	12/5/2013 13:11								14.5	1.66	771.81
	12/5/2013	13:12	12/5/2013 13:12										771.81
SW-9 Event 3	12/11/2013	9:03	12/11/2013 9:03	55	34	33	<2	66	0.0				771.81
	12/11/2013	9:41	12/11/2013 9:41	52	34	33	<2	68	0.0				771.81
	12/11/2013	10:14	12/11/2013 10:14	50	32	32	<2	68	0.0				771.81
	12/11/2013	10:55	12/11/2013 10:55	50	32	32	<2	70	0.0				771.81
	12/11/2013	11:38	12/11/2013 11:38	50	34	33	6.5	70	13.5		289.9	33.16	804.97
	12/11/2013	12:32	12/11/2013 12:32	50	34	33	7.5	68	15.6		784.8	89.79	894.75
	12/11/2013	13:12	12/11/2013 13:12	50	34	33	8	66	16.7		644.9	73.78	968.53
	12/11/2013	13:13	12/11/2013 13:13								16.7	1.91	970.43
	12/11/2013	13:14	12/11/2013 13:14			25							970.43
		12/11/2013	13:14	12/11/2013 13:14									
SW-9 Event 4	12/13/2013	8:20	12/13/2013 8:20	55	30	31	<2	60	0.0				970.43
	12/13/2013	8:21	12/13/2013 8:21	55	32	30	<2	60	0.0				970.43
	12/13/2013	9:07	12/13/2013 9:07	52	30	29	<2	62	0.0				970.43
	12/13/2013	9:08	12/13/2013 9:08	52	32	31.5	<2	62	0.0				970.43
	12/13/2013	9:09	12/13/2013 9:09	52	35	33	4	62	8.4		4.2	0.48	970.92
	12/13/2013	9:37	12/13/2013 9:37	50	35	34	3	64	6.3		206.8	23.66	994.58
	12/13/2013	10:32	12/13/2013 10:32	47.5	35	34	4	67	8.4		405.1	46.35	1040.92
	12/13/2013	12:30	12/13/2013 12:30	45	35	33	6	70	12.6		1237.9	141.61	1182.54
	12/13/2013	13:52	12/13/2013 13:52	45	35	33	8	70	16.8		1202.9	137.61	1320.15
	12/13/2013	15:10	12/13/2013 15:10	50	35	32.5	9.5	68	19.9		1431.8	163.80	1483.95
	12/13/2013	15:11	12/13/2013 15:11								19.9	2.28	1486.23
	12/13/2013	15:12	12/13/2013 15:12			26							1486.23
		12/13/2013	15:12	12/13/2013 15:12									
SW-9 Event 5	12/16/2013	8:32	12/16/2013 8:32			35			0.0				1486.23
	12/16/2013	8:32	12/16/2013 8:32	50	32	32	<2	50	0.0		0.0	0.00	1486.23
	12/16/2013	8:36	12/16/2013 8:36			39			0.0		0.0	0.00	1486.23
	12/16/2013	9:07	12/16/2013 9:07	50	32	31	3.5	50	7.2		112.4	12.86	1499.09
	12/16/2013	10:12	12/16/2013 10:12	45	32	31	4	58	8.2		502.7	57.51	1556.60
	12/16/2013	10:13	12/16/2013 10:13	47.5	32	31	4	64	8.2		8.2	0.94	1557.53

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/16/2013	11:14	12/16/2013 11:14	47.5	34	33	6	64	12.5		631.0	72.19	1629.72
	12/16/2013	13:18	12/16/2013 13:18	42.5	34	33	6.5	70	13.5		1612.0	184.41	1814.13
	12/16/2013	13:19	12/16/2013 13:19	55	34	32	10	70	20.7		17.1	1.96	1816.09
	12/16/2013	13:20	12/16/2013 13:20			25			0.0		10.4	1.19	1817.28
	12/16/2013	14:48	12/16/2013 14:48	45	32	39	16.5	74	33.4		1468.4	167.98	1985.26
	12/16/2013	15:28	12/16/2013 15:28	45	32	31	13	68	26.4		1196.4	136.87	2122.12
	12/16/2013	16:24	12/16/2013 16:24	45	34	31	12	62	25.1		1443.0	165.07	2287.20
	12/16/2013	16:25	12/16/2013 16:25	44	34	32	14	62	29.3		27.2	3.11	2290.31
	12/16/2013	22:22	12/16/2013 22:22	47	37	30.5	17.5	58	37.9		11983.4	1370.91	3661.21
	12/17/2013	8:34	12/17/2013 8:34	45	36	30	20	62	42.7		24645.9	2819.49	6480.70
	12/17/2013	8:35	12/17/2013 8:35								42.7	4.88	6485.58
	12/17/2013	8:36	12/17/2013 8:36			25							6485.58
SW-9 Event 6	1/21/2014	12:51	1/21/2014 12:51	49	26	25.5	<2	71	0.0				6485.58
	1/21/2014	12:52	1/21/2014 12:52	49	32.5	32.2	<2	71	0.0		0.0	0.00	6485.58
	1/21/2014	14:12	1/21/2014 14:12	52	31	32	4.2	72	8.4		336.7	38.52	6524.10
	1/21/2014	15:53	1/21/2014 15:53	55	30	30.5	6.8	68	13.5		1108.4	126.80	6650.90
	1/21/2014	15:54	1/21/2014 15:54	55	32	31.5	12	68	24.4		19.0	2.17	6653.07
	1/21/2014	16:58	1/21/2014 16:58	57	32.5	31.5	11.6	64	23.8		1543.5	176.57	6829.64
	1/21/2014	17:00	1/21/2014 17:00								47.6	5.45	6835.09
SW-9 Event 7	1/23/2014	13:07	1/23/2014 13:07	52	30	27	<2	58	0.0				6835.09
	1/23/2014	13:08	1/23/2014 13:08	52	35	32	<2	58	0.0		0.0	0.00	6835.09
	1/23/2014	13:12	1/23/2014 13:12	52	33	30.5	5	58	10.4		20.8	2.38	6837.47
	1/23/2014	13:12	1/23/2014 13:12	52	34.5	32	6.5	58	13.7		0.0	0.00	6837.47
	1/23/2014	14:24	1/23/2014 14:24	53	34	30	8.8	57	18.5		1159.3	132.63	6970.10
	1/23/2014	14:26	1/23/2014 14:26	53	35	32.2	12	57	25.5		44.0	5.03	6975.13
	1/23/2014	15:59	1/23/2014 15:59	53	35	32	13	57	27.6		2467.9	282.33	7257.45
	1/23/2014	17:08	1/23/2014 17:08	59	35	31	14.3	54	30.4		2002.6	229.10	7486.56
	1/23/2014	17:09	1/23/2014 17:09			27					30.4	3.48	7490.04
SW-9 Event 8	1/27/2014	12:35	1/27/2014 12:35						0.0				7490.04
	1/27/2014	12:37	1/27/2014 12:37	56	35	33	5	86	10.3		10.3	1.18	7491.22
	1/27/2014	13:05	1/27/2014 13:05	50	34.5	31.5	9.5	75	19.7		420.4	48.09	7539.31
	1/27/2014	13:06	1/27/2014 13:06	49	36	33	12.5	74	26.4		23.0	2.64	7541.95
	1/27/2014	13:19	1/27/2014 13:19	49	36	33	12.5	72	26.4		343.0	39.24	7581.19
	1/27/2014	14:54	1/27/2014 14:54	48	36	33	13	68	27.6		2564.3	293.35	7874.54
	1/27/2014	15:52	1/27/2014 15:52	47	36	32.5	14	67	29.7		1661.7	190.10	8064.64
	1/27/2014	16:38	1/27/2014 16:38	52	36	32.5	14	65	29.8		1368.7	156.58	8221.22
	1/27/2014	16:39	1/27/2014 16:39								29.8	3.41	8224.62
	1/27/2014	16:40	1/27/2014 16:40			25							8224.62
SW-9 Event 9	1/7/2015	7:39	1/7/2015 7:39		26	27	0	48	0.0				8224.62
	1/7/2015	7:59	1/7/2015 7:59		26	27	0	50	0.0		0.0	0.00	8224.62
	1/7/2015	9:17	1/7/2015 9:17		26	27	0	63	0.0		0.0	0.00	8224.62
	1/7/2015	11:26	1/7/2015 11:26		25	26	<2	72	0.0		0.0	0.00	8224.62
	1/7/2015	11:27	1/7/2015 11:27		32	30.5	14	72	28.4		14.2	1.62	8226.25
	1/7/2015	13:18	1/7/2015 13:18		32	31.5	12	71	24.3		2925.5	334.68	8560.92
	1/7/2015	13:19	1/7/2015 13:19		35	33	16	71	33.5		28.9	3.31	8564.23
	1/7/2015	15:15	1/7/2015 15:15		35	33	16	70	33.5		3887.6	444.74	9008.97
	1/7/2015	16:59	1/7/2015 16:59		35	33	16	64	33.7		3497.5	400.11	9409.08
	1/7/2015	17:00	1/7/2015 17:00			28					33.7	3.86	9412.94
SW-9 Event 10	2/17/2015	7:51	2/17/2015 7:51		30	30	0	66	0.0				9412.94
	2/17/2015	8:15	2/17/2015 8:15		30	30	4	66	8.0		95.7	10.95	9423.89
	2/17/2015	8:16	2/17/2015 8:16		36	34.5	11	66	23.4		15.7	1.79	9425.68

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/17/2015	10:03	2/17/2015 10:03		36	33.5	14	62	29.9		2849.0	325.92	9751.61
	2/17/2015	10:04	2/17/2015 10:04		40	36	21	62	46.6		38.2	4.37	9755.98
	2/17/2015	12:32	2/17/2015 12:32		40	35	21	58	46.8		6907.1	790.18	10546.15
	2/17/2015	14:19	2/17/2015 14:19		40	34	22	58	49.0		5122.9	586.06	11132.21
	2/17/2015	17:03	2/17/2015 17:03		40	33	24	56	53.6		8408.6	961.94	12094.15
	2/17/2015	17:04	2/17/2015 17:04			27					53.6	6.13	12100.28
Total CO ₂ Mass (lbs):												12100.28	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-10 Event 1	11/21/2013	9:29	11/21/2013 9:29	55	28			66	0.0				
	11/21/2013	9:30	11/21/2013 9:30		33	34	<2	66	0.0		0.0	0.00	0.00
	11/21/2013	10:20	11/21/2013 10:20		31	32	4	66	8.1		201.6	23.06	23.06
	11/21/2013	10:21	11/21/2013 10:21		34	34	6	68	12.5		10.3	1.17	24.24
	11/21/2013	10:57	11/21/2013 10:57		34	34	6.5	70	13.5		467.1	53.44	77.68
	11/21/2013	11:59	11/21/2013 11:59		34	34	7	72	14.5		867.1	99.20	176.88
	11/21/2013	13:23	11/21/2013 13:23	45	33	33.5	7	74	14.3		1209.6	138.38	315.26
	11/21/2013	13:40	11/21/2013 13:40		33.5	34	8	74	16.4		261.4	29.90	345.16
	11/21/2013	13:41	11/21/2013 13:41								16.4	1.88	347.05
	11/21/2013	13:42	11/21/2013 13:42			28							347.05
SW-10 Event 2	11/26/2013	8:02	11/26/2013 8:02	52	25			68					347.05
	11/26/2013	8:05	11/26/2013 8:05	55	33	33	<2	68	0.0		0.0	0.00	347.05
	11/26/2013	8:25	11/26/2013 8:25	55	33	32	<2	68	0.0		0.0	0.00	347.05
	11/26/2013	8:27	11/26/2013 8:27	55	35	31	4	68	8.4		8.4	0.96	348.01
	11/26/2013	9:10	11/26/2013 9:10	55	34	34	4	68	8.3		359.3	41.10	389.11
	11/26/2013	11:10	11/26/2013 11:10	54	33	34	8	68	16.5		1485.8	169.98	559.09
	11/26/2013	12:35	11/26/2013 12:35	58	34	34	10	68	20.8		1582.4	181.03	740.12
	11/26/2013	12:36	11/26/2013 12:36								20.8	2.38	742.49
	11/26/2013	12:38	11/26/2013 12:38			26							742.49
SW-10 Event 3	12/12/2013	9:20	12/12/2013 9:20	50	30	29	<2	62	0.0				742.49
	12/12/2013	9:21	12/12/2013 9:21	50	35	32.5	<2	62	0.0		0.0	0.00	742.49
	12/12/2013	9:59	12/12/2013 9:59	49	32	32	<2	66	0.0		0.0	0.00	742.49
	12/12/2013	10:00	12/12/2013 10:00	49	35	33	4	66	8.4		4.2	0.48	742.98
	12/12/2013	10:36	12/12/2013 10:36	47	35	33.5	4	67	8.4		302.8	34.64	777.62
	12/12/2013	11:33	12/12/2013 11:33	45	35	33.5	6	68	12.6		598.7	68.49	846.11
	12/12/2013	13:28	12/12/2013 13:28	45	32	32	9	70	18.3		1775.2	203.08	1049.18
	12/12/2013	13:29	12/12/2013 13:29								18.3	2.09	1051.27
	12/12/2013	13:30	12/12/2013 13:30			19							1051.27
SW-10 Event 4	12/16/2013	8:34	12/16/2013 8:34	50	34	33	<2	50.0	0.0				1051.27
	12/16/2013	8:34	12/16/2013 8:34	50	33	32	<2	50.0	0.0		0.0	0.00	1051.27
	12/16/2013	9:06	12/16/2013 9:06	45	32	31.5	3.5	58.0	7.2		115.1	13.16	1064.44
	12/16/2013	9:08	12/16/2013 9:08	45	34	33	6	58.0	12.6		19.8	2.26	1066.70
	12/16/2013	10:11	12/16/2013 10:11	47.5	34	33	6	64.0	12.5		791.0	90.49	1157.19
	12/16/2013	11:12	12/16/2013 11:12	42.5	34	33	8	70.0	16.6		887.9	101.58	1258.77
	12/16/2013	13:20	12/16/2013 13:20	55	32	31.5	11	70.0	22.3		2491.4	285.01	1543.78
	12/16/2013	13:21	12/16/2013 13:21								0.0	1.28	1545.06
	12/16/2013	13:22	12/16/2013 13:22			25							1545.06
	12/16/2013	14:46	12/16/2013 14:46	45	30	28	20	74.0	39.6				1545.06
	12/16/2013	15:30	12/16/2013 15:30	45	30	31	14	68.0	27.9		1483.2	169.68	1714.74
	12/16/2013	16:26	12/16/2013 16:26	45	32	31	14	62.0	28.7		1582.2	181.00	1895.74
	12/16/2013	22:20	12/16/2013 22:20	47	32	30	18	58.0	37.0		11617.4	1329.03	3224.77
	12/17/2013	8:35	12/17/2013 8:35	45	32	28	20	62.0	40.9		23958.6	2740.86	5965.63
12/17/2013	8:36	12/17/2013 8:36								40.9	4.68	5970.32	
12/17/2013	8:37	12/17/2013 8:37			24							5970.32	
SW-10 Event 5	1/20/2014	10:54	1/20/2014 10:54	46	26	26	<2	66.0	0.0				5970.32
	1/20/2014	10:57	1/20/2014 10:57	46	32.5	30.2	4	66.0	8.2		12.3	1.41	5971.72
	1/20/2014	11:01	1/20/2014 11:01	46	34.5	31.2	5.5	66.0	11.5		39.4	4.51	5976.23
	1/20/2014	11:30	1/20/2014 11:30	45	34.5	31.5	5.5	68.0	11.5		333.5	38.16	6014.39
	1/20/2014	12:51	1/20/2014 12:51	49	34	31	7.2	69.0	14.9		1070.7	122.49	6136.88
	1/20/2014	13:54	1/20/2014 13:54	50	34	31	9.2	68.0	19.1		1073.1	122.77	6259.65
	1/20/2014	15:10	1/20/2014 15:10	49	33.5	30.5	10	68.0	20.7		1512.1	172.99	6432.63

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/20/2014	15:11	1/20/2014 15:11			27							6432.63
SW-10 Event 6	1/21/2014	8:11	1/21/2014 8:11	55	30	28	<2	54.0	0.0				6432.63
	1/21/2014	8:12	1/21/2014 8:12	55	33	31	3.8	54.0	7.9		4.0	0.45	6433.08
	1/21/2014	8:13	1/21/2014 8:13	55	34	31.5	7	54.0	14.8		11.3	1.30	6434.38
	1/21/2014	8:19	1/21/2014 8:19	54	33	31.5	9	56.0	18.7		100.4	11.49	6445.87
	1/21/2014	8:54	1/21/2014 8:54	50	33	31.5	10	60.0	20.7		690.5	78.99	6524.87
	1/21/2014	8:58	1/21/2014 8:58	50	34	31.5	12	60.0	25.1		91.7	10.49	6535.36
	1/21/2014	9:59	1/21/2014 9:59	40	34	31.5	10.5	64.0	21.9		1434.9	164.15	6699.51
	1/21/2014	11:20	1/21/2014 11:20	39	34	31	11	68.0	22.9		1813.1	207.42	6906.92
	1/21/2014	12:44	1/21/2014 12:44	45	34	30.5	12.5	68.0	26.0		2051.2	234.65	7141.58
	1/21/2014	12:45	1/21/2014 12:45			27					26.0	2.97	7144.55
SW-10 Event 7	1/23/2014	8:22	1/23/2014 8:22	53	33	31	<2	41.0	0.0				7144.55
	1/23/2014	9:03	1/23/2014 9:03	52	30.5	29.5	6.3	50.0	12.8		263.1	30.10	7174.65
	1/23/2014	9:04	1/23/2014 9:04	52	33.5	31	11	50.0	23.2		18.0	2.06	7176.71
	1/23/2014	9:49	1/23/2014 9:49	48	33.5	30.5	10	52.0	21.0		993.6	113.67	7290.38
	1/23/2014	9:50	1/23/2014 9:50	48	35	32	12	52.0	25.6		23.3	2.67	7293.05
	1/23/2014	10:54	1/23/2014 10:54	45	35	32	12.8	54.0	27.3		1691.5	193.51	7486.56
	1/23/2014	11:47	1/23/2014 11:47	44	35	31.5	13.5	54.0	28.7		1484.1	169.78	7656.33
	1/23/2014	13:04	1/23/2014 13:04	50	35	31.5	15.5	58.0	32.9		2372.3	271.39	7927.72
	1/23/2014	13:05	1/23/2014 13:05			26					32.9	3.76	7931.48
SW-10 Event 8	12/17/2014	7:47	12/17/2014 7:47		26	25	0	47	0.0				7931.48
	12/17/2014	8:06	12/17/2014 8:06		26	26	0	54	0.0		0.0	0.00	7931.48
	12/17/2014	9:27	12/17/2014 9:27		26	25.5	0	66	0.0		0.0	0.00	7931.48
	12/17/2014	9:28	12/17/2014 9:28		30	28	7	66	14.0		7.0	0.80	7932.28
	12/17/2014	11:27	12/17/2014 11:27		30	28	7	70	13.9		1657.4	189.61	8121.89
	12/17/2014	11:28	12/17/2014 11:28		36	32	14	70	29.6		21.8	2.49	8124.38
	12/17/2014	12:42	12/17/2014 12:42		36	32	14	70	29.6		2193.2	250.90	8375.28
	12/17/2014	13:59	12/17/2014 13:59		36	31.5	15	74	31.6		2358.8	269.85	8645.13
	12/17/2014	15:38	12/17/2014 15:38		36	31	16.5	70	34.9		3294.7	376.92	9022.05
	12/17/2014	15:39	12/17/2014 15:39		40	32.5	22	70	48.4		41.7	4.77	9026.81
	12/17/2014	17:05	12/17/2014 17:05		40	32.5	22	63	48.7		4177.5	477.91	9504.72
	12/17/2014	17:06	12/17/2014 17:06			27					48.7	5.58	9510.30
SW-10 Event 10	2/18/2015	8:11	2/18/2015 8:11		31	31	0	50	0.0				9510.30
	2/18/2015	8:39	2/18/2015 8:39		30	30	3	53	6.1		84.8	9.70	9520.00
	2/18/2015	8:40	2/18/2015 8:40		36	36	10	53	21.5		13.8	1.58	9521.58
	2/18/2015	10:30	2/18/2015 10:30		36	35	11	63	23.4		2473.9	283.02	9804.60
	2/18/2015	12:13	2/18/2015 12:13		36	33.5	14	66	29.8		2739.9	313.45	10118.05
	2/18/2015	13:55	2/18/2015 13:55		35	32	16	67	33.6		3232.6	369.81	10487.85
	2/18/2015	13:56	2/18/2015 13:56		40	35	22	67	48.6		41.1	4.70	10492.55
	2/18/2015	15:39	2/18/2015 15:39		40	35	23	67	50.8		5114.4	585.08	11077.64
	2/18/2015	17:11	2/18/2015 17:11		40	34	24	60	53.3		4788.3	547.78	11625.42
	2/18/2015	17:12	2/18/2015 17:12			27					53.3	6.10	11631.53
SW-10 Event 11	3/10/2015	13:07	3/10/2015 13:07		30	32	<2	83	0.0				11631.53
	3/10/2015	13:15	3/10/2015 13:15		30	31	4	84	7.8		31.3	3.59	11635.11
	3/10/2015	13:16	3/10/2015 13:16		36	35	11	84	23.0		15.4	1.76	11636.87
	3/10/2015	14:20	3/10/2015 14:20		36	35.5	11	83	23.0		1471.0	168.28	11805.15
	3/10/2015	16:07	3/10/2015 16:07		36	35	14	80	29.4		2800.5	320.38	12125.53
	3/10/2015	17:04	3/10/2015 17:04		36	34.5	14.5	77	30.5		1705.4	195.09	12320.63
	3/10/2015	18:16	3/10/2015 18:16		36	33.5	16	74	33.7		2312.1	264.51	12585.13
	3/10/2015	18:18	3/10/2015 18:18			28					67.5	7.72	12592.85
Total CO ₂ Mass (lbs):												12592.85	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-11 Event 1	11/22/2013	8:29	11/22/2013 8:29						0.0				0.00
	11/22/2013	8:30	11/22/2013 8:30	55	24	24	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:44	11/22/2013 8:44	55	30	30	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:48	11/22/2013 8:48	55	32	33	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	9:08	11/22/2013 9:08	55	32	33	<2	74	0.0		0.0	0.00	0.00
	11/22/2013	9:09	11/22/2013 9:09	55	34	34	3.8	74	7.9		3.9	0.45	0.45
	11/22/2013	10:02	11/22/2013 10:02	53	32.5	34	6.0	76	12.2		530.7	60.72	61.17
	11/22/2013	10:37	11/22/2013 10:37	53	34	34	6.0	77	12.4		429.4	49.12	110.29
	11/22/2013	11:06	11/22/2013 11:06	52	34	33	7	77	14.4		388.3	44.42	154.71
	11/22/2013	11:36	11/22/2013 11:36	53	34	33.5	7	77	14.4		432.6	49.49	204.20
	11/22/2013	11:59	11/22/2013 11:59	52	35	35	10	81	20.7		404.3	46.25	250.45
	11/22/2013	12:43	11/22/2013 12:43	52	35	35	10	81	20.7		912.3	104.37	354.82
	11/22/2013	12:44	11/22/2013 12:44								20.7	2.37	357.19
	11/22/2013	12:45	11/22/2013 12:45										357.19
SW-11 Event 2	11/26/2013	7:55	11/26/2013 7:55	54	28		0	68	0.0				357.19
	11/26/2013	7:58	11/26/2013 7:58	55	32	33	<2	68	0.0		0.0	0.00	357.19
	11/26/2013	8:22	11/26/2013 8:22	55	31	31	4	68	8.0		96.6	11.05	368.24
	11/26/2013	9:07	11/26/2013 9:07	55	32	32	5	68	10.2		410.0	46.90	415.14
	11/26/2013	11:03	11/26/2013 11:03	54	31	31	7	68	14.1		1406.9	160.95	576.09
	11/26/2013	12:30	11/26/2013 12:30	58	31	32	8	68	16.1		1312.9	150.20	726.29
	11/26/2013	12:32	11/26/2013 12:32								32.2	3.68	729.97
	11/26/2013	12:33	11/26/2013 12:33			24							729.97
SW-11 Event 3	12/5/2013	8:09	12/5/2013 8:09	55	35	32.5	7	66	14.7				729.97
	12/5/2013	8:43	12/5/2013 8:43	53	36	34.5	13	69	27.5		718.7	82.22	812.19
	12/5/2013	9:19	12/5/2013 9:19	51	36	34	14	72	29.6		1028.3	117.64	929.83
	12/5/2013	10:19	12/5/2013 10:19	50	36	33.5	14	78	29.4		1769.6	202.44	1132.27
	12/5/2013	11:34	12/5/2013 11:34	50	36	33.5	14.5	80	30.4		2242.7	256.57	1388.84
	12/5/2013	12:18	12/5/2013 12:18	50	36	33	15	82	31.4		1359.3	155.50	1544.34
	12/5/2013	12:19	12/5/2013 12:19								31.4	3.59	1547.93
	12/5/2013	12:20	12/5/2013 12:20			23							1547.93
SW-11 Event 4	12/18/2013	8:33	12/18/2013 8:33	48	33	36	<2	56.0	0.0				1547.93
	12/18/2013	9:34	12/18/2013 9:34	45	31	32	3	62.0	6.1		185.2	21.19	1569.12
	12/18/2013	9:35	12/18/2013 9:35	45	33	34.5	7.5	62.0	15.5		10.8	1.23	1570.35
	12/18/2013	9:38	12/18/2013 9:38								23.3	2.66	1573.01
	12/18/2013	13:59	12/18/2013 13:59	50	36	35.6	<2	75.0	0.0				1573.01
	12/18/2013	14:00	12/18/2013 14:00	50	34	34	<2	75.0	0.0		0.0	0.00	1573.01
	12/18/2013	14:45	12/18/2013 14:45	48	29	29.8	<2	72.0	0.0		0.0	0.00	1573.01
	12/18/2013	14:47	12/18/2013 14:47	48	34	34.4	5	72.0	10.4		10.4	1.18	1574.20
	12/18/2013	15:31	12/18/2013 15:31	40	34	34	6	70.0	12.4		501.5	57.37	1631.57
	12/18/2013	16:52	12/18/2013 16:52	45	33	33.6	9	65.0	18.6		1255.8	143.66	1775.23
	12/18/2013	17:50	12/18/2013 17:50	45	33	33.4	10.5	56.0	21.9		1172.0	134.08	1909.31
	12/18/2013	17:55	12/18/2013 17:55								109.3	12.50	1921.81
	12/18/2013	17:56	12/18/2013 17:56			26							1921.81
	SW-11 Event 4	1/8/2014	8:17	1/8/2014 8:17				0	40.0	0.0			
1/8/2014		8:18	1/8/2014 8:18	57	38	34.5	<2	40.0	0.0		0.0	0.00	1921.81
1/8/2014		8:34	1/8/2014 8:34	50	36	34	3	45.0	6.5		52.1	5.96	1927.77
1/8/2014		8:52	1/8/2014 8:52	50	36	33.5	3.5	48.0	7.6		126.8	14.51	1942.27
1/8/2014		8:53	1/8/2014 8:53	50	37	35	6	48.0	13.1		10.3	1.18	1943.46
1/8/2014		9:50	1/8/2014 9:50	47	37	35	7	50.0	15.3		809.0	92.55	2036.01
1/8/2014		10:41	1/8/2014 10:41	46	36	34.5	8.5	54.0	18.3		855.6	97.88	2133.89
1/8/2014		11:20	1/8/2014 11:20	45	36	34	9.5	56.0	20.4		754.2	86.28	2220.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/8/2014	12:54	1/8/2014 12:54	49	36	33.5	12	56.0	25.8		2169.2	248.16	2468.34
	1/8/2014	12:55	1/8/2014 12:55	49	38	35	16	56.0	35.0		30.4	3.48	2471.81
	1/8/2014	13:02	1/8/2014 13:02	55	38	35	16	56.0	35.0		245.2	28.05	2499.87
	1/8/2014	14:00	1/8/2014 14:00	52	38	35	16	56.0	35.0		2031.8	232.44	2732.30
	1/8/2014	15:09	1/8/2014 15:09	51	38	34.5	18	58.0	39.3		2565.4	293.49	3025.79
	1/8/2014	16:30	1/8/2014 16:30	50	38	34	18	54.0	39.5		3192.2	365.19	3390.98
	1/8/2014	16:52	1/8/2014 16:52	53	38	34	19	53.0	41.7		893.4	102.20	3493.18
	1/8/2014	16:53	1/8/2014 16:53								41.7	4.77	3497.95
	1/8/2014	16:54	1/8/2014 16:54			26							3497.95
SW-11 Event 5	1/10/2014	11:10	1/10/2014 11:10	45	32.5	32.5	<2	72.0	0.0				3497.95
	1/10/2014	11:13	1/10/2014 11:13	45	34	33.5	<2	72.0	0.0		0	0.00	3497.95
	1/10/2014	12:50	1/10/2014 12:50	45	32	32	4.5	72.0	9.1		442.3	50.60	3548.55
	1/10/2014	12:54	1/10/2014 12:54	45	35	33.5	8	72.0	16.7		51.7	5.91	3554.46
	1/10/2014	14:35	1/10/2014 14:35	50	35	33	8.5	70.0	17.8		1744.5	199.57	3754.04
	1/10/2014	16:32	1/10/2014 16:32	48	35	33	11	70.0	23.1		2390.6	273.48	4027.52
	1/10/2014	17:55	1/10/2014 17:55	48	35	33	12.2	66.0	25.7		2021.9	231.30	4258.82
	1/10/2014	22:10	1/10/2014 22:10	45	34	31	14.5	64.0	30.3		7129.9	815.66	5074.48
	1/10/2014	22:14	1/10/2014 22:14								121.0	13.84	5088.32
	1/10/2014	22:16	1/10/2014 22:16			26							5088.32
SW-11 Event 6	1/13/2014	8:05	1/13/2014 8:05				0		0.0				5088.32
	1/13/2014	8:07	1/13/2014 8:07	53	39	36	3	50	6.7		6.7	0.76	5089.09
	1/13/2014	8:22	1/13/2014 8:22	50	39	34	10	52	22.2		216.5	24.77	5113.86
	1/13/2014	10:09	1/13/2014 10:09	47	39	34	10	67	21.9		2357.1	269.65	5383.51
	1/13/2014	11:18	1/13/2014 11:18	46	39	34	10	70	21.8		1506.3	172.32	5555.82
	1/13/2014	12:10	1/13/2014 12:10	50	39	34	10.5	72	22.8		1160.6	132.78	5688.60
	1/13/2014	12:39	1/13/2014 12:39	49	39	34	10.5	70	22.9		663.1	75.86	5764.45
	1/13/2014	13:50	1/13/2014 13:50	45	37	33	12	68	25.7		1725.1	197.35	5961.81
	1/13/2014	13:51	1/13/2014 13:51	45	39	34	15	68	32.8		29.2	3.34	5965.15
	1/13/2014	14:41	1/13/2014 14:41	42	39	34	15	68	32.8		1638.0	187.39	6152.54
	1/13/2014	15:59	1/13/2014 15:59	41	39	33	15	66	32.8		2557.9	292.62	6445.17
	1/13/2014	16:00	1/13/2014 16:00	41	39	34	16	66	35.0		33.9	3.88	6449.05
	1/13/2014	17:00	1/13/2014 17:00	46	41	35	20	64	44.7		2390.8	273.51	6722.56
	1/13/2014	17:01	1/13/2014 17:01								44.7	5.11	6727.67
	1/13/2014	17:02	1/13/2014 17:02			27							6727.67
SW-11 Event 6	1/15/2014	9:09	1/15/2014 9:09	52	34	32	<2	62	0.0				6727.67
	1/15/2014	9:12	1/15/2014 9:12	52	34	32	4	62	8.4		12.5	1.43	6729.10
	1/15/2014	9:13	1/15/2014 9:13	52	35	33	6	62	12.7		10.5	1.20	6730.31
	1/15/2014	9:18	1/15/2014 9:18	52	35	33	8	62	16.9		73.9	8.46	6738.76
	1/15/2014	9:32	1/15/2014 9:32	46	34	32	10.2	64	21.3		267.3	30.57	6769.34
	1/15/2014	9:33	1/15/2014 9:33	46	35	33	12.2	64	25.7		23.5	2.69	6772.03
	1/15/2014	10:18	1/15/2014 10:18	43	35	32.5	13	66	27.4		1194.1	136.60	6908.63
	1/15/2014	11:26	1/15/2014 11:26	41	35	32.5	13.5	69	28.3		1892.8	216.53	7125.16
	1/15/2014	12:35	1/15/2014 12:35	45	35	32.5	14.2	67	29.8		2006.7	229.56	7354.72
	1/15/2014	13:58	1/15/2014 13:58	50	35	32.5	15	66	31.6		2548.3	291.52	7646.25
	1/15/2014	15:40	1/15/2014 15:40	48	34	32	16	69	33.2		3303.6	377.93	8024.18
	1/15/2014	17:11	1/15/2014 17:11	57	34	31.5	17	62	35.5		3128.5	357.90	8382.08
	1/15/2014	17:13	1/15/2014 17:13								71.1	8.13	8390.21
	1/15/2014	17:16	1/15/2014 17:16			24							8390.21
SW-11 Event 7	1/17/2014	7:32	1/17/2014 7:32	55	35	30	<2	40	0.0				8390.21
	1/17/2014	7:33	1/17/2014 7:33	55	34	30	2	40	4.3		2.1	0.24	8390.46
	1/17/2014	7:34	1/17/2014 7:34	55	34	30	3.8	40	8.1		6.2	0.71	8391.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/17/2014	7:36	1/17/2014 7:36	55	34	32.5	8	40	17.1		25.2	2.89	8394.05
	1/17/2014	8:50	1/17/2014 8:50	50	33	31	11.5	60	23.8		1514.8	173.30	8567.35
	1/17/2014	8:51	1/17/2014 8:51	50	34	32.5	14	60	29.3		26.6	3.04	8570.39
	1/17/2014	10:28	1/17/2014 10:28	47	34	32	13	66	27.1		2735.2	312.91	8883.30
	1/17/2014	11:36	1/17/2014 11:36	45	34	32	13	67	27.0		1839.8	210.48	9093.78
	1/17/2014	12:28	1/17/2014 12:28	46	34	32	13.5	68	28.1		1432.6	163.89	9257.66
	1/17/2014	13:00	1/17/2014 13:00	45	34	32	13.8	68	28.7		907.8	103.85	9361.51
	1/17/2014	14:11	1/17/2014 14:11	45	34	32	14	68	29.1		2051.0	234.63	9596.14
	1/17/2014	15:30	1/17/2014 15:30	47	34	31.5	14.5	66	30.2		2341.9	267.91	9864.05
	1/17/2014	15:32	1/17/2014 15:32								60.4	6.91	9870.95
	1/17/2014	15:41	1/17/2014 15:41			26							9870.95
SW-11 Event 8	1/21/2014	8:15	1/21/2014 8:15	55	30	30	<2	54	0.0				9870.95
	1/21/2014	8:17	1/21/2014 8:17	55	33	33	4	54	8.3		8.3	0.95	9871.91
	1/21/2014	8:56	1/21/2014 8:56	50	31	31	10	60	20.3		558.1	63.85	9935.76
	1/21/2014	8:57	1/21/2014 8:57	50	33.5	33.5	13	60	27.1		23.7	2.71	9938.47
	1/21/2014	9:58	1/21/2014 9:58	40	33.3	33	12	64	24.9		1584.3	181.24	10119.71
	1/21/2014	11:19	1/21/2014 11:19	39	33	32.5	11.7	68	24.1		1981.0	226.63	10346.33
	1/21/2014	12:43	1/21/2014 12:43	46	33	32.5	13	69	26.7		2132.2	243.92	10590.26
	1/21/2014	12:45	1/21/2014 12:45			28					53.4	6.11	10596.37
SW-11 Event 9	1/28/2014	7:45	1/28/2014 7:45				0		0.0				10596.37
	1/28/2014	7:46	1/28/2014 7:46	55	35	34.5	3.5	58	7.4		3.7	0.42	10596.79
	1/28/2014	8:16	1/28/2014 8:16	55	33	33	10.5	58	21.8		438.5	50.16	10646.95
	1/28/2014	8:18	1/28/2014 8:18	55	35	34	13	58	27.6		49.4	5.65	10652.60
	1/28/2014	8:35	1/28/2014 8:35	55	35	34	13.5	58	28.6		477.7	54.65	10707.25
	1/28/2014	10:10	1/28/2014 10:10	54	35	34	13.5	58	28.6		2719.9	311.15	11018.41
	1/28/2014	11:05	1/28/2014 11:05	54	35	34	13.5	58	28.6		1574.7	180.14	11198.55
	1/28/2014	11:52	1/28/2014 11:52	52	35	34	15	54	31.9		1423.4	162.84	11361.39
	1/28/2014	13:07	1/28/2014 13:07	51	35	34	16	54	34.1		2475.4	283.18	11644.57
	1/28/2014	14:10	1/28/2014 14:10	51	34.5	33.5	17	54	36.0		2207.6	252.55	11897.12
	1/28/2014	15:02	1/28/2014 15:02	50	34.5	33.5	18	54	38.1		1927.8	220.54	12117.66
	1/28/2014	16:18	1/28/2014 16:18	50	34	33	18.5	52	39.1		2933.6	335.60	12453.26
	1/28/2014	16:19	1/28/2014 16:19								39.1	4.47	12457.73
	1/28/2014	16:20	1/28/2014 16:20			25							12457.73
SW-11 Event 10	1/29/2014	8:18	1/29/2014 8:18				0		0				12457.73
	1/29/2014	8:19	1/29/2014 8:19	53	35	35	7	42	15.1		7.5	0.86	12458.59
	1/29/2014	9:11	1/29/2014 9:11	50	32.5	32	15.5	44	32.5		1236.8	141.50	12600.09
	1/29/2014	9:12	1/29/2014 9:12	50	35	34	18	44	38.7		35.6	4.07	12604.16
	1/29/2014	10:28	1/29/2014 10:28	50	35	34	19.5	46	41.9		3062.3	350.33	12954.49
	1/29/2014	12:42	1/29/2014 12:42	50	35	34	20	46	42.9		5681.7	649.99	13604.48
	1/29/2014	14:00	1/29/2014 14:00	50	35	33.5	20	46	42.9		3349.1	383.14	13987.62
	1/29/2014	14:55	1/29/2014 14:55	50	35	33.5	20	45	43.0		2362.8	270.30	14257.92
	1/29/2014	16:25	1/29/2014 16:25	50	35	33.5	21	45	45.1		3965.1	453.61	14711.53
	1/29/2014	16:26	1/29/2014 16:26								45.1	5.16	14716.69
	1/29/2014	16:27	1/29/2014 16:27			25							14716.69
SW-11 Event 11	1/30/2014	7:40	1/30/2014 7:40				0		0				14716.69
	1/30/2014	7:42	1/30/2014 7:42	54	36.5	34	10	42	21.9		21.9	2.50	14719.19
	1/30/2014	7:49	1/30/2014 7:49	54	36	34	14	42	30.5		183.3	20.97	14740.16
	1/30/2014	9:04	1/30/2014 9:04	52	35	34	20	46	42.9		2753.5	315.00	15055.16
	1/30/2014	9:56	1/30/2014 9:56	50	35	34	20.5	48	43.9		2258.3	258.35	15313.51
	1/30/2014	11:00	1/30/2014 11:00	50	35	34	20.5	48	43.9		2810.9	321.57	15635.08
	1/30/2014	12:22	1/30/2014 12:22	50	34.5	33.5	21.5	50	45.7		3675.8	420.51	16055.59

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/30/2014	13:35	1/30/2014 13:35	55	34.5	33.5	22	50	46.8		3377.3	386.36	16441.95
	1/30/2014	13:36	1/30/2014 13:36								46.8	5.35	16447.30
	1/30/2014	13:37	1/30/2014 13:37			25							16447.30
SW-11 Event 12	2/5/2014	7:32	2/5/2014 7:32	58	34	34	<2	62	0.0				16447.30
	2/5/2014	7:58	2/5/2014 7:58	56	32	32	9.2	62	18.8	244.8	28.00		16475.30
	2/5/2014	8:51	2/5/2014 8:51	51	32	32	10	66	20.4	1039.1	118.87		16594.18
	2/5/2014	9:17	2/5/2014 9:17		32	32	10.2	66	20.8	535.3	61.24		16655.41
	2/5/2014	10:32	2/5/2014 10:32	45	32	32	10.2	68	20.8	1557.8	178.22		16833.63
	2/5/2014	11:32	2/5/2014 11:32	45	31.5	31.5	10.2	70	20.6	1240.4	141.91		16975.54
	2/5/2014	12:43	2/5/2014 12:43	45	31.5	31.5	10.2	71	20.6	1461.7	167.22		17142.76
	2/5/2014	13:41	2/5/2014 13:41	45	31.5	31.5	10.3	73	20.7	1198.2	137.07		17279.83
	2/5/2014	14:52	2/5/2014 14:52	48	31.5	31.5	11.3	80	22.6	1538.5	176.00		17455.83
	2/5/2014	15:45	2/5/2014 15:45	48	31.5	31.5	12	74	24.1	1238.5	141.69		17597.52
	2/5/2014	16:03	2/5/2014 16:03	48	31.5	31.5	12	76	24.1	434.1	49.66		17647.17
	2/5/2014	16:04	2/5/2014 16:04			27				24.1	2.76		17649.93
SW-11 Event 13	2/7/2014	8:34	2/7/2014 8:34	51	30	30	<2	56	0.0				17649.93
	2/7/2014	8:36	2/7/2014 8:36	49	33.5	33	3	56	6.3	6.3	0.72		17650.65
	2/7/2014	8:40	2/7/2014 8:40	49	32.5	33	7	57	14.5	41.5	4.75		17655.40
	2/7/2014	9:29	2/7/2014 9:29	46	31.5	31.5	10.5	57	21.5	880.9	100.77		17756.17
	2/7/2014	9:31	2/7/2014 9:31	46	33.5	32.2	13.6	57	28.4	49.9	5.71		17761.88
	2/7/2014	11:43	2/7/2014 11:43	44	33.5	32.5	13.7	60	28.5	3760.2	430.17		18192.04
	2/7/2014	13:15	2/7/2014 13:15	44	33.5	32.5	13.7	61	28.5	2625.1	300.31		18492.35
	2/7/2014	14:32	2/7/2014 14:32	49	33.5	32.5	14.2	61	29.6	2236.1	255.81		18748.16
	2/7/2014	15:45	2/7/2014 15:45	50	33.5	32.5	15	60	31.3	2219.8	253.95		19002.11
	2/7/2014	16:23	2/7/2014 16:23	50	33	32	15.9	59	33.0	1220.7	139.65		19141.75
	2/7/2014	16:34	2/7/2014 16:34	57	33	32	16.5	58	34.3	369.9	42.32		19184.07
	2/7/2014	16:35	2/7/2014 16:35			27				34.3	3.92		19187.99
SW-11 Event 14	2/10/2014	9:15	2/10/2014 9:15	54	29	31	<2	60	0.0				19187.99
	2/10/2014	9:18	2/10/2014 9:18	53	33	33.5	3.8	60	7.9	11.8	1.35		19189.35
	2/10/2014	10:02	2/10/2014 10:02	48	32	32	12	66	24.5	711.4	81.39		19270.73
	2/10/2014	10:03	2/10/2014 10:03	47	33.5	32.5	14.5	66	30.0	27.2	3.12		19273.85
	2/10/2014	11:52	2/10/2014 11:52	48	33.5	32.5	14.2	70	29.3	3233.7	369.93		19643.78
	2/10/2014	13:32	2/10/2014 13:32	48	33.5	32.5	14.2	71	29.3	2928.4	335.01		19978.79
	2/10/2014	15:04	2/10/2014 15:04	45	33.5	32.5	14.2	71	29.3	2692.8	308.06		20286.85
	2/10/2014	16:54	2/10/2014 16:54	45	33.5	32.5	14.5	67	30.0	3260.1	372.96		20659.81
	2/10/2014	17:46	2/10/2014 17:46	48	33.5	32.5	15.5	63	32.2	1617.4	185.03		20844.84
	2/10/2014	17:47	2/10/2014 17:47			26				32.2	3.68		20848.53
SW-11 Event 15	2/11/2014	8:30	2/11/2014 8:30	51	30.5	31.5	3.5	56	7.1				20848.53
	2/11/2014	8:35	2/11/2014 8:35	48	33.5	33.2	9	56	18.8	64.8	7.41		20855.94
	2/11/2014	9:06	2/11/2014 9:06	49	32.5	32	13.8	59	28.5	733.3	83.89		20939.83
	2/11/2014	9:10	2/11/2014 9:10			22				113.9	13.03		20952.86
SW-11 Event 16	3/2/2015	7:59	3/2/2015 7:59		28	31	0	60	0.0				20952.86
	3/2/2015	8:23	3/2/2015 8:23		28	28.5	4	60	7.8	94.1	10.76		20963.62
	3/2/2015	8:24	3/2/2015 8:24		32	32.5	4.5	60	9.2	8.5	0.98		20964.60
	3/2/2015	8:46	3/2/2015 8:46		32	31	7	60	14.4	259.4	29.68		20994.27
	3/2/2015	10:12	3/2/2015 10:12		31	30.5	8	63	16.2	1312.8	150.19		21144.46
	3/2/2015	10:12	3/2/2015 10:12		36	35	14	63	29.8	0.0	0.00		21144.46
	3/2/2015	11:26	3/2/2015 11:26		36	35	13	64	27.7	2128.5	243.50		21387.96
	3/2/2015	12:38	3/2/2015 12:38		36	34	13	67	27.6	1990.3	227.69		21615.65
	3/2/2015	14:38	3/2/2015 14:38		36	34	14.5	78	30.5	3483.6	398.52		22014.17
	3/2/2015	16:56	3/2/2015 16:56		35	33	16	72	33.5	4410.6	504.58		22518.75

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/2/2015	16:57	3/2/2015 16:57			28					33.5	3.83	22522.57
SW-11 Event 17	3/9/2015	12:26	3/9/2015 12:26		34	35	0	80	0.0				22522.57
	3/9/2015	12:46	3/9/2015 12:46		33	33	6	82	12.2		121.7	13.92	22536.50
	3/9/2015	12:47	3/9/2015 12:47		38	37	11	82	23.5		17.8	2.04	22538.54
	3/9/2015	14:03	3/9/2015 14:03		38	36	12	81	25.6		1866.0	213.47	22752.01
	3/9/2015	15:30	3/9/2015 15:30		38	36	13.5	76	29.0		2375.5	271.75	23023.76
	3/9/2015	16:58	3/9/2015 16:58		38	35.5	14	76	30.0		2597.1	297.11	23320.87
	3/9/2015	17:00	3/9/2015 17:00			28					60.1	6.88	23327.75
Total CO ₂ Mass (lbs):												23327.75	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-12 Event 1	11/25/2013	8:53	11/25/2013 8:53	55	28		0	52	0.0				
	11/25/2013	8:54	11/25/2013 8:54		34	33	<2	52	0.0		0.0	0.00	0.00
	11/25/2013	9:14	11/25/2013 9:14		33	30	4	54	8.3		83.4	9.54	9.54
	11/25/2013	9:15	11/25/2013 9:15		35	32.5	6	54	12.8		10.6	1.21	10.75
	11/25/2013	9:16	11/25/2013 9:16		36	34	7	54	15.1		13.9	1.59	12.34
	11/25/2013	10:24	11/25/2013 10:24		35	33	11	62	23.2		1301.9	148.94	161.29
	11/25/2013	11:30	11/25/2013 11:30		36	33	12	62	25.6		1611.7	184.38	345.67
	11/25/2013	12:38	11/25/2013 12:38		36	32	12	64	25.6		1739.4	198.99	544.66
	11/25/2013	13:58	11/25/2013 13:58	50	36	31	12	64	25.6		2044.4	233.88	778.54
	11/25/2013	14:10	11/25/2013 14:10								306.7	35.08	813.62
	11/25/2013	14:11	11/25/2013 14:11			23							813.62
SW-12 Event 2	12/4/2013	8:05	12/4/2013 8:05				0	63	0.0				813.62
	12/4/2013	8:07	12/4/2013 8:07	54	36	33.5	<2	63	0.0		0.0	0.00	813.62
	12/4/2013	8:37	12/4/2013 8:37	47	34	31.5	6	68	12.5		187.0	21.40	835.01
	12/4/2013	8:39	12/4/2013 8:39	47	36	33	7.5	68	15.9		28.4	3.25	838.26
	12/4/2013	9:09	12/4/2013 9:09	46	35	33	8.5	70	17.8		505.8	57.87	896.13
	12/4/2013	9:59	12/4/2013 9:59	46	35	32	10	70	21.0		969.2	110.88	1007.01
	12/4/2013	11:00	12/4/2013 11:00	45	37	33.5	14	74	29.8		1548.6	177.16	1184.16
	12/4/2013	12:06	12/4/2013 12:06	45	36	33	15	76	31.6		2025.7	231.74	1415.90
	12/4/2013	12:07	12/4/2013 12:07								31.6	3.61	1419.51
	12/4/2013	12:08	12/4/2013 12:08			24							1419.51
	SW-12 Event 3	12/17/2013	8:29	12/17/2013 8:29	45	28	32	<2	50	0.0			
12/17/2013		9:58	12/17/2013 9:58	42	28	27.4	<2	66	0.0		0.0	0.00	1419.51
12/17/2013		9:59	12/17/2013 9:59	42	31	32	6	66.0	12.1		6.0	0.69	1420.21
12/17/2013		11:05	12/17/2013 11:05	39	30	32	7	68.0	13.9		858.8	98.25	1518.45
12/17/2013		11:06	12/17/2013 11:06	39	32	33.6	10	68	20.3		17.1	1.96	1520.41
12/17/2013		12:38	12/17/2013 12:38	47	32	33	12.5	72	25.3		2101.0	240.36	1760.77
12/17/2013		12:39	12/17/2013 12:39								25.3	2.90	1763.67
12/17/2013		12:40	12/17/2013 12:40			23							1763.67
SW-12 Event 4		1/6/2014	13:04	1/6/2014 13:04				0		0.0			
	1/6/2014	13:06	1/6/2014 13:06	56	32	32.4	<2	60	0.0		0.0	0.00	1763.67
	1/6/2014	13:26	1/6/2014 13:26	55	30.5	31.6	<2	60	0.0		0.0	0.00	1763.67
	1/6/2014	13:28	1/6/2014 13:28	55	33.5	34.4	4.5	60	9.4		9.4	1.07	1764.74
	1/6/2014	13:58	1/6/2014 13:58	55	33.5	34.4	5	58	10.4		297.3	34.01	1798.75
	1/6/2014	15:06	1/6/2014 15:06	55	33	34	7.5	58	15.6		884.6	101.19	1899.94
	1/6/2014	16:04	1/6/2014 16:04	54	33	33.6	9	55	18.7		995.5	113.88	2013.82
	1/6/2014	17:04	1/6/2014 17:04	54	33	33.2	10.5	52	21.9		1220.7	139.65	2153.47
	1/6/2014	17:18	1/6/2014 17:18	55	33	33.2	11	52	23.0		314.5	35.98	2189.45
	1/6/2014	17:19	1/6/2014 17:19								23.0	2.63	2192.07
	1/6/2014	17:20	1/6/2014 17:20										2192.07
SW-12 Event 5	1/7/2014	7:34	1/7/2014 7:34					27					2192.07
	1/7/2014	7:36	1/7/2014 7:36	19	19	21.2	<2	27	0.0		0.0	0.00	2192.07
	1/7/2014	7:51	1/7/2014 7:51	15	17	19.2	<2	27	0.0		0.0	0.00	2192.07
	1/7/2014	9:04	1/7/2014 9:04	55	35	36.4	7.5	42	16.2		590.2	67.51	2259.59
	1/7/2014	9:05	1/7/2014 9:05	55	33.5	34.8	6	42	12.7		14.5	1.65	2261.24
	1/7/2014	10:23	1/7/2014 10:23	50	33.5	34.4	7.5	47	15.8		1114.2	127.47	2388.71
	1/7/2014	11:23	1/7/2014 11:23	48	33	34	9.5	50	19.9		1071.8	122.62	2511.33
	1/7/2014	12:42	1/7/2014 12:42	49	32.5	33.6	10.5	50	21.9		1649.5	188.70	2700.03
	1/7/2014	12:43	1/7/2014 12:43								21.9	2.50	2702.53
	1/7/2014	12:44	1/7/2014 12:44			27.6							2702.53
SW-12 Event 6	1/9/2014	12:51	1/9/2014 12:51						0.0				2702.53

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/9/2014	12:52	1/9/2014 12:52	45	38	34.5	<2	60	0.0		0.0	0.00	2702.53
	1/9/2014	12:58	1/9/2014 12:58	43	36	33	2	60	4.3		12.8	1.47	2704.00
	1/9/2014	12:59	1/9/2014 12:59	43	38	34.5	4	60	8.7		6.5	0.74	2704.74
	1/9/2014	14:16	1/9/2014 14:16	37	36	33.5	6.5	60	13.9		870.9	99.63	2804.37
	1/9/2014	15:56	1/9/2014 15:56	42	36	32.5	10	58	21.4		1766.1	202.04	3006.40
	1/9/2014	15:57	1/9/2014 15:57	40	38	34	13.5	58	29.5		25.5	2.91	3009.32
	1/9/2014	17:29	1/9/2014 17:29	56	38	34	16	58	35.0		2965.0	339.20	3348.52
	1/9/2014	17:30	1/9/2014 17:30								35.0	4.00	3352.51
	1/9/2014	17:31	1/9/2014 17:31			24							3352.51
SW-12 Event 7	1/13/2014	8:07	1/13/2014 8:07	50	30	27.5	<2	46	0.0			0.00	3352.51
	1/13/2014	8:08	1/13/2014 8:08	50	35	32	<2	46	0.0		0.0	0.00	3352.51
	1/13/2014	8:09	1/13/2014 8:09	50	36	33.5	<2	46	0.0		0.0	0.00	3352.51
	1/13/2014	8:12	1/13/2014 8:12	50	36	33.5	3.5	46	7.6		11.4	1.30	3353.82
	1/13/2014	8:26	1/13/2014 8:26	47	36	32.5	6	46	13.0		144.2	16.50	3370.32
	1/13/2014	8:27	1/13/2014 8:27	47	37.5	33.2	6.5	46	14.3		13.7	1.56	3371.88
	1/13/2014	8:47	1/13/2014 8:47	46	36	33	7	54	15.1		293.7	33.59	3405.47
	1/13/2014	9:55	1/13/2014 9:55	45	36	32.5	9	62	19.2		1164.9	133.26	3538.74
	1/13/2014	9:56	1/13/2014 9:56	45	37	32.8	10	62	21.6		20.4	2.33	3541.07
	1/13/2014	11:08	1/13/2014 11:08	43	36	32.5	11	69	23.3		1615.0	184.75	3725.82
	1/13/2014	12:16	1/13/2014 12:16	45	36	32	12	70	25.4		1656.2	189.47	3915.30
	1/13/2014	12:17	1/13/2014 12:17			25					25.4	2.91	3918.20
SW-12 Event 8	1/14/2014	7:45	1/14/2014 7:45	49	34	30.5	<2	62	0.0			0.00	3918.20
	1/14/2014	7:47	1/14/2014 7:47	49	35	32.5	<2	62	0.0		0.0	0.00	3918.20
	1/14/2014	7:55	1/14/2014 7:55	50	35	32.5	4	62	8.4		33.8	3.87	3922.07
	1/14/2014	8:42	1/14/2014 8:42	46	35	31	6.8	62	14.4		536.1	61.33	3983.40
	1/14/2014	8:45	1/14/2014 8:45	46	37	33	10	62	21.6		53.9	6.16	3989.56
	1/14/2014	10:07	1/14/2014 10:07	44	37	32.5	11.2	63	24.1		1872.2	214.18	4203.74
	1/14/2014	11:30	1/14/2014 11:30	38	36	31.5	12.5	63	26.6		2106.5	240.98	4444.73
	1/14/2014	11:53	1/14/2014 11:53	38	36	31	12.8	63	27.3		620.2	70.95	4515.68
	1/14/2014	11:55	1/14/2014 11:55			25							4515.68
SW-12 Event 9	1/15/2014	8:15	1/15/2014 8:15	54	37	30	<2	46	0.0			0.00	4515.68
	1/15/2014	8:16	1/15/2014 8:16	54	37	33	<2	46	0.0		0.0	0.00	4515.68
	1/15/2014	8:22	1/15/2014 8:22	54	37	33	4.2	46	9.2		27.6	3.16	4518.84
	1/15/2014	8:25	1/15/2014 8:25	54	37	33	5	46	11.0		30.2	3.46	4522.29
	1/15/2014	9:02	1/15/2014 9:02	50	35	31	7.2	58	15.3		485.1	55.50	4577.79
	1/15/2014	9:03	1/15/2014 9:03	50	37.5	33.8	1.1	58	2.4		8.8	1.01	4578.80
	1/15/2014	9:40	1/15/2014 9:40	42	37.5	33.8	11.5	64	24.9		504.1	57.67	4636.47
	1/15/2014	10:52	1/15/2014 10:52	40	37	33	12.5	68	26.8		1858.8	212.65	4849.12
	1/15/2014	11:22	1/15/2014 11:22	39	37	33	13	68	27.8		819.4	93.74	4942.86
	1/15/2014	12:14	1/15/2014 12:14	43	37	33	14	67	30.0		1504.7	172.13	5114.99
	1/15/2014	12:15	1/15/2014 12:15			25					30.0	3.43	5118.43
SW-12 Event 10	1/16/2014	7:58	1/16/2014 7:58	55	32	28.5	<2	40	0.0			0.00	5118.43
	1/16/2014	8:00	1/16/2014 8:00	55	37	34	2	40	4.4		4.4	0.50	5118.93
	1/16/2014	8:04	1/16/2014 8:04	55	37	34	3	40	6.6		22.0	2.52	5121.45
	1/16/2014	8:58	1/16/2014 8:58	47	35	31	7.8	54	16.6		627.0	71.73	5193.18
	1/16/2014	8:59	1/16/2014 8:59	47	37	33	11.5	54	25.0		20.8	2.38	5195.56
	1/16/2014	10:24	1/16/2014 10:24	42	37	33	12	57	26.0		2166.5	247.85	5443.41
	1/16/2014	11:18	1/16/2014 11:18	40	37	32	13.2	58	28.6		1472.9	168.50	5611.91
	1/16/2014	12:05	1/16/2014 12:05	44	37	32	14	59	30.3		1382.4	158.14	5770.05
	1/16/2014	12:06	1/16/2014 12:06			25					30.3	3.46	5773.52
SW-12 Event 11	1/17/2014	7:24	1/17/2014 7:24	55	36	33.5	<2	37	0.0				5773.52

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/17/2014	7:27	1/17/2014 7:27	55	36	33.5	4	37	8.8		13.1	1.50	5775.02
	1/17/2014	8:21	1/17/2014 8:21	51	35	30	7.5	54	16.0		667.6	76.38	5851.40
	1/17/2014	8:22	1/17/2014 8:22	51	37	33.2	11	54	23.9		19.9	2.28	5853.68
	1/17/2014	10:15	1/17/2014 10:15	45	37	33	12.5	59	27.0		2876.9	329.12	6182.79
	1/17/2014	11:19	1/17/2014 11:19	45	37	32.5	14	65	30.1		1827.2	209.04	6391.83
	1/17/2014	12:04	1/17/2014 12:04	44	37		14.8	66	31.8		1391.6	159.20	6551.03
	1/17/2014	12:05	1/17/2014 12:05								31.8	3.63	6554.67
SW-12 Event 12	1/20/2014	8:43	1/20/2014 8:43	50	27	25	<2	49	0.0		0.0	0.00	6554.67
	1/20/2014	8:44	1/20/2014 8:44	50	37.5	34	<2	49	0.0				6554.67
	1/20/2014	8:47	1/20/2014 8:47	50	37.5	33	4	49	8.8		13.2	1.51	6556.17
	1/20/2014	9:15	1/20/2014 9:15	49	36	32.5	7	58	15.0		332.8	38.08	6594.25
	1/20/2014	9:16	1/20/2014 9:16	49	37.5	33	9.5	58	20.7		17.8	2.04	6596.29
	1/20/2014	10:28	1/20/2014 10:28	47	37.5	33	9.8	64	21.2		1506.2	172.31	6768.60
	1/20/2014	11:24	1/20/2014 11:24	44	37	33	11	67	23.6		1253.6	143.41	6912.00
	1/20/2014	13:01	1/20/2014 13:01	48	36	32	12	69	25.4		2377.3	271.97	7183.97
	1/20/2014	13:02	1/20/2014 13:02								25.4	2.91	7186.88
	1/20/2014	13:04	1/20/2014 13:04			27							7186.88
SW-12 Event 13	1/21/2014	8:00	1/21/2014 8:00	55	32.5	30	<2	50	0.0				7186.88
	1/21/2014	8:01	1/21/2014 8:01	55	37.5	34.2	<2	50	0.0		0.0	0.00	7186.88
	1/21/2014	8:03	1/21/2014 8:03	55	37	33.33	3	50	6.5		6.5	0.75	7187.63
	1/21/2014	8:06	1/21/2014 8:06	55	37	33.3	4	52	8.7		22.9	2.62	7190.24
	1/21/2014	8:47	1/21/2014 8:47	50	35	31.5	8.8	56	18.7		561.9	64.28	7254.52
	1/21/2014	8:48	1/21/2014 8:48	50	37.5	33.5	13.2	56	28.8		23.7	2.71	7257.24
	1/21/2014	9:53	1/21/2014 9:53	39	37.5	33	12.2	62	26.4		1793.4	205.17	7462.40
	1/21/2014	11:15	1/21/2014 11:15	38	37	32.5	12.2	66	26.2		2157.0	246.76	7709.16
	1/21/2014	12:18	1/21/2014 12:18	39	37	33	13.8	67	29.6		1757.1	201.01	7910.17
	1/21/2014	12:19	1/21/2014 12:19			26					29.6	3.39	7913.56
SW-12 Event 14	1/22/2014	8:33	1/22/2014 8:33	53	35	32	<2	40	0.0				7913.56
	1/22/2014	8:34	1/22/2014 8:34	53	37	33.8	<2	40	0.0		0.0	0.00	7913.56
	1/22/2014	9:02	1/22/2014 9:02	51	36	31	8	46	17.4		242.9	27.79	7941.35
	1/22/2014	9:03	1/22/2014 9:03	51	37.5	33	11	46	24.2		20.8	2.38	7943.72
	1/22/2014	9:54	1/22/2014 9:54	46	37	32	11.2	50	24.4		1240.5	141.91	8085.63
	1/22/2014	9:55	1/22/2014 9:55	46	38	33.2	14	50	30.8		27.6	3.16	8088.80
	1/22/2014	11:02	1/22/2014 11:02	44	37.5	33	14	55	30.5		2056.0	235.21	8324.01
	1/22/2014	12:08	1/22/2014 12:08		37	32.5	14.8	56	32.1		2066.6	236.41	8560.42
	1/22/2014	12:36	1/22/2014 12:36		37.5	32.5	14.8	57	32.2		900.2	102.99	8663.41
SW-12 Event 15	3/9/2015	7:57	3/9/2015 7:57		30	31	0	55	0.0				8663.41
	3/9/2015	8:39	3/9/2015 8:39		30	30	4	60	8.0		168.5	19.27	8682.68
	3/9/2015	9:46	3/9/2015 9:46		30	29	4.5	70	8.9		568.1	64.99	8747.67
	3/9/2015	10:09	3/9/2015 10:09		36	34	12	74	25.3		393.8	45.05	8792.72
	3/9/2015	11:23	3/9/2015 11:23		36	34	11	78	23.1		1791.2	204.91	8997.63
	3/9/2015	12:25	3/9/2015 12:25		36	34	12	79	25.2		1496.9	171.25	9168.88
	3/9/2015	12:27	3/9/2015 12:27			26					50.4	5.76	9174.64
SW-12 Event 16	3/13/2015	8:10	3/13/2015 8:10		34	34	0	65	0.0				9174.64
	3/13/2015	8:24	3/13/2015 8:24		34	33	4	65	8.3		58.4	6.68	9181.31
	3/13/2015	8:25	3/13/2015 8:25		38	37	8	65	17.4		12.8	1.47	9182.78
	3/13/2015	9:40	3/13/2015 9:40		39	36	10	65	21.9		1472.4	168.44	9351.22
	3/13/2015	10:22	3/13/2015 10:22		38	35.5	11	66	23.8		960.7	109.91	9461.13
	3/13/2015	11:00	3/13/2015 11:00		38	34.5	12	66	26.0		947.2	108.36	9569.49
	3/13/2015	11:01	3/13/2015 11:01			27					26.0	2.98	9572.47
SW-12 Event 17	3/16/2015	10:12	3/16/2015 10:12		34	34	0	77	0.0				9572.47

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/16/2015	11:26	3/16/2015 11:26		33	33	5.5	82	11.2		412.8	47.23	9619.70
	3/16/2015	11:27	3/16/2015 11:27		36	36	9	82	18.8		15.0	1.72	9621.41
	3/16/2015	12:53	3/16/2015 12:53		36	35	10	82	20.9		1709.5	195.57	9816.98
	3/16/2015	14:04	3/16/2015 14:04		36	34.5	11	86	22.9		1556.8	178.10	9995.08
	3/16/2015	14:46	3/16/2015 14:46		36	34.5	12	86	25.0		1006.8	115.18	10110.26
	3/16/2015	16:09	3/16/2015 16:09		36	34	13.5	84	28.2		2208.1	252.61	10362.87
	3/16/2015	17:24	3/16/2015 17:24		36	32	14	82	29.3		2155.8	246.63	10609.50
	3/16/2015	17:25	3/16/2015 17:25			27					29.3	3.35	10612.85
SW-12 Event 18	3/18/2015	12:14	3/18/2015 12:14		32	33	0	78	0.0				10612.85
	3/18/2015	13:24	3/18/2015 13:24		32	32	6	77	12.1		423.5	48.45	10661.30
	3/18/2015	13:25	3/18/2015 13:25		36	35	10	77	21.0		16.6	1.89	10663.19
	3/18/2015	15:14	3/18/2015 15:14		36	34	11	74	23.2		2410.1	275.71	10938.90
	3/18/2015	15:16	3/18/2015 15:16			26					46.4	5.31	10944.21
											Total CO ₂ Mass (lbs):		10944.21

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-13 Event 1	11/21/2013	9:12	11/21/2013 9:12	57	28			64	0.0				
	11/21/2013	9:14	11/21/2013 9:14	59	32	34.5	<2	64	0.0		0.0	0.00	0.00
	11/21/2013	9:20	11/21/2013 9:20		31	31.5	4	65.5	8.1		24.2	2.77	2.77
	11/21/2013	9:21	11/21/2013 9:21		35	35	6	65.5	12.6		10.3	1.18	3.95
	11/21/2013	9:41	11/21/2013 9:41		35	34.5	9	67	18.9		315.5	36.09	40.04
	11/21/2013	10:14	11/21/2013 10:14		34	34	11	68	22.9		689.3	78.86	118.90
	11/21/2013	10:47	11/21/2013 10:47	50	34	32.5	13.0	70	27.0		822.1	94.05	212.95
	11/21/2013	10:48	11/21/2013 10:48		36	34	14.0	70	29.6		28.3	3.24	216.18
	11/21/2013	11:46	11/21/2013 11:46		36	33.5	15.5	70.0	32.8		1811.1	207.18	423.37
	11/21/2013	13:11	11/21/2013 13:11	45	35	33	16	72.0	33.5		2816.8	322.24	745.61
	11/21/2013	13:30	11/21/2013 13:30		35	33	16	72	33.5		635.8	72.74	818.35
	11/21/2013	13:31	11/21/2013 13:31								33.5	3.83	822.18
	11/21/2013	13:33	11/21/2013 13:33			21.5							822.18
SW-13 Event 2	12/10/2013	13:09	12/10/2013 13:09	50	30	34	5	76	9.9				822.18
	12/10/2013	14:02	12/10/2013 14:02	50	30	30.5	9	70	17.9		735.2	84.11	906.28
	12/10/2013	14:04	12/10/2013 14:04	50	35	32	11	70	23.1		40.9	4.68	910.97
	12/10/2013	14:32	12/10/2013 14:32	49	35	32	11.5	72	24.1		659.5	75.44	986.41
	12/10/2013	15:18	12/10/2013 15:18	47.5	35	31	13	72	27.2		1178.6	134.83	1121.24
	12/10/2013	15:43	12/10/2013 15:43	47.5	34	30.5	14	72	29.0		702.1	80.32	1201.56
	12/10/2013	16:22	12/10/2013 16:22	45	35	30	14.5	70	30.4		1157.7	132.44	1334.00
	12/10/2013	17:02	12/10/2013 17:02	45	35	30	15	68	31.5		1237.7	141.59	1475.59
	12/10/2013	17:03	12/10/2013 17:03								31.5	3.60	1479.19
	12/10/2013	17:04	12/10/2013 17:04										1479.19
	SW-13 Event 3	12/19/2013	13:08	12/19/2013 13:08	50	34	34	3	73	6.2			
12/19/2013		13:42	12/19/2013 13:42	45	32	32	11	74	22.2		483.7	55.33	1534.52
12/19/2013		15:15	12/19/2013 15:15	40	31	32	14	71	28.1		2340.6	267.77	1802.29
12/19/2013		16:27	12/19/2013 16:27	42	30	29.6	16	70	31.8		2155.0	246.53	2048.82
12/19/2013		16:28	12/19/2013 16:28	40	34	32	20	70	41.5		36.6	4.19	2053.01
12/19/2013		17:04	12/19/2013 17:04	50	35	33.2	20.5	66	43.1		1523.0	174.23	2227.24
12/19/2013		17:06	12/19/2013 17:06								86.3	9.87	2237.11
12/19/2013		17:07	12/19/2013 17:07										2237.11
SW-13 Event 4	1/8/2014	7:52	1/8/2014 7:52					34					2237.11
	1/8/2014	7:53	1/8/2014 7:53	42	31.5	33.4	3	34	6.3		0.0	0.00	2237.11
	1/8/2014	8:07	1/8/2014 8:07	59	32	33.4	4.5	36	9.5		110.2	12.61	2249.72
	1/8/2014	8:29	1/8/2014 8:29	52	32	33.2	8	42	16.7		287.8	32.93	2282.64
	1/8/2014	8:42	1/8/2014 8:42	49	32	33.2	9	42	18.8		230.8	26.40	2309.04
	1/8/2014	8:43	1/8/2014 8:43	49	33	34	10	42	21.1		20.0	2.28	2311.33
	1/8/2014	9:45	1/8/2014 9:45	46	33	33.2	11	50	23.0		1368.5	156.55	2467.88
	1/8/2014	10:36	1/8/2014 10:36	45	33	33.2	11	52	23.0		1173.4	134.24	2602.12
	1/8/2014	11:12	1/8/2014 11:12	45	33	32.8	12	56	25.0		863.3	98.76	2700.88
	1/8/2014	11:13	1/8/2014 11:13	45	34	33.6	14	56	29.4		27.2	3.11	2703.99
	1/8/2014	12:14	1/8/2014 12:14	43	33.5	33.2	14	58	29.2		1789.6	204.73	2908.72
	1/8/2014	12:15	1/8/2014 12:15								29.2	3.34	2912.07
	1/8/2014	12:16	1/8/2014 12:16			27.2							2912.07
	SW-13 Event 5	1/11/2014	8:06	1/11/2014 8:06									
1/11/2014		8:07	1/11/2014 8:07	49	36	33.5	<2	64	0.0		0.0	0.00	2912.07
1/11/2014		8:12	1/11/2014 8:12	46	36	33	<2	64	0.0		0.0	0.00	2912.07
1/11/2014		8:13	1/11/2014 8:13	46	38	34	3.5	64	7.6		3.8	0.43	2912.50
1/11/2014		9:02	1/11/2014 9:02	42	36	33.5	6	66	12.8		498.7	57.05	2969.55
1/11/2014		9:03	1/11/2014 9:03	42	38	34	8	66	17.3		15.0	1.72	2971.27
1/11/2014		10:40	1/11/2014 10:40	39	36	33	10	69	21.2		1868.7	213.78	3185.05

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/11/2014	10:41	1/11/2014 10:41	39	37	33.5	12	69	25.7		23.4	2.68	3187.73
	1/11/2014	11:37	1/11/2014 11:37	37	37	33	13	70	27.8		1497.4	171.30	3359.03
	1/11/2014	11:38	1/11/2014 11:38	37	37	33	14	70	29.9		28.9	3.30	3362.33
	1/11/2014	12:25	1/11/2014 12:25	46	40	34	20	70	44.0		1737.6	198.78	3561.11
	1/11/2014	12:26	1/11/2014 12:26								44.0	5.03	3566.15
	1/11/2014	12:27	1/11/2014 12:27			28							3566.15
SW-13 Event 6	1/13/2014	12:20	1/13/2014 12:20	48	31	28	<2	70	0.0				3566.15
	1/13/2014	12:21	1/13/2014 12:21	48	33	30.5	3.5	70	7.2		3.6	0.41	3566.56
	1/13/2014	12:22	1/13/2014 12:22	48	35	32.5	7	70	14.7		10.9	1.25	3567.81
	1/13/2014	12:24	1/13/2014 12:24	48	37.5	33	8.5	70	18.3		32.9	3.77	3571.57
	1/13/2014	14:26	1/13/2014 14:26	40	36	32.5	10	70	21.2		2405.4	275.17	3846.75
	1/13/2014	14:28	1/13/2014 14:28	40	37	33	12.2	70	26.1		47.3	5.41	3852.16
	1/13/2014	15:46	1/13/2014 15:46	38	37	32.8	12.2	66	26.2		2038.6	233.22	4085.37
	1/13/2014	16:44	1/13/2014 16:44	38	37	32.2	14	66	30.1		1630.9	186.58	4271.95
	1/13/2014	17:00	1/13/2014 17:00	42	37	32.2	15	66	32.2		498.0	56.97	4328.92
	1/13/2014	17:02	1/13/2014 17:02								64.4	7.37	4336.29
	1/13/2014	17:04	1/13/2014 17:04			26							4336.29
SW-13 Event 7	1/14/2014	12:17	1/14/2014 12:17	43	27	29.2	<2	63	0.0				4336.29
	1/14/2014	12:19	1/14/2014 12:19	43	31	31	8	63	16.2		16.2	1.85	4338.14
	1/14/2014	12:21	1/14/2014 12:21	43	32	32.6	12	65	24.5		40.7	4.65	4342.79
	1/14/2014	13:03	1/14/2014 13:03	46	31	31.4	16	67	32.2		1190.9	136.24	4479.04
	1/14/2014	13:04	1/14/2014 13:04	46	33	31.4	18	67	37.1		34.6	3.96	4483.00
	1/14/2014	13:06	1/14/2014 13:06	46	34	32.5	20.2	67	42.0		79.1	9.05	4492.04
	1/14/2014	15:50	1/14/2014 15:50	45	36	33.4	18	70	38.1		6570.3	751.64	5243.69
	1/14/2014	16:22	1/14/2014 16:22	44	36	33.4	19	70	40.2		1253.2	143.37	5387.06
	1/14/2014	16:23	1/14/2014 16:23			27.6					40.2	4.60	5391.66
SW-13 Event 8	1/15/2014	12:18	1/15/2014 12:18	45	27.5	26	<2	69	0.0				5391.66
	1/15/2014	12:19	1/15/2014 12:19	45	34	30	8.5	69	17.6		8.8	1.01	5392.67
	1/15/2014	12:21	1/15/2014 12:21	45	36	32	12	69	25.4		43.1	4.93	5397.60
	1/15/2014	13:45	1/15/2014 13:45	47	35	30.5	15.2	64	32.0		2413.8	276.14	5673.74
	1/15/2014	13:46	1/15/2014 13:46	47	37.5	32	18.2	64	39.3		35.7	4.08	5677.82
	1/15/2014	15:34	1/15/2014 15:34	45	37.5	32	18.2	67	39.2		4242.1	485.29	6163.11
	1/15/2014	16:31	1/15/2014 16:31	48	37	31.2	19	65	40.8		2281.3	260.98	6424.09
	1/15/2014	16:32	1/15/2014 16:32								40.8	4.67	6428.76
	1/15/2014	16:33	1/15/2014 16:33			25							6428.76
SW-13 Event 9	1/16/2014	12:21	1/16/2014 12:21	45	28	29.6	<2	60	0.0				6428.76
	1/16/2014	12:22	1/16/2014 12:22	45	31	32.2	9.8	60	19.9		9.9	1.14	6429.90
	1/16/2014	12:24	1/16/2014 12:24	45	32	32.4	12	60	24.6		44.5	5.09	6434.98
	1/16/2014	12:25	1/16/2014 12:25	45	34	33.6	15	60	31.4		28.0	3.20	6438.19
	1/16/2014	13:07	1/16/2014 13:07	45	34	32.8	17	60	35.6		1407.7	161.04	6599.23
	1/16/2014	14:43	1/16/2014 14:43	46	34	32.8	17.5	61	36.6		3467.1	396.64	6995.87
	1/16/2014	15:47	1/16/2014 15:47	48	34	32.8	17	61	35.6		2310.3	264.30	7260.17
	1/16/2014	16:22	1/16/2014 16:22	43	34	32.8	17	61	35.6		1245.1	142.44	7402.61
	1/16/2014	16:23	1/16/2014 16:23			28					35.6	4.07	7406.68
SW-13 Event 10	1/17/2014	12:18	1/17/2014 12:18	45	26.5	27.6	6	70	11.4				7406.68
	1/17/2014	12:19	1/17/2014 12:19	45	32	32	12.2	70	24.8		18.1	2.07	7408.75
	1/17/2014	12:20	1/17/2014 12:20	45	33	32.6	15.7	70	32.2		28.5	3.26	7412.01
	1/17/2014	12:51	1/17/2014 12:51	43	33	32.2	16.5	68	33.9		1025.4	117.30	7529.31
	1/17/2014	12:53	1/17/2014 12:53	43	34.5	32.8	18	68	37.6		71.5	8.18	7537.49
	1/17/2014	14:07	1/17/2014 14:07	42	35	33.6	17	67	35.7		2713.3	310.40	7847.90
	1/17/2014	14:39	1/17/2014 14:39	45	36	33.8	17	67	36.1		1149.2	131.47	7979.37

