

**Buck Residential Surface Water and Groundwater Sampling Results (May 27, 2014)**

Sample #		1	2	3	4	5	6	7	8	9		
Sample Location Name		Surface Water 1 <sup>3</sup>	Surface Water 2 <sup>3</sup>	Private Well 1 <sup>4</sup>	Private Well 2 <sup>4</sup>	Private Well 3 <sup>4</sup>	Private Well 4 <sup>4</sup>	Private Well 5 <sup>4</sup>	Private Well 6 <sup>4</sup>	Private Well 7 <sup>4</sup>		
Sample Location Address		Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential		
Collection Date		5/27/2014	5/27/2014	5/27/2014	5/27/2014	5/27/2014	5/27/2014	5/27/2014	5/27/2014	5/27/2014		
Collection Time		Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential	Confidential		
Parameter	Units	2B Std	2L Std	Results <sup>3</sup>	Results <sup>3</sup>	Results <sup>4</sup>	Results <sup>4</sup>	Results <sup>4</sup>	Results <sup>4</sup>	Results <sup>4</sup>	Results <sup>4</sup>	
Field pH	Std Units	6.0-9.0 (N)	6.5-8.5	7.1	7.6	6.5	6.3	6.3	6.8	6.1	6.5	6.7
Field Temperature	deg C			22.1	27.9	22.0	17.3	17.6	16.9	19.4	17.5	17.4
Appearance				CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR
Field Specific Conductance	umhos/cm			205	69	64	153	133	193	145	91	7.1
Dissolved Oxygen	mg/L			3.5	5.9	5.0	4.9	3.3	1.3	5.0	5.4	6.0
Redox	mV			-22	102	148	183	186	165	141	166	184
Turbidity	NTU	50/25 (N)		2.0	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alkalinity	mg/L			73.7	21.7	36.2	60.8	54.4	80.6	27.4	33.1	36.4
Aluminum	µg/L			658	137	< 100	< 100	< 100	150	< 100	< 100	< 100
Aluminum, dissolved <sup>1</sup>				< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Antimony	µg/L		1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Antimony, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Arsenic	µg/L	50	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Arsenic, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Barium	µg/L		700	166	64.7	13.9	17.9	18.4	37.8	77.8	26.4	30.7
Barium, dissolved <sup>1</sup>				150	12.1	13.6	19.2	18.8	37.5	77.6	26.2	30.0
Boron	µg/L		700	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Boron, dissolved <sup>1</sup>				< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	µg/L	2 (N)	2	< 1	< 1	< 1	< 1	< 1	< 1	1.5	< 1	< 1
Cadmium, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	2.1	< 1	< 1
Calcium	µg/L			13,200	5,340	7,260	15,400	13,900	20,000	11,300	8,110	6,340
Calcium, dissolved <sup>1</sup>				12,900	4,120	7,180	16,800	13,600	20,100	11,700	8,160	6,410
Chloride	mg/L	230 (AL)	250	8.2	5.9	< 5	5.0	< 5	9.3	11.8	< 5	< 5
Chromium	µg/L	50	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.7	2.8
Chromium, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.7	2.7
Chromium, hexavalent <sup>2</sup>				< 0.1	< 0.1	0.384	0.293	0.149	< 0.1	< 0.1	1.03	1.86
Copper	µg/L	7 (AL)	1,000	1.1	1.3	5.6	13.1	3.9	1.5	15.6	2.1	< 1
Copper, dissolved <sup>1</sup>				< 1	< 1	6.1	13.3	4.3	1.3	22.8	2.5	< 1
Fluoride	mg/L	1.8	2	0.18	0.17	0.18	0.16	0.16	0.27	0.16	0.18	0.18
Iron	µg/L	1,000 (AL)	300	3,220	2,890	< 50	< 50	< 50	274	75.3	< 50	< 50
Iron, dissolved <sup>1</sup>				899	1,350	< 50	< 50	< 50	< 50	59.2	< 50	< 50
Lead	µg/L	25 (N)	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Lead, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Magnesium	µg/L			6,960	3,160	2,680	6,440	4,870	5,370	2,930	2,560	3,970
Magnesium, dissolved <sup>1</sup>				6,830	3,020	2,650	7,030	4,870	5,340	2,970	2,520	3,940
Manganese	µg/L		50	4,660	2,180	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Manganese, dissolved <sup>1</sup>				4,420	178	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mercury	µg/L	0.012	1	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Mercury, dissolved <sup>1</sup>				< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Nickel	µg/L	88 (N)	100	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Nickel, dissolved <sup>1</sup>				< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Nitrate (as N)	mg/L		10	0.081	< 0.02	1.3	3.9	2.8	1.2	6.2	3.1	1.0
Phosphorus	mg/L			< 0.05	0.091	0.093	0.11	0.084	0.065	0.071	0.086	0.097
Potassium	µg/L			3,830	8,940	1,280	1,640	2,070	3,050	1,560	1,680	1,690
Potassium, dissolved <sup>1</sup>				3,710	9,140	1,260	1,780	2,020	3,030	1,530	1,680	1,680
Selenium	µg/L	5	20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Sodium	µg/L			8,650	1,740	6,580	7,880	7,010	13,700	12,200	8,630	5,020
Sodium, dissolved <sup>1</sup>				8,670	1,820	6,290	8,490	7,020	13,600	12,100	8,690	4,940
Sulfate	mg/L		250	7.3	< 5.0	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Thallium	µg/L		0.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Thallium, dissolved <sup>1</sup>				< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total Dissolved Solids	mg/L		500	118	73.0	116	152	111	195	202	154	89.0
Total Organic Carbon	mg/L			5.2	9.2	1.4	2.9	2.3	2.3	2.0	1.3	9.9
Zinc	µg/L	50 (AL)	1,000	< 5	< 5	136	41.0	1,400	12.0	564	124	< 5
Zinc, dissolved <sup>1</sup>				< 5	< 5	162	40.7	1,460	10.6	782	480	< 5

**Notes:** <sup>1</sup> Filtered (i.e., dissolved) results are not regulatorily accepted by NCDENR and are provided for information only

<sup>2</sup> Chromium is comprised of trivalent (Cr-3) or hexavalent (Cr-6) chromium. Total Chromium = Cr-3 + Cr-6. The 2L standard of 10 µg/L is for total chromium.

<sup>3</sup> Samples 1 and 2 are surface water samples, and 2B (surface water) standards for freshwater aquatic life may apply.

<sup>4</sup> Samples 3-9 are groundwater samples, and 2L (groundwater) standards may apply.

(N) = Narrative standard. See 2B .0211

(AL) = Action Level Standard - See 2B .0211 for additional information

**Legend:** 1,000 A red cell represents an exceedance of the applicable 2B surface water or 2L groundwater standard for that constituent (see 15A NCAC 2B for surface water and 15A NCAC 2L for groundwater)

1,000 A yellow cell represents an exceedance of the applicable 2B surface water or 2L groundwater standard for that constituent. However, the sample is not applicable either due to Note 1 or Note 3