

Turbidity Results for R-64

R-64 DAY 1 [Thursday April 19, 2012]

Time (min)	Approx. Vol. (gal.)	Pumping Level	Hach Meter NTU	YSI Meter NTU
Purge drop pipe	100			
0	0	5851.7	15.8	27.6
30	150	5841.1	25.2	25.7
120	600	5842.3	21.0	17.8
150	750	5842.3	16.8	18.8
300	1500	5842.4	8.45	8.9
390	1950	5842.4	6.64	6.59

Notes:

Manual water level tag SWL 5851.7 ft

Screen elev. Top – 5836.7 ft

Screen elev. Bot. – 5816.2 ft

9.3 ft drawdown at 5 gpm; .54 gpm/ft consistent with aquifer test and sampling data. Since the pump test was a 2 gpm and we are pumping at 5 gpm, expect slightly better specific capacity numbers.

No odors were detected; still experiencing some effervescing, which is mostly related to the drilling process and which affects the turbidity readings in a flow-through cell. The YSI has a self-cleaning mode that can be programmed at regular time intervals. That feature will be used on Monday to eliminate the air bubble buildup within the cell and get more accurate readings next week.

R-64 DAY 2 [Monday April 23, 2012]

Time (min)	Approx. Vol. (gal.)	Pumping Level	Hach Meter NTU	YSI Meter NTU
Purge drop pipe	50–100	5851.65		
0	0			64.5
10	50	5842.76	35.2	42.3
20	100	5842.67	50.1	51.6
40	200			21.6
60	300			28.3
80	400			10.6
100	500			8.9
120	600			8.6
140	700			6.0
160	800			5.2
180	900			6.1
200	1000	5842.76	4.9	4.5

Notes:

Manual water level tag SWL 5851.47 ft

New generator did not arrive on site until noon; pumping began at approx. 1300 h. The transducer was reprogrammed based on an accurate manual water level tag and set to 15-min intervals to record water levels.

Total pumping time today was 200 min at 5 gpm, for a total approx. volume of 1100 gal. Total cumulative volume removed since 4/19 is approx. 3150 gal. Drawdown during pumping stabilized at 8.9 ft.

Water is visually clear, no odors detected but still has effervescence.

R-64 DAY 3 [Tuesday April 24, 2012]

Time (min)	Approx. Vol. (gal.)	Pumping Level	Hach Meter NTU	YSI Meter NTU
Purge drop pipe	50–100	5851.7		
0	0			29.1
10	50	5842.39	20.9	15.3
20	100			10.7
40	200			6.5
60	300			5.1
80	400			4.4
100	500			3.5
120	600			3.5
140	700			3.8
160	800			3.1
180	900			3.8
200	1000			3.0
220	1100			2.0
240	1200			2.7
260	1300			2.0
280	1400			2.5
300	1500			2.1
320	1600			2.0
340	1700			2.1
350	1750	5843.8	3.1	2.9

Notes:

Total pump time was 350 min at 5 gpm, for a total purge volume of 1850 gal. Total cumulative volume removed since 4/19 is 5000 gal. (approx).

Water is visually clear, no odors detected but water still has slight effervescence.

Collected 1 carboy (5 gal.) near end of day.

Water quality was within sampling criteria (5 NTU) after approx. 300 gal. or 7 CVs.

R-64 DAY 4 [Wednesday April 25, 2012] – Cyclic Pumping

Time (min)	Approx. Vol. (gal.)	Pumping Level	Hach Meter NTU	YSI Meter NTU
Purge drop pipe	75	5851.73		
Cycle 1 – 30 min	75			
0			41.4	37.5
5	25			24.2
10	50			15.7
15	75	5843.7	15.2	10.9
Cycle 2 – 30 min				
0		5851.69		
5	25			8.2
10	50			6.2
15	75			11.1
20	100			8.8
25	125			6.4
30	150	5843.78	8.8	4.8
Cycle 3 – 30 min				
0		5851.7		
5	25			4.6
10	50			3.4
15	75			8.0
20	100			5.9
25	125			4.6
30	150	5843.77		3.7
Cycle 4 – 60 min				
0		5851.23		
5	25			2.8
10	50			2.3
15	75			7.3
20	100			5.1
25	125			4.1
30	150			2.7
35	175			2.4
40	200			1.7
45	225			1.6
50	250			1.4
55	275			1.2
60	300	5843.72	2.2	1.2
Cycle 5 – 175 min				
0				
5				1.2

Time (min)	Approx. Vol. (gal.)	Pumping Level	Hach Meter NTU	YSI Meter NTU
10	50			1.2
15				8.6
20	100			5.8
25				4.0
30	150			3.0
35				2.5
40	200			2.4
45				1.9
50	250			1.5
55				1.2
60	300			1.1
65				1.2
70				0.9
75				0.8
80	400			0.8
85				0.9
90				0.7
95				0.7
100	500			0.6
105				0.7
110				0.5
115				0.6
120	600			0.5
125				0.7
130				0.4
135				0.4
140	700			0.5
145				0.4
150				0.4
155				0.4
160	800			0.4
165				0.6
170				0.4
175	875	5843.99	1.1	0.3

Notes:

During cycles 2–5, turbidities for first 10 min not representative of aquifer but represent drop pipe purge water.

Pump was cycled on and off for specified durations. All pumping performed at 5 gpm. Total pump time was 325 min at 5 gpm, for a total purge volume of 1625 gal. Total cumulative volume removed since 4/19 is 6625 gal. (approx).

Water is visually clear, no odors detected, water still has very slight effervescence.

Collected 2 carboys (10 gal.) during cycle 5 of pumping.

Specific capacity continued to improve with continued development with final values ranging from .62 to .66 gpm/ft.