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/17/2014	16:09	1/17/2014 16:09	55	35	33.6	17.8	67	37.4		3307.8	378.42	8357.78
	1/17/2014	16:10	1/17/2014 16:10								37.4	4.28	8362.06
	1/17/2014	16:11	1/17/2014 16:11			29.2							8362.06
SW-13 Event 11	12/15/2014	8:00	12/15/2014 8:00		29	30	6	42	12.1				8362.06
	12/15/2014	8:16	12/15/2014 8:16		29	29	8	50	16.0		225.1	25.75	8387.81
	12/15/2014	8:17	12/15/2014 8:17		34	33	16	50	33.9		24.9	2.85	8390.67
	12/15/2014	9:15	12/15/2014 9:15		34	33	15	61	31.4		1892.2	216.46	8607.13
	12/15/2014	10:56	12/15/2014 10:56		34	33	16	69	33.2		3262.7	373.25	8980.38
	12/15/2014	12:18	12/15/2014 12:18		34	32.5	16	71	33.2		2721.2	311.31	9291.69
	12/15/2014	12:19	12/15/2014 12:19		37	34	20	71	42.7		37.9	4.34	9296.03
	12/15/2014	12:36	12/15/2014 12:36		37	34	19.5	71	41.7		717.2	82.04	9378.07
	12/15/2014	14:10	12/15/2014 14:10		38	34	20	74	43.0		3979.1	455.21	9833.29
	12/15/2014	16:00	12/15/2014 16:00		38	34	20	74	43.0		4731.2	541.25	10374.54
	12/15/2014	17:10	12/15/2014 17:10		38	33	20	64	43.4		3025.7	346.14	10720.68
	12/15/2014	17:11	12/15/2014 17:11			27.5					43.4	4.97	10725.65
SW-13 Event 12	12/17/2014	12:35	12/17/2014 12:35		29	29	0	80	0.0				10725.65
	12/17/2014	12:42	12/17/2014 12:42		34	31	15	80	30.8		107.8	12.34	10737.99
	12/17/2014	14:07	12/17/2014 14:07		34	31	16	72	33.1		2717.1	310.84	11048.83
	12/17/2014	15:42	12/17/2014 15:42		34	30	16	70	33.2		3149.6	360.31	11409.14
	12/17/2014	15:43	12/17/2014 15:43		38	33.5	20	70	43.2		38.2	4.37	11413.50
	12/17/2014	17:02	12/17/2014 17:02		38	33	21	62	45.7		3510.8	401.63	11815.14
	12/17/2014	17:03	12/17/2014 17:03			28					45.7	5.23	11820.37
SW-13 Event 13	12/19/2014	7:29	12/19/2014 7:29		27	27	0	44	0.0				11820.37
	12/19/2014	7:41	12/19/2014 7:41		37	33	18	48	39.3		236.1	27.01	11847.37
	12/19/2014	9:07	12/19/2014 9:07		37	32	18	60	38.9		3363.3	384.77	12232.14
	12/19/2014	9:08	12/19/2014 9:08		40	34	22	60	48.9		43.9	5.02	12237.16
	12/19/2014	10:14	12/19/2014 10:14		40	33	22	65	48.6		3218.8	368.23	12605.39
	12/19/2014	10:15	12/19/2014 10:15		42	34	22	65	49.5		49.1	5.62	12611.01
	12/19/2014	11:33	12/19/2014 11:33		42	34	22	65	49.5		3864.5	442.10	13053.11
	12/19/2014	11:34	12/19/2014 11:34			26					49.5	5.67	13058.78
Total CO ₂ Mass (lbs):												13058.78	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)	
SW-14 Event 1	11/21/2013	9:15	11/21/2013 9:15	55	28			65	0.0				0.00	
	11/21/2013	9:19	11/21/2013 9:19		32	32	<2	64	0.0		0.0	0.00	0.00	
	11/21/2013	9:37	11/21/2013 9:37		30	30	6.5	66	13.0		116.6	13.34	13.34	
	11/21/2013	9:38	11/21/2013 9:38		34	33	10	67	20.8		16.9	1.93	15.27	
	11/21/2013	10:07	11/21/2013 10:07		34	32	15	68	31.2		753.6	86.22	101.49	
	11/21/2013	10:43	11/21/2013 10:43	50	32	31	16	70	32.5		1145.9	131.09	232.58	
	11/21/2013	11:48	11/21/2013 11:48		34	30	17.0	71	35.2		2200.6	251.75	484.33	
	11/21/2013	11:53	11/21/2013 11:53		39	33	21.0	71	45.7		202.4	23.15	507.48	
	11/21/2013	13:06	11/21/2013 13:06	45	38	33	22	72	47.4		3399.4	388.89	896.38	
	11/21/2013	13:29	11/21/2013 13:29		38	33	22	72	47.4		1090.3	124.73	1021.11	
	11/21/2013	13:30	11/21/2013 13:30								47.4	5.42	1026.53	
	11/21/2013	13:32	11/21/2013 13:32										1026.53	
SW-14 Event 2	12/11/2013	9:19	12/11/2013 9:19	51	32.5	33	4.5	62	9.3				1026.53	
	12/11/2013	9:48	12/11/2013 9:48	50	31	30.4	10	67	20.1		426.3	48.77	1075.30	
	12/11/2013	9:50	12/11/2013 9:50	50	31	30.4	11.5	67	23.2		43.3	4.95	1080.25	
	12/11/2013	10:25	12/11/2013 10:25	50	31	30	12	67	24.2		828.3	94.76	1175.01	
	12/11/2013	11:01	12/11/2013 11:01	50	31	29.6	13.5	70	27.1		923.1	105.60	1280.61	
	12/11/2013	11:32	12/11/2013 11:32	50	31	30	14	71	28.1		855.6	97.88	1378.49	
	12/11/2013	11:33	12/11/2013 11:33	50	31	30.4	16	71	32.1		30.1	3.44	1381.93	
	12/11/2013	12:17	12/11/2013 12:17	46	31	30.4	16	70	32.1		1413.1	161.66	1543.59	
	12/11/2013	13:53	12/11/2013 13:53	45	36	30.4	16	66	34.0		3174.6	363.17	1906.76	
	12/11/2013	13:54	12/11/2013 13:54								34.0	3.89	1910.65	
	12/11/2013	13:55	12/11/2013 13:55										1910.65	
	SW-14 Event 3	12/19/2013	13:04	12/19/2013 13:04	50	34	31.5	<2	72	0.0				1910.65
12/19/2013		13:40	12/19/2013 13:40	45	30	26	13.5	74	26.7		480.7	54.99	1965.64	
12/19/2013		13:41	12/19/2013 13:41	45	32.5	29	17	74	34.6		30.6	3.50	1969.15	
12/19/2013		13:43	12/19/2013 13:43	45	35	30	19.5	74	40.7		75.3	8.61	1977.76	
12/19/2013		15:17	12/19/2013 15:17	40	33	30.4	24.3	71	49.8		4254.9	486.76	2464.52	
12/19/2013		15:19	12/19/2013 15:19								99.6	11.40	2475.92	
12/19/2013		15:19	12/19/2013 15:19										2475.92	
SW-14 Event 4	1/8/2014	12:18	1/8/2014 12:18				0	58.0	0.0				2475.92	
	1/8/2014	12:19	1/8/2014 12:19	45	29.5	28	11	58.0	22.0		0.0	0.00	2475.92	
	1/8/2014	12:21	1/8/2014 12:21	45	33	30	20	58.0	41.5		63.5	7.27	2483.18	
	1/8/2014	12:36	1/8/2014 12:36	48	32.5	28.4	26	58.0	53.7		714.4	81.72	2564.91	
	1/8/2014	12:37	1/8/2014 12:37	49	34	29.4	28	58.0	58.8		56.2	6.43	2571.34	
	1/8/2014	13:18	1/8/2014 13:18	52	33	28	30	56.0	62.4		2484.7	284.25	2855.59	
	1/8/2014	14:04	1/8/2014 14:04	50	32.5	27.2	31	55.0	64.2		2913.4	333.29	3188.88	
	1/8/2014	15:20	1/8/2014 15:20	48	32.5	26.6	32	54.0	66.4		4963.1	567.78	3756.66	
	1/8/2014	16:33	1/8/2014 16:33	46	32	26	32	53.0	66.1		4834.6	553.08	4309.74	
	1/8/2014	16:44	1/8/2014 16:44	46	32	26	32	52.0	66.1		727.3	83.20	4392.94	
	1/8/2014	16:45	1/8/2014 16:45								66.1	7.57	4400.51	
	1/8/2014	16:46	1/8/2014 16:46			19.6							4400.51	
	1/11/2014	8:09	1/11/2014 8:09				0			0				4400.51
	1/11/2014	8:10	1/11/2014 8:10	48	31.5	30.4	14	64	28.4		14.2	1.63	4402.13	
1/11/2014	8:14	1/11/2014 8:14	45	32.5	30.4	21.5	64	44.2		145.2	16.61	4418.74		
1/11/2014	9:05	1/11/2014 9:05	42	31	27.6	24.5	66	49.4		2385.4	272.89	4691.63		
1/11/2014	9:06	1/11/2014 9:06	40	34	29.2	28	66	58.3		53.8	6.16	4697.79		
1/11/2014	10:42	1/11/2014 10:42	39	31.5	27	28	69	56.6		5515.3	630.95	5328.74		
1/11/2014	11:40	1/11/2014 11:40	37	31	26.2	28	70	56.2		3272.0	374.32	5703.06		
1/11/2014	12:28	1/11/2014 12:28	46	36	28.4	29	70	61.4		2822.9	322.94	6026.00		
1/11/2014	12:29	1/11/2014 12:29								61.4	7.02	6033.02		
1/11/2014	12:30	1/11/2014 12:30			19							6033.02		

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-14 Event 6	1/23/2014	7:58	1/23/2014 7:58	55	32.5	31	8	34	16.9				6033.02
	1/23/2014	8:02	1/23/2014 8:02	55	32.5	31	18.3	34	38.8		111.4	12.74	6045.77
	1/23/2014	8:17	1/23/2014 8:17	52	30	30	20.3	44	41.4		601.0	68.75	6114.52
	1/23/2014	8:55	1/23/2014 8:55	49	30	22.5	21.2	50	42.9		1602.1	183.29	6297.80
	1/23/2014	9:35	1/23/2014 9:35	46	29.5	22	21.2	50	42.7		1713.0	195.96	6493.76
	1/23/2014	9:36	1/23/2014 9:36	46	30	23.5	24.8	50	50.2		46.5	5.32	6499.08
	1/23/2014	10:05	1/23/2014 10:05	45	30	23	24.8	50	50.2		1456.9	166.67	6665.75
	1/23/2014	11:15	1/23/2014 11:15	42	30	22.5	25.8	52	52.2		3583.9	410.00	7075.76
	1/23/2014	12:03	1/23/2014 12:03	41	30	22.2	25.9	54	52.3		2506.0	286.68	7362.44
	1/23/2014	12:06	1/23/2014 12:06								156.8	17.93	7380.37
	1/23/2014	12:07	1/23/2014 12:07			17							7380.37
SW-14 Event 7	1/24/2014	7:52	1/24/2014 7:52	52	32	32.4	10	39	21.0				7380.37
	1/24/2014	7:53	1/24/2014 7:53	52	29	30.4	16	39	32.4		26.7	3.05	7383.43
	1/24/2014	7:54	1/24/2014 7:54	51	32	31.2	23.7	39	49.7		41.0	4.69	7388.12
	1/24/2014	7:57	1/24/2014 7:57	55	32	30	24.5	40	51.3		151.4	17.32	7405.44
	1/24/2014	8:12	1/24/2014 8:12	51	31	28.6	25.8	45	53.1		783.0	89.58	7495.02
	1/24/2014	8:33	1/24/2014 8:33	50	31	28.6	25.9	46	53.3		1117.3	127.82	7622.83
	1/24/2014	8:59	1/24/2014 8:59	50	31	28.4	25.9	46	53.3		1385.3	158.47	7781.30
	1/24/2014	9:44	1/24/2014 9:44	49	30.5	28	26	48	53.1		2393.0	273.76	8055.06
	1/24/2014	10:47	1/24/2014 10:47	49	30.2	27.4	26.5	51	53.8		3365.1	384.96	8440.03
	1/24/2014	11:49	1/24/2014 11:49	49	30.2	26	27	55	54.5		3357.1	384.05	8824.08
	1/24/2014	11:53	1/24/2014 11:53			20					218.2	24.96	8849.04
SW-14 Event 8	1/28/2014	11:27	1/28/2014 11:27				0		0.0				8849.04
	1/28/2014	11:28	1/28/2014 11:28	52	33	29	9.5	54	19.8		9.9	1.13	8850.17
	1/28/2014	11:30	1/28/2014 11:30	50	35	27.5	20	53	42.6		62.4	7.14	8857.32
	1/28/2014	11:45	1/28/2014 11:45	50	34	25	24	53	50.6		699.5	80.02	8937.34
	1/28/2014	11:46	1/28/2014 11:46	50	35	5	26.5	53	56.5		53.6	6.13	8943.46
	1/28/2014	13:20	1/28/2014 13:20	48	38	27	28	51	61.6		5550.8	635.01	9578.48
	1/28/2014	14:20	1/28/2014 14:20	48	38	26	28	51	61.6		3697.0	422.94	10001.42
	1/28/2014	15:45	1/28/2014 15:45	48	38	24.5	29.5	51	64.9		5377.7	615.21	10616.63
	1/28/2014	16:40	1/28/2014 16:40	51	37.5	24	30	51	65.7		3592.0	410.92	11027.55
	1/28/2014	16:42	1/28/2014 16:42			18					131.4	15.03	11042.58
	SW-14 Event 9	2/4/2014	9:42	2/4/2014 9:42	55	32	33	<2	60	0.0			
2/4/2014		10:01	2/4/2014 10:01	53	30.5	31.4	6	60	12.1		115.0	13.15	11055.73
2/4/2014		10:05	2/4/2014 10:05	53	32	32.2	10	60	20.5		65.2	7.46	11063.19
2/4/2014		11:43	2/4/2014 11:43	50	30	29	16.8	64	33.6		2649.2	303.06	11366.26
2/4/2014		11:45	2/4/2014 11:45	50	32.5	30.6	19.9	64	40.9		74.4	8.51	11374.77
2/4/2014		12:40	2/4/2014 12:40	50	32.5	30.4	20.8	64	42.7		2298.4	262.94	11637.71
2/4/2014		12:44	2/4/2014 12:44	49	33.5	31.2	21.9	64	45.5		176.3	20.17	11657.88
2/4/2014		13:23	2/4/2014 13:23	49	33.5	31.2	21.9	60	45.6		1776.2	203.20	11861.08
2/4/2014		14:25	2/4/2014 14:25	48	33	30.8	22.5	60	46.6		2860.4	327.23	12188.32
2/4/2014		14:47	2/4/2014 14:47	48	33	30.6	23	62	47.6		1036.4	118.56	12306.88
2/4/2014		15:37	2/4/2014 15:37	47	33	30.2	23	62	47.6		2378.9	272.15	12579.03
2/4/2014		16:32	2/4/2014 16:32	46	33	29.8	24	60	49.7		2676.4	306.19	12885.21
2/4/2014		17:45	2/4/2014 17:45	53	32	29.4	25	60	51.3		3686.9	421.78	13306.99
2/4/2014	17:47	2/4/2014 17:47			21					102.5	11.73	13318.72	
SW-14 Event 10	2/6/2014	8:10	2/6/2014 8:10	54	33	31	<2	50	0.0				13318.72
	2/6/2014	8:40	2/6/2014 8:40	54	30	28	<2	54	0.0		0.0	0.00	13318.72
	2/6/2014	8:43	2/6/2014 8:43	50	33.5	30.5	15.5	54	32.5		48.7	5.58	13324.30
	2/6/2014	10:37	2/6/2014 10:37	47	31.5	27	23.2	60	47.3		4549.1	520.41	13844.71
	2/6/2014	11:09	2/6/2014 11:09	46	31	26.5	23.8	61	48.2		1528.6	174.87	14019.58

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/6/2014	12:11	2/6/2014 12:11	45	30	25.5	25	62	50.0		3046.0	348.47	14368.05
	2/6/2014	14:11	2/6/2014 14:11	42	30	24.5	26	63	52.0		6121.5	700.30	15068.35
	2/6/2014	15:22	2/6/2014 15:22	43	30	24	26.3	60	52.7		3718.0	425.34	15493.69
	2/6/2014	16:37	2/6/2014 16:37	43	29.5	23.5	27	58	53.9		4000.9	457.71	15951.40
	2/6/2014	17:20	2/6/2014 17:20	47	29.5	23.5	27	58	53.9		2319.7	265.38	16216.77
	2/6/2014	17:21	2/6/2014 17:21			19					53.9	6.17	16222.95
SW-14 Event 11	3/6/2015	7:39	3/6/2015 7:39		29	30	0	53	0				16222.95
	3/6/2015	8:16	3/6/2015 8:16		28	28	<2	54	0		0	0	16222.95
	3/6/2015	8:18	3/6/2015 8:18		32	32	7	54	14.4		14.44	1.65	16224.60
	3/6/2015	9:00	3/6/2015 9:00		32	32	6.5	57	13.4		584.00	66.81	16291.41
	3/6/2015	10:11	3/6/2015 10:11		32	31.5	7.5	58	15.4		1021.65	116.88	16408.29
	3/6/2015	10:12	3/6/2015 10:12		35	33.5	10	58	21.2		18.31	2.09	16410.38
	3/6/2015	11:10	3/6/2015 11:10		35	33.5	10	59	21.2		1229.43	140.65	16551.03
	3/6/2015	11:11	3/6/2015 11:11			26					21.19	2.42	16553.45
SW-14 Event 12	3/11/2015	12:12	3/11/2015 12:12		32	32	14	95	27.8				16553.45
	3/11/2015	12:41	3/11/2015 12:41		32	27	16.5	90	32.9		879.0	100.56	16654.01
	3/11/2015	12:42	3/11/2015 12:42		42	33	23	90	50.6		41.7	4.77	16658.78
	3/11/2015	13:35	3/11/2015 13:35		42	32	24	84	53.1		2745.5	314.09	16972.87
	3/11/2015	14:54	3/11/2015 14:54		42	31	24	84	53.1		4191.2	479.47	17452.34
	3/11/2015	14:55	3/11/2015 14:55		44	32.5	25.5	84	57.4		55.2	6.32	17458.66
	3/11/2015	16:22	3/11/2015 16:22		44	32	26	78	58.8		5055.1	578.30	18036.96
	3/11/2015	17:50	3/11/2015 17:50		44	32	26.5	77	60.0		5230.0	598.31	18635.27
	3/11/2015	17:51	3/11/2015 17:51			20					60.0	6.87	18642.14
Total CO ₂ Mass (lbs):												18642.14	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-15 Event 1	11/21/2013	10:27	11/21/2013 10:27	49	28			70	0.0				
	11/21/2013	10:29	11/21/2013 10:29		30.5	30.5	<2	70	0.0		0.0	0.00	0.00
	11/21/2013	10:30	11/21/2013 10:30		33	33	<2	70	0.0		0.0	0.00	0.00
	11/21/2013	10:50	11/21/2013 10:50		32	32	<2	73	0.0		0.0	0.00	0.00
	11/21/2013	10:51	11/21/2013 10:51		34	34	2	73	4.1		2.1	0.24	0.24
	11/21/2013	11:56	11/21/2013 11:56		34	33.5	3	76	6.2		335.5	38.38	38.61
	11/21/2013	13:21	11/21/2013 13:21		34	33.5	4.0	77	8.2		613.1	70.14	108.75
	11/21/2013	17:23	11/21/2013 17:23		34	32.5	6.0	77	12.4		2492.6	285.16	393.91
	11/21/2013	17:25	11/21/2013 17:25								24.7	2.83	396.74
11/21/2013	17:26	11/21/2013 17:26										396.74	
SW-15 Event 2	12/12/2013	9:05	12/12/2013 9:05	52.5	30	30	<2	62	0.0				396.74
	12/12/2013	9:52	12/12/2013 9:52	50	30	30	<2	67	0.0		0.0	0.00	396.74
	12/12/2013	9:53	12/12/2013 9:53	50	32	32	4	67	8.1		4.1	0.47	397.21
	12/12/2013	10:46	12/12/2013 10:46	49	32	32	5	68	10.2		485.4	55.53	452.74
	12/12/2013	11:40	12/12/2013 11:40	45	32	31	6.5	70	13.2		631.0	72.18	524.92
	12/12/2013	11:41	12/12/2013 11:41	45	32.5	32.5	9.5	70	19.4		16.3	1.86	526.79
	12/12/2013	13:08	12/12/2013 13:08	45	32.5	32.5	9.5	70	19.4		1687.2	193.02	719.81
	12/12/2013	13:09	12/12/2013 13:09								19.4	2.22	722.02
	12/12/2013	13:10	12/12/2013 13:10										722.02
SW-15 Event 3	12/13/2013	8:57	12/13/2013 8:57	50	30	31	<2	66	0.0				722.02
	12/13/2013	9:46	12/13/2013 9:46	48	32	31	<2	68	0.0		0.0	0.00	722.02
	12/13/2013	10:42	12/13/2013 10:42	48	30	30.5	<2	70	0.0		0.0	0.00	722.02
	12/13/2013	10:43	12/13/2013 10:43	45	32	32.5	5	70	10.2		5.1	0.58	722.60
	12/13/2013	12:39	12/13/2013 12:39	45	32	32	5	70	10.2		1177.6	134.72	857.33
	12/13/2013	13:45	12/13/2013 13:45	45	32	32	5	70	10.2		670.0	76.65	933.98
	12/13/2013	14:53	12/13/2013 14:53	45	32	32	5.5	70	11.2		724.9	82.92	1016.90
	12/13/2013	14:54	12/13/2013 14:54								11.2	1.28	1018.18
	12/13/2013	14:55	12/13/2013 14:55			26							1018.18
SW-15 Event 4	12/16/2013	8:41	12/16/2013 8:41	45	32	33	<2	50	0.0				1018.18
	12/16/2013	9:25	12/16/2013 9:25	48	30	32	3	58.0	6.0		132.6	15.17	1033.35
	12/16/2013	10:17	12/16/2013 10:17	47.5	30	31	4	56.0	8.1		366.1	41.89	1075.24
	12/16/2013	11:20	12/16/2013 11:20	45	29	31	5	70	9.8		562.9	64.40	1139.64
	12/16/2013	13:24	12/16/2013 13:24	50	28	30	6	68	11.7		1331.8	152.35	1291.99
	12/16/2013	13:25	12/16/2013 13:25								11.7	1.33	1293.32
	12/16/2013	13:26	12/16/2013 13:26			25							1293.32
	12/16/2013	14:51	12/16/2013 14:51	45	28	28	10	70	19.4				1293.32
	12/16/2013	15:20	12/16/2013 15:20	45	28	30	8	69	15.5		506.6	57.96	1351.28
	12/16/2013	15:24	12/16/2013 15:24	45	32	32	9	69	18.3		67.7	7.74	1359.02
	12/16/2013	16:13	12/16/2013 16:13	45	32	33	9	68	18.3		896.7	102.59	1461.61
	12/16/2013	22:16	12/16/2013 22:16	50	32	32.5	10	58	20.5		7052.4	806.80	2268.41
	12/17/2013	8:56	12/17/2013 8:56	45	31	31	12	64	24.2		14332.2	1639.60	3908.01
	12/17/2013	10:51	12/17/2013 10:51	41	32	30.5	12	68	24.4		2797.6	320.05	4228.06
	12/17/2013	13:39	12/17/2013 13:39	45	31	31	13.5	69	27.1		4330.2	495.38	4723.44
12/17/2013	14:32	12/17/2013 14:32	45	31	31	13.5	70	27.1		1437.6	164.46	4887.90	
12/17/2013	15:56	12/17/2013 15:56	45	30	31	14	69	27.8		2307.5	263.97	5151.87	
12/17/2013	16:10	12/17/2013 16:10								389.6	44.57	5196.44	
12/17/2013	16:11	12/17/2013 16:11			25							5196.44	
SW-15 Event 5	12/19/2013	12:46	12/19/2013 12:46	50	30	32	<2	71	0.0				5196.44
	12/19/2013	13:14	12/19/2013 13:14	50	30	31	6	72	11.9		166.5	19.05	5215.49
	12/19/2013	13:15	12/19/2013 13:15	49	32	33	8.5	72	17.2		14.6	1.67	5217.15
	12/19/2013	15:59	12/19/2013 15:59	45	32	32	10	71	20.3		3075.8	351.87	5569.02

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/19/2013	16:56	12/19/2013 16:56	44	32	32	11	67	22.4		1216.5	139.17	5708.19
	12/19/2013	22:22	12/19/2013 22:22	50	40	31	12	60	26.7		7998.2	914.99	6623.18
	12/20/2013	7:38	12/20/2013 7:38	50	30	30	14	59	28.1		15226.9	1741.96	8365.14
	12/20/2013	8:38	12/20/2013 8:38	44	30	30	14	64	28.0		1682.1	192.43	8557.58
	12/20/2013	9:12	12/20/2013 9:12								950.8	108.78	8666.35
	12/20/2013	9:13	12/20/2013 9:13										8666.35
SW-15 Event 6	1/8/2015	8:30	1/8/2015 8:30		27	28	0	42	0.0				8666.35
	1/8/2015	8:42	1/8/2015 8:42		27	28	0	42	0.0		0.0	0.00	8666.35
	1/8/2015	10:34	1/8/2015 10:34		26	27	0	54	0.0		0.0	0.00	8666.35
	1/8/2015	10:35	1/8/2015 10:35		35	34.5	9	54	19.2		9.6	1.10	8667.45
	1/8/2015	11:30	1/8/2015 11:30		35	35	8	52	17.1		996.4	113.99	8781.44
	1/8/2015	13:06	1/8/2015 13:06		35	34.5	8.5	52	18.1		1689.9	193.32	8974.76
	1/8/2015	15:02	1/8/2015 15:02		35	34	9	52	19.2		2165.7	247.76	9222.52
	1/8/2015	16:59	1/8/2015 16:59		35	34	10	52	21.3		2371.6	271.31	9493.83
	1/8/2015	17:00	1/8/2015 17:00			27					21.3	2.44	9496.27
SW-15 Event 7	1/12/2015	8:30	1/12/2015 8:30		30	30	0	64	0.0				9496.27
	1/12/2015	8:55	1/12/2015 8:55		29	29	0	65	0.0		0.0	0.00	9496.27
	1/12/2015	8:56	1/12/2015 8:56		34	34.5	6	65	12.5		6.3	0.72	9496.99
	1/12/2015	11:24	1/12/2015 11:24		34	34	7	64	14.6		2006.2	229.51	9726.50
	1/12/2015	11:26	1/12/2015 11:26		35	35	8	64	16.9		31.5	3.60	9730.10
	1/12/2015	12:52	1/12/2015 12:52		35	35	8	69	16.8		1446.8	165.51	9895.61
	1/12/2015	13:45	1/12/2015 13:45		35	35	8	68	16.8		889.9	101.80	9997.41
	1/12/2015	15:14	1/12/2015 15:14		35	35	8	66	16.8		1496.5	171.20	10168.61
	1/12/2015	16:15	1/12/2015 16:15		35	35	8	66	16.8		1026.7	117.46	10286.07
	1/12/2015	17:09	1/12/2015 17:09		35	34	9	65	19.0		966.2	110.53	10396.60
	1/12/2015	17:10	1/12/2015 17:10			28					19.0	2.17	10398.77
SW-15 Event 8	2/18/2015	8:33	2/18/2015 8:33		33	33	0	54	0.0				10398.77
	2/18/2015	9:01	2/18/2015 9:01		32	32	0	56	0.0		0.0	0.00	10398.77
	2/18/2015	9:02	2/18/2015 9:02		36	37	8	56	17.2		8.6	0.98	10399.75
	2/18/2015	10:44	2/18/2015 10:44		36	36	9	63	19.2		1854.3	212.13	10611.88
	2/18/2015	12:33	2/18/2015 12:33		36	36	10	64	21.3		2206.2	252.39	10864.27
	2/18/2015	14:40	2/18/2015 14:40		36	35	11	65	23.4		2838.3	324.70	11188.97
	2/18/2015	15:52	2/18/2015 15:52		36	35	11	66	23.4		1684.1	192.66	11381.63
	2/18/2015	17:04	2/18/2015 17:04		36	34.5	11.5	64	24.5		1723.3	197.14	11578.77
	2/18/2015	17:05	2/18/2015 17:05			28					24.5	2.80	11581.57
SW-15 Event 9	2/20/2015	8:32	2/20/2015 8:32		32	32	0	45	0.0				11581.57
	2/20/2015	8:50	2/20/2015 8:50		31	31.5	0	50	0.0		0.0	0.00	11581.57
	2/20/2015	8:51	2/20/2015 8:51		36	37	8	50	17.3		8.6	0.99	11582.56
	2/20/2015	10:09	2/20/2015 10:09		36	35	10	60	21.4		1507.7	172.48	11755.04
	2/20/2015	11:46	2/20/2015 11:46		36	35	10	60	21.4		2073.9	237.26	11992.30
	2/20/2015	13:26	2/20/2015 13:26		36	35	11.5	59	24.6		2299.7	263.08	12255.38
	2/20/2015	15:56	2/20/2015 15:56		36	35	12	60	25.7		3770.2	431.31	12686.69
	2/20/2015	17:01	2/20/2015 17:01		36	34.5	12	56	25.8		1671.1	191.17	12877.86
	2/20/2015	17:02	2/20/2015 17:02			29					25.8	2.95	12880.81
SW-15 Event 10	2/23/2015	8:10	2/23/2015 8:10		32	34	0	66	0.0				12880.81
	2/23/2015	8:26	2/23/2015 8:26		31	32.5	3	66	6.0		48.4	5.54	12886.34
	2/23/2015	8:27	2/23/2015 8:27		35	36	10	66	21.0		13.5	1.55	12887.89
	2/23/2015	10:10	2/23/2015 10:10		35	36	10	73	20.9		2159.6	247.06	13134.95
	2/23/2015	11:56	2/23/2015 11:56		35	36	10	72	20.9		2215.9	253.50	13388.45
	2/23/2015	13:15	2/23/2015 13:15		35	36	10	70	21.0		1653.9	189.21	13577.66
	2/23/2015	15:15	2/23/2015 15:15		34	35.5	10	70	20.7		2501.8	286.21	13863.88

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/23/2015	17:26	2/23/2015 17:26		34	34.5	10	69	20.8		2718.4	310.99	14174.86
	2/23/2015	17:27	2/23/2015 17:27			30					20.8	2.38	14177.24
SW-15 Event 11	3/2/2015	8:08	3/2/2015 8:08		30	31	0	60	0.0				14177.24
	3/2/2015	8:33	3/2/2015 8:33		29	31	0	62	0.0		0.0	0.00	14177.24
	3/2/2015	8:34	3/2/2015 8:34		33	34.5	7	62	14.5		7.2	0.83	14178.07
	3/2/2015	8:52	3/2/2015 8:52		33	34	6	62	12.4		242.0	27.69	14205.75
	3/2/2015	8:53	3/2/2015 8:53		35	35.5	7	62	14.8		13.6	1.56	14207.31
	3/2/2015	10:07	3/2/2015 10:07		34	35	10	64	20.9		1319.1	150.90	14358.21
	3/2/2015	11:30	3/2/2015 11:30		34	34.5	11.5	65	24.0		1860.6	212.85	14571.06
	3/2/2015	12:34	3/2/2015 12:34		33	33	12	68	24.7		1556.7	178.09	14749.15
	3/2/2015	14:29	3/2/2015 14:29		33	32.5	13	73	26.6		2948.6	337.32	15086.47
	3/2/2015	16:39	3/2/2015 16:39		32	32	14	71	28.4		3575.1	408.99	15495.45
	3/2/2015	16:40	3/2/2015 16:40			26					28.4	3.25	15498.70
SW-15 Event 12	3/9/2015	8:02	3/9/2015 8:02		33	34.5	0	55	0.0				15498.70
	3/9/2015	8:42	3/9/2015 8:42		32	32.5	4.5	63	9.2		184.0	21.05	15519.75
	3/9/2015	8:44	3/9/2015 8:44		36	36	8	63	17.1		26.3	3.00	15522.76
	3/9/2015	9:49	3/9/2015 9:49		36	35	10.5	73	22.2		1274.5	145.81	15668.56
	3/9/2015	11:28	3/9/2015 11:28		36	34	12.5	76	26.3		2399.3	274.48	15943.04
	3/9/2015	12:22	3/9/2015 12:22		36	32.5	16	77	33.6		1618.6	185.17	16128.21
	3/9/2015	12:23	3/9/2015 12:23			26					33.6	3.85	16132.06
Total CO ₂ Mass (lbs):													16132.06

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-16 Event 1	11/23/2013	8:16	11/23/2013 8:16	50	28			70	0.0				
	11/23/2013	8:18	11/23/2013 8:18	54	30	33	<2	70	0.0		0.0	0.00	0.00
	11/23/2013	8:22	11/23/2013 8:22	54	31	33	<2	70	0.0		0.0	0.00	0.00
	11/23/2013	8:35	11/23/2013 8:35		31	32	<2	72.5	0.0		0.0	0.00	0.00
	11/23/2013	8:38	11/23/2013 8:38		33	35	<2	75	0.0		0.0	0.00	0.00
	11/23/2013	9:23	11/23/2013 9:23		33	34.5	3	80	6.1		137.2	15.70	15.70
	11/23/2013	10:21	11/23/2013 10:21		32	34	4.0	84	8.0		409.2	46.81	62.51
	11/23/2013	10:22	11/23/2013 10:22		34	36	6.0	84	12.3		10.1	1.16	63.67
	11/23/2013	11:26	11/23/2013 11:26		34	36	6	83	12.3		786.1	89.93	153.60
	11/23/2013	11:29	11/23/2013 11:29		36	37.5	6.5	83	13.6		38.8	4.44	158.04
	11/23/2013	12:38	11/23/2013 12:38	50	36	37.5	6.5	82	13.6		938.0	107.31	265.35
	11/23/2013	12:55	11/23/2013 12:55		36	37.5	6.5	82	13.6		231.2	26.45	291.80
	11/23/2013	12:57	11/23/2013 12:57								27.2	3.11	294.92
	11/23/2013	12:58	11/23/2013 12:58			31							294.92
SW-16 Event 2	11/25/2013	10:35	11/25/2013 10:35	48	24			66					294.92
	11/25/2013	10:40	11/25/2013 10:40	55	28	28.4	<2	68	0.0		0.0	0.00	294.92
	11/25/2013	10:43	11/25/2013 10:43	55	32	32.8	<2	68	0.0		0.0	0.00	294.92
	11/25/2013	11:03	11/25/2013 11:03		35	37.2	4	64	8.4		84.3	9.65	304.56
	11/25/2013	11:30	11/25/2013 11:30	54	35	37.2	3.5	63	7.4		213.5	24.43	328.99
	11/25/2013	12:12	11/25/2013 12:12		35	36.8	4	68	8.4		331.5	37.92	366.91
	11/25/2013	12:48	11/25/2013 12:48	54	35	36.4	5	67	10.5		340.3	38.94	405.85
	11/25/2013	13:56	11/25/2013 13:56	54	35	36	5.5	68	11.5		750.0	85.80	491.64
	11/25/2013	15:12	11/25/2013 15:12	54	36	36	6	67	12.7		922.9	105.58	597.23
	11/25/2013	16:02	11/25/2013 16:02		37	36	7.5	64	16.1		721.8	82.57	679.80
	11/25/2013	16:03	11/25/2013 16:03								16.1	1.85	681.64
	11/25/2013	16:04	11/25/2013 16:04			28.4							681.64
	SW-16 Event 3	12/6/2013	8:42	12/6/2013 8:42	51	34	33.5	<2	76	0.0			
12/6/2013		9:20	12/6/2013 9:20	47	34	33	<2	82	0.0		0.0	0.00	681.64
12/6/2013		9:21	12/6/2013 9:21	47	34	34.5	3	82	6.2		3.1	0.35	682.00
12/6/2013		10:31	12/6/2013 10:31	45	34	34.5	3	84	6.1		430.1	49.21	731.20
12/6/2013		11:25	12/6/2013 11:25	44	34	34.5	3	85	6.1		331.3	37.90	769.11
12/6/2013		13:11	12/6/2013 13:11	49	34	34.5	4	82	8.2		759.7	86.91	856.01
12/6/2013		13:12	12/6/2013 13:12								8.2	0.94	856.95
12/6/2013		13:13	12/6/2013 13:13			28.5							856.95
SW-16 Event 4	12/11/2013	9:04	12/11/2013 9:04	52	32	31	<2	66	0.0				856.95
	12/11/2013	9:34	12/11/2013 9:34	52.5	31	31	<2	70	0.0		0.0	0.00	856.95
	12/11/2013	9:36	12/11/2013 9:36	52.5	32	32	<2	70	0.0		0.0	0.00	856.95
	12/11/2013	10:05	12/11/2013 10:05	51	32	32	<2	70	0.0		0.0	0.00	856.95
	12/11/2013	11:09	12/11/2013 11:09	51	32	32	<2	74	0.0		0.0	0.00	856.95
	12/11/2013	11:16	12/11/2013 11:16	50	32	32.5	3.5	74	7.1		24.8	2.83	859.79
	12/11/2013	11:17	12/11/2013 11:17	50	34	34	4	74	8.3		7.7	0.88	860.66
	12/11/2013	11:48	12/11/2013 11:48	50	34	34	4	72	8.3		256.4	29.34	890.00
	12/11/2013	12:37	12/11/2013 12:37	50	34	34	4.5	70	9.3		431.5	49.37	939.37
	12/11/2013	13:36	12/11/2013 13:36								550.7	63.00	1002.37
	12/11/2013	13:37	12/11/2013 13:37			28							1002.37
	SW-16 Event 5	12/11/2013	17:36	12/11/2013 17:36		32	34	<2	62	0			
12/11/2013		22:14	12/11/2013 22:14		32	34	<2	62	0.0		0.0	0.00	1002.37
12/12/2013		8:06	12/12/2013 8:06		32	32.5	4	58	8.2		2432.7	278.31	1280.67
12/12/2013		9:05	12/12/2013 9:05			25					484.9	55.47	1336.14
12/12/2013	9:07	12/12/2013 9:07										1336.14	
SW-16 Event 6	12/19/2013	9:14	12/19/2013 9:14	45	37	34	<2	64	0.0				1336.14

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/19/2013	9:50	12/19/2013 9:50	45	34	32	4	68	8.3		149.6	17.12	1353.26
	12/19/2013	9:52	12/19/2013 9:52	41	34	34	7	68	14.5		22.9	2.62	1355.88
	12/19/2013	11:39	12/19/2013 11:39	44	34	32.5	7	72	14.5		1553.5	177.72	1533.60
	12/19/2013	11:40	12/19/2013 11:40	44	35	34.5	9.5	72	19.9		17.2	1.97	1535.56
	12/19/2013	13:12	12/19/2013 13:12	49	37.5	35.5	10	72	21.4		1900.4	217.41	1752.97
	12/19/2013	13:13	12/19/2013 13:13	49	35	34	5.5	72	11.5		16.5	1.88	1754.85
	12/19/2013	15:58	12/19/2013 15:58	45	34	33	9	71	18.6		2487.6	284.58	2039.43
	12/19/2013	16:55	12/19/2013 16:55	44	34	33	9	67	18.7		1065.1	121.84	2161.27
	12/19/2013	22:20	12/19/2013 22:20	50	34	32	12	60	25.1		7127.1	815.34	2976.61
	12/20/2013	7:37	12/20/2013 7:37	50	34	30	14	59	29.4		15176.3	1736.16	4712.78
	12/20/2013	7:38	12/20/2013 7:38								29.4	3.36	4716.14
	12/20/2013	7:39	12/20/2013 7:39			24							4716.14
SW-16 Event 7	1/7/2014	9:17	1/7/2014 9:17					40					4716.14
	1/7/2014	9:18	1/7/2014 9:18	55	31.5	32.5	<2	40	0.0		0.0	0.00	4716.14
	1/7/2014	9:25	1/7/2014 9:25	54	32.5	30	4.5	40	9.5		33.1	3.79	4719.93
	1/7/2014	9:57	1/7/2014 9:57	53	32	33	4	43	8.3		285.0	32.61	4752.54
	1/7/2014	10:45	1/7/2014 10:45	51	32	33	4	46	8.3		400.0	45.76	4798.29
	1/7/2014	11:46	1/7/2014 11:46	50	32	33	4	48	8.3		507.0	58.00	4856.29
	1/7/2014	13:19	1/7/2014 13:19	50	31.5	33	4	50	8.2		769.2	88.00	4944.29
	1/7/2014	14:09	1/7/2014 14:09	50	31.5	33	4.5	50	9.3		437.8	50.08	4994.37
	1/7/2014	15:23	1/7/2014 15:23	50	31.5	32.5	5	53	10.3		723.0	82.71	5077.08
	1/7/2014	15:24	1/7/2014 15:24	50	33.5	34	8	53	16.8		13.5	1.55	5078.62
	1/7/2014	16:42	1/7/2014 16:42	49	34	34	8	48	17.0		1316.3	150.59	5229.21
	1/7/2014	17:22	1/7/2014 17:22	50	34	34	8	45	17.0		679.6	77.74	5306.95
	1/7/2014	17:23	1/7/2014 17:23								17.0	1.95	5308.90
	1/7/2014	17:24	1/7/2014 17:24			29							5308.90
SW-16 Event 8	1/13/2014	12:04	1/13/2014 12:04						0.0				5308.90
	1/13/2014	12:05	1/13/2014 12:05	50	34.5	34	9	72	18.7		9.4	1.07	5309.97
	1/13/2014	12:15	1/13/2014 12:15	49	34	34	6	71	12.4		155.8	17.82	5327.79
	1/13/2014	12:44	1/13/2014 12:44	46	33	33	8	70	16.4		418.3	47.86	5375.65
	1/13/2014	12:45	1/13/2014 12:45	46	34.5	34.5	10	70	20.8		18.6	2.13	5377.78
	1/13/2014	13:48	1/13/2014 13:48	45	34	34.5	10	68	20.8		1311.4	150.02	5527.80
	1/13/2014	14:44	1/13/2014 14:44	44	34	34	10.5	68	21.8		1192.9	136.47	5664.27
	1/13/2014	16:03	1/13/2014 16:03	42	34	34	10.5	67	21.8		1724.7	197.31	5861.58
	1/13/2014	17:08	1/13/2014 17:08	51	35	34.5	11.5	66	24.2		1496.2	171.17	6032.74
	1/13/2014	21:45	1/13/2014 21:45	50	34.5	34	12	64	25.2		6836.7	782.12	6814.86
	1/14/2014	7:45	1/14/2014 7:45	50	33	32.5	15.5	63	32.0		17159.8	1963.08	8777.94
	1/14/2014	7:46	1/14/2014 7:46								32.0	3.66	8781.60
	1/14/2014	7:47	1/14/2014 7:47			28							8781.60
SW-16 Event 9	1/15/2014	9:22	1/15/2014 9:22	49	25	25	6	62	11.3				8781.60
	1/15/2014	9:23	1/15/2014 9:23	49	33	31	12	62	24.8		18.1	2.07	8783.67
	1/15/2014	9:29	1/15/2014 9:29	46	32	30	14	62	28.7		160.4	18.35	8802.02
	1/15/2014	9:30	1/15/2014 9:30	46	34	31.5	16.5	62	34.5		31.6	3.61	8805.64
	1/15/2014	10:12	1/15/2014 10:12	44	33	31	16.5	68	33.9		1436.9	164.38	8970.02
	1/15/2014	11:31	1/15/2014 11:31	42	33	30.5	17	68	35.0		2721.1	311.30	9281.32
	1/15/2014	11:32	1/15/2014 11:32	42	34.5	33.5	17.8	68	37.2		36.1	4.13	9285.44
	1/15/2014	12:42	1/15/2014 12:42	43	37	33.2	20.2	66	43.4		2819.0	322.50	9607.94
	1/15/2014	12:44	1/15/2014 12:44								86.7	9.92	9617.86
	1/15/2014	12:51	1/15/2014 12:51			24							9617.86
SW-16 Event 10	1/15/2015	8:02	1/15/2015 8:02		29	30	0	51	0.0				9617.86
	1/15/2015	8:28	1/15/2015 8:28		33	33	8	52	16.7		217.3	24.86	9642.72

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/15/2015	9:42	1/15/2015 9:42		33	33	8	55	16.7		1235.1	141.30	9784.02
	1/15/2015	9:43	1/15/2015 9:43		36	35	13	55	27.9		22.3	2.55	9786.58
	1/15/2015	11:28	1/15/2015 11:28		36	35	13	57	27.9		2930.3	335.22	10121.80
	1/15/2015	14:09	1/15/2015 14:09		36	35	14	57	30.0		4661.2	533.24	10655.03
	1/15/2015	15:48	1/15/2015 15:48		36	35	14	55	30.1		2975.3	340.38	10995.41
	1/15/2015	17:07	1/15/2015 17:07		36	35	14	53	30.1		2379.1	272.17	11267.58
	1/15/2015	17:08	1/15/2015 17:08			30					30.1	3.45	11271.03
SW-16 Event 11	2/3/2015	12:42	2/3/2015 12:42		30	30	0	67	0.0				11271.03
	2/3/2015	12:52	2/3/2015 12:52		30	30	0	68	0.0		0.0	0.00	11271.03
	2/3/2015	12:53	2/3/2015 12:53		37	37	4	68	8.6		4.3	0.49	11271.52
	2/3/2015	14:34	2/3/2015 14:34		37	36	9.5	66	20.4		1462.5	167.32	11438.83
	2/3/2015	15:58	2/3/2015 15:58		37	36	10.5	64	22.6		1805.0	206.49	11645.32
	2/3/2015	17:11	2/3/2015 17:11		36	35.5	12	58	25.7		1762.7	201.65	11846.97
	2/3/2015	17:12	2/3/2015 17:12			29							11849.91
SW-16 Event 12	2/10/2015	12:38	2/10/2015 12:38		28	28	0	65	0.0				11849.91
	2/10/2015	12:40	2/10/2015 12:40		34	34	0	65	0.0		0.0	0.00	11849.91
	2/10/2015	13:44	2/10/2015 13:44		34	32	6	66	12.5		399.8	45.74	11895.65
	2/10/2015	13:45	2/10/2015 13:45		36	35.5	11	66	23.4		17.9	2.05	11897.70
	2/10/2015	15:18	2/10/2015 15:18		36	35.5	11.5	65	24.5		2224.7	254.51	12152.21
	2/10/2015	16:47	2/10/2015 16:47		36	35.5	12	63	25.6		2227.0	254.77	12406.98
	2/10/2015	16:48	2/10/2015 16:48			29					25.6	2.93	12409.91
SW-16 Event 13	2/12/2015	7:44	2/12/2015 7:44		28	30	0	52	0.0				12409.91
	2/12/2015	8:20	2/12/2015 8:20		28	28.5	3.5	56	6.9		123.9	14.18	12424.09
	2/12/2015	8:21	2/12/2015 8:21		37	36.5	14	56	30.4		18.6	2.13	12426.22
	2/12/2015	9:42	2/12/2015 9:42		38	36.5	14	67	30.3		2457.1	281.10	12707.31
	2/12/2015	11:51	2/12/2015 11:51		38	36	15	70	32.4		4044.2	462.66	13169.97
	2/12/2015	13:10	2/12/2015 13:10		38	36	15	72	32.3		2555.9	292.40	13462.37
	2/12/2015	13:11	2/12/2015 13:11			28					32.3	3.70	13466.06
SW-16 Event 14	2/20/2015	8:06	2/20/2015 8:06		32	32	0	38	0.0				13466.06
	2/20/2015	8:33	2/20/2015 8:33		31	30.5	5	44	10.3		139.1	15.92	13481.98
	2/20/2015	8:34	2/20/2015 8:34		37	35	12	44	26.3		18.3	2.10	13484.08
	2/20/2015	9:48	2/20/2015 9:48		37	35	13	54	28.2		2019.6	231.04	13715.12
	2/20/2015	11:34	2/20/2015 11:34		37	35	13.5	60	29.2		3042.0	348.00	14063.12
	2/20/2015	13:10	2/20/2015 13:10		37	35	14	60	30.2		2850.4	326.09	14389.21
	2/20/2015	15:18	2/20/2015 15:18		37	35	15	58	32.5		4012.1	458.98	14848.19
	2/20/2015	16:41	2/20/2015 16:41		37	35	14	56	30.4		2606.7	298.20	15146.40
	2/20/2015	16:42	2/20/2015 16:42			28					30.4	3.47	15149.87
SW-16 Event 15	2/23/2015	7:56	2/23/2015 7:56		36	36	5	64	10.6				15149.87
	2/23/2015	8:13	2/23/2015 8:13		36	35	9	65	19.1		253.3	28.97	15178.84
	2/23/2015	9:56	2/23/2015 9:56		35	33.5	11	70	23.1		2173.2	248.62	15427.46
	2/23/2015	9:57	2/23/2015 9:57		38	36	15	70	32.4		27.7	3.17	15430.63
	2/23/2015	11:42	2/23/2015 11:42		38	36	14	70	30.2		3287.1	376.04	15806.67
	2/23/2015	13:13	2/23/2015 13:13		38	36	14	68	30.3		2753.3	314.98	16121.65
	2/23/2015	14:58	2/23/2015 14:58		39	36	14.5	68	31.7		3252.6	372.10	16493.75
	2/23/2015	17:10	2/23/2015 17:10		39	36	14.5	68	31.7		4180.3	478.22	16971.97
	2/23/2015	17:11	2/23/2015 17:11			30					31.7	3.62	16975.60
Total CO ₂ Mass (lbs):												16975.60	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-17 Event 1	11/20/2013	9:49	11/20/2013 9:49	55	28			66	0.0				
	11/20/2013	9:51	11/20/2013 9:51		32		<2	66	0.0		0.0	0.00	0.00
	11/20/2013	10:05	11/20/2013 10:05		30	30	3	66	6.0		41.9	4.79	4.79
	11/20/2013	10:06	11/20/2013 10:06		34	32.5	5	66	10.4		8.2	0.94	5.73
	11/20/2013	11:05	11/20/2013 11:05	55	33	32.5	7	66	14.4		732.6	83.81	89.54
	11/20/2013	11:10	11/20/2013 11:10		35	33.5	9	66	18.9		83.4	9.54	99.08
	11/20/2013	13:09	11/20/2013 13:09		34	33	10	66	20.8		2365.6	270.63	369.70
	11/20/2013	14:56	11/20/2013 14:56		34	33	10.5	65	21.9		2284.9	261.39	631.10
	11/20/2013	15:00	11/20/2013 15:00								87.5	10.01	641.11
	11/20/2013	15:01	11/20/2013 15:01		25	25							641.11
SW-17 Event 2	12/5/2013	14:02	12/5/2013 14:02	53	36	34	<2	88	0.0				641.11
	12/5/2013	14:29	12/5/2013 14:29	53	35	33.5	3	86.0	6.2		83.6	9.56	650.67
	12/5/2013	15:33	12/5/2013 15:33	50	34	33	5	80.0	10.3		526.8	60.26	710.93
	12/5/2013	15:35	12/5/2013 15:35	50	36	35	9	80.0	18.9		29.1	3.33	714.27
	12/5/2013	16:45	12/5/2013 16:45	50	36	35	10	73.0	21.1		1399.2	160.06	874.33
	12/5/2013	17:30	12/5/2013 17:30	56	36	33.5	12	70.0	25.4		1046.5	119.72	994.05
	12/5/2013	17:32	12/5/2013 17:32								50.8	5.81	999.86
	12/5/2013	17:33	12/5/2013 17:33			27.5							999.86
	SW-17 Event 3	12/11/2013	13:30	12/11/2013 13:30	50	34	32	<2	67	0.0			
12/11/2013		14:01	12/11/2013 14:01	50	32	31	<2	67	0.0				999.86
12/11/2013		14:03	12/11/2013 14:03	50	35	33.5	3.5	66	7.4		7.4	0.84	1000.70
12/11/2013		14:30	12/11/2013 14:30	50	35	33.5	3.5	67	7.4		198.7	22.73	1023.44
12/11/2013		15:09	12/11/2013 15:09	50	34	33.5	5	66	10.4		346.5	39.64	1063.07
12/11/2013		15:35	12/11/2013 15:35	45	35	33	6	65	12.6		299.6	34.28	1097.35
12/11/2013		16:32	12/11/2013 16:32	47.5	34	33	8	64	16.7		835.8	95.62	1192.97
12/11/2013		17:08	12/11/2013 17:08	50	34	32	9.5	64	19.8		657.2	75.19	1268.16
12/11/2013		17:57	12/11/2013 17:57	55	34	31.5	12	60	25.1		1101.5	126.01	1394.16
12/11/2013		17:58	12/11/2013 17:58								25.1	2.88	1397.04
12/11/2013		17:59	12/11/2013 17:59			26							1397.04
SW-17 Event 4		12/17/2013	8:50	12/17/2013 8:50	45	35	33	<2	65.0	0.0		0.0	0.00
	12/17/2013	9:50	12/17/2013 9:50	45	34	33	4	66.0	8.3		249.9	28.59	1425.62
	12/17/2013	10:56	12/17/2013 10:56	42	35	32	7	72.0	14.6		758.0	86.72	1512.34
	12/17/2013	13:47	12/17/2013 13:47	45	35	29	13	74.0	27.1		3572.0	408.64	1920.98
	12/17/2013	13:48	12/17/2013 13:48	45	32.5	31	16	74.0	32.5		29.8	3.41	1924.39
	12/17/2013	14:54	12/17/2013 14:54	45	32.5	31	16	70.0	32.7		2151.5	246.14	2170.53
	12/17/2013	14:55	12/17/2013 14:55	45	35	31	19	70.0	39.8		36.2	4.15	2174.67
	12/17/2013	15:47	12/17/2013 15:47	45	35	31.5	19	68.0	39.9		2072.5	237.10	2411.77
	12/17/2013	22:22	12/17/2013 22:22	46	34	29	22	60.0	46.1		16981.0	1942.63	4354.40
	12/17/2013	22:24	12/17/2013 22:24	42.5	38	30.2	28	60.0	61.1		107.1	12.26	4366.66
	12/18/2013	8:45	12/18/2013 8:45	45	39	31	32	61.0	70.4		40810.8	4668.76	9035.42
	12/18/2013	8:49	12/18/2013 8:49								281.5	32.21	9067.62
	12/18/2013	8:50	12/18/2013 8:50			25							9067.62
	SW-17 Event 5	1/13/2015	8:09	1/13/2015 8:09		29	29	0	66	0.0			
1/13/2015		8:23	1/13/2015 8:23		32	32	7	66	14.3		99.9	11.43	9079.05
1/13/2015		9:38	1/13/2015 9:38		32	32	7	66	14.3		1070.2	122.43	9201.47
1/13/2015		12:04	1/13/2015 12:04		32	31	10	66	20.4		2529.7	289.39	9490.87
1/13/2015		12:06	1/13/2015 12:06		36	33	14	66	29.8		50.1	5.74	9496.60
1/13/2015		13:58	1/13/2015 13:58		36	32.5	16	66	34.0		3570.5	408.47	9905.07
1/13/2015		14:00	1/13/2015 14:00		38	33	18	66	39.0		73.0	8.35	9913.43
1/13/2015		15:53	1/13/2015 15:53		37	33	19.5	66	41.9		4569.4	522.73	10436.16
1/13/2015		17:28	1/13/2015 17:28		38	33	20	62	43.5		4055.6	463.97	10900.13

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/13/2015	17:29	1/13/2015 17:29			31					43.5	4.98	10905.11
SW-17 Event 6	2/11/2015	7:45	2/11/2015 7:45		29	30	0	47	0.0				10905.11
	2/11/2015	8:18	2/11/2015 8:18		28	30	4	54	7.9		130.1	14.88	10919.99
	2/11/2015	8:19	2/11/2015 8:19		36	34	16	54	34.4		21.2	2.42	10922.41
	2/11/2015	9:40	2/11/2015 9:40		37	34	15.5	63	33.4		2745.4	314.07	11236.48
	2/11/2015	11:09	2/11/2015 11:09		36	33.5	17	68	36.1		3089.6	353.45	11589.94
	2/11/2015	12:33	2/11/2015 12:33		36	32	18	72	38.0		3111.8	355.99	11945.92
	2/11/2015	12:34	2/11/2015 12:34			27					38.0	4.35	11950.27
SW-17 Event 7	2/13/2015	8:06	2/13/2015 8:06		30	32.5	0	53	0.0				11950.27
	2/13/2015	8:33	2/13/2015 8:33		29	30.5	<2	56	0.0		0.0	0.00	11950.27
	2/13/2015	8:34	2/13/2015 8:34		35	34.5	12	56	25.5		12.8	1.46	11951.73
	2/13/2015	9:37	2/13/2015 9:37		35	35	12	59	25.4		1604.1	183.51	12135.24
	2/13/2015	10:53	2/13/2015 10:53		35	34	14	64	29.5		2087.6	238.82	12374.06
	2/13/2015	11:15	2/13/2015 11:15		34	33	14	60	29.3		647.2	74.04	12448.11
	2/13/2015	11:16	2/13/2015 11:16			29.5					29.3	3.35	12451.46
SW-17 Event 8	2/16/2015	12:42	2/16/2015 12:42		30	30	0	76	0.0				12451.46
	2/16/2015	12:57	2/16/2015 12:57		35	34	14	76	29.2		218.8	25.03	12476.49
	2/16/2015	13:56	2/16/2015 13:56		35	34	14	72	29.3		1724.3	197.25	12673.74
	2/16/2015	13:57	2/16/2015 13:57		38	35	18	72	38.8		34.0	3.89	12677.64
	2/16/2015	16:48	2/16/2015 16:48		38	34	20	68	43.3		7015.4	802.56	13480.20
	2/16/2015	16:49	2/16/2015 16:49			30					43.3	4.95	13485.15
SW-17 Event 9	2/19/2015	12:32	2/19/2015 12:32		31	32	0	56	0.0				13485.15
	2/19/2015	12:56	2/19/2015 12:56		31	31	0	56	0.0		0.0	0.00	13485.15
	2/19/2015	12:57	2/19/2015 12:57		33	33	0	56	0.0		0.0	0.00	13485.15
	2/19/2015	14:00	2/19/2015 14:00		33	32	3	56	6.2		196.7	22.50	13507.64
	2/19/2015	14:01	2/19/2015 14:01		36	35	16	56	34.3		20.3	2.32	13509.97
	2/19/2015	16:04	2/19/2015 16:04		36	34.5	16	57	34.3		4222.6	483.06	13993.03
	2/19/2015	16:59	2/19/2015 16:59		36	34	16.5	56	35.4		1917.7	219.38	14212.41
	2/19/2015	17:00	2/19/2015 17:00			29					35.4	4.05	14216.46
SW-17 Event 10	2/24/2015	8:06	2/24/2015 8:06		30	32.5	0	56	0.0				14216.46
	2/24/2015	8:18	2/24/2015 8:18		30	31.5	5	57	10.1		60.3	6.90	14223.37
	2/24/2015	8:19	2/24/2015 8:19		36	36	14	57	30.0		20.0	2.29	14225.66
	2/24/2015	10:24	2/24/2015 10:24		36	34	16	58	34.3		4018.8	459.76	14685.41
	2/24/2015	13:05	2/24/2015 13:05		36	33	18	58	38.6		5863.7	670.80	15356.22
	2/24/2015	13:06	2/24/2015 13:06			28					38.6	4.41	15360.63
SW-17 Event 11	3/2/2015	8:30	3/2/2015 8:30		33	33	0	60	0.0				15360.63
	3/2/2015	8:46	3/2/2015 8:46		31	30	8	60	16.2		129.8	14.85	15375.48
	3/2/2015	8:47	3/2/2015 8:47		39	36	18	60	39.6		27.9	3.19	15378.68
	3/2/2015	10:11	3/2/2015 10:11		39	35	18	63	39.5		3323.8	380.24	15758.91
	3/2/2015	11:28	3/2/2015 11:28		38	34	19	64	41.3		3109.8	355.76	16114.68
	3/2/2015	12:37	3/2/2015 12:37		38	32	20	67	43.3		2917.8	333.80	16448.47
	3/2/2015	12:38	3/2/2015 12:38			25					43.3	4.95	16453.43
Total CO ₂ Mass (lbs):												16453.43	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-18 Event 1	11/22/2013	13:14	11/22/2013 13:14			31.5		82	0.0				
	11/22/2013	13:15	11/22/2013 13:15	58	30	31.5	<2	82	0.0		0.0	0.00	0.00
	11/22/2013	13:18	11/22/2013 13:18	58	32	33.5	<2	82	0.0		0.0	0.00	0.00
	11/22/2013	13:44	11/22/2013 13:44	56	30	30	13	82	25.5		331.7	37.95	37.95
	11/22/2013	14:06	11/22/2013 14:06	55	30	29.5	14	80	27.5		583.6	66.76	104.71
	11/22/2013	14:37	11/22/2013 14:37	53	30	29	16	76	31.6		916.4	104.84	209.55
	11/22/2013	15:07	11/22/2013 15:07	51	34	32	22	74	45.5		1155.6	132.20	341.75
	11/22/2013	15:51	11/22/2013 15:51	50	34	32	23	76	47.4		2043.3	233.76	575.51
	11/22/2013	16:46	11/22/2013 16:46	50	34	31	24	71	49.7		2671.8	305.65	881.17
	11/22/2013	17:22	11/22/2013 17:22	56	34	31	24	70	49.8		1791.2	204.91	1086.07
	11/22/2013	17:23	11/22/2013 17:23								49.8	5.69	1091.77
	11/22/2013	17:24	11/22/2013 17:24			25							1091.77
SW-18 Event 2	12/6/2013	12:39	12/6/2013 12:39	49	34	32.5	5.5	84	11.3				1091.77
	12/6/2013	13:36	12/6/2013 13:36	49	34	30.5	13.5	83	27.7		1108.8	126.85	1218.61
	12/6/2013	13:38	12/6/2013 13:38	47	35	33	20	83	41.4		69.0	7.90	1226.51
	12/6/2013	14:37	12/6/2013 14:37	46	35	32.5	21.5	80	44.6		2537.3	290.26	1516.78
	12/6/2013	15:56	12/6/2013 15:56	45	36	31	23	74	48.5		3678.3	420.79	1937.57
	12/6/2013	15:57	12/6/2013 15:57	45	36	31.5	24	74	50.6		49.6	5.67	1943.24
	12/6/2013	16:25	12/6/2013 16:25	45	36	31	24	72	50.7		1418.4	162.27	2105.51
	12/6/2013	16:45	12/6/2013 16:45	45	36	31	24	71	50.8		1014.6	116.08	2221.58
	12/6/2013	16:47	12/6/2013 16:47								101.5	11.61	2233.20
	12/6/2013	16:48	12/6/2013 16:48			25							2233.20
	SW-18 Event 3	12/12/2013	9:15	12/12/2013 9:15	50	35	33.5	14	62	29.6			
12/12/2013		9:57	12/12/2013 9:57	50	34	28	22	66	45.8		1583.0	181.10	2414.29
12/12/2013		9:58	12/12/2013 9:58	49	34	30	24	66	50.0		47.9	5.48	2419.77
12/12/2013		10:02	12/12/2013 10:02	49	35	30	26	66	54.7		209.4	23.95	2443.72
12/12/2013		10:35	12/12/2013 10:35	47	38	29.5	26.5	67	57.4		1849.4	211.57	2655.29
12/12/2013		11:31	12/12/2013 11:31	45	35	29	27	68	56.7		3194.2	365.41	3020.71
12/12/2013		11:32	12/12/2013 11:32	45	36	30	28	68	59.4		58.0	6.64	3027.35
12/12/2013		13:17	12/12/2013 13:17	45	36	28	30	70	63.5		6452.3	738.14	3765.48
12/12/2013		13:18	12/12/2013 13:18								63.5	7.27	3772.75
12/12/2013		13:19	12/12/2013 13:19			20							3772.75
SW-18 Event 4		12/19/2013	8:10	12/19/2013 8:10	55	35	35	7	50	15.0			
	12/19/2013	8:37	12/19/2013 8:37	52	34	31	15.5	60	32.5		640.4	73.26	3846.01
	12/19/2013	8:44	12/19/2013 8:44	49	37.5	33	20.5	60	44.5		269.3	30.81	3876.82
	12/19/2013	8:45	12/19/2013 8:45	47.5	39	34	22	60	48.4		46.5	5.32	3882.14
	12/19/2013	9:32	12/19/2013 9:32	41	36	31	21.5	63	45.8		2215.2	253.42	4135.56
	12/19/2013	11:31	12/19/2013 11:31	40	35	29	22	67	46.2		5478.2	626.71	4762.27
	12/19/2013	12:06	12/19/2013 12:06	40	36	30	24.5	69	51.9		1717.7	196.51	4958.78
	12/19/2013	12:10	12/19/2013 12:10								207.7	23.76	4982.53
	12/19/2013	12:11	12/19/2013 12:11			22							4982.53
	SW-18 Event 5	1/9/2014	10:41	1/9/2014 10:41						0.0			
1/9/2014		10:42	1/9/2014 10:42	47	33	35	16.5	64	34.1		17.0	1.95	4984.48
1/9/2014		10:50	1/9/2014 10:50	45	32	29	20	64	40.8		299.7	34.28	5018.76
1/9/2014		10:51	1/9/2014 10:51	43	35	31	24.5	64	51.6		46.2	5.29	5024.05
1/9/2014		11:12	1/9/2014 11:12	40	35	30	24	60	50.8		1075.7	123.06	5147.11
1/9/2014		12:42	1/9/2014 12:42	39	34	27.5	24	60	50.3		4548.2	520.31	5667.42
1/9/2014		14:25	1/9/2014 14:25	36	32	26	23.5	60	48.2		5070.8	580.10	6247.52
1/9/2014		14:46	1/9/2014 14:46	36	32	26	24	60	49.2		1022.7	117.00	6364.52
1/9/2014		14:47	1/9/2014 14:47								49.2	5.63	6370.15
1/9/2014		14:48	1/9/2014 14:48			21							6370.15

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-18 Event 6	1/13/2014	7:52	1/13/2014 7:52						0.0				6370.15
	1/13/2014	7:54	1/13/2014 7:54	53	30.5	35	16	48	32.7		32.7	3.74	6373.89
	1/13/2014	7:59	1/13/2014 7:59	50	30	33.5	18	50	36.5		172.8	19.77	6393.66
	1/13/2014	8:00	1/13/2014 8:00	50	33	29	22	50	46.1		41.3	4.72	6398.38
	1/13/2014	8:02	1/13/2014 8:02	49	36	31	26	52	56.0		102.1	11.68	6410.06
	1/13/2014	8:20	1/13/2014 8:20	45	35	30.5	28	56	59.5		1039.9	118.96	6529.02
	1/13/2014	10:15	1/13/2014 10:15	42	34	29	28	64	58.4		6780.5	775.68	7304.71
	1/13/2014	11:24	1/13/2014 11:24	40	33.5	29	26	64	54.0		3877.2	443.55	7748.26
	1/13/2014	11:57	1/13/2014 11:57	44	34	29	28	66	58.3		1852.4	211.92	7960.17
	1/13/2014	11:58	1/13/2014 11:58								58.3	6.67	7966.84
	1/13/2014	11:59	1/13/2014 11:59		22								7966.84
SW-18 Event 7	12/8/2014	7:42	12/8/2014 7:42		18	18	0	52	0.0				7966.84
	12/8/2014	8:54	12/8/2014 8:54		18	18	0	54	0.0		0.0	0.00	7966.84
	12/8/2014	10:33	12/8/2014 10:33		18	18	0	58	0.0		0.0	0.00	7966.84
	12/8/2014	10:34	12/8/2014 10:34		24	24	0	58	0.0		0.0	0.00	7966.84
	12/8/2014	12:35	12/8/2014 12:35		24	23	<2	64	0.0		0.0	0.00	7966.84
	12/8/2014	12:36	12/8/2014 12:36		30	27	10	64	20.0		10.0	1.14	7967.99
	12/8/2014	14:12	12/8/2014 14:12		30	27	10	64	20.0		1917.6	219.38	8187.37
	12/8/2014	14:13	12/8/2014 14:13		40	32.5	16	64	35.4		27.7	3.17	8190.53
	12/8/2014	16:53	12/8/2014 16:53		40	31	18	61	40.0		6030.2	689.85	8880.39
	12/8/2014	16:54	12/8/2014 16:54		25			MJS			40.0	4.57	8884.96
SW-18 Event 8	12/12/2014	7:33	12/12/2014 7:33		30	30	0	36	0.0				8884.96
	12/12/2014	7:52	12/12/2014 7:52		37	35	8	39	17.7		167.7	19.18	8904.14
	12/12/2014	9:41	12/12/2014 9:41		36	31	13	62	27.7		2473.8	283.01	9187.15
	12/12/2014	9:42	12/12/2014 9:42		42	34	15	62	33.9		30.8	3.52	9190.68
	12/12/2014	11:04	12/12/2014 11:04		42	32.5	18	66	40.5		3049.6	348.87	9539.55
	12/12/2014	11:33	12/12/2014 11:33		42	32	18	67	40.5		1173.8	134.29	9673.83
	12/12/2014	11:34	12/12/2014 11:34			26					40.5	4.63	9678.46
SW-18 Event 9	12/16/2014	12:09	12/16/2014 12:09		29	29	0	74	0.0				9678.46
	12/16/2014	12:24	12/16/2014 12:24		28	29	0	74	0.0		0.0	0.00	9678.46
	12/16/2014	12:25	12/16/2014 12:25		37	35	7	74	14.9		7.5	0.85	9679.31
	12/16/2014	13:50	12/16/2014 13:50		37	33.5	12	73	25.6		1720.8	196.86	9876.17
	12/16/2014	15:22	12/16/2014 15:22		36	32	13.5	70	28.6		2491.4	285.01	10161.19
	12/16/2014	15:23	12/16/2014 15:23		40	33.5	14	70	30.8		29.7	3.40	10164.58
	12/16/2014	17:08	12/16/2014 17:08		41	33	16	66	35.7		3490.0	399.26	10563.84
	12/16/2014	17:09	12/16/2014 17:09			27					35.7	4.08	10567.92
SW-18 Event 10	12/18/2014	12:23	12/18/2014 12:23		30	30	3	65	6.0				10567.92
	12/18/2014	12:37	12/18/2014 12:37		29	28	5	65	9.9		111.0	12.69	10580.62
	12/18/2014	12:38	12/18/2014 12:38		39	34.5	12	65	26.3		18.1	2.07	10582.68
	12/18/2014	13:31	12/18/2014 13:31		39	33.5	13	67	28.4		1449.8	165.85	10748.54
	12/18/2014	13:33	12/18/2014 13:33		42	35	14	67	31.5		59.9	6.85	10755.39
	12/18/2014	14:52	12/18/2014 14:52		42	34	15.5	65	34.9		2621.7	299.93	11055.31
	12/18/2014	15:57	12/18/2014 15:57		42	33.5	16	63	36.1		2307.9	264.02	11319.34
	12/18/2014	16:54	12/18/2014 16:54		42	32.5	17	63	38.4		2122.3	242.79	11562.13
	12/18/2014	16:55	12/18/2014 16:55			26					38.4	4.39	11566.52
SW-18 Event 11	2/26/2015	8:02	2/26/2015 8:02		33	32	12	54	25.0				11566.52
	2/26/2015	8:36	2/26/2015 8:36		32	26	20	56	41.2		1125.4	128.75	11695.27
	2/26/2015	8:37	2/26/2015 8:37		40	29	26	56	58.0		49.6	5.67	11700.94
	2/26/2015	9:36	2/26/2015 9:36		38	28	26	58	56.8		3387.4	387.51	12088.45
	2/26/2015	10:46	2/26/2015 10:46		38	27.5	26	61	56.6		3970.7	454.25	12542.70
	2/26/2015	11:59	2/26/2015 11:59		36	27	26	66	55.3		4084.2	467.24	13009.94

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/26/2015	13:11	2/26/2015 13:11		40	26	28	66	61.9		4216.0	482.31	13492.25
	2/26/2015	13:12	2/26/2015 13:12			18					61.9	7.08	13499.32
											Total CO ₂ Mass (lbs):	13499.32	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-19 Event 1	11/22/2013	8:30	11/22/2013 8:30						0.0				0.00
	11/22/2013	8:32	11/22/2013 8:32			25	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:51	11/22/2013 8:51		22	25	<2	71	0.0		0.0	0.00	0.00
	11/22/2013	8:52	11/22/2013 8:52	56	28		3.5	72	6.8		3.4	0.39	0.39
	11/22/2013	10:05	11/22/2013 10:05	63		28.5	7.5	76	8.5		555.9	63.59	63.98
	11/22/2013	10:44	11/22/2013 10:44	55	28	28.5	8	77	15.4		465.5	53.25	117.23
	11/22/2013	11:14	11/22/2013 11:14	55	28	28.5	8.5	76	16.4		477.2	54.59	171.82
	11/22/2013	11:44	11/22/2013 11:44	55	28	28.5	9	79	17.3		505.6	57.84	229.67
	11/22/2013	12:07	11/22/2013 12:07	54	30	31	14.5	82	28.5		526.4	60.22	289.89
	11/22/2013	13:04	11/22/2013 13:04	59	35	30	16	80	33.2		1757.6	201.07	490.95
	11/22/2013	13:08	11/22/2013 13:08								132.8	15.20	506.15
	11/22/2013	13:09	11/22/2013 13:09			32							506.15
SW-19 Event 2	12/6/2013	8:28	12/6/2013 8:28	55	30	29	5	73	9.9				506.15
	12/6/2013	9:00	12/6/2013 9:00	49	29	27	14	75	27.4		596.0	68.19	574.34
	12/6/2013	9:02	12/6/2013 9:02	49	33	30.2	20	75	40.8		68.2	7.80	582.14
	12/6/2013	10:19	12/6/2013 10:19	43	32	27.5	23.5	78	47.3		3395.5	388.44	970.58
	12/6/2013	10:22	12/6/2013 10:22	42	34	29	27	78	55.6		154.4	17.66	988.24
	12/6/2013	11:19	12/6/2013 11:19	41	34	28	28	80	57.5		3222.8	368.69	1356.93
	12/6/2013	12:25	12/6/2013 12:25	45	35	28	31.5	80	65.4		4055.3	463.93	1820.86
	12/6/2013	12:26	12/6/2013 12:26								65.4	7.48	1828.34
	12/6/2013	12:27	12/6/2013 12:27			21							1828.34
	12/6/2013	12:27	12/6/2013 12:27										1828.34
SW-19 Event 3	12/11/2013	13:19	12/11/2013 13:19	49	30	28	<2	66	0.0				1828.34
	12/11/2013	13:57	12/11/2013 13:57	50	28	25	13.5	67	26.3		499.1	57.10	1885.44
	12/11/2013	13:58	12/11/2013 13:58	50	28	26	16	67	31.1		28.7	3.28	1888.72
	12/11/2013	14:32	12/11/2013 14:32	50	24	25	17	67	31.5		1064.3	121.76	2010.48
	12/11/2013	14:35	12/11/2013 14:35	50	34	26	20	67	41.6		109.6	12.54	2023.02
	12/11/2013	15:04	12/11/2013 15:04	50	30	26	21	66	41.9		1210.3	138.46	2161.49
	12/11/2013	15:05	12/11/2013 15:05	50	31	27	25	66	50.4		46.1	5.28	2166.76
	12/11/2013	15:26	12/11/2013 15:26	45	31	27	26	65	52.5		1080.2	123.57	2290.34
	12/11/2013	16:30	12/11/2013 16:30	47.5	31	26	27	64	54.5		3424.4	391.76	2682.09
	12/11/2013	17:06	12/11/2013 17:06	50	31	25	28.5	64	57.6		2018.1	230.87	2912.96
	12/11/2013	17:19	12/11/2013 17:19								748.5	85.62	2998.58
	12/11/2013	17:20	12/11/2013 17:20			21							2998.58
	12/11/2013	17:20	12/11/2013 17:20										2998.58
SW-19 Event 4	12/18/2013	8:54	12/18/2013 8:54	50	30	30	4	62	8.0				2998.58
	12/18/2013	9:42	12/18/2013 9:42			27					384.3	43.96	3042.55
	12/18/2013	9:43	12/18/2013 9:43			27							3042.55
	12/18/2013	14:00	12/18/2013 14:00	50	28	26	16	74	30.9				3042.55
	12/18/2013	14:01	12/18/2013 14:01	50	32	28	20.5	74	41.5		36.2	4.14	3046.69
	12/18/2013	15:57	12/18/2013 15:57	40	32	25	23	64	47.0		5129.4	586.80	3633.49
	12/18/2013	16:59	12/18/2013 16:59	45	32	24	24	60	49.2		2981.9	341.13	3974.62
	12/18/2013	17:19	12/18/2013 17:19	41	35	26	28	60	59.3		1084.8	124.10	4098.71
	12/18/2013	17:22	12/18/2013 17:22	41	35	26	29	60	61.4		181.0	20.70	4119.42
	12/18/2013	17:56	12/18/2013 17:56	50	40	29	33	58	73.5		2292.7	262.29	4381.70
	12/18/2013	17:57	12/18/2013 17:57								73.5	8.41	4390.11
	12/18/2013	17:58	12/18/2013 17:58			19							4390.11
	12/18/2013	17:58	12/18/2013 17:58										4390.11
	SW-19 Event 5	1/9/2014	10:46	1/9/2014 10:46				0		0			
1/9/2014		10:47	1/9/2014 10:47	45	34	30.5	6	64	12.5		6.3	0.72	4390.82
1/9/2014		10:53	1/9/2014 10:53	43	34	28	12	64	25.0		112.7	12.89	4403.71
1/9/2014		10:54	1/9/2014 10:54	42	35	30.5	18	64	37.9		31.5	3.60	4407.32
1/9/2014		11:14	1/9/2014 11:14	40	35	29	20	60	42.3		802.8	91.84	4499.15
1/9/2014		12:44	1/9/2014 12:44	39	35	36.5	22.5	60	47.6		4047.8	463.07	4962.22

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/9/2014	14:27	1/9/2014 14:27	36	32	25	23	60	47.2		4881.4	558.43	5520.66
	1/9/2014	14:51	1/9/2014 14:51	40	35	26	26	60	55.0		1226.3	140.29	5660.95
	1/9/2014	14:52	1/9/2014 14:52								55.0	6.30	5667.24
	1/9/2014	14:53	1/9/2014 14:53			22							5667.24
SW-19 Event 6	1/14/2014	8:10	1/14/2014 8:10				0		0.0				5667.24
	1/14/2014	8:11	1/14/2014 8:11	46	27	29	10	60	19.4		9.7	1.11	5668.35
	1/14/2014	8:25	1/14/2014 8:25	44	27	27	14	60	27.1		325.3	37.21	5705.56
	1/14/2014	8:26	1/14/2014 8:26	44	30.5	29	20	60	40.3		33.7	3.86	5709.42
	1/14/2014	10:02	1/14/2014 10:02	44	29	26	24	62	47.5		4215.6	482.26	6191.68
	1/14/2014	10:04	1/14/2014 10:04	44	32.5	27.5	28	62	57.6		105.1	12.02	6203.70
	1/14/2014	11:02	1/14/2014 11:02	38	30.5	26	28	62	56.4		3305.2	378.11	6581.82
	1/14/2014	12:17	1/14/2014 12:17	38	30.5	26	29	62	58.4		4302.4	492.20	7074.02
	1/14/2014	12:18	1/14/2014 12:18								58.4	6.68	7080.69
	1/14/2014	12:19	1/14/2014 12:19			22							7080.69
SW-19 Event 7	1/20/2014	10:56	1/20/2014 10:56	46	28	30	12	64	23.4				7080.69
	1/20/2014	10:58	1/20/2014 10:58	46	30	28.5	18	64	36.0		59.4	6.79	7087.49
	1/20/2014	11:02	1/20/2014 11:02	46	30	28.5	19	64	38.0		147.8	16.91	7104.40
	1/20/2014	11:28	1/20/2014 11:28	45	29	26	21	68	41.3		1030.4	117.88	7222.27
	1/20/2014	12:52	1/20/2014 12:52	50	28.5	25	22.5	69	44.0		3581.1	409.68	7631.95
	1/20/2014	12:55	1/20/2014 12:55	50	29	25.2	23.8	69	46.8		136.1	15.57	7647.52
	1/20/2014	13:58	1/20/2014 13:58	50	29	25	24	68	47.2		2960.3	338.65	7986.17
	1/20/2014	15:08	1/20/2014 15:08	50	29	25	24	68	47.2		3304.6	378.04	8364.22
	1/20/2014	15:11	1/20/2014 15:11								141.6	16.20	8380.42
	1/20/2014	15:12	1/20/2014 15:12			21							8380.42
SW-19 Event 8	1/27/2014	12:40	1/27/2014 12:40										8380.42
	1/27/2014	12:42	1/27/2014 12:42	53	30	30	15	84	29.4		58.8	6.72	8387.14
	1/27/2014	13:02	1/27/2014 13:02	50	28	25	20	76	38.6		679.7	77.76	8464.90
	1/27/2014	13:03	1/27/2014 13:03	50	34	28	28	75	57.8		48.2	5.51	8470.41
	1/27/2014	13:18	1/27/2014 13:18	49	34	28	28	72	58.0		868.2	99.32	8569.73
	1/27/2014	14:53	1/27/2014 14:53	48	33	26	30	68	61.7		5683.5	650.20	9219.93
	1/27/2014	15:51	1/27/2014 15:51	47	32.5	25	30	67	61.4		3570.3	408.45	9628.37
	1/27/2014	16:42	1/27/2014 16:42	52	32	25	32	65	65.3		3231.3	369.66	9998.03
	1/27/2014	16:43	1/27/2014 16:43								65.3	7.47	10005.50
	1/27/2014	16:44	1/27/2014 16:44			20							10005.50
SW-19 Event 9	2/5/2014	8:57	2/5/2014 8:57	48	29	29.5	12	66	23.7				10005.50
	2/5/2014	9:00	2/5/2014 9:00		28		13	66	25.3		73.5	8.40	10013.90
	2/5/2014	9:15	2/5/2014 9:15	46	27	24.5	16	66	30.8		420.9	48.15	10062.05
	2/5/2014	9:18	2/5/2014 9:18		30	25	20	66	39.9		106.0	12.13	10074.18
	2/5/2014	10:30	2/5/2014 10:30		30	24	21.9	68	43.6		3004.1	343.67	10417.84
	2/5/2014	11:31	2/5/2014 11:31		29.5	23.5	22	70	43.4		2653.9	303.61	10721.45
	2/5/2014	12:45	2/5/2014 12:45	45	29.5	23.5	21	71	41.4		3140.0	359.21	11080.66
	2/5/2014	13:39	2/5/2014 13:39	45	29.5	23.5	21.2	74	41.7		2244.3	256.75	11337.41
	2/5/2014	13:42	2/5/2014 13:42			21					125.1	14.31	11351.72
SW-19 Event 10	2/7/2014	8:35	2/7/2014 8:35	51	24	23	4	56	7.5				11351.72
	2/7/2014	8:37	2/7/2014 8:37	49	29.5	26	11.2	56	22.4		29.9	3.42	11355.14
	2/7/2014	8:39	2/7/2014 8:39	49	30.5	26	15.8	57	32.0		54.4	6.22	11361.37
	2/7/2014	9:28	2/7/2014 9:28	46	30	25	18.2	57	36.6		1680.0	192.19	11553.56
	2/7/2014	9:33	2/7/2014 9:33	46	31.5	26.5	20.8	57	42.5		197.9	22.64	11576.20
	2/7/2014	11:45	2/7/2014 11:45	44	31.5	26	21.2	60	43.2		5661.6	647.69	12223.89
	2/7/2014	13:14	2/7/2014 13:14	44	31	25	21.8	61	44.2		3889.5	444.96	12668.85
	2/7/2014	14:31	2/7/2014 14:31	46	31	25.5	22.5	61	45.6		3455.7	395.33	13064.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/7/2014	14:32	2/7/2014 14:32			21					45.6	5.22	13069.39
SW-19 Event 11	2/10/2014	9:16	2/10/2014 9:16		25	25.5	5	60	9.4				13069.39
	2/10/2014	9:19	2/10/2014 9:19	53	30	26	16	60	32.1		62.3	7.13	13076.51
	2/10/2014	10:00	2/10/2014 10:00	49	38	23	22.1	66	47.9		1639.8	187.59	13264.11
	2/10/2014	10:02	2/10/2014 10:02	48	30	23.5	25.5	66	50.8		98.7	11.30	13275.41
	2/10/2014	11:51	2/10/2014 11:51	48	30	23	26	70	51.6		5584.5	638.87	13914.28
	2/10/2014	13:30	2/10/2014 13:30	48	30	24.5	26	71	51.6		5109.0	584.47	14498.75
	2/10/2014	15:02	2/10/2014 15:02	45	30	23.5	26	71	51.6		4745.4	542.88	15041.63
	2/10/2014	16:53	2/10/2014 16:53	45	30	23.5	26	67	51.8		5736.7	656.28	15697.90
	2/10/2014	17:45	2/10/2014 17:45	48	30	23.5	26	63	52.0		2698.0	308.66	16006.56
	2/10/2014	17:48	2/10/2014 17:48			20					156.0	17.84	16024.40
SW-19 Event 12	2/11/2014	8:32	2/11/2014 8:32		23	22.2	5		9.8				16024.40
	2/11/2014	8:34	2/11/2014 8:34	49	29.5	24	18.2	56	36.4		46.2	5.29	16029.69
	2/11/2014	9:08	2/11/2014 9:08		28	22.5	23	59	45.1		1386.3	158.60	16188.29
	2/11/2014	9:10	2/11/2014 9:10			17					90.2	10.32	16198.61
	2/11/2014	12:22	2/11/2014 12:22			29	0	66	0.0				16198.61
	2/11/2014	12:23	2/11/2014 12:23	49	29	25	20.3	66	40.0		20.0	2.29	16200.90
	2/11/2014	12:25	2/11/2014 12:25	49	29	24	21.8	66	43.0		83.0	9.49	16210.39
	2/11/2014	13:50	2/11/2014 13:50	48	28	23	23.9	62	46.7		3812.4	436.13	16646.52
	2/11/2014	13:51	2/11/2014 13:51	48	29	24	26	62	51.4		49.1	5.62	16652.14
	2/11/2014	15:00	2/11/2014 15:00	47	29	23.5	26	59	51.6		3555.0	406.69	17058.83
	2/11/2014	17:08	2/11/2014 17:08	49	29.5	23	26	56	52.1		6633.7	758.90	17817.73
	2/11/2014	17:10	2/11/2014 17:10			20					104.1	11.91	17829.64
SW-19 Event 13	2/12/2014	8:19	2/12/2014 8:19	53	25	24	3.8	49	7.3				17829.64
	2/12/2014	8:20	2/12/2014 8:20	53	30	25	14	49	28.4		17.8	2.04	17831.68
	2/12/2014	8:52	2/12/2014 8:52	48	28	22.5	21	51	41.5		1118.6	127.97	17959.65
	2/12/2014	8:53	2/12/2014 8:53	48	29.5	24	25.2	51	50.7		46.1	5.28	17964.92
	2/12/2014	10:29	2/12/2014 10:29	48	29.5	24	26.2	54	52.6		4956.8	567.06	18531.98
	2/12/2014	11:59	2/12/2014 11:59	49	29.5	24	26.2	53	52.6		4732.8	541.43	19073.41
	2/12/2014	12:00	2/12/2014 12:00			18					52.6	6.02	19079.43
SW-19 Event 14	3/3/2015	8:08	3/3/2015 8:08		26	27	9	67	17.1				19079.43
	3/3/2015	8:31	3/3/2015 8:31		26	25	13.5	66	25.7		491.7	56.25	19135.68
	3/3/2015	9:52	3/3/2015 9:52		26	24	16	68	30.4		2268.9	259.56	19395.24
	3/3/2015	9:53	3/3/2015 9:53		33	27	24	68	49.4		39.9	4.56	19399.80
	3/3/2015	11:31	3/3/2015 11:31		33	27	24	71	49.2		4829.6	552.50	19952.30
	3/3/2015	11:32	3/3/2015 11:32		37	28	29.5	71	63.0		56.1	6.42	19958.72
	3/3/2015	12:34	3/3/2015 12:34		38	27.5	29.5	74	63.4		3920.0	448.45	20407.17
	3/3/2015	12:35	3/3/2015 12:35			19					63.4	7.26	20414.43
SW-19 Event 15	3/5/2015	8:02	3/5/2015 8:02		28	28	8	71	15.5				20414.43
	3/5/2015	8:26	3/5/2015 8:26		28	25	14	71	27.1		511.7	58.54	20472.97
	3/5/2015	8:27	3/5/2015 8:27		33	27	20	71	41.0		34.1	3.90	20476.87
	3/5/2015	8:57	3/5/2015 8:57		33	27	20	73	40.9		1229.0	140.60	20617.47
	3/5/2015	10:29	3/5/2015 10:29		33	25	20	77	40.8		3758.0	429.92	21047.39
	3/5/2015	10:30	3/5/2015 10:30		42	28.5	28	77	62.3		51.5	5.90	21053.28
	3/5/2015	11:48	3/5/2015 11:48		42	28	28	77	62.3		4860.6	556.05	21609.34
	3/5/2015	13:00	3/5/2015 13:00		42	28	28	80	62.1		4480.2	512.53	22121.87
	3/5/2015	13:03	3/5/2015 13:03			19					186.4	21.32	22143.20
Total CO ₂ Mass (lbs):												22143.20	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-20 Event 1	11/20/2013	9:20	11/20/2013 9:20	55	28			64	0.0				0.00
	11/20/2013	9:23	11/20/2013 9:23		32	33	<2	66	0.0		0.0	0.00	0.00
	11/20/2013	10:09	11/20/2013 10:09		30	31	2	66	4.0		91.7	10.49	10.49
	11/20/2013	10:11	11/20/2013 10:11		36	36	7	66	14.9		18.9	2.16	12.65
	11/20/2013	10:59	11/20/2013 10:59		36	35.5	8	66	17.0		765.1	87.53	100.18
	11/20/2013	12:46	11/20/2013 12:46		36	35	10	66	21.3		2046.7	234.14	334.32
	11/20/2013	14:40	11/20/2013 14:40		36	34.5	10.5	65	22.3		2484.7	284.25	618.57
	11/20/2013	15:17	11/20/2013 15:17		36	34.5	10.5	65	22.3		826.5	94.55	713.12
	11/20/2013	15:18	11/20/2013 15:18								22.3	2.56	715.68
	11/20/2013	15:19	11/20/2013 15:19			28.5							715.68
SW-20 Event 2	12/4/2013	12:12	12/4/2013 12:12	50	36	35	<2	76	0.0				715.68
	12/4/2013	13:04	12/4/2013 13:04	55	35	33.5	6	85	12.4		322.2	36.86	752.54
	12/4/2013	13:42	12/4/2013 13:42	52	34	33	7	84	14.3		507.6	58.07	810.61
	12/4/2013	13:43	12/4/2013 13:43	52	36	35.5	10.5	84	21.9		18.1	2.07	812.68
	12/4/2013	14:42	12/4/2013 14:42	50	36	35	11	74	23.2		1331.2	152.29	964.97
	12/4/2013	15:48	12/4/2013 15:48	52	36	35	12	78	25.2		1597.3	182.73	1147.70
	12/4/2013	17:13	12/4/2013 17:13	52	36	34.5	14	70	29.6		2330.9	266.65	1414.35
	12/4/2013	17:14	12/4/2013 17:14								29.6	3.39	1417.74
	12/4/2013	17:15	12/4/2013 17:15										1417.74
SW-20 Event 3	12/17/2013	12:43	12/17/2013 12:43	48	35	35	<2	74	0.0				1417.74
	12/17/2013	13:24	12/17/2013 13:24	48	34	33.6	5	76	10.3		211.4	24.18	1441.92
	12/17/2013	14:25	12/17/2013 14:25	45	33	32.8	7.5	76	15.3		781.2	89.37	1531.29
	12/17/2013	15:40	12/17/2013 15:40	45	32	32.4	8.5	74	17.2		1218.5	139.40	1670.69
	12/17/2013	15:41	12/17/2013 15:41	45	34.5	34	12	74.0	24.9		21.1	2.41	1673.10
	12/17/2013	17:02	12/17/2013 17:02	45	34.5	34.4	12.5	66.0	26.2		2069.0	236.69	1909.78
	12/17/2013	17:03	12/17/2013 17:03								26.2	2.99	1912.78
	12/17/2013	17:04	12/17/2013 17:04			28.4							1912.78
		12/17/2013	17:04	12/17/2013 17:04									
SW-20 Event 4	1/8/2014	7:57	1/8/2014 7:57				0	34	0.0				1912.78
	1/8/2014	7:58	1/8/2014 7:58	25	26	23	<2	34.0	0.0		0.0	0.00	1912.78
	1/8/2014	8:13	1/8/2014 8:13	55	34	32	6	38.0	12.9		96.4	11.03	1923.81
	1/8/2014	8:30	1/8/2014 8:30	52	35	32	6	42	12.9		219.2	25.08	1948.89
	1/8/2014	8:44	1/8/2014 8:44	49	35	32	6	42.0	12.9		181.1	20.72	1969.60
	1/8/2014	8:45	1/8/2014 8:45	48	38	34	9.5	42.0	21.1		17.0	1.95	1971.55
	1/8/2014	9:46	1/8/2014 9:46	46	37	34	10	50.0	21.8		1308.9	149.74	2121.29
	1/8/2014	10:37	1/8/2014 10:37	45	36	33	11	50.0	23.8		1162.1	132.95	2254.24
	1/8/2014	11:15	1/8/2014 11:15	45	36	32.5	12	56.0	25.8		940.9	107.63	2361.87
	1/8/2014	11:16	1/8/2014 11:16	45	37	34	14	56.0	30.4		28.1	3.21	2365.08
	1/8/2014	12:25	1/8/2014 12:25	40	37	33.5	14	58.0	30.3		2092.3	239.36	2604.45
	1/8/2014	12:26	1/8/2014 12:26								30.3	3.47	2607.91
	1/8/2014	12:27	1/8/2014 12:27			26							2607.91
SW-20 Event 5	1/10/2014	8:50	1/10/2014 8:50				0		0				2607.91
	1/10/2014	8:51	1/10/2014 8:51	53	34	33	3	67	6.2		3.1	0.36	2608.27
	1/10/2014	8:55	1/10/2014 8:55	53	31	29	10	67	20.1		52.8	6.04	2614.30
	1/10/2014	8:59	1/10/2014 8:59	50	40	34.5	19	67	41.9		124.1	14.20	2628.51
	1/10/2014	10:05	1/10/2014 10:05	42	36	32	21	65	44.7		2858.0	326.96	2955.46
	1/10/2014	10:06	1/10/2014 10:06	42	40	33.5	22	65	48.6		46.7	5.34	2960.80
	1/10/2014	11:44	1/10/2014 11:44	41	39	33	22	67	48.1		4740.5	542.31	3503.11
	1/10/2014	13:00	1/10/2014 13:00	40	38	31	22	66	47.7		3639.8	416.39	3919.50
	1/10/2014	13:01	1/10/2014 13:01								47.7	5.46	3924.95
	1/10/2014	13:02	1/10/2014 13:02			23							3924.95
SW-20 Event 6	1/14/2014	7:50	1/14/2014 7:50	50	28	29.2	<2	62	0.0				3924.95

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/14/2014	7:51	1/14/2014 7:51	50	33.5	34	5	62	10.4		5.2	0.59	3925.55
	1/14/2014	7:53	1/14/2014 7:53	50	33	33.6	7	62	14.5		24.9	2.85	3928.39
	1/14/2014	8:44	1/14/2014 8:44	46	32	32.6	9	62	18.4		838.9	95.97	4024.37
	1/14/2014	10:05	1/14/2014 10:05	44	32	32.4	10.5	63	21.5		1615.4	184.80	4209.16
	1/14/2014	10:09	1/14/2014 10:09	44	34	34	13.8	63	28.8		100.6	11.51	4220.67
	1/14/2014	11:32	1/14/2014 11:32	38	34	33.4	13	63	27.2		2322.8	265.73	4486.40
	1/14/2014	11:56	1/14/2014 11:56	38	34	33.4	13.9	63	29.0		674.2	77.12	4563.52
	1/14/2014	11:57	1/14/2014 11:57			29					29.0	3.32	4566.84
SW-20 Event 7	1/16/2014	8:03	1/16/2014 8:03	55	30	33	2	40	4.1				4566.84
	1/16/2014	8:05	1/16/2014 8:05	55	29	31.4	6	42	12.1		16.2	1.85	4568.70
	1/16/2014	8:06	1/16/2014 8:06	55	32	33	12	42	25.1		18.6	2.13	4570.83
	1/16/2014	9:00	1/16/2014 9:00	46	31	31.4	16	54	32.6		1558.1	178.25	4749.08
	1/16/2014	9:02	1/16/2014 9:02	46	33	33	18.5	54	38.6		71.2	8.15	4757.22
	1/16/2014	10:25	1/16/2014 10:25	42	33	32	19.8	57	41.2		3309.3	378.59	5135.81
	1/16/2014	11:19	1/16/2014 11:19	40	32.5	31	20	58	41.3		2227.0	254.77	5390.58
	1/16/2014	11:20	1/16/2014 11:20	40	34	32	22	58	46.2		43.7	5.00	5395.58
	1/16/2014	12:16	1/16/2014 12:16	43	34	32.4	23.8	58	50.0		2691.7	307.93	5703.51
	1/16/2014	12:18	1/16/2014 12:18			28					99.9	11.43	5714.94
SW-20 Event 8	1/17/2014	8:33	1/17/2014 8:33	48	26	29	29	5	54.0				5714.94
	1/17/2014	8:34	1/17/2014 8:34	48	31	32.4	32.4	7.5	54.0		54.0	6.18	5721.12
	1/17/2014	8:35	1/17/2014 8:35	48	32	33	33	7.8	54.0		54.0	6.18	5727.30
	1/17/2014	10:17	1/17/2014 10:17	45	31.5	32.4	32.4	8.5	59.0		5763.0	659.29	6386.59
	1/17/2014	11:21	1/17/2014 11:21	45	31	31.2	31.2	9.2	65.0		3968.0	453.94	6840.53
	1/17/2014	11:22	1/17/2014 11:22	45	33	32.8	32.8	14.2	65.0		65.0	7.44	6847.96
	1/17/2014	12:13	1/17/2014 12:13	45	33	32.6	32.6	12.8	65.0		3315.0	379.24	7227.20
	1/17/2014	12:14	1/17/2014 12:14								65.0	7.44	7234.63
SW-20 Event 9	1/20/2014	8:39	1/20/2014 8:39	50	32.5	34	<2	47	0.0				7234.63
	1/20/2014	8:44	1/20/2014 8:44	50	32	32.6	6	49	12.4		31.1	3.56	7238.19
	1/20/2014	8:48	1/20/2014 8:48	50	32	32.6	6.5	49	13.5		51.8	5.93	7244.12
	1/20/2014	8:49	1/20/2014 8:49	49	33.5	34.2	10	51	21.0		17.3	1.97	7246.10
	1/20/2014	9:13	1/20/2014 9:13	49	33.5	34.2	10	58	20.9		502.9	57.53	7303.63
	1/20/2014	10:27	1/20/2014 10:27	47	33.5	33.6	10.2	64	21.2		1555.8	177.99	7481.61
	1/20/2014	11:26	1/20/2014 11:26	44	33.2	33	10.5	67	21.7		1263.5	144.54	7626.16
	1/20/2014	13:05	1/20/2014 13:05		32.5	32.4	10.8	69	22.1		2164.6	247.62	7873.78
	1/20/2014	13:06	1/20/2014 13:06			26					22.1	2.52	7876.31
SW-20 Event 10	1/21/2014	7:54	1/21/2014 7:54	55	27.5	27.8	<2	50	0.0				7876.31
	1/21/2014	7:55	1/21/2014 7:55	55	33	33.6	8	50	16.8		8.4	0.96	7877.26
	1/21/2014	8:01	1/21/2014 8:01	55	33	33.6	10	50	20.9		113.1	12.93	7890.20
	1/21/2014	8:45	1/21/2014 8:45	50	32	32.8	10.5	56	21.6		936.2	107.10	7997.30
	1/21/2014	9:54	1/21/2014 9:54	38	32	32.8	10.5	62	21.5		1487.1	170.13	8167.43
	1/21/2014	11:16	1/21/2014 11:16	38	32	32.8	10.5	66	21.4		1758.5	201.18	8368.61
	1/21/2014	12:20	1/21/2014 12:20	41	32	32.4	10.5	71	21.3		1366.5	156.32	8524.93
	1/21/2014	12:21	1/21/2014 12:21			27.6					21.3	2.44	8527.37
SW-20 Event 11	1/22/2014	8:27	1/22/2014 8:27	54	27	29.6	<2	37	0.0				8527.37
	1/22/2014	8:29	1/22/2014 8:29	54	33	34.2	7	37	14.9		14.9	1.70	8529.07
	1/22/2014	8:34	1/22/2014 8:34	53	33	33.8	9.5	40	20.1		87.4	10.00	8539.07
	1/22/2014	9:00	1/22/2014 9:00	51	33	33.6	10.3	46	21.7		542.8	62.09	8601.16
	1/22/2014	9:03	1/22/2014 9:03	56	32	33	10	50	20.7		63.6	7.27	8608.43
	1/22/2014	11:00	1/22/2014 11:00	44	32	32.6	10.5	55	21.6		2477.7	283.44	8891.87
	1/22/2014	12:07	1/22/2014 12:07	41	32	32.4	11	56	22.6		1483.6	169.72	9061.60
	1/22/2014	12:34	1/22/2014 12:34	44	32	32.4	11.2	57	23.0		616.7	70.55	9132.15

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/22/2014	12:35	1/22/2014 12:35			25					23.0	2.64	9134.79
SW-20 Event 12	1/28/2014	7:20	1/28/2014 7:20				0		0.0				9134.79
	1/28/2014	7:22	1/28/2014 7:22	57	36	34	<2	56	0.0	0.0	0.0	0.00	9134.79
	1/28/2014	7:27	1/28/2014 7:27	56	36	32	4	56	8.6	21.5	2.46		9137.24
	1/28/2014	7:28	1/28/2014 7:28	55	38	34	6.5	56	14.2	11.4	1.31		9138.55
	1/28/2014	8:05	1/28/2014 8:05	54	38	34	8	56	17.5	587.3	67.19		9205.73
	1/28/2014	8:27	1/28/2014 8:27	54	38	34	8	56	17.5	385.3	44.08		9249.82
	1/28/2014	10:00	1/28/2014 10:00	54	37	33.5	9	56	19.5	1721.8	196.98		9446.80
	1/28/2014	11:18	1/28/2014 11:18	51	37	33.5	10	54	21.7	1608.3	183.99		9630.79
	1/28/2014	11:23	1/28/2014 11:23							108.6	12.43		9643.22
	1/28/2014	11:24	1/28/2014 11:24			26							9643.22
SW-20 Event 13	2/5/2013	7:54	2/5/2013 7:54	55	33	35	3.2	62	6.6				9643.22
	2/5/2013	8:45	2/5/2013 8:45	49	32	31.5	9.8	65	20.0	678.7	77.64		9720.86
	2/5/2013	10:26	2/5/2013 10:26	45	32	31.5	9.8	68	19.9	2016.6	230.70		9951.56
	2/5/2013	11:28	2/5/2013 11:28	45	32	31.5	9.8	70	19.9	1234.9	141.27		10092.83
	2/5/2013	12:40	2/5/2013 12:40	45	32	31.5	9.8	72	19.9	1431.3	163.74		10256.57
	2/5/2013	13:33	2/5/2013 13:33	45	32	31.5	9.8	74	19.8	1051.5	120.29		10376.86
	2/5/2013	13:36	2/5/2013 13:36	45	33	32.5	13	74	26.6	69.6	7.96		10384.82
	2/5/2013	14:47	2/5/2013 14:47	46	33	32.5	13	74	26.6	1887.0	215.87		10600.69
	2/5/2013	15:40	2/5/2013 15:40	46	33	32.5	13	70	26.7	1411.3	161.46		10762.15
	2/5/2013	15:58	2/5/2013 15:58	46	33	32.5	13	73	26.6	479.6	54.86		10817.01
	2/5/2013	16:00	2/5/2013 16:00			26							10817.01
SW-20 Event 14	2/7/2014	8:25	2/7/2014 8:25	50	30	31	3.2	48	6.5				10817.01
	2/7/2014	8:27	2/7/2014 8:27	50	33.2	33	7	48	14.7		2.43		10819.44
	2/7/2014	9:21	2/7/2014 9:21	45	33	33	9.3	55	19.4	920.5	105.30		10924.74
	2/7/2014	11:40	2/7/2014 11:40	45	33	33	9.3	62	19.2	2683.6	307.00		11231.74
	2/7/2014	13:10	2/7/2014 13:10	44	33	33	9.8	64	20.2	1776.2	203.20		11434.93
	2/7/2014	14:26	2/7/2014 14:26	46	33	33	10	64	20.6	1553.4	177.70		11612.64
	2/7/2014	15:42	2/7/2014 15:42	49	32	33	10.8	62	22.1	1624.4	185.83		11798.47
	2/7/2014	16:20	2/7/2014 16:20	49	32	33	10.8	60	22.1	840.7	96.18		11894.65
	2/7/2014	16:31	2/7/2014 16:31	49	32	33	10.9	57	22.4	245.1	28.04		11922.69
	2/7/2014	16:32	2/7/2014 16:32			26				22.4	2.56		11925.25
SW-20 Event 15	2/10/2014	9:30	2/10/2014 9:30	52	27	27.5	<2	60	0.0				11925.25
	2/10/2014	9:33	2/10/2014 9:33	51	33	33	5	60	10.4	15.5	1.78		11927.03
	2/10/2014	10:11	2/10/2014 10:11	49	32.5	32.5	8.5	67	17.4	527.6	60.35		11987.39
	2/10/2014	10:16	2/10/2014 10:16	48	33.5	32.5	11	67	22.8	100.4	11.49		11998.87
	2/10/2014	11:40	2/10/2014 11:40	48	33.5	32.5	9.8	71	20.2	1804.5	206.43		12205.30
	2/10/2014	13:25	2/10/2014 13:25	48	33.5	32.5	9.8	71	20.2	2121.0	242.65		12447.95
	2/10/2014	14:58	2/10/2014 14:58	47	33	32.5	10	73	20.5	1890.9	216.32		12664.26
	2/10/2014	16:45	2/10/2014 16:45	46	33	32.5	10.5	69	21.6	2248.9	257.27		12921.53
	2/10/2014	17:52	2/10/2014 17:52	54	33	32.5	10.8	63	22.3	1470.3	168.20		13089.74
	2/10/2014	17:53	2/10/2014 17:53			29				22.3	2.55		13092.29
SW-20 Event 16	2/11/2014	8:19	2/11/2014 8:19			30	10.2	55	20.6				13092.29
	2/11/2014	8:22	2/11/2014 8:22	50	33.5	32	16	55	33.5	81.1	9.28		13101.57
	2/11/2014	9:02	2/11/2014 9:02	48	33.5	32	16.8	58	35.1	1371.7	156.93		13258.49
	2/11/2014	9:03	2/11/2014 9:03			24				35.1	4.01		13262.51
SW-20 Event 17													13262.51
	3/4/2015	7:39	3/4/2015 7:39		29	30	0	68	0.0	0.0	0.00		13262.51
	3/4/2015	7:56	3/4/2015 7:56		28	30	0	68	0.0	0.0	0.00		13262.51
	3/4/2015	8:01	3/4/2015 8:01		31	32	3	68	6.0	15.1	1.73		13264.23
	3/4/2015	8:59	3/4/2015 8:59		31	32	5	74	10.0	465.1	53.21		13317.44

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/4/2015	9:29	3/4/2015 9:29		34	34	10	76	20.6		459.3	52.55	13369.99
	3/4/2015	11:51	3/4/2015 11:51		34	34	10	80	20.5		2922.4	334.33	13704.32
	3/4/2015	13:52	3/4/2015 13:52		34	33.5	10	80	20.5		2485.4	284.34	13988.65
	3/4/2015	13:57	3/4/2015 13:57		36	34	13	80	27.3		119.5	13.67	14002.32
	3/4/2015	15:24	3/4/2015 15:24		36	35	13	76	27.4		2375.7	271.78	14274.10
	3/4/2015	17:02	3/4/2015 17:02		36	35	14	73	29.6		2788.6	319.02	14593.12
	3/4/2015	17:02	3/4/2015 17:02			28					0.0	0.00	14593.12
SW-20 Event 18	3/6/2015	7:40	3/6/2015 7:40		33	35	5	53	10.4				14593.1
	3/6/2015	8:10	3/6/2015 8:10		33	32	7	54	14.6		375.52	42.96	14636.08
	3/6/2015	8:11	3/6/2015 8:11		38	36	12.5	54	27.4		21.01	2.40	14638.48
	3/6/2015	9:01	3/6/2015 9:01		38	36	13	57	28.4		1396.43	159.75	14798.23
	3/6/2015	10:11	3/6/2015 10:11		38	36	14	58	30.6		2065.82	236.33	15034.56
	3/6/2015	11:07	3/6/2015 11:07		38	36	14	58	30.6		1713.03	195.97	15230.53
	3/6/2015	11:08	3/6/2015 11:08			28					30.59	3.50	15234.03
SW-20 Event 19	3/11/2015	8:12	3/11/2015 8:12		33	34	3	67	6.2				15234.03
	3/11/2015	8:42	3/11/2015 8:42		33	33	6	70	12.3		277.3	31.73	15265.76
	3/11/2015	8:45	3/11/2015 8:45		37	36	10	70	21.4		50.5	5.78	15271.54
	3/11/2015	10:02	3/11/2015 10:02		37	36	10	77	21.2		1640.7	187.70	15459.24
	3/11/2015	11:00	3/11/2015 11:00		37	35.5	11.5	80	24.3		1322.0	151.23	15610.47
	3/11/2015	11:01	3/11/2015 11:01			29					24.3	2.79	15613.26
Total CO ₂ Mass (lbs):												15613.26	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-21 Event 1	11/22/2013	13:01	11/22/2013 13:01										
	11/22/2013	13:02	11/22/2013 13:02		28	30		84	0.0		0.0	0.00	0.00
	11/22/2013	13:32	11/22/2013 13:32	55	30	29.5	<2	88	0.0		0.0	0.00	0.00
	11/22/2013	13:58	11/22/2013 13:58	55	33	33	5	87	10.1		131.2	15.01	15.01
	11/22/2013	14:20	11/22/2013 14:20	52	34	33	6	80	12.3		246.6	28.21	43.23
	11/22/2013	15:00	11/22/2013 15:00	50	34	32.5	7	77	14.4		534.9	61.19	104.42
	11/22/2013	15:44	11/22/2013 15:44	50	34	32.5	8	80	16.4		678.8	77.65	182.07
	11/22/2013	16:40	11/22/2013 16:40	50	34	32	9	76	18.6		979.7	112.08	294.15
	11/22/2013	17:11	11/22/2013 17:11	50	34	32	9	72	18.6		576.4	65.94	360.10
	11/22/2013	17:12	11/22/2013 17:12								18.6	2.13	362.23
	11/22/2013	17:13	11/22/2013 17:13			25							362.23
SW-21 Event 2	11/25/2013	10:54	11/25/2013 10:54	50	26			62					362.23
	11/25/2013	10:58	11/25/2013 10:58	55	29	30	<2	64	0.0		0.0	0.00	362.23
	11/25/2013	11:25	11/25/2013 11:25	55	34	33.5	5	62	10.5		141.1	16.14	378.37
	11/25/2013	12:35	11/25/2013 12:35	55	34	33	8	64	16.7		950.0	108.69	487.06
	11/25/2013	13:55	11/25/2013 13:55	54	33	32.5	10	65	20.6		1492.6	170.76	657.81
	11/25/2013	15:05	11/25/2013 15:05	55	32	32	12	64	24.5		1579.7	180.72	838.53
	11/25/2013	16:05	11/25/2013 16:05	55	32	31	12	61	24.6		1472.7	168.48	1007.01
	11/25/2013	16:07	11/25/2013 16:07								49.2	5.62	1012.64
	11/25/2013	16:08	11/25/2013 16:08			25							1012.64
	11/25/2013	16:08	11/25/2013 16:08										1012.64
SW-21 Event 3	12/5/2013	12:12	12/5/2013 12:12	50	32	32	<2	81	0.0				1012.64
	12/5/2013	14:18	12/5/2013 14:18	52	31	31	6	87	11.9		746.8	85.44	1098.08
	12/5/2013	15:22	12/5/2013 15:22	49	31	30	7.5	83	14.9		855.3	97.85	1195.92
	12/5/2013	16:35	12/5/2013 16:35	49	31	30	9	78	17.9		1197.5	137.00	1332.92
	12/5/2013	16:54	12/5/2013 16:54	49	31	30	9.5	75	19.0		350.7	40.13	1373.04
	12/5/2013	16:55	12/5/2013 16:55								19.0	2.17	1375.22
	12/5/2013	16:56	12/5/2013 16:56			25							1375.22
	12/5/2013	16:56	12/5/2013 16:56										1375.22
SW-21 Event 4	12/19/2013	8:58	12/19/2013 8:58	47	34	31	<2	52	0.0				1375.22
	12/19/2013	9:29	12/19/2013 9:29	42	33	30	3.5	62	7.2		112.2	12.84	1388.06
	12/19/2013	10:03	12/19/2013 10:03	40	33	30	4	66	8.2		263.2	30.11	1418.16
	12/19/2013	11:26	12/19/2013 11:26	40	32.5	30	6	70	12.2		850.3	97.28	1515.44
	12/19/2013	12:50	12/19/2013 12:50	45	31	29	7	72	14.0		1103.7	126.26	1641.71
	12/19/2013	12:58	12/19/2013 12:58								112.2	12.84	1654.55
	12/19/2013	12:59	12/19/2013 12:59			25							1654.55
	12/19/2013	12:59	12/19/2013 12:59										1654.55
SW-21 Event 5	1/6/2014	13:00	1/6/2014 13:00				0		0.0				1654.55
	1/6/2014	13:01	1/6/2014 13:01	57	32	29.5	<2	60	0.0		0.0	0.00	1654.55
	1/6/2014	13:25	1/6/2014 13:25	55	31	29	2	60	4.1		48.7	5.57	1660.12
	1/6/2014	13:56	1/6/2014 13:56	55	31	29	2	58	4.1		125.9	14.40	1674.52
	1/6/2014	15:02	1/6/2014 15:02	55	31	28.5	3.5	58	7.1		368.8	42.20	1716.71
	1/6/2014	15:04	1/6/2014 15:04	55	32	29.5	6	58	12.3		19.4	2.22	1718.94
	1/6/2014	16:02	1/6/2014 16:02	54	33	29.5	6	55	12.5		720.0	82.37	1801.30
	1/6/2014	17:03	1/6/2014 17:03	54	33	29.5	7	52	14.6		827.3	94.65	1895.95
	1/6/2014	17:15	1/6/2014 17:15	54	33	29.5	7.5	52	15.7		181.8	20.80	1916.75
	1/6/2014	17:16	1/6/2014 17:16								15.7	1.79	1918.54
	1/6/2014	17:17	1/6/2014 17:17			29							1918.54
SW-21 Event 6	1/7/2014	7:29	1/7/2014 7:29					27					1918.54
	1/7/2014	7:30	1/7/2014 7:30	26	25	22	4	27	7.8		7.8	0.89	1919.44
	1/7/2014	7:49	1/7/2014 7:49	15	20	16.5	2	27	3.6		108.9	12.46	1931.89
	1/7/2014	9:02	1/7/2014 9:02	55	33	30	11.5	42	24.3		1019.3	116.61	2048.51
	1/7/2014	10:22	1/7/2014 10:22	50	34	30	10	47	21.2		1820.2	208.23	2256.73
	1/7/2014	11:21	1/7/2014 11:21	48	34	30	11	50	23.3		1312.8	150.19	2406.92
	1/7/2014	11:21	1/7/2014 11:21										2406.92

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/7/2014	13:56	1/7/2014 13:56	52	34	29.5	13.5	52	28.5		4013.3	459.13	2866.04
	1/7/2014	15:16	1/7/2014 15:16	50	34	29.5	14	55	29.5		2319.3	265.33	3131.37
	1/7/2014	16:25	1/7/2014 16:25	47	34	29.5	14	50	29.6		2038.9	233.25	3364.62
	1/7/2014	17:08	1/7/2014 17:08	50	34	29	15	47	31.8		1321.5	151.18	3515.80
	1/7/2014	17:09	1/7/2014 17:09								31.8	3.64	3519.44
	1/7/2014	17:10	1/7/2014 17:10										3519.44
SW-21 Event 7	1/10/2014	8:41	1/10/2014 8:41										3519.44
	1/10/2014	8:42	1/10/2014 8:42	55	30.5	31.2	3	67	6.0		6.0	0.69	3520.13
	1/10/2014	9:02	1/10/2014 9:02	50	30	30.4	6	67	11.9		179.6	20.54	3540.67
	1/10/2014	10:04	1/10/2014 10:04	42	30	30.4	6	65	12.0		741.6	84.84	3625.52
	1/10/2014	11:42	1/10/2014 11:42	41	30	30	6.5	67	12.9		1221.0	139.69	3765.20
	1/10/2014	13:05	1/10/2014 13:05	45	30	29.8	7	66	14.0		1116.4	127.72	3892.92
	1/10/2014	14:08	1/10/2014 14:08	49	29.5	29.2	8	69	15.8		937.7	107.27	4000.19
	1/10/2014	14:09	1/10/2014 14:09	49	31	30.6	12.5	69	25.1		20.5	2.34	4002.53
	1/10/2014	15:12	1/10/2014 15:12	49	31	20.6	13	69	26.1		1614.7	184.72	4187.25
	1/10/2014	16:19	1/10/2014 16:19	47	31	30.2	13.5	68	27.2		1785.4	204.25	4391.50
	1/10/2014	17:48	1/10/2014 17:48	45	31	29.6	14	65	28.3		2466.1	282.12	4673.63
	1/10/2014	17:49	1/10/2014 17:49	45	32	30.8	16	65	32.6		30.5	3.48	4677.11
	1/10/2014	21:51	1/10/2014 21:51	44	32	30.6	17.5	63	35.8		8279.4	947.16	5624.27
	1/11/2014	7:55	1/11/2014 7:55	40	31	28.8	20	64	40.4		23006.4	2631.94	8256.21
	1/11/2014	7:56	1/11/2014 7:56								40.4	4.62	8260.83
	1/11/2014	7:57	1/11/2014 7:57										8260.83
SW-21 Event 8	1/23/2014	12:10	1/23/2014 12:10		27	24	<2	56	0.0				8260.83
	1/23/2014	12:11	1/23/2014 12:11	46	32.5	31	2	56	4.1		2.1	0.24	8261.06
	1/23/2014	12:13	1/23/2014 12:13	46	32.5	29.5	3	56	6.2		10.3	1.18	8262.25
	1/23/2014	12:53	1/23/2014 12:53	46	32.5	29.5	5.2	58	10.7		339.0	38.79	8301.04
	1/23/2014	14:16	1/23/2014 14:16	50	32.5	28	7	55	14.5		1047.7	119.86	8420.90
	1/23/2014	14:17	1/23/2014 14:17	50	33	30	12.2	54.5	25.4		20.0	2.28	8423.18
	1/23/2014	15:06	1/23/2014 15:06	50	33	30	12.2	54	25.4		1246.3	142.58	8565.76
	1/23/2014	16:38	1/23/2014 16:38	55	34	29.8	13	54	27.4		2430.5	278.05	8843.81
	1/23/2014	16:39	1/23/2014 16:39			25					27.4	3.13	8846.95
SW-21 Event 9	3/10/2015	13:07	3/10/2015 13:07		27	28	0	83	0.0				8846.95
	3/10/2015	13:18	3/10/2015 13:18		26	28	0	84	0.0		0.0	0.00	8846.95
	3/10/2015	14:18	3/10/2015 14:18		26	27.5	<2	83	0.0		0.0	0.00	8846.95
	3/10/2015	14:19	3/10/2015 14:19		32	32	8	83	16.0		8.0	0.92	8847.86
	3/10/2015	16:06	3/10/2015 16:06		32	31	8.5	80	17.1		1772.6	202.79	9050.65
	3/10/2015	17:02	3/10/2015 17:02		32	31	9.5	77	19.2		1015.0	116.12	9166.77
	3/10/2015	18:14	3/10/2015 18:14		32	31	10	74	20.2		1417.8	162.20	9328.97
	3/10/2015	18:15	3/10/2015 18:15			26					20.2	2.31	9331.28
SW-21 Event 10	3/12/2015	13:05	3/12/2015 13:05		30	30.5	<2	70	0.0				9331.28
	3/12/2015	13:13	3/12/2015 13:13		30	29	4	71	7.9		31.7	3.63	9334.91
	3/12/2015	13:14	3/12/2015 13:14		34	33	7	71	14.5		11.2	1.28	9336.19
	3/12/2015	14:58	3/12/2015 14:58		34	32	10	71	20.7		1831.7	209.55	9545.74
	3/12/2015	16:07	3/12/2015 16:07		34	31	11	69	22.8		1502.8	171.92	9717.66
	3/12/2015	17:42	3/12/2015 17:42		34	30	12	67	25.0		2270.5	259.75	9977.41
	3/12/2015	17:44	3/12/2015 17:44			24					49.9	5.71	9983.12
SW-21 Event 11	3/16/2015	8:11	3/16/2015 8:11		30	30	0	58	0.0				9983.12
	3/16/2015	8:56	3/16/2015 8:56		30	28	4	69	8.0		178.9	20.47	10003.58
	3/16/2015	8:57	3/16/2015 8:57		34	32.5	10	69	20.8		14.4	1.64	10005.23
	3/16/2015	10:08	3/16/2015 10:08		34	31.5	10	77	20.6		1468.3	167.98	10173.20
	3/16/2015	11:25	3/16/2015 11:25		34	30	11	82	22.6		1661.4	190.06	10363.26

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/16/2015	11:28	3/16/2015 11:28		37	31.5	13	82	27.5		75.0	8.58	10371.85
	3/16/2015	12:52	3/16/2015 12:52		37	31	14	82	29.6		2396.5	274.16	10646.01
	3/16/2015	12:55	3/16/2015 12:55			25					88.8	10.15	10656.16
SW-21 Event 12	3/18/2015	8:03	3/18/2015 8:03		31	30	6	70	12.0				10656.16
	3/18/2015	9:09	3/18/2015 9:09		30	28	8	72	15.9		920.9	105.35	10761.51
	3/18/2015	9:10	3/18/2015 9:10		33	30	12	72	24.6		20.2	2.31	10763.82
	3/18/2015	10:27	3/18/2015 10:27		33	29	12	74	24.5		1890.8	216.31	10980.13
	3/18/2015	10:28	3/18/2015 10:28			22.5					24.5	2.81	10982.94
Total CO ₂ Mass (lbs):												10982.94	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)	
SW-22 Event 1	11/14/2013	7:53	11/14/2013 7:53	30	11				0.0				0.00	
	11/14/2013	7:56	11/14/2013 7:56	39	36	32	<2	34.5	0.0		0.0	0.00	0.00	
	11/14/2013	8:00	11/14/2013 8:00	30	31.5	29	<2	36.6	0.0		0.0	0.00	0.00	
	11/14/2013	8:04	11/14/2013 8:04	32	32.5	29	4.5	40.4	7.7		15.3	1.76	1.76	
	11/14/2013	8:08	11/14/2013 8:08	33	33	29	4.5	41.5	7.7		30.8	3.52	5.27	
	11/14/2013	8:10	11/14/2013 8:10	36	35	31	6.25	41.3	10.9		18.6	2.13	7.41	
	11/14/2013	8:14	11/14/2013 8:14	38	37	33	8	38.6	14.3		50.5	5.78	13.18	
	11/14/2013	8:36	11/14/2013 8:36	38	36	32.5	9.75	28.1	17.5		349.6	39.99	53.18	
	11/14/2013	9:01	11/14/2013 9:01	38	35	30.5	10.5	27.5	18.6		451.2	51.62	104.80	
	11/14/2013	9:02	11/14/2013 9:02	42	38	32.5	13.5	27.8	24.7		21.7	2.48	107.27	
	11/14/2013	9:03	11/14/2013 9:03	43	38.5	34	13.25	27.3	24.3		24.5	2.80	110.08	
	11/14/2013	9:07	11/14/2013 9:07	43	38.5	34	13.25	26	24.4		97.5	11.15	121.23	
	11/14/2013	9:40	11/14/2013 9:40	42	38	33	14	26.7	25.6		825.1	94.39	215.62	
	11/14/2013	10:03	11/14/2013 10:03	42	37	33	14.5	28.7	26.2		596.2	68.20	283.82	
	11/14/2013	10:43	11/14/2013 10:43	42	37	32	15.25	31.7	27.5		1074.2	122.88	406.70	
	11/14/2013	11:50	11/14/2013 11:50	42	36	31	16	34.7	28.5		1874.3	214.42	621.13	
11/14/2013	12:07	11/14/2013 12:07								483.9	55.35	676.48		
11/14/2013	12:08	11/14/2013 12:08	26	26	21		37.2					676.48		
SW-22 Event 2	12/10/2013	12:43	12/10/2013 12:43	52.5	32.5	32.2	<2	80	0.0				676.48	
	12/10/2013	13:07	12/10/2013 13:07	52.5	28	25.2	20	76	38.6		463.0	52.96	729.44	
	12/10/2013	13:59	12/10/2013 13:59	50	28	25.2	21.5	70	41.7		2087.7	238.83	968.28	
	12/10/2013	14:01	12/10/2013 14:01	50	30	27	24	72	47.6		89.3	10.21	978.49	
	12/10/2013	14:30	12/10/2013 14:30	49	30	27	24.5	72	48.6		1393.8	159.45	1137.94	
	12/10/2013	15:10	12/10/2013 15:10	47.5	30	27	24.5	72	48.6		1942.3	222.20	1360.14	
	12/10/2013	15:16	12/10/2013 15:16	47.5	32	27.6	26	72	52.7		303.7	34.75	1394.89	
	12/10/2013	15:43	12/10/2013 15:43	47.5	31	27.6	26	72	52.1		1414.8	161.85	1556.74	
	12/10/2013	16:21	12/10/2013 16:21	45	31	28	26	70	52.2		1982.2	226.76	1783.51	
	12/10/2013	16:55	12/10/2013 16:55	45	31	28	26	70	52.2		1775.3	203.09	1986.60	
	12/10/2013	16:58	12/10/2013 16:58								156.6	17.92	2004.52	
	12/10/2013	16:59	12/10/2013 16:59			15							2004.52	
	SW-22 Event 3	12/20/2013	7:47	12/20/2013 7:47	48	30	31	16	56	32.2				2004.52
		12/20/2013	7:49	12/20/2013 7:49	48	31		19	56	38.7		70.9	8.11	2012.63
12/20/2013		8:10	12/20/2013 8:10	45	31	25	22	60	44.6		874.7	100.07	2112.70	
12/20/2013		8:14	12/20/2013 8:14	44	35	28	27	60	57.1		203.5	23.28	2135.99	
12/20/2013		8:16	12/20/2013 8:16	43	37.5	30	29	60	62.9		120.1	13.74	2149.72	
12/20/2013		9:48	12/20/2013 9:48	40	36	29	28	68	59.4		5626.8	643.71	2793.43	
12/20/2013		9:49	12/20/2013 9:49	40	36	29	28	68	59.4		59.4	6.79	2800.23	
12/20/2013		10:35	12/20/2013 10:35	39	36	28	28	72	59.2		2726.7	311.93	3112.16	
12/20/2013		11:29	12/20/2013 11:29	39	34	27	28.5	74	58.9		3187.1	364.60	3476.76	
12/20/2013		11:49	12/20/2013 11:49	42	39	28.5	30	74	65.1		1240.2	141.88	3618.64	
12/20/2013		11:50	12/20/2013 11:50								65.1	7.45	3626.09	
12/20/2013		11:51	12/20/2013 11:51			16							3626.09	
SW-22 Event 4	1/8/2014	12:30	1/8/2014 12:30						0.0				3626.09	
	1/8/2014	12:31	1/8/2014 12:31	45	34	24	16	58	33.6		16.8	1.92	3628.01	
	1/8/2014	12:33	1/8/2014 12:33								67.2	7.68	3635.69	
SW-22 Event 5	2/4/2014	14:20	2/4/2014 14:20	48	28	25	<2	62	0.0				3635.69	
	2/4/2014	14:21	2/4/2014 14:21	48	33	29	14	62	29.0		14.5	1.66	3637.35	
	2/4/2014	14:23	2/4/2014 14:23	48	31	29	18	62	36.4		65.4	7.48	3644.83	
	2/4/2014	14:45	2/4/2014 14:45	48	31	23	22	62	44.5		890.6	101.89	3746.72	
	2/4/2014	15:36	2/4/2014 15:36	47	31	22	25	62	50.6		2425.9	277.52	4024.24	
	2/4/2014	16:30	2/4/2014 16:30	46	30	22	25.2	60	50.5		2730.8	312.41	4336.64	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/4/2014	17:30	2/4/2014 17:30	48	30		25.2	60	50.5		3032.3	346.90	4683.54
	2/4/2014	17:32	2/4/2014 17:32			9					101.1	11.56	4695.10
SW-22 Event 6	2/6/2014	10:47	2/6/2014 10:47	47	29	32.2	12	60	23.8				4695.10
	2/6/2014	10:49	2/6/2014 10:49	47	28	27.6	16.5	60	32.3		56.1	6.42	4701.52
	2/6/2014	11:08	2/6/2014 11:08	46	27	24.4	20.5	61	39.6		683.8	78.23	4779.75
	2/6/2014	12:10	2/6/2014 12:10	45	26.5	23.4	21.8	62	41.9		2526.9	289.08	5068.83
	2/6/2014	12:13	2/6/2014 12:13	45	30	26.2	27	62.5	54.0		143.8	16.45	5085.28
	2/6/2014	14:09	2/6/2014 14:09	42	30	26	27.8	63	55.6		6356.8	727.22	5812.51
	2/6/2014	15:21	2/6/2014 15:21	43	30	26	28	60	56.2		4022.7	460.19	6272.70
	2/6/2014	16:35	2/6/2014 16:35	43	30	26	28	58	56.3		4159.5	475.85	6748.55
	2/6/2014	17:18	2/6/2014 17:18	47	30	26	28.5	58	57.3		2441.0	279.25	7027.80
	2/7/2014	8:02	2/7/2014 8:02	49	29	24.4	31	54	61.8		52642.7	6022.33	13050.13
	2/7/2014	8:04	2/7/2014 8:04			12					123.7	14.15	13064.28
SW-22 Event 7	2/7/2014	10:07	2/7/2014 10:07	45	25	26.5	6	57	11.4				13064.28
	2/7/2014	10:09	2/7/2014 10:09	43	32	28	20	57	41.1		52.5	6.01	13070.28
	2/7/2014	10:16	2/7/2014 10:16	43	29.5	25	25.9	58	51.7		325.1	37.19	13107.47
	2/7/2014	11:30	2/7/2014 11:30	42	29	24.5	26.5	60	52.5		3858.7	441.43	13548.90
	2/7/2014	13:04	2/7/2014 13:04	42	29	24	26.5	60	52.5		4938.6	564.98	14113.88
	2/7/2014	14:22	2/7/2014 14:22	45	29	24	2.5	60	5.0		2242.3	256.52	14370.40
	2/7/2014	15:39	2/7/2014 15:39	46	29	24	26.5	60	52.5		2213.6	253.23	14623.63
	2/7/2014	16:39	2/7/2014 16:39	46	29	24	26.5	58	52.6		3155.5	360.98	14984.62
	2/7/2014	17:28	2/7/2014 17:28	49	29	24	26.5	57	52.7		2580.8	295.25	15279.86
	2/7/2014	17:29	2/7/2014 17:29			16					52.7	6.03	15285.89
SW-22 Event 8	2/12/2014	8:10	2/12/2014 8:10	55	31	30.5	<2	46	0.0				15285.89
	2/12/2014	8:11	2/12/2014 8:11	51	32.5	27	23.5	46	49.1		24.6	2.81	15288.70
	2/12/2014	8:50	2/12/2014 8:50	45	31	26	27	50	55.3		2036.9	233.02	15521.73
	2/12/2014	10:25	2/12/2014 10:25	45	30	25	28.2	51	57.1		5338.2	610.69	16132.42
	2/12/2014	11:52	2/12/2014 11:52	44	30	24	28.2	51	57.1		4965.0	568.00	16700.42
	2/12/2014	11:53	2/12/2014 11:53			17					57.1	6.53	16706.95
SW-22 Event 9	3/10/2015	8:16	3/10/2015 8:16		28	30	0	62	0.0				16706.95
	3/10/2015	9:07	3/10/2015 9:07		28	29	3	68	5.8		148.7	17.01	16723.96
	3/10/2015	10:27	3/10/2015 10:27		28	29	4	77	7.7		541.6	61.96	16785.92
	3/10/2015	10:29	3/10/2015 10:29		34	33	10	77	20.6		28.3	3.24	16789.16
	3/10/2015	11:52	3/10/2015 11:52		34	33	10	80	20.5		1707.4	195.32	16984.48
	3/10/2015	11:53	3/10/2015 11:53		37	35	13	80	27.5		24.0	2.75	16987.23
	3/10/2015	13:01	3/10/2015 13:01		37	35	12.5	80	26.5		1835.8	210.01	17197.24
	3/10/2015	13:02	3/10/2015 13:02			26					26.5	3.03	17200.27
SW-22 Event 10	3/12/2015	7:53	3/12/2015 7:53		32	33	10	71	20.3				17200.27
	3/12/2015	8:02	3/12/2015 8:02		32	26.5	12.5	71	25.4		205.4	23.50	17223.77
	3/12/2015	8:03	3/12/2015 8:03		42	32	19	71	42.5		33.9	3.88	17227.65
	3/12/2015	9:18	3/12/2015 9:18		42	29	20.5	72	45.8		3314.4	379.16	17606.81
	3/12/2015	10:31	3/12/2015 10:31		42	29	21	72	47.0		3387.7	387.55	17994.37
	3/12/2015	11:57	3/12/2015 11:57		42	28	22	70	49.3		4139.4	473.55	18467.92
	3/12/2015	13:00	3/12/2015 13:00		42	27.5	22	70	49.3		3105.9	355.31	18823.23
	3/12/2015	13:01	3/12/2015 13:01			19					49.3	5.64	18828.87
											Total CO ₂ Mass (lbs):		18828.87

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)	
SW-23 Event 1	11/13/2013	8:51	11/13/2013 8:51											
	11/13/2013	8:54	11/13/2013 8:54	32	33	30	<2	32.3	0.0		0.0	0.00	0.00	
	11/13/2013	8:59	11/13/2013 8:59	28	28	24.5	3.5	34.6	5.7		14.3	1.63	1.63	
	11/13/2013	9:00	11/13/2013 9:00	34	34	30	8	36.8	13.9		9.8	1.12	2.75	
	11/13/2013	9:03	11/13/2013 9:03	34	32.5	28.5	9.25	36.8	15.8		44.6	5.10	7.86	
	11/13/2013	9:06	11/13/2013 9:06	37	34	30	11.75	35.2	20.5		54.4	6.23	14.09	
	11/13/2013	9:07	11/13/2013 9:07	41	36	31.5	13.75	27.9	24.6		22.6	2.58	16.67	
	11/13/2013	9:36	11/13/2013 9:36	40	35	31	15.5	19.7	27.7		759.5	86.88	103.55	
	11/13/2013	10:13	11/13/2013 10:13	40	34	30	16	20.6	28.3		1036.9	118.62	222.17	
	11/13/2013	10:18	11/13/2013 10:18	44	36	31.5	18.25	19.7	33.0		153.3	17.53	239.70	
	11/13/2013	10:45	11/13/2013 10:45	44	36	31	18.75	17.4	34.0		904.2	103.44	343.15	
	11/13/2013	12:20	11/13/2013 12:20	44	34.5	30	19.75	17.2	35.3		3289.1	376.27	719.42	
	11/13/2013	12:24	11/13/2013 12:24	48	36	31	21.5	21.7	38.8		148.1	16.94	736.36	
	11/13/2013	12:29	11/13/2013 12:29	51	37.5	32.5	22.75	15.9	41.9		201.8	23.08	759.45	
	11/13/2013	12:53	11/13/2013 12:53	52	38	33	23	26.2	42.1		1008.5	115.37	874.81	
	11/13/2013	13:00	11/13/2013 13:00		25	21					294.8	33.72	908.54	
11/13/2013	13:02	11/13/2013 13:02	24	25	21							908.54		
SW-23 Event 2	12/10/2013	8:37	12/10/2013 8:37	52	36	36	<2	72.0	0.0			0.00	908.54	
	12/10/2013	8:38	12/10/2013 8:38	52	33	36	<2	72.0	0.0		0.0	0.00	908.54	
	12/10/2013	8:50	12/10/2013 8:50	52	33	32.4	<2	72.0	0.0		0.0	0.00	908.54	
	12/10/2013	9:27	12/10/2013 9:27	50	32	32	<2	72.0	0.0		0.0	0.00	908.54	
	12/10/2013	10:00	12/10/2013 10:00	50	31	32	<2	73.0	0.0		0.0	0.00	908.54	
	12/10/2013	10:48	12/10/2013 10:48	47.5	31	31.6	<2	75.0	0.0		0.0	0.00	908.54	
	12/10/2013	10:51	12/10/2013 10:51	47.5	32.5	32.4	5.5	75.0	11.2		0.0	0.00	908.54	
	12/10/2013	11:41	12/10/2013 11:41	45	32.5	32.4	6	74.0	12.2		558.7	63.91	972.45	
	12/10/2013	12:34	12/10/2013 12:34	51	32.5	32	6.5	78.0	13.2		646.6	73.98	1046.43	
	12/10/2013	12:37	12/10/2013 12:37								39.5	4.52	1050.95	
	12/10/2013	12:38	12/10/2013 12:38			24							1050.95	
	SW-23 Event 3	12/12/2013	11:43	12/12/2013 11:43		28	33.2	14	72	27.1				1050.95
		12/12/2013	11:51	12/12/2013 11:51		28	29.2	16.1	72	31.2		233.2	26.67	1077.62
12/12/2013		12:58	12/12/2013 12:58		28	25.2	19	72	36.8		2277.0	260.49	1338.11	
12/12/2013		13:00	12/12/2013 13:00		32	28.6	23	72	46.6		83.4	9.54	1347.65	
12/12/2013		15:43	12/12/2013 15:43	45	32	28	24	70	48.7		7770.1	888.90	2236.55	
12/12/2013		15:44	12/12/2013 15:44	45	34	29	26	70	53.9		51.3	5.87	2242.42	
12/12/2013		16:40	12/12/2013 16:40	45	34	29	26.5	66	55.2		3055.0	349.49	2591.91	
12/12/2013		17:00	12/12/2013 17:00	45	34	29	27	64	56.3		1115.1	127.57	2719.48	
12/12/2013		17:01	12/12/2013 17:01								56.3	6.44	2725.93	
12/12/2013		17:02	12/12/2013 17:02			18							2725.93	
SW-23 Event 4	12/19/2013	8:44	12/19/2013 8:44	48	33	34	10	58	20.8				2725.93	
	12/19/2013	9:20	12/19/2013 9:20	43	30	26	23	61	46.1		1203.3	137.66	2863.59	
	12/19/2013	9:21	12/19/2013 9:21	43	32	27.5	24	61	49.2		47.6	5.45	2869.03	
	12/19/2013	10:12	12/19/2013 10:12	40	31	26	25	66	50.4		2539.0	290.46	3159.49	
	12/19/2013	11:10	12/19/2013 11:10	40	31	26	25	70	50.2		2917.7	333.78	3493.27	
	12/19/2013	12:39	12/19/2013 12:39	45	31	26	26	74	52.0		4548.7	520.37	4013.64	
	12/19/2013	12:41	12/19/2013 12:41								104.0	11.90	4025.54	
	12/19/2013	12:42	12/19/2013 12:42			17							4025.54	
SW-23 Event 5	1/7/2014	9:44	1/7/2014 9:44					40					4025.54	
	1/7/2014	9:46	1/7/2014 9:46	54	30	33	7	40	14.3		28.7	3.28	4028.82	
	1/7/2014	10:34	1/7/2014 10:34	50	28	27	17	42	33.9		1158.0	132.48	4161.29	
	1/7/2014	10:36	1/7/2014 10:36	49	33.5	30.5	23	42	48.8		82.7	9.47	4170.76	
	1/7/2014	11:39	1/7/2014 11:39	46	33	30	24	44	50.6		3130.4	358.12	4528.88	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/7/2014	13:30	1/7/2014 13:30	47	32.5	28.5	26	48	54.3		5817.6	665.53	5194.41
	1/7/2014	13:31	1/7/2014 13:31								54.3	6.21	5200.62
	1/7/2014	13:32	1/7/2014 13:32			20							5200.62
SW-23 Event 6	1/9/2014	13:08	1/9/2014 13:08	41	34	34	4	64	8.3		0.0	0.00	5200.62
	1/9/2014	13:15	1/9/2014 13:15	40	32	28	15	64	30.6		136.4	15.61	5216.23
	1/9/2014	14:49	1/9/2014 14:49	39	32	26	17	62	34.8		3075.1	351.79	5568.02
	1/9/2014	14:54	1/9/2014 14:54	39	32.5	28	20.5	62	42.2		192.4	22.01	5590.03
	1/9/2014	14:59	1/9/2014 14:59	40	35	29	21	62	44.4		216.3	24.75	5614.78
	1/9/2014	15:30	1/9/2014 15:30	40	35	28.5	21.5	61	45.5		1392.2	159.26	5774.04
	1/9/2014	17:14	1/9/2014 17:14	51	37	28.5	23.9	60	51.6		5047.6	577.45	6351.49
	1/9/2014	17:18	1/9/2014 17:18			25							6351.49
SW-23 Event 7	1/23/2014	11:27	1/23/2014 11:27	45	28	30	<2	56	0.0		0.0	0.00	6351.49
	1/23/2014	11:28	1/23/2014 11:28	45	32.8	31.3	7	56	14.5		7.3	0.83	6352.32
	1/23/2014	12:56	1/23/2014 12:56	45	30	29.5	14.3	58	28.7		1904.0	217.82	6570.14
	1/23/2014	12:57	1/23/2014 12:57	45	33	31.5	18.5	58	38.4		33.6	3.84	6573.98
	1/23/2014	14:21	1/23/2014 14:21	48	33	30	20	56	41.6		3361.9	384.60	6958.58
	1/23/2014	15:50	1/23/2014 15:50	48	32	29.8	21.8	56	44.9		3849.4	440.38	7398.96
	1/23/2014	16:24	1/23/2014 16:24		32	29	21.9	56	45.1		1529.5	174.97	7573.94
	1/23/2014	16:32	1/23/2014 16:32			21					360.7	41.26	7615.20
SW-23 Event 8	1/24/2014	7:41	1/24/2014 7:41	56	30	30.5	<2	40	0.0				7615.20
	1/24/2014	7:42	1/24/2014 7:42	55	32	31	10.8	40	22.6		11.3	1.29	7616.49
	1/24/2014	7:45	1/24/2014 7:45	55	30.5	29.5	16	40	32.9		83.3	9.53	7626.02
	1/24/2014	7:48	1/24/2014 7:48	55	32	30.5	20	40	41.9		112.2	12.83	7638.86
	1/24/2014	8:00	1/24/2014 8:00	53	32	30	20.3	41	42.4		505.8	57.86	7696.72
	1/24/2014	8:27	1/24/2014 8:27	50	32	29.5	20.8	44	43.4		1158.2	132.50	7829.22
	1/24/2014	8:52	1/24/2014 8:52	49	32	29.5	20.8	45	43.3		1083.2	123.92	7953.13
	1/24/2014	8:54	1/24/2014 8:54	48	33.5	30.5	23.2	45	49.1		92.4	10.57	7963.70
	1/24/2014	9:41	1/24/2014 9:41	47	33.5	30	23.8	49	50.1		2332.0	266.79	8230.49
	1/24/2014	10:43	1/24/2014 10:43	46	33	29.5	24.1	51	50.4		3117.3	356.62	8587.11
	1/24/2014	11:45	1/24/2014 11:45	45	33	29	24.7	54	51.5		3159.4	361.44	8948.55
	1/24/2014	11:58	1/24/2014 11:58	45	33	29	24.7	54	51.5		669.6	76.60	9025.15
	1/24/2014	12:01	1/24/2014 12:01			21					154.5	17.68	9042.83
SW-23 Event 9	1/29/2014	11:45	1/29/2014 11:45	50	28	29	8	40	16.0				9042.83
	1/29/2014	11:50	1/29/2014 11:50	50	29	29.5	8	40	16.2		80.5	9.20	9052.04
	1/29/2014	13:00	1/29/2014 13:00	48	26	28	10.5	40	20.5		1283.7	146.85	9198.89
	1/29/2014	14:00	1/29/2014 14:00	45	26	28	10.5	40	20.5		1229.4	140.65	9339.54
	1/29/2014	15:00	1/29/2014 15:00	46	28	28	12.5	40	25.0		1364.6	156.11	9495.64
	1/29/2014	16:20	1/29/2014 16:20	46	29	28.5	12.5	40	25.3		2011.5	230.11	9725.75
	1/29/2014	16:25	1/29/2014 16:25			20					126.5	14.47	9740.22
SW-23 Event 10	2/3/2014	8:44	2/3/2014 8:44	54	27	25	<2	68	0.0		0.0	0.00	9740.22
	2/3/2014	8:46	2/3/2014 8:46	54	33	31	7	68	14.4		14.4	1.65	9741.87
	2/3/2014	8:47	2/3/2014 8:47		33	30	11	68	22.6		18.5	2.12	9743.98
	2/3/2014	8:49	2/3/2014 8:49	53	32	29	14	68	28.5		51.1	5.85	9749.83
	2/3/2014	8:51	2/3/2014 8:51	53	33	28	17.8	68	36.6		65.1	7.45	9757.28
	2/3/2014	8:52	2/3/2014 8:52	53	33	27	19	68	39.1		37.8	4.33	9761.60
	2/3/2014	9:13	2/3/2014 9:13		32.5	27	20	70	40.8		838.9	95.98	9857.58
	2/3/2014	10:16	2/3/2014 10:16	52	32	26	20.5	74	41.5		2592.1	296.54	10154.12
	2/3/2014	11:58	2/3/2014 11:58	51	31.5	25	21.3	77	42.7		4293.3	491.16	10645.28
	2/3/2014	12:00	2/3/2014 12:00	50	33	27	25	77	51.0		93.7	10.72	10655.99
	2/3/2014	13:22	2/3/2014 13:22	50	34	27	25	74	51.7		4207.1	481.29	11137.29
	2/3/2014	14:22	2/3/2014 14:22	50	34	27	25	73	51.7		3100.5	354.70	11491.99

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/3/2014	15:28	2/3/2014 15:28	50	34	26	25.5	70	52.9		3451.5	394.85	11886.84
	2/3/2014	16:55	2/3/2014 16:55	50	34	26	26.2	70	54.3		4664.6	533.63	12420.47
	2/4/2014	9:30	2/4/2014 9:30	48	34	24	28.7	61	60.1		56914.4	6511.01	18931.47
	2/4/2014	9:33	2/4/2014 9:33			19					180.2	20.61	18952.09
SW-23 Event 11	2/5/2014	8:12	2/5/2014 8:12	54	32.5	35	6.5	64	13.3				18952.09
	2/5/2014	8:37	2/5/2014 8:37	48	29	30	18	64	35.5		611.2	69.92	19022.00
	2/5/2014	9:23	2/5/2014 9:23	45	29	29	19	66	37.4		1678.8	192.06	19214.06
	2/5/2014	9:25	2/5/2014 9:25	45	32	29	23	66	46.9		84.3	9.65	19223.71
	2/5/2014	10:23	2/5/2014 10:23	44	32	29	23.2	68	47.2		2728.4	312.12	19535.83
	2/5/2014	11:24	2/5/2014 11:24	44	32	28.8	23.2	70	47.1		2876.3	329.04	19864.88
	2/5/2014	12:36	2/5/2014 12:36	44	32	28.8	22.2	72	45.0		3315.3	379.28	20244.15
	2/5/2014	13:30	2/5/2014 13:30	43	32	28.2	23	76	46.4		2468.2	282.36	20526.51
	2/5/2014	14:44	2/5/2014 14:44	45	32	27.8	24	76	48.4		3510.4	401.59	20928.10
	2/5/2014	15:38	2/5/2014 15:38	45	32	27.6	24.3	71	49.3		2638.9	301.89	21229.99
	2/5/2014	17:10	2/5/2014 17:10	48	32	27.6	24	72	48.6		4504.6	515.32	21745.32
	2/5/2014	21:19	2/5/2014 21:19	48	32	28	25	62	51.2		12424.8	1421.39	23166.71
	2/6/2014	7:58	2/6/2014 7:58	48	31.5	28.2	26	56	53.2		33355.6	3815.88	26982.59
	2/6/2014	8:00	2/6/2014 8:00			22					106.5	12.18	26994.77
SW-23 Event 12	2/7/2014	8:15	2/7/2014 8:15	53	31	33.4	<2		0.0				26994.77
	2/7/2014	8:48	2/7/2014 8:48	46	28	27.6	14.5	56	28.5		470.7	53.84	27048.62
	2/7/2014	8:51	2/7/2014 8:51	44	31	29.2	20.5	56	41.7		105.4	12.06	27060.67
	2/7/2014	9:38	2/7/2014 9:38	43	30.5	28.6	22.5	56	45.6		2051.7	234.71	27295.38
	2/7/2014	10:00	2/7/2014 10:00	43	30.5	28.2	24	57	48.5		1035.2	118.43	27413.81
	2/7/2014	10:01	2/7/2014 10:01			22					48.5	5.55	27419.37
SW-23 Event 13	2/26/2015	7:40	2/26/2015 7:40		27	28	0	52	0.0				27419.37
	2/26/2015	8:30	2/26/2015 8:30		28	27	4	54	7.9		197.1	22.55	27441.92
	2/26/2015	9:30	2/26/2015 9:30		27	27	4.5	56	8.7		499.0	57.08	27499.00
	2/26/2015	9:31	2/26/2015 9:31		33	32	9.5	57	19.8		14.2	1.63	27500.63
	2/26/2015	10:40	2/26/2015 10:40		34	32	8.5	60	17.8		1295.7	148.23	27648.86
	2/26/2015	11:52	2/26/2015 11:52		34	32	8	66	16.7		1240.7	141.94	27790.79
	2/26/2015	11:53	2/26/2015 11:53		37	35	13	66	27.9		22.3	2.55	27793.34
	2/26/2015	13:51	2/26/2015 13:51		38	36	12	66	26.0		3181.0	363.91	28157.25
	2/26/2015	15:18	2/26/2015 15:18		38	36	12	68	26.0		2260.7	258.62	28415.87
	2/26/2015	17:06	2/26/2015 17:06		37	35	14	60	30.2		3034.3	347.13	28763.00
	2/26/2015	17:07	2/26/2015 17:07			27					30.2	3.46	28766.46
SW-23 Event 14	3/12/2015	12:42	3/12/2015 12:42		33	35	0	73	0.0				28766.46
	3/12/2015	12:56	3/12/2015 12:56		33	33	4	73	8.2		57.3	6.55	28773.01
	3/12/2015	12:57	3/12/2015 12:57		36	36	7	73	14.8		11.5	1.31	28774.33
	3/12/2015	13:16	3/12/2015 13:16		36	37.5	5.5	73	11.6		250.7	28.67	28803.00
	3/12/2015	13:17	3/12/2015 13:17		34	35	4	73	8.3		9.9	1.14	28804.14
	3/12/2015	14:24	3/12/2015 14:24		34	35	6	72	12.4		693.2	79.30	28883.44
	3/12/2015	16:12	3/12/2015 16:12		34	34	7	70	14.5		1454.7	166.42	29049.86
	3/12/2015	17:50	3/12/2015 17:50		33	33	8	66	16.5		1519.1	173.79	29223.65
	3/12/2015	17:51	3/12/2015 17:51		0	28.5					16.5	1.89	29225.53
SW-23 Event 15	3/16/2015	7:47	3/16/2015 7:47		32	32	0	57	0.0				29225.53
	3/16/2015	8:45	3/16/2015 8:45		31	32	4	66	8.1		233.9	26.75	29252.29
	3/16/2015	8:46	3/16/2015 8:46		35	36	6	66	12.6		10.3	1.18	29253.47
	3/16/2015	10:01	3/16/2015 10:01		35	36	8	77	16.7		1097.8	125.59	29379.06
	3/16/2015	11:06	3/16/2015 11:06		35	36	8	87	16.5		1077.2	123.23	29502.29
	3/16/2015	11:07	3/16/2015 11:07			28					16.5	1.89	29504.17
Total CO ₂ Mass (lbs):													29504.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-24 Event 1	11/22/2013	8:21	11/22/2013 8:21	50	28			72	0.0				0
	11/22/2013	8:23	11/22/2013 8:23	55	32	32	<2	72	0.0		0.0	0.00	0.00
	11/22/2013	8:47	11/22/2013 8:47		31	31	<2	74	0.0		0.0	0.00	0.00
	11/22/2013	8:48	11/22/2013 8:48	54	34	34	2	78	4.1		2.1	0.24	0.24
	11/22/2013	9:56	11/22/2013 9:56		35	34	2	78	4.2		281.3	32.19	32.42
	11/22/2013	9:57	11/22/2013 9:57	50	37	36.5	4	82	8.5		6.3	0.72	33.14
	11/22/2013	11:06	11/22/2013 11:06		38	36.5	4	80	8.6		586.7	67.12	100.26
	11/22/2013	12:01	11/22/2013 12:01		38	36.5	4.5	84	9.6		498.8	57.06	157.32
	11/22/2013	13:17	11/22/2013 13:17		37	36.5	5	84	10.5		765.0	87.51	244.83
	11/22/2013	14:13	11/22/2013 14:13		37	36.5	5.5	80	11.6		621.4	71.09	315.92
	11/22/2013	15:27	11/22/2013 15:27	50	37	36	6	76	12.8		902.8	103.28	419.19
	11/22/2013	16:40	11/22/2013 16:40		37	36	6	75	12.8		931.5	106.56	525.75
	11/22/2013	17:29	11/22/2013 17:29	54	37	36	6	72	12.8		626.4	71.67	597.42
	11/22/2013	17:30	11/22/2013 17:30								12.8	1.46	598.88
	11/22/2013	17:31	11/22/2013 17:31										598.88
SW-24 Event 2	12/6/2013	13:31	12/6/2013 13:31	50	33	33	<2	86	0.0				598.88
	12/6/2013	13:44	12/6/2013 13:44	49	32	32.5	<2	88	0.0		0.0	0.00	598.88
	12/6/2013	14:45	12/6/2013 14:45	49	32	32	<2	86	0.0		0.0	0.00	598.88
	12/6/2013	14:46	12/6/2013 14:46	47	34	34.5	4	86	8.2		4.1	0.47	599.35
	12/6/2013	16:00	12/6/2013 16:00	45	34	35	4	78	8.2		606.9	69.42	668.77
	12/6/2013	16:30	12/6/2013 16:30	45	34	34.5	4	77	8.2		247.1	28.27	697.04
	12/6/2013	17:32	12/6/2013 17:32	50	34	34.5	5.5	71	11.4		608.7	69.64	766.68
	12/6/2013	17:34	12/6/2013 17:34			28					22.8	2.61	769.29
	SW-24 Event 3	12/10/2013	13:22	12/10/2013 13:22	54	33	33	<2	82	0.0			
12/10/2013		13:41	12/10/2013 13:41	54	33	32	<2	80	0.0		0.0	0.00	769.29
12/10/2013		14:14	12/10/2013 14:14	52	32	31.5	<2	75	0.0		0.0	0.00	769.29
12/10/2013		14:37	12/10/2013 14:37	50	32	31.5	<2	74	0.0		0.0	0.00	769.29
12/10/2013		15:26	12/10/2013 15:26	51	32	31.5	<2	76	0.0		0.0	0.00	769.29
12/10/2013		15:52	12/10/2013 15:52	50	32.5	31.5	<2	76	0.0		0.0	0.00	769.29
12/10/2013		16:30	12/10/2013 16:30	50	32	31	<2	72	0.0		0.0	0.00	769.29
12/10/2013		17:13	12/10/2013 17:13	50	32	31	<2	68	0.0		0.0	0.00	769.29
12/10/2013		22:36	12/10/2013 22:36	54	30	30	8	58	16.1		2596.3	297.01	1066.30
12/11/2013		7:53	12/11/2013 7:53	50	30	30	6.5	58	13.1		8114.9	928.34	1994.64
SW-24 Event 4	12/12/2013	15:40	12/12/2013 15:40	50	37	34	<2	70	0.0				1994.64
	12/12/2013	16:24	12/12/2013 16:24	45	34	33	3.5	70	7.3		159.7	18.27	2012.91
	12/12/2013	17:29	12/12/2013 17:29	52	34	33	3.5	63	7.3		473.5	54.17	2067.08
	12/12/2013	22:16	12/12/2013 22:16	50	32.5	31.5	5	58	10.3		2531.2	289.57	2356.64
	12/13/2013	9:44	12/13/2013 9:44	50	33	30.5	9.5	68	19.5		10273.5	1175.29	3531.94
	12/13/2013	9:45	12/13/2013 9:45	50	37.5	32	13	68	28.0		23.8	2.72	3534.66
	12/13/2013	10:47	12/13/2013 10:47	45	32	31.5	12	70	24.4		1622.9	185.66	3720.31
	12/13/2013	12:40	12/13/2013 12:40	45	32	31	12.5	70	25.4		2810.6	321.53	4041.85
	12/13/2013	13:47	12/13/2013 13:47	45	32	31	12	70	24.4		1666.5	190.64	4232.49
	12/13/2013	13:48	12/13/2013 13:48	45	32	33	16	70	32.5		28.4	3.25	4235.74
	12/13/2013	14:56	12/13/2013 14:56	45	35	33.5	15.5	70	32.5		2208.9	252.70	4488.45
	12/13/2013	14:57	12/13/2013 14:57								32.5	3.72	4492.16
	12/13/2013	14:58	12/13/2013 14:58										4492.16
	SW-24 Event 5	12/18/2013	12:34	12/18/2013 12:34	50	32	33	<2	66	0.0			
12/18/2013		13:16	12/18/2013 13:16	51	31	32	4	68	8.0		169.0	19.34	4511.50
12/18/2013		13:17	12/18/2013 13:17	50	34	34	7	68	14.5		11.3	1.29	4512.79
12/18/2013		14:37	12/18/2013 14:37	50	34	34	7	69	14.5		1163.2	133.07	4645.86
12/18/2013		16:10	12/18/2013 16:10	45	33	34	7	68	14.4		1345.1	153.88	4799.75

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/18/2013	17:06	12/18/2013 17:06	45	33	34	7.5	64	15.5		836.6	95.71	4895.45
	12/18/2013	17:50	12/18/2013 17:50	48	33	34	8	58	16.6		706.2	80.79	4976.24
	12/18/2013	17:51	12/18/2013 17:51								16.6	1.90	4978.14
	12/18/2013	17:52	12/18/2013 17:52			28							4978.14
SW-24 Event 6	1/8/2014	8:28	1/8/2014 8:28	51	33	35	<2	40	0.0				4978.14
	1/8/2014	8:29	1/8/2014 8:29	51	32	35	<2	40	0.0	0.0	0.00	0.00	4978.14
	1/8/2014	8:44	1/8/2014 8:44	51	32	34	<2	42	0.0	0.0	0.00	0.00	4978.14
	1/8/2014	9:13	1/8/2014 9:13	50	32	33	3.5	46	7.3	105.6	12.08	12.08	4990.22
	1/8/2014	9:58	1/8/2014 9:58	49	32	33	3.5	50	7.2	326.9	37.40	50.27	5027.62
	1/8/2014	11:01	1/8/2014 11:01	47	31	32.5	3.8	48	7.8	474.1	54.24	104.71	5081.85
	1/8/2014	11:02	1/8/2014 11:02	47	32	33.5	5	48	10.4	9.1	1.04	1.04	5082.89
	1/8/2014	12:24	1/8/2014 12:24	47	32	33.5	5	60	10.3	845.9	96.77	101.81	5179.66
	1/8/2014	12:35	1/8/2014 12:35	47	32	33.5	5	60	10.3	112.8	12.90	12.90	5192.56
	1/8/2014	12:36	1/8/2014 12:36							10.3	1.17	1.17	5193.74
	1/8/2014	13:24	1/8/2014 13:24	50	32	32.5	8	59	16.4				5193.74
	1/8/2014	13:55	1/8/2014 13:55	50	32	33	6	58	12.3	445.6	50.98	50.98	5244.71
	1/8/2014	15:03	1/8/2014 15:03	50	32.5	33	6	60	12.4	839.7	96.07	96.07	5340.78
	1/8/2014	16:25	1/8/2014 16:25	50	32	33	6	55	12.4	1014.2	116.02	116.02	5456.80
	1/8/2014	17:14	1/8/2014 17:14	54	32	33	6	53	12.4	606.5	69.39	69.39	5526.19
	1/8/2014	21:19	1/8/2014 21:19	53	33	32.5	7	50	14.7	3313.3	379.04	379.04	5905.22
	1/8/2014	21:21	1/8/2014 21:21	53	32	34	8.5	50	17.6	32.3	3.69	3.69	5908.91
	1/9/2014	7:14	1/9/2014 7:14	52	32	32	11.5	54	23.7	12254.6	1401.93	1401.93	7310.84
	1/9/2014	8:16	1/9/2014 8:16	52	32	32	11.5	55	23.7	1470.2	168.19	168.19	7479.03
	1/9/2014	8:17	1/9/2014 8:17							23.7	2.71	2.71	7481.74
	1/9/2014	8:18	1/9/2014 8:18			27							7481.74
SW-24 Event 7	1/10/2014	9:18	1/10/2014 9:18						0.0				7481.74
	1/10/2014	9:19	1/10/2014 9:19	50	33	29	6	67	12.4	6.2	0.71	0.71	7482.45
	1/10/2014	9:25	1/10/2014 9:25	49	36	34	16	67	34.0	139.0	15.90	15.90	7498.34
	1/10/2014	10:13	1/10/2014 10:13	45	35	33	18	68	37.8	1722.4	197.04	197.04	7695.39
	1/10/2014	11:52	1/10/2014 11:52	45	35	33	18	69	37.8	3739.9	427.85	427.85	8123.23
	1/10/2014	12:49	1/10/2014 12:49	44	35	33	17.5	68	36.7	2123.4	242.91	242.91	8366.15
	1/10/2014	14:18	1/10/2014 14:18	48	35	33	18	67	37.8	3318.8	379.67	379.67	8745.81
	1/10/2014	15:16	1/10/2014 15:16	47	35	33	18	67	37.8	2194.3	251.03	251.03	8996.84
	1/10/2014	16:23	1/10/2014 16:23	46	35	33	18	68	37.8	2533.6	289.84	289.84	9286.68
	1/10/2014	17:14	1/10/2014 17:14	45	35	33	18	66	37.9	1929.5	220.73	220.73	9507.41
	1/10/2014	17:42	1/10/2014 17:42	46	35	33	18	66	37.9	1060.4	121.31	121.31	9628.72
	1/10/2014	22:01	1/10/2014 22:01	45	35	33	16	64	33.7	9272.2	1060.73	1060.73	10689.46
	1/11/2014	8:21	1/11/2014 8:21	45	34.5	32.5	18	64	37.8	22158.9	2534.98	2534.98	13224.43
	1/11/2014	8:22	1/11/2014 8:22							37.8	4.32	4.32	13228.75
	1/11/2014	8:23	1/11/2014 8:23			28							13228.75
SW-24 Event 8	1/14/2015	8:15	1/14/2015 8:15		29	29	0	54	0.0				13228.75
	1/14/2015	8:32	1/14/2015 8:32		33	33	7	54	14.6	124.1	14.19	14.19	13242.95
	1/14/2015	9:20	1/14/2015 9:20		32	32	10	56	20.6	844.4	96.61	96.61	13339.55
	1/14/2015	9:22	1/14/2015 9:22		34	34	11	56	23.1	43.7	5.00	5.00	13344.55
	1/14/2015	11:12	1/14/2015 11:12		34	32	12	60	25.1	2655.0	303.73	303.73	13648.28
	1/14/2015	11:13	1/14/2015 11:13		37	34	15	60	32.4	28.8	3.29	3.29	13651.57
	1/14/2015	12:12	1/14/2015 12:12		37	34	16	61	34.5	1973.8	225.80	225.80	13877.37
	1/14/2015	13:52	1/14/2015 13:52		37	34	16	61	34.5	3451.6	394.87	394.87	14272.24
	1/14/2015	15:35	1/14/2015 15:35		37	34	16	60	34.6	3557.0	406.92	406.92	14679.15
	1/14/2015	16:59	1/14/2015 16:59		37	34	16	60	34.6	2902.3	332.02	332.02	15011.17
	1/14/2015	17:00	1/14/2015 17:00			30				34.6	3.95	3.95	15015.12

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-24 Event 9	2/25/2015	12:30	2/25/2015 12:30		33	33	0	63	0.0				15015.12
	2/25/2015	12:47	2/25/2015 12:47		32	33	3	62	6.1		52.2	5.97	15021.09
	2/25/2015	12:48	2/25/2015 12:48		34	36.5	7	62	14.6		10.4	1.19	15022.28
	2/25/2015	14:30	2/25/2015 14:30		34	35	10	58	21.0		1816.8	207.84	15230.12
	2/25/2015	15:31	2/25/2015 15:31		34	35	12	57	25.2		1409.2	161.21	15391.33
	2/25/2015	17:00	2/25/2015 17:00		34	35	13	57	27.3		2337.4	267.40	15658.74
	2/25/2015	17:01	2/25/2015 17:01			30					27.3	3.12	15661.86
SW-24 Event 10	3/9/2015	12:21	3/9/2015 12:21		32	34	0	77	0.0				15661.86
	3/9/2015	12:42	3/9/2015 12:42		31	33	0	84	0.0		0.0	0.00	15661.86
	3/9/2015	12:43	3/9/2015 12:43		35	37	4.5	84	9.3		4.7	0.53	15662.39
	3/9/2015	13:56	3/9/2015 13:56		35	36	8	80	16.6		945.6	108.18	15770.57
	3/9/2015	15:47	3/9/2015 15:47		35	35	12	80	24.9		2303.7	263.54	16034.11
	3/9/2015	17:07	3/9/2015 17:07		34	34.5	12.5	80	25.7		2023.2	231.46	16265.57
	3/9/2015	17:12	3/9/2015 17:12			30					128.4	14.69	16280.25
Total CO ₂ Mass (lbs):												16280.25	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-25 Event 1	11/23/2013	8:05	11/23/2013 8:05	50	30			60	0.0				0
	11/23/2013	8:06	11/23/2013 8:06	57	39	38.8	<2	60	0.0		0.0	0.00	0.00
	11/23/2013	8:13	11/23/2013 8:13	55	37	37.6	4	63	8.6		30.1	3.45	3.45
	11/23/2013	8:24	11/23/2013 8:24	55	37	37.2	5	65	10.7		106.5	12.18	15.63
	11/23/2013	8:41	11/23/2013 8:41	54	37	36.4	6	66	12.9		200.8	22.97	38.60
	11/23/2013	9:17	11/23/2013 9:17		36	35.6	6	76	12.6		459.1	52.52	91.12
	11/23/2013	10:16	11/23/2013 10:16		36	32.8	7.0	80	14.7		805.4	92.14	183.26
	11/23/2013	10:19	11/23/2013 10:19		40	38.8	11	80	24.0		58.0	6.63	189.89
	11/23/2013	11:22	11/23/2013 11:22		40	38.4	12	80	26.1		1578.6	180.60	370.49
	11/23/2013	12:33	11/23/2013 12:33	47	40	38	12	78	26.2		1858.2	212.58	583.07
	11/23/2013	12:43	11/23/2013 12:43		39	38	12.5	78	27.0		266.2	30.45	613.52
	11/23/2013	12:45	11/23/2013 12:45								54.1	6.19	619.71
	11/23/2013	12:46	11/23/2013 12:46			31.2							619.71
SW-25 Event 2	12/12/2013	13:13	12/12/2013 13:13					70					619.71
	12/12/2013	13:18	12/12/2013 13:18		33	35	<2	70	0.0		0.0	0.00	619.71
	12/12/2013	14:49	12/12/2013 14:49	50	32	33	4	70	8.1		369.5	42.27	661.98
	12/12/2013	14:50	12/12/2013 14:50	50	33	34.5	5	70	10.3		9.2	1.05	663.03
	12/12/2013	15:35	12/12/2013 15:35	50	34	34	6	70	12.4		510.9	58.45	721.48
	12/12/2013	16:28	12/12/2013 16:28	45	33	3.5	6.5	70	13.3		683.3	78.17	799.65
	12/12/2013	16:29	12/12/2013 16:29	46	34	35	9	70	18.7		16.0	1.83	801.48
	12/12/2013	17:30	12/12/2013 17:30	52	36	35	9	70	19.1		1150.4	131.61	933.09
	12/12/2013	22:17	12/12/2013 22:17	50	34	33	12	58	25.2		6348.4	726.26	1659.35
	12/13/2013	8:50	12/13/2013 8:50	48	34	32	14.5	58	30.4		17604.5	2013.95	3673.31
	12/13/2013	8:51	12/13/2013 8:51								30.4	3.48	3676.79
	12/13/2013	8:52	12/13/2013 8:52										3676.79
	SW-25 Event 3	12/18/2013	12:32	12/18/2013 12:32	52	34	33	<2	66	0.0			
12/18/2013		13:14	12/18/2013 13:14	51	34	32	3.5	68	7.3		152.7	17.47	3694.26
12/18/2013		13:15	12/18/2013 13:15	50	34	34	7	68	14.5		10.9	1.25	3695.51
12/18/2013		14:25	12/18/2013 14:25	50	34	34	6.5	69.0	13.5		981.5	112.28	3807.79
12/18/2013		16:08	12/18/2013 16:08	45	34	33	8	68.0	16.6		1551.2	177.46	3985.25
12/18/2013		17:04	12/18/2013 17:04	45	34	33	9	64.0	18.8		991.3	113.40	4098.65
12/18/2013		17:45	12/18/2013 17:45	45	35	33	10	58.0	21.2		819.7	93.77	4192.43
12/18/2013		17:47	12/18/2013 17:47								42.4	4.85	4197.28
12/18/2013		17:50	12/18/2013 17:50			28							4197.28
SW-25 Event 4		1/9/2014	8:29	1/9/2014 8:29									
	1/9/2014	8:30	1/9/2014 8:30	55	36	35.5	<2	53	0.0				4197.28
	1/9/2014	8:33	1/9/2014 8:33	55	35.5	35	3	53	6.4		9.6	1.10	4198.38
	1/9/2014	8:55	1/9/2014 8:55	51	35	34.5	6.5	54	13.8		222.9	25.51	4223.89
	1/9/2014	9:35	1/9/2014 9:35	51	34	34.5	7.5	54	15.8		592.9	67.83	4291.72
	1/9/2014	10:03	1/9/2014 10:03	50	34	34	8	56	16.8		456.8	52.26	4343.98
	1/9/2014	10:04	1/9/2014 10:04	50	35.5	35	12	56	25.6		21.2	2.43	4346.41
	1/9/2014	11:05	1/9/2014 11:05	42	35.5	35	12	61	25.5		1559.6	178.41	4524.82
	1/9/2014	12:25	1/9/2014 12:25	40	34.5	33.5	12	62	25.2		2028.8	232.09	4756.92
	1/9/2014	12:27	1/9/2014 12:27	39	36	35	13.5	62	28.8		54.0	6.18	4763.10
	1/9/2014	14:18	1/9/2014 14:18	39	35.5	34.5	14	60	29.8		3251.7	371.99	5135.09
	1/9/2014	16:02	1/9/2014 16:02	43	38	36	18	48	39.7		3614.8	413.54	5548.62
	1/9/2014	17:14	1/9/2014 17:14	51	42	36.5	22	56	50.0		3230.3	369.55	5918.17
	1/9/2014	17:15	1/9/2014 17:15								50.0	5.72	5923.89
1/9/2014	17:16	1/9/2014 17:16			28							5923.89	
SW-25 Event 5	1/10/2014	17:32	1/10/2014 17:32						0.0				5923.89
	1/10/2014	17:35	1/10/2014 17:35	47	38.5	35.5	18	64	39.3		58.9	6.74	5930.63

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/10/2014	17:44	1/10/2014 17:44	46	39	36	18	64	39.5		354.4	40.54	5971.17
	1/10/2014	22:05	1/10/2014 22:05	45	37.5	36	18	62	39.0		10238.0	1171.23	7142.40
	1/11/2014	8:45	1/11/2014 8:45	42	35	32.5	21.5	63	45.4		26992.4	3087.93	10230.33
	1/11/2014	8:46	1/11/2014 8:46								45.4	5.19	10235.52
	1/11/2014	8:47	1/11/2014 8:47			28							10235.52
SW-25 Event 6	12/9/2014	7:45	12/9/2014 7:45		25	25	0	46	0.0				10235.52
	12/9/2014	7:55	12/9/2014 7:55		24	26	0	48	0.0		0.0	0.00	10235.52
	12/9/2014	9:08	12/9/2014 9:08		24	26	0	58	0.0		0.0	0.00	10235.52
	12/9/2014	9:09	12/9/2014 9:09		30	31	6	58	12.1		6.0	0.69	10236.21
	12/9/2014	10:42	12/9/2014 10:42		30	32	4	66	8.0		931.5	106.56	10342.77
	12/9/2014	10:43	12/9/2014 10:43		34	35	10.5	66	21.9		14.9	1.71	10344.48
	12/9/2014	11:35	12/9/2014 11:35		34	35.5	9	68	18.7		1054.8	120.66	10465.14
	12/9/2014	14:55	12/9/2014 14:55		34	34	10	71	20.7		3942.4	451.02	10916.16
	12/9/2014	14:56	12/9/2014 14:56		40	38	18	71	39.6		30.1	3.45	10919.60
	12/9/2014	17:01	12/9/2014 17:01		40	38	18	66	39.8		4958.1	567.20	11486.81
	12/9/2014	17:02	12/9/2014 17:02			32					39.8	4.55	11491.36
SW-25 Event 7	12/16/2014	7:47	12/16/2014 7:47		30	30	0	53	0.0				11491.36
	12/16/2014	8:03	12/16/2014 8:03		29	32	0	56	0.0		0.0	0.00	11491.36
	12/16/2014	8:04	12/16/2014 8:04		32	33	5	56	10.3		5.1	0.59	11491.95
	12/16/2014	10:09	12/16/2014 10:09		32	33	6	76	12.1		1400.4	160.20	11652.15
	12/16/2014	10:10	12/16/2014 10:10		36	36.5	14	76	29.5		20.8	2.38	11654.53
	12/16/2014	11:29	12/16/2014 11:29		36	36.5	12	78	25.2		2159.5	247.05	11901.57
	12/16/2014	12:18	12/16/2014 12:18		36	36.5	12	78	25.2		1235.1	141.30	12042.87
	12/16/2014	12:19	12/16/2014 12:19			32.5					25.2	2.88	12045.75
SW-25 Event 8	12/18/2014	8:00	12/18/2014 8:00		32	32	0	50	0.0				12045.75
	12/18/2014	8:11	12/18/2014 8:11		30	32.5	<2	53	0.0		0.0	0.00	12045.75
	12/18/2014	8:12	12/18/2014 8:12		35	36	8	53	17.1		8.5	0.98	12046.73
	12/18/2014	9:02	12/18/2014 9:02		35	36	8	57	17.0		850.9	97.34	12144.07
	12/18/2014	10:23	12/18/2014 10:23		35	36	8	64	16.9		1370.8	156.82	12300.89
	12/18/2014	11:22	12/18/2014 11:22		35	36	9	65	19.0		1056.6	120.88	12421.77
	12/18/2014	12:27	12/18/2014 12:27		34	35	10	68	20.8		1291.4	147.74	12569.51
	12/18/2014	12:28	12/18/2014 12:28			30					20.8	2.38	12571.89
SW-25 Event 8	1/9/2015	7:45	1/9/2015 7:45		33	34	0	46	0.0				12571.89
	1/9/2015	7:57	1/9/2015 7:57		32	33.5	<2	47	0.0		0.0	0.00	12571.89
	1/9/2015	7:58	1/9/2015 7:58		37	38	6	47	13.1		6.6	0.75	12572.64
	1/9/2015	9:51	1/9/2015 9:51		36	37	7.5	60	16.0		1647.8	188.51	12761.15
	1/9/2015	9:52	1/9/2015 9:52		38	38	12	60	26.2		21.1	2.41	12763.56
	1/9/2015	11:08	1/9/2015 11:08		38	38	11	60	24.0		1905.8	218.03	12981.59
	1/9/2015	11:09	1/9/2015 11:09			32					24.0	2.74	12984.33
SW-25 Event 9	2/17/2015	7:53	2/17/2015 7:53		30	34	0	66	0.0				12984.33
	2/17/2015	8:14	2/17/2015 8:14		34	36	8	66	16.7		174.9	20.01	13004.34
	2/17/2015	10:22	2/17/2015 10:22		34	36	7	62	14.6		2002.7	229.11	13233.45
	2/17/2015	12:54	2/17/2015 12:54		34	35	8	60	16.8		2385.8	272.93	13506.39
	2/17/2015	12:55	2/17/2015 12:55		38	37	14	60	30.5		23.6	2.70	13509.09
	2/17/2015	14:40	2/17/2015 14:40		38	38	15	60	32.7		3320.0	379.80	13888.89
	2/17/2015	17:01	2/17/2015 17:01		38	38	15	58	32.8		4616.6	528.14	14417.03
	2/17/2015	17:02	2/17/2015 17:02			30					32.8	3.75	14420.78
SW-25 Event 10	2/19/2015	8:00	2/19/2015 8:00		29	31	0	44	0.0				14420.78
	2/19/2015	8:18	2/19/2015 8:18		28	30	0	48	0.0		0.0	0.00	14420.78
	2/19/2015	8:19	2/19/2015 8:19		36	36	12	48	26.0		13.0	1.49	14422.27
	2/19/2015	10:31	2/19/2015 10:31		36	36	12	56	25.8		3414.3	390.60	14812.87

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/19/2015	12:29	2/19/2015 12:29		36	35.5	12	56	25.8		3039.7	347.75	15160.61
	2/19/2015	12:30	2/19/2015 12:30			31					25.8	2.95	15163.56
SW-25 Event 11	2/25/2015	8:12	2/25/2015 8:12		33	35	0	54	0.0				15163.56
	2/25/2015	8:50	2/25/2015 8:50		32	32.5	3	59	6.2		117.0	13.38	15176.95
	2/25/2015	8:51	2/25/2015 8:51		39	38.5	13	59	28.6		17.4	1.99	15178.94
	2/25/2015	10:44	2/25/2015 10:44		39	38	12	62	26.4		3108.3	355.59	15534.53
	2/25/2015	11:40	2/25/2015 11:40		39	38	12	62	26.4		1476.5	168.91	15703.44
	2/25/2015	12:28	2/25/2015 12:28		39	37.5	13	62	28.6		1318.3	150.81	15854.25
	2/25/2015	12:29	2/25/2015 12:29			32					28.6	3.27	15857.52
SW-25 Event 12	3/11/2015	8:27	3/11/2015 8:27		33	34.5	0	68	0.0				15857.52
	3/11/2015	8:50	3/11/2015 8:50		32	34	<2	72	0.0		0.0	0.00	15857.52
	3/11/2015	8:52	3/11/2015 8:52		36	37	9	72	19.0		19.0	2.18	15859.70
	3/11/2015	10:07	3/11/2015 10:07		36	36.5	8	80	16.8		1342.0	153.53	16013.22
	3/11/2015	11:11	3/11/2015 11:11		36	37	8.5	82	17.8		1105.8	126.51	16139.73
	3/11/2015	11:12	3/11/2015 11:12		0	32					17.8	2.03	16141.77
Total CO ₂ Mass (lbs):												16141.77	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-26 Event 1	11/22/2013	8:00	11/22/2013 8:00	52	30			67	0.0				0.00
	11/22/2013	8:02	11/22/2013 8:02		28		<2	66.5	0.0		0.0	0.00	0.00
	11/22/2013	8:03	11/22/2013 8:03		27	33.2	4	66	7.7		3.8	0.44	0.44
	11/22/2013	8:04	11/22/2013 8:04		34	34	8	69	16.6		12.2	1.39	1.83
	11/22/2013	8:12	11/22/2013 8:12		34	32.8	11	69	22.8		157.8	18.05	19.88
	11/22/2013	8:13	11/22/2013 8:13		35	33.2	12	69	25.2		24.0	2.75	22.63
	11/22/2013	8:44	11/22/2013 8:44		34	32.8	13	68	27.0		808.9	92.54	115.17
	11/22/2013	8:45	11/22/2013 8:45		34	33.6	15	71	31.1		29.0	3.32	118.49
	11/22/2013	9:52	11/22/2013 9:52		34	33.6	15	74	31.0		2079.4	237.88	356.37
	11/22/2013	9:54	11/22/2013 9:54		36	34.4	16	74	33.7		64.7	7.41	363.78
	11/22/2013	11:03	11/22/2013 11:03		36	34.8	17	74	35.8		2400.7	274.64	638.42
	11/22/2013	11:56	11/22/2013 11:56		36	34.4	17	75	35.8		1899.0	217.25	855.67
	11/22/2013	12:51	11/22/2013 12:51		36	34.4	17	76	35.8		1968.8	225.23	1080.90
	11/22/2013	12:52	11/22/2013 12:52								35.8	4.09	1084.99
	11/22/2013	12:53	11/22/2013 12:53										1084.99
SW-26 Event 2	12/5/2013	12:51	12/5/2013 12:51	53	35	37	4	80	8.3				1084.99
	12/5/2013	14:35	12/5/2013 14:35	50	34	35	8.5	80	17.5		1339.6	153.25	1238.24
	12/5/2013	15:40	12/5/2013 15:40	47	33	34	10.5	75	21.4		1264.4	144.65	1382.89
	12/5/2013	15:42	12/5/2013 15:42	49	34	34.5	12	75	24.8		46.2	5.29	1388.17
	12/5/2013	16:50	12/5/2013 16:50	47	34	34	13.5	72	27.9		1792.3	205.04	1593.21
	12/5/2013	17:12	12/5/2013 17:12	53	34	34	14	70	29.0		626.8	71.71	1664.92
	12/5/2013	17:13	12/5/2013 17:13								29.0	3.32	1668.24
	12/5/2013	17:14	12/5/2013 17:14			30							1668.24
	SW-26 Event 3	12/11/2013	12:55	12/11/2013 12:55	50	34	35	<2	66	0.0			
12/11/2013		14:06	12/11/2013 14:06	50	32	32	7.5	68	15.3		541.7	61.97	1730.21
12/11/2013		14:07	12/11/2013 14:07	49	32.5	34	11	68	22.5		18.9	2.16	1732.36
12/11/2013		14:48	12/11/2013 14:48	50	32.5	33	11.5	66	23.6		944.4	108.04	1840.40
12/11/2013		14:54	12/11/2013 14:54	45	35	34.5	14	66	29.5		159.1	18.20	1858.60
12/11/2013		15:26	12/11/2013 15:26	45	35	34	14.5	66	30.5		959.4	109.75	1968.36
12/11/2013		16:44	12/11/2013 16:44	35	31	32	14.5	62	29.3		2334.4	267.06	2235.41
12/11/2013		16:55	12/11/2013 16:55								322.8	36.93	2272.34
12/11/2013		16:56	12/11/2013 16:56										2272.34
SW-26 Event 4	12/19/2013	8:35	12/19/2013 8:35	52	34	33	<2	45	0.0				2272.34
	12/19/2013	8:54	12/19/2013 8:54	45	32	29	12	53	24.8		235.4	26.93	2299.28
	12/19/2013	8:58	12/19/2013 8:58	45	35	33	20	53	42.6		134.8	15.42	2314.70
	12/19/2013	9:38	12/19/2013 9:38	41	35	32	19.5	64	41.1		1674.8	191.59	2506.29
	12/19/2013	11:46	12/19/2013 11:46	40	34	30	20	68	41.6		5291.0	605.29	3111.58
	12/19/2013	12:34	12/19/2013 12:34	45	34	31	22	68	45.7		2094.8	239.65	3351.22
	12/19/2013	12:35	12/19/2013 12:35								45.7	5.23	3356.46
	12/19/2013	12:36	12/19/2013 12:36			24							3356.46
	SW-26 Event 5	12/20/2013	7:26	12/20/2013 7:26	50	33	32.5	<2	60	0.0			
12/20/2013		7:35	12/20/2013 7:35	49	31	34	10	60	20.3		91.3	10.44	3366.90
12/20/2013		7:56	12/20/2013 7:56	45	31	28	12	56	24.4		469.5	53.71	3420.61
12/20/2013		8:02	12/20/2013 8:02	45	35	32	21	56	44.6		207.2	23.70	3444.31
12/20/2013		8:04	12/20/2013 8:04	45	37	34	22.5	56	48.8		93.4	10.69	3455.00
12/20/2013		8:49	12/20/2013 8:49	42	37	34	22	60	47.5		2166.5	247.85	3702.85
12/20/2013		10:02	12/20/2013 10:02	40	36	32	22	66	46.8		3440.7	393.61	4096.46
12/20/2013		10:48	12/20/2013 10:48	39	36	31	22	68	46.7		2148.7	245.81	4342.27
12/20/2013		10:54	12/20/2013 10:54	39	35	31	22	68	46.2		278.6	31.87	4374.14
12/20/2013		11:36	12/20/2013 11:36	39	35	31	22	70	46.1		1938.3	221.74	4595.88
12/20/2013		11:37	12/20/2013 11:37								46.1	5.27	4601.16

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/20/2013	11:38	12/20/2013 11:38			24							4601.16
SW-26 Event 6	1/8/2014	13:07	1/8/2014 13:07						0.0				4601.16
	1/8/2014	13:14	1/8/2014 13:14	54	33	34	<2	58	0.0		0.0	0.00	4601.16
	1/8/2014	13:51	1/8/2014 13:51	52	33	33	4	57	8.3	153.8	17.60	4618.76	
	1/8/2014	13:52	1/8/2014 13:52	52	35	34.5	7.5	57	15.9	12.1	1.39	4620.14	
	1/8/2014	15:01	1/8/2014 15:01	50	35	34.5	8	60	16.9	1133.5	60	4749.81	
	1/8/2014	16:21	1/8/2014 16:21	50	35	33.5	10	53	21.3	1529.9	175.02	4924.83	
	1/8/2014	16:22	1/8/2014 16:22	50	36	35	14	53	30.1	25.7	2.94	4927.77	
	1/8/2014	17:22	1/8/2014 17:22	55	36	34.5	14	52	30.2	1809.7	207.02	5134.80	
	1/8/2014	17:23	1/8/2014 17:23							30.2	3.45	5138.25	
	1/8/2014	17:24	1/8/2014 17:24			29							5138.25
SW-26 Event 7	1/10/2014	13:25	1/10/2014 13:25				0		0.0				5138.25
	1/10/2014	13:28	1/10/2014 13:28	50	35	34	7	66	14.7	22.1	2.53	5140.78	
	1/10/2014	14:23	1/10/2014 14:23	48	34.5	33.5	13	65	27.2	1154.0	132.02	5272.80	
	1/10/2014	14:24	1/10/2014 14:24	48	36	35	16.5	65	35.1	31.2	3.57	5276.36	
	1/10/2014	15:21	1/10/2014 15:21	46	36	35	17.5	64	37.3	2062.5	235.95	5512.32	
	1/10/2014	16:28	1/10/2014 16:28	45	36	34	18	66	38.3	2530.0	289.43	5801.75	
	1/10/2014	17:30	1/10/2014 17:30	46	35	34	20	62	42.2	2495.5	285.49	6087.24	
	1/10/2014	17:31	1/10/2014 17:31							42.2	4.83	6092.08	
	1/10/2014	17:32	1/10/2014 17:32			27							6092.08
SW-26 Event 8	1/14/2014	12:10	1/14/2014 12:10				0		0.0				6092.08
	1/14/2014	12:12	1/14/2014 12:12	46	35	35	5	65	10.5	10.5	1.20	6093.28	
	1/14/2014	12:29	1/14/2014 12:29	45	32.5	32	8.5	66	17.4	237.6	27.18	6120.46	
	1/14/2014	12:30	1/14/2014 12:30	45	36	34.5	13.5	66	28.7	23.1	2.64	6123.10	
	1/14/2014	13:42	1/14/2014 13:42	48	36	34	14.5	69	30.7	2139.0	244.71	6367.80	
	1/14/2014	14:15	1/14/2014 14:15	48	36	34	14.5	69	30.7	1014.0	116.00	6483.80	
	1/14/2014	16:00	1/14/2014 16:00	46	35	32.5	17	70	35.6	3483.5	398.51	6882.31	
	1/14/2014	16:16	1/14/2014 16:16	46	35	32.5	18	70	37.7	586.8	67.13	6949.44	
	1/14/2014	16:17	1/14/2014 16:17							37.7	4.32	6953.75	
	1/14/2014	16:18	1/14/2014 16:18			27							6953.75
SW-26 Event 9	1/16/2014	12:46	1/16/2014 12:46	47	34	35	<2	58	0.0				6953.75
	1/16/2014	12:47	1/16/2014 12:47	47	34	35	6	58	12.6	6.3	0.72	6954.47	
	1/16/2014	12:48	1/16/2014 12:48	47	33	32.5	8	58	16.6	14.6	1.67	6956.14	
	1/16/2014	12:49	1/16/2014 12:49	47	34	33	13	58	27.3	22.0	2.51	6958.65	
	1/16/2014	14:53	1/16/2014 14:53	47	32	31.5	15.8	60	32.4	3700.5	423.34	7381.99	
	1/16/2014	14:54	1/16/2014 14:54	47	34	32.5	18	60	37.7	35.1	4.01	7386.00	
	1/16/2014	15:34	1/16/2014 15:34	50	34	32	18	60	37.7	1508.2	172.54	7558.54	
	1/16/2014	15:35	1/16/2014 15:35			26				37.7	4.31	7562.86	
SW-26 Event 10	1/21/2014	8:28	1/21/2014 8:28	50	32	33	<2	56	0				7562.86
	1/21/2014	8:30	1/21/2014 8:30	50	33	33	8	56	16.6	16.6	1.90	7564.76	
	1/21/2014	8:34	1/21/2014 8:34	50	33	32	9.8	58	20.4	74.0	8.47	7573.23	
	1/21/2014	9:26	1/21/2014 9:26	46	32	31	11	64	22.5	1113.3	127.37	7700.59	
	1/21/2014	9:27	1/21/2014 9:27	46	34	32.5	15.7	64	32.8	27.6	3.16	7703.75	
	1/21/2014	10:08	1/21/2014 10:08	42	33	32	14.5	64	29.9	1285.2	147.03	7850.78	
	1/21/2014	11:35	1/21/2014 11:35	40	32	30.5	15	67	30.5	2631.0	300.98	8151.76	
	1/21/2014	12:58	1/21/2014 12:58	46	34	31	17.8	66	37.1	2805.8	320.99	8472.75	
	1/21/2014	13:00	1/21/2014 13:00							74.1	8.48	8481.23	
SW-26 Event 11	12/15/2014	7:44	12/15/2014 7:44		30	30	0	38	0.0				8481.23
	12/15/2014	8:08	12/15/2014 8:08		29	28.5	4	46	8.0	96.5	11.04	8492.27	
	12/15/2014	8:09	12/15/2014 8:09		34	32	8	46	17.0	12.5	1.43	8493.70	
	12/15/2014	9:09	12/15/2014 9:09		34	32	10	59	21.0	1139.0	130.30	8624.00	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/15/2014	9:10	12/15/2014 9:10		37	33.5	11	59	23.8		22.4	2.56	8626.56
	12/15/2014	11:12	12/15/2014 11:12		37	32	13	66	27.9		3152.6	360.66	8987.22
	12/15/2014	11:13	12/15/2014 11:13		42	34	14	66	31.5		29.7	3.40	8990.62
	12/15/2014	12:45	12/15/2014 12:45		42	34	17.5	65	39.4		3261.8	373.15	9363.77
	12/15/2014	14:19	12/15/2014 14:19		42	32.5	18	66	40.5		3755.7	429.65	9793.42
	12/15/2014	15:55	12/15/2014 15:55		41	32	17.5	67	39.0		3814.8	436.41	10229.83
	12/15/2014	16:53	12/15/2014 16:53		44	31.5	18	63	41.3		2329.3	266.47	10496.30
	12/15/2014	16:54	12/15/2014 16:54			25					41.3	4.73	10501.03
SW-26 Event 12	12/17/2014	12:34	12/17/2014 12:34		30	30	0	66	0.0				10501.03
	12/17/2014	12:55	12/17/2014 12:55		30	28.5	4.5	69	8.9		93.9	10.74	10511.78
	12/17/2014	12:56	12/17/2014 12:56		37	34	10	69	21.4		15.2	1.74	10513.51
	12/17/2014	14:09	12/17/2014 14:09		37	33	12	70	25.7		1717.6	196.50	10710.01
	12/17/2014	14:10	12/17/2014 14:10		40	34	13.5	70	29.7		27.7	3.17	10713.18
	12/17/2014	15:18	12/17/2014 15:18		40	33	14	70	30.8		2057.3	235.35	10948.53
	12/17/2014	15:19	12/17/2014 15:19		42	34	15	70	33.6		32.2	3.68	10952.21
	12/17/2014	16:52	12/17/2014 16:52		41.5	33	16	63	35.9		3234.4	370.01	11322.23
	12/17/2014	16:53	12/17/2014 16:53			26					35.9	4.11	11326.34
SW-26 Event 13	12/19/2014	7:28	12/19/2014 7:28		30	30	0	45	0.0				11326.34
	12/19/2014	7:46	12/19/2014 7:46		29.5	29	4	48	8.1		72.7	8.31	11334.65
	12/19/2014	7:47	12/19/2014 7:47		35	34	7	48	15.0		11.5	1.32	11335.97
	12/19/2014	9:28	12/19/2014 9:28		34.5	31.5	11	61	23.1		1925.9	220.32	11556.29
	12/19/2014	9:29	12/19/2014 9:29		39	34.5	12	61	26.4		24.8	2.83	11559.12
	12/19/2014	10:37	12/19/2014 10:37		39	33	14	64	30.7		1941.1	222.06	11781.18
	12/19/2014	11:42	12/19/2014 11:42		39	33	14	64	30.7		1995.4	228.27	12009.46
	12/19/2014	11:43	12/19/2014 11:43			25.5					30.7	3.51	12012.97
Total CO ₂ Mass (lbs):													12012.97

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-27 Event 1	11/22/2013	13:24	11/22/2013 13:24										
	11/22/2013	13:25	11/22/2013 13:25	55	31	31	<2	81.5	0.0		0.0	0.00	0.00
	11/22/2013	13:26	11/22/2013 13:26	55	33	33	<2	81.5	0.0		0.0	0.00	0.00
	11/22/2013	13:47	11/22/2013 13:47	55	34	30.5	6	83	12.3		129.0	14.76	14.76
	11/22/2013	14:11	11/22/2013 14:11	54	37	33	13	84	27.4		476.5	54.51	69.28
	11/22/2013	14:39	11/22/2013 14:39	51	36	33	14	80	29.4		794.8	90.92	160.20
	11/22/2013	15:11	11/22/2013 15:11	50	38	33.5	16.0	79	34.2		1017.5	116.40	276.60
	11/22/2013	15:53	11/22/2013 15:53	50	38	33.5	16.5	82	35.2		1458.5	166.85	443.45
	11/22/2013	16:48	11/22/2013 16:48	50	38	33.5	16.5	76	35.4		1942.2	222.19	665.64
	11/22/2013	17:25	11/22/2013 17:25	57	38	33.5	16.5	71	35.6		1313.6	150.27	815.91
	11/22/2013	17:26	11/22/2013 17:26								35.6	4.07	819.99
	11/22/2013	17:28	11/22/2013 17:28										819.99
SW-27 Event 2	12/5/2013	8:10	12/5/2013 8:10										819.99
	12/5/2013	8:12	12/5/2013 8:12	56	26	27	<2	64	0.0		0.0	0.00	819.99
	12/5/2013	8:13	12/5/2013 8:13		34	34.5	<2	64	0.0		0.0	0.00	819.99
	12/5/2013	8:38	12/5/2013 8:38	53		33.5	<2	64	0.0		0.0	0.00	819.99
	12/5/2013	8:48	12/5/2013 8:48	52	34	32	5.5	66	11.5		57.3	6.55	826.54
	12/5/2013	8:51	12/5/2013 8:51		34.5	33.5	7.5	66	15.7		40.7	4.66	831.20
	12/5/2013	9:05	12/5/2013 9:05	52	33	32.5	8.5	68	17.5		232.2	26.57	857.76
	12/5/2013	9:06	12/5/2013 9:06	52	34.5		11	68	23.0		20.2	2.31	860.08
	12/5/2013	9:23	12/5/2013 9:23	50	35	34.5	12	70	25.1		409.1	46.80	906.88
	12/5/2013	10:27	12/5/2013 10:27	49	35	33	16.5	76	34.4		1904.8	217.90	1124.78
	12/5/2013	11:44	12/5/2013 11:44	48	35	33.5	16	76	33.3		2606.9	298.23	1423.01
	12/5/2013	12:40	12/5/2013 12:40	49	35	33	17	75	35.5		1926.0	220.34	1643.35
	12/5/2013	12:41	12/5/2013 12:41								35.5	4.06	1647.40
	12/5/2013	12:42	12/5/2013 12:42			26							1647.40
SW-27 Event 3	12/11/2013	8:58	12/11/2013 8:58	55	37.5	34	<2	62	0.0				1647.40
	12/11/2013	9:27	12/11/2013 9:27	53	30	30	<2	68	0.0		0.0	0.00	1647.40
	12/11/2013	9:28	12/11/2013 9:28	53	32.5	32	4	68	8.2		4.1	0.47	1647.87
	12/11/2013	9:59	12/11/2013 9:59	52	32.5	32	4	67	8.2		253.8	29.03	1676.90
	12/11/2013	11:24	12/11/2013 11:24	50	34	31	6.5	72	13.5		919.9	105.24	1782.14
	12/11/2013	11:25	12/11/2013 11:25	49	34	33	10	72	20.7		17.1	1.95	1784.09
	12/11/2013	11:57	12/11/2013 11:57	48	35	34	12.5	71	26.2		749.9	85.79	1869.88
	12/11/2013	12:50	12/11/2013 12:50	45	35	34	13	68	27.3		1416.9	162.09	2031.97
	12/11/2013	12:58	12/11/2013 12:58								218.4	24.98	2056.95
	12/11/2013	12:59	12/11/2013 12:59										2056.95
	SW-27 Event 4	12/18/2013	8:38	12/18/2013 8:38	48	29	32	<2	53	0.0			
12/18/2013		9:14	12/18/2013 9:14	50	28	29	<2	60	0.0		0.0	0.00	2056.95
12/18/2013		9:16	12/18/2013 9:16	50	32	34	6	60	12.3		12.3	1.41	2058.36
12/18/2013		10:00	12/18/2013 10:00								541.4	61.93	2120.29
12/18/2013		14:02	12/18/2013 14:02	49	31	33	<2	68	0.0				2120.29
12/18/2013		14:40	12/18/2013 14:40	47	31	32	6	70	12.0		228.9	26.19	2146.48
12/18/2013		14:42	12/18/2013 14:42	47	32	33	8	70	16.2		28.3	3.24	2149.72
12/18/2013		16:13	12/18/2013 16:13	40	32	33	9.5	69	19.3		1617.6	185.05	2334.77
12/18/2013		17:08	12/18/2013 17:08	45	32	32	10.5	62	21.5		1121.9	128.34	2463.11
12/18/2013		17:09	12/18/2013 17:09	45	34	34	13.5	62	28.2		24.9	2.84	2465.96
12/18/2013		17:53	12/18/2013 17:53	47	35	34	14.5	56	30.8		1298.8	148.58	2614.54
12/18/2013		17:54	12/18/2013 17:54								30.8	3.53	2618.06
12/18/2013		17:55	12/18/2013 17:55			29							2618.06
SW-27 Event 5		12/19/2013	12:36	12/19/2013 12:36	50	30	34	<2	68	0.0			
	12/19/2013	13:03	12/19/2013 13:03	50	29	39.5	4	74	7.8		105.6	12.08	2630.14

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/19/2013	13:04	12/19/2013 13:04	50	32	32	9	74	18.2		13.0	1.49	2631.63
	12/19/2013	13:08	12/19/2013 13:08	50	34	34	10	74	20.7		77.7	8.89	2640.53
	12/19/2013	16:04	12/19/2013 16:04	45	33	32	13.5	70	27.7		4256.3	486.92	3127.45
	12/19/2013	16:47	12/19/2013 16:47	45	32	31	14	66	28.5		1209.3	138.34	3265.79
	12/19/2013	16:48	12/19/2013 16:48								28.5	3.26	3269.05
	12/19/2013	16:49	12/19/2013 16:49			25							3269.05
SW-27 Event 6	1/8/2014	8:33	1/8/2014 8:33			34.5	<2		0.0				3269.05
	1/8/2014	8:33	1/8/2014 8:33	51	31	30.5	<2	36	0.0		0.0	0.00	3269.05
	1/8/2014	8:35	1/8/2014 8:35	51	33	33.5	5.5	37	11.7		145.9	16.69	3285.74
	1/8/2014	9:00	1/8/2014 9:00	48	33	33	7	45	14.7		13.2	1.51	3287.25
	1/8/2014	9:01	1/8/2014 9:01	48	34	33.8	8	45	17.0		809.6	92.61	3379.87
	1/8/2014	9:52	1/8/2014 9:52	46	34	34	8	50	16.9		984.4	112.61	3492.48
	1/8/2014	10:50	1/8/2014 10:50	45	33	33.5	9.5	56	19.8		1614.8	184.73	3677.21
	1/8/2014	12:18	1/8/2014 12:18	45	33	33	11	58	22.8		490.1	56.07	3733.28
	1/8/2014	12:41	1/8/2014 12:41	44	32	32.5	11	57	22.6		22.7	2.60	3735.88
	1/8/2014	12:42	1/8/2014 12:42			28					22.6	2.59	3738.46
	1/8/2014	12:43	1/8/2014 12:43										3738.46
SW-27 Event 7	1/10/2014	9:37	1/10/2014 9:37				0		0				3738.46
	1/10/2014	9:38	1/10/2014 9:38	50	34	32	6	64	12.5		6.3	0.72	3739.18
	1/10/2014	9:45	1/10/2014 9:45	42	36	34	13	64	27.7		140.7	16.10	3755.28
	1/10/2014	10:17	1/10/2014 10:17	42	35	34	13.5	64	28.5		898.3	102.76	3858.04
	1/10/2014	11:47	1/10/2014 11:47	41	34	33	14	65	29.2		2593.8	296.73	4154.77
	1/10/2014	12:54	1/10/2014 12:54	40	32.5	32	15	64	30.8		2009.4	229.88	4384.65
	1/10/2014	13:15	1/10/2014 13:15	40	32	32	16	64	32.7		666.6	76.25	4460.91
	1/10/2014	13:16	1/10/2014 13:16								32.7	3.74	4464.65
	1/10/2014	13:17	1/10/2014 13:17			24							4464.65
SW-27 Event 8	1/13/2014	7:45	1/13/2014 7:45				0		0				4464.65
	1/13/2014	7:47	1/13/2014 7:47	55	34	34	7	44	14.9		14.9	1.71	4466.35
	1/13/2014	7:56	1/13/2014 7:56	53	33.5	33	13.5	50	28.4		194.9	22.30	4488.65
	1/13/2014	7:57	1/13/2014 7:57	50	37	34	17	50	37.1		32.8	3.75	4492.40
	1/13/2014	8:19	1/13/2014 8:19	45	36	34	17	56	36.5		809.4	92.59	4584.99
	1/13/2014	10:14	1/13/2014 10:14	42	35	33.5	17	64	35.8		4159.1	475.80	5060.79
	1/13/2014	11:22	1/13/2014 11:22	40	34	31.5	17	64	35.5		2424.4	277.35	5338.14
	1/13/2014	11:23	1/13/2014 11:23	40	35	32	18	64	37.9		36.7	4.20	5342.34
	1/13/2014	11:50	1/13/2014 11:50	40	34	32	18	64	37.6		1019.3	116.60	5458.94
	1/13/2014	11:51	1/13/2014 11:51								37.6	4.30	5463.24
	1/13/2014	11:52	1/13/2014 11:52			27							5463.24
SW-27 Event 9	1/14/2014	12:20	1/14/2014 12:20				0		0.0				5463.24
	1/14/2014	12:22	1/14/2014 12:22	45	32	31	4	64	8.2		8.2	0.93	5464.18
	1/14/2014	12:32	1/14/2014 12:32	44	29.5	29	6.5	63	12.9		105.5	12.07	5476.24
	1/14/2014	12:33	1/14/2014 12:33	42	35.5	34	16	63	33.9		23.4	2.68	5478.92
	1/14/2014	13:47	1/14/2014 13:47	50	36	34	16	69	33.9		2510.1	287.15	5766.07
	1/14/2014	14:18	1/14/2014 14:18	50	36	34	16	69	33.9		1051.0	120.24	5886.31
	1/14/2014	16:02	1/14/2014 16:02	48	34	32	18.4	70	38.2		3747.5	428.72	6315.03
	1/14/2014	16:37	1/14/2014 16:37	53	34	32	19	70	39.4		1357.5	155.30	6470.33
	1/14/2014	16:38	1/14/2014 16:38								39.4	4.51	6474.84
	1/14/2014	16:39	1/14/2014 16:39			27							6474.84
SW-27 Event 10	1/16/2014	11:53	1/16/2014 11:53	45	26	26	<2	56	0.0				6474.84
	1/16/2014	11:54	1/16/2014 11:54	45	32	32	<2	56	0.0		0.0	0.00	6474.84
	1/16/2014	11:55	1/16/2014 11:55	45	33.5	33	10	56	20.9		10.5	1.20	6476.03
	1/16/2014	13:02	1/16/2014 13:02	50	32.5	32	12	56	24.8		1533.0	175.38	6651.41

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/16/2014	14:58	1/16/2014 14:58	48	31.5	30	13.5	60	27.5		3037.6	347.50	6998.91
	1/16/2014	16:04	1/16/2014 16:04	50	31.5	30	14	60	28.6		1850.7	211.73	7210.63
	1/16/2014	16:05	1/16/2014 16:05			26					28.6	3.27	7213.90
SW-27 Event 11	1/17/2014	11:53	1/17/2014 11:53	44	32	33.8	3.5	66	7.1				7213.90
	1/17/2014	12:41	1/17/2014 12:41	45	30	28	12	63	24.0		747.1	85.47	7299.37
	1/17/2014	12:42	1/17/2014 12:42	45	33.5	32.2	17.5	63	36.4		30.2	3.45	7302.82
	1/17/2014	13:57	1/17/2014 13:57	43	33.5	32.2	17.8	64	36.9		2748.8	314.46	7617.28
	1/17/2014	14:17	1/17/2014 14:17	43	33.5	32.2	18	64	37.4		743.0	85.00	7702.28
	1/17/2014	15:47	1/17/2014 15:47	52	33.5	32.2	19.5	64	40.5		3502.4	400.68	8102.96
	1/17/2014	15:48	1/17/2014 15:48								40.5	4.63	8107.59
	1/17/2014	15:49	1/17/2014 15:49			27							8107.59
SW-27 Event 12	1/21/2014	9:02	1/21/2014 9:02	49	29	29	<2	52	0.0				8107.59
	1/21/2014	9:03	1/21/2014 9:03	48	34	33	9	52	19.0		9.5	1.09	8108.68
	1/21/2014	10:02	1/21/2014 10:02	40	33	31.5	15	60	31.1		1477.9	169.07	8277.75
	1/21/2014	11:24	1/21/2014 11:24	36	32	31	13.8	64	28.2		2430.4	278.03	8555.78
	1/21/2014	11:25	1/21/2014 11:25	35	33	31.8	14.5	64	29.9		29.1	3.32	8559.10
	1/21/2014	13:13	1/21/2014 13:13	45	36	35	22.7	62	48.4		4232.1	484.16	9043.26
	1/21/2014	13:14	1/21/2014 13:14			30					48.4	5.54	9048.80
SW-27 Event 13	3/4/2015	7:43	3/4/2015 7:43		27	26	0	68	0.0				9048.80
	3/4/2015	8:00	3/4/2015 8:00		26	25	0	70	0.0		0.0	0.00	9048.80
	3/4/2015	9:22	3/4/2015 9:22		27	24.5	3	79	5.7		233.8	26.74	9075.54
	3/4/2015	9:23	3/4/2015 9:23		35	30	13	79	27.0		16.4	1.87	9077.41
	3/4/2015	11:52	3/4/2015 11:52		34	29	12.5	80	25.7		3924.8	449.00	9526.41
	3/4/2015	11:55	3/4/2015 11:55		39	33	18	80	38.9		96.8	11.07	9537.49
	3/4/2015	13:55	3/4/2015 13:55		39	33	18	80	38.9		4662.6	533.40	10070.88
	3/4/2015	15:18	3/4/2015 15:18		39	33	19	78	41.1		3317.8	379.56	10450.44
	3/4/2015	17:09	3/4/2015 17:09		39	32.5	19.5	75	42.3		4628.1	529.46	10979.90
	3/4/2015	17:10	3/4/2015 17:10			25					42.3	4.84	10984.74
SW-27 Event 14	3/6/2015	7:54	3/6/2015 7:54		32	34	4	53	8.3				10984.74
	3/6/2015	8:07	3/6/2015 8:07		31	30	8	54	16.3		159.8	18.3	11003.02
	3/6/2015	8:08	3/6/2015 8:08		39	34	16	54	35.4		25.9	3.0	11005.98
	3/6/2015	9:05	3/6/2015 9:05		39	34	16	60	35.2		2014.0	230.4	11236.38
	3/6/2015	10:07	3/6/2015 10:07		39	32	18	60	39.6		2320.5	265.5	11501.84
	3/6/2015	10:08	3/6/2015 10:08		42	34	22	60	49.8		44.7	5.1	11506.95
	3/6/2015	11:03	3/6/2015 11:03		42	33	22.5	60	50.9		2769.8	316.9	11823.82
	3/6/2015	11:04	3/6/2015 11:04			27					50.9	5.8	11829.65
Total CO ₂ Mass (lbs):													11829.65

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-28 Event 1	11/22/2013	8:36	11/22/2013 8:36	55	29			70	0.0				0.00
	11/22/2013	8:38	11/22/2013 8:38	55	34	32	<2	70	0.0		0.0	0.00	0.00
	11/22/2013	8:51	11/22/2013 8:51		32	31	2	72	4.1		26.3	3.01	3.01
	11/22/2013	8:52	11/22/2013 8:52	55	35	34	5	74	10.4		7.2	0.83	3.84
	11/22/2013	9:47	11/22/2013 9:47		35	32	10	80	20.8		857.8	98.13	101.97
	11/22/2013	9:49	11/22/2013 9:49		37	33.5	11	79	23.3		44.1	5.04	107.01
	11/22/2013	10:57	11/22/2013 10:57		37	33	12	79	25.4		1657.4	189.60	296.62
	11/22/2013	10:58	11/22/2013 10:58	52	39	34	14	78	30.3		27.9	3.19	299.80
	11/22/2013	11:46	11/22/2013 11:46	52	37	34	14	82	29.6		1436.8	164.37	464.17
	11/22/2013	12:40	11/22/2013 12:40		38	34	14	87	29.7		1601.6	183.23	647.39
	11/22/2013	12:41	11/22/2013 12:41								29.7	3.40	650.80
	11/22/2013	12:42	11/22/2013 12:42		26	24.5							650.80
SW-28 Event 2	12/5/2013	12:47	12/5/2013 12:47	55	34	34	4	79.0	8.2				650.80
	12/5/2013	14:32	12/5/2013 14:32	50	33	31.5	12	80.0	24.4		1712.3	195.89	846.68
	12/5/2013	14:33	12/5/2013 14:33	50	35	34	16.5	80.0	34.2		29.3	3.35	850.04
	12/5/2013	15:38	12/5/2013 15:38	47	35	34	18	75.0	37.5		2332.9	266.88	1116.92
	12/5/2013	16:48	12/5/2013 16:48	47	35	33.5	19	72.0	39.7		2704.7	309.42	1426.34
	12/5/2013	17:08	12/5/2013 17:08	47	35	33.5	9.5	70.0	19.9		596.5	68.24	1494.57
	12/5/2013	17:09	12/5/2013 17:09								19.9	2.28	1496.85
	12/5/2013	17:10	12/5/2013 17:10										1496.85
SW-28 Event 3	12/11/2013	13:04	12/11/2013 13:04	50	35	34	3	68	6.3				1496.85
	12/11/2013	14:10	12/11/2013 14:10	49	32.5	31	11	68	22.5		950.4	108.72	1605.57
	12/11/2013	14:12	12/11/2013 14:12	49	32.5	31	13	68	26.6		49.1	5.62	1611.19
	12/11/2013	14:50	12/11/2013 14:50	50	32.5	31	13.5	66	27.7		1030.9	117.94	1729.13
	12/11/2013	14:53	12/11/2013 14:53	49	35	33	16.5	66	34.7		93.6	10.70	1739.83
	12/11/2013	15:28	12/11/2013 15:28	45	35	33	16.5	66	34.7		1215.0	139.00	1878.83
	12/11/2013	16:46	12/11/2013 16:46	35	35	30	16.5	62	34.9		2713.1	310.38	2189.21
	12/11/2013	17:04	12/11/2013 17:04								627.3	71.77	2260.98
	12/11/2013	17:05	12/11/2013 17:05			24							2260.98
SW-28 Event 4	12/19/2013	8:33	12/19/2013 8:33	54	32	33	<2	44	0.0				2260.98
	12/19/2013	8:55	12/19/2013 8:55	45	31	31	4	53	8.2		89.9	10.28	2271.26
	12/19/2013	9:00	12/19/2013 9:00	45	33	34	8	53	16.7		62.2	7.11	2278.37
	12/19/2013	9:40	12/19/2013 9:40	41	33	33.5	9	64	18.6		705.6	80.72	2359.09
	12/19/2013	11:44	12/19/2013 11:44	40	31	32	12	68	24.1		2649.1	303.05	2662.14
	12/19/2013	12:31	12/19/2013 12:31	41	31	32	13	68	26.2		1182.1	135.24	2797.38
	12/19/2013	12:32	12/19/2013 12:32								26.2	2.99	2800.37
	12/19/2013	12:33	12/19/2013 12:33										2800.37
SW-28 Event 5	12/20/2013	7:28	12/20/2013 7:28	44	35	35	9.5	60	20.1				2800.37
	12/20/2013	7:58	12/20/2013 7:58	45	34	33	13	56	27.3		711.7	81.42	2881.80
	12/20/2013	8:47	12/20/2013 8:47	42	32	31	13.5	60	27.7		1348.1	154.22	3036.02
	12/20/2013	10:00	12/20/2013 10:00	40	32	31	14.5	66	29.6		2089.2	239.01	3275.03
	12/20/2013	10:46	12/20/2013 10:46	40	32	30	14.5	68	29.5		1358.3	155.39	3430.41
	12/20/2013	10:47	12/20/2013 10:47	39	32	31	16	68	32.6		31.0	3.55	3433.96
	12/20/2013	11:34	12/20/2013 11:34	39	32	30	17	70	34.5		1576.1	180.30	3614.27
	12/20/2013	11:35	12/20/2013 11:35								34.5	3.95	3618.22
	12/20/2013	11:36	12/20/2013 11:36			24							3618.22
SW-28 Event 6	1/8/2014	13:00	1/8/2014 13:00	52	34	34	<2	58	0.0				3618.22
	1/8/2014	13:03	1/8/2014 13:03	52	34	34	<2	58	0.0		0.0	0.00	3618.22
	1/8/2014	13:10	1/8/2014 13:10	52	34	34	3	58	6.3		22.0	2.52	3620.74
	1/8/2014	13:15	1/8/2014 13:15	54	34	34	3	58	6.3		31.5	3.60	3624.34
	1/8/2014	13:50	1/8/2014 13:50	52	33	34	5	57	10.4		292.1	33.42	3657.76

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/8/2014	15:00	1/8/2014 15:00	50	32.5	34	7.5	60	15.5		905.0	103.53	3761.29
	1/8/2014	16:20	1/8/2014 16:20	50	31.5	34	9.5	53	19.5		1399.0	160.04	3921.33
	1/8/2014	17:19	1/8/2014 17:19	55	31	34	10	52	20.4		1178.7	134.84	4056.18
	1/8/2014	17:20	1/8/2014 17:20								20.4	2.34	4058.52
	1/8/2014	17:21	1/8/2014 17:21			26							4058.52
SW-28 Event 7	1/10/2014	13:24	1/10/2014 13:24				0		0				4058.52
	1/10/2014	13:27	1/10/2014 13:27	50	35	34	7	66	14.7		22.1	2.53	4061.04
	1/10/2014	14:22	1/10/2014 14:22	48	34.5	34	10.5	65	22.0		1010.0	115.54	4176.59
	1/10/2014	15:19	1/10/2014 15:19	46	33	34	13	64	26.8		1391.9	159.23	4335.82
	1/10/2014	16:27	1/10/2014 16:27	45	33	34	14	66	28.8		1893.3	216.59	4552.41
	1/10/2014	17:27	1/10/2014 17:27	45	32.5	34	14.5	62	29.8		1760.4	201.39	4753.81
	1/10/2014	17:28	1/10/2014 17:28								29.8	3.41	4757.22
	1/10/2014	17:29	1/10/2014 17:29			27							4757.22
SW-28 Event 8	1/13/2014	11:54	1/13/2014 11:54				0		0.0				4757.22
	1/13/2014	11:55	1/13/2014 11:55	45	35	35	2	66	4.2		2.1	0.24	4757.46
	1/13/2014	12:08	1/13/2014 12:08	49	34	34	4.5	69	9.3		88.1	10.08	4767.54
	1/13/2014	12:36	1/13/2014 12:36	49	34	34	4.5	70	9.3		261.5	29.91	4797.45
	1/13/2014	13:45	1/13/2014 13:45	45	33.5	34	6	71	12.4		748.7	85.65	4883.10
	1/13/2014	13:46	1/13/2014 13:46	42	33	33.5	7	71	14.4		13.4	1.53	4884.63
	1/13/2014	16:05	1/13/2014 16:05	40	32.5	33	6.5	70	13.3		1919.7	219.62	5104.24
	1/13/2014	16:06	1/13/2014 16:06								13.3	1.52	5105.76
	1/13/2014	16:07	1/13/2014 16:07			27							5105.76
SW-28 Event 9	1/15/2014	11:41	1/15/2014 11:41	40	34	34.5	<2	70	0.0				5105.76
	1/15/2014	12:26	1/15/2014 12:26	45	32	32.5	6.2	68	12.6		283.8	32.47	5138.23
	1/15/2014	12:27	1/15/2014 12:27	45	33	33.2	8	68	16.5		14.5	1.66	5139.89
	1/15/2014	12:50	1/15/2014 12:50	48	33	33.2	7.9	67	16.3		376.2	43.04	5182.93
	1/15/2014	13:49	1/15/2014 13:49	48	33	33	8.5	65	17.5		996.9	114.04	5296.97
	1/15/2014	15:45	1/15/2014 15:45	48	32.5	32	10	70	20.4		2200.8	251.78	5548.74
	1/15/2014	16:40	1/15/2014 16:40	54	32.2	32	10.2	68	20.8		1133.3	129.65	5678.39
	1/15/2014	16:42	1/15/2014 16:42								41.6	4.76	5683.15
	1/15/2014	16:43	1/15/2014 16:43			27							5683.15
SW-28 Event 10	1/17/2014	8:59	1/17/2014 8:59	50	27	27	3	46	5.9				5683.15
	1/17/2014	9:01	1/17/2014 9:01	50	32.5	32.5	9	46	18.8		24.7	2.83	5685.98
	1/17/2014	9:02	1/17/2014 9:02	50	33.5	33	10.5	46	22.2		20.5	2.35	5688.32
	1/17/2014	10:34	1/17/2014 10:34	46	33	32.5	10.7	55	22.3		2046.2	234.09	5922.41
	1/17/2014	11:43	1/17/2014 11:43	46	32.5	32	12	66	24.6		1617.5	185.04	6107.45
	1/17/2014	11:44	1/17/2014 11:44	46	34	32.2	13.9	66	28.9		26.8	3.06	6110.52
	1/17/2014	12:29	1/17/2014 12:29	43	34	32.3	14	62	29.3		1309.8	149.84	6260.35
	1/17/2014	12:55	1/17/2014 12:55	43	34	32.2	14	64	29.2		760.2	86.97	6347.32
	1/17/2014	14:16	1/17/2014 14:16	43	34	32.2	14.2	64	29.6		2382.9	272.60	6619.92
	1/17/2014	15:38	1/17/2014 15:38	48	34	32.2	15	64	31.3		2497.9	285.75	6905.68
	1/17/2014	15:39	1/17/2014 15:39								31.3	3.58	6909.26
	1/17/2014	15:40	1/17/2014 15:40			27							6909.26
SW-28 Event 11	1/20/2014	7:57	1/20/2014 7:57	55	28	31	3.5	40	7.0				6909.26
	1/20/2014	7:58	1/20/2014 7:58	55	31	30	8	40	16.6		11.8	1.35	6910.61
	1/20/2014	7:59	1/20/2014 7:59	55	33.5	32.5	11	40	23.4		20.0	2.29	6912.89
	1/20/2014	8:31	1/20/2014 8:31	50	33	32	13	48	27.3		810.7	92.75	7005.64
	1/20/2014	8:32	1/20/2014 8:32	50	34	32.3	14	48	29.7		28.5	3.26	7008.90
	1/20/2014	9:11	1/20/2014 9:11	50	34	32.3	14.5	54	30.6		1174.7	134.39	7143.29
	1/20/2014	9:23	1/20/2014 9:23	47	34	32.3	15	64	31.3		371.1	42.46	7185.75
	1/20/2014	11:15	1/20/2014 11:15	45	33.5	32.3	15	65	31.1		3494.3	399.75	7585.49

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/20/2014	12:47	1/20/2014 12:47	50	33.5	32.3	15.2	65	31.5		2880.4	329.52	7915.01
	1/20/2014	13:10	1/20/2014 13:10	50	33.5	32.2	15.2	66	31.5		724.5	82.88	7997.90
	1/20/2014	14:07	1/20/2014 14:07	50	33.5	32.2	15.8	68	32.7		1828.2	209.15	8207.05
	1/20/2014	15:18	1/20/2014 15:18	52	33.5	32.2	15.9	70	32.8		2324.2	265.88	8472.93
	1/20/2014	16:25	1/20/2014 16:25	52	33.5	32.2	16.5	68	34.1		2241.7	256.45	8729.39
	1/20/2014	16:26	1/20/2014 16:26								34.1	3.90	8733.29
	1/20/2014	16:35	1/20/2014 16:35			23							8733.29
SW-28 Event 12	1/21/2014	9:08	1/21/2014 9:08	47	28	30.5	5.5	52	10.9				8733.29
	1/21/2014	9:09	1/21/2014 9:09	47	32	30.5	12	52	24.8		17.8	2.04	8735.33
	1/21/2014	9:10	1/21/2014 9:10	47	34	32.5	16	52	33.8		29.3	3.35	8738.68
	1/21/2014	10:04	1/21/2014 10:04	39	33	32	13	61	26.9		1639.1	187.51	8926.19
	1/21/2014	11:00	1/21/2014 11:00	36	33	31.5	13.8	64	28.5		1551.5	177.49	9103.68
	1/21/2014	11:28	1/21/2014 11:28	36	33.5	31.8	13.8	64	28.6		799.9	91.50	9195.18
	1/21/2014	13:15	1/21/2014 13:15	47	36	34	17.7	62	37.8		3552.9	406.46	9601.64
	1/21/2014	13:16	1/21/2014 13:16			27					37.8	4.32	9605.96
SW-28 Event 13	2/10/2014	9:27	2/10/2014 9:27	51	32	32.5	<2	60	0.0				9605.96
	2/10/2014	9:29	2/10/2014 9:29		33	32.5	2.5	63.5	5.2		5.2	0.59	9606.55
	2/10/2014	10:10	2/10/2014 10:10	48	31.5	31	6	67	12.2		355.0	40.61	9647.16
	2/10/2014	10:15	2/10/2014 10:15	48	33.5	33.5	9.7	69	20.0		80.5	9.20	9656.36
	2/10/2014	11:42	2/10/2014 11:42	47	33.5	32.5	9	71	18.6		1678.4	192.01	9848.38
	2/10/2014	13:27	2/10/2014 13:27	47	33.5	32.5	9.9	71	20.4		2045.3	233.98	10082.36
	2/10/2014	14:59	2/10/2014 14:59	46	33.5	32.5	10.5	73	21.6		1932.3	221.06	10303.41
	2/10/2014	16:46	2/10/2014 16:46	45	32.5	31.5	11.5	69	23.5		2412.9	276.03	10579.45
	2/10/2014	17:50	2/10/2014 17:50	54	32.5	31.5	11.7	63	24.0		1521.6	174.07	10753.51
	2/10/2014	17:51	2/10/2014 17:51			26					24.0	2.75	10756.27
SW-28 Event 14	2/11/2014	8:14	2/11/2014 8:14	54	25.5	26	4.5	54	8.6				10756.27
	2/11/2014	8:16	2/11/2014 8:16	54	33.5	31.5	13	54	27.3		35.9	4.10	10760.37
	2/11/2014	8:20	2/11/2014 8:20	50	32.5	30.5	14.5	55	30.0		114.6	13.11	10773.48
	2/11/2014	9:00	2/11/2014 9:00	46	32.5	30.5	15	58	31.0		1220.7	139.64	10913.12
	2/11/2014	9:01	2/11/2014 9:01			23					31.0	3.54	10916.67
	2/11/2014	12:16	2/11/2014 12:16	50	32	31	15.7	69	31.9		6222.2	711.82	11628.48
	2/11/2014	12:18	2/11/2014 12:18	50	33.5	31	16.7	69	34.5		66.4	7.60	11636.08
	2/11/2014	13:45	2/11/2014 13:45	47	34.3	32.5	17	63	35.6		3049.6	348.87	11984.95
	2/11/2014	14:53	2/11/2014 14:53	47	34.3	32.5	17.8	60	37.4		2482.6	284.01	12268.97
	2/11/2014	17:04	2/11/2014 17:04	46	34.3	32	16.8	56	35.4		4771.5	545.86	12814.83
	2/11/2014	17:06	2/11/2014 17:06			27					70.9	8.11	12822.94
SW-28 Event 15	2/12/2014	8:31	2/12/2014 8:31	45	27	27.5	9	47	17.7				12822.94
	2/12/2014	8:33	2/12/2014 8:33	45	33.5	31	17	48	35.9		53.5	6.12	12829.06
	2/12/2014	8:54	2/12/2014 8:54	45	33.5	30.2	17	53	35.7		751.1	85.93	12914.98
	2/12/2014	10:33	2/12/2014 10:33	46	33.5	31	16.5	55	34.6		3476.4	397.70	13312.69
	2/12/2014	11:55	2/12/2014 11:55	47	33.5	31.5	16.5	54	34.6		2835.0	324.33	13637.01
	2/12/2014	13:59	2/12/2014 13:59	48	33	30.5	17	51	35.6		4349.3	497.56	14134.57
	2/12/2014	14:55	2/12/2014 14:55	48	33	30.5	17.2	51	36.0		2003.0	229.14	14363.71
	2/12/2014	15:55	2/12/2014 15:55	48	33	30.5	18	51	37.7		2208.8	252.69	14616.40
	2/12/2014	16:54	2/12/2014 16:54	48	32.5	30	18	51	37.4		2215.4	253.45	14869.85
	2/12/2014	17:55	2/12/2014 17:55	48	32.5	30	18	52	37.4		2283.2	261.20	15131.05
	2/13/2014	7:12	2/13/2014 7:12	47	30.5	23	20	49	40.8		31161.9	3564.92	18695.97
	2/13/2014	7:14	2/13/2014 7:14										18695.97
SW-28 Event 16	3/3/2015	8:11	3/3/2015 8:11		30	28.5	0	69	0.0				18695.97
	3/3/2015	8:37	3/3/2015 8:37		30	28	0	69	0.0		0.0	0.00	18695.97
	3/3/2015	10:02	3/3/2015 10:02		30	27	4	70	7.9		337.6	38.62	18734.59

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/3/2015	10:04	3/3/2015 10:04		37.5	33.5	12	70	25.8		33.7	3.86	18738.44
	3/3/2015	11:27	3/3/2015 11:27		38	34	10.5	73	22.6		2008.0	229.72	18968.16
	3/3/2015	12:45	3/3/2015 12:45		39	33.5	12	74	26.1		1897.6	217.09	19185.25
	3/3/2015	12:46	3/3/2015 12:46			26					26.1	2.98	19188.23
SW-28 Event 17	3/5/2015	7:58	3/5/2015 7:58		36	36	6	76	12.6				19188.23
	3/5/2015	8:18	3/5/2015 8:18		36	34	8	74	16.9		295.0	33.74	19221.97
	3/5/2015	8:22	3/5/2015 8:22		39	36.5	10	74	21.7		77.2	8.83	19230.80
	3/5/2015	8:59	3/5/2015 8:59		37	36	10	78	21.2		794.1	90.85	19321.65
	3/5/2015	10:18	3/5/2015 10:18		38	35.5	10	80	21.4		1682.5	192.48	19514.13
	3/5/2015	11:37	3/5/2015 11:37		38	35	11	80	23.5		1773.5	202.89	19717.02
	3/5/2015	12:45	3/5/2015 12:45		38	34	12	80	25.7		1672.0	191.27	19908.30
	3/5/2015	12:46	3/5/2015 12:46			26					25.7	2.94	19911.23
SW-28 Event 18	3/10/2015	8:05	3/10/2015 8:05		31	32	0	60	0.0				19911.23
	3/10/2015	9:00	3/10/2015 9:00		30	30	5	68	9.9		273.6	31.30	19942.53
	3/10/2015	9:03	3/10/2015 9:03		37	35	13	68	27.8		56.7	6.49	19949.02
	3/10/2015	10:14	3/10/2015 10:14		37	35	11	78	23.3		1817.1	207.88	20156.89
	3/10/2015	11:42	3/10/2015 11:42		37	34	12	80	25.4		2144.8	245.36	20402.26
	3/10/2015	12:55	3/10/2015 12:55		37	33	13	86	27.4		1926.3	220.37	20622.63
	3/10/2015	12:57	3/10/2015 12:57			25					54.7	6.26	20628.89
SW-28 Event 19	3/13/2015	8:05	3/13/2015 8:05		36	36	6	66	12.8				20628.89
	3/13/2015	8:29	3/13/2015 8:29		35	34	8	66	16.8		355.0	40.61	20669.50
	3/13/2015	8:30	3/13/2015 8:30		37	35	9	66	19.3		18.1	2.07	20671.57
	3/13/2015	9:42	3/13/2015 9:42		37	34	10	66	21.5		1468.2	167.97	20839.54
	3/13/2015	10:18	3/13/2015 10:18		37	34	11	68	23.6		810.6	92.73	20932.26
	3/13/2015	11:05	3/13/2015 11:05		37	34	12	68	25.7		1157.9	132.46	21064.73
	3/13/2015	11:06	3/13/2015 11:06			26					25.7	2.94	21067.67
Total CO ₂ Mass (lbs):												21067.67	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-29 Event 1	11/21/2013	9:52	11/21/2013 9:52	54	30			66	0.0				
	11/21/2013	9:54	11/21/2013 9:54		34		<2	66	0.0		0.0	0.00	0.00
	11/21/2013	10:02	11/21/2013 10:02		33	32.5	<2	67	0.0		0.0	0.00	0.00
	11/21/2013	10:25	11/21/2013 10:25	52	32	32	3.5	68	7.1		81.9	9.37	9.37
	11/21/2013	10:28	11/21/2013 10:28	52.5	35	34	5.8	68	12.2		28.9	3.31	12.68
	11/21/2013	11:37	11/21/2013 11:37	50	35	33.5	7.5	71	15.7		961.9	110.04	122.72
	11/21/2013	11:41	11/21/2013 11:41	50	35.5	33.5	8.0	71	16.8		65.1	7.44	130.16
	11/21/2013	13:27	11/21/2013 13:27	49	35	33.5	9.0	74	18.8		1887.9	215.98	346.14
	11/21/2013	17:15	11/21/2013 17:15	55	34	32	12	66	25.0		4990.3	570.89	917.03
	11/21/2013	17:20	11/21/2013 17:20								124.9	14.29	931.32
	11/21/2013	17:22	11/21/2013 17:22			25							931.32
SW-29 Event 2	12/5/2013	8:04	12/5/2013 8:04	55	37	36	3	65	6.4				931.32
	12/5/2013	8:42	12/5/2013 8:42	53	35	35	7	69	14.7		401.5	45.93	977.25
	12/5/2013	9:18	12/5/2013 9:18	51	35	35	8	72	16.7		565.5	64.69	1041.94
	12/5/2013	10:18	12/5/2013 10:18	50	35	35	8	78	16.6		1001.0	114.52	1156.46
	12/5/2013	11:32	12/5/2013 11:32	50	35	34.5	9	80	18.7		1306.6	149.48	1305.94
	12/5/2013	12:08	12/5/2013 12:08	50	35	34	9.5	80	19.7		691.1	79.06	1385.00
	12/5/2013	12:09	12/5/2013 12:09								19.7	2.26	1387.25
	12/5/2013	12:10	12/5/2013 12:10			29							1387.25
	SW-29 Event 3	12/13/2013	8:44	12/13/2013 8:44	52	32	31	<2	58	0.0			
12/13/2013		8:45	12/13/2013 8:45	52	35	34	3	58	6.4		3.2	0.36	1387.62
12/13/2013		9:32	12/13/2013 9:32	49	35	33	8	63	16.9		546.2	62.49	1450.11
12/13/2013		10:19	12/13/2013 10:19	45	34	32.5	8	66	16.7		788.2	90.17	1540.27
12/13/2013		10:20	12/13/2013 10:20	45	35	33.5	11	66	23.1		19.9	2.28	1542.55
12/13/2013		12:01	12/13/2013 12:01	45	35	33	11.5	70	24.1		2385.8	272.93	1815.48
12/13/2013		14:28	12/13/2013 14:28	45	35	32	14	68	29.4		3932.0	449.82	2265.30
12/13/2013		15:23	12/13/2013 15:23	55	36	31	15	70	31.8		1681.7	192.38	2457.68
12/13/2013		15:24	12/13/2013 15:24								31.8	3.63	2461.31
12/13/2013		15:25	12/13/2013 15:25										2461.31
SW-29 Event 4		12/18/2013	8:25	12/18/2013 8:25	50	36	34	<2	54.0	0.0		0.0	0.00
	12/18/2013	8:35	12/18/2013 8:35	48	36	34	<2	56.0	0.0		0.0	0.00	2461.31
	12/18/2013	9:31	12/18/2013 9:31	47.5	36	32.5	4	61.0	8.5		239.2	27.37	2488.68
	12/18/2013	9:32	12/18/2013 9:32	45	38	35	10	61.0	21.8		15.2	1.73	2490.42
	12/18/2013	9:40	12/18/2013 9:40								174.3	19.94	2510.35
	12/18/2013	13:55	12/18/2013 13:55	50	38	38	<2	76.0	0.0				2510.35
	12/18/2013	13:57	12/18/2013 13:57	50	35	32	6	76.0	12.5		12.5	1.43	2511.78
	12/18/2013	14:50	12/18/2013 14:50	47	35	32	10	72.0	20.9		885.5	101.30	2613.09
	12/18/2013	14:52	12/18/2013 14:52	47	36	33.5	12.5	72.0	26.4		47.3	5.41	2618.50
	12/18/2013	15:37	12/18/2013 15:37	40	37	33	13	70.0	27.8		1219.6	139.52	2758.02
	12/18/2013	16:50	12/18/2013 16:50	45	37	33	14	65.0	30.1		2112.5	241.67	2999.69
	12/18/2013	17:53	12/18/2013 17:53	45	36	32	15	56.0	32.2		1961.9	224.44	3224.13
	12/18/2013	17:54	12/18/2013 17:54			27					32.2	3.68	3227.82
SW-29 Event 5	1/7/2014	12:58	1/7/2014 12:58					46					3227.82
	1/7/2014	12:59	1/7/2014 12:59	51	35	34	3	46	6.4		6.4	0.74	3228.55
	1/7/2014	14:02	1/7/2014 14:02	53	35	32	4.5	46	9.7		507.2	58.02	3286.58
	1/7/2014	14:04	1/7/2014 14:04	53	36	34	8	46	17.4		27.0	3.09	3289.67
	1/7/2014	15:19	1/7/2014 15:19	51	36	34	8	49	17.3		1299.3	148.64	3438.30
	1/7/2014	16:28	1/7/2014 16:28	50	36	34	8.5	43	18.5		1234.7	141.25	3579.55
	1/7/2014	17:16	1/7/2014 17:16	55	36	34	9.5	40	20.7		941.4	107.70	3687.25
	1/7/2014	17:17	1/7/2014 17:17								20.7	2.37	3689.62
	1/7/2014	17:18	1/7/2014 17:18			27							3689.62

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-29 Event 6	1/9/2014	13:00	1/9/2014 13:00	44	36	35	4	62	8.5				3689.62
	1/9/2014	13:06	1/9/2014 13:06	42	36	35	6.5	62	13.9		67.2	7.69	3697.31
	1/9/2014	13:10	1/9/2014 13:10	41	35	33	7	64	14.8		57.3	6.55	3703.86
	1/9/2014	14:48	1/9/2014 14:48	39	35	32.5	8.3	62	17.5		1582.1	181.00	3884.86
	1/9/2014	15:33	1/9/2014 15:33	40	35	32.5	8.3	61	17.5		789.3	90.30	3975.16
	1/9/2014	17:11	1/9/2014 17:11	49	35	32.5	10.5	60	22.2		1948.9	222.95	4198.11
	1/9/2014	17:13	1/9/2014 17:13			27.8					44.4	5.08	4203.19
SW-29 Event 7	1/13/2014	8:18	1/13/2014 8:18	48	34	33.2	2.5	48	5.3				4203.19
	1/13/2014	8:22	1/13/2014 8:22	48	30	30.4	8	48	16.2		43.1	4.93	4208.12
	1/13/2014	8:23	1/13/2014 8:23	48	33	34	9	48	18.9		17.6	2.01	4210.13
	1/13/2014	8:44	1/13/2014 8:44	45	32	32.8	10.5	54	21.7		425.7	48.70	4258.83
	1/13/2014	8:45	1/13/2014 8:45	45	33	33.6	12.5	54	26.1		23.9	2.73	4261.56
	1/13/2014	9:53	1/13/2014 9:53	45	33	33	13	64	26.8		1798.8	205.78	4467.34
	1/13/2014	11:06	1/13/2014 11:06	43	33	32.8	12.5	69	25.7		1916.9	219.30	4686.64
	1/13/2014	12:18	1/13/2014 12:18	44	33	32.6	12.5	70	25.7		1848.0	211.42	4898.05
	1/13/2014	13:00	1/13/2014 13:00	44	33	32.6	13	70	26.7		1099.0	125.73	5023.78
	1/13/2014	13:02	1/13/2014 13:02	44	35	33	16	70	33.5		60.2	6.89	5030.67
	1/13/2014	14:30	1/13/2014 14:30	40	34.5	33	17	70	35.4		3034.8	347.18	5377.86
	1/13/2014	15:47	1/13/2014 15:47	38	33.5	32.8	15	66	31.1		2560.8	292.96	5670.81
	1/13/2014	16:41	1/13/2014 16:41	38	33.5	32.6	16	66	33.1		1733.8	198.34	5869.15
	1/13/2014	17:03	1/13/2014 17:03	45	33.5	32.6	17	66	35.2		751.9	86.02	5955.17
	1/13/2014	17:04	1/13/2014 17:04			28					35.2	4.03	5959.20
	SW-29 Event 8	1/15/2014	8:21	1/15/2014 8:21	54	31	32	<2	46	0.0			
1/15/2014		8:22	1/15/2014 8:22	54	31	32	5	46	10.3		5.1	0.59	5959.79
1/15/2014		8:24	1/15/2014 8:24	54	32	33	9.8	46	20.4		30.7	3.51	5963.30
1/15/2014		8:58	1/15/2014 8:58	50	31	31.2	13.2	58	26.8		802.5	91.81	6055.11
1/15/2014		8:59	1/15/2014 8:59	50	35	34	19.2	58	40.7		33.8	3.86	6058.97
1/15/2014		9:38	1/15/2014 9:38	43	35	34	18.2	64	38.4		1542.2	176.42	6235.40
1/15/2014		10:50	1/15/2014 10:50	40	34	33.6	17.8	68	37.0		2712.9	310.36	6545.75
1/15/2014		11:20	1/15/2014 11:20	39	34	32.8	17.2	68	35.7		1091.0	124.82	6670.57
1/15/2014		12:30	1/15/2014 12:30	42	35	32.8	19	67	39.9		2648.8	303.02	6973.59
1/15/2014		12:31	1/15/2014 12:31	42	36	33.6	21	67	44.6		42.3	4.83	6978.43
1/15/2014		13:48	1/15/2014 13:48	48	37.5	34.8	22	64	47.6		3547.3	405.81	7384.24
1/15/2014		15:36	1/15/2014 15:36	45	37.5	34.4	22	67	47.4		5127.8	586.62	7970.85
1/15/2014		16:33	1/15/2014 16:33	48	37.5	34.2	23	65	49.7		2766.5	316.49	8287.34
1/15/2014		16:34	1/15/2014 16:34								49.7	5.68	8293.02
1/15/2014		16:37	1/15/2014 16:37			28							8293.02
SW-29 Event 9		1/17/2014	7:25	1/17/2014 7:25	55	31	30.4	2.5	37	5.2			
	1/17/2014	7:27	1/17/2014 7:27	55	33	34.8	6	37	12.7		17.9	2.05	8295.07
	1/17/2014	7:28	1/17/2014 7:28	55	33	32	10.5	37	22.3		17.5	2.00	8297.08
	1/17/2014	8:19	1/17/2014 8:19	48	32	32	15	53	31.0		1358.1	155.37	8452.45
	1/17/2014	8:20	1/17/2014 8:20								31.0	3.54	8455.99
SW-29 Event 10	3/6/2015	7:42	3/6/2015 7:42		28	29.5	0	51	0.0				8455.99
	3/6/2015	8:01	3/6/2015 8:01		28	29	3.5	52	6.9		65.7	7.51	8463.50
	3/6/2015	9:16	3/6/2015 9:16		28	29	4	54	7.9		554.9	63.48	8526.99
	3/6/2015	9:17	3/6/2015 9:17		38	35.5	18	54	39.5		23.7	2.71	8529.70
	3/6/2015	10:05	3/6/2015 10:05		38	36	14	54	30.7		1684.9	192.75	8722.45
	3/6/2015	11:04	3/6/2015 11:04		38	36	14	54	30.7		1812.1	207.31	8929.76
	3/6/2015	11:05	3/6/2015 11:05			20					30.7	3.51	8933.27
SW-29 Event 11	3/9/2015	8:11	3/9/2015 8:11		31	32	0	56	0.0				8933.27
	3/9/2015	8:37	3/9/2015 8:37		29	29	7.5	58	14.9		193.7	22.16	8955.43

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/9/2015	8:38	3/9/2015 8:38		38	36	17	58	37.1		26.0	2.98	8958.41
	3/9/2015	9:53	3/9/2015 9:53		38	35.5	16	74	34.4		2683.3	306.97	9265.37
	3/9/2015	11:30	3/9/2015 11:30		38	35	16.5	84	35.1		3373.3	385.90	9651.27
	3/9/2015	12:37	3/9/2015 12:37		38	34	17	86	36.1		2387.9	273.18	9924.45
	3/9/2015	12:38	3/9/2015 12:38			28					36.1	4.13	9928.59
SW-29 Event 12	3/11/2015	12:18	3/11/2015 12:18		34	35	4	96	8.1				9928.59
	3/11/2015	12:45	3/11/2015 12:45		33	32	10	96	20.0		379.5	43.42	9972.01
	3/11/2015	12:46	3/11/2015 12:46		40	36.5	17	96	36.5		28.3	3.23	9975.24
	3/11/2015	13:40	3/11/2015 13:40		40	36	17	94	36.6		1971.9	225.59	10200.83
	3/11/2015	14:57	3/11/2015 14:57		40	36	18	93	38.7		2898.6	331.60	10532.43
	3/11/2015	16:24	3/11/2015 16:24		40	35	18.5	90	39.9		3421.9	391.46	10923.89
	3/11/2015	17:56	3/11/2015 17:56		40	34	20	86	43.3		3829.7	438.12	11362.01
	3/11/2015	17:57	3/11/2015 17:57			28.5					43.3	4.96	11366.97
											Total CO ₂ Mass (lbs):		11366.97

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-30 Event 1	11/14/2013	12:20	11/14/2013 12:20	26	11		0	53	0.0				0.00
	11/14/2013	12:22	11/14/2013 12:22	30	30	29	<2	53	0.0		0.0	0.00	0.00
	11/14/2013	12:25	11/14/2013 12:25	34	35	33	<2	54.5	0.0		0.0	0.00	0.00
	11/14/2013	12:28	11/14/2013 12:28	34	33.5	30	<2	56.8	0.0		0.0	0.00	0.00
	11/14/2013	12:32	11/14/2013 12:32	36	35	33	3.5	60.6	6.0		12.0	1.37	1.37
	11/14/2013	12:36	11/14/2013 12:36	38	35	32.5	4.25	70.7	7.2		26.4	3.02	4.40
	11/14/2013	12:41	11/14/2013 12:41	36	35	32.5	5	74.4	8.5		39.2	4.48	8.88
	11/14/2013	12:42	11/14/2013 12:42	38	36	33.5	6.5	73.9	11.1		9.8	1.12	10.00
	11/14/2013	12:50	11/14/2013 12:50	38	36	33.5	7	73.4	12.0		92.3	10.56	20.56
	11/14/2013	13:40	11/14/2013 13:40	37	33	31	9.5	70.3	15.8		694.3	79.43	99.99
	11/14/2013	13:47	11/14/2013 13:47	40	36	33	11.5	7	21.1		129.1	14.77	114.76
	11/14/2013	15:00	11/14/2013 15:00	40	36	33	12.5	64.2	21.6		1557.1	178.13	292.89
	11/14/2013	15:51	11/14/2013 15:51	40	36	32.5	12.75	52.7	22.3		1117.7	127.87	420.76
	11/14/2013	15:55	11/14/2013 15:55	42	36	33	13.5	52.7	23.6		91.7	10.49	431.25
	11/14/2013	16:30	11/14/2013 16:30	42	37	33	13.5	41	24.1		834.1	95.42	526.67
11/14/2013	16:32	11/14/2013 16:32								48.2	5.51	532.18	
11/14/2013	16:33	11/14/2013 16:33	26	25	21							532.18	
SW-30 Event 2	12/4/2013	12:25	12/4/2013 12:25	51	38	37.6	<2	80	0.0				532.18
	12/4/2013	13:05	12/4/2013 13:05	55	36	35.6	3	85	6.3		125.2	14.32	546.51
	12/4/2013	13:45	12/4/2013 13:45	52	36	35	4.5	85	9.4		313.0	35.80	582.31
	12/4/2013	14:43	12/4/2013 14:43	50	36	35.2	5	74	10.5		578.0	66.13	648.44
	12/4/2013	15:50	12/4/2013 15:50	52	36	35.2	6	78	12.6		775.4	88.71	737.14
	12/4/2013	17:18	12/4/2013 17:18	54	35	35.2	6	69	12.6		1108.3	126.79	863.94
	12/4/2013	17:20	12/4/2013 17:20								25.2	2.88	866.82
	12/4/2013	17:21	12/4/2013 17:21			26							866.82
	SW-30 Event 3	12/17/2013	12:34	12/17/2013 12:34	48	37	37	<2	71	0.0			
12/17/2013		12:34	12/17/2013 12:34	48	30	31	<2	71	0.0		0.0	0.00	866.82
12/17/2013		12:36	12/17/2013 12:36	48	36		<2	71	0.0		0.0	0.00	866.82
12/17/2013		13:25	12/17/2013 13:25	48	35	33	<2	76	0.0		0.0	0.00	866.82
12/17/2013		14:24	12/17/2013 14:24	45	35	32.5	<2	75	0.0		0.0	0.00	866.82
12/17/2013		15:38	12/17/2013 15:38	45	36	33	<2	74	0.0		0.0	0.00	866.82
12/17/2013		17:01	12/17/2013 17:01	45	36	32	3	66	6.4		264.6	30.27	897.09
12/17/2013		22:16	12/17/2013 22:16	45	35	32	4	56	8.5		2343.0	268.04	1165.13
12/18/2013		8:15	12/18/2013 8:15	48	35	31	6	54	12.8		6372.3	728.99	1894.11
12/18/2013		8:18	12/18/2013 8:18								38.3	4.38	1898.50
12/18/2013		8:19	12/18/2013 8:19			26							1898.50
SW-30 Event 4		1/8/2014	8:22	1/8/2014 8:22	56	35	33	<2	39	0.0			
	1/8/2014	9:00	1/8/2014 9:00	50	35	31.5	<2	40	0.0		0.0	0.00	1898.50
	1/8/2014	9:55	1/8/2014 9:55	47	34	32.5	<2	48	0.0		0.0	0.00	1898.50
	1/8/2014	10:49	1/8/2014 10:49	46	35	34.5	<2	52	0.0		0.0	0.00	1898.50
	1/8/2014	12:05	1/8/2014 12:05	45	34	33	<2	60	0.0		0.0	0.00	1898.50
	1/8/2014	13:18	1/8/2014 13:18	52	35	31.5	<2	58	0.0		0.0	0.00	1898.50
	1/8/2014	13:20	1/8/2014 13:20	52	36	33	5.5	58	11.8		11.8	1.35	1899.85
	1/8/2014	14:20	1/8/2014 14:20	50	35.5	33	6	56	12.8		738.0	84.42	1984.27
	1/8/2014	16:27	1/8/2014 16:27	50	35.5	32.5	9	53	19.3		2038.2	233.17	2217.44
	1/8/2014	21:15	1/8/2014 21:15	55	35	31	11	50	23.5		6163.3	705.08	2922.51
	1/8/2014	21:16	1/8/2014 21:16	54	41	34	18	50	40.8		32.2	3.68	2926.19
	1/9/2014	7:10	1/9/2014 7:10	54	41	34	18	54	40.6		24178.1	2765.98	5692.17
	1/9/2014	8:26	1/9/2014 8:26	52	41	34	18.2	54	41.1		3104.3	355.13	6047.30
	1/9/2014	8:27	1/9/2014 8:27								41.1	4.70	6052.00
SW-30 Event 5	1/10/2014	9:06	1/10/2014 9:06	50	35	34.5	<2	66	0.0				6052.00

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/10/2014	9:09	1/10/2014 9:09	50	35	34.5	<2	66	0.0		0.0	0.00	6052.00
	1/10/2014	9:55	1/10/2014 9:55	45	34	33	4	66	8.3		191.6	21.92	6073.91
	1/10/2014	9:57	1/10/2014 9:57	45	35	34.5	5	66	10.5		18.8	2.16	6076.07
	1/10/2014	10:51	1/10/2014 10:51	45	35	34.5	5	72	10.5		566.4	64.79	6140.86
	1/10/2014	12:42	1/10/2014 12:42	42	35	34.5	6	72	12.5		1276.9	146.08	6286.94
	1/10/2014	14:29	1/10/2014 14:29	50	35	34.5	6.5	70	13.6		1400.1	160.18	6447.11
	1/10/2014	16:25	1/10/2014 16:25	46	35	34	7.5	71	15.7		1700.8	194.57	6641.68
	1/10/2014	17:42	1/10/2014 17:42	47	34	33	8	68	16.6		1244.6	142.38	6784.06
	1/10/2014	17:43	1/10/2014 17:43	47	35	34	11	68	23.1		19.9	2.27	6786.34
	1/10/2014	22:02	1/10/2014 22:02	45	35	33	11	66	23.1		5988.1	685.04	7471.38
	1/10/2014	22:06	1/10/2014 22:06	45	36	34	13	66	27.6		101.5	11.62	7482.99
	1/11/2014	11:41	1/11/2014 11:41	40	34	32	15.5	74	32.0		24308.4	2780.89	10263.88
	1/11/2014	11:42	1/11/2014 11:42								32.0	3.66	10267.54
	1/11/2014	11:48	1/11/2014 11:48			26							10267.54
SW-30 Event 6	2/11/2014	10:01	2/11/2014 10:01	52	36	34.5	<2	60	0.0				10267.54
	2/11/2014	10:03	2/11/2014 10:03	52	34	34	<2	60	0.0		0.0	0.00	10267.54
	2/11/2014	10:31	2/11/2014 10:31	51	32.5	32.5	<2	62	0.0		0.0	0.00	10267.54
	2/11/2014	10:34	2/11/2014 10:34	51	34	33.5	2	62	4.2		6.3	0.72	10268.26
	2/11/2014	11:51	2/11/2014 11:51	51	34	33.5	2.5	63	5.2		362.0	41.41	10309.67
	2/11/2014	12:46	2/11/2014 12:46	45	34	33.5	3	63	6.3		315.9	36.14	10345.81
	2/11/2014	14:10	2/11/2014 14:10	45	34	33.5	3.8	60	8.0		597.5	68.35	10414.16
	2/11/2014	16:59	2/11/2014 16:59	45	33	33.5	4.3	55	9.0		1429.6	163.54	10577.70
	2/11/2014	17:20	2/11/2014 17:20	45	33	33.5	4.3	54	9.0		188.2	21.53	10599.23
	2/11/2014	17:21	2/11/2014 17:21			29					9.0	1.03	10600.26
SW-30 Event 7	3/4/2015	7:40	3/4/2015 7:40		31	33	0	68	0.0				10600.26
	3/4/2015	7:56	3/4/2015 7:56		30	31	<2	68	0.0		0.0	0.00	10600.26
	3/4/2015	7:57	3/4/2015 7:57		38	38	12	68	26.0		13.0	1.48	10601.74
	3/4/2015	9:02	3/4/2015 9:02		38	38	9	79	19.3		1469.7	168.13	10769.87
	3/4/2015	11:47	3/4/2015 11:47		38	37.5	10	86	21.3		3342.9	382.42	11152.30
	3/4/2015	13:49	3/4/2015 13:49		38	37	11	88	23.3		2720.5	311.22	11463.52
	3/4/2015	15:15	3/4/2015 15:15		38	37	12	88	25.5		2098.4	240.06	11703.58
	3/4/2015	17:08	3/4/2015 17:08		38	37	12	82	25.6		2885.4	330.09	12033.67
	3/4/2015	17:09	3/4/2015 17:09			32					25.6	2.93	12036.60
SW-30 Event 8	3/13/2015	7:59	3/13/2015 7:59		30	30	0	64	0.0				12036.60
	3/13/2015	8:18	3/13/2015 8:18		29	30	0	64	0.0		0.0	0.00	12036.60
	3/13/2015	8:19	3/13/2015 8:19		38	38	8	64	17.4		8.7	0.99	12037.59
	3/13/2015	8:58	3/13/2015 8:58		38	38	8	64	17.4		677.6	77.52	12115.11
	3/13/2015	11:01	3/13/2015 11:01		38	37	9	66	19.5		2268.3	259.49	12374.61
	3/13/2015	11:02	3/13/2015 11:02			32					19.5	2.23	12376.84
SW-30 Event 9	3/16/2015	8:04	3/16/2015 8:04		35	35	0	57	0.0				12376.84
	3/16/2015	8:50	3/16/2015 8:50		34	33.5	6	69	12.5		286.5	32.78	12409.61
	3/16/2015	8:51	3/16/2015 8:51		37	36	8.5	69	18.2		15.3	1.75	12411.37
	3/16/2015	10:04	3/16/2015 10:04		37	36	8.5	80	18.0		1320.9	151.11	12562.48
	3/16/2015	11:15	3/16/2015 11:15		37	36	8.5	90	17.8		1271.8	145.49	12707.97
	3/16/2015	11:16	3/16/2015 11:16			30					17.8	2.04	12710.01
Total CO ₂ Mass (lbs):													12710.01

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-31 Event 1	11/13/2013	13:08	11/13/2013 13:08	28	12		0		0.0				
	11/13/2013	13:09	11/13/2013 13:09	32	32	31	<2	49.8	0.0		0.0	0.00	0.00
	11/13/2013	13:11	11/13/2013 13:11	34	34	32	<2	53.2	0.0		0.0	0.00	0.00
	11/13/2013	13:12	11/13/2013 13:12	30	28	25	4.5	55	7.2		3.6	0.41	0.41
	11/13/2013	13:14	11/13/2013 13:14	36	33	25	12	55	20.3		27.4	3.14	3.55
	11/13/2013	13:16	11/13/2013 13:16	34	27.5	27	14.75	56.3	23.4		43.6	4.99	8.54
	11/13/2013	13:17	11/13/2013 13:17	38	32	26.5	15.25	55.2	25.5		24.4	2.79	11.34
	11/13/2013	13:18	11/13/2013 13:18	42	34	28	18.5	53.6	31.6		28.5	3.27	14.60
	11/13/2013	13:50	11/13/2013 13:50	42	31	24	21.5	38.7	36.1		1083.8	123.99	138.59
	11/13/2013	13:51	11/13/2013 13:51	46	33	25	22.5	37.5	38.7		37.4	4.28	142.87
	11/13/2013	13:52	11/13/2013 13:52	53	36	27.5	25	34.8	44.5		41.6	4.76	147.62
	11/13/2013	13:54	11/13/2013 13:54	57	38	28	26	34.5	47.2		91.7	10.48	158.11
	11/13/2013	13:56	11/13/2013 13:56	60	40	30	27	33.6	50.0		97.2	11.12	169.22
	11/13/2013	14:30	11/13/2013 14:30	62	39.5	28.5	28.75	29.7	53.2		1754.2	200.69	369.91
	11/13/2013	15:10	11/13/2013 15:10	62	39	28	27.75	27.5	51.2		2088.6	238.94	608.85
	11/13/2013	15:16	11/13/2013 15:16	66	40	28.5	28.75	24.8	53.7		314.9	36.02	644.88
	11/13/2013	15:24	11/13/2013 15:24	70	43	30	30	24.2	57.7		445.6	50.98	695.85
	11/13/2013	16:08	11/13/2013 16:08	72	43	30.5	30	19.5	58.0		2544.0	291.03	986.89
	11/13/2013	16:59	11/13/2013 16:59	72	43.5	29.5	30.75	-4	61.3		3041.6	347.95	1334.84
	11/13/2013	17:11	11/13/2013 17:11		22	16.5					735.7	84.17	1419.01
SW-31 Event 2	12/4/2013	8:10	12/4/2013 8:10										1419.01
	12/4/2013	8:13	12/4/2013 8:13	48	30	24	32	64	63.9		191.8	21.94	1440.94
	12/4/2013	8:42	12/4/2013 8:42	46	31	22.4	34	68	68.4		1918.9	219.52	1660.46
	12/4/2013	8:45	12/4/2013 8:45	46	27	20.8	32	68	61.5		194.8	22.29	1682.75
	12/4/2013	9:10	12/4/2013 9:10	46	27	21.6	32	70	61.3		1535.2	175.62	1858.37
	12/4/2013	10:01	12/4/2013 10:01	46	27	23.6	28	70	53.7		2933.2	335.55	2193.93
	12/4/2013	11:02	12/4/2013 11:02	45	30	23.2	28	74	55.4		3326.5	380.55	2574.48
	12/4/2013	12:17	12/4/2013 12:17	50	28	22.4	29	76	55.9		4174.8	477.60	3052.08
	12/4/2013	12:18	12/4/2013 12:18								55.9	6.40	3058.48
	12/4/2013	12:19	12/4/2013 12:19			16							3058.48
SW-31 Event 3	12/17/2013	8:27	12/17/2013 8:27	46	33	32	7.5	48.0	15.7				3058.48
	12/17/2013	9:56	12/17/2013 9:56	42	28	24	18	66.0	35.1		2256.7	258.17	3316.65
	12/17/2013	10:03	12/17/2013 10:03	40	32	27	23	66.0	46.9		286.8	32.81	3349.46
	12/17/2013	11:07	12/17/2013 11:07	39	32	25	23.5	68.0	47.8		3030.1	346.65	3696.11
	12/17/2013	12:25	12/17/2013 12:25	45	33	27	24	70.0	49.3		3785.5	433.07	4129.17
	12/17/2013	12:28	12/17/2013 12:28			18					147.8	16.90	4146.08
SW-31 Event 4	1/9/2014	8:43	1/9/2014 8:43	53	34	32.5	<2	54.0	0.0				4146.08
	1/9/2014	8:48	1/9/2014 8:48	53	34	32.5	<2	55.0	0.0		0.0	0.00	4146.08
	1/9/2014	10:20	1/9/2014 10:20	49	31	29.5	6.5	59.0	13.2		607.0	69.44	4215.52
	1/9/2014	10:22	1/9/2014 10:22	49	31	32	9	59.0	18.3		31.5	3.60	4219.12
	1/9/2014	11:36	1/9/2014 11:36	40	30	31	12	67.0	23.9		1560.3	178.50	4397.62
	1/9/2014	11:38	1/9/2014 11:38	40	31	31.2	12.5	67.0	25.2		49.1	5.61	4403.24
	1/9/2014	12:50	1/9/2014 12:50	40	31	30.5	13.5	63.0	27.3		1889.1	216.11	4619.35
	1/9/2014	12:51	1/9/2014 12:51			20					27.3	3.12	4622.48
SW-31 Event 5	1/14/2014	8:09	1/14/2014 8:09	49	32	30.5	<2	62.0	0.0				4622.48
	1/14/2014	8:11	1/14/2014 8:11	49	34	32	<2	62.0	0.0		0.0	0.00	4622.48
	1/14/2014	8:51	1/14/2014 8:51	47	31	30	5	62.0	10.1		202.4	23.16	4645.63
	1/14/2014	8:55	1/14/2014 8:55	47	33	31.5	7	62.0	14.5		49.2	5.63	4651.26
	1/14/2014	10:00	1/14/2014 10:00	45	33	31	8.2	64.0	16.8		1017.9	116.45	4767.71
	1/14/2014	11:26	1/14/2014 11:26	40	32	31	9.8	64.0	20.0		1584.8	181.30	4949.00
	1/14/2014	13:12	1/14/2014 13:12	47	32	30	11	69.0	22.4		2245.7	256.91	5205.91

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/14/2014	15:40	1/14/2014 15:40	47	31	30	12.5	72.0	25.1		3508.4	401.36	5607.27
	1/14/2014	16:28	1/14/2014 16:28	53	31	30	13	72.0	26.1		1226.6	140.33	5747.60
	1/14/2014	16:29	1/14/2014 16:29			24							5747.60
SW-31 Event 6	1/16/2014	8:15	1/16/2014 8:15	55	29	28	<2	48.0	0.0				5747.60
	1/16/2014	8:16	1/16/2014 8:16	55	33	32	<2	48.0	0.0		0.0	0.00	5747.60
	1/16/2014	9:10	1/16/2014 9:10	49	31	31	3	50.0	6.1		165.9	18.98	5766.58
	1/16/2014	9:11	1/16/2014 9:11	49	32	31.5	4	50.0	8.3		7.2	0.83	5767.41
	1/16/2014	10:20	1/16/2014 10:20	45	32	31.5	5.5	55.0	11.3		676.9	77.44	5844.85
	1/16/2014	11:22	1/16/2014 11:22	43	32	31	6.5	57.0	13.4		765.8	87.61	5932.46
	1/16/2014	13:09	1/16/2014 13:09	49	31	30.5	7.5	58.0	15.2		1530.7	175.11	6107.56
	1/16/2014	14:47	1/16/2014 14:47	49	31	30.5	8.2	58.0	16.7		1563.4	178.85	6286.41
	1/16/2014	15:50	1/16/2014 15:50	50	31	30	8.5	58.0	17.3		1069.0	122.30	6408.71
	1/16/2014	16:20	1/16/2014 16:20	54	31	30	8.8	58.0	17.9		527.4	60.33	6469.04
	1/16/2014	16:42	1/16/2014 16:42	56	31	30	8.8	58.0	17.9		393.4	45.01	6514.05
	1/16/2014	16:43	1/16/2014 16:43								17.9	2.05	6516.10
SW-31 Event 7	1/21/2014	12:36	1/21/2014 12:36	45	33	34	<2	71.0	0.0				6516.10
	1/21/2014	13:32	1/21/2014 13:32	51	31	33.5	<2	72.0	0.0		0.0	0.00	6516.10
	1/21/2014	14:42	1/21/2014 14:42	50	31	33.2	2	72.0	4.0		140.3	16.05	6532.15
	1/21/2014	14:43	1/21/2014 14:43	50	32	33.2	3	72.0	6.1		5.0	0.58	6532.72
	1/21/2014	15:49	1/21/2014 15:49	54	32	33.2	3.7	68.0	7.5		447.7	51.21	6583.94
	1/21/2014	16:50	1/21/2014 16:50	55	31	33.2	4.5	68.0	9.1		504.5	57.71	6641.65
	1/21/2014	16:51	1/21/2014 16:51			24							6641.65
SW-31 Event 8	1/23/2014	8:04	1/23/2014 8:04	55	27	28.8	<2	40.0	0.0				6641.65
	1/23/2014	8:06	1/23/2014 8:06	55	31	32.4	<2	40.0	0.0		0.0	0.00	6641.65
	1/23/2014	8:16	1/23/2014 8:16	52	30	32.2	<2	44.0	0.0		0.0	0.00	6641.65
	1/23/2014	8:53	1/23/2014 8:53	49	29	31.6	<2	50.0	0.0		0.0	0.00	6641.65
	1/23/2014	9:32	1/23/2014 9:32	46	29	31.4	<2	50.0	0.0		0.0	0.00	6641.65
	1/23/2014	9:34	1/23/2014 9:34	46	32	33.4	2	50.0	4.1		4.1	0.47	6642.13
	1/23/2014	10:07	1/23/2014 10:07	45	32	33.4	2.5	50.0	5.2		153.8	17.59	6659.72
	1/23/2014	11:13	1/23/2014 11:13	42	32	33.2	3.5	52.0	7.2		409.6	46.86	6706.58
	1/23/2014	12:02	1/23/2014 12:02	41	31	32.6	3.8	54.0	7.8		367.2	42.01	6748.59
	1/23/2014	12:54	1/23/2014 12:54	46	31	32.4	3.9	58.0	7.9		407.7	46.64	6795.23
	1/23/2014	14:17	1/23/2014 14:17	50	30	31.6	4	55.0	8.1		663.5	75.90	6871.13
	1/23/2014	15:55	1/23/2014 15:55	50	30	31.4	4.2	54.0	8.5		810.3	92.69	6963.83
	1/23/2014	16:35	1/23/2014 16:35	55	30	31.4	4.2	54.0	8.5		339.0	38.78	7002.60
	1/23/2014	16:37	1/23/2014 16:37								16.9	1.94	7004.54
	1/23/2014	16:40	1/23/2014 16:40			22							7004.54
SW-31 Event 9	1/28/2014	7:24	1/28/2014 7:24										7004.54
	1/28/2014	7:25	1/28/2014 7:25	56	34	34.4	<2	56	0.0		0.0	0.00	7004.54
	1/28/2014	7:29	1/28/2014 7:29	55	34	34.4	<2	56	0.0		0.0	0.00	7004.54
	1/28/2014	8:06	1/28/2014 8:06	54	33	33.6	<2	56	0.0		0.0	0.00	7004.54
	1/28/2014	8:28	1/28/2014 8:28	54	33	33.6	<2	56	0.0		0.0	0.00	7004.54
	1/28/2014	10:02	1/28/2014 10:02	54	32.5	33.2	3.5	56	7.2		340.5	38.95	7043.50
	1/28/2014	11:15	1/28/2014 11:15	51	32.5	33.2	4	54	8.3		567.3	64.90	7108.39
	1/28/2014	11:44	1/28/2014 11:44	50	32.5	33.2	4.5	53	9.3		255.8	29.26	7137.66
	1/28/2014	13:20	1/28/2014 13:20	48	32	33.2	4.5	51	9.3		895.4	102.44	7240.09
	1/28/2014	14:25	1/28/2014 14:25	48	31	32.4	4.5	51	9.2		601.9	68.86	7308.96
	1/28/2014	15:45	1/28/2014 15:45	48	31	32.4	4	50	8.2		696.2	79.64	7388.60
	1/28/2014	16:40	1/28/2014 16:40	51	31	32.4	4	50	8.2		450.7	51.56	7440.16
	1/28/2014	16:42	1/28/2014 16:42			22.4					16.4	1.87	7442.04
SW-31 Event 10	1/29/2014	8:00	1/29/2014 8:00	51	32	34.8	<2	40	0.0				7442.04

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/29/2014	8:10	1/29/2014 8:10	51	32	34.8	<2	40	0.0		0.0	0.00	7442.04
	1/29/2014	9:30	1/29/2014 9:30	48	32	34.8	<2	40	0.0		0.0	0.00	7442.04
	1/29/2014	10:30	1/29/2014 10:30	49	32	34	2.5	40	5.2		157.0	17.96	7459.99
	1/29/2014	11:40	1/29/2014 11:40	49	32	34	2.5	40	5.2		366.2	41.90	7501.89
	1/29/2014	13:00	1/29/2014 13:00	48.5	32	34	4	40	8.4		544.1	62.25	7564.14
	1/29/2014	14:00	1/29/2014 14:00	46	32	34	4	40	8.4		502.3	57.46	7621.60
	1/29/2014	15:00	1/29/2014 15:00	45	32	34	4	40	8.4		502.3	57.46	7679.06
	1/29/2014	16:30	1/29/2014 16:30	50	32	34	4.5	40	9.4		800.5	91.58	7770.64
	1/29/2014	16:31	1/29/2014 16:31			26							7770.64
SW-31 Event 11	1/30/2014	7:40	1/30/2014 7:40	55	34	35	<2	38	0.0				7770.64
	1/30/2014	8:30	1/30/2014 8:30	50	34	34	2	38	4.3		107.1	12.26	7782.90
	1/30/2014	8:50	1/30/2014 8:50	50	32.5	34	2.5	38	5.3		95.6	10.93	7793.83
	1/30/2014	9:30	1/30/2014 9:30	50	32.5	34	2.5	40	5.3		210.6	24.10	7817.93
	1/30/2014	10:50	1/30/2014 10:50	50	32	34	3	42	6.3		461.0	52.74	7870.67
	1/30/2014	12:00	1/30/2014 12:00	50	32	34	3.5	44	7.3		474.6	54.29	7924.97
	1/30/2014	13:30	1/30/2014 13:30	50	32	34	4.2	44	8.8		722.2	82.62	8007.58
	1/30/2014	13:31	1/30/2014 13:31			23					8.8	1.00	8008.58
SW-31 Event 12	2/3/2014	8:36	2/3/2014 8:36	55	32	34	<2	68	0.0		0.0	0.00	8008.58
	2/3/2014	8:42	2/3/2014 8:42	54	32	34	<2	68	0.0		0.0	0.00	8008.58
	2/3/2014	8:52	2/3/2014 8:52	53	32	33.4	<2	68	0.0		0.0	0.00	8008.58
	2/3/2014	9:14	2/3/2014 9:14	53	32	33	<2	70	0.0		0.0	0.00	8008.58
	2/3/2014	10:17	2/3/2014 10:17	52	32	32.6	3	74	6.1		191.1	21.87	8030.45
	2/3/2014	11:56	2/3/2014 11:56	51	32	32	3.9	77	7.9		689.7	78.90	8109.35
	2/3/2014	12:02	2/3/2014 12:02	50	33	32.6	4.5	77	9.2		51.1	5.85	8115.19
	2/3/2014	13:20	2/3/2014 13:20	50	33	32.6	5.2	74	10.6		772.3	88.36	8203.55
	2/3/2014	14:20	2/3/2014 14:20	50	33	32.6	5.8	73	11.9		675.0	77.22	8280.77
	2/3/2014	15:30	2/3/2014 15:30	50	33	32.6	6	70	12.3		846.4	96.83	8377.60
	2/3/2014	16:57	2/3/2014 16:57	50	33	32.6	6.5	70	13.3		1116.0	127.67	8505.27
	2/4/2014	9:32	2/4/2014 9:32		32	31	13.2	70	26.8		19970.6	2284.63	10789.90
	2/4/2014	9:33	2/4/2014 9:33			22					26.8	3.07	10792.97
SW-31 Event 13	2/5/2014	8:04	2/5/2014 8:04	55	25	24		63	0.0				10792.97
	2/5/2014	8:06	2/5/2014 8:06	55	32.5	31	<2	63	0.0		0.0	0.00	10792.97
	2/5/2014	8:15	2/5/2014 8:15	54	32.5	31	<2	64	0.0		0.0	0.00	10792.97
	2/5/2014	8:16	2/5/2014 8:16	54	35	32	<2	64	0.0		0.0	0.00	10792.97
	2/5/2014	8:38	2/5/2014 8:38	48	35	32	3.7	64	7.8		85.8	9.82	10802.78
	2/5/2014	9:22	2/5/2014 9:22	45	35	32	4.5	66	9.5		379.9	43.46	10846.24
	2/5/2014	10:21	2/5/2014 10:21	44	35	32	5	68	10.5		589.0	67.38	10913.62
	2/5/2014	11:23	2/5/2014 11:23	44	35	32	5.5	70	11.5		682.8	78.11	10991.73
	2/5/2014	12:35	2/5/2014 12:35	44	35	32	5.8	72	12.1		851.6	97.43	11089.16
	2/5/2014	13:29	2/5/2014 13:29	43	35	32	5.9	76	12.3		659.4	75.44	11164.60
	2/5/2014	14:43	2/5/2014 14:43	45	35	32	5.9	76	12.3		909.6	104.06	11268.66
	2/5/2014	15:36	2/5/2014 15:36	45	35	31.5	6	71	12.6		658.6	75.35	11344.00
	2/5/2014	17:09	2/5/2014 17:09		35	31.5	6	66.5	12.6		1170.8	133.94	11477.94
	2/5/2014	21:20	2/5/2014 21:20	48	35	31.5	7	62	14.8		3439.1	393.43	11871.38
	2/6/2014	7:56	2/6/2014 7:56	48	33	28.3	11.3	56	23.5		12180.2	1393.42	13264.79
	2/6/2014	7:59	2/6/2014 7:59			20					70.5	8.07	13272.87
SW-31 Event 14	2/7/2014	8:12	2/7/2014 8:12	53	32	32	<2	52	0.0				13272.87
	2/7/2014	8:16	2/7/2014 8:16	53	32	32	<2	54	0.0		0.0	0.00	13272.87
	2/7/2014	8:47	2/7/2014 8:47	46	29	29	3	56	6.0		92.6	10.59	13283.45
	2/7/2014	8:49	2/7/2014 8:49	46	32	31.5	5	56	10.3		16.3	1.86	13285.31
	2/7/2014	9:37	2/7/2014 9:37	43	32	31.5	6.1	56	12.6		548.5	62.74	13348.06

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/7/2014	11:27	2/7/2014 11:27	42	31.5	30.5	7	60	14.3		1475.9	168.84	13516.90
	2/7/2014	11:29	2/7/2014 11:29	42	33	31.5	9.2	60	19.1		33.3	3.81	13520.72
	2/7/2014	13:05	2/7/2014 13:05	42	33	31.5	9.2	60	19.1		1830.7	209.43	13730.15
	2/7/2014	14:21	2/7/2014 14:21	45	33	31.5	9.6	60	19.9		1480.8	169.40	13899.55
	2/7/2014	15:37	2/7/2014 15:37	46	33	31	10	60	20.7		1543.8	176.61	14076.16
	2/7/2014	16:36	2/7/2014 16:36	46	33	30.5	10.1	58	21.0		1230.3	140.74	14216.90
	2/7/2014	17:27	2/7/2014 17:27	46	33	30.5	10.3	57	21.4		1081.0	123.66	14340.57
	2/7/2014	17:28	2/7/2014 17:28								21.4	2.45	14343.02
SW-31 Event 15	2/11/2014	7:54	2/11/2014 7:54	57	31	32.5	<2	55	0.0				14343.02
	2/11/2014	7:55	2/11/2014 7:55	55	32	33.2	<2	55	0.0		0.0	0.00	14343.02
	2/11/2014	9:16	2/11/2014 9:16	54	30.5	32.5	3.8	60	7.7		310.4	35.51	14378.52
	2/11/2014	9:18	2/11/2014 9:18	54	32	33.5	4.7	60	9.6		17.3	1.98	14380.50
	2/11/2014	10:29	2/11/2014 10:29	53	32	33.5	5.7	66	11.6		754.6	86.33	14466.83
	2/11/2014	11:49	2/11/2014 11:49	53	32	33.5	6	66	12.2		954.0	109.13	14575.97
	2/11/2014	12:44	2/11/2014 12:44	47	32	33.5	6.2	66	12.6		683.9	78.24	14654.20
	2/11/2014	14:00	2/11/2014 14:00	47	31.8	33.5	6.5	63	13.3		984.1	112.58	14766.79
	2/11/2014	16:48	2/11/2014 16:48	47	31.8	33.5	7.2	56	14.8		2356.3	269.56	15036.35
	2/11/2014	17:25	2/11/2014 17:25	53	31.5	33.5	7.2	54	14.8		546.9	62.57	15098.92
	2/11/2014	17:26	2/11/2014 17:26			26					14.8	1.69	15100.61
SW-31 Event 16	1/8/2015	8:22	1/8/2015 8:22		29	29	0	40	0.0				15100.61
	1/8/2015	8:34	1/8/2015 8:34		33	32	4	40	8.5		50.8	5.81	15106.41
	1/8/2015	10:00	1/8/2015 10:00		33	32	7	48	14.7		995.4	113.87	15220.29
	1/8/2015	10:23	1/8/2015 10:23		33	32	8	48	16.8		361.9	41.40	15261.69
	1/8/2015	11:41	1/8/2015 11:41		33	31.5	8	46	16.8		1310.6	149.93	15411.62
	1/8/2015	11:42	1/8/2015 11:42		36	34	11	46	23.9		20.3	2.33	15413.95
	1/8/2015	13:06	1/8/2015 13:06		36	34	12	46	26.0		2095.0	239.67	15653.62
	1/8/2015	15:12	1/8/2015 15:12		36	33.5	12	45	26.1		3280.9	375.33	16028.96
	1/8/2015	17:01	1/8/2015 17:01		36	33	14	46	30.4		3074.6	351.74	16380.69
	1/8/2015	17:02	1/8/2015 17:02			23					30.4	3.47	16384.17
Total CO ₂ Mass (lbs):													16384.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-32 Event 1	11/11/2013	12:45	11/11/2013 12:45		30	28	0	72	0.0				
	11/11/2013	12:46	11/11/2013 12:46		23	21	0	72	0.0		0.0	0.00	0.00
	11/11/2013	12:47	11/11/2013 12:47		28	26	<2	72	0.0		0.0	0.00	0.00
	11/11/2013	12:48	11/11/2013 12:48		31	29	<2	72	0.0		0.0	0.00	0.00
	11/11/2013	12:49	11/11/2013 12:49		32	30	<2	72	0.0		0.0	0.00	0.00
	11/11/2013	12:59	11/11/2013 12:59		28	26	<2	72	0.0		0.0	0.00	0.00
	11/11/2013	13:00	11/11/2013 13:00		31	29	5.5	72	11.0		5.5	0.63	0.63
	11/11/2013	13:22	11/11/2013 13:22	33	30	28	8	72	15.9		295.7	33.83	34.46
	11/11/2013	13:35	11/11/2013 13:35	32	30	28	8	72	15.9		206.1	23.58	58.04
	11/11/2013	13:50	11/11/2013 13:50	32	29	27	8.5	72	16.7		243.8	27.89	85.93
	11/11/2013	14:07	11/11/2013 14:07	32	29	27	9	72	17.6		291.5	33.34	119.27
	11/11/2013	14:44	11/11/2013 14:44	32	29	27	9.5	72	18.6		670.6	76.72	195.99
	11/11/2013	14:54	11/11/2013 14:54	36	31	29	11	75.5	17.8		182.1	20.83	216.82
	11/11/2013	14:58	11/11/2013 14:58	40	33	31	12.5	73	20.7		77.1	8.82	225.64
	11/11/2013	15:03	11/11/2013 15:03	40	33	31	12.75	73	21.1		104.7	11.98	237.62
	11/11/2013	15:09	11/11/2013 15:09	42	35	33	14	70.5	23.8		134.8	15.42	253.04
	11/11/2013	15:13	11/11/2013 15:13						0.0		47.5	5.44	258.47
	11/11/2013	15:16	11/11/2013 15:16	42	35	33	14.5	66.2	24.7		37.1	4.24	262.72
	11/11/2013	15:19	11/11/2013 15:19	40	33	31	14	68.1	23.3		72.1	8.25	270.96
	11/11/2013	15:23	11/11/2013 15:23	38	32	30	13.5	69.9	22.2		91.1	10.42	281.39
	11/11/2013	15:26	11/11/2013 15:26	36	30	28	12.5	69.5	20.1		63.5	7.27	288.65
	11/11/2013	15:43	11/11/2013 15:43	36	30	28	12.5	62.6	20.3		343.4	39.28	327.94
	11/11/2013	16:15	11/11/2013 16:15	36	30	28	12.5	56.3	20.4		650.6	74.43	402.37
	11/11/2013	16:24	11/11/2013 16:24	34	29	27	12	56.3	19.4		178.9	20.46	422.83
	11/11/2013	16:26	11/11/2013 16:26	32	28	26	11	56.3	17.5		36.9	4.22	427.05
	11/11/2013	16:34	11/11/2013 16:34	30	26	24	10.5	56.2	16.3		135.5	15.50	442.55
	11/11/2013	16:43	11/11/2013 16:43	28	25	23	9	54.8	13.8		135.8	15.54	458.09
	11/11/2013	17:06	11/11/2013 17:06	28	22	20	9	45.6	13.4		313.7	35.89	493.98
	11/11/2013	17:08	11/11/2013 17:08	30	24	22	10.5	48	16.1		29.5	3.37	497.35
	11/11/2013	17:11	11/11/2013 17:11	32	26	24	11.5	48	18.0		51.2	5.85	503.20
	11/11/2013	17:15	11/11/2013 17:15	34	27	25	12.5	48	19.9		75.8	8.67	511.87
	11/11/2013	17:17	11/11/2013 17:17	36	28	26	13.5	50.3	21.7		41.5	4.75	516.62
	11/11/2013	17:20	11/11/2013 17:20	40	31	29	15	48	25.0		69.9	8.00	524.62
	11/11/2013	17:24	11/11/2013 17:24	42	32	30	15.5	42.5	26.2		102.4	11.71	536.33
	11/11/2013	17:25	11/11/2013 17:25	38	30	28	14	44.5	23.1		24.7	2.82	539.16
	11/11/2013	17:39	11/11/2013 17:39								323.7	37.03	576.18
	11/11/2013	17:40	11/11/2013 17:40		18								576.18
SW-32 Event 2	12/6/2013	8:20	12/6/2013 8:20	52	25	27	<2	71	0.0				576.18
	12/6/2013	8:22	12/6/2013 8:22	52	32	31	<2	71	0.0				576.18
	12/6/2013	8:48	12/6/2013 8:48	50	30	30.5	8	76	15.8		205.3	23.49	599.67
	12/6/2013	8:51	12/6/2013 8:51	50	30	30.5	10	76	19.7		53.3	6.10	605.77
	12/6/2013	9:00	12/6/2013 9:00	45	29	30.5	10	76	19.5		176.7	20.21	625.98
	12/6/2013	9:01	12/6/2013 9:01	45	32	33	12	76	24.2		21.9	2.50	628.48
	12/6/2013	10:13	12/6/2013 10:13	50	32	32	15	79	30.2		1958.9	224.10	852.59
	12/6/2013	10:56	12/6/2013 10:56	50	31	31.5	15	82	29.8		1289.3	147.50	1000.09
	12/6/2013	10:58	12/6/2013 10:58	50	32	33	16.25	82	32.6		62.4	7.14	1007.22
	12/6/2013	12:40	12/6/2013 12:40	45	32	33	18	84	36.1		3502.3	400.66	1407.88
	12/6/2013	12:42	12/6/2013 12:42	45	32	33	19	84	38.1		74.1	8.48	1416.36
	12/6/2013	12:43	12/6/2013 12:43			19.5							1416.36
SW-32 Event 3	12/12/2013	8:40	12/12/2013 8:40	55	35	33	<2	58	0.0				1416.36
	12/12/2013	9:38	12/12/2013 9:38	50	35	31	8	64	16.9		489.1	55.95	1472.31

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/12/2013	9:39	12/12/2013 9:39	50	30	32.5	10	64	20.0		18.4	2.11	1474.42
	12/12/2013	10:27	12/12/2013 10:27	50	30	32	12	67	23.9		1053.0	120.46	1594.88
	12/12/2013	11:15	12/12/2013 11:15	45	30	31.5	13.5	68	26.9		1218.3	139.37	1734.25
	12/12/2013	11:16	12/12/2013 11:16	43	31	32.5	15	68	30.2		28.5	3.26	1737.51
	12/12/2013	12:32	12/12/2013 12:32	45	31	32	16	70	32.1		2367.9	270.89	2008.41
	12/12/2013	12:40	12/12/2013 12:40								257.1	29.41	2037.81
	12/12/2013	12:41	12/12/2013 12:41			19.5							2037.81
SW-32 Event 4	12/18/2013	8:09	12/18/2013 8:09	45	31	30	<2	54	0.0		0.0	0.00	2037.81
	12/18/2013	8:12	12/18/2013 8:12	45	33	32	<2	54	0.0		0.0	0.00	2037.81
	12/18/2013	9:21	12/18/2013 9:21	48	32	31	6.5	60	13.3		459.8	52.61	2090.42
	12/18/2013	9:22	12/18/2013 9:22	48	35	33.5	9	60	19.0		16.2	1.85	2092.27
	12/18/2013	10:21	12/18/2013 10:21	50	35	33	11	63	23.2		1246.7	142.62	2234.89
	12/18/2013	11:34	12/18/2013 11:34	50	35	33	11.5	66	24.2		1730.4	197.95	2432.84
	12/18/2013	12:09	12/18/2013 12:09	50	35	33	11.5	68	24.1		846.0	96.78	2529.63
	12/18/2013	13:01	12/18/2013 13:01	55	34	32	12	68	24.9		1276.2	146.00	2675.62
	12/18/2013	14:18	12/18/2013 14:18	47	34	32.5	13	68	27.0		2000.3	228.83	2904.45
	12/18/2013	15:53	12/18/2013 15:53	40	34	32.5	13	65	27.1		2570.4	294.05	3198.50
	12/18/2013	16:18	12/18/2013 16:18	40	34	33	13	65	27.1		677.4	77.50	3276.00
	12/18/2013	16:19	12/18/2013 16:19								27.1	3.10	3279.10
	12/18/2013	16:20	12/18/2013 16:20			18							3279.10
SW-32 Event 5	12/19/2013	12:44	12/19/2013 12:44	50	27	26	<2	74	0.0				3279.10
	12/19/2013	12:45	12/19/2013 12:45	50	35	34	<2	74	0.0				3279.10
	12/19/2013	12:47	12/19/2013 12:47	50	32	32	<2	74	0.0		0	0.00	3279.10
	12/19/2013	13:49	12/19/2013 13:49	50	31	30	9	74	18.0		558.1	63.85	3342.95
	12/19/2013	13:58	12/19/2013 13:58	45	33.5	32	13	74	26.7		201.2	23.02	3365.97
	12/19/2013	15:05	12/19/2013 15:05	43	33.5	31	14.2	75	29.2		1871.8	214.13	3580.10
	12/19/2013	15:07	12/19/2013 15:07	41	34.5	32	16.8	75	34.9		64.0	7.32	3587.43
	12/19/2013	16:20	12/19/2013 16:20	42	34	32	17.5	72	36.2		2594.5	296.81	3884.23
	12/19/2013	16:48	12/19/2013 16:48	45	34	32	17.5	70	36.3		1015.3	116.15	4000.39
	12/19/2013	16:50	12/19/2013 16:50								72.6	8.30	4008.69
SW-32 Event 6	1/7/2014	13:35	1/7/2014 13:35					48					4008.69
	1/7/2014	13:36	1/7/2014 13:36	51	31	33.5	<2	48	0.0				4008.69
	1/7/2014	15:32	1/7/2014 15:32	50	28.5	30	6	48	12.0		694.3	79.42	4088.12
	1/7/2014	15:33	1/7/2014 15:33	50	30.5	32	8	48	16.3		14.2	1.62	4089.73
	1/7/2014	16:35	1/7/2014 16:35	47	30.5	32	9.5	44	19.5		1110.0	126.98	4216.71
	1/7/2014	17:30	1/7/2014 17:30	56	30	31	10	40	20.5		1098.4	125.65	4342.37
	1/7/2014	17:31	1/7/2014 17:31								20.5	2.34	4344.71
	1/7/2014	17:32	1/7/2014 17:32			22							4344.71
SW-32 Event 7	1/11/2014	8:08	1/11/2014 8:08	46	30	31	<2	65	0.0				4344.71
	1/11/2014	8:09	1/11/2014 8:09	46	31	32	<2	65	0.0				4344.71
	1/11/2014	8:32	1/11/2014 8:32	44	30	32	3.8	66	7.6		87.1	9.97	4354.67
	1/11/2014	9:02	1/11/2014 9:02	42	30	31.5	5.2	67	10.4		269.0	30.77	4385.45
	1/11/2014	9:04	1/11/2014 9:04	42	31	32	6	67	12.1		22.4	2.57	4388.01
	1/11/2014	10:36	1/11/2014 10:36	38	31	31.5	9	72	18.0		1385.7	158.52	4546.54
	1/11/2014	11:38	1/11/2014 11:38	38	31	31.5	9.8	74	19.6		1166.9	133.50	4680.03
	1/11/2014	12:10	1/11/2014 12:10	42	30.5	30.5	10.5	76	20.8		647.2	74.04	4754.08
	1/11/2014	12:12	1/11/2014 12:12								41.7	4.77	4758.85
	1/11/2014	12:13	1/11/2014 12:13			21							4758.85
SW-32 Event 8	1/13/2014	7:32	1/13/2014 7:32	60	33	33	<2	47	0.0		0.0	0.00	4758.85
	1/13/2014	7:38	1/13/2014 7:38	60	28	29	<2	47	0.0		0.0	0.00	4758.85
	1/13/2014	7:39	1/13/2014 7:39	60	33	33	<2	47	0.0		0.0	0.00	4758.85

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/13/2014	7:44	1/13/2014 7:44	58	33	33	<2	48	0.0		0.0	0.00	4758.85
	1/13/2014	8:31	1/13/2014 8:31	47	31	31.5	9	51	18.4		432.9	49.52	4808.37
	1/13/2014	8:33	1/13/2014 8:33	47	32	32	10.2	51	21.1		39.5	4.52	4812.89
	1/13/2014	9:37	1/13/2014 9:37	45	32	31.5	12	59	24.6		1463.6	167.44	4980.33
	1/13/2014	9:38	1/13/2014 9:38	45	32.5	32.2	13.8	59	28.5		26.6	3.04	4983.36
	1/13/2014	10:54	1/13/2014 10:54	45	32.5	31.5	15	70	30.6		2245.8	256.92	5240.29
	1/13/2014	10:55	1/13/2014 10:55	45	33	32	16.2	70	33.2		31.9	3.65	5243.94
	1/13/2014	11:57	1/13/2014 11:57	44	33	32	17	70	34.9		2112.3	241.65	5485.59
	1/13/2014	12:56	1/13/2014 12:56	45	33.5	33	17.5	72	36.0		2092.3	239.36	5724.95
	1/13/2014	14:22	1/13/2014 14:22	40	34	33	15	71	31.1		2886.1	330.17	6055.12
	1/13/2014	15:42	1/13/2014 15:42	39	33	32.5	14.5	70	29.8		2433.6	278.41	6333.53
	1/13/2014	16:25	1/13/2014 16:25	40	33	32.5	14.5	70	29.8		1279.7	146.39	6479.92
	1/13/2014	16:47	1/13/2014 16:47	39	33	33	14.5	68	29.8		655.3	74.97	6554.89
	1/13/2014	16:49	1/13/2014 16:49								59.6	6.82	6561.71
	1/13/2014	16:51	1/13/2014 16:51			21							6561.71
SW-32 Event 9	1/15/2014	7:58	1/15/2014 7:58	55	30	33	<2	46	0.0		0.0	0.00	6561.71
	1/15/2014	8:39	1/15/2014 8:39	52	27	28.5	<2	55	0.0		0.0	0.00	6561.71
	1/15/2014	8:41	1/15/2014 8:41	52	32	32	5	55	10.3		10.3	1.18	6562.89
	1/15/2014	9:48	1/15/2014 9:48	44	31	31.5	7.8	64	15.8		873.1	99.88	6662.77
	1/15/2014	9:49	1/15/2014 9:49	44	32.5	32.5	9	64	18.5		17.1	1.96	6664.73
	1/15/2014	10:56	1/15/2014 10:56	40	32.5	32	10	69	20.4		1303.7	149.14	6813.87
	1/15/2014	12:00	1/15/2014 12:00	41	32.5	32	11	69	22.5		1373.2	157.09	6970.96
	1/15/2014	13:43	1/15/2014 13:43	49	32	31.5	11.2	67	22.8		2332.2	266.80	7237.76
	1/15/2014	15:25	1/15/2014 15:25	48	31.5	31	12.5	70	25.2		2450.5	280.34	7518.10
	1/15/2014	16:22	1/15/2014 16:22	46	31	31	13	68	26.2		1464.9	167.58	7685.69
	1/15/2014	16:23	1/15/2014 16:23			21					26.2	2.99	7688.68
SW-32 Event 10	1/17/2014	7:08	1/17/2014 7:08	57	30	31	<2	40	0.0				7688.68
	1/17/2014	7:09	1/17/2014 7:09	57	32	33	<2	40	0.0				7688.68
	1/17/2014	7:59	1/17/2014 7:59	51	31	32.5	2	44	4.1		103.1	11.79	7700.47
	1/17/2014	8:46	1/17/2014 8:46	50	31	32	3.5	54	7.1		264.7	30.28	7730.75
	1/17/2014	10:22	1/17/2014 10:22	45	31	32	4.2	60	8.5		751.7	85.99	7816.74
	1/17/2014	11:27	1/17/2014 11:27	46	30	32	5	69	9.9		599.9	68.62	7885.37
	1/17/2014	12:33	1/17/2014 12:33	46	30	32	5.5	72	10.9		687.7	78.67	7964.04
	1/17/2014	13:07	1/17/2014 13:07	45	30	32	5.7	72	11.3		377.4	43.17	8007.21
	1/17/2014	14:22	1/17/2014 14:22	44	30	32	5.8	70	11.5		855.6	97.88	8105.09
	1/17/2014	15:51	1/17/2014 15:51	55	30	31	6	70	11.9		1042.8	119.29	8224.38
	1/17/2014	15:52	1/17/2014 15:52								11.9	1.36	8225.74
	1/17/2014	15:53	1/17/2014 15:53			23							8225.74
SW-32 Event 11	1/30/2014	7:30	1/30/2014 7:30	50	30	32	<2	46	0.0				8225.74
	1/30/2014	8:30	1/30/2014 8:30	50	28	32	2	40	4.0		120.0	13.73	8239.46
	1/30/2014	9:30	1/30/2014 9:30	50	28	31	2	40	4.0		240.0	27.45	8266.92
	1/30/2014	10:50	1/30/2014 10:50	50	28	31	2	42	4.0		319.6	36.56	8303.48
	1/30/2014	12:00	1/30/2014 12:00	50	29	31	2	42	4.0		281.0	32.15	8335.63
	1/30/2014	13:32	1/30/2014 13:32	50	29	30	2.5	44	5.0		417.5	47.76	8383.39
	1/30/2014	13:35	1/30/2014 13:35			21					15.1	1.73	8385.12
SW-32 Event 12	2/3/2014	8:10	2/3/2014 8:10	55	33	33	<2	68	0.0		0.0	0.00	8385.12
	2/3/2014	8:16	2/3/2014 8:16	55	33	32	<2	68	0.0		0.0	0.00	8385.12
	2/3/2014	8:31	2/3/2014 8:31	55	32	32	<2	70	0.0		0.0	0.00	8385.12
	2/3/2014	8:59	2/3/2014 8:59	54	31	32	<2	75	0.0		0.0	0.00	8385.12
	2/3/2014	10:10	2/3/2014 10:10	54	31	32	<2	82	0.0		0.0	0.00	8385.12
	2/3/2014	10:14	2/3/2014 10:14	54	33.5	33	<2	82	0.0		0.0	0.00	8385.12

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/3/2014	11:50	2/3/2014 11:50	53	33.5	33	<2	86	0.0		0.0	0.00	8385.12
	2/3/2014	11:54	2/3/2014 11:54	54	34.5	34	<2	86	0.0		0.0	0.00	8385.12
	2/3/2014	13:18	2/3/2014 13:18	52	34.5	33.5	2	85	4.1		172.6	19.75	8404.86
	2/3/2014	14:28	2/3/2014 14:28	51	34.5	33.2	2.5	84	5.1		323.8	37.05	8441.91
	2/3/2014	15:23	2/3/2014 15:23	51	34.5	33.2	3	82	6.2		311.4	35.63	8477.54
	2/3/2014	16:49	2/3/2014 16:49	50	34.5	33	3.8	82	7.8		602.6	68.94	8546.47
	2/4/2014	9:20	2/4/2014 9:20	48	33.5	32.5	6.3	62	13.1		10372.2	1186.58	9733.05
	2/4/2014	9:22	2/4/2014 9:22			24					26.2	3.00	9736.05
SW-32 Event 13	2/5/2014	8:19	2/5/2014 8:19	53	27	25.5	3.5	65	6.7				9736.05
	2/5/2014	8:21	2/5/2014 8:21		33	33	6.3	66	13.0		19.7	2.26	9738.30
	2/5/2014	9:06	2/5/2014 9:06	47	33	33	5.9	68	12.1		565.1	64.64	9802.94
	2/5/2014	10:17	2/5/2014 10:17	45	33	33	5.9	70	12.1		860.6	98.45	9901.39
	2/5/2014	11:18	2/5/2014 11:18	45	33	33	6	72	12.3		744.2	85.13	9986.53
	2/5/2014	12:30	2/5/2014 12:30	45	33	33	6.2	78	12.6		897.0	102.62	10089.14
	2/5/2014	13:25	2/5/2014 13:25	45	33	33	6.5	80	13.2		710.5	81.29	10170.43
	2/5/2014	14:39	2/5/2014 14:39	46	33	32.5	6.5	80	13.2		977.7	111.85	10282.28
	2/5/2014	15:32	2/5/2014 15:32	46	33		6.8	77	13.9		717.4	82.08	10364.35
	2/5/2014	17:05	2/5/2014 17:05	49	33	32	7	79	14.2		1306.8	149.50	10513.85
	2/5/2014	20:12	2/5/2014 20:12		33	32	7.3	64	15.1		2740.8	313.54	10827.39
	2/6/2014	7:35	2/6/2014 7:35	45	32.5	32	9.6	47	20.1		11995.5	1372.28	12199.67
	2/6/2014	7:44	2/6/2014 7:44			24					180.5	20.65	12220.32
SW-32 Event 14	2/7/2014	7:38	2/7/2014 7:38	53	28.5	27	<2		0.0				12220.32
	2/7/2014	7:39	2/7/2014 7:39	53	33	31	8.1	49	17.0		8.5	0.97	12221.29
	2/7/2014	7:42	2/7/2014 7:42	53	33	31	8.1	49	17.0		50.9	5.83	12227.12
	2/7/2014	8:57	2/7/2014 8:57	46	33	31	8	58	16.6		1259.7	144.11	12371.23
	2/7/2014	9:42	2/7/2014 9:42	44	33	31	7.9	54	16.5		744.5	85.17	12456.40
	2/7/2014	11:48	2/7/2014 11:48	44	33	31	8.2	61	17.0		2107.6	241.11	12697.51
	2/7/2014	13:31	2/7/2014 13:31	45	33	31	8.5	64	17.5		1778.2	203.43	12900.94
	2/7/2014	14:41	2/7/2014 14:41	48	32.5	31	8.5	62	17.5		1226.3	140.29	13041.23
	2/7/2014	15:52	2/7/2014 15:52	48	32.5	31	8.5	60	17.5		1243.0	142.20	13183.43
	2/7/2014	16:32	2/7/2014 16:32	48	32.5	31	9	59	18.6		722.0	82.59	13266.02
	2/7/2014	17:22	2/7/2014 17:22	48	32.5	31	9	58	18.6		929.2	106.30	13372.32
	2/7/2014	17:23	2/7/2014 17:23								18.6	2.13	13374.45
SW-32 Event 15	2/11/2014	7:40	2/11/2014 7:40	56	32.5	32.2	<2	55	0.0				13374.45
	2/11/2014	8:48	2/11/2014 8:48	47	25	25	<2	56	0.0		0.0	0.00	13374.45
	2/11/2014	8:49	2/11/2014 8:49	47	32.5	32.2	<2	56	0.0		0.0	0.00	13374.45
	2/11/2014	9:31	2/11/2014 9:31	51	32	32	<2	61	0.0		0.0	0.00	13374.45
	2/11/2014	9:32	2/11/2014 9:32	51	33	33.2	<2	61	0.0		0.0	0.00	13374.45
	2/11/2014	9:51	2/11/2014 9:51	50	33.2	33.2	<2	63	0.0		0.0	0.00	13374.45
	2/11/2014	10:21	2/11/2014 10:21	53	33.2	33.2	<2	66	0.0		0.0	0.00	13374.45
	2/11/2014	11:43	2/11/2014 11:43	53	34.5	33.2	<2	66	0.0		0.0	0.00	13374.45
	2/11/2014	11:44	2/11/2014 11:44	53	34.5	34	<2	66	0.0		0.0	0.00	13374.45
	2/11/2014	12:38	2/11/2014 12:38	46	34.5	34	2	66	4.2		113.0	12.93	13387.38
	2/11/2014	13:57	2/11/2014 13:57	46	34.5	34	2	64	4.2		331.0	37.87	13425.25
	2/11/2014	16:37	2/11/2014 16:37	46	34.5	34	3.5	56	7.4		927.5	106.11	13531.36
	2/11/2014	17:35	2/11/2014 17:35	57	34.5	34	3.6	54	7.6		435.7	49.85	13581.21
	2/11/2014	17:36	2/11/2014 17:36			26					7.6	0.87	13582.08
SW-32 Event 16	2/12/2014	8:07	2/12/2014 8:07	55	33	32	<2	49	0.0				13582.08
	2/12/2014	8:42	2/12/2014 8:42	47	27	27	<2	49	0.0		0.0	0.00	13582.08
	2/12/2014	8:43	2/12/2014 8:43	47	32.5	32	6	49	12.5		6.3	0.72	13582.80
	2/12/2014	10:20	2/12/2014 10:20	47	32	30.5	10.2	51	21.1		1630.3	186.51	13769.30

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/12/2014	11:49	2/12/2014 11:49	45	31.5	29	12.8	50	26.4		2112.7	241.69	14010.99
	2/12/2014	13:54	2/12/2014 13:54	50	30.5	28	14	49	28.6		3432.5	392.68	14403.67
	2/12/2014	13:55	2/12/2014 13:55	50	32.5	28.5	17	49	35.4		32.0	3.66	14407.33
	2/12/2014	14:40	2/12/2014 14:40	50	32.5	28.5	17	49	35.4		1594.8	182.45	14589.78
	2/12/2014	15:50	2/12/2014 15:50	50	32.5	28	17.5	47	36.6		2520.0	288.28	14878.06
	2/12/2014	16:50	2/12/2014 16:50	50	32.5	28	17.9	47	37.4		2218.6	253.80	15131.86
	2/12/2014	17:50	2/12/2014 17:50	50	32.5	28	18.1	48	37.8		2255.0	257.97	15389.84
	2/13/2014	7:08	2/13/2014 7:08	49	32	27	19.8	45	41.2		31519.7	3605.86	18995.69
	2/13/2014	7:56	2/13/2014 7:56	50	32	27	19.4	44	40.4		1959.8	224.20	19219.89
	2/13/2014	9:02	2/13/2014 9:02	50	32	27	19.4	45	40.4		2667.2	305.13	19525.02
	2/13/2014	9:50	2/13/2014 9:50	50	32	27	19.6	45	40.8		1948.8	222.94	19747.96
	2/13/2014	10:30	2/13/2014 10:30	50	32	27	19.7	46	41.0		1635.6	187.12	19935.07
	2/13/2014	11:00	2/13/2014 11:00	50	32	27	19.7	46	41.0		1229.2	140.62	20075.69
	2/13/2014	11:30	2/13/2014 11:30	50	32	27	19.7	47	40.9		1228.6	140.55	20216.24
	2/13/2014	12:00	2/13/2014 12:00	50	32	27	19.7	50	40.8		1226.1	140.26	20356.51
	2/13/2014	12:30	2/13/2014 12:30	50	32	27	19.7	53	40.7		1222.3	139.83	20496.34
	2/13/2014	13:00	2/13/2014 13:00	50	32	26.5	19.2	55	39.6		1203.8	137.71	20634.05
	2/13/2014	14:01	2/13/2014 14:01	50	32	26.5	19.2	56	39.5		2412.5	275.99	20910.04
	2/13/2014	15:00	2/13/2014 15:00	50	32	26.5	19.2	58	39.4		2329.9	266.54	21176.58
	2/13/2014	15:18	2/13/2014 15:18			20					710.1	81.24	21257.81
SW-32 Event 10	12/10/2014	7:59	12/10/2014 7:59		22	22	0	46	0.0				21257.81
	12/10/2014	8:14	12/10/2014 8:14		30	30	0	48	0.0		0.0	0.00	21257.81
	12/10/2014	9:29	12/10/2014 9:29		30	30	0	62	0.0		0.0	0.00	21257.81
	12/10/2014	11:14	12/10/2014 11:14		30	29	0	70	0.0		0.0	0.00	21257.81
	12/10/2014	11:15	12/10/2014 11:15		35	33.5	5	70	10.5		5.2	0.60	21258.41
	12/10/2014	12:28	12/10/2014 12:28		35	33.5	5	70	10.5		764.9	87.51	21345.92
	12/10/2014	13:45	12/10/2014 13:45		35	33.5	5	70	10.5		806.8	92.30	21438.22
	12/10/2014	16:13	12/10/2014 16:13		35	33.5	6	68	12.6		1707.7	195.36	21633.58
	12/10/2014	16:57	12/10/2014 16:57		36	33	6	64	12.8		558.3	63.87	21697.44
	12/10/2014	16:58	12/10/2014 16:58			24					12.8	1.46	21698.90
SW-32 Event 11	3/17/2015	8:06	3/17/2015 8:06		33	32	0	60	0.0				21698.90
	3/17/2015	8:19	3/17/2015 8:19		32	30	0	62	0.0		0.0	0.00	21698.90
	3/17/2015	8:20	3/17/2015 8:20		37	36	0	64	0.0		0.0	0.00	21698.90
	3/17/2015	9:18	3/17/2015 9:18		36	34	4	76	8.4		244.1	27.93	21726.83
	3/17/2015	10:29	3/17/2015 10:29		36	34	5	84	10.4		669.6	76.60	21803.43
	3/17/2015	11:30	3/17/2015 11:30		36	33	6	90	12.5		698.5	79.91	21883.34
	3/17/2015	11:32	3/17/2015 11:32		38	35.5	8	90	16.9		29.4	3.36	21886.70
	3/17/2015	12:42	3/17/2015 12:42		38	35	8	90	16.9		1186.0	135.67	22022.37
	3/17/2015	14:02	3/17/2015 14:02		38	35	8	93	16.9		1353.5	154.84	22177.21
	3/17/2015	14:03	3/17/2015 14:03			21					16.9	1.93	22179.14
SW-32 Event 12	3/19/2015	8:17	3/19/2015 8:17		33	32	0	66	0.0				22179.14
	3/19/2015	9:25	3/19/2015 9:25		32	32	0	68	0.0		0.0	0.00	22179.14
	3/19/2015	9:26	3/19/2015 9:26		35	35	0	68	0.0		0.0	0.00	22179.14
	3/19/2015	10:42	3/19/2015 10:42		35	35	0	70	0.0		0.0	0.00	22179.14
	3/19/2015	11:50	3/19/2015 11:50		35	34.5	3	70	6.3		213.8	24.45	22203.60
	3/19/2015	13:29	3/19/2015 13:29		35	34.5	4	73	8.4		724.9	82.93	22286.53
	3/19/2015	14:19	3/19/2015 14:19		35	34.5	4	73	8.4		417.9	47.81	22334.34
	3/19/2015	15:25	3/19/2015 15:25		35	34.5	5	73	10.4		620.6	70.99	22405.33
	3/19/2015	16:36	3/19/2015 16:36		35	34	5	73	10.4		741.8	84.86	22490.19
	3/19/2015	17:22	3/19/2015 17:22		35	34	5	70	10.5		481.3	55.06	22545.25
	3/20/2015	7:44	3/20/2015 7:44		35	33	9	66	18.9		12677.1	1450.27	23995.51

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/20/2015	7:47	3/20/2015 7:47			24					56.8	6.50	24002.01
SW-32 Event 13	3/25/2015	8:23	3/25/2015 8:23		33	33	0	68	0.0				24002.01
	3/25/2015	8:29	3/25/2015 8:29		33	34	0	68	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	8:31	3/25/2015 8:31		35	35	0	68	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	9:11	3/25/2015 9:11		35	35	0	68	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	10:11	3/25/2015 10:11		34	35	0	69	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	11:13	3/25/2015 11:13		34	34.5	0	74	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	11:14	3/25/2015 11:14		36	36.5	0	74	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	12:11	3/25/2015 12:11		37	37	0	74	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	12:55	3/25/2015 12:55		37	37	<2	78	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	13:45	3/25/2015 13:45		37	37	<2	79	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	14:58	3/25/2015 14:58		37	37	<2	82	0.0	0.0	0.00	0.00	24002.01
	3/25/2015	16:18	3/25/2015 16:18		36	36.5	3	90	6.2	249.2	28.51	28.51	24030.52
	3/25/2015	17:41	3/25/2015 17:41		36	36	4	82	8.4	605.9	69.31	69.31	24099.83
	3/25/2015	17:42	3/25/2015 17:42			29				8.4	0.96	0.96	24100.79
SW-32 Event 13	3/28/2015	7:55	3/28/2015 7:55		32	32	0	56	0.0				24100.79
	3/28/2015	8:21	3/28/2015 8:21		32	32	0	56	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	8:22	3/28/2015 8:22		34	33.5	0	56	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	9:02	3/28/2015 9:02		32	32	0	60	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	9:03	3/28/2015 9:03		36	36	0	60	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	10:06	3/28/2015 10:06		36	36	0	64	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	11:07	3/28/2015 11:07		36	35	<2	69	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	11:57	3/28/2015 11:57		36	35	<2	72	0.0	0.0	0.00	0.00	24100.79
	3/28/2015	13:01	3/28/2015 13:01		36	35	3	73	6.3	202.6	23.18	23.18	24123.97
	3/28/2015	13:44	3/28/2015 13:44		36	35	3	74	6.3	272.2	31.13	31.13	24155.11
	3/28/2015	15:00	3/28/2015 15:00		36	35	4	72	8.5	561.5	64.24	64.24	24219.35
	3/28/2015	16:00	3/28/2015 16:00		35	35	4	72	8.4	504.5	57.72	57.72	24277.06
	3/29/2015	7:20	3/29/2015 7:20		35	34	8.5	45	18.3	12251.4	1401.56	1401.56	25678.62
	3/29/2015	7:21	3/29/2015 7:21		38	36	11	45	24.4	21.3	2.44	2.44	25681.06
	3/29/2015	8:53	3/29/2015 8:53		38	35.5	11	59	24.0	2224.9	254.53	254.53	25935.59
	3/29/2015	9:53	3/29/2015 9:53		38	36	11.5	64	25.0	1469.6	168.12	168.12	26103.72
	3/29/2015	10:53	3/29/2015 10:53		37	35.5	11.5	68	24.6	1488.4	170.27	170.27	26273.99
	3/29/2015	11:49	3/29/2015 11:49		37	35.5	11.5	70	24.6	1378.3	157.68	157.68	26431.66
	3/29/2015	11:50	3/29/2015 11:50			24				24.6	2.81	2.81	26434.48
SW-32 Event 14	4/1/2015	7:51	4/1/2015 7:51		32	32	5	68	10.2				26434.48
	4/1/2015	8:02	4/1/2015 8:02		32	31	5	68	10.2	111.9	12.80	12.80	26447.28
	4/1/2015	8:03	4/1/2015 8:03		34	34	8	68	16.6	13.4	1.53	1.53	26448.81
	4/1/2015	9:08	4/1/2015 9:08		34	33.5	6	74	12.4	943.2	107.90	107.90	26556.71
	4/1/2015	10:16	4/1/2015 10:16		34	33	7	80	14.4	910.3	104.14	104.14	26660.85
	4/1/2015	11:52	4/1/2015 11:52		34	32.5	7	88	14.3	1375.1	157.31	157.31	26818.17
	4/1/2015	11:53	4/1/2015 11:53		36	35	8	88	16.6	15.5	1.77	1.77	26819.93
	4/1/2015	12:47	4/1/2015 12:47		36	34.5	10	93	20.7	1008.5	115.37	115.37	26935.31
	4/1/2015	13:39	4/1/2015 13:39		36	34.5	10	93	20.7	1076.8	123.19	123.19	27058.49
	4/1/2015	14:36	4/1/2015 14:36		36	34.5	10	91	20.7	1181.4	135.16	135.16	27193.65
	4/1/2015	15:48	4/1/2015 15:48		36	34.5	10.5	88	21.8	1533.3	175.41	175.41	27369.06
	4/1/2015	16:47	4/1/2015 16:47		36	34.5	10.5	87	21.9	1289.5	147.52	147.52	27516.58
	4/1/2015	17:51	4/1/2015 17:51		36	34	12	84	25.1	1501.7	171.79	171.79	27688.37
	4/1/2015	17:52	4/1/2015 17:52			24				25.1	2.87	2.87	27691.24
SW-32 Event 14	4/2/2015	7:39	4/2/2015 7:39		33	31	12	64	24.8				27691.24
	4/2/2015	7:45	4/2/2015 7:45		33	31	11	65	22.7	142.4	16.29	16.29	27707.53
	4/2/2015	7:46	4/2/2015 7:46		37	35	14	65	30.1	26.4	3.02	3.02	27710.55

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	4/2/2015	8:27	4/2/2015 8:27		37	35	12	70	25.7		1142.6	130.72	27841.27
	4/2/2015	9:39	4/2/2015 9:39		37	35	12.5	78	26.5		1878.3	214.88	28056.14
	4/2/2015	10:53	4/2/2015 10:53		37	34.5	12	80	25.4		1921.3	219.80	28275.94
	4/2/2015	11:07	4/2/2015 11:07		37	34	12.5	81	26.4		363.0	41.52	28317.46
	4/2/2015	11:08	4/2/2015 11:08			24					26.4	3.02	28320.49
											Total CO ₂ Mass (lbs):		28320.49

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-33 Event 1	11/19/2013	13:12	11/19/2013 13:12	55	26			70	0.0				
	11/19/2013	13:14	11/19/2013 13:14		29	30	<2	70	0.0		0.0	0.00	0.00
	11/19/2013	13:26	11/19/2013 13:26		27	22	21	70	40.3		241.6	27.63	27.63
	11/19/2013	13:28	11/19/2013 13:28		34	26	26	70	53.9		94.2	10.77	38.41
	11/19/2013	13:57	11/19/2013 13:57	55	34	24	28	70	58.1		1624.0	185.79	224.20
	11/19/2013	13:58	11/19/2013 13:58		36	25	30	70	63.5		60.8	6.95	231.15
	11/19/2013	14:45	11/19/2013 14:45	52	35	25	29	70	60.8		2920.6	334.12	565.27
	11/19/2013	17:09	11/19/2013 17:09	50	34.5	25	29	62	60.9		8763.5	1002.55	1567.82
	11/19/2013	17:11	11/19/2013 17:11										1567.82
	11/19/2013	17:12	11/19/2013 17:12										1567.82
	11/19/2013	17:15	11/19/2013 17:15			30							1567.82
	11/19/2013	17:16	11/19/2013 17:16	52	34	29	24	62.0	50.2		1304.5	149.24	1717.05
	11/19/2013	17:42	11/19/2013 17:42		35	28.5	25	60.0	52.9		103.1	11.79	1728.85
	11/19/2013	17:44	11/19/2013 17:44								52.9	6.05	1734.90
	11/19/2013	17:45	11/19/2013 17:45		20	20							1734.90
SW-33 Event 2	12/3/2013	15:47	12/3/2013 15:47										1734.90
	12/3/2013	15:48	12/3/2013 15:48	48	28	31.5	6	73	11.6		11.6	1.33	1736.23
	12/3/2013	15:49	12/3/2013 15:49	48	28	27	12.5	73	24.2		17.9	2.05	1738.28
	12/3/2013	15:50	12/3/2013 15:50	47.5	28	28.5	16	73	31.0		27.6	3.15	1741.43
	12/3/2013	15:53	12/3/2013 15:53	47.5	28	28.5	17	73	32.9		95.8	10.96	1752.38
	12/3/2013	15:54	12/3/2013 15:54	46	30.5	29.5	18	73	35.8		34.4	3.93	1756.32
	12/3/2013	16:05	12/3/2013 16:05	45	33	30	24	72	49.2		467.5	53.48	1809.80
	12/3/2013	16:18	12/3/2013 16:18	45	32	29.5	25	70	50.8		649.5	74.30	1884.10
	12/3/2013	16:20	12/3/2013 16:20	45	35	30.5	26	70	54.5		105.2	12.04	1896.14
	12/3/2013	16:33	12/3/2013 16:33	45	34	30	26	68	54.0		705.4	80.69	1976.84
	12/3/2013	16:34	12/3/2013 16:34	44	35	30.5	27.5	68	57.7		55.9	6.39	1983.23
	12/3/2013	16:50	12/3/2013 16:50	44	35	30.5	27.5	67	57.8		924.3	105.75	2088.98
	12/3/2013	16:51	12/3/2013 16:51								57.8	6.61	2095.59
	12/3/2013	16:52	12/3/2013 16:52										2095.59
	SW-33 Event 3	12/4/2013	13:24	12/4/2013 13:24									
12/4/2013		13:25	12/4/2013 13:25	53	32	31	6	84	12.0		48.1	5.50	2101.09
12/4/2013		13:29	12/4/2013 13:29	53	27	25	16.5	84	31.2		21.6	2.47	2103.56
12/4/2013		13:30	12/4/2013 13:30	53	27	27	19.5	84	36.9		476.7	54.53	2158.09
12/4/2013		13:44	12/4/2013 13:44	52	27	26	21	84	39.7		38.3	4.38	2162.47
12/4/2013		13:45	12/4/2013 13:45	52	28	26.5	22	84	42.1		2250.6	257.46	2419.94
12/4/2013		14:40	12/4/2013 14:40	50	28	25	22.5	79	43.3		170.8	19.54	2439.47
12/4/2013		14:44	12/4/2013 14:44								43.3	4.95	2444.43
12/4/2013		14:45	12/4/2013 14:45				18						2444.43
SW-33 Event 4		12/5/2013	13:14	12/5/2013 13:14				0		0.0			
	12/5/2013	13:15	12/5/2013 13:15	54	31	35	<2	85	0.0		0.0	0.00	2444.43
	12/5/2013	13:18	12/5/2013 13:18	54	31	33	5	85	9.9		19.8	2.26	2446.69
	12/5/2013	13:22	12/5/2013 13:22	52	29	32	8	84	15.5		76.2	8.71	2455.41
	12/5/2013	13:28	12/5/2013 13:28	52	29	31.5	10	84	19.4		627.6	71.79	2527.20
	12/5/2013	14:04	12/5/2013 14:04	50	29	30	13.5	85	26.1		22.7	2.60	2529.80
	12/5/2013	14:05	12/5/2013 14:05	50	28	31.25	14.5	85	27.7		134.6	15.40	2545.20
	12/5/2013	14:10	12/5/2013 14:10	50	29	31.25	14.5	85	28.1		223.2	25.53	2570.73
	12/5/2013	14:18	12/5/2013 14:18	50	29	30.5	15	85	29.0		28.5	3.27	2574.00
	12/5/2013	14:19	12/5/2013 14:19								29.0	3.32	2577.32
	12/5/2013	14:20	12/5/2013 14:20			22							2577.32
	SW-33 Event 5	12/6/2013	15:52	12/6/2013 15:52	45	28	32	<2	79	0.0			
12/6/2013		16:12	12/6/2013 16:12	44	26	29	7.5	78	14.1		7.0	0.81	2578.13

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/6/2013	16:13	12/6/2013 16:13	43	29	31	11	78	21.4		923.6	105.66	2683.78
	12/6/2013	17:05	12/6/2013 17:05	42.5	27.5	30	14.5	76	27.8		24.6	2.82	2686.60
	12/6/2013	17:06	12/6/2013 17:06								27.8	3.18	2689.78
	12/6/2013	17:07	12/6/2013 17:07			20.5							2689.78
SW-33 Event 6	12/9/2013	13:43	12/9/2013 13:43				0		0.0				2689.78
	12/9/2013	13:46	12/9/2013 13:46	50	32	30	<2	84	0.0		0.0	0.00	2689.78
	12/9/2013	13:56	12/9/2013 13:56	50	30	30	4	84	7.8		39.2	4.48	2694.26
	12/9/2013	14:11	12/9/2013 14:11	50	30	28	7	84	13.7		161.6	18.49	2712.75
	12/9/2013	14:30	12/9/2013 14:30	45	30	27	9	84	17.6		297.8	34.07	2746.82
	12/9/2013	14:55	12/9/2013 14:55	48	30	26.5	10	82	19.6		465.8	53.29	2800.11
	12/9/2013	14:56	12/9/2013 14:56	48	32	28.5	12	82	24.1		21.9	2.50	2802.61
	12/9/2013	14:59	12/9/2013 14:59	48	32	28.5	12	82	24.1		72.3	8.27	2810.88
	12/9/2013	15:00	12/9/2013 15:00			20							2810.88
SW-33 Event 7	12/10/2013	16:38	12/10/2013 16:38	45	30	34	3	70	6.0				2810.88
	12/10/2013	16:40	12/10/2013 16:40	45	28	34	9	70	17.5		23.4	2.68	2813.55
	12/10/2013	16:42	12/10/2013 16:42	45	28	32	10	70	19.4		36.9	4.22	2817.77
	12/10/2013	16:56	12/10/2013 16:56	45	28	31	11	68	21.4		285.5	32.66	2850.43
	12/10/2013	17:24	12/10/2013 17:24	45	28	30	13	63	25.4		654.9	74.93	2925.36
	12/10/2013	17:35	12/10/2013 17:35	45	28	30	13.5	62	26.4		284.9	32.59	2957.95
SW-33 Event 8	12/11/2013	14:18	12/11/2013 14:18	50	30	31	<2	68	0.0				2957.95
	12/11/2013	14:38	12/11/2013 14:38		28	24.5	8	68	12.6		126.1	14.42	2972.37
	12/11/2013	15:33	12/11/2013 15:33		26	28	11.5	64	17.8		835.0	95.52	3067.89
	12/11/2013	15:35	12/11/2013 15:35	46	28	30	14	64	22.1		39.9	4.56	3072.46
	12/11/2013	15:44	12/11/2013 15:44	46	28	30	14	64	22.1		199.3	22.80	3095.26
	12/11/2013	15:45	12/11/2013 15:45								22.1	2.53	3097.79
	12/11/2013	15:46	12/11/2013 15:46			22							3097.79
SW-33 Event 9	12/12/2013	12:42	12/12/2013 12:42	45	30	32	<2	70	0.0				3097.79
	12/12/2013	13:50	12/12/2013 13:50	50	29	30	10.5	70	20.6		700.8	80.18	3177.97
	12/12/2013	13:55	12/12/2013 13:55	50	29	30	10.5	70	20.6		103.1	11.79	3189.76
	12/12/2013	14:03	12/12/2013 14:03	50	29	29	10.5	70	20.6		164.9	18.87	3208.63
	12/12/2013	14:04	12/12/2013 14:04	50	29	30.5	12.5	70	24.5		22.6	2.58	3211.21
	12/12/2013	14:15	12/12/2013 14:15	45	30	30	12.5	70	24.8		271.5	31.06	3242.27
	12/12/2013	14:16	12/12/2013 14:16								24.8	2.84	3245.11
	12/12/2013	14:17	12/12/2013 14:17			20							3245.11
SW-33 Event 10	12/16/2013	8:12	12/16/2013 8:12	50	26	26	<2	48	0.0				3245.11
	12/16/2013	8:15	12/16/2013 8:15	50	30	31	<2	48	0.0		0.0	0.00	3245.11
	12/16/2013	8:17	12/16/2013 8:17	50	30	31	3.5	48	7.1		7.1	0.81	3245.92
	12/16/2013	8:22	12/16/2013 8:22	50	30	31	6	49	12.2		48.2	5.51	3251.43
	12/16/2013	8:57	12/16/2013 8:57	45	30	30	9	50	18.2		532.0	60.86	3312.29
	12/16/2013	9:01	12/16/2013 9:01	45	30	31.5	11.5	50	23.3		83.1	9.50	3321.79
	12/16/2013	9:13	12/16/2013 9:13	44	30	31	11.5	52	23.2		279.3	31.95	3353.74
	12/16/2013	9:14	12/16/2013 9:14								23.2	2.66	3356.40
	12/16/2013	9:15	12/16/2013 9:15			22							3356.40
SW-33 Event 11	12/17/2013	12:11	12/17/2013 12:11	45	33	32	<2	72	0.0				3356.40
	12/17/2013	13:07	12/17/2013 13:07	50	31	29	10	72	20.0		561.2	64.20	3420.60
	12/17/2013	13:08	12/17/2013 13:08	50	32	30.5	13.5	72	27.4		23.7	2.71	3423.31
	12/17/2013	13:09	12/17/2013 13:09	50	35	32	14.5	72	30.3		28.8	3.30	3426.61
	12/17/2013	14:10	12/17/2013 14:10	45	33	30.5	18	73	36.8		2048.4	234.34	3660.96
	12/17/2013	15:20	12/17/2013 15:20	45	33	29	20	72	41.0		2723.1	311.52	3972.47
	12/17/2013	15:21	12/17/2013 15:21	45	35	30	23	72	48.1		44.5	5.09	3977.57
	12/17/2013	16:32	12/17/2013 16:32	45	35	31	23	70	48.2		3418.8	391.11	4368.68

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/17/2013	22:08	12/17/2013 22:08	45	29	29	24.5	56	48.8		16290.5	1863.64	6232.32
	12/18/2013	8:02	12/18/2013 8:02	42	32.5	28	25	52	52.0		29916.1	3422.40	9654.72
	12/18/2013	8:03	12/18/2013 8:03								52.0	5.94	9660.66
	12/18/2013	8:04	12/18/2013 8:04			20							9660.66
SW-33 Event 12	1/21/2014	12:13	1/21/2014 12:13	40	32	33	<2	71	0.0				9660.66
	1/21/2014	13:25	1/21/2014 13:25	51	29	30.5	5	74	9.8		352.0	40.27	9700.93
	1/21/2014	13:26	1/21/2014 13:26	51	31	32.2	6.3	74	12.6		11.2	1.28	9702.21
	1/21/2014	14:38	1/21/2014 14:38	48	31	31	8.5	74	17.0		1065.8	121.93	9824.14
	1/21/2014	15:46	1/21/2014 15:46	52	30	30.5	10.5	68	20.9		1288.4	147.40	9971.54
	1/21/2014	16:41	1/21/2014 16:41	53	30	30.2	11.9	68	23.7		1225.7	140.22	10111.76
	1/21/2014	16:42	1/21/2014 16:42								23.7	2.71	10114.47
	1/21/2014	16:44	1/21/2014 16:44			22							10114.47
SW-33 Event 13	1/28/2014	9:45	1/28/2014 9:45				0		0.0				10114.47
	1/28/2014	9:46	1/28/2014 9:46	52	33	32.5	<2	56	0.0		0.0	0.00	10114.47
	1/28/2014	10:13	1/28/2014 10:13	52	33	32	2	56	4.2		56.2	6.43	10120.90
	1/28/2014	10:56	1/28/2014 10:56	52	33	32	3.5	56	7.3		246.1	28.15	10149.05
	1/28/2014	11:37	1/28/2014 11:37	52	32	32	4.5	54	9.3		339.6	38.85	10187.90
	1/28/2014	13:15	1/28/2014 13:15	50	31	31	5	51	10.2		956.3	109.40	10297.30
	1/28/2014	14:20	1/28/2014 14:20	50	31	30.5	4.5	51	9.2		631.9	72.29	10369.59
	1/28/2014	15:40	1/28/2014 15:40	50	30	30	6	50	12.2		854.6	97.76	10467.36
	1/28/2014	16:45	1/28/2014 16:45	58	30	29.5	10	50	20.3		1053.4	120.51	10587.87
	1/28/2014	16:46	1/28/2014 16:46			21					20.3	2.32	10590.18
SW-33 Event 14	2/4/2014	9:24	2/4/2014 9:24	47	33	32	<2	62	0.0				10590.18
	2/4/2014	10:10	2/4/2014 10:10	53	31.5	31.5	2	62	4.1		93.6	10.71	10600.89
	2/4/2014	10:11	2/4/2014 10:11	53	32.5	32	3.7	62	7.6		5.8	0.67	10601.56
	2/4/2014	10:32	2/4/2014 10:32	53	32.5	32	4	63	8.2		166.3	19.02	10620.58
	2/4/2014	11:33	2/4/2014 11:33	52	32	31.5	6	65	12.2		624.2	71.41	10691.99
	2/4/2014	12:34	2/4/2014 12:34	50	32	31	6.8	66	13.9		796.2	91.08	10783.07
	2/4/2014	13:15	2/4/2014 13:15	48	32	30.5	7.2	67	14.7		584.7	66.89	10849.96
	2/4/2014	14:10	2/4/2014 14:10	48	31	30	9.2	64	18.6		914.3	104.60	10954.56
	2/4/2014	14:41	2/4/2014 14:41	48	32.5	30.5	12	64	24.6		670.0	76.65	11031.21
	2/4/2014	15:08	2/4/2014 15:08	50	32.5	30	13	62	26.7		693.8	79.37	11110.58
	2/4/2014	16:21	2/4/2014 16:21	50	32	39	14	60	28.7		2024.2	231.57	11342.14
	2/4/2014	16:22	2/4/2014 16:22	50	33.5	30.5	16.5	60	34.4		31.5	3.61	11345.75
	2/4/2014	17:26	2/4/2014 17:26	48	33.5	30	16.5	59	34.4		2201.6	251.86	11597.61
	2/4/2014	17:27	2/4/2014 17:27			25					34.4	3.94	11601.55
SW-33 Event 15	2/6/2014	7:46	2/6/2014 7:46	52	30	32	<2	47	0.0				11601.55
	2/6/2014	8:33	2/6/2014 8:33	55	24	23	<2	53	0.0		0.0	0.00	11601.55
	2/6/2014	8:34	2/6/2014 8:34	55	33	32	2	53	4.2		2.1	0.24	11601.79
	2/6/2014	9:10	2/6/2014 9:10	56	32.5	31.5	6	56	12.4		298.7	34.17	11635.96
	2/6/2014	10:24	2/6/2014 10:24	47	31	29	8.7	60	17.6		1112.4	127.26	11763.22
	2/6/2014	10:27	2/6/2014 10:27	47	33	31	12	60	24.9		63.8	7.30	11770.51
	2/6/2014	11:04	2/6/2014 11:04	46	33	31	12.5	62	25.9		938.5	107.37	11877.88
	2/6/2014	12:06	2/6/2014 12:06	45	33	29.5	14.3	66	29.5		1715.0	196.20	12074.08
	2/6/2014	14:02	2/6/2014 14:02	45	33	28.5	16	64	33.0		3624.8	414.68	12488.76
	2/6/2014	14:04	2/6/2014 14:04		34	29.5	19	64	39.6		72.7	8.31	12497.07
	2/6/2014	15:16	2/6/2014 15:16	44	34	29.5	19	61	39.8		2858.5	327.01	12824.08
	2/6/2014	16:30	2/6/2014 16:30	44	34	29.5	19	58	39.9		2946.7	337.10	13161.18
	2/6/2014	17:12	2/6/2014 17:12	44	34	29.5	19	57	39.9		1675.8	191.71	13352.90
	2/6/2014	17:13	2/6/2014 17:13			23					39.9	4.57	13357.46
SW-33 Event 16	2/10/2014	8:30	2/10/2014 8:30	57	32	32	<2	54	0.0				13357.46

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/10/2014	8:40	2/10/2014 8:40	57	29.5	29.5	<2	54	0.0		0.0	0.00	13357.46
	2/10/2014	8:41	2/10/2014 8:41	57	32	32	<2	54	0.0		0.0	0.00	13357.46
	2/10/2014	9:00	2/10/2014 9:00	54	32	32.2	4.2	59	8.6		81.9	9.37	13366.83
	2/10/2014	9:49	2/10/2014 9:49	49	32	32	6	66	12.2		510.9	58.44	13425.28
	2/10/2014	11:05	2/10/2014 11:05	48	31	30.5	9	6	19.3		1199.2	137.19	13562.47
	2/10/2014	13:05	2/10/2014 13:05	47	30	29.5	11	79	21.7		2459.0	281.31	13843.77
	2/10/2014	13:06	2/10/2014 13:06			22					21.7	2.48	13846.25
SW-33 Event 17	12/16/2014	7:34	12/16/2014 7:34		25	25	0	52	0.0				13846.25
	12/16/2014	7:55	12/16/2014 7:55		33	30	8	54	16.7		175.2	20.04	13866.29
	12/16/2014	9:57	12/16/2014 9:57		32	29.5	12	70	24.4		2503.9	286.45	14152.73
	12/16/2014	9:58	12/16/2014 9:58		34	31	15	70	31.1		27.7	3.17	14155.91
	12/16/2014	11:16	12/16/2014 11:16		35	30	17	76	35.4		2594.7	296.83	14452.74
	12/16/2014	11:17	12/16/2014 11:17		37	31	20	76	42.5		39.0	4.46	14457.19
	12/16/2014	12:26	12/16/2014 12:26		37	31	20	80	42.3		2927.6	334.92	14792.12
	12/16/2014	13:36	12/16/2014 13:36		37	31	20	81	42.3		2962.9	338.96	15131.07
	12/16/2014	14:42	12/16/2014 14:42		36	29.5	21	80	44.0		2849.0	325.92	15456.99
	12/16/2014	14:43	12/16/2014 14:43		40	31.5	24	80	52.3		48.2	5.51	15462.50
	12/16/2014	16:38	12/16/2014 16:38		40	32.5	24	76	52.5		6025.5	689.32	16151.83
	12/16/2014	16:39	12/16/2014 16:39			24.5					52.5	6.01	16157.83
SW-33 Event 18	12/18/2014	8:01	12/18/2014 8:01		23	23	0	46	0.0				16157.83
	12/18/2014	8:15	12/18/2014 8:15		34	31	11	50	23.3		162.9	18.64	16176.47
	12/18/2014	9:30	12/18/2014 9:30		34	28	18	56	37.9		2292.5	262.26	16438.74
	12/18/2014	9:31	12/18/2014 9:31		38	30	22	56	48.2		43.0	4.92	16443.66
	12/18/2014	11:06	12/18/2014 11:06		38	32	20	62	43.5		4355.4	498.25	16941.91
	12/18/2014	12:12	12/18/2014 12:12		38	32	20	70	43.2		2861.2	327.33	17269.24
	12/18/2014	12:13	12/18/2014 12:13		41	33	21	70	46.6		44.9	5.14	17274.37
	12/18/2014	13:28	12/18/2014 13:28		40	33	22	72	48.3		3560.5	407.32	17681.69
	12/18/2014	14:44	12/18/2014 14:44		41	33	22	72	48.8		3688.7	421.98	18103.68
	12/18/2014	16:43	12/18/2014 16:43		41	32	24	68	53.4		6078.6	695.39	18799.07
	12/18/2014	16:44	12/18/2014 16:44			24					53.4	6.11	18805.17
Total CO ₂ Mass (lbs):												18805.17	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-34 Event 1	11/19/2013	10:09	11/19/2013 10:09	55	26			72	0.0				0.00
	11/19/2013	10:13	11/19/2013 10:13		27	28.5	<2	71.5	0.0		0.0	0.00	0.00
	11/19/2013	10:20	11/19/2013 10:20		26	22.5	15.5	71.5	29.3		102.6	11.74	11.74
	11/19/2013	10:21	11/19/2013 10:21		29	24	20	71	39.2		34.3	3.92	15.66
	11/19/2013	10:23	11/19/2013 10:23		34	25	25	70.5	51.8		91.1	10.42	26.07
	11/19/2013	10:25	11/19/2013 10:25		37	25	30	70.3	64.1		116.0	13.27	39.34
	11/19/2013	11:47	11/19/2013 11:47	54	36	22.5	33	70	69.9		5493.4	628.45	667.79
	11/19/2013	11:50	11/19/2013 11:50								209.6	23.98	691.76
	11/19/2013	11:51	11/19/2013 11:51			13							691.76
SW-34 Event 2	12/4/2013	7:48	12/4/2013 7:48				0		0.0				691.76
	12/4/2013	7:49	12/4/2013 7:49	55	28	28	6	64	11.7		5.9	0.67	692.43
	12/4/2013	7:57	12/4/2013 7:57	53	26	22.5	17	64	32.4		176.4	20.18	712.61
	12/4/2013	8:04	12/4/2013 8:04	53	26	22	18	64	34.3		233.3	26.69	739.30
	12/4/2013	8:05	12/4/2013 8:05	53	28	23	22	64	42.9		38.6	4.42	743.72
	12/4/2013	8:09	12/4/2013 8:09	53	28	22.5	22	66	42.9		171.6	19.63	763.35
	12/4/2013	8:10	12/4/2013 8:10	53	30	23	23.5	66	46.8		44.9	5.13	768.48
	12/4/2013	8:34	12/4/2013 8:34	48	29	22.5	24	70	47.1		1127.6	129.00	897.47
	12/4/2013	9:26	12/4/2013 9:26	47	29	22.5	25	73	48.9		2497.4	285.70	1183.17
	12/4/2013	9:59	12/4/2013 9:59	47	29	22	25	75	48.8		1613.3	184.57	1367.74
	12/4/2013	11:10	12/4/2013 11:10	46	28	22	25	80	48.0		3439.3	393.46	1761.20
	12/4/2013	12:09	12/4/2013 12:09	46	28	22	24	82	46.0		2775.2	317.48	2078.68
	12/4/2013	12:11	12/4/2013 12:11								92.1	10.53	2089.21
	12/4/2013	12:12	12/4/2013 12:12										2089.21
	SW-34 Event 3	12/10/2013	7:55	12/10/2013 7:55	52.5	28	30	<2	70	0.0			
12/10/2013		8:02	12/10/2013 8:02	51	26	28	8	70	15.1		53.0	6.07	2095.27
12/10/2013		8:20	12/10/2013 8:20	51	26	26	12	70	22.7		340.9	38.99	2134.27
12/10/2013		8:32	12/10/2013 8:32	52	26	26	13.5	72	25.5		289.4	33.11	2167.38
12/10/2013		9:07	12/10/2013 9:07	50	26	25	16	72	30.2		975.7	111.62	2279.00
12/10/2013		9:40	12/10/2013 9:40	50	26	24	17	72	32.1		1029.1	117.73	2396.73
12/10/2013		10:17	12/10/2013 10:17	50	26	24	18	74	34.0		1222.6	139.86	2536.59
12/10/2013		11:12	12/10/2013 11:12	46	25	23.5	17	74	31.7		1804.6	206.44	2743.03
12/10/2013		11:13	12/10/2013 11:13	46	26	25	21	74	39.6		35.6	4.08	2747.11
12/10/2013		11:15	12/10/2013 11:15	45	26	25	23	74	43.4		83.0	9.50	2756.61
12/10/2013		12:02	12/10/2013 12:02	45	27.5	25	22	76	42.2		2010.9	230.05	2986.66
12/10/2013		12:03	12/10/2013 12:03								42.2	4.83	2991.49
12/10/2013		12:04	12/10/2013 12:04			20							2991.49
SW-34 Event 4	12/17/2013	8:09	12/17/2013 8:09	45	30	28	<2	52	0.0				2991.49
	12/17/2013	8:25	12/17/2013 8:25	47	27	26	10	56	19.4		155.5	17.79	3009.27
	12/17/2013	8:33	12/17/2013 8:33	45	27	26	11.5	58	22.3		167.0	19.10	3028.38
	12/17/2013	8:53	12/17/2013 8:53	46	26	24	13.3	60	25.4		477.4	54.62	3082.99
	12/17/2013	10:16	12/17/2013 10:16	42	25	23	16	66	30.0		2302.0	263.35	3346.34
	12/17/2013	10:18	12/17/2013 10:18	40	29	25	22	66	43.4		73.4	8.40	3354.74
	12/17/2013	11:15	12/17/2013 11:15	38	29	24	22.5	70	44.2		2494.6	285.38	3640.12
	12/17/2013	11:16	12/17/2013 11:16	38	31	25	26	70	52.2		48.2	5.51	3645.64
	12/17/2013	12:00	12/17/2013 12:00	40	32	25.5	26.5	71	53.8		2331.3	266.70	3912.34
	12/17/2013	12:09	12/17/2013 12:09								483.8	55.34	3967.68
	12/17/2013	12:10	12/17/2013 12:10			19							3967.68
SW-34 Event 5	1/7/2014	9:41	1/7/2014 9:41					40					3967.68
	1/7/2014	9:42	1/7/2014 9:42	55	30	29	<2	40	0.0		0.0	0.00	3967.68
	1/7/2014	10:30	1/7/2014 10:30	50	27	25.5	11.5	42	22.7		544.2	62.25	4029.93
	1/7/2014	10:32	1/7/2014 10:32	50	30.5	28	16	42	32.9		55.5	6.35	4036.29

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/7/2014	11:33	1/7/2014 11:33	47	28	25.5	16.5	44	32.9		2004.6	229.32	4265.61
	1/7/2014	11:34	1/7/2014 11:34	46	30.5	27	21.5	44	44.1		38.5	4.40	4270.01
	1/7/2014	13:38	1/7/2014 13:38	51	28	24.5	22.5	50	44.5		5493.4	628.45	4898.46
	1/7/2014	13:39	1/7/2014 13:39								44.5	5.09	4903.55
	1/7/2014	13:40	1/7/2014 13:40										4903.55
SW-34 Event 6	1/9/2014	12:05	1/9/2014 12:05	40	28.5	28	<2	64	0.0				4903.55
	1/9/2014	12:06	1/9/2014 12:06	40	29.5	27.5	9	64	17.9		8.9	1.02	4904.57
	1/9/2014	13:18	1/9/2014 13:18	39	26.5	25	15	62	28.8		1680.5	192.25	5096.83
	1/9/2014	13:20	1/9/2014 13:20	39	30	26.5	20	62	40.0		68.8	7.87	5104.70
	1/9/2014	14:35	1/9/2014 14:35	36	30	25.5	20.5	62	41.0		3039.8	347.75	5452.45
	1/9/2014	14:36	1/9/2014 14:36	36	30.5	28	22.5	62	45.3		43.2	4.94	5457.39
	1/9/2014	15:23	1/9/2014 15:23	40	33	28	26	60	53.9		2330.8	266.64	5724.03
	1/9/2014	16:47	1/9/2014 16:47	42	32.5	27	26.5	60	54.6		4558.1	521.45	6245.48
	1/9/2014	16:48	1/9/2014 16:48								54.6	6.25	6251.73
	1/9/2014	16:57	1/9/2014 16:57			20							6251.73
SW-34 Event 7	1/17/2014	8:43	1/17/2014 8:43	50	28.5	28.5	<2	52	0.0				6251.73
	1/17/2014	10:20	1/17/2014 10:20	45	26	27	10	60	19.1		927.5	106.10	6357.83
	1/17/2014	11:29	1/17/2014 11:29	45	25	23	15.5	69	29.0		1660.7	189.98	6547.82
	1/17/2014	12:34	1/17/2014 12:34	46	25	23	16	72	29.9		1913.4	218.89	6766.71
	1/17/2014	12:35	1/17/2014 12:35	46	28	24	21.7	72	42.0		35.9	4.11	6770.82
	1/17/2014	13:05	1/17/2014 13:05	45	28	24	21.7	72	42.0		1260.7	144.22	6915.04
	1/17/2014	14:24	1/17/2014 14:24	44	28	24	21.9	70	42.5		3338.3	381.90	7296.94
	1/17/2014	14:25	1/17/2014 14:25			20					42.5	4.86	7301.80
SW-34 Event 8	1/20/2014	12:37	1/20/2014 12:37	46	29	29.5	<2	71	0.0				7301.80
	1/20/2014	13:53	1/20/2014 13:53	50	26	24.5	14	73	26.4		1004.5	114.92	7416.72
	1/20/2014	13:54	1/20/2014 13:54	50	29	26	20	73	39.1		32.8	3.75	7420.47
	1/20/2014	14:24	1/20/2014 14:24	50	29	26	20	74	39.1		1173.9	134.29	7554.76
	1/20/2014	15:03	1/20/2014 15:03	49	29	26	20	74	39.1		1525.3	174.50	7729.26
	1/20/2014	16:13	1/20/2014 16:13	53	29	26	21	73	41.1		2807.6	321.19	8050.45
	1/20/2014	16:50	1/20/2014 16:50	56	29	25	21.7	72	42.5		1547.0	176.98	8227.43
	1/20/2014	16:51	1/20/2014 16:51			20					42.5	4.86	8232.30
SW-34 Event 9	1/27/2014	12:13	1/27/2014 12:13				0		0.0				8232.30
	1/27/2014	12:14	1/27/2014 12:14	58	31	29	3	80	6.0		3.0	0.34	8232.64
	1/27/2014	12:21	1/27/2014 12:21	55	29	28	10	80	19.4		88.9	10.17	8242.81
	1/27/2014	12:49	1/27/2014 12:49	53	27.5	26	14	80	26.7		646.6	73.97	8316.78
	1/27/2014	12:51	1/27/2014 12:51	51	31	28.5	18	80	35.8		62.5	7.15	8323.94
	1/27/2014	13:11	1/27/2014 13:11	50	30.5	27	19	80	37.6		733.8	83.95	8407.89
	1/27/2014	13:12	1/27/2014 13:12	49	33.5	29	22	80	45.0		41.3	4.72	8412.61
	1/27/2014	14:44	1/27/2014 14:44	47	32.5	27	24.5	80	49.5		4346.4	497.23	8909.83
	1/27/2014	14:45	1/27/2014 14:45	47	35	29	28	80	58.1		53.8	6.16	8915.99
	1/27/2014	15:42	1/27/2014 15:42	46	35	28.5	28	77	58.3		3317.1	379.48	9295.47
	1/27/2014	16:15	1/27/2014 16:15	46	34.5	28	28.5	77	59.0		1935.4	221.41	9516.88
	1/27/2014	16:16	1/27/2014 16:16								59.0	6.75	9523.63
	1/27/2014	16:18	1/27/2014 16:18			20							9523.63
SW-34 Event 10	2/25/2015	7:54	2/25/2015 7:54		26	26	0	52	0.0				9523.63
	2/25/2015	8:20	2/25/2015 8:20		26	24	10	54	19.2		250.1	28.61	9552.24
	2/25/2015	8:56	2/25/2015 8:56		26	22.5	12	54	23.1		761.8	87.15	9639.39
	2/25/2015	8:57	2/25/2015 8:57		36	29	22	54	47.3		35.2	4.03	9643.42
	2/25/2015	9:58	2/25/2015 9:58		35	27.5	24	60	50.8		2992.7	342.36	9985.78
	2/25/2015	9:59	2/25/2015 9:59		40	29.5	27	60	60.0		55.4	6.34	9992.12
	2/25/2015	11:17	2/25/2015 11:17		40.5	29.5	29	60	64.7		4865.3	556.59	10548.71

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/25/2015	13:14	2/25/2015 13:14		42	29	31.5	59	71.4		7962.9	910.95	11459.66
	2/25/2015	13:15	2/25/2015 13:15		38	27.5	29	59	63.3		67.3	7.70	11467.36
	2/25/2015	14:39	2/25/2015 14:39		38	27	30	54	65.8		5422.9	620.38	12087.74
	2/25/2015	15:35	2/25/2015 15:35		38	26	30	52	66.0		3689.5	422.08	12509.82
	2/25/2015	16:50	2/25/2015 16:50		28	26	30	52	59.3		4695.3	537.14	13046.96
	2/25/2015	16:51	2/25/2015 16:51			18					59.3	6.78	13053.74
Total CO ₂ Mass (lbs):												13053.74	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-35 Event 1	11/19/2013	13:20	11/19/2013 13:20	57	24			80	0.0		0	0	0.00
	11/19/2013	13:22	11/19/2013 13:22		27	28	<2	80	0.0		0.0	0.00	0.00
	11/19/2013	13:41	11/19/2013 13:41		26	25.2	9	80	16.9		160.4	18.35	18.35
	11/19/2013	13:43	11/19/2013 13:43			28.4	12	80	23.3		40.2	4.60	22.95
	11/19/2013	15:00	11/19/2013 15:00	52	28	24	19	76	36.7		2309.4	264.19	287.14
	11/19/2013	15:05	11/19/2013 15:05	50	32	26.6	22	76	44.4		202.7	23.18	310.32
	11/19/2013	15:12	11/19/2013 15:12		34	27.2	23.5	68	48.8		326.4	37.34	347.66
	11/19/2013	17:20	11/19/2013 17:20	49	34.5	26.9	25	60	52.6		6494.6	742.99	1090.64
	11/19/2013	17:49	11/19/2013 17:49	50	34	26.4	26	60	54.5		1553.0	177.67	1268.31
	11/19/2013	17:55	11/19/2013 17:55	50	34	26.4	26	60	54.5		326.8	37.38	1305.69
	11/19/2013	17:57	11/19/2013 17:57								108.9	12.46	1318.15
	11/19/2013	17:59	11/19/2013 17:59			15.6							1318.15
SW-35 Event 2	12/4/2013	7:43	12/4/2013 7:43				0		0.0				1318.15
	12/4/2013	7:45	12/4/2013 7:45	58	31	31	<2	64	0.0		0.0	0.00	1318.15
	12/4/2013	7:51	12/4/2013 7:51		31	30	6	64	12.1		36.4	4.16	1322.31
	12/4/2013	7:55	12/4/2013 7:55	58	27.5	23	17	64	33.0		90.2	10.32	1332.63
	12/4/2013	8:16	12/4/2013 8:16	52	27.5	23	16	66	31.0		671.6	76.83	1409.46
	12/4/2013	8:18	12/4/2013 8:18	50	30	26	22	6	46.7		77.7	8.89	1418.35
	12/4/2013	9:03	12/4/2013 9:03	50	30	24	24	70	47.7		2123.4	242.92	1661.27
	12/4/2013	10:05	12/4/2013 10:05	47.5	30	23	25	75	49.4		3009.0	344.23	2005.50
	12/4/2013	11:09	12/4/2013 11:09	47.5	30	23	24	82	47.1		3088.5	353.33	2358.83
	12/4/2013	12:27	12/4/2013 12:27	50	30	23	24	82	47.1		3674.7	420.39	2779.22
	12/4/2013	12:36	12/4/2013 12:36	50	30	23	24	82	47.1		424.0	48.51	2827.72
	12/4/2013	12:37	12/4/2013 12:37								47.1	5.39	2833.11
	12/4/2013	12:38	12/4/2013 12:38			17							2833.11
	SW-35 Event 3	12/10/2013	7:32	12/10/2013 7:32				0		0.0			
12/10/2013		7:33	12/10/2013 7:33	53	29	30	<2		0.0		0.0	0.00	2833.11
12/10/2013		7:38	12/10/2013 7:38	53	29	28	15	70	29.4		73.6	8.42	2841.53
12/10/2013		7:41	12/10/2013 7:41	53	27.5	22	19.5	70	37.6		100.6	11.51	2853.04
12/10/2013		8:25	12/10/2013 8:25	51	27	20	20.5	72	39.2		1690.3	193.38	3046.42
12/10/2013		9:04	12/10/2013 9:04	51	27	20	21.5	72	41.1		1567.1	179.27	3225.69
12/10/2013		9:39	12/10/2013 9:39	50	27	20	22	72	42.1		1456.6	166.63	3392.32
12/10/2013		10:12	12/10/2013 10:12	50	27	20	22	72	42.1		1389.1	158.91	3551.23
12/10/2013		10:13	12/10/2013 10:13	49	26	20	24	72	45.4		43.7	5.00	3556.23
12/10/2013		11:05	12/10/2013 11:05	47.5	27.5	20	24	74	46.1		2378.2	272.07	3828.30
12/10/2013		11:50	12/10/2013 11:50	45	27.5	21	25.5	74	49.0		2139.8	244.79	4073.09
12/10/2013		12:02	12/10/2013 12:02	45	27.5	20	25.5	74	49.0		587.9	67.26	4140.35
12/10/2013		12:03	12/10/2013 12:03			16							4140.35
SW-35 Event 4	12/17/2013	8:40	12/17/2013 8:40	47	20	18	10	54	17.7				4140.35
	12/17/2013	8:41	12/17/2013 8:41	47	26	22	18	54	34.6		26.2	3.00	4143.35
	12/17/2013	8:42	12/17/2013 8:42	47	27	23.5	23	54	44.8		39.7	4.54	4147.89
	12/17/2013	8:47	12/17/2013 8:47	47	27	23.5	24	55	46.7		228.7	26.17	4174.06
	12/17/2013	9:35	12/17/2013 9:35	45	27	22	24.5	60	47.4		2259.1	258.44	4432.50
	12/17/2013	10:40	12/17/2013 10:40	40	25	21	24.5	68	45.9		3033.4	347.02	4779.52
	12/17/2013	11:33	12/17/2013 11:33	39	26	20	24	72	45.4		2418.5	276.67	5056.19
	12/17/2013	12:48	12/17/2013 12:48	50	25	20	24.5	78	45.5		3405.8	389.63	5445.82
	12/17/2013	12:49	12/17/2013 12:49								45.5	5.20	5451.02
	12/17/2013	12:50	12/17/2013 12:50			16							5451.02
	SW-35 Event 5	1/11/2014	8:14	1/11/2014 8:14	45	28	24	10	65	19.5			
1/11/2014		8:17	1/11/2014 8:17	45	28	24	19	65	37.0		84.8	9.70	5460.72
1/11/2014		8:31	1/11/2014 8:31	44	26	22	22	66	41.8		552.1	63.16	5523.88

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/11/2014	9:06	1/11/2014 9:06	42	26	22	22.8	67	43.3		1489.7	170.42	5694.30
	1/11/2014	10:32	1/11/2014 10:32	38	26	21	23	72	43.5		3731.2	426.85	6121.15
	1/11/2014	11:36	1/11/2014 11:36	38	26	21	23.5	74	44.3		2809.6	321.41	6442.56
	1/11/2014	12:19	1/11/2014 12:19	43	26	21	23.8	77	44.8		1915.5	219.14	6661.70
	1/11/2014	12:20	1/11/2014 12:20								44.8	5.12	6666.82
SW-35 Event 6	1/13/2014	12:34	1/13/2014 12:34	47	29.5	29	<2	72	0.0				6666.82
	1/13/2014	12:39	1/13/2014 12:39	47	28.5	27	9	72	17.5		43.8	5.01	6671.84
	1/13/2014	13:14	1/13/2014 13:14	45	26.5	24	14	72	26.6		772.7	88.40	6760.24
	1/13/2014	13:17	1/13/2014 13:17	44	29.5	26.5	20	72	39.4		99.1	11.33	6771.57
	1/13/2014	14:19	1/13/2014 14:19	40	29.5	25	22	71	43.4		2567.1	293.68	7065.25
	1/13/2014	15:44	1/13/2014 15:44	39	28	23.5	22.8	70	44.2		3724.5	426.08	7491.33
	1/13/2014	16:23	1/13/2014 16:23	40	28	23.5	23	70	44.6		1732.8	198.24	7689.57
	1/13/2014	16:50	1/13/2014 16:50	40	28	23.5	23.8	68	46.3		1227.1	140.38	7829.95
	1/13/2014	16:51	1/13/2014 16:51								46.3	5.29	7835.24
	1/13/2014	16:55	1/13/2014 16:55			17							7835.24
SW-35 Event 7	1/23/2014	7:51	1/23/2014 7:51	55	23	27	14.5	38	27.3				7835.24
	1/23/2014	7:52	1/23/2014 7:52		25	25	17.5	38	33.8		30.5	3.49	7838.73
	1/23/2014	8:10	1/23/2014 8:10	52	23.5	22.5	18.5	38	35.0		619.4	70.86	7909.59
	1/23/2014	8:43	1/23/2014 8:43	50	23	22	19.2	44	35.9		1170.2	133.87	8043.46
	1/23/2014	9:22	1/23/2014 9:22	47	23	21.5	19.5	46	36.4		1409.3	161.22	8204.68
	1/23/2014	10:12	1/23/2014 10:12	45	23	21.5	19.5	48	36.3		1817.1	207.87	8412.56
	1/23/2014	11:22	1/23/2014 11:22	43	23	21.5	19	50	35.3		2506.2	286.71	8699.27
	1/23/2014	12:16	1/23/2014 12:16	45	23	21.5	19.2	54	35.5		1912.5	218.79	8918.06
	1/23/2014	12:17	1/23/2014 12:17			17					35.5	4.06	8922.12
SW-35 Event 8	1/24/2014	7:38	1/24/2014 7:38	55	27	26	<2	40	0.0				8922.12
	1/24/2014	7:39	1/24/2014 7:39	55	29.5	27.5	<2	40	0.0		0.0	0.00	8922.12
	1/24/2014	7:47	1/24/2014 7:47	55	29	27.5	4	40	8.1		32.4	3.70	8925.83
	1/24/2014	8:02	1/24/2014 8:02	53	27.5	26	8.5	41	16.9		187.3	21.43	8947.25
	1/24/2014	8:24	1/24/2014 8:24	50	26.5	25	11.9	44	23.3		441.6	50.52	8997.77
	1/24/2014	8:25	1/24/2014 8:25	50	29	27	15	44	30.2		26.7	3.06	9000.83
	1/24/2014	8:26	1/24/2014 8:26	50	30	27.5	16.8	44	34.2		32.2	3.69	9004.52
	1/24/2014	8:50	1/24/2014 8:50	49	30	27	18	45	36.7		850.7	97.32	9101.85
	1/24/2014	9:39	1/24/2014 9:39	47	29.8	26	19.8	49	40.1		1879.4	215.01	9316.85
	1/24/2014	10:40	1/24/2014 10:40	46	29.5	25.2	20.5	51	41.2		2479.9	283.71	9600.56
	1/24/2014	11:43	1/24/2014 11:43	45	29.2	25	21	54	42.0		2621.8	299.94	9900.49
	1/24/2014	11:59	1/24/2014 11:59	45	29.2	25	21	54	42.0		671.7	76.84	9977.34
	1/24/2014	12:00	1/24/2014 12:00			12					42.0	4.80	9982.14
SW-35 Event 9	3/10/2015	8:37	3/10/2015 8:37		26	27	0	65	0.0				9982.14
	3/10/2015	9:03	3/10/2015 9:03		26	25	4.5	68	8.5		111.0	12.70	9994.84
	3/10/2015	10:39	3/10/2015 10:39		26	24	8	83	15.0		1128.0	129.04	10123.88
	3/10/2015	10:40	3/10/2015 10:40		34	30.5	14	83	28.7		21.8	2.50	10126.38
	3/10/2015	11:58	3/10/2015 11:58		34	30	14.5	86	29.6		2273.3	260.06	10386.44
	3/10/2015	13:22	3/10/2015 13:22		33	29	16	88	32.3		2599.3	297.36	10683.80
	3/10/2015	13:23	3/10/2015 13:23			16			0.0		16.1	1.85	10685.65
SW-35 Event 10	3/19/2015	13:23	3/19/2015 13:23		30	30	0	74	0.0				10685.65
	3/19/2015	13:33	3/19/2015 13:33		30	29	4	74	7.9		39.6	4.53	10690.18
	3/19/2015	14:16	3/19/2015 14:16		30	27.5	10	74	19.8		595.4	68.12	10758.29
	3/19/2015	15:23	3/19/2015 15:23		30	25	12	74	23.7		1457.9	166.78	10925.07
	3/19/2015	15:25	3/19/2015 15:25			15					47.5	5.43	10930.50
SW-35 Event 11	3/25/2015	12:45	3/25/2015 12:45		30	29	0	78	0.0				10930.50
	3/25/2015	13:00	3/25/2015 13:00		29	29	3	79	5.8		43.8	5.01	10935.51

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/25/2015	13:01	3/25/2015 13:01		32	31	6	79	12.1		9.0	1.02	10936.54
	3/25/2015	13:27	3/25/2015 13:27		32	28.5	9	80	18.1		392.3	44.88	10981.41
	3/25/2015	13:28	3/25/2015 13:28			15					18.1	2.07	10983.48
SW-35 Event 12	3/30/2015	8:02	3/30/2015 8:02		29	29	0	55	0.0				10983.48
	3/30/2015	8:11	3/30/2015 8:11		28	27.5	3	56	5.9		26.6	3.04	10986.52
	3/30/2015	8:14	3/30/2015 8:14		32	31	5	56	10.3		24.3	2.78	10989.30
	3/30/2015	9:04	3/30/2015 9:04		31	26.5	11	65	22.2		812.3	92.93	11082.23
	3/30/2015	9:05	3/30/2015 9:05		34	29	14	65	29.2		25.7	2.94	11085.17
	3/30/2015	10:10	3/30/2015 10:10		34	29	14	72	29.0		1890.3	216.24	11301.41
	3/30/2015	11:03	3/30/2015 11:03		34	29	14	80	28.8		1530.1	175.04	11476.45
	3/30/2015	11:55	3/30/2015 11:55		34	29	14	82	28.7		1493.9	170.91	11647.36
	3/30/2015	12:52	3/30/2015 12:52		34	28	15	84	30.7		1692.8	193.65	11841.01
	3/30/2015	12:53	3/30/2015 12:53			18					30.7	3.51	11844.53
SW-35 Event 13	4/1/2015	7:45	4/1/2015 7:45		30	30	0	68	0.0				11844.53
	4/1/2015	8:03	4/1/2015 8:03		28	27	6	70	11.6		104.8	11.99	11856.51
	4/1/2015	8:04	4/1/2015 8:04		32	30	8	70	16.2		13.9	1.60	11858.11
	4/1/2015	8:58	4/1/2015 8:58		32	27	13	74	26.3		1148.5	131.39	11989.49
	4/1/2015	9:00	4/1/2015 9:00		36	30	17	74	35.8		62.1	7.11	11996.60
	4/1/2015	9:18	4/1/2015 9:18		36	29	18	74	38.0		664.2	75.99	12072.59
	4/1/2015	9:34	4/1/2015 9:34		36	29	18	76	37.9		606.7	69.41	12142.00
	4/1/2015	9:36	4/1/2015 9:36			16					75.8	8.67	12150.67
Total CO ₂ Mass (lbs):													12150.67

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-36 Event 1	11/23/2013	8:09	11/23/2013 8:09	50	24			63	0.0				0.00
	11/23/2013	8:11	11/23/2013 8:11	55	24	23.5	<2	63	0.0		0.0	0.00	0.00
	11/23/2013	8:24	11/23/2013 8:24	55	24	23.5	<2	65	0.0		0.0	0.00	0.00
	11/23/2013	8:29	11/23/2013 8:29		33	33	<2	65	0.0		0.0	0.00	0.00
	11/23/2013	8:42	11/23/2013 8:42	54	34	33	2	66	4.2		27.1	3.10	3.10
	11/23/2013	9:18	11/23/2013 9:18		34	32	2	76	4.1		149.2	17.07	20.16
	11/23/2013	9:20	11/23/2013 9:20		36	36	5	78	10.5		14.6	1.67	21.84
	11/23/2013	10:17	11/23/2013 10:17		36	36	8	80	16.8		777.3	88.93	110.76
	11/23/2013	11:23	11/23/2013 11:23		36	35.5	9	80	18.9		1176.1	134.55	245.31
	11/23/2013	12:34	11/23/2013 12:34	47	36	35	10	78	21.0		1415.5	161.93	407.25
	11/23/2013	12:51	11/23/2013 12:51		36	35	10	80	21.0		356.7	40.81	448.06
	11/23/2013	12:52	11/23/2013 12:52								21.0	2.40	450.46
	11/23/2013	12:53	11/23/2013 12:53										450.46
SW-36 Event 2	12/12/2013	9:09	12/12/2013 9:09	50	34	33	<2	62	0.0		0.0	0.00	450.46
	12/12/2013	9:51	12/12/2013 9:51	50	34	32.5	<2	67	0.0		0.0	0.00	450.46
	12/12/2013	10:47	12/12/2013 10:47	49	32.5	32	4	68	8.2		229.1	26.21	476.66
	12/12/2013	11:42	12/12/2013 11:42	45	32	31	5	70	10.2		504.2	57.68	534.34
	12/12/2013	13:10	12/12/2013 13:10	50	36	32	6	70	12.7		1005.6	115.04	649.38
	12/12/2013	13:11	12/12/2013 13:11								12.7	1.45	650.83
	12/12/2013	13:12	12/12/2013 13:12			26							650.83
SW-36 Event 3	12/13/2013	8:35	12/13/2013 8:35	50	35	35	<2	50	0.0				650.83
	12/13/2013	8:36	12/13/2013 8:36	50	30	28	<2	50	0.0		0.0	0.00	650.83
	12/13/2013	8:58	12/13/2013 8:58	50	32	33	<2	50	0.0		0.0	0.00	650.83
	12/13/2013	9:52	12/13/2013 9:52	48	32	33	<2	68	0.0		0.0	0.00	650.83
	12/13/2013	10:54	12/13/2013 10:54	45	32	33	3	70	6.1		188.8	21.60	672.43
	12/13/2013	12:42	12/13/2013 12:42	45	32	32	3.5	72	7.1		711.9	81.44	753.88
	12/13/2013	13:35	12/13/2013 13:35	45	31	32	4	73	8.0		400.2	45.78	799.66
	12/13/2013	15:01	12/13/2013 15:01	45	31	32	4	73	8.0		688.8	78.80	878.46
	12/13/2013	15:02	12/13/2013 15:02								8.0	0.92	879.38
	12/13/2013	15:03	12/13/2013 15:03			26							879.38
SW-36 Event 4	12/16/2013	8:45	12/16/2013 8:45	48	32	32	<2	50	0.0				879.38
	12/16/2013	9:26	12/16/2013 9:26	48	32.5	31	<2	58	0.0		0.0	0.00	879.38
	12/16/2013	9:28	12/16/2013 9:28	48	32	32	4	58	8.2		8.2	0.94	880.32
	12/16/2013	10:16	12/16/2013 10:16	47.5	32	32	4	56	8.2		394.9	45.18	925.50
	12/16/2013	11:18	12/16/2013 11:18	45	32	31.5	5	70	10.2		570.0	65.21	990.70
	12/16/2013	13:26	12/16/2013 13:26	50	30	31	6	68	11.9		1413.8	161.74	1152.44
	12/16/2013	13:27	12/16/2013 13:27								11.9	1.37	1153.81
	12/16/2013	13:28	12/16/2013 13:28			24							1153.81
	12/16/2013	14:53	12/16/2013 14:53	45	30	30	11.5	70	22.8				1153.81
	12/16/2013	15:22	12/16/2013 15:22	45	32	31	8	69	16.3		566.9	64.85	1218.66
	12/16/2013	16:10	12/16/2013 16:10	45	32	31	8	68	16.3		780.8	89.33	1307.99
	12/16/2013	22:14	12/16/2013 22:14	50	32	30.5	9.5	58	19.5		6514.6	745.27	2053.26
	12/17/2013	8:54	12/17/2013 8:54	45	32	30	12	64	24.5		14089.2	1611.80	3665.06
	12/17/2013	10:53	12/17/2013 10:53	41	32	30	12	68	24.4		2910.9	333.00	3998.06
	12/17/2013	13:37	12/17/2013 13:37	45	31	30	12	69	24.1		3979.9	455.30	4453.36
	12/17/2013	13:38	12/17/2013 13:38	46	32	31	16	69	32.5		28.3	3.24	4456.60
	12/17/2013	14:35	12/17/2013 14:35	45	32	31	15	70	30.5		1794.8	205.32	4661.92
12/17/2013	15:58	12/17/2013 15:58	45	32	31	15	69	30.5		2529.1	289.33	4951.25	
12/17/2013	16:00	12/17/2013 16:00								61.0	6.98	4958.23	
12/17/2013	16:01	12/17/2013 16:01			24							4958.23	
SW-36 Event 5	1/7/2014	9:19	1/7/2014 9:19				0	40	0				4958.23

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/7/2014	9:21	1/7/2014 9:21	54	30	29	<2	40	0.0		0.0	0.00	4958.23
	1/7/2014	9:22	1/7/2014 9:22	53	34	32	<2	40	0.0		0.0	0.00	4958.23
	1/7/2014	9:53	1/7/2014 9:53	54	33	30.5	3	43	6.3		98.1	11.22	4969.45
	1/7/2014	9:55	1/7/2014 9:55	53	33	32.5	5	43	10.5		16.9	1.93	4971.38
	1/7/2014	10:44	1/7/2014 10:44	51	33	32.5	5.5	46	11.6		541.7	61.96	5033.34
	1/7/2014	11:44	1/7/2014 11:44	50	33	32.5	6.5	48	13.6		756.0	86.49	5119.83
	1/7/2014	13:18	1/7/2014 13:18	50	33	32	7	50	14.7		1329.8	152.13	5271.97
	1/7/2014	14:08	1/7/2014 14:08	50	33	32	7.5	50	15.7		759.0	86.83	5358.80
	1/7/2014	15:26	1/7/2014 15:26	50	33	31.5	8	53	16.7		1263.7	144.57	5503.37
	1/7/2014	16:40	1/7/2014 16:40	49	33	31.5	8.5	48	17.8		1277.7	146.17	5649.54
	1/7/2014	17:24	1/7/2014 17:24	54	33	31	8.5	45	17.9		785.9	89.91	5739.45
	1/7/2014	17:25	1/7/2014 17:25								17.9	2.05	5741.49
	1/7/2014	17:26	1/7/2014 17:26			25							5741.49
SW-36 Event 6	1/14/2014	7:55	1/14/2014 7:55										5741.49
	1/14/2014	7:56	1/14/2014 7:56	50	34	34.5	<2	62	0.0		0.0	0.00	5741.49
	1/14/2014	8:20	1/14/2014 8:20	45	32.5	33	4	62	8.2		98.8	11.30	5752.79
	1/14/2014	9:50	1/14/2014 9:50	45	31.5	32	5.5	64	11.2		873.1	99.88	5852.68
	1/14/2014	10:58	1/14/2014 10:58	43	32	32.5	6	65	12.2		796.1	91.07	5943.75
	1/14/2014	12:28	1/14/2014 12:28	45	32	32	6	66	12.2		1101.3	125.99	6069.74
	1/14/2014	13:45	1/14/2014 13:45	48	31	32	7.5	69	15.1		1051.3	120.27	6190.01
	1/14/2014	14:14	1/14/2014 14:14	48	31	32	7.5	69	15.1		437.2	50.02	6240.03
	1/14/2014	15:58	1/14/2014 15:58	46	30	31	8.2	70	16.3		1630.7	186.56	6426.58
	1/14/2014	16:15	1/14/2014 16:15	46	30	31	8.2	70	16.3		276.8	31.67	6458.25
	1/14/2014	16:16	1/14/2014 16:16			25							6458.25
SW-36 Event 7	1/16/2014	8:32	1/16/2014 8:32	51	26	20	<2	48	0.0				6458.25
	1/16/2014	8:33	1/16/2014 8:33	51	30	31.5	<2	48	0.0		0.0	0.00	6458.25
	1/16/2014	9:26	1/16/2014 9:26	48	28.5	30	5.2	46	10.4		275.5	31.51	6489.76
	1/16/2014	9:27	1/16/2014 9:27	48	32	32	7	46	14.6		12.5	1.43	6491.19
	1/16/2014	10:32	1/16/2014 10:32	45	32	32	7.2	48	14.9		958.9	109.69	6600.89
	1/16/2014	11:33	1/16/2014 11:33	43	31	31.5	7.8	49	16.0		943.7	107.96	6708.84
	1/16/2014	12:59	1/16/2014 12:59	47	31	31.5	8	48	16.4		1394.0	159.48	6868.32
	1/16/2014	14:52	1/16/2014 14:52	47	31	31.5	9	60	18.3		1959.2	224.13	7092.45
	1/16/2014	15:35	1/16/2014 15:35	50	31	31.5	9.2	60	18.7		793.6	90.79	7183.24
	1/16/2014	16:32	1/16/2014 16:32	52	31	31.5	9.8	60	19.9		1098.2	125.64	7308.88
	1/16/2014	16:33	1/16/2014 16:33								19.9	2.27	7311.16
	1/16/2014	16:34	1/16/2014 16:34			25							7311.16
SW-36 Event 8	1/21/2014	8:24	1/21/2014 8:24	53	26	27	<2	56	0.0				7311.16
	1/21/2014	8:25	1/21/2014 8:25	53	32	33	<2	56	0.0		0.0	0.00	7311.16
	1/21/2014	8:29	1/21/2014 8:29	50	31	33	3	56	6.1		12.2	1.40	7312.55
	1/21/2014	8:35	1/21/2014 8:35	50	31	33	3.8	56	7.7		41.5	4.75	7317.31
	1/21/2014	9:28	1/21/2014 9:28	46	31	32.5	5	64	10.1		472.7	54.08	7371.39
	1/21/2014	10:10	1/21/2014 10:10	42	30	32.5	5.8	64	11.6		455.4	52.10	7423.48
	1/21/2014	11:33	1/21/2014 11:33	40	30	31.8	6	68	11.9		976.2	111.68	7535.17
	1/21/2014	13:00	1/21/2014 13:00	46	30	32	6.8	66	13.6		1109.0	126.87	7662.04
	1/21/2014	14:14	1/21/2014 14:14	50	30	31.5	7	68	13.9		1016.9	116.34	7778.38
	1/21/2014	15:59	1/21/2014 15:59	50	30	31.5	7.2	66	14.4		1484.8	169.86	7948.24
	1/21/2014	17:07	1/21/2014 17:07	50	30	31.5	7.5	64	15.0		997.4	114.10	8062.34
	1/21/2014	17:08	1/21/2014 17:08								15.0	1.71	8064.05
	1/21/2014	17:09	1/21/2014 17:09			26							8064.05
SW-36 Event 9	1/15/2015	8:22	1/15/2015 8:22		24	25	0	50	0.0				8064.05
	1/15/2015	8:53	1/15/2015 8:53		24	25	3	52	5.6		87.4	10.00	8074.05

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/15/2015	8:54	1/15/2015 8:54		32	32	6	52	12.4		9.0	1.03	8075.08
	1/15/2015	10:12	1/15/2015 10:12		32	32	6.5	57	13.4		1005.1	114.98	8190.07
	1/15/2015	10:15	1/15/2015 10:15		36	36	11	57	23.6		55.4	6.34	8196.41
	1/15/2015	12:10	1/15/2015 12:10		36	36	11	58	23.6		2711.5	310.19	8506.60
	1/15/2015	14:26	1/15/2015 14:26		36	36	11	58	23.6		3205.0	366.65	8873.25
	1/15/2015	16:12	1/15/2015 16:12		36	36	11	56	23.6		2500.5	286.06	9159.31
	1/15/2015	17:04	1/15/2015 17:04		36	36	11	55	23.6		1228.5	140.54	9299.86
	1/15/2015	17:05	1/15/2015 17:05			30					23.6	2.70	9302.56
SW-36 Event 10	1/28/2015	7:45	1/28/2015 7:45		26	28	0	44	0.0				9302.56
	1/28/2015	8:34	1/28/2015 8:34		26	28	0	56	0.0		0.0	0.00	9302.56
	1/28/2015	8:35	1/28/2015 8:35		32	35	6	56	12.4		6.2	0.71	9303.27
	1/28/2015	10:10	1/28/2015 10:10		32	35	6	64	12.3		1168.9	133.72	9436.99
	1/28/2015	11:25	1/28/2015 11:25		32	34.5	6	65	12.2		918.6	105.09	9542.08
	1/28/2015	13:28	1/28/2015 13:28		33	34.5	6	66	12.4		1513.2	173.11	9715.19
	1/28/2015	15:39	1/28/2015 15:39		33	34.5	6	68	12.3		1617.9	185.09	9900.28
	1/28/2015	16:55	1/28/2015 16:55		33	34	6	64	12.4		939.6	107.49	10007.77
	1/28/2015	16:56	1/28/2015 16:56			32					12.4	1.42	10009.19
SW-36 Event 11	2/3/2015	8:24	2/3/2015 8:24		27	29	0	50	0.0				10009.19
	2/3/2015	8:47	2/3/2015 8:47		26	28	<2	56	0.0		0.0	0.00	10009.19
	2/3/2015	8:49	2/3/2015 8:49		35	36	8.5	56	18.1		18.1	2.07	10011.25
	2/3/2015	9:58	2/3/2015 9:58		35	35	9	64	19.0		1277.7	146.17	10157.42
	2/3/2015	11:39	2/3/2015 11:39		35	35	9.5	66	20.0		1967.5	225.08	10382.50
	2/3/2015	14:33	2/3/2015 14:33		35	34.5	10	65	21.1		3571.1	408.53	10791.04
	2/3/2015	15:57	2/3/2015 15:57		35	34.5	10	65	21.1		1769.0	202.38	10993.41
	2/3/2015	17:05	2/3/2015 17:05		34	35	10	60	20.9		1428.3	163.39	11156.81
	2/3/2015	17:06	2/3/2015 17:06			28					20.9	2.40	11159.20
SW-36 Event 12	2/10/2015	8:27	2/10/2015 8:27		29	28	3	60	5.9				11159.20
	2/10/2015	9:05	2/10/2015 9:05		28	28	4	60	7.8		261.9	29.96	11189.17
	2/10/2015	9:06	2/10/2015 9:06		34	33.5	10	60	20.9		14.4	1.65	11190.81
	2/10/2015	10:28	2/10/2015 10:28		34	33.5	10	63	20.9		1715.1	196.21	11387.02
	2/10/2015	11:58	2/10/2015 11:58		34	33.5	10	66	20.8		1876.8	214.71	11601.73
	2/10/2015	13:49	2/10/2015 13:49		34	33	11	64	23.0		2429.4	277.93	11879.66
	2/10/2015	15:22	2/10/2015 15:22		34	33	11	64	23.0		2134.4	244.18	12123.84
	2/10/2015	17:00	2/10/2015 17:00		34	33	12	67	25.0		2347.8	268.58	12392.42
	2/10/2015	17:01	2/10/2015 17:01			29					25.0	2.86	12395.28
SW-36 Event 13	2/20/2015	8:29	2/20/2015 8:29		30	30	7	45	14.3				12395.28
	2/20/2015	8:48	2/20/2015 8:48		30	29	9	50	18.2		308.6	35.30	12430.58
	2/20/2015	8:49	2/20/2015 8:49		36	34	14	50	30.2		24.2	2.77	12433.35
	2/20/2015	10:07	2/20/2015 10:07		36	34	14	60	29.9		2346.7	268.46	12701.81
	2/20/2015	11:44	2/20/2015 11:44		36	34	14	60	29.9		2903.5	332.16	13033.97
	2/20/2015	13:25	2/20/2015 13:25		36	34	14	59	30.0		3024.8	346.03	13380.00
	2/20/2015	15:57	2/20/2015 15:57		36	34	14	60	29.9		4552.1	520.76	13900.77
	2/20/2015	16:59	2/20/2015 16:59		36	34	14.5	56	31.1		1892.9	216.54	14117.31
	2/20/2015	17:00	2/20/2015 17:00			27					31.1	3.56	14120.87
SW-36 Event 14	2/23/2015	8:09	2/23/2015 8:09		30	33	0	66	0.0				14120.87
	2/23/2015	8:26	2/23/2015 8:26		30	29	7	66	14.0		118.6	13.57	14134.44
	2/23/2015	8:27	2/23/2015 8:27		36	34	11.5	66	24.4		19.2	2.20	14136.64
	2/23/2015	10:09	2/23/2015 10:09		36	34	12	73	25.3		2538.3	290.38	14427.02
	2/23/2015	11:56	2/23/2015 11:56		36	34	13	72	27.5		2824.6	323.13	14750.14
	2/23/2015	13:16	2/23/2015 13:16		36	34	13	70	27.5		2199.5	251.62	15001.76
	2/23/2015	15:13	2/23/2015 15:13		36	34	13	70	27.5		3219.9	368.36	15370.12

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/23/2015	17:29	2/23/2015 17:29		36	34	13	69	27.5		3744.6	428.38	15798.50
	2/23/2015	17:30	2/23/2015 17:30			30					27.5	3.15	15801.66
SW-36 Event 15	4/11/2015	12:42	4/11/2015 12:42		30	30	0	97	0.0				15801.66
	4/11/2015	13:13	4/11/2015 13:13		30	29.5	0	94	0.0		0.0	0.00	15801.66
	4/11/2015	13:14	4/11/2015 13:14		36	36	6	94	12.4		6.2	0.71	15802.37
	4/11/2015	13:59	4/11/2015 13:59		36	35.5	6	92	12.4		559.1	63.96	15866.33
	4/11/2015	15:08	4/11/2015 15:08		36	35	8	90	16.6		1002.2	114.65	15980.98
	4/11/2015	16:32	4/11/2015 16:32		36	34	9	80	18.9		1490.2	170.48	16151.46
	4/11/2015	16:33	4/11/2015 16:33			29					18.9	2.16	16153.62
Total CO ₂ Mass (lbs):												16153.62	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-37 Event 1	11/22/2013	13:02	11/22/2013 13:02	50	28			80	0.0				0.00
	11/22/2013	13:05	11/22/2013 13:05		36	36.4	<2	80	0.0		0.0	0.00	0.00
	11/22/2013	13:20	11/22/2013 13:20		35	34.4	5.5	81	11.4		85.5	9.78	9.78
	11/22/2013	14:06	11/22/2013 14:06		34	33.6	8	82	16.4		639.5	73.16	82.94
	11/22/2013	15:22	11/22/2013 15:22	48	34	33.2	9	75	18.6		1329.1	152.05	235.00
	11/22/2013	16:56	11/22/2013 16:56		34	33.2	9.5	74	19.6		1795.6	205.41	440.41
	11/22/2013	17:19	11/22/2013 17:19	50	34	33.2	9.5	70	19.7		452.3	51.74	492.16
	11/22/2013	17:20	11/22/2013 17:20								19.7	2.25	494.41
11/22/2013	17:21	11/22/2013 17:21										494.41	
SW-37 Event 2	12/6/2013	8:37	12/6/2013 8:37	54	32	32.5	<2	75	0.0				494.41
	12/6/2013	9:18	12/6/2013 9:18	48	31	31.5	3	82	6.0		122.1	13.97	508.38
	12/6/2013	9:19	12/6/2013 9:19	47	34	34	6	82	12.3		9.1	1.04	509.42
	12/6/2013	10:29	12/6/2013 10:29	45	34	33.5	6	84	12.3		860.2	98.41	607.83
	12/6/2013	11:23	12/6/2013 11:23	44	34	33.5	7	85	14.3		717.9	82.12	689.96
	12/6/2013	13:15	12/6/2013 13:15	50	34	33.5	8	83	16.4		1719.0	196.65	886.60
	12/6/2013	13:16	12/6/2013 13:16								16.4	1.87	888.48
	12/6/2013	13:18	12/6/2013 13:18			26							888.48
SW-37 Event 3	12/11/2013	9:08	12/11/2013 9:08	52	34	33	<2	68	0.0				888.48
	12/11/2013	9:33	12/11/2013 9:33	52.5	34	32	<2	70	0.0		0.0	0.00	888.48
	12/11/2013	10:04	12/11/2013 10:04	51	34	32	<2	70	0.0		0.0	0.00	888.48
	12/11/2013	11:10	12/11/2013 11:10	51	32.5	32	<2	74	0.0		0.0	0.00	888.48
	12/11/2013	11:18	12/11/2013 11:18	50	32.5	33	5.5	74	11.2		44.7	5.12	893.60
	12/11/2013	11:49	12/11/2013 11:49	50	34	33	5.5	72	11.4		349.8	40.02	933.62
	12/11/2013	11:50	12/11/2013 11:50	50	35	34	7	72	14.6		13.0	1.49	935.11
	12/11/2013	12:38	12/11/2013 12:38	50	35	34	7	70	14.7		703.4	80.47	1015.58
	12/11/2013	13:38	12/11/2013 13:38								880.2	100.69	1116.27
	12/11/2013	13:39	12/11/2013 13:39			28							1116.27
SW-37 Event 4	12/13/2013	8:37	12/13/2013 8:37	50	35	33	<2	50	0.0				1116.27
	12/13/2013	8:44	12/13/2013 8:44	50	35	32	3	50	6.4		22.4	2.57	1118.84
	12/13/2013	8:45	12/13/2013 8:45	50	36	36	6	50	13.0				1118.84
	12/13/2013	8:46	12/13/2013 8:46	50	35	34	4	50	8.6		10.8	1.23	1120.07
	12/13/2013	9:54	12/13/2013 9:54	48	36	34	5.5	68	11.7		687.4	78.64	1198.71
	12/13/2013	10:56	12/13/2013 10:56	45	35	33	7.5	70	15.7		848.9	97.11	1295.82
	12/13/2013	12:44	12/13/2013 12:44	45	35	32	10.5	72	22.0		2034.6	232.76	1528.59
	12/13/2013	13:37	12/13/2013 13:37	45	35	32	11	73	23.0		1191.1	136.26	1664.84
	12/13/2013	13:38	12/13/2013 13:38	42.5	35	33.5	14.5	73	30.3		26.6	3.05	1667.89
	12/13/2013	15:04	12/13/2013 15:04	45	35	33.5	14.5	73	30.3		2605.6	298.08	1965.97
	12/13/2013	15:05	12/13/2013 15:05								30.3	3.47	1969.44
	12/13/2013	15:06	12/13/2013 15:06			27							1969.44
	SW-37 Event 5	12/19/2013	12:38	12/19/2013 12:38	48	35	34.5	<2	68	0.0			
12/19/2013		13:05	12/19/2013 13:05	50	35	33	<2	74	0.0		0.0	0.00	1969.44
12/19/2013		16:05	12/19/2013 16:05	45	34	31	6	70	12.4		1120.0	128.13	2097.57
12/19/2013		16:06	12/19/2013 16:06	42	35	33.5	12	70	25.1		18.8	2.15	2099.72
12/19/2013		16:48	12/19/2013 16:48	45	35	33.5	10.5	66	22.1		992.0	113.49	2213.20
12/19/2013		16:49	12/19/2013 16:49								22.1	2.53	2215.73
12/19/2013	16:50	12/19/2013 16:50										2215.73	
SW-37 Event 6	1/8/2014	8:23	1/8/2014 8:23				0		0.0				2215.73
	1/8/2014	8:25	1/8/2014 8:25	52	38	35	<2	40	0.0		0.0	0.00	2215.73
	1/8/2014	8:26	1/8/2014 8:26	51	35.5	34	<2	40	0.0		0.0	0.00	2215.73
	1/8/2014	8:31	1/8/2014 8:31		35.5	34	2.5	40	5.4		13.6	1.55	2217.28
	1/8/2014	8:44	1/8/2014 8:44		35.5	34	3	42	6.5		77.5	8.87	2226.15

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/8/2014	9:08	1/8/2014 9:08	50	33	32	3	44	6.3		153.9	17.60	2243.75
	1/8/2014	9:09	1/8/2014 9:09	50	33	33.5	4	44	8.4		7.4	0.84	2244.60
	1/8/2014	9:11	1/8/2014 9:11	50	34	33.5	5	45	10.6		19.1	2.18	2246.78
	1/8/2014	9:56	1/8/2014 9:56	49	33	33.5	5.5	50	11.5		498.4	57.02	2303.79
	1/8/2014	10:58	1/8/2014 10:58	48	33	33.5	5.8	58	12.0		730.4	83.56	2387.36
	1/8/2014	12:22	1/8/2014 12:22	47	32.5	33	5.5	60	11.3		982.2	112.36	2499.72
	1/8/2014	12:34	1/8/2014 12:34	47	32.5	33	5.5	60	11.3		136.1	15.57	2515.28
	1/8/2014	12:35	1/8/2014 12:35								11.3	1.30	2516.58
	1/8/2014	12:36	1/8/2014 12:36			29							2516.58
	1/8/2014	13:28	1/8/2014 13:28	49	35	30.5	13	59	27.5				2516.58
	1/8/2014	13:56	1/8/2014 13:56	50	34	32.5	9.5	58	19.9		664.8	76.05	2592.63
	1/8/2014	15:04	1/8/2014 15:04	50	34	32.5	9.5	60	19.9		1354.6	154.96	2747.59
	1/8/2014	16:26	1/8/2014 16:26	50	33.5	32	9.5	55	19.9		1631.6	186.66	2934.25
	1/8/2014	16:27	1/8/2014 16:27	59	36	33.5	14	55	30.1		25.0	2.86	2937.11
	1/8/2014	17:04	1/8/2014 17:04	50	36	34	14	55	30.1		1113.1	127.34	3064.45
	1/8/2014	17:05	1/8/2014 17:05								30.1	3.44	3067.89
	1/8/2014	17:06	1/8/2014 17:06			28							3067.89
SW-37 Event 7	1/10/2014	9:14	1/10/2014 9:14				0		0				3067.89
	1/10/2014	9:15	1/10/2014 9:15	52	32	32	4	67	8.1		4.1	0.47	3068.36
	1/10/2014	9:27	1/10/2014 9:27	49	34	34	6	67	12.5		123.8	14.16	3082.52
	1/10/2014	10:14	1/10/2014 10:14	45	34	34	6	68	12.5		586.3	67.08	3149.59
	1/10/2014	11:51	1/10/2014 11:51	45	33	34	6	69	12.3		1202.6	137.57	3287.17
	1/10/2014	12:50	1/10/2014 12:50	44	33	34	6	68	12.3		727.6	83.24	3370.41
	1/10/2014	14:19	1/10/2014 14:19	48	32.5	34	6	67	12.3		1095.7	125.35	3495.76
	1/10/2014	15:17	1/10/2014 15:17	47	32.5	34	6.5	67	13.3		742.2	84.91	3580.67
	1/10/2014	16:24	1/10/2014 16:24	46	32	34	7	68	14.2		922.9	105.58	3686.24
	1/10/2014	17:15	1/10/2014 17:15	45	32	34	8	66	16.3		779.0	89.11	3775.36
	1/10/2014	17:16	1/10/2014 17:16								16.3	1.87	3777.22
	1/10/2014	17:17	1/10/2014 17:17			29							3777.22
SW-37 Event 8	1/13/2014	8:14	1/13/2014 8:14						0.0				3777.22
	1/13/2014	8:15	1/13/2014 8:15	50	33	33	4	48	8.4		4.2	0.48	3777.70
	1/13/2014	8:16	1/13/2014 8:16	50	35	34	8	48	17.1		12.8	1.46	3779.16
	1/13/2014	8:25	1/13/2014 8:25	50	35	33.5	9.5	52	20.3		168.3	19.26	3798.42
	1/13/2014	10:11	1/13/2014 10:11	48	35	33.5	9.5	68	19.9		2131.5	243.85	4042.27
	1/13/2014	11:19	1/13/2014 11:19	48	35	33	9.5	70	19.9		1355.1	155.02	4197.30
	1/13/2014	11:20	1/13/2014 11:20	48	36	34	13	70	27.5		23.7	2.71	4200.01
	1/13/2014	12:14	1/13/2014 12:14	49	34	33.5	10	71	20.7		1302.5	149.01	4349.02
	1/13/2014	12:42	1/13/2014 12:42	48	34	33	10	70	20.7		580.5	66.41	4415.42
	1/13/2014	12:43	1/13/2014 12:43	48	36.5	34	15	70	31.9		26.3	3.01	4418.43
	1/13/2014	13:47	1/13/2014 13:47	45	36	34	15	68	31.8		2039.4	233.30	4651.74
	1/13/2014	14:45	1/13/2014 14:45	44	35.5	33.5	15	68	31.7		1840.7	210.58	4862.32
	1/13/2014	16:03	1/13/2014 16:03	42	34.5	33	15	67	31.4		2457.9	281.18	5143.50
	1/13/2014	17:07	1/13/2014 17:07	46	36	33.5	17.5	66	37.2		2193.9	250.98	5394.48
	1/13/2014	17:08	1/13/2014 17:08								37.2	4.25	5398.74
	1/13/2014	17:09	1/13/2014 17:09			27							5398.74
SW-37 Event 9	1/15/2014	9:28	1/15/2014 9:28	47	33	34.2	<2	62	0.0				5398.74
	1/15/2014	10:13	1/15/2014 10:13	44	31	33	7	68	14.1		316.9	36.26	5434.99
	1/15/2014	11:27	1/15/2014 11:27	42	31	31.5	7	68	14.1		1042.3	119.24	5554.23
	1/15/2014	11:28	1/15/2014 11:28	42	33.5	33	10	68	20.7		17.4	1.99	5556.22
	1/15/2014	12:45	1/15/2014 12:45	47	37	36	14	67	30.0		1951.8	223.28	5779.50
	1/15/2014	12:47	1/15/2014 12:47	47	34	34	10	67	20.8		50.8	5.81	5785.31

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/15/2014	13:57	1/15/2014 13:57	50	33.5	33	11.5	67	23.8		1561.0	178.58	5963.89
	1/15/2014	15:50	1/15/2014 15:50	48	33.5	33	13	70	26.8		2860.0	327.19	6291.08
	1/15/2014	17:25	1/15/2014 17:25	51	33.5	32.5	14	65	29.0		2652.9	303.49	6594.57
	1/15/2014	17:26	1/15/2014 17:26								29.0	3.32	6597.89
	1/15/2014	17:27	1/15/2014 17:27			28							6597.89
SW-37 Event 10	1/17/2014	7:40	1/17/2014 7:40	53	32	33	3.8	40	8.0				6597.89
	1/17/2014	9:07	1/17/2014 9:07	50	31	32	6.8	62	13.8		944.7	108.07	6705.97
	1/17/2014	9:08	1/17/2014 9:08	50	32	32.2	8	62	16.4		15.1	1.72	6707.69
	1/17/2014	10:36	1/17/2014 10:36	49	32	32.2	8.2	65	16.7		1456.5	166.63	6874.32
	1/17/2014	11:47	1/17/2014 11:47	47	32	32.2	9	69	18.3		1243.3	142.24	7016.55
	1/17/2014	12:46	1/17/2014 12:46	46	32	32.2	9.5	67	19.3		1110.3	127.02	7143.57
	1/17/2014	13:58	1/17/2014 13:58	47	32	32.2	10.3	70	20.9		1449.3	165.80	7309.37
	1/17/2014	14:19	1/17/2014 14:19	47	32	32.2	10.3	70	20.9		439.2	50.24	7359.62
	1/17/2014	15:44	1/17/2014 15:44	49	32	32.2	11	70	22.3		1838.0	210.27	7569.89
	1/17/2014	15:45	1/17/2014 15:45								22.3	2.56	7572.44
	1/17/2014	15:46	1/17/2014 15:46			28							7572.44
SW-37 Event 11	1/20/2014	8:05	1/20/2014 8:05	53	34	34	3	42	6.4				7572.44
	1/20/2014	8:14	1/20/2014 8:14	53	34	33.5	7.2	46	15.3		97.6	11.17	7583.61
	1/20/2014	8:54	1/20/2014 8:54	49	33	33.5	7.2	59	14.9		604.7	69.18	7652.80
	1/20/2014	10:05	1/20/2014 10:05	47	32.5	33.5	7.5	64	15.4		1077.1	123.22	7776.01
	1/20/2014	11:07	1/20/2014 11:07	45	32.5	33	7.8	66	16.0		973.0	111.31	7887.33
	1/20/2014	12:42	1/20/2014 12:42	49	32.5	33	8.5	64	17.5		1588.4	181.72	8069.04
	1/20/2014	13:08	1/20/2014 13:08	52	32.5	33	9	68	18.4		466.2	53.34	8122.38
	1/20/2014	14:03	1/20/2014 14:03	50	32	32.5	9	71	18.3		1008.3	115.35	8237.73
	1/20/2014	14:04	1/20/2014 14:04	50	33	33	11	71	22.6		20.4	2.33	8240.06
	1/20/2014	15:14	1/20/2014 15:14	50	33	33	11.9	71	24.4		1643.4	188.00	8428.06
	1/20/2014	16:16	1/20/2014 16:16	50	33	33	12	72	24.6		1518.4	173.70	8601.76
	1/20/2014	16:22	1/20/2014 16:22	50	33	33	12	72	24.6		147.5	16.87	8618.63
	1/20/2014	16:23	1/20/2014 16:23			29							8618.63
SW-37 Event 12	1/22/2014	8:21	1/22/2014 8:21	54	32	34	<2	41	0.0				8618.63
	1/22/2014	8:23	1/22/2014 8:23	54	32	34	3.8	41	7.9		7.9	0.91	8619.54
	1/22/2014	8:53	1/22/2014 8:53	53	30.5	31	6.8	46	13.9		327.8	37.50	8657.05
	1/22/2014	8:55	1/22/2014 8:55	53	33.5	33.5	9.8	46	20.7		34.6	3.96	8661.01
	1/22/2014	9:50	1/22/2014 9:50	50	33.5	33.5	10	50	21.0		1148.5	131.39	8792.39
	1/22/2014	10:58	1/22/2014 10:58	47	33.5	33.5	10	54	21.0		1428.5	163.42	8955.81
	1/22/2014	12:03	1/22/2014 12:03	45	33.2	33.2	10.2	54	21.3		1374.1	157.20	9113.01
	1/22/2014	12:49	1/22/2014 12:49	48	33.2	33.2	11.5	54	24.0		1043.0	119.32	9232.33
	1/22/2014	14:03	1/22/2014 14:03	48	33.2	33	12	56	25.0		1815.2	207.66	9439.98
	1/22/2014	15:10	1/22/2014 15:10	49	33	32.5	13	58	27.0		1742.9	199.39	9639.37
	1/22/2014	16:04	1/22/2014 16:04	50	32.5	32	13.5	59	27.9		1481.2	169.45	9808.82
	1/22/2014	16:05	1/22/2014 16:05	50	33.5	33	15	59	31.3		29.6	3.38	9812.21
	1/22/2014	16:36	1/22/2014 16:36	49	33.5	33	15.7	58	32.8		993.1	113.61	9925.81
	1/22/2014	16:38	1/22/2014 16:38			28					65.6	7.50	9933.31
SW-37 Event 13	1/28/2014	7:40	1/28/2014 7:40										9933.31
	1/28/2014	7:42	1/28/2014 7:42	55	34	33	4	54	8.4		16.9	1.93	9935.24
	1/28/2014	8:12	1/28/2014 8:12	55	33.5	32.5	6	54	12.6		315.1	36.05	9971.29
	1/28/2014	8:13	1/28/2014 8:13	55	35	34	9.5	54	20.2		16.4	1.88	9973.17
	1/28/2014	8:33	1/28/2014 8:33	55	35	34	9	54	19.2		393.9	45.07	10018.24
	1/28/2014	10:06	1/28/2014 10:06	53	35	34	8.5	54	18.1		1732.8	198.23	10216.46
	1/28/2014	11:06	1/28/2014 11:06	53	34	33.5	9.5	54	20.0		1143.6	130.83	10347.29
	1/28/2014	11:50	1/28/2014 11:50	51	34	33.5	10	54	21.1		904.1	103.43	10450.72

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/28/2014	13:05	1/28/2014 13:05	50	34	33	10.5	54	22.1		1620.1	185.34	10636.06
	1/28/2014	14:05	1/28/2014 14:05	50	33.5	32.5	11	53	23.1		1356.4	155.17	10791.23
	1/28/2014	14:07	1/28/2014 14:07	59	36	33.5	14	53	30.1		53.2	6.09	10797.32
	1/28/2014	15:00	1/28/2014 15:00	59	36	33.5	14.5	52	31.3		1627.1	186.14	10983.46
	1/28/2014	16:37	1/28/2014 16:37	51	36	33.5	14.5	50	31.3		3034.7	347.17	11330.63
	1/28/2014	16:38	1/28/2014 16:38								31.3	3.58	11334.21
	1/28/2014	16:39	1/28/2014 16:39			28							11334.21
SW-37 Event 14	1/29/2014	8:15	1/29/2014 8:15										11334.21
	1/29/2014	8:16	1/29/2014 8:16	50	35	33	18	40	38.9		38.9	4.45	11338.66
	1/29/2014	9:09	1/29/2014 9:09	50	37	34	18.5	44	40.6		2106.6	240.99	11579.66
	1/29/2014	10:26	1/29/2014 10:26	50	37	34	18	44	39.5		3084.6	352.88	11932.53
	1/29/2014	12:40	1/29/2014 12:40	50	37	34	18	45	39.5		5291.7	605.37	12537.90
	1/29/2014	13:57	1/29/2014 13:57	48	37	33.5	18.5	45	40.6		3081.4	352.51	12890.41
	1/29/2014	14:57	1/29/2014 14:57	48	37	33.5	18.5	44	40.6		2435.2	278.59	13169.00
	1/29/2014	16:29	1/29/2014 16:29	48	37	33.5	18.5	43	40.7		3737.9	427.62	13596.61
	1/29/2014	16:30	1/29/2014 16:30								40.7	4.65	13601.26
	1/29/2014	16:31	1/29/2014 16:31			27							13601.26
SW-37 Event 15	1/30/2014	7:37	1/30/2014 7:37										13601.26
	1/30/2014	7:38	1/30/2014 7:38	53	35	29	23	39	49.7		49.7	5.69	13606.95
	1/30/2014	7:46	1/30/2014 7:46	50	35	30	23.5	42	50.7		401.6	45.94	13652.90
	1/30/2014	9:02	1/30/2014 9:02	50	35	34	21	46	45.1		3638.3	416.23	14069.12
	1/30/2014	9:58	1/30/2014 9:58	50	36	34	20.5	47	44.4		2506.0	286.68	14355.81
	1/30/2014	10:58	1/30/2014 10:58	50	36	34	20.5	47	44.4		2664.8	304.86	14660.66
	1/30/2014	12:24	1/30/2014 12:24	50	37	34	21	50	45.8		3879.7	443.83	15104.50
	1/30/2014	13:31	1/30/2014 13:31	50	37	34	21.5	50	46.9		3105.9	355.31	15459.81
	1/30/2014	13:32	1/30/2014 13:32								46.9	5.37	15465.17
	1/30/2014	13:33	1/30/2014 13:33			28							15465.17
SW-37 Event 16	2/5/2014	7:43	2/5/2014 7:43	55	32	31.5	3	61	6.1				15465.17
	2/5/2014	7:44	2/5/2014 7:44		33	32.5	4	61	8.3		7.2	0.83	15466.00
	2/5/2014	7:46	2/5/2014 7:46		34	33.5	8.1	61	17.0		25.2	2.89	15468.89
	2/5/2014	7:57	2/5/2014 7:57	55	34	33.5	8.1	62	16.9		186.4	21.32	15490.21
	2/5/2014	8:48	2/5/2014 8:48		34	33.5	8.1	66	16.9		861.9	98.60	15588.81
	2/5/2014	10:28	2/5/2014 10:28		34	33.5	9	68	18.7		1778.5	203.46	15792.27
	2/5/2014	11:29	2/5/2014 11:29		33.5	33.5	9.5	70	19.6		1168.3	133.65	15925.92
	2/5/2014	12:41	2/5/2014 12:41	45	33.5	33.5	10	72	20.6		1447.0	165.53	16091.45
	2/5/2014	13:35	2/5/2014 13:35	45	33.5	33.5	10.2	74	21.0		1122.0	128.36	16219.81
	2/5/2014	14:49	2/5/2014 14:49		33	32.5	11	74	22.5		1607.7	183.92	16403.73
	2/5/2014	15:42	2/5/2014 15:42		32.5	32.5	11.2	70	22.9		1201.8	137.49	16541.22
	2/5/2014	16:01	2/5/2014 16:01	47	32.5	32.5	11.2	73	22.8		433.8	49.62	16590.85
	2/5/2014	16:02	2/5/2014 16:02			28.5					22.8	2.61	16593.46
SW-37 Event 17	2/7/2014	8:20	2/7/2014 8:20	50	33	32	4	46	8.4				16593.46
	2/7/2014	8:22	2/7/2014 8:22	50	33.5	33	8.2	46	17.3		25.7	2.94	16596.40
	2/7/2014	9:24	2/7/2014 9:24	45	32.5	32	8.8	55	18.2		1102.5	126.13	16722.53
	2/7/2014	9:25	2/7/2014 9:25	45	33.5	33.3	12.2	55	25.6		21.9	2.50	16725.04
	2/7/2014	10:13	2/7/2014 10:13	44	33.5	33.3	11.5	59	24.0		1188.9	136.01	16861.05
	2/7/2014	10:14	2/7/2014 10:14			29					24.0	2.74	16863.79
SW-37 Event 18	2/11/2014	12:32	2/11/2014 12:32	50	32.5	33.5	<2	69	0.0				16863.79
	2/11/2014	12:34	2/11/2014 12:34	49	33.3	34	6.1	69	12.6		12.6	1.44	16865.23
	2/11/2014	13:52	2/11/2014 13:52	49	33.2	34	7.3	66	15.1		1078.2	123.34	16988.57
	2/11/2014	14:57	2/11/2014 14:57	49	33.2	34	7.5	62	15.5		995.2	113.85	17102.42

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/11/2014	17:12	2/11/2014 17:12	51	33.2	34	9	56	18.8		2316.4	265.00	17367.42
	2/11/2014	17:13	2/11/2014 17:13			30					18.8	2.15	17369.57
<u>SW-37 Event 19</u>	2/12/2014	8:25	2/12/2014 8:25	50	25		4	47	7.7				17369.57
	2/12/2014	8:27	2/12/2014 8:27	50	33.5		19	47	40.1		47.8	5.46	17375.03
	2/12/2014	8:58	2/12/2014 8:58	45	34		17.8	53	37.6		1203.9	137.72	17512.76
	2/12/2014	10:31	2/12/2014 10:31	46	34		17	55	35.8		3410.4	390.14	17902.90
	2/12/2014	11:54	2/12/2014 11:54	47	34.2		17	54	35.9		2975.2	340.36	18243.26
	2/12/2014	13:58	2/12/2014 13:58	49	34.2		17.2	51	36.4		4484.8	513.07	18756.33
	2/12/2014	14:54	2/12/2014 14:54	48	34.2		17.8	51	37.7		2075.9	237.49	18993.82
	2/12/2014	15:54	2/12/2014 15:54	48	34.2		18.5	51	39.2		2306.8	263.90	19257.72
	2/12/2014	16:53	2/12/2014 16:53	48	34.2		19	51	40.2		2343.4	268.08	19525.80
	2/12/2014	17:54	2/12/2014 17:54	48	34.2		19.5	52	41.3		2486.1	284.41	19810.21
	2/13/2014	7:11	2/13/2014 7:11	47	32		22.2	49	46.0		34787.6	3979.70	23789.91
	2/13/2014	7:59	2/13/2014 7:59	51	32.5		22.8	47	47.6		2247.9	257.16	24047.07
	2/13/2014	9:05	2/13/2014 9:05	51	32.5		22.8	48	47.6		3142.0	359.44	24406.51
	2/13/2014	9:54	2/13/2014 9:54	52	32.5		23	47	48.0		2342.9	268.03	24674.54
	2/13/2014	10:34	2/13/2014 10:34	52	32.5		23	47	48.0		1921.9	219.87	24894.40
	2/13/2014	11:03	2/13/2014 11:03	52	32.5		23.2	48	48.4		1398.7	160.01	25054.42
	2/13/2014	11:35	2/13/2014 11:35	52	32.5		23.3	49	48.6		1551.9	177.53	25231.95
	2/13/2014	12:04	2/13/2014 12:04	52	32.2		23.5	51	48.7		1411.0	161.42	25393.37
	2/13/2014	12:34	2/13/2014 12:34	52	32.2		23.7	51	49.1		1468.2	167.97	25561.33
	2/13/2014	13:04	2/13/2014 13:04	52	32.2		23.8	53	49.3		1476.1	168.86	25730.19
	2/13/2014	14:08	2/13/2014 14:08	52	32		23.8	56	49.0		3144.2	359.69	26089.88
	2/13/2014	15:05	2/13/2014 15:05	52	32		23.8	58	48.9		2790.2	319.20	26409.08
	2/13/2014	15:24	2/13/2014 15:24								929.1	106.29	26515.37
<u>SW-37 Event 20</u>	3/2/2015	8:32	3/2/2015 8:32		26	27	0	62	0.0				26515.37
	3/2/2015	8:48	3/2/2015 8:48		25	26	0	62	0.0		0.0	0.00	26515.37
	3/2/2015	8:49	3/2/2015 8:49		30	30.5	5	62	10.0		5.0	0.57	26515.95
	3/2/2015	10:05	3/2/2015 10:05		30	30	4.5	64	9.0		721.9	82.58	26598.53
	3/2/2015	10:06	3/2/2015 10:06		35	34	12	64	25.3		17.1	1.96	26600.49
	3/2/2015	11:31	3/2/2015 11:31		35	35	10	65	21.1		1970.2	225.39	26825.88
	3/2/2015	12:32	3/2/2015 12:32		35	34.5	11	68	23.1		1346.8	154.07	26979.95
	3/2/2015	14:27	3/2/2015 14:27		35	34	12	73	25.1		2769.8	316.87	27296.82
	3/2/2015	16:38	3/2/2015 16:38		35	33	13	71	27.2		3425.0	391.82	27688.64
	3/2/2015	16:39	3/2/2015 16:39			30					27.2	3.11	27691.76
<u>SW-37 Event 21</u>	3/4/2015	7:45	3/4/2015 7:45		26	26	0	68	0.0				27691.76
	3/4/2015	8:01	3/4/2015 8:01		26	29	6	70	11.4		90.9	10.40	27702.15
	3/4/2015	8:02	3/4/2015 8:02		35	35	13	70	27.2		19.3	2.21	27704.36
	3/4/2015	9:26	3/4/2015 9:26		36	35.5	13	79	27.3		2290.0	261.98	27966.34
	3/4/2015	11:53	3/4/2015 11:53		35	35.5	13	80	27.0		3988.1	456.24	28422.58
	3/4/2015	13:55	3/4/2015 13:55		35	35	14	80	29.1		3418.2	391.04	28813.62
	3/4/2015	15:19	3/4/2015 15:19		35	35	14	78	29.1		2443.0	279.48	29093.10
	3/4/2015	17:11	3/4/2015 17:11		35	34.5	14	75	29.2		3265.2	373.54	29466.64
	3/4/2015	17:12	3/4/2015 17:12			31					29.2	3.34	29469.98
											Total CO ₂ Mass (lbs):		29469.98

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-38 Event 1	11/22/2013	12:58	11/22/2013 12:58	50	26			78	0.0				0.00
	11/22/2013	13:00	11/22/2013 13:00		27	27	<2	80	0.0		0.0	0.00	0.00
	11/22/2013	13:01	11/22/2013 13:01		34	34	<2	80	0.0		0.0	0.00	0.00
	11/22/2013	13:22	11/22/2013 13:22		35	33	<2	82	0.0		0.0	0.00	0.00
	11/22/2013	13:23	11/22/2013 13:23		37	36.5	4	82	8.5		4.2	0.48	0.48
	11/22/2013	14:08	11/22/2013 14:08		36	35	10	82	20.9		661.0	75.62	76.10
	11/22/2013	15:24	11/22/2013 15:24	48	36	34.5	12	75	25.3		1755.8	200.86	276.96
	11/22/2013	16:37	11/22/2013 16:37		36	34	12	74	25.3		1846.3	211.22	488.18
	11/22/2013	17:17	11/22/2013 17:17	50	36	34	12	70	25.4		1014.2	116.02	604.20
	11/22/2013	17:18	11/22/2013 17:18								25.4	2.91	607.10
	11/22/2013	17:19	11/22/2013 17:19										607.10
SW-38 Event 2	12/4/2013	13:20	12/4/2013 13:20	55	38	38	<2	85	0.0				607.10
	12/4/2013	13:22	12/4/2013 13:22	55	35	35	2	85	4.1		4.1	0.47	607.58
	12/4/2013	13:54	12/4/2013 13:54	50	35	36	7.5	84	15.5		314.2	35.94	643.52
	12/4/2013	14:51	12/4/2013 14:51	50	36	35.5	8.5	74	17.9		952.7	108.99	752.51
	12/4/2013	15:58	12/4/2013 15:58	50	35	34.5	11	75	22.9		1368.9	156.61	909.12
	12/4/2013	17:42	12/4/2013 17:42	50	35	33	14	75	29.2		2711.1	310.15	1219.27
	12/4/2013	17:43	12/4/2013 17:43								29.2	3.34	1222.61
	12/4/2013	17:44	12/4/2013 17:44			25							1222.61
SW-38 Event 3	12/10/2013	13:38	12/10/2013 13:38	50	34	34	<2	78	0.0				1222.61
	12/10/2013	13:40	12/10/2013 13:40	50	30	30	<2	78	0.0		0.0	0.00	1222.61
	12/10/2013	14:20	12/10/2013 14:20	50	27.5	30	<2	72	0.0		0.0	0.00	1222.61
	12/10/2013	14:52	12/10/2013 14:52	50	28	30	<2	72	0.0		0.0	0.00	1222.61
	12/10/2013	14:53	12/10/2013 14:53	50	30	32	5.5	72	10.9		5.5	0.62	1223.23
	12/10/2013	15:28	12/10/2013 15:28	50	30	32	5.5	72	10.9		381.5	43.65	1266.88
	12/10/2013	15:29	12/10/2013 15:29	50	32.5	33.5	7.5	72	15.3		13.1	1.50	1268.37
	12/10/2013	15:55	12/10/2013 15:55	45	32	33.5	7.5	70	15.2		396.6	45.37	1313.75
	12/10/2013	16:34	12/10/2013 16:34	45	32.5	33.5	8	68	16.4		616.0	70.47	1384.22
	12/10/2013	17:16	12/10/2013 17:16	50	32	33	9	66	18.3		728.9	83.38	1467.61
	12/10/2013	22:32	12/10/2013 22:32	52	32	31.5	13.5	60	27.7		7272.5	831.97	2299.58
	12/11/2013	7:56	12/11/2013 7:56	49	30	29	15.5	60	31.1		16572.5	1895.90	4195.48
	SW-38 Event 4	12/17/2013	12:37	12/17/2013 12:37	48	34	34	<2	69	0.0			
12/17/2013		13:32	12/17/2013 13:32	49	32	30	5	70	10.2		279.2	31.94	4227.41
12/17/2013		13:33	12/17/2013 13:33	47	36	34	13.5	70	28.6		19.4	2.22	4229.63
12/17/2013		14:47	12/17/2013 14:47	45	36	34	13.5	70	28.6		2114.8	241.94	4471.57
12/17/2013		16:10	12/17/2013 16:10	45	36	33.5	16	68	33.9		2594.5	296.81	4768.37
12/17/2013		22:30	12/17/2013 22:30	45	35	30	21	58	44.5		14910.1	1705.71	6474.09
12/17/2013		22:32	12/17/2013 22:32	43	36	31	26	58	55.7		100.2	11.47	6485.55
12/18/2013		8:13	12/18/2013 8:13	41	37	30	28	57	60.6		33799.3	3866.64	10352.20
12/18/2013		8:14	12/18/2013 8:14								60.6	6.94	10359.13
12/18/2013		8:15	12/18/2013 8:15			25							10359.13
SW-38 Event 5	3/5/2015	8:00	3/5/2015 8:00		28	30	0	76	0.0				10359.13
	3/5/2015	8:19	3/5/2015 8:19		28	30	0	74	0.0		0.0	0.00	10359.13
	3/5/2015	9:01	3/5/2015 9:01		27	29	<2	78	0.0		0.0	0.00	10359.13
	3/5/2015	9:02	3/5/2015 9:02		37	37	18	78	38.2		19.1	2.18	10361.32
	3/5/2015	10:19	3/5/2015 10:19		38	37	16.5	80	35.3		2828.4	323.57	10684.89
	3/5/2015	11:39	3/5/2015 11:39		37	35.5	18	80	38.1		2935.6	335.84	11020.72
	3/5/2015	12:47	3/5/2015 12:47		37	35	19.5	80	41.3		2699.6	308.84	11329.56
	3/5/2015	12:48	3/5/2015 12:48			28					41.3	4.72	11334.29
SW-38 Event 6	3/9/2015	8:00	3/9/2015 8:00		33	35	3	55	6.2				11334.29
	3/9/2015	8:46	3/9/2015 8:46		32	33	7	63	14.3		472.9	54.10	11388.39

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/9/2015	8:47	3/9/2015 8:47		36	36.5	14	63	29.8		22.1	2.53	11390.91
	3/9/2015	9:53	3/9/2015 9:53		36	36	14	73	29.6		1960.0	224.22	11615.14
	3/9/2015	11:29	3/9/2015 11:29		36	34.5	16.5	76	34.7		3085.3	352.95	11968.09
	3/9/2015	12:14	3/9/2015 12:14		36	33.5	17	76	35.8		1586.3	181.48	12149.57
	3/9/2015	12:15	3/9/2015 12:15			28							12149.57
SW-38 Event 7	3/13/2015	8:03	3/13/2015 8:03		34	36	4.5	66	9.4				12149.57
	3/13/2015	8:27	3/13/2015 8:27		34	35	8	66	16.7		312.3	35.73	12185.30
	3/13/2015	8:28	3/13/2015 8:28		35	36	10	66	21.0		18.8	2.16	12187.45
	3/13/2015	9:44	3/13/2015 9:44		35	35	12	66	25.2		1758.9	201.21	12388.67
	3/13/2015	10:19	3/13/2015 10:19		34	35	13	68	27.0		914.6	104.63	12493.30
	3/13/2015	11:06	3/13/2015 11:06		34	34	14	68	29.1		1318.6	150.85	12644.15
	3/13/2015	11:07	3/13/2015 11:07			28					29.1	3.33	12647.48
Total CO ₂ Mass (lbs):												12647.48	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-39 Event 1	11/20/2013	8:42	11/20/2013 8:42	59.5		16			0.0		0	0	0
	11/20/2013	8:48	11/20/2013 8:48			8		64	0.0		0.0	0.00	0.00
	11/20/2013	8:49	11/20/2013 8:49	57.5	34	34	<2	64	0.0		0.0	0.00	0.00
	11/20/2013	8:50	11/20/2013 8:50	57.5	35	36	<2	64	0.0		0.0	0.00	0.00
	11/20/2013	9:40	11/20/2013 9:40	57.5	34	32	7	64	14.6		365.1	41.77	41.77
	11/20/2013	11:10	11/20/2013 11:10	55	34	31.5	9	66	18.7		1500.5	171.66	213.43
	11/20/2013	11:12	11/20/2013 11:12	55	36	32.5	11	66	23.4		42.1	4.82	218.25
	11/20/2013	11:15	11/20/2013 11:15	55	37	33	11.5	66	24.7		72.1	8.25	226.50
	11/20/2013	12:55	11/20/2013 12:55	52.5	36	33	12.25	64	26.1		2538.6	290.42	516.92
	11/20/2013	14:30	11/20/2013 14:30	52.5	36	32	12.5	64	26.6		2503.5	286.41	803.32
	11/20/2013	14:49	11/20/2013 14:49	52	35	32.5	14	63	29.5		533.5	61.04	864.36
	11/20/2013	14:53	11/20/2013 14:53	52	40	33.5	14.5	63	32.1		123.3	14.11	878.47
	11/20/2013	15:09	11/20/2013 15:09	55	40	33.5	15	63	33.2		522.9	59.82	938.29
	11/20/2013	15:12	11/20/2013 15:12	55	40	33.5	15	63	33.2		99.7	11.41	949.69
	11/20/2013	15:13	11/20/2013 15:13			29							
SW-39 Event 2	12/4/2013	13:23	12/4/2013 13:23	52	33	31.5	4	85	8.1				988.91
	12/4/2013	13:54	12/4/2013 13:54	50	32	31	7	84	14.0		342.8	39.21	993.14
	12/4/2013	13:56	12/4/2013 13:56	50	36	35.5	11	84	23.0		37.0	4.23	1134.27
	12/4/2013	14:52	12/4/2013 14:52	50	36	35.5	10	74	21.1		1233.7	141.13	1306.42
	12/4/2013	16:00	12/4/2013 16:00	50	36	35.5	11	75	23.2		1504.8	172.15	1624.66
	12/4/2013	17:45	12/4/2013 17:45	55	36	33.5	14	64	29.8		2781.8	318.24	1628.07
	12/4/2013	17:46	12/4/2013 17:46								29.8	3.41	1628.07
	12/4/2013	17:47	12/4/2013 17:47										1628.07
	SW-39 Event 3	12/10/2013	13:36	12/10/2013 13:36	51	35	24	<2	78	0.0			
12/10/2013		13:37	12/10/2013 13:37	51	35	33	6	78	12.5		6.2	0.71	1628.79
12/10/2013		13:40	12/10/2013 13:40		35	33	6.5	78	13.5		39.0	4.46	1633.25
12/10/2013		14:20	12/10/2013 14:20	50	35	33	7	70	14.7		563.7	64.49	1697.74
12/10/2013		14:56	12/10/2013 14:56	50	35	33	7	72	14.6		527.6	60.36	1758.09
12/10/2013		15:30	12/10/2013 15:30	50	35	33	7	72	14.6		497.8	56.95	1815.04
12/10/2013		15:57	12/10/2013 15:57	45	35	33	7.5	70	15.7		409.8	46.88	1861.92
12/10/2013		16:35	12/10/2013 16:35	45	35	32.5	8	68	16.8		617.8	70.68	1932.60
12/10/2013		17:17	12/10/2013 17:17	50	35	32	8.5	66	17.9		728.3	83.32	2015.92
12/10/2013		22:30	12/10/2013 22:30	52	34	30	17	60	35.6		8371.8	957.73	2973.65
12/11/2013		7:58	12/11/2013 7:58	49	34	30	17	60	35.6		20226.9	2313.96	5287.61
SW-39 Event 4	12/17/2013	12:36	12/17/2013 12:36	48	34	34	5.5	69	11.4				5287.61
	12/17/2013	13:30	12/17/2013 13:30	49	32.5	33	6	70	12.2		639.0	73.10	5360.71
	12/17/2013	14:45	12/17/2013 14:45	45	32.5	33	6.5	70	13.3		956.9	109.47	5470.18
	12/17/2013	16:12	12/17/2013 16:12	45	32	33	7	68	14.2		1196.7	136.90	5607.08
	12/17/2013	22:16	12/17/2013 22:16	45	32	32	10	58	20.5		6331.3	724.31	6331.39
	12/18/2013	8:12	12/18/2013 8:12	41	30	30	12.5	57	25.1		13615.8	1557.65	7889.04
	12/18/2013	8:13	12/18/2013 8:13								25.1	2.88	7891.92
	12/18/2013	8:14	12/18/2013 8:14			26							7891.92
SW-39 Event 5	1/21/2014	9:19	1/21/2014 9:19	47	28	28	<2	62	0.0				7891.92
	1/21/2014	9:21	1/21/2014 9:21	47	34	33	5.5	62	11.5		11.5	1.32	7893.23
	1/21/2014	10:12	1/21/2014 10:12	40	33	32	9	66	18.5		766.1	87.64	7980.87
	1/21/2014	11:39	1/21/2014 11:39	48	33	31.2	9	70	18.5		1610.2	184.20	8165.07
	1/21/2014	12:27	1/21/2014 12:27	44	32.5	31	9.7	71	19.8		918.1	105.03	8270.10
	1/21/2014	12:29	1/21/2014 12:29			29					39.6	4.53	8274.63
SW-39 Event 6	1/22/2014	8:00	1/22/2014 8:00	57	28	29	3	40	6.0				8274.63
	1/22/2014	8:01	1/22/2014 8:01	57	32.5	30.5	10	40	21.0		13.5	1.55	8276.18
	1/22/2014	8:39	1/22/2014 8:39	57	31.5	29.5	15	44	31.1		990.5	113.32	8389.49

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/22/2014	8:42	1/22/2014 8:42	52	33.5	31	19	44	40.2		107.0	12.24	8401.74
	1/22/2014	9:40	1/22/2014 9:40	47	34	31.5	18	47	38.2		2275.0	260.26	8662.00
	1/22/2014	10:49	1/22/2014 10:49	45	34	31	18	50	38.1		2632.2	301.12	8963.12
	1/22/2014	11:52	1/22/2014 11:52	43	33	30.5	18.3	54	38.2		2401.9	274.78	9237.89
	1/22/2014	12:23	1/22/2014 12:23	42	33	30.5	18.3	55	38.1		1182.4	135.27	9373.16
	1/22/2014	12:24	1/22/2014 12:24								38.1	4.36	9377.52
	1/22/2014	12:26	1/22/2014 12:26			26							9377.52
SW-39 Event 6	12/18/2014	7:54	12/18/2014 7:54		26	26	0	48	0.0				9377.52
	12/18/2014	8:08	12/18/2014 8:08		30	30	8	50	16.2		113.4	12.98	9390.50
	12/18/2014	9:38	12/18/2014 9:38		30	30	8	56	16.1		1454.2	166.36	9556.85
	12/18/2014	9:39	12/18/2014 9:39		36	33	16	56	34.3		25.2	2.89	9559.74
	12/18/2014	11:13	12/18/2014 11:13		37	33	15	62	32.3		3133.7	358.49	9918.23
	12/18/2014	11:14	12/18/2014 11:14		42	36	20	62	45.2		38.8	4.43	9922.67
	12/18/2014	12:23	12/18/2014 12:23		41	36	20	70	44.4		3090.9	353.60	10276.26
	12/18/2014	13:30	12/18/2014 13:30		41	36	20	72	44.3		2972.8	340.09	10616.35
	12/18/2014	14:53	12/18/2014 14:53		41	35	20	72	44.3		3679.1	420.89	11037.24
	12/18/2014	16:48	12/18/2014 16:48		41	34	22	68	49.0		5363.5	613.58	11650.82
	12/18/2014	16:49	12/18/2014 16:49			28					49.0	5.60	11656.42
SW-39 Event 7	2/10/2015	12:46	2/10/2015 12:46		28	28	0	64	0.0				11656.42
	2/10/2015	12:49	2/10/2015 12:49		36	35	5	64	10.6		16.0	1.83	11658.25
	2/10/2015	14:04	2/10/2015 14:04		36	34	9.5	65	20.2		1157.2	132.38	11790.63
	2/10/2015	14:05	2/10/2015 14:05		39	36	14	65	30.7		25.4	2.91	11793.54
	2/10/2015	16:00	2/10/2015 16:00		39	36.5	14	66	30.6		3525.1	403.27	12196.81
	2/10/2015	17:07	2/10/2015 17:07		39	36	15	66	32.8		2126.0	243.22	12440.03
	2/10/2015	17:08	2/10/2015 17:08			30					32.8	3.76	12443.78
Total CO ₂ Mass (lbs):													12443.78

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-40 Event 1	11/15/2013	7:43	11/15/2013 7:43	28	11.5			63.3	0.0				
	11/15/2013	7:45	11/15/2013 7:45	33	33.5		<2	57	0.0		0.0	0.00	0.00
	11/15/2013	7:46	11/15/2013 7:46		39	36	<2	57	0.0		0.0	0.00	0.00
	11/15/2013	7:46	11/15/2013 7:46		38	35	<2	50.7	0.0		0.0	0.00	0.00
	11/15/2013	7:47	11/15/2013 7:47	33	33	33	<2	50.7	0.0		0.0	0.00	0.00
	11/15/2013	7:51	11/15/2013 7:51	37	35	32.5	4.5	50.7	7.8		15.6	1.78	1.78
	11/15/2013	7:52	11/15/2013 7:52	38	36	33.5	5.5	49.6	9.6		8.7	1.00	2.78
	11/15/2013	7:57	11/15/2013 7:57	38	36	33.5	6.3	49.6	11.0		51.7	5.91	8.69
	11/15/2013	8:02	11/15/2013 8:02	37	36	33	6.3	49.6	11.0		55.2	6.31	15.00
	11/15/2013	8:03	11/15/2013 8:03	39	37.5	34	7.75	48.5	13.8		12.4	1.42	16.42
	11/15/2013	8:35	11/15/2013 8:35	38	37	33	9.25	45.3	16.4		483.7	55.33	71.75
	11/15/2013	8:41	11/15/2013 8:41	40	37.5	34	10.5	37.9	18.9		106.0	12.13	83.88
	11/15/2013	9:19	11/15/2013 9:19	40	37.5	34	11.5	30.5	20.9		755.3	86.40	170.28
	11/15/2013	10:11	11/15/2013 10:11	40	37	33.5	12	41	21.4		1099.2	125.74	296.03
	11/15/2013	10:14	11/15/2013 10:14	42	38	34	13	40.4	23.4		67.3	7.70	303.72
	11/15/2013	11:12	11/15/2013 11:12	42	38	34	13.5	32.1	24.6		1392.2	159.27	462.99
11/15/2013	11:50	11/15/2013 11:50								933.4	106.78	569.77	
11/15/2013	11:51	11/15/2013 11:51		27								569.77	
SW-40 Event 2	12/5/2013	7:58	12/5/2013 7:58	56	36	36	<2	66	0.0				569.77
	12/5/2013	8:20	12/5/2013 8:20	55	36	35.5	4	68	8.5		93.3	10.68	580.45
	12/5/2013	8:31	12/5/2013 8:31										580.45
	12/5/2013	8:34	12/5/2013 8:34										580.45
	12/5/2013	8:36	12/5/2013 8:36	55	35	35	6	70	12.6		25.1	2.88	583.33
	12/5/2013	9:11	12/5/2013 9:11	53	35	35	6	74	12.5		439.2	50.25	633.57
	12/5/2013	10:13	12/5/2013 10:13	51	35	35	6.5	80	13.5		806.5	92.26	725.83
	12/5/2013	11:20	12/5/2013 11:20	50	35	35	7	85	14.5		936.3	107.11	832.94
	12/5/2013	12:00	12/5/2013 12:00	50	35	35	7	85	14.5		578.3	66.16	899.10
	12/5/2013	14:13	12/5/2013 14:13	51	34	34	10	87	20.4		2318.4	265.22	1164.32
	12/5/2013	15:20	12/5/2013 15:20	49	34	34	10	86	20.4		1367.7	156.47	1320.79
	12/5/2013	16:29	12/5/2013 16:29	50	34	33.5	10.5	82	21.5		1447.3	165.57	1486.36
	12/5/2013	16:30	12/5/2013 16:30	50	35	35.5	13.5	82	28.0		24.7	2.83	1489.19
	12/5/2013	17:52	12/5/2013 17:52	55	35	35.5	14	70	29.3		2349.4	268.77	1757.97
	12/5/2013	22:01	12/5/2013 22:01	55	35	34.5	17	68	35.7		8096.8	926.28	2684.24
	12/6/2013	7:04	12/6/2013 7:04	54	34	32.2	20	66	41.6		20998.3	2402.20	5086.44
	12/6/2013	9:29	12/6/2013 9:29	45	34	32.2	19	77	39.1		5857.0	670.04	5756.49
	12/6/2013	9:30	12/6/2013 9:30	44	36	33.2	23	78	48.3		43.7	5.00	5761.49
	12/6/2013	10:37	12/6/2013 10:37	41	36	33.5	21	84	43.9		3087.7	353.23	6114.72
	12/6/2013	11:33	12/6/2013 11:33	40	36	33.5	20.5	86	42.7		2424.5	277.36	6392.08
12/6/2013	13:47	12/6/2013 13:47	45	39	35	24	88	51.4		6307.6	721.59	7113.67	
12/6/2013	14:28	12/6/2013 14:28	45	39	35	24	86	51.5		2109.9	241.37	7355.04	
12/6/2013	15:27	12/6/2013 15:27	45	39	34.5	23	80	49.6		2984.1	341.38	7696.42	
12/6/2013	17:15	12/6/2013 17:15	46	38	35	24.5	74	52.7		5526.2	632.19	8328.61	
12/6/2013	17:17	12/6/2013 17:17			29					105.4	12.06	8340.67	
SW-40 Event 3	12/10/2013	12:26	12/10/2013 12:26	55	30	30	<2	78	0.0				8340.67
	12/10/2013	12:28	12/10/2013 12:28	54	34	35	4	78	8.2		8.2	0.94	8341.61
	12/10/2013	12:48	12/10/2013 12:48	50	34	34	7.5	80	15.4		236.4	27.04	8368.65
	12/10/2013	12:58	12/10/2013 12:58	54	34	34	8	80	16.4		159.2	18.21	8386.86
	12/10/2013	13:56	12/10/2013 13:56	54	33	34	8.5	71	17.4		982.0	112.34	8499.20
	12/10/2013	14:23	12/10/2013 14:23	50	34	34	8	72	16.6		458.8	52.49	8551.69
	12/10/2013	15:00	12/10/2013 15:00	50	34	34	8	72	16.6		612.7	70.10	8621.79
	12/10/2013	15:34	12/10/2013 15:34	50	34	34	8.5	74	17.6		580.1	66.36	8688.15

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/10/2013	16:13	12/10/2013 16:13	50	34	34	9	72	18.6		705.7	80.74	8768.89
	12/10/2013	16:45	12/10/2013 16:45	47.5	34	34	9	68	18.7		597.3	68.34	8837.22
	12/10/2013	17:21	12/10/2013 17:21	45	32	33	10	66	20.4		703.6	80.49	8917.71
	12/10/2013	22:26	12/10/2013 22:26	52	34	32	13	54	27.4		7286.6	833.58	9751.30
	12/11/2013	7:44	12/11/2013 7:44	50	34	32	12.5	50	26.5		15023.4	1718.68	11469.98
SW-40 Event 4	12/17/2013	12:21	12/17/2013 12:21	50	37	34	<2	72	0.0				11469.98
	12/17/2013	13:13	12/17/2013 13:13	50	35	32	8	73	16.7		434.6	49.72	11519.70
	12/17/2013	13:17	12/17/2013 13:17	50	35	33	12	73	25.1		83.6	9.56	11529.26
	12/17/2013	14:21	12/17/2013 14:21	46	35	33	12	74	25.0		1604.0	183.49	11712.75
	12/17/2013	15:30	12/17/2013 15:30	45	35	33	12.5	72	26.1		1766.2	202.05	11914.80
	12/17/2013	16:45	12/17/2013 16:45	45	35	32	13	69	27.3		2003.0	229.15	12143.95
	12/17/2013	22:14	12/17/2013 22:14	45	36	32	14.5	54	31.2		9616.7	1100.16	13244.10
	12/18/2013	9:02	12/18/2013 9:02	48	35	30	17.3	58	36.7		21993.0	2516.00	15760.11
	12/18/2013	9:04	12/18/2013 9:04								73.4	8.39	15768.50
	12/18/2013	9:05	12/18/2013 9:05			27							15768.50
SW-40 Event 5	1/15/2015	8:01	1/15/2015 8:01		25	26	0	50	0.0				15768.50
	1/15/2015	8:33	1/15/2015 8:33		34	33.5	12	50	25.4		406.3	46.48	15814.98
	1/15/2015	9:36	1/15/2015 9:36		35	33	11	52	23.5		1539.2	176.08	15991.06
	1/15/2015	11:07	1/15/2015 11:07		35	33	12	55	25.5		2229.4	255.04	16246.10
	1/15/2015	11:11	1/15/2015 11:11		40	36	18	55	40.2		131.5	15.04	16261.14
	1/15/2015	13:42	1/15/2015 13:42		40	36	18	55	40.2		6071.1	694.53	16955.67
	1/15/2015	15:30	1/15/2015 15:30		40	36	18	52	40.3		4348.9	497.51	17453.18
	1/15/2015	17:12	1/15/2015 17:12		40	35	18.5	52	41.4		4170.7	477.13	17930.31
	1/15/2015	17:13	1/15/2015 17:13			29					41.4	4.74	17935.05
Total CO ₂ Mass (lbs):												17935.05	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-41 Event 1	11/18/2013	7:36	11/18/2013 7:36	26	12			65.1	0.0				
	11/18/2013	7:38	11/18/2013 7:38	30	29	29	<2	61.8	0.0		0.0	0.00	0.00
	11/18/2013	7:42	11/18/2013 7:42	36	36	30	<2	61.8	0.0		0.0	0.00	0.00
	11/18/2013	7:47	11/18/2013 7:47	34	31	30	8	61.8	13.1		32.8	3.75	3.75
	11/18/2013	7:48	11/18/2013 7:48	36	33	29	10.5	58.4	17.7		15.4	1.76	5.52
	11/18/2013	7:51	11/18/2013 7:51	36	33	29	11	55.2	18.6		54.4	6.22	11.74
	11/18/2013	7:53	11/18/2013 7:53	41	35	30	13.75	48	23.9		42.4	4.86	16.59
	11/18/2013	7:55	11/18/2013 7:55	45	38.5	32	15.5	47.4	27.9		51.8	5.92	22.51
	11/18/2013	7:57	11/18/2013 7:57	48	40	33.5	17	38.3	31.3		59.2	6.77	29.29
	11/18/2013	8:17	11/18/2013 8:17	48	39	32	18.25	20.6	33.9		652.6	74.66	103.95
	11/18/2013	8:18	11/18/2013 8:18	51	41	33	19.5	19.9	37.0		35.5	4.06	108.01
	11/18/2013	9:00	11/18/2013 9:00	51	40	31	20.5	-5.3	39.6		1609.3	184.11	292.11
	11/18/2013	9:01	11/18/2013 9:01	54	41.5	31.5	21.5	-6.4	42.2		40.9	4.68	296.79
	11/18/2013	9:12	11/18/2013 9:12	58	43	32.5	23	-16.1	46.3		487.0	55.71	352.50
	11/18/2013	10:00	11/18/2013 10:00	58	43	32	23.25	-19	47.0		2239.5	256.19	608.70
	11/18/2013	10:03	11/18/2013 10:03								141.0	16.13	624.82
11/18/2013	10:04	11/18/2013 10:04		23	18.5							624.82	
SW-41 Event 2	11/20/2013	8:07	11/20/2013 8:07										624.82
	11/20/2013	8:20	11/20/2013 8:20	28	11			59.7	0.0		0.0	0.00	624.82
	11/20/2013	8:23	11/20/2013 8:23	28	27	28	5.5	52.5	8.7		13.0	1.49	626.32
	11/20/2013	8:26	11/20/2013 8:26	34	31		10.5	52.8	17.4		39.1	4.48	630.79
	11/20/2013	8:27	11/20/2013 8:27	37	32.5		12.5	52.9	21.0		19.2	2.20	632.99
	11/20/2013	8:28	11/20/2013 8:28	44	36	30.5	16	53	27.9		24.5	2.80	635.79
	11/20/2013	10:18	11/20/2013 10:18	42	32.5	26.5	19.25	57.7	32.2		3309.3	378.59	1014.38
	11/20/2013	10:21	11/20/2013 10:21	48	35	28	21.5	45.6	37.4		104.5	11.96	1026.34
	11/20/2013	12:38	11/20/2013 12:38	48	35	27.5	22.25	33.4	39.2		5251.6	600.78	1627.12
	11/20/2013	12:39	11/20/2013 12:39	58	39	30	25.5	33.4	46.8		43.0	4.92	1632.04
	11/20/2013	15:37	11/20/2013 15:37	59	40	30	26	21.7	48.8		8503.2	972.76	2604.80
	11/20/2013	17:13	11/20/2013 17:13	59	39	28	26.5	17.7	49.5		4714.3	539.31	3144.12
	11/20/2013	17:16	11/20/2013 17:16								148.4	16.97	3161.09
	11/20/2013	17:21	11/20/2013 17:21		19								3161.09
SW-41 Event 3	11/21/2013	7:04	11/21/2013 7:04					56.4	0.0				3161.09
	11/21/2013	7:11	11/21/2013 7:11		28		13.5	31.4	22.1		77.3	8.84	3169.93
	11/21/2013	7:14	11/21/2013 7:14		31		15.5	82.3	24.9		70.5	8.07	3178.00
	11/21/2013	7:17	11/21/2013 7:17		30	25	17.5	32.5	29.3		81.3	9.30	3187.30
	11/21/2013	7:19	11/21/2013 7:19		33.5	28	20	29.6	34.9		64.1	7.34	3194.63
	11/21/2013	10:21	11/21/2013 10:21		33	27	20.5	38.3	35.2		6377.1	729.54	3924.18
	11/21/2013	10:40	11/21/2013 10:40		35.8	26.5	23	38.3	40.7		721.0	82.49	4006.66
	11/21/2013	13:23	11/21/2013 13:23		35	26.5	23	46.9	40.0		6574.3	752.10	4758.76
	11/21/2013	14:36	11/21/2013 14:36		34	26.5	23	51	39.4		2898.0	331.53	5090.30
	11/21/2013	17:11	11/21/2013 17:11		34	26	24.3	32	42.5		6345.7	725.94	5816.24
	11/21/2013	17:26	11/21/2013 17:26		34	26	24.3	29.1	42.6		638.0	72.99	5889.23
11/21/2013	17:27	11/21/2013 17:27								42.6	4.87	5894.10	
11/21/2013	17:29	11/21/2013 17:29										5894.10	
SW-41 Event 4	12/6/2013	8:53	12/6/2013 8:53	50	32	31	8	76	16.1				5894.10
	12/6/2013	8:55	12/6/2013 8:55	50	35	28	15	76	31.3		47.4	5.42	5899.53
	12/6/2013	9:02	12/6/2013 9:02	45	33	28	19.5	76	39.8		248.6	28.44	5927.97
	12/6/2013	9:03	12/6/2013 9:03	45	34	28	21	76	43.3		41.5	4.75	5932.72
	12/6/2013	10:15	12/6/2013 10:15	40	33	27	21.5	79	43.7		3133.6	358.49	6291.21
	12/6/2013	10:29	12/6/2013 10:29	40	34	27.5	22.5	80	46.2		629.7	72.04	6363.25
	12/6/2013	10:55	12/6/2013 10:55	40	34	26.5	22.5	82	46.1		1200.5	137.34	6500.59

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/6/2013	11:00	12/6/2013 11:00	40	35	27.5	23	82	47.6		234.4	26.82	6527.40
	12/6/2013	12:08	12/6/2013 12:08	39	35	26.5	23	84	47.6		3236.6	370.27	6897.67
	12/6/2013	13:04	12/6/2013 13:04	44	37.5	24.5	25	82	53.1		2818.0	322.38	7220.05
	12/6/2013	13:08	12/6/2013 13:08			20					212.4	24.29	7244.34
SW-41 Event 5	12/9/2013	8:36	12/9/2013 8:36	55	34	32	6.5	64	13.6				7244.34
	12/9/2013	8:40	12/9/2013 8:40	55	30.5	27.5	14	64	28.1		83.4	9.54	7253.88
	12/9/2013	8:42	12/9/2013 8:42	55	32	28	17	64	34.7		62.8	7.19	7261.07
	12/9/2013	9:18	12/9/2013 9:18	50	32	27	19	64	38.8		1323.5	151.41	7412.48
	12/9/2013	9:54	12/9/2013 9:54	50	31	27.5	18	70	36.1		1349.2	154.35	7566.83
	12/9/2013	11:07	12/9/2013 11:07	50	31	27.5	18	77	35.9		2629.9	300.86	7867.69
	12/9/2013	11:36	12/9/2013 11:36	50	31	27	18	82	35.7		1038.7	118.83	7986.52
	12/9/2013	12:34	12/9/2013 12:34	50	31	27	18	86	35.6		2068.5	236.64	8223.16
	12/9/2013	12:55	12/9/2013 12:55								747.5	85.52	8308.67
	12/9/2013	12:56	12/9/2013 12:56			20							8308.67
SW-41 Event 6	12/12/2013	8:58	12/12/2013 8:58	55	34	31	<2	58	0.0				8308.67
	12/12/2013	9:45	12/12/2013 9:45	50	28	24	20	62	39.1		919.1	105.15	8413.82
	12/12/2013	9:46	12/12/2013 9:46	50	31	26	23.5	62	47.6		43.3	4.96	8418.78
	12/12/2013	9:47	12/12/2013 9:47	49	32.5	28	25	62	51.4		49.5	5.66	8424.44
	12/12/2013	10:30	12/12/2013 10:30	45	32.5	27	25	66	51.2		2207.5	252.54	8676.98
	12/12/2013	10:31	12/12/2013 10:31	45	36	29	28	66	59.5		55.4	6.33	8683.32
	12/12/2013	10:32	12/12/2013 10:32	45	38	30	29.5	66	63.9		61.7	7.06	8690.38
	12/12/2013	11:25	12/12/2013 11:25	45	38	29.5	29.5	68	63.8		3385.6	387.32	9077.69
	12/12/2013	13:35	12/12/2013 13:35	45	36	29.5	31	70	65.6		8413.7	962.53	10040.23
	12/12/2013	13:36	12/12/2013 13:36								65.6	7.51	10047.73
	12/12/2013	13:37	12/12/2013 13:37			18							10047.73
SW-41 Event 7	12/16/2013	8:24	12/16/2013 8:24	50	31	31	7	48	14.4				10047.73
	12/16/2013	8:50	12/16/2013 8:50	45	29	26	15.5	50	31.0		590.3	67.54	10115.27
	12/16/2013	8:51	12/16/2013 8:51	45	30	29	20	50	40.5		35.8	4.09	10119.36
	12/16/2013	10:07	12/16/2013 10:07	45	30	28	20	48	40.6		3082.3	352.62	10471.98
	12/16/2013	11:04	12/16/2013 11:04	40	31	28	20	66	40.3		2306.2	263.83	10735.81
	12/16/2013	11:05	12/16/2013 11:05	40	32	30	23	66	46.9		43.6	4.99	10740.80
	12/16/2013	11:06	12/16/2013 11:06	40	34	31	26	66	54.1		50.5	5.78	10746.58
	12/16/2013	13:12	12/16/2013 13:12	45	40	33	26	67	57.4		7025.6	803.73	11550.31
	12/16/2013	13:13	12/16/2013 13:13								57.4	6.56	11556.87
	12/16/2013	13:14	12/16/2013 13:14			22							11556.87
	12/16/2013	14:42	12/16/2013 14:42	50	40	31.5	29.5	68	65.0		5723.3	654.75	12211.62
	12/16/2013	15:36	12/16/2013 15:36	45	37.5	32	26.5	68	57.0		3296.3	377.10	12588.72
	12/16/2013	16:33	12/16/2013 16:33	40	37	30.5	25.5	64	54.8		3189.0	364.82	12953.54
	12/16/2013	16:35	12/16/2013 16:35	40	37	31	26	64	55.9		110.8	12.67	12966.22
	12/16/2013	17:18	12/16/2013 17:18	40	37	30	25	60	54.0		2363.0	270.33	13236.54
	12/16/2013	17:19	12/16/2013 17:19								54.0	6.18	13242.72
	12/16/2013	17:20	12/16/2013 17:20			22							13242.72
SW-41 Event 8	12/17/2014	7:34	12/17/2014 7:34		26	26	0	42	0.0				13242.72
	12/17/2014	7:45	12/17/2014 7:45		31	30	12	46	24.7		135.8	15.53	13258.25
	12/17/2014	9:45	12/17/2014 9:45		31	29	13	66	26.2		3053.7	349.34	13607.59
	12/17/2014	9:46	12/17/2014 9:46		35	31	18	66	37.9		32.0	3.67	13611.26
	12/17/2014	11:21	12/17/2014 11:21		35	31	17	74	35.5		3484.5	398.62	14009.88
	12/17/2014	11:22	12/17/2014 11:22		38	33	20	74	43.0		39.2	4.49	14014.37
	12/17/2014	12:39	12/17/2014 12:39		38	33	20	76	42.9		3308.6	378.51	14392.88
	12/17/2014	14:15	12/17/2014 14:15		38	33	21	78	45.0		4219.9	482.75	14875.63
	12/17/2014	14:16	12/17/2014 14:16		42	34	24	78	53.4		49.2	5.63	14881.26

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/17/2014	15:51	12/17/2014 15:51		41	33.5	23	76	50.8		4946.5	565.88	15447.14
	12/17/2014	16:58	12/17/2014 16:58		41	33	24	66	53.5		3493.5	399.66	15846.80
	12/17/2014	17:58	12/17/2014 17:58			28					3210.5	367.28	16214.08
Total CO ₂ Mass (lbs):												16214.08	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-42 Event 1	11/12/2013	8:28	11/12/2013 8:28	24					0.0				
	11/12/2013	8:31	11/12/2013 8:31	31	31	28	<2	54.8	0.0		0.0	0.00	0.00
	11/12/2013	8:33	11/12/2013 8:33	30	30	28	<2	54.1	0.0		0.0	0.00	0.00
	11/12/2013	8:35	11/12/2013 8:35	33	33	30	<2	54.5	0.0		0.0	0.00	0.00
	11/12/2013	8:39	11/12/2013 8:39	36	35	33.5	<2	58.4	0.0		0.0	0.00	0.00
	11/12/2013	8:42	11/12/2013 8:42	35	36	33.5	<2	58.6	0.0		0.0	0.00	0.00
	11/12/2013	8:44	11/12/2013 8:44	35	34	32.5	<2	59.5	0.0		0.0	0.00	0.00
	11/12/2013	8:59	11/12/2013 8:59		33	31	<2	60	0.0		0.0	0.00	0.00
	11/12/2013	9:04	11/12/2013 9:04	33	33		<2	60	0.0		0.0	0.00	0.00
	11/12/2013	9:05	11/12/2013 9:05	35	34.5	32	<2	60	0.0		0.0	0.00	0.00
	11/12/2013	9:10	11/12/2013 9:10	35	34.5		<2	59.3	0.0		0.0	0.00	0.00
	11/12/2013	9:14	11/12/2013 9:14	35	34	32	<2	59.0	0.0		0.0	0.00	0.00
	11/12/2013	9:15	11/12/2013 9:15	36	35	34	3.5	58.6	6.0		3.0	0.34	0.34
	11/12/2013	9:25	11/12/2013 9:25	37	36	34	3.5	58.2	6.1		60.4	6.92	7.26
	11/12/2013	9:40	11/12/2013 9:40	37	36	33.5	4	58.1	6.9		97.7	11.17	18.43
	11/12/2013	10:05	11/12/2013 10:05	36	35	33	4.5	58.2	7.7		183.5	20.99	39.42
	11/12/2013	10:36	11/12/2013 10:36	38	37	34	5.25	60.9	9.2		262.2	29.99	69.42
	11/12/2013	10:53	11/12/2013 10:53	38	37	34.5	5.5	60.6	9.6		159.8	18.28	87.70
	11/12/2013	11:00	11/12/2013 11:00	40	38	36	6.5	60.8	11.5		73.9	8.45	96.15
	11/12/2013	11:20	11/12/2013 11:20	40	38	36	6.5	60.4	11.5		229.6	26.27	122.42
	11/12/2013	11:45	11/12/2013 11:45	40	38	35.5	7	61.7	12.4		297.9	34.09	156.51
	11/12/2013	12:20	11/12/2013 12:20	40	37.5	35.5	7.5	63.5	13.1		446.2	51.05	207.55
	11/12/2013	12:36	11/12/2013 12:36	40	37	35	7.5	66.7	13.0		209.5	23.97	231.52
	11/12/2013	12:38	11/12/2013 12:38	41	39	36.5	8.5	67.4	15.1		28.1	3.21	234.73
	11/12/2013	13:07	11/12/2013 13:07	42	39	36.5	8.75	67.6	15.5		443.0	50.68	285.42
	11/12/2013	13:17	11/12/2013 13:17								155.0	17.73	303.14
	11/12/2013	13:19	11/12/2013 13:19										303.14
SW-42 Event 2	11/26/2013	7:45	11/26/2013 7:45	54	25			68	0.0				303.14
	11/26/2013	7:48	11/26/2013 7:48	55	34	34	<2	68	0.0		0	0.00	303.14
	11/26/2013	8:10	11/26/2013 8:10	55	33	33	<2	68	0.0		0	0.00	303.14
	11/26/2013	8:12	11/26/2013 8:12	52	37	38	<2	68	0.0		0	0.00	303.14
	11/26/2013	8:15	11/26/2013 8:15	52	35	36	<2	68	0.0		0	0.00	303.14
	11/26/2013	9:12	11/26/2013 9:12	52	36	35.5	<2	68	0.0		0	0.00	303.14
	11/26/2013	11:17	11/26/2013 11:17	50	37	36	<2	68	0.0		0	0.00	303.14
	11/26/2013	12:20	11/26/2013 12:20	50	37	36	<2	68	0.0		0	0.00	303.14
	11/26/2013	12:21	11/26/2013 12:21								0	0.00	303.14
	11/26/2013	12:23	11/26/2013 12:23			30							303.14
SW-42 Event 3	12/4/2013	8:01	12/4/2013 8:01										303.14
	12/4/2013	8:02	12/4/2013 8:02	53	28	30	<2	64	0.0		0	0.00	303.14
	12/4/2013	8:06	12/4/2013 8:06	53	28	30	<2	64	0.0		0	0.00	303.14
	12/4/2013	8:07	12/4/2013 8:07	53	32	34	<2	66	0.0		0	0.00	303.14
	12/4/2013	8:35	12/4/2013 8:35	48	32	34	<2	70	0.0		0	0.00	303.14
	12/4/2013	8:38	12/4/2013 8:38	48	34	37.5	<2	70	0.0		0	0.00	303.14
	12/4/2013	9:28	12/4/2013 9:28	47	34	37.5	<2	73	0.0		0	0.00	303.14
	12/4/2013	9:58	12/4/2013 9:58	47	34	37.5	<2	74	0.0		0	0.00	303.14
	12/4/2013	11:12	12/4/2013 11:12	46	34	36.5	2	80	4.1		152.0	17.39	320.53
	12/4/2013	12:09	12/4/2013 12:09	50	34	36.5	3.5	82	7.2		321.6	36.79	357.32
	12/4/2013	12:14	12/4/2013 12:14										357.32
	12/4/2013	12:15	12/4/2013 12:15			28							357.32
SW-42 Event 4	12/10/2013	8:00	12/10/2013 8:00	51	35	34	<2	70	0.0				357.32
	12/10/2013	8:20	12/10/2013 8:20	51	35	34	<2	70	0.0		0.0	0.00	357.32

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/10/2013	8:34	12/10/2013 8:34	52	36	34	<2	72	0.0		0.0	0.00	357.32
	12/10/2013	9:08	12/10/2013 9:08	50	36	34	<2	72	0.0		0.0	0.00	357.32
	12/10/2013	9:42	12/10/2013 9:42	50	35	34	<2	72	0.0		0.0	0.00	357.32
	12/10/2013	10:19	12/10/2013 10:19	50	35	34	<2	74	0.0		0.0	0.00	357.32
	12/10/2013	11:17	12/10/2013 11:17	45	35	34	<2	74	0.0		0.0	0.00	357.32
	12/10/2013	12:00	12/10/2013 12:00	45	35	34	<2	76	0.0		0.0	0.00	357.32
	12/10/2013	13:54	12/10/2013 13:54	45	35	33	3	76	6.3		356.3	40.76	398.08
	12/10/2013	15:06	12/10/2013 15:06	50	35	33	4	72	8.4		526.2	60.20	458.28
	12/10/2013	16:00	12/10/2013 16:00	50	35	33	4	72	8.4		451.8	51.68	509.96
	12/10/2013	17:25	12/10/2013 17:25	50	35	33	4	66	8.4		713.2	81.59	591.55
	12/10/2013	20:14	12/10/2013 20:14								1422.2	162.70	754.26
	12/10/2013	20:17	12/10/2013 20:17				0		0				754.26
	12/10/2013	22:20	12/10/2013 22:20	50	36	35	11.5	54	24.7		1521.3	174.04	928.30
	12/11/2013	7:38	12/11/2013 7:38	50	37.5	35	9.5	52	20.8		12700.2	1452.90	2381.20
SW-42 Event 5	12/17/2013	8:30	12/17/2013 8:30	45	34	34.5	<2	58	0.0				2381.20
	12/17/2013	8:56	12/17/2013 8:56	46	34	34.5	<2	60	0.0		0.0	0.00	2381.20
	12/17/2013	10:14	12/17/2013 10:14	42	34	34	<2	66	0.0		0.0	0.00	2381.20
	12/17/2013	11:17	12/17/2013 11:17	38	32	34	<2	70	0.0		0.0	0.00	2381.20
	12/17/2013	12:02	12/17/2013 12:02	40	32	34	<2	71	0.0		0.0	0.00	2381.20
	12/17/2013	14:12	12/17/2013 14:12	45	32	33	<2	73	0.0		0.0	0.00	2381.20
	12/17/2013	15:22	12/17/2013 15:22	45	31	33	<2	72	0.0		0.0	0.00	2381.20
	12/17/2013	16:30	12/17/2013 16:30	45	31	33	<2	70	0.0		0.0	0.00	2381.20
	12/17/2013	22:09	12/17/2013 22:09	45	31	33	3	56	6.1		1035.5	118.46	2499.66
	12/18/2013	8:04	12/18/2013 8:04	44	31	32.5	4	52	8.2		4250.4	486.24	2985.90
	12/18/2013	12:15	12/18/2013 12:15								2052.7	234.83	3220.73
SW-42 Event 6	1/8/2014	8:00	1/8/2014 8:00	58	33	34	<2	38	0.0				3220.73
	1/8/2014	8:25	1/8/2014 8:25	51	33	34	<2	38	0.0		0.0	0.00	3220.73
	1/8/2014	9:02	1/8/2014 9:02	49	32	34	<2	40	0.0		0.0	0.00	3220.73
	1/8/2014	10:01	1/8/2014 10:01	46	32	34	<2	48	0.0		0.0	0.00	3220.73
	1/8/2014	10:42	1/8/2014 10:42	45	32	34	<2	52	0.0		0.0	0.00	3220.73
	1/8/2014	12:05	1/8/2014 12:05	43	32	32.5	<2	60	0.0		0.0	0.00	3220.73
	1/8/2014	13:25	1/8/2014 13:25	50	32	32.5	<2	58	0.0		0.0	0.00	3220.73
	1/8/2014	14:29	1/8/2014 14:29	50	32	32.5	<2	58	0.0		0.0	0.00	3220.73
	1/8/2014	17:00	1/8/2014 17:00	50	32	32.5	<2	54	0.0		0.0	0.00	3220.73
	1/8/2014	21:05	1/8/2014 21:05	55	31	32.5	3	50	6.1		752.9	86.13	3306.86
	1/8/2014	21:07	1/8/2014 21:07	55	33.5	33.5	5	50	10.5		16.7	1.91	3308.77
	1/9/2014	7:02	1/9/2014 7:02	53	32.5	33.5	6	53	12.5		6837.3	782.19	4090.95
	1/9/2014	8:50	1/9/2014 8:50	51	32.5	33.5	6.5	55	13.5		1400.0	160.16	4251.12
	1/9/2014	10:30	1/9/2014 10:30	48	32.5	33.5	7.5	61	15.4		1445.8	165.40	4416.51
	1/9/2014	11:48	1/9/2014 11:48	40	32.5	33	7.9	66	16.2		1233.9	141.16	4557.67
	1/9/2014	14:40	1/9/2014 14:40	35	32	33	8.5	62	17.4		2888.4	330.43	4888.10
	1/9/2014	15:25	1/9/2014 15:25	40	32	33	9	61	18.4		806.2	92.23	4980.33
	1/9/2014	16:49	1/9/2014 16:49	45	32	33	9	60	18.5		1549.5	177.26	5157.59
	1/9/2014	16:50	1/9/2014 16:50								18.5	2.11	5159.70
	1/9/2014	16:51	1/9/2014 16:51			28							5159.70
SW-42 Event 7	1/10/2014	8:57	1/10/2014 8:57		28	28	10	66	19.5				5159.70
	1/10/2014	8:59	1/10/2014 8:59		32	32	11.5	66	23.4		42.9	4.91	5164.61
	1/10/2014	9:50	1/10/2014 9:50	43	34	34	12	66	25.0		1234.9	141.28	5305.89
	1/10/2014	10:46	1/10/2014 10:46	44	34	34.5	11	70	22.8		1338.5	153.12	5459.01
	1/10/2014	12:34	1/10/2014 12:34	41	34.5	35.5	10	71	20.8		2356.8	269.61	5728.63
	1/10/2014	14:18	1/10/2014 14:18	50	35	35	10	70	21.0		2172.8	248.57	5977.20

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/10/2014	16:14	1/10/2014 16:14	48	35	35	10.2	70	21.4		2455.2	280.88	6258.08
	1/10/2014	17:49	1/10/2014 17:49	48	35	34.5	10.2	68	21.4		2032.7	232.54	6490.61
	1/10/2014	21:53	1/10/2014 21:53	45	35	35	11	65	23.2		5439.2	622.24	7112.85
	1/11/2014	8:00	1/11/2014 8:00	40	35	34	11	65	23.2		14061.7	1608.66	8721.51
	1/11/2014	8:02	1/11/2014 8:02			29							8721.51
SW-42 Event 8	1/23/2014	7:43	1/23/2014 7:43	58	32	34.2	<2	38	0.0				8721.51
	1/23/2014	8:25	1/23/2014 8:25	57	31	33.8	<2	40	0.0		0.0	0.00	8721.51
	1/23/2014	8:49	1/23/2014 8:49	51	31	33.8	<2	44	0.0		0.0	0.00	8721.51
	1/23/2014	9:28	1/23/2014 9:28	48	31	33.8	<2	46	0.0		0.0	0.00	8721.51
	1/23/2014	9:31	1/23/2014 9:31	48	32	34	2	46	4.2		6.2	0.71	8722.23
	1/23/2014	10:01	1/23/2014 10:01	47	32	34	2	48	4.2		124.7	14.26	8736.49
	1/23/2014	11:07	1/23/2014 11:07	45	32	34	2	50	4.1		273.7	31.31	8767.80
	1/23/2014	11:56	1/23/2014 11:56	44	32	34	2	53	4.1		202.7	23.19	8790.99
	1/23/2014	11:57	1/23/2014 11:57	44	33.5	35	3	53	6.3		5.2	0.60	8791.58
	1/23/2014	12:49	1/23/2014 12:49	48	33.2	35	2.5	58	5.2		299.0	34.20	8825.79
	1/23/2014	14:10	1/23/2014 14:10	52	33	35	3.8	57	7.9		530.7	60.71	8886.50
	1/23/2014	15:46	1/23/2014 15:46	51	32.8	34.8	4.2	56	8.7		797.9	91.28	8977.78
	1/23/2014	16:14	1/23/2014 16:14	51	32.8	34.8	4.3	56	8.9		247.1	28.27	9006.05
	1/23/2014	16:16	1/23/2014 16:16			30					17.9	2.04	9008.09
SW-42 Event 9	1/30/2014	7:28	1/30/2014 7:28	59	35	34.5	<2	40	0.0				9008.09
	1/30/2014	7:29	1/30/2014 7:29	53	34.5	34	<2	40	0.0		0.0	0.00	9008.09
	1/30/2014	7:52	1/30/2014 7:52	53	34	33.5	<2	42	0.0		0.0	0.00	9008.09
	1/30/2014	8:53	1/30/2014 8:53	52	36	35	3.5	42	7.6		232.5	26.60	9034.69
	1/30/2014	10:00	1/30/2014 10:00	50	36	35	3.5	42	7.6		510.7	58.42	9093.11
	1/30/2014	10:55	1/30/2014 10:55	50	36	35	3.75	44	8.1		433.7	49.62	9142.73
	1/30/2014	12:28	1/30/2014 12:28	50	36	35	4	48	8.7		781.5	89.41	9232.14
	1/30/2014	13:42	1/30/2014 13:42	56	36	35	4	48	8.7		640.6	73.29	9305.42
	1/30/2014	13:43	1/30/2014 13:43								8.7	0.99	9306.41
	1/30/2014	13:44	1/30/2014 13:44			28							9306.41
SW-42 Event 10	2/3/2014	8:21	2/3/2014 8:21	53	33.5	34	<2	68	0.0				9306.41
	2/3/2014	8:27	2/3/2014 8:27	52	33.5	34	<2	68	0.0		0.0	0.00	9306.41
	2/3/2014	8:57	2/3/2014 8:57	53	33	33.5	<2	76	0.0		0.0	0.00	9306.41
	2/3/2014	9:19	2/3/2014 9:19	52	33	33	<2	77	0.0		0.0	0.00	9306.41
	2/3/2014	10:21	2/3/2014 10:21	54	33	32.5	<2	80	0.0		0.0	0.00	9306.41
	2/3/2014	10:25	2/3/2014 10:25	54	34	33.5	4	83	8.2		16.4	1.87	9308.29
	2/3/2014	12:06	2/3/2014 12:06	52	34	33.5	3.5	86	7.1		774.7	88.63	9396.92
	2/3/2014	13:24	2/3/2014 13:24	52	34	33.5	4	84	8.2		598.0	68.41	9465.33
	2/3/2014	14:25	2/3/2014 14:25	52	34	33.5	4	83	8.2		499.5	57.15	9522.47
	2/3/2014	15:34	2/3/2014 15:34	52	34	33.5	4.3	82	8.8		586.8	67.13	9589.60
	2/3/2014	17:00	2/3/2014 17:00	52	34	33.5	5.2	80	10.7		838.4	95.91	9685.51
	2/4/2014	9:48	2/4/2014 9:48	52	32.5	33.5	7.5	61	15.4		13168.8	1506.51	11192.02
	2/4/2014	9:53	2/4/2014 9:53			27					77.2	8.84	11200.86
SW-42 Event 11	2/5/2014	8:32	2/5/2014 8:32	48	28.5	25	15	66	29.4				11200.86
	2/5/2014	8:34	2/5/2014 8:34	47	33	31	19.8	66	40.8		70.2	8.03	11208.89
	2/5/2014	9:03	2/5/2014 9:03	46	33	32	16	68	32.9		1068.6	122.25	11331.14
	2/5/2014	10:37	2/5/2014 10:37	44	35	33	13.9	70	29.1		2915.5	333.53	11664.67
	2/5/2014	11:36	2/5/2014 11:36	44	35	33	13.5	75	28.2		1689.8	193.32	11857.99
	2/5/2014	12:48	2/5/2014 12:48	44	35	33	13	70	27.2		1994.3	228.15	12086.14
	2/5/2014	13:46	2/5/2014 13:46	46	35	33	12.8	82	26.5		1559.0	178.35	12264.48
	2/5/2014	14:57	2/5/2014 14:57	46	35.5	3.5	12.8	83	26.6		1886.4	215.80	12480.28
	2/5/2014	15:50	2/5/2014 15:50	46	35.5	33.5	12.2	78	25.5		1381.2	158.01	12638.29

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/5/2014	17:15	2/5/2014 17:15	50	35.5	33.5	12	80	25.0		2147.5	245.67	12883.97
	2/5/2014	21:28	2/5/2014 21:28	49	35.5	33.5	12	80	25.0		6333.0	724.49	13608.46
	2/6/2014	8:19	2/6/2014 8:19	52	35.5	33.5	13.3	48	28.6		17470.2	1998.59	15607.05
	2/6/2014	8:20	2/6/2014 8:20			28					28.6	3.28	15610.32
SW-42 Event 12	2/7/2014	7:45	2/7/2014 7:45	50	25	24	7.8	48	14.9				15610.32
	2/7/2014	7:47	2/7/2014 7:47	50	33.5	32	20.5	49	43.2		58.1	6.65	15616.97
	2/7/2014	7:55	2/7/2014 7:55	48	35	32	18	49	38.5		326.9	37.40	15654.36
	2/7/2014	9:17	2/7/2014 9:17	44	35	32.2	15.6	56	33.2		2938.7	336.19	15990.55
	2/7/2014	11:33	2/7/2014 11:33	42	35	33.5	14.5	60	30.7		4341.1	496.63	16487.18
	2/7/2014	13:21	2/7/2014 13:21	42	35.5	33.5	14	63	29.7		3260.7	373.02	16860.20
	2/7/2014	13:22	2/7/2014 13:22			29					29.7	3.40	16863.59
SW-42 Event 13	12/18/2014	7:52	12/18/2014 7:52		23	23	0	48	0.0				16863.59
	12/18/2014	8:06	12/18/2014 8:06		30	29	0	48	0.0		0.0	0.00	16863.59
	12/18/2014	9:36	12/18/2014 9:36		30	29	0	56	0.0		0.0	0.00	16863.59
	12/18/2014	9:37	12/18/2014 9:37		36	34	8	56	17.2		8.6	0.98	16864.58
	12/18/2014	11:10	12/18/2014 11:10		36	34	6	66	12.8		1391.5	159.19	17023.77
	12/18/2014	11:11	12/18/2014 11:11		39	36	10	66	21.9		17.3	1.98	17025.75
	12/18/2014	12:24	12/18/2014 12:24		39	36	8	70	17.4		1435.2	164.19	17189.94
	12/18/2014	13:29	12/18/2014 13:29		39	36	9	72	19.6		1203.1	137.63	17327.57
	12/18/2014	14:52	12/18/2014 14:52		39	36	10	72	21.8		1715.4	196.24	17523.81
	12/18/2014	16:52	12/18/2014 16:52		39	36	11	68	24.0		2746.8	314.23	17838.04
	12/18/2014	16:53	12/18/2014 16:53			32					24.0	2.75	17840.79
SW-42 Event 13	1/9/2015	7:45	1/9/2015 7:45		27	27	0	46	0.0				17840.79
	1/9/2015	7:56	1/9/2015 7:56		35	34	0	46	0.0		0.0	0.00	17840.79
	1/9/2015	8:06	1/9/2015 8:06		39	37.5	2	46	4.5		22.3	2.55	17843.34
	1/9/2015	9:35	1/9/2015 9:35		39	37	4	50	8.9		594.7	68.03	17911.37
	1/9/2015	11:11	1/9/2015 11:11		38	37.5	4	60	8.7		845.7	96.75	18008.12
	1/9/2015	11:12	1/9/2015 11:12			31					8.7	1.00	18009.11
SW-42 Event 14	3/11/2015	8:11	3/11/2015 8:11		30	30	0	66	0.0				18009.11
	3/11/2015	8:34	3/11/2015 8:34		30	29	0	66	0.0		0.0	0.00	18009.11
	3/11/2015	8:35	3/11/2015 8:35		37	36	7.5	66	16.1		8.0	0.92	18010.04
	3/11/2015	10:10	3/11/2015 10:10		38	36	6.5	84	13.8		1422.3	162.71	18172.75
	3/11/2015	11:18	3/11/2015 11:18		38	36	7	91	14.8		974.3	111.46	18284.20
	3/11/2015	12:24	3/11/2015 12:24		38	36	8	96	16.8		1044.7	119.51	18403.72
	3/11/2015	13:42	3/11/2015 13:42		38	36	8.5	94	17.9		1356.4	155.18	18558.89
	3/11/2015	14:00	3/11/2015 14:00		38	36	8.5	94	17.9		322.8	36.93	18595.82
	3/11/2015	14:01	3/11/2015 14:01		0	30	0	0	0.0		9.0	1.03	18596.85
SW-42 Event 15	3/13/2015	7:58	3/13/2015 7:58		28	26	6	64	11.7				18596.85
	3/13/2015	8:14	3/13/2015 8:14		28	27	4.5	64	8.8		163.9	18.75	18615.60
	3/13/2015	8:15	3/13/2015 8:15		37	34	13	64	28.0		18.4	2.10	18617.70
	3/13/2015	8:59	3/13/2015 8:59		38	35	10.5	64	22.8		1116.8	127.77	18745.47
	3/13/2015	11:05	3/13/2015 11:05		38	35	10.5	66	22.8		2870.5	328.39	19073.86
	3/13/2015	11:06	3/13/2015 11:06		0	29	0	0	0.0		11.4	1.30	19075.16
SW-42 Event 16	3/16/2015	8:07	3/16/2015 8:07		34	33	3	57	6.3				19075.16
	3/16/2015	8:53	3/16/2015 8:53		33	31	4.5	69	9.2		357.6	40.91	19116.07
	3/16/2015	8:54	3/16/2015 8:54		37	36	7	69	15.0		12.1	1.39	19117.45
	3/16/2015	10:05	3/16/2015 10:05		37	35.5	7	80	14.8		1058.0	121.04	19238.49
	3/16/2015	11:18	3/16/2015 11:18		37	34.5	8	90	16.8		1153.4	131.95	19370.44
	3/16/2015	12:42	3/16/2015 12:42		36	34	8	91	16.6		1401.8	160.36	19530.80
	3/16/2015	12:43	3/16/2015 12:43			30					16.6	1.90	19532.70
SW-42 Event 17	3/18/2015	12:04	3/18/2015 12:04		34	31	4	78	8.2				19532.70

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/18/2015	12:09	3/18/2015 12:09		37	34.5	8	78	17.0		63.0	7.21	19539.91
	3/18/2015	12:20	3/18/2015 12:20		37	34.5	8	79	17.0		186.6	21.35	19561.26
	3/18/2015	13:21	3/18/2015 13:21		37	34.5	8	79	17.0		1034.3	118.32	19679.58
	3/18/2015	15:12	3/18/2015 15:12		37	34.5	8	76	17.0		1884.8	215.62	19895.19
	3/18/2015	16:27	3/18/2015 16:27		36	34	9	72	19.0		1350.7	154.53	20049.72
	3/18/2015	16:28	3/18/2015 16:28		38	36	11	72	23.7		21.4	2.44	20052.16
	3/18/2015	17:42	3/18/2015 17:42		38	36	11	68	23.8		1757.4	201.05	20253.21
	3/18/2015	17:44	3/18/2015 17:44			28					47.6	5.44	20258.66
SW-42 Event 18	3/25/2015	8:22	3/25/2015 8:22		31	32	0	68	0.0				20258.66
	3/25/2015	8:30	3/25/2015 8:30		31	31.5	0	68	0.0		0.0	0.00	20258.66
	3/25/2015	8:32	3/25/2015 8:32		36	36.5	4	68	8.5		8.5	0.97	20259.63
	3/25/2015	9:12	3/25/2015 9:12		36	36.5	4	68	8.5		339.4	38.83	20298.46
	3/25/2015	10:12	3/25/2015 10:12		36	36	5	69	10.6		572.4	65.48	20363.94
	3/25/2015	11:14	3/25/2015 11:14		36	36	6	74	12.7		720.7	82.44	20446.38
	3/25/2015	12:12	3/25/2015 12:12		36	36	6.5	74	13.7		764.4	87.45	20533.83
	3/25/2015	12:54	3/25/2015 12:54		36	36	7	78	14.7		596.6	68.25	20602.08
	3/25/2015	13:45	3/25/2015 13:45		36	36	7.5	79	15.7		776.3	88.81	20690.89
	3/25/2015	14:59	3/25/2015 14:59		36	35.5	8	82	16.7		1201.7	137.47	20828.36
	3/25/2015	16:18	3/25/2015 16:18		36	35	8	90	16.6		1317.4	150.71	20979.08
	3/25/2015	17:42	3/25/2015 17:42		36	35	8.5	83	17.8		1444.0	165.20	21144.27
	3/26/2015	8:06	3/26/2015 8:06		36	34	11	66	23.4		17775.7	2033.54	23177.81
	3/26/2015	8:07	3/26/2015 8:07			29					23.4	2.67	23180.48
SW-42 Event 18	3/27/2015	8:07	3/27/2015 8:07		30	28	12	70	23.8				23180.48
	3/27/2015	8:29	3/27/2015 8:29		30	28	12	70	23.8		524.3	59.97	23240.46
	3/27/2015	8:30	3/27/2015 8:30		42	36	20	70	44.8		34.3	3.93	23244.39
	3/27/2015	9:28	3/27/2015 9:28		42	37.5	18	72	40.3		2467.2	282.24	23526.63
	3/27/2015	10:28	3/27/2015 10:28		42	38	18	76	40.1		2410.7	275.78	23802.41
	3/27/2015	10:30	3/27/2015 10:30		40	37	15.5	76	33.9		74.0	8.47	23810.88
	3/27/2015	11:25	3/27/2015 11:25		40	37	16	78	34.9		1893.0	216.56	24027.43
	3/27/2015	12:20	3/27/2015 12:20		40	37	16	78	34.9		1921.2	219.78	24247.21
	3/27/2015	13:22	3/27/2015 13:22		40	37	16	80	34.9		2163.6	247.52	24494.73
	3/27/2015	14:16	3/27/2015 14:16		40	37	16	80	34.9		1882.6	215.37	24710.10
	3/27/2015	15:03	3/27/2015 15:03		40	37	16	78	34.9		1640.1	187.63	24897.73
	3/27/2015	16:13	3/27/2015 16:13		40	37	16	72	35.1		2452.3	280.54	25178.28
	3/27/2015	17:12	3/27/2015 17:12		40	37	16	72	35.1		2073.0	237.15	25415.43
	3/27/2015	17:34	3/27/2015 17:34		40	37	16	72	35.1		773.0	88.43	25503.86
	3/27/2015	17:37	3/27/2015 17:37		36	34	12	72	25.4		90.7	10.38	25514.24
	3/28/2015	8:06	3/28/2015 8:06		36	33	15	54	32.3		25035.7	2864.09	28378.33
	3/28/2015	8:57	3/28/2015 8:57		36	33	15	60	32.1		1640.6	187.68	28566.01
	3/28/2015	8:58	3/28/2015 8:58			28					32.1	3.67	28569.68
Total CO ₂ Mass (lbs):												28569.68	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-43 Event 1	11/19/2013	10:14	11/19/2013 10:14	55	28				0.0				0.00
	11/19/2013	10:16	11/19/2013 10:16		30	30	<2	71	0.0		0.0	0.00	0.00
	11/19/2013	10:18	11/19/2013 10:18		32	31	<2	71	0.0		0.0	0.00	0.00
	11/19/2013	10:27	11/19/2013 10:27		32	31	<2	71	0.0		0.0	0.00	0.00
	11/19/2013	10:51	11/19/2013 10:51		32	31	<2	71	0.0		0.0	0.00	0.00
	11/19/2013	10:52	11/19/2013 10:52		36	35	<2	70.5	0.0		0.0	0.00	0.00
	11/19/2013	11:42	11/19/2013 11:42	55	36	35	<2	70	0.0		0.0	0.00	0.00
	11/19/2013	13:05	11/19/2013 13:05		36	35	<2	70	0.0		0.0	0.00	0.00
	11/19/2013	13:26	11/19/2013 13:26		36	35	2	69.8	4.2		44.5	5.09	5.09
	11/19/2013	13:56	11/19/2013 13:56	55	36	35	3	69.8	6.4		158.8	18.17	23.25
	11/19/2013	14:55	11/19/2013 14:55	52	36	35	3	69.5	6.4		374.8	42.88	66.14
	11/19/2013	17:13	11/19/2013 17:13		36	35	4	64.8	8.5		1025.7	117.34	183.48
	11/19/2013	17:48	11/19/2013 17:48		36	35	4	60	8.6		298.6	34.16	217.64
	11/19/2013	17:50	11/19/2013 17:50			35					17.1	1.96	219.60
	11/19/2013	17:52	11/19/2013 17:52			23	20						219.60
SW-43 Event 2	11/20/2013	8:14	11/20/2013 8:14	55	37								219.60
	11/20/2013	8:15	11/20/2013 8:15	60	37	36	<2	64	0.0		0.0	0.00	219.60
	11/20/2013	9:18	11/20/2013 9:18	57	36	35	4	64	8.5		268.3	30.70	250.30
	11/20/2013	9:51	11/20/2013 9:51	57	34	35	4.5	64	9.4		295.5	33.80	284.10
	11/20/2013	11:04	11/20/2013 11:04	55	34	34.5	5.5	65	11.5		761.1	87.07	371.17
	11/20/2013	12:40	11/20/2013 12:40	53	34	34	5.5	65	11.5		1100.5	125.90	497.07
	11/20/2013	14:24	11/20/2013 14:24	52.5	35	33.5	7.25	64	15.3		1390.9	159.12	656.19
	11/20/2013	15:03	11/20/2013 15:03	52	35	33.5	7.75	63.5	16.3		616.8	70.56	726.75
	11/20/2013	15:04	11/20/2013 15:04			33.5					16.3	1.87	728.62
	11/20/2013	15:05	11/20/2013 15:05			20							728.62
	SW-43 Event 3	12/3/2013	8:53	12/3/2013 8:53									
12/3/2013		8:54	12/3/2013 8:54	54	28	28	<2	67	0.0		0.0	0.00	728.62
12/3/2013		8:58	12/3/2013 8:58				0		0.0		0.0	0.00	728.62
12/3/2013		8:59	12/3/2013 8:59	54	28	29.5	<2	67	0.0		0.0	0.00	728.62
12/3/2013		9:17	12/3/2013 9:17			28	<2		0.0		0.0	0.00	728.62
12/3/2013		9:18	12/3/2013 9:18	52	32	32	<2	70	0.0		0.0	0.00	728.62
12/3/2013		10:15	12/3/2013 10:15	50	29	32	<2	67	0.0		0.0	0.00	728.62
12/3/2013		11:36	12/3/2013 11:36	50	29	31.5	2	69	3.9		159.2	18.21	746.83
12/3/2013		12:27	12/3/2013 12:27	50	29	31	3	76	5.9		249.5	28.55	775.37
12/3/2013		13:14	12/3/2013 13:14	47.5	29	31	3	78	5.8		274.9	31.45	806.82
12/3/2013		13:15	12/3/2013 13:15								5.8	0.67	807.49
12/3/2013		13:16	12/3/2013 13:16			21							807.49
SW-43 Event 4		12/9/2013	8:26	12/9/2013 8:26	55	34	32	<2	64	0.0			
	12/9/2013	8:48	12/9/2013 8:48	50	34	32	<2	64	0.0		0.0	0.00	807.49
	12/9/2013	9:12	12/9/2013 9:12	50	34	32	<2	64	0.0		0.0	0.00	807.49
	12/9/2013	9:50	12/9/2013 9:50	50	34	31	<2	70	0.0		0.0	0.00	807.49
	12/9/2013	10:10	12/9/2013 10:10	50	34	30	<2	70	0.0		0.0	0.00	807.49
	12/9/2013	11:00	12/9/2013 11:00	50	32.5	31	<2	76	0.0		0.0	0.00	807.49
	12/9/2013	11:40	12/9/2013 11:40	50	32.5	31	3.5	81	7.1		141.4	16.17	823.67
	12/9/2013	12:38	12/9/2013 12:38	50	32.5	31	4	85	8.0		438.4	50.16	873.82
	12/9/2013	13:41	12/9/2013 13:41	50	32.5	31	4	84	8.1		507.3	58.03	931.86
	12/9/2013	14:09	12/9/2013 14:09	50	32.5	31	4	84	8.1		225.6	25.81	957.66
	12/9/2013	14:36	12/9/2013 14:36	50	33	30	4	82	8.1		218.3	24.97	982.64
	12/9/2013	14:52	12/9/2013 14:52	48	32	31	4	80	8.0		129.3	14.79	997.43
	12/9/2013	16:50	12/9/2013 16:50	45	32.5	31	4	74	8.1		954.5	109.19	1106.62
	12/9/2013	17:40	12/9/2013 17:40	55	32	30.5	5	73	10.1		456.4	52.21	1158.83

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/9/2013	22:08	12/9/2013 22:08	55	32	30	8	68	16.3		3537.3	404.66	1563.49
	12/9/2013	22:09	12/9/2013 22:09	55	32	30.5	10	68	20.3		18.3	2.09	1565.59
	12/10/2013	7:50	12/10/2013 7:50	50	32	30	13	70	26.4		13577.8	1553.30	3118.89
	12/10/2013	7:52	12/10/2013 7:52			20					52.8	6.04	3124.93
SW-43 Event 5	12/11/2013	15:50	12/11/2013 15:50	48	30	33.5	<2	64	0.0				3124.93
	12/11/2013	17:14	12/11/2013 17:14	50	30	32	2	62	4.0		168.1	19.23	3144.16
	12/11/2013	22:06	12/11/2013 22:06	55	30	30.5	6	60	12.0		2341.2	267.84	3412.00
	12/12/2013	7:53	12/12/2013 7:53	52	30	30	10	60	20.1		9417.8	1077.39	4489.39
	12/12/2013	8:20	12/12/2013 8:20								541.5	61.95	4551.34
	12/12/2013	8:21	12/12/2013 8:21			20							4551.34
SW-43 Event 6	12/13/2013	8:32	12/13/2013 8:32	50	32	32	<2	58	0.0				4551.34
	12/13/2013	9:20	12/13/2013 9:20	50	32	31	3.5	62	7.2		171.9	19.67	4571.00
	12/13/2013	10:14	12/13/2013 10:14	48	32	30.5	5	66	10.2		468.6	53.61	4624.61
	12/13/2013	11:58	12/13/2013 11:58	45	31	30	6	70	12.0		1156.6	132.31	4756.92
	12/13/2013	14:36	12/13/2013 14:36	45	30	30	7.5	68	14.9		2130.8	243.76	5000.68
	12/13/2013	15:28	12/13/2013 15:28	55	30	29	8	68	15.9		801.9	91.73	5092.41
	12/13/2013	15:29	12/13/2013 15:29								15.9	1.82	5094.24
	12/13/2013	15:30	12/13/2013 15:30			20							5094.24
SW-43 Event 7	12/16/2013	12:31	12/16/2013 12:31	47	32	32	<2	67	0.0				5094.24
	12/16/2013	13:05	12/16/2013 13:05	47	30	32	<2	68	0.0		0.0	0.00	5094.24
	12/16/2013	13:11	12/16/2013 13:11								0.0	0.00	5094.24
	12/16/2013	13:12	12/16/2013 13:12			23							5094.24
	12/16/2013	15:40	12/16/2013 15:40	45	31	32	<2	68	0.0				5094.24
	12/16/2013	16:39	12/16/2013 16:39	42	30	31.5	<2	66	0.0		0.0	0.00	5094.24
	12/16/2013	17:12	12/16/2013 17:12	40	30	32	3	60	6.0		99.3	11.36	5105.59
	12/16/2013	22:07	12/16/2013 22:07	50	28	30	5	48	9.9		2350.1	268.85	5374.44
	12/17/2013	8:09	12/17/2013 8:09	47	28	29.5	9	52	17.8		8335.6	953.59	6328.03
	12/17/2013	8:24	12/17/2013 8:24								266.7	30.51	6358.54
	12/17/2013	8:25	12/17/2013 8:25			21							6358.54
SW-43 Event 8	1/10/2014	13:05	1/10/2014 13:05	45	32.5	32.5	<2	70	0.0				6358.54
	1/10/2014	14:20	1/10/2014 14:20	50	32	31.5	3.5	70	7.1		266.5	30.49	6389.03
	1/10/2014	16:15	1/10/2014 16:15	48	31	31.5	5	70	10.0		986.0	112.80	6501.82
	1/10/2014	17:51	1/10/2014 17:51	48	31	32	6	68	12.1		1061.5	121.43	6623.26
	1/10/2014	21:54	1/10/2014 21:54	45	31	29	8	65	16.1		3428.5	392.22	7015.47
	1/10/2014	21:57	1/10/2014 21:57	45	32.5	31	11	65	22.6		58.1	6.64	7022.12
	1/11/2014	8:02	1/11/2014 8:02	40	32	30	14	65	28.6		15467.5	1769.48	8791.60
	1/11/2014	8:03	1/11/2014 8:03			21					28.6	3.27	8794.86
SW-43 Event 9	12/11/2014	7:57	12/11/2014 7:57		23	23	0	42	0.0				8794.86
	12/11/2014	8:11	12/11/2014 8:11		30	30	0	46	0.0		0.0	0.00	8794.86
	12/11/2014	10:10	12/11/2014 10:10		30	29.5	0	60	0.0		0.0	0.00	8794.86
	12/11/2014	10:11	12/11/2014 10:11		34	33	0	60	0.0		0.0	0.00	8794.86
	12/11/2014	11:28	12/11/2014 11:28		34	33	0	66	0.0		0.0	0.00	8794.86
	12/11/2014	14:18	12/11/2014 14:18		34	33	0	70	0.0		0.0	0.00	8794.86
	12/11/2014	15:40	12/11/2014 15:40		34	33	0	70	0.0		0.0	0.00	8794.86
	12/11/2014	16:54	12/11/2014 16:54		34	33	0	64	0.0		0.0	0.00	8794.86
	12/11/2014	16:55	12/11/2014 16:55			32					0.0	0.00	8794.86
SW-43 Event 10	1/26/2015	7:52	1/26/2015 7:52		27	25	0	56	0.0				8794.86
	1/26/2015	9:15	1/26/2015 9:15		27	28	0	66	0.0		0.0	0.00	8794.86
	1/26/2015	9:16	1/26/2015 9:16		35	35.5	0	66	0.0		0.0	0.00	8794.86
	1/26/2015	10:46	1/26/2015 10:46		35	35	0	69	0.0		0.0	0.00	8794.86
	1/26/2015	12:04	1/26/2015 12:04		34	35	0	70	0.0		0.0	0.00	8794.86

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/26/2015	13:42	1/26/2015 13:42		35	35	0	66	0.0		0.0	0.00	8794.86
	1/26/2015	14:44	1/26/2015 14:44		34	35	0	65	0.0		0.0	0.00	8794.86
	1/26/2015	15:42	1/26/2015 15:42		34	35	0	62	0.0		0.0	0.00	8794.86
	1/26/2015	17:59	1/26/2015 17:59		34	34	0	58	0.0		0.0	0.00	8794.86
	1/27/2015	7:42	1/27/2015 7:42		34	34	0	46	0.0		0.0	0.00	8794.86
	1/27/2015	8:21	1/27/2015 8:21		34	34	0	52	0.0		0.0	0.00	8794.86
	1/27/2015	8:22	1/27/2015 8:22		35	35.5	4	52	8.5		4.3	0.49	8795.35
	1/27/2015	9:27	1/27/2015 9:27		36	36	3	59	6.4		486.1	55.60	8850.96
	1/27/2015	10:39	1/27/2015 10:39		35	36	4	66	8.4		534.1	61.10	8912.06
	1/27/2015	11:40	1/27/2015 11:40		36	36	4	68	8.5		515.5	58.97	8971.03
	1/27/2015	14:00	1/27/2015 14:00		36	36	3	66	6.4		1040.2	119.00	9090.03
	1/27/2015	14:56	1/27/2015 14:56		36	36	3	66	6.4		357.1	40.85	9130.87
	1/27/2015	15:44	1/27/2015 15:44		35	36	4	64	8.4		355.4	40.66	9171.53
	1/27/2015	17:09	1/27/2015 17:09		35	35.5	4	61	8.5		717.8	82.12	9253.65
	1/28/2015	7:30	1/28/2015 7:30		36	35	4	42	8.7		7391.2	845.55	10099.20
	1/28/2015	8:01	1/28/2015 8:01		36	35	5	46	10.8		303.1	34.68	10133.88
	1/28/2015	9:27	1/28/2015 9:27		36	35.5	4	59	8.6		834.4	95.46	10229.33
	1/28/2015	10:34	1/28/2015 10:34		36	35.5	5	60	10.7		644.9	73.78	10303.11
	1/28/2015	12:55	1/28/2015 12:55		36	35.5	4	68	8.5		1351.8	154.65	10457.76
	1/28/2015	15:08	1/28/2015 15:08		36	35.5	4	68	8.5		1128.4	129.09	10586.85
	1/28/2015	17:03	1/28/2015 17:03		36	35.5	4	64	8.5		977.7	111.84	10698.70
	1/29/2015	7:48	1/29/2015 7:48		36	35.5	5	42	10.9		8587.7	982.43	11681.13
	1/29/2015	8:31	1/29/2015 8:31		36	35	5	50	10.8		466.3	53.34	11734.48
	1/29/2015	9:40	1/29/2015 9:40		36	35.5	5	65	10.6		739.6	84.61	11819.08
	1/29/2015	10:38	1/29/2015 10:38		35	35.5	5	71	10.5		612.0	70.02	11889.10
	1/29/2015	11:42	1/29/2015 11:42		36	35.5	5	75	10.5		672.0	76.88	11965.98
	1/29/2015	12:49	1/29/2015 12:49		36	35.5	5	75	10.5		705.7	80.73	12046.72
	1/29/2015	14:38	1/29/2015 14:38		35	35.5	5	72	10.5		1144.0	130.87	12177.59
	1/29/2015	15:46	1/29/2015 15:46		35	35.5	5	72	10.5		711.1	81.35	12258.94
	1/29/2015	16:38	1/29/2015 16:38		36	35.5	4.5	70	9.5		519.6	59.44	12318.38
	1/29/2015	16:39	1/29/2015 16:39			31					9.5	1.09	12319.47
SW-43 Event 11	2/10/2015	7:47	2/10/2015 7:47		29	30	0	59	0.0				12319.47
	2/10/2015	8:35	2/10/2015 8:35		29	29.5	0	59	0.0		0.0	0.00	12319.47
	2/10/2015	8:37	2/10/2015 8:37		32	32.5	0	59	0.0		0.0	0.00	12319.47
	2/10/2015	10:42	2/10/2015 10:42		32	33	0	61	0.0		0.0	0.00	12319.47
	2/10/2015	12:06	2/10/2015 12:06		32	33	0	66	0.0		0.0	0.00	12319.47
	2/10/2015	14:01	2/10/2015 14:01		32	33	0	65	0.0		0.0	0.00	12319.47
	2/10/2015	15:58	2/10/2015 15:58		32	33	0	65	0.0		0.0	0.00	12319.47
	2/10/2015	17:07	2/10/2015 17:07		32	33	0	64	0.0		0.0	0.00	12319.47
	2/11/2015	7:32	2/11/2015 7:32		32	32	<2	45	0.0		0.0	0.00	12319.47
	2/11/2015	8:12	2/11/2015 8:12		32	32	<2	54	0.0		0.0	0.00	12319.47
	2/11/2015	8:14	2/11/2015 8:14		34	34	4	54	8.4		8.4	0.96	12320.44
	2/11/2015	9:37	2/11/2015 9:37		34	34	4	65	8.3		695.8	79.60	12400.04
	2/11/2015	11:39	2/11/2015 11:39		34	35	3.5	73	7.2		950.1	108.69	12508.73
	2/11/2015	12:59	2/11/2015 12:59		34	34.5	4	73	8.3		620.4	70.98	12579.71
	2/11/2015	13:46	2/11/2015 13:46		34	34.5	4	72	8.3		389.0	44.50	12624.21
	2/11/2015	15:00	2/11/2015 15:00		34	34.5	4	73	8.3		612.4	70.06	12694.27
	2/11/2015	16:19	2/11/2015 16:19		34	34.5	4	74	8.3		653.2	74.72	12768.99
	2/11/2015	17:21	2/11/2015 17:21		34	34.5	4	72	8.3		512.9	58.67	12827.67
	2/12/2015	7:35	2/12/2015 7:35		34	34	5.5	51	11.6		8500.1	972.41	13800.08
	2/12/2015	8:13	2/12/2015 8:13		34	34	5.5	57	11.6		440.5	50.39	13850.47

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	2/12/2015	9:34	2/12/2015 9:34		34	34	5.5	60	11.5		934.6	106.92	13957.39
	2/12/2015	11:42	2/12/2015 11:42		34	34	5.5	77	11.3		1462.5	167.31	14124.70
	2/12/2015	14:11	2/12/2015 14:11		34	34	5.5	77	11.3		1688.2	193.13	14317.83
	2/12/2015	15:42	2/12/2015 15:42		34	34	5.5	78	11.3		1030.5	117.89	14435.72
	2/12/2015	17:11	2/12/2015 17:11		34	34	5.5	74	11.4		1009.4	115.47	14551.19
	2/13/2015	7:41	2/13/2015 7:41		35	34	6	41	12.9		10575.5	1209.84	15761.03
	2/13/2015	8:14	2/13/2015 8:14		35	34	6	48	12.9		425.8	48.71	15809.74
	2/13/2015	9:19	2/13/2015 9:19		35	34	6	56	12.8		832.2	95.20	15904.94
	2/13/2015	10:43	2/13/2015 10:43		35	34	6	59	12.7		1069.4	122.34	16027.28
	2/13/2015	10:59	2/13/2015 10:59		35	34	6	60	12.7		203.3	23.26	16050.53
	2/13/2015	11:00	2/13/2015 11:00			27			0.0		6.3	0.73	16051.26
SW-43 Event 12	3/2/2015	12:47	3/2/2015 12:47		32	34	0	73	0.0				16051.26
	3/2/2015	14:42	3/2/2015 14:42		33	33.5	0	81	0.0		0.0	0.00	16051.26
	3/2/2015	17:19	3/2/2015 17:19		33	33	0	80	0.0		0.0	0.00	16051.26
	3/2/2015	17:20	3/2/2015 17:20		35	35.5	0	80	0.0		0.0	0.00	16051.26
	3/3/2015	7:52	3/3/2015 7:52		35	35.5	4	65	8.4		3672.9	420.17	16471.43
	3/3/2015	8:11	3/3/2015 8:11		35	35.5	4	66	8.4		160.0	18.30	16489.73
	3/3/2015	9:57	3/3/2015 9:57		36	35.5	4	74	8.4		893.1	102.17	16591.90
	3/3/2015	11:23	3/3/2015 11:23		36	36	4	80	8.4		723.3	82.74	16674.65
	3/3/2015	15:00	3/3/2015 15:00		36	35.5	4	83	8.4		1817.1	207.88	16882.52
	3/3/2015	17:12	3/3/2015 17:12		35	35	4	78	8.3		1100.8	125.94	17008.46
	3/4/2015	7:34	3/4/2015 7:34		36	35	6	66	12.8		9080.9	1038.86	18047.32
	3/4/2015	7:35	3/4/2015 7:35			28					12.8	1.46	18048.78
SW-43 Event 13	3/16/2015	11:11	3/16/2015 11:11		33	34	0	88	0.0				18048.78
	3/16/2015	12:48	3/16/2015 12:48		33	33.5	0	90	0.0		0.0	0.00	18048.78
	3/16/2015	12:49	3/16/2015 12:49		34	35	<2	90	0.0		0.0	0.00	18048.78
	3/16/2015	14:15	3/16/2015 14:15		34	35	<2	90	0.0		0.0	0.00	18048.78
	3/16/2015	16:06	3/16/2015 16:06		34	35	0	88	0.0		0.0	0.00	18048.78
	3/16/2015	17:19	3/16/2015 17:19		34	35	0	88	0.0		0.0	0.00	18048.78
	3/17/2015	8:04	3/17/2015 8:04		34	34.5	4	60	8.4		3707.7	424.16	18472.94
	3/17/2015	9:19	3/17/2015 9:19		34	34.5	4	76	8.2		623.5	71.33	18544.27
	3/17/2015	10:45	3/17/2015 10:45		34	34.5	4	87	8.2		705.6	80.72	18624.99
	3/17/2015	11:35	3/17/2015 11:35		34	34.5	4	92	8.1		407.1	46.58	18671.57
	3/17/2015	12:40	3/17/2015 12:40		34	34.5	4	94	8.1		527.5	60.35	18731.92
	3/17/2015	14:06	3/17/2015 14:06		34	34.5	4	94	8.1		697.3	79.77	18811.69
	3/17/2015	15:16	3/17/2015 15:16		34	34.5	4	92	8.1		568.1	64.99	18876.68
	3/17/2015	16:22	3/17/2015 16:22		34	34.5	4	93	8.1		535.9	61.31	18937.99
	3/17/2015	17:51	3/17/2015 17:51		34	34.5	4	91	8.1		723.0	82.71	19020.70
	3/18/2015	7:55	3/18/2015 7:55		34	34.5	5	69	10.4		7811.9	893.69	19914.38
	3/18/2015	9:18	3/18/2015 9:18		34	34.5	5	74	10.3		859.5	98.33	20012.71
	3/18/2015	10:23	3/18/2015 10:23		34	34.5	5	76	10.3		670.8	76.74	20089.45
	3/18/2015	10:24	3/18/2015 10:24			28.5					10.3	1.18	20090.63
SW-43 Event 14	3/25/2015	8:20	3/25/2015 8:20		30	31	0	68	0.0				20090.63
	3/25/2015	8:27	3/25/2015 8:27		30	30	0	68	0.0		0.0	0.00	20090.63
	3/25/2015	8:28	3/25/2015 8:28		34	34	0	68	0.0		0.0	0.00	20090.63
	3/25/2015	9:10	3/25/2015 9:10		35	34	0	68	0.0		0.0	0.00	20090.63
	3/25/2015	10:08	3/25/2015 10:08		35	34.5	<2	68	0.0		0.0	0.00	20090.63
	3/25/2015	11:13	3/25/2015 11:13		35	34.5	<2	74	0.0		0.0	0.00	20090.63
	3/25/2015	12:14	3/25/2015 12:14		35	34	<2	74	0.0		0.0	0.00	20090.63
	3/25/2015	12:58	3/25/2015 12:58		35	34	<2	78	0.0		0.0	0.00	20090.63
	3/25/2015	13:44	3/25/2015 13:44		35	34	<2	80	0.0		0.0	0.00	20090.63

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	3/25/2015	15:02	3/25/2015 15:02		35	34	<2	81	0.0		0.0	0.00	20090.63
	3/25/2015	16:16	3/25/2015 16:16		35	34	<2	86	0.0		0.0	0.00	20090.63
	3/25/2015	17:42	3/25/2015 17:42		35	34	<2	84	0.0		0.0	0.00	20090.63
	3/26/2015	8:02	3/26/2015 8:02		35	34	3	66	6.3		2714.0	310.49	20401.12
	3/26/2015	9:05	3/26/2015 9:05		35	34	3	68	6.3		397.2	45.44	20446.56
	3/26/2015	9:06	3/26/2015 9:06		36	35	4	68	8.5		7.4	0.85	20447.41
	3/26/2015	10:03	3/26/2015 10:03		36	35	4	75	8.4		482.0	55.14	20502.54
	3/26/2015	11:00	3/26/2015 11:00		36	35	4	85	8.3		478.0	54.68	20557.23
	3/26/2015	11:48	3/26/2015 11:48		36	35	4	86	8.3		400.4	45.81	20603.04
	3/26/2015	12:53	3/26/2015 12:53		36	35	4	84	8.4		542.5	62.06	20665.10
	3/26/2015	14:42	3/26/2015 14:42		36	35	4	74	8.4		915.0	104.67	20769.77
	3/26/2015	15:49	3/26/2015 15:49		36	35	4	87	8.3		561.6	64.25	20834.02
	3/26/2015	16:47	3/26/2015 16:47		36	35	4	84	8.4		483.8	55.35	20889.37
	3/26/2015	17:53	3/26/2015 17:53		36	35	4	82	8.4		551.9	63.14	20952.50
	3/26/2015	18:09	3/26/2015 18:09		36	35	4	82	8.4		133.9	15.32	20967.82
	3/26/2015	18:10	3/26/2015 18:10			30					8.4	0.96	20968.78
SW-43 Event 14	3/27/2015	8:15	3/27/2015 8:15		28	28	6	70	11.6				20968.78
	3/27/2015	8:20	3/27/2015 8:20		31	30	7	70	14.1		64.2	7.35	20976.13
	3/27/2015	8:32	3/27/2015 8:32		30	30	6	70	11.9		155.8	17.83	20993.96
	3/27/2015	8:33	3/27/2015 8:33		35	35	9	70	18.9		15.4	1.76	20995.72
	3/27/2015	9:24	3/27/2015 9:24		35	35	6.5	72	13.6		827.6	94.68	21090.40
	3/27/2015	10:26	3/27/2015 10:26		37	36	5	76	10.6		750.9	85.90	21176.30
	3/27/2015	11:23	3/27/2015 11:23		37	36	5	79	10.6		604.9	69.20	21245.50
	3/27/2015	12:18	3/27/2015 12:18		36	36	5	79	10.5		580.0	66.35	21311.85
	3/27/2015	13:18	3/27/2015 13:18		37	37	4.5	80	9.5		600.6	68.71	21380.56
	3/27/2015	13:19	3/27/2015 13:19		36	36	3	80	6.3		7.9	0.90	21381.47
	3/27/2015	14:18	3/27/2015 14:18		36	35	4	79	8.4		433.2	49.55	21431.02
	3/27/2015	15:04	3/27/2015 15:04		36	35	4	78	8.4		386.3	44.19	21475.22
	3/27/2015	16:10	3/27/2015 16:10		35	35	4	72	8.4		553.4	63.30	21538.52
	3/27/2015	17:10	3/27/2015 17:10		35	35	4	72	8.4		502.0	57.43	21595.94
	3/27/2015	17:31	3/27/2015 17:31		35	35	4	72	8.4		175.7	20.10	21616.04
	3/27/2015	17:33	3/27/2015 17:33								16.7	1.91	21617.96
	3/27/2015	17:35	3/27/2015 17:35			32.5							21617.96
SW-43 Event 15	4/6/2015	12:19	4/6/2015 12:19		30	31	0	83	0.0				21617.96
	4/6/2015	12:26	4/6/2015 12:26		30	31	0	83	0.0		0.0	0.00	21617.96
	4/6/2015	12:44	4/6/2015 12:44		30	31	0	86	0.0		0.0	0.00	21617.96
	4/6/2015	13:50	4/6/2015 13:50		30	31	0	87	0.0		0.0	0.00	21617.96
	4/6/2015	13:51	4/6/2015 13:51		33	34	4	87	8.1		4.0	0.46	21618.42
	4/6/2015	15:06	4/6/2015 15:06		34	35	4	87	8.2		608.9	69.66	21688.08
	4/6/2015	16:33	4/6/2015 16:33		34	34	4	86	8.2		710.4	81.27	21769.35
	4/6/2015	17:49	4/6/2015 17:49		34	34	4	85	8.2		621.2	71.06	21840.41
	4/7/2015	7:48	4/7/2015 7:48		34	34	4	64	8.3		6931.3	792.95	22633.36
	4/7/2015	8:34	4/7/2015 8:34		34	34	4	74	8.3		382.0	43.70	22677.06
	4/7/2015	10:30	4/7/2015 10:30		34	34	4	84	8.2		954.0	109.14	22786.21
	4/7/2015	11:53	4/7/2015 11:53		33	34	4	89	8.1		674.2	77.13	22863.34
	4/7/2015	13:28	4/7/2015 13:28		33	34	4	92	8.0		764.7	87.48	22950.82
	4/7/2015	15:02	4/7/2015 15:02		33	34	4	87	8.1		757.4	86.65	23037.47
	4/7/2015	16:24	4/7/2015 16:24		33	34	4	87	8.1		662.3	75.76	23113.23
	4/7/2015	17:27	4/7/2015 17:27		33	34	5	85	10.1		573.0	65.55	23178.78
	4/8/2015	7:52	4/8/2015 7:52		33	34	5	70	10.3		8812.8	1008.18	24186.96
	4/8/2015	8:40	4/8/2015 8:40		33	34	5	74	10.2		491.6	56.24	24243.20

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	4/8/2015	9:19	4/8/2015 9:19		33	34	5	77	10.2		398.1	45.54	24288.74
	4/8/2015	10:51	4/8/2015 10:51		33	34	5	90	10.1		931.9	106.61	24395.36
	4/8/2015	12:09	4/8/2015 12:09		33	34	5	95	10.0		783.4	89.62	24484.98
	4/8/2015	13:24	4/8/2015 13:24		33	34	5	95	10.0		751.5	85.97	24570.95
	4/8/2015	14:52	4/8/2015 14:52		33	34	5	93	10.0		882.6	100.97	24671.91
	4/8/2015	16:12	4/8/2015 16:12		33	34	5	92	10.0		803.5	91.92	24763.83
	4/8/2015	17:37	4/8/2015 17:37		33	34	5	87	10.1		856.1	97.94	24861.77
	4/8/2015	17:38	4/8/2015 17:38			31					10.1	1.15	24862.92
SW-43 Event 16	4/13/2015	7:36	4/13/2015 7:36		32	33	0	74	0.0				24862.92
	4/13/2015	8:20	4/13/2015 8:20		32	32.5	<2	74	0.0		0.0	0.00	24862.92
	4/13/2015	8:21	4/13/2015 8:21		34	34.5	4	74	8.3		4.1	0.47	24863.39
	4/13/2015	9:29	4/13/2015 9:29		34	34	4	77	8.2		561.1	64.19	24927.59
	4/13/2015	11:08	4/13/2015 11:08		34	34	4	80	8.2		814.6	93.19	25020.78
	4/13/2015	12:25	4/13/2015 12:25		34	34	4	88	8.2		630.3	72.10	25092.88
	4/13/2015	13:02	4/13/2015 13:02		34	34	4	89	8.1		301.6	34.50	25127.38
	4/13/2015	14:08	4/13/2015 14:08		34	34	4	90	8.1		537.4	61.48	25188.86
	4/13/2015	15:11	4/13/2015 15:11		34	34	4	90	8.1		512.7	58.66	25247.51
	4/13/2015	16:13	4/13/2015 16:13		34	34	4	87	8.2		505.3	57.81	25305.32
	4/13/2015	17:09	4/13/2015 17:09		34	34	4	82	8.2		458.1	52.41	25357.73
	4/14/2015	7:52	4/14/2015 7:52		34	34	4.5	74	9.3		7725.3	883.77	26241.50
	4/14/2015	8:25	4/14/2015 8:25		34	34	4.5	74	9.3		306.8	35.10	26276.60
	4/14/2015	8:49	4/14/2015 8:49		34	34	4.5	75	9.3		223.0	25.51	26302.12
	4/14/2015	10:07	4/14/2015 10:07		34	34	4.5	81	9.2		722.4	82.64	26384.76
	4/14/2015	11:08	4/14/2015 11:08		34	34	4.5	86	9.2		562.0	64.29	26449.05
	4/14/2015	11:53	4/14/2015 11:53		34	34	4.5	86	9.2		413.6	47.31	26496.36
	4/14/2015	13:10	4/14/2015 13:10		34	34	4.5	93	9.1		705.4	80.69	26577.05
	4/14/2015	14:05	4/14/2015 14:05		34	34	4.5	95	9.1		501.7	57.39	26634.45
	4/14/2015	15:30	4/14/2015 15:30		34	33.5	5	96	10.1		817.3	93.49	26727.94
	4/14/2015	17:44	4/14/2015 17:44		34	33.5	5	86	10.2		1362.0	155.81	26883.75
	4/15/2015	7:46	4/15/2015 7:46		34	33	6	73	12.4		9523.0	1089.44	27973.19
	4/15/2015	8:10	4/15/2015 8:10		35	35	8	73	16.7		349.5	39.98	28013.17
	4/15/2015	9:01	4/15/2015 9:01		35	35	8	78	16.6		850.5	97.29	28110.46
	4/15/2015	9:55	4/15/2015 9:55		35	35	7.5	84	15.5		867.8	99.28	28209.74
	4/15/2015	11:37	4/15/2015 11:37		35	35	7.5	93	15.4		1574.9	180.17	28389.91
	4/15/2015	11:38	4/15/2015 11:38			28.5					15.4	1.76	28391.67
Total CO ₂ Mass (lbs):												28391.67	

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
SW-44 Event 1	11/21/2013	10:10	11/21/2013 10:10						0.0				0.00
	11/21/2013	10:11	11/21/2013 10:11	54	30	32	<2	68	0.0		0.0	0.00	0.00
	11/21/2013	10:53	11/21/2013 10:53	50	29	28	12.3	71	24.1		506.6	57.95	57.95
	11/21/2013	10:55	11/21/2013 10:55	50	30	30	14.1	71	28.0		52.1	5.96	63.91
	11/21/2013	11:30	11/21/2013 11:30	49	30	29.5	15.5	70.5	30.8		1027.9	117.59	181.51
	11/21/2013	11:33	11/21/2013 11:33	49	31	31	17	70.5	34.1		97.3	11.13	192.64
	11/21/2013	13:15	11/21/2013 13:15	46	31	30	18.0	72	36.1		3580.3	409.58	602.22
	11/21/2013	13:18	11/21/2013 13:18	45	33	32	19.8	73	40.5		114.9	13.14	615.37
	11/21/2013	14:16	11/21/2013 14:16	52	38	31.5	21	74	45.2		2484.7	284.25	899.62
	11/21/2013	14:19	11/21/2013 14:19								135.5	15.50	915.12
	11/21/2013	14:20	11/21/2013 14:20			15							915.12
SW-44 Event 2	12/3/2013	14:37	12/3/2013 14:37	50	31	34	4	76.0	8.0				915.12
	12/3/2013	14:50	12/3/2013 14:50	50	29	30.5	11.5	76.0	22.4		197.8	22.63	937.75
	12/3/2013	15:22	12/3/2013 15:22	48	29	29.5	13.5	74.0	26.4		781.5	89.41	1027.15
	12/3/2013	15:24	12/3/2013 15:24	48	30	31	15	74.0	29.7		56.1	6.41	1033.57
	12/3/2013	15:41	12/3/2013 15:41	42.5	30	31	15.25	73.0	30.2		508.9	58.21	1091.78
	12/3/2013	15:42	12/3/2013 15:42								30.2	3.45	1095.24
	12/3/2013	15:43	12/3/2013 15:43										1095.24
SW-44 Event 3	12/4/2013	13:21	12/4/2013 13:21				0		0				1095.24
	12/4/2013	13:22	12/4/2013 13:22	53	32	32	6	84.0	12.0		6.0	0.69	1095.93
	12/4/2013	13:26	12/4/2013 13:26	53	32	30.5	6.5	84.0	13.0		50.1	5.73	1101.65
	12/4/2013	13:43	12/4/2013 13:43	52	32	29	11	83	22.1		298.2	34.11	1135.76
	12/4/2013	14:43	12/4/2013 14:43	50	31	28	14.5	79.0	28.9		1527.7	174.77	1310.53
	12/4/2013	14:44	12/4/2013 14:44								28.9	3.30	1313.83
	12/4/2013	14:45	12/4/2013 14:45				17						1313.83
SW-44 Event 4	12/5/2013	13:09	12/5/2013 13:09				0		0.0				1313.83
	12/5/2013	13:10	12/5/2013 13:10	54	31	31.5	<2	86	0.0		0.0	0.00	1313.83
	12/5/2013	13:16	12/5/2013 13:16	54	31	29.5	3.5	86	6.9		20.8	2.38	1316.21
	12/5/2013	13:19	12/5/2013 13:19	54	31	29	4	86	7.9		22.2	2.55	1318.75
	12/5/2013	13:25	12/5/2013 13:25	52	31	29	5	85	9.9		53.4	6.11	1324.87
	12/5/2013	13:27	12/5/2013 13:27	52	32.5	31.5	7	84	14.1		24.0	2.75	1327.61
	12/5/2013	14:06	12/5/2013 14:06	50	32.5	30.5	10	85	20.1		667.3	76.34	1403.95
	12/5/2013	14:07	12/5/2013 14:07	50	33	31	11.5	85	23.3		21.7	2.48	1406.43
	12/5/2013	14:10	12/5/2013 14:10	50	33	31	11.5	85	23.3		69.8	7.98	1414.41
	12/5/2013	14:11	12/5/2013 14:11			18							1414.41
SW-44 Event 5	12/6/2013	14:08	12/6/2013 14:08				0		0.0				1414.41
	12/6/2013	14:09	12/6/2013 14:09	47	31	33	<2	83	0.0		0.0	0.00	1414.41
	12/6/2013	14:13	12/6/2013 14:13	47	31	33	<2	83	0.0		0.0	0.00	1414.41
	12/6/2013	14:33	12/6/2013 14:33	45	29	32	4	84	7.7		77.5	8.86	1423.28
	12/6/2013	15:05	12/6/2013 15:05	45	29	31.5	5.5	80	10.7		295.1	33.76	1457.03
	12/6/2013	15:45	12/6/2013 15:45	45	29	30.5	8	80	15.6		525.0	60.06	1517.09
	12/6/2013	15:47	12/6/2013 15:47								31.1	3.56	1520.65
	12/6/2013	15:48	12/6/2013 15:48			20							1520.65
SW-44 Event 6	12/9/2013	16:24	12/9/2013 16:24	48	35	33	<2	76	0.0				1520.65
	12/9/2013	16:34	12/9/2013 16:34	46	34	32	<2	74	0.0		0.0	0.00	1520.65
	12/9/2013	16:53	12/9/2013 16:53	46	34	31	<2	72	0.0		0.0	0.00	1520.65
	12/9/2013	17:20	12/9/2013 17:20	50	32.5	31	5	71	10.2		137.7	15.75	1536.40
	12/9/2013	17:36	12/9/2013 17:36	55	32	30	5	71	10.1		162.7	18.61	1555.01
	12/9/2013	17:37	12/9/2013 17:37								10.1	1.16	1556.17
	12/9/2013	17:38	12/9/2013 17:38			19							1556.17
SW-44 Event 7	12/10/2013	16:10	12/10/2013 16:10	50	30	33	<2	72	0.0				1556.17

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	12/10/2013	16:15	12/10/2013 16:15	50	30	33	3	70	6.0		14.9	1.70	1557.87
	12/10/2013	16:46	12/10/2013 16:46	50	30	33	5	70	9.9		246.2	28.17	1586.04
	12/10/2013	17:19	12/10/2013 17:19	50	30	32.5	7	67	13.9		393.9	45.06	1631.10
	12/10/2013	17:21	12/10/2013 17:21								27.9	3.19	1634.29
	12/10/2013	17:22	12/10/2013 17:22			22							1634.29
SW-44 Event 8	12/11/2013	13:09	12/11/2013 13:09	48	32	34	<2	67	0.0				1634.29
	12/11/2013	13:10	12/11/2013 13:10	48	30	32.5	<2	67	0.0		0.0	0.00	1634.29
	12/11/2013	13:33	12/11/2013 13:33	48	30	32.5	2.5	67	5.0		57.3	6.55	1640.84
	12/11/2013	13:34	12/11/2013 13:34	48	32	33	3.5	67	7.1		6.1	0.69	1641.54
	12/11/2013	13:41	12/11/2013 13:41	48	32	33	4	67	8.1		53.5	6.12	1647.65
	12/11/2013	14:14	12/11/2013 14:14	48	32	33	5.3	66	10.8		312.7	35.77	1683.42
	12/11/2013	14:16	12/11/2013 14:16										1683.42
SW-44 Event 9	12/12/2013	12:58	12/12/2013 12:58	45	34	33	<2	70	0.0				1683.42
	12/12/2013	13:44	12/12/2013 13:44	50	33	33	2.5	70	5.1		118.0	13.50	1696.92
	12/12/2013	13:52	12/12/2013 13:52	50	33	34	5	70	10.3		61.6	7.04	1703.96
	12/12/2013	14:06	12/12/2013 14:06	50	33	34	5.8	70	11.9		155.2	17.75	1721.71
	12/12/2013	14:07	12/12/2013 14:07			22					11.9	1.36	1723.08
SW-44 Event 10	12/16/2013	9:21	12/16/2013 9:21	45	30	33	<2	54	0.0				1723.08
	12/16/2013	9:54	12/16/2013 9:54	45	30	32	3	58	6.0		99.5	11.38	1734.45
	12/16/2013	10:24	12/16/2013 10:24	45	29	32	3.5	63	6.9		194.2	22.22	1756.67
	12/16/2013	10:25	12/16/2013 10:25								6.9	0.79	1757.46
	12/16/2013	10:26	12/16/2013 10:26			21.5							1757.46
SW-44 Event 11	12/18/2013	12:15	12/18/2013 12:15	50	30	30	<2	68	0.0				1757.46
	12/18/2013	13:03	12/18/2013 13:03	55	28	28	<2	68	0.0		0.0	0.00	1757.46
	12/18/2013	13:04	12/18/2013 13:04	54	31	32	4	68	8.0		4.0	0.46	1757.92
	12/18/2013	14:20	12/18/2013 14:20	47	31	31	9	68	18.1		994.0	113.71	1871.64
	12/18/2013	15:55	12/18/2013 15:55	40	29	30	10.5	68	20.7		1841.2	210.64	2082.28
	12/18/2013	16:20	12/18/2013 16:20	40	30	30	10.5	68	20.9		519.3	59.41	2141.69
	12/18/2013	16:21	12/18/2013 16:21								20.9	2.39	2144.08
	12/18/2013	16:22	12/18/2013 16:22										2144.08
SW-44 Event 12	12/19/2013	8:33	12/19/2013 8:33	52	26	25	<2	54	0.0				2144.08
	12/19/2013	8:35	12/19/2013 8:35	52	29	31	<2	54	0.0		0.0	0.00	2144.08
	12/19/2013	8:37	12/19/2013 8:37	52	27	25	<2	54	0.0		0.0	0.00	2144.08
	12/19/2013	9:35	12/19/2013 9:35	42	26	28.5	<2	63	0.0		0.0	0.00	2144.08
	12/19/2013	9:37	12/19/2013 9:37	42	31.5	33	4	63	8.1		8.1	0.93	2145.01
	12/19/2013	10:14	12/19/2013 10:14	40	31	33	5	66	10.1		337.0	38.55	2183.55
	12/19/2013	11:08	12/19/2013 11:08	40	31	33	6.6	70	13.3		630.0	72.08	2255.63
	12/19/2013	15:00	12/19/2013 15:00	42	30	30.5	12	74	23.7		4291.0	490.89	2746.53
	12/19/2013	15:03	12/19/2013 15:03	42	31	32	14	74	28.0		77.6	8.88	2755.41
	12/19/2013	16:14	12/19/2013 16:14	42	32	32.5	10	72	20.3		1713.6	196.04	2951.44
	12/19/2013	17:05	12/19/2013 17:05	50	32	33	10	67	20.4		1036.0	118.52	3069.96
	12/19/2013	22:12	12/19/2013 22:12	50	31	32	12	56	24.4		6876.7	786.70	3856.66
	12/20/2013	8:22	12/20/2013 8:22	45	32	31.5	16	58	32.9		17479.7	1999.67	5856.33
	12/20/2013	12:22	12/20/2013 12:22	55	31	30.5	13.5	82	26.8		7160.9	819.20	6675.54
	12/20/2013	12:23	12/20/2013 12:23								26.8	3.07	6678.61
SW-44 Event 13	1/20/2014	7:39	1/20/2014 7:39	60	26	28	<2	40	0.0				6678.61
	1/20/2014	7:40	1/20/2014 7:40	60	32.5	33	<2	40	0.0		0.0	0.00	6678.61
	1/20/2014	7:45	1/20/2014 7:45	58	32.5	33	<2	40	0.0		0.0	0.00	6678.61
	1/20/2014	8:20	1/20/2014 8:20	52	31	32	4	50	8.2		143.4	16.41	6695.01
	1/20/2014	9:02	1/20/2014 9:02	48	30.5	31.5	5.5	56	11.1		406.0	46.44	6741.45
	1/20/2014	10:11	1/20/2014 10:11	48	30	31	7.5	66	15.0		900.1	102.97	6844.42

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/20/2014	10:16	1/20/2014 10:16	48	32	32	10	66	20.4		88.3	10.11	6854.53
	1/20/2014	11:18	1/20/2014 11:18	43	32	32	12	69	24.4		1388.0	158.78	7013.31
	1/20/2014	12:32	1/20/2014 12:32	44	32	32	10.5	71	21.3		1690.4	193.39	7206.70
	1/20/2014	12:34	1/20/2014 12:34								42.6	4.87	7211.57
	1/20/2014	12:35	1/20/2014 12:35			25							7211.57
SW-44 Event 14	1/21/2014	7:49	1/21/2014 7:49	58	28	29.5	<2	51	0.0				7211.57
	1/21/2014	7:50	1/21/2014 7:50	58	32	32.5	<2	51	0.0		0.0	0.00	7211.57
	1/21/2014	8:37	1/21/2014 8:37	51	32	32.5	6	57	12.3		290.0	33.18	7244.75
	1/21/2014	9:35	1/21/2014 9:35	44	31.5	32	7.5	62	15.3		800.6	91.58	7336.33
	1/21/2014	10:18	1/21/2014 10:18	39	31	31	9.2	67	18.5		726.6	83.12	7419.45
	1/21/2014	11:44	1/21/2014 11:44	37	30.5	30.8	10.2	70	20.4		1672.7	191.36	7610.81
	1/21/2014	11:59	1/21/2014 11:59	37	30.5	30.5	10.2	70	20.4		305.5	34.95	7645.76
	1/21/2014	12:00	1/21/2014 12:00			23					20.4	2.33	7648.10
SW-44 Event 15	1/22/2014	8:06	1/22/2014 8:06	56	27	27	<2	40	0.0				7648.10
	1/22/2014	8:08	1/22/2014 8:08	56	28	28	<2	40	0.0		0.0	0.00	7648.10
	1/22/2014	8:10	1/22/2014 8:10	56	32	32	<2	40	0.0		0.0	0.00	7648.10
	1/22/2014	8:46	1/22/2014 8:46	52	30.5	30	<2	44	0.0		0.0	0.00	7648.10
	1/22/2014	8:47	1/22/2014 8:47	52	33.5	33	<2	44	0.0		0.0	0.00	7648.10
	1/22/2014	9:45	1/22/2014 9:45	48	3.5	33	3	48	3.9		112.1	12.83	7660.92
	1/22/2014	10:53	1/22/2014 10:53	45	33.5	32	5	52	10.5		488.6	55.89	7716.82
	1/22/2014	11:57	1/22/2014 11:57	43	32	31.5	7	54	14.4		798.2	91.32	7808.13
	1/22/2014	12:30	1/22/2014 12:30	44	32	31.5	7.7	55	15.9		500.1	57.21	7865.35
	1/22/2014	13:56	1/22/2014 13:56	45	31.5	31	8.5	55	17.4		1431.5	163.76	8029.11
	1/22/2014	15:02	1/22/2014 15:02	52	30.5	29	8.8	56	17.8		1163.0	133.04	8162.15
	1/22/2014	15:03	1/22/2014 15:03	52	33.5	32	12	56	25.1		21.5	2.46	8164.61
	1/22/2014	15:57	1/22/2014 15:57	51	33.5	32	11.9	56	24.9		1350.1	154.45	8319.06
	1/22/2014	16:58	1/22/2014 16:58	56	33.5	32	11.9	56	24.9		1518.7	173.74	8492.80
	1/22/2014	16:59	1/22/2014 16:59			23							8492.80
SW-44 Event 16	1/23/2014	7:47	1/23/2014 7:47	56	31	30	<2	37	0.0				8492.80
	1/23/2014	7:48	1/23/2014 7:48	56	33	32	<2	37	0.0		0.0	0.00	8492.80
	1/23/2014	7:50	1/23/2014 7:50	56	33	32	7	37	14.9		14.9	1.70	8494.50
	1/23/2014	8:13	1/23/2014 8:13	52	32	31	9	38	18.9		387.9	44.38	8538.87
	1/23/2014	8:44	1/23/2014 8:44	50	29	27.5	9.7	44	19.5		595.5	68.13	8607.00
	1/23/2014	8:46	1/23/2014 8:46	50	32	30.5	13	44	27.1		46.6	5.34	8612.34
	1/23/2014	9:24	1/23/2014 9:24	47	31	30	12.2	46	25.1		991.6	113.44	8725.78
	1/23/2014	9:25	1/23/2014 9:25	47	33	31.5	15	46	31.5		28.3	3.24	8729.02
	1/23/2014	10:10	1/23/2014 10:10	45	33	31.5	15.2	48	31.9		1427.1	163.26	8892.28
	1/23/2014	11:19	1/23/2014 11:19	43	33	31	16	50	33.5		2256.0	258.09	9150.37
	1/23/2014	12:18	1/23/2014 12:18	45	33	31	16.2	54	33.8		1984.9	227.07	9377.44
	1/23/2014	12:58	1/23/2014 12:58	45	33	31	16.2	58	33.6		1348.6	154.28	9531.72
	1/23/2014	14:19	1/23/2014 14:19	48	32.2	30	17	56	35.1		2783.2	318.40	9850.12
	1/23/2014	15:53	1/23/2014 15:53	48	32.2	30	17.9	56	36.9		3384.4	387.18	10237.30
	1/23/2014	16:22	1/23/2014 16:22	48	32	29.5	17.9	55	36.9		1070.4	122.46	10359.75
	1/23/2014	16:25	1/23/2014 16:25			22					110.7	12.66	10372.42
SW-44 Event 17	1/27/2014	12:16	1/27/2014 12:16										10372.42
	1/27/2014	12:18	1/27/2014 12:18	55	33	33.5	<2	80	0.0		0.0	0.00	10372.42
	1/27/2014	12:47	1/27/2014 12:47	53	32.5	33	<2	80	0.0		0.0	0.00	10372.42
	1/27/2014	13:10	1/27/2014 13:10	50	32.5	33	<2	80	0.0		0.0	0.00	10372.42
	1/27/2014	14:42	1/27/2014 14:42	47	32.5	33.5	<2	80	0.0		0.0	0.00	10372.42
	1/27/2014	15:40	1/27/2014 15:40	46	32.5	33	<2	77	0.0		0.0	0.00	10372.42
	1/27/2014	16:19	1/27/2014 16:19	49	32.5	33	<2	77	0.0		0.0	0.00	10372.42

Sparge Event	Date	Time	Date + Time	P at Reducer (psig)	P at Panel (psig)	P at Well (psi)	Rotameter Reading (scfm)	Temp (°F)	Flow (scfm)		Volume of CO ₂ (scf)	Mass of CO ₂ (lb)	Cumulative Mass (lb)
	1/27/2014	16:20	1/27/2014 16:20								0.0	0.00	10372.42
	1/27/2014	16:21	1/27/2014 16:21		25								10372.42
<u>SW-44 Event 18</u>	1/28/2014	9:41	1/28/2014 9:41										10372.42
	1/28/2014	9:42	1/28/2014 9:42	52	35	34.5	<2	56	0.0		0.0	0.00	10372.42
	1/28/2014	10:12	1/28/2014 10:12	52	35	34.5	<2	56	0.0		0.0	0.00	10372.42
	1/28/2014	10:55	1/28/2014 10:55	52	35	34	<2	56	0.0		0.0	0.00	10372.42
	1/28/2014	11:34	1/28/2014 11:34	52	33.5	34	<2	54	0.0		0.0	0.00	10372.42
	1/28/2014	13:15	1/28/2014 13:15	50	33.5	34	<2	51	0.0		0.0	0.00	10372.42
	1/28/2014	14:20	1/28/2014 14:20	50	33.5	33.5	<2	51	0.0		0.0	0.00	10372.42
	1/28/2014	15:40	1/28/2014 15:40	50	33.5	33.5	<2	50	0.0		0.0	0.00	10372.42
	1/28/2014	16:42	1/28/2014 16:42	58	33	33.5	<2	50	0.0		0.0	0.00	10372.42
	1/28/2014	16:44	1/28/2014 16:44								0.0	0.00	10372.42
<u>SW-44 Event 19</u>	1/29/2014	7:45	1/29/2014 7:45	45	32	33.5	2.5	40	5.2				10372.42
	1/29/2014	7:50	1/29/2014 7:50	35	29	29	<2	40	0.0		13.1	1.50	10373.91
	1/29/2014	8:00	1/29/2014 8:00	55	28.5	29.5	2	40	4.0		20.1	2.30	10376.21
	1/29/2014	9:30	1/29/2014 9:30	50	29	29.5	2	40	4.0		363.1	41.54	10417.75
	1/29/2014	10:30	1/29/2014 10:30	49	26	28	4	40	7.8		355.6	40.68	10458.43
	1/29/2014	11:40	1/29/2014 11:40	43	28	28	6	40	12.0		693.1	79.29	10537.73
	1/29/2014	13:00	1/29/2014 13:00	48	27	28	8	40	15.8		1112.1	127.23	10664.95
	1/29/2014	14:00	1/29/2014 14:00	45	27	29	8	40	15.8		948.3	108.49	10773.44
	1/29/2014	15:00	1/29/2014 15:00	46	27	29	8	40	15.8		948.3	108.49	10881.93
	1/29/2014	16:20	1/29/2014 16:20	46	28	29	8	40	16.0		1272.1	145.53	11027.46
	1/29/2014	16:25	1/29/2014 16:25			21					80.0	9.15	11036.61
<u>SW-44 Event 20</u>	1/30/2014	7:30	1/30/2014 7:30	50	32	31	<2	40	0.0				11036.61
	1/30/2014	8:30	1/30/2014 8:30	50	30	31	<2	40	0.0		0.0	0.00	11036.61
	1/30/2014	9:30	1/30/2014 9:30	50	28	30	2	41	4.0		119.9	13.71	11050.32
	1/30/2014	10:49	1/30/2014 10:49	50	31	30	2	42	4.1		321.0	36.72	11087.04
	1/30/2014	12:00	1/30/2014 12:00	50	31	30	2	44	4.1		293.0	33.52	11120.56
	1/30/2014	13:32	1/30/2014 13:32	50	30	31	2.5	44	5.1		424.0	48.51	11169.07
	1/30/2014	13:35	1/30/2014 13:35			21					15.3	1.75	11170.82
<u>SW-44 Event 21</u>	2/3/2014	8:14	2/3/2014 8:14	55	30	31.5	<2	68	0.0				11170.82
	2/3/2014	8:15	2/3/2014 8:15	55	31.5	31.5	<2	68	0.0		0.0	0.00	11170.82
	2/3/2014	8:32	2/3/2014 8:32	55	31	31.5	<2	70	0.0		0.0	0.00	11170.82
	2/3/2014	9:01	2/3/2014 9:01	54	30.5	31.2	<2	75	0.0		0.0	0.00	11170.82
	2/3/2014	10:11	2/3/2014 10:11	54	30.5	31	<2	82	0.0		0.0	0.00	11170.82
	2/3/2014	10:12	2/3/2014 10:12	54	32.5	33.2	4.5	82	9.1		4.5	0.52	11171.34
	2/3/2014	11:52	2/3/2014 11:52	54	32.5	33.2	6	87	12.0		1056.5	120.87	11292.21
	2/3/2014	13:19	2/3/2014 13:19	52	32	33	7.2	85	14.4		1151.0	131.67	11423.88
	2/3/2014	14:30	2/3/2014 14:30	51	32	32.5	9.8	84	19.6		1208.4	138.25	11562.13
	2/3/2014	15:25	2/3/2014 15:25	51	32	32	10.3	82	20.7		1108.4	126.80	11688.92
	2/3/2014	16:51	2/3/2014 16:51	50	29.5	31.5	11.8	82	23.0		1879.3	214.99	11903.91
	2/4/2014	10:13	2/4/2014 10:13		32.9		16.8	62	34.7		30086.6	3441.90	15345.81
	2/4/2014	10:14	2/4/2014 10:14			23					34.7	3.97	15349.78
<u>SW-44 Event 22</u>	2/5/2014	8:23	2/5/2014 8:23	52	31	32	<2	66	0.0				15349.78
	2/5/2014	9:07	2/5/2014 9:07	47	30	30.5	6	68	11.9		262.6	30.05	15379.83
	2/5/2014	9:08	2/5/2014 9:08	47	32	32.5	8	68	16.3		14.1	1.61	15381.44
	2/5/2014	10:18	2/5/2014 10:18	45	32	32	11.8	70	24.0		1408.2	161.10	15542.54
	2/5/2014	11:19	2/5/2014 11:19	45	32.5	30.5	13.8	72	28.1		1588.3	181.70	15724.24
	2/5/2014	12:31	2/5/2014 12:31	45	31	30	15	78	29.9		2088.3	238.90	15963.14
	2/5/2014	12:32	2/5/2014 12:32	45	33	32	17.5	78	35.6		32.8	3.75	15966.89
	2/5/2014	13:26	2/5/2014 13:26	45	33	31.5	17.9	80	36.4		1944.6	222.46	16189.35