

GROUNDWATER SAMPLING FORM

Well No.: 34-0157SB-B3L-PZ

Project No. <u>Y0239-04.A3</u>	Date: <u>3/31/2009</u>
Project name: <u>Doyle Drive</u>	Well screened interval BTOC (feet): <u>15-25</u>
Location: <u>Lincoln Drive</u>	Depth of well (feet) BTOC: <u>25.00</u>
Sampled and Recorded by: <u>Bill Scott</u>	Tube inlet placement BTOC (feet): <u>20.0</u>
Weather: <u>Sunny</u>	Tubing Diameter ID Used (inches): <u>0.17</u>
Precip. past 5 days (inches): <u>0</u>	Water Level BTOC (feet): <u>10.73</u>
Water Level Instrument: <u>Solinst Model 122, s/n 001654-1</u>	Product level BTOC (feet): <u>None</u>
	Well diameter (inches): <u>1.5</u>
	Time: <u>7:38</u>

CALCULATION OF THE WATER VOLUME CONTAINED WITHIN THE LOW-FLOW SYSTEM

$$22.0 \text{ ft.} \times (0.0071 \text{ ft})^2 \times \pi \times 28.32 \text{ liters/ft}^3 + 0.5 \text{ L} = \frac{0.60}{7.0} \text{ liters of water in tubing}$$

tubing length tubing radius flow cell vol total liters removed

CALIBRATION	Before Purging	After Purging	Standard
Time:	<u>7:40</u>	<u>13:00</u>	<u>--</u>
Temp (°C):	<u>10.0</u>	<u>13.1</u>	<u>--</u>
DO (%):	<u>100%</u>	<u>99.6</u>	<u>100%</u>
NTU:	<u>0/9.8</u>	<u>0/8.9</u>	<u>0/10</u>
ORP (mV):	<u>467</u>	<u>452</u>	<u>465</u>
pH:	<u>7.0</u>	<u>7.2</u>	<u>7.0</u>
E C (µmho/cm):	<u>1,000</u>	<u>1,050</u>	<u>1,000</u>

FIELD MEASUREMENTS

Time	Water Level (ft.)	BTOC (L/min)	Flow Rate (L/min)	pH	(µmho/c m)	ORP (mV)	DO (mg/l)	NTU	Cumulative Purge Vol. Removed (L)	Temp (°C)
0805	7.06			6.64	2,794	174.0	5.1	65.00	1.0	13.5
0813	7.10	0.13		6.67	1,657	175.0	5.37	45.00	2.0	13.9
0820	7.09	0.14		6.68	1,256	179.0	5.38	38.00	3.0	14.0
0828	7.09	0.13		6.68	908	185.0	5.12	55.00	4.0	14.4
0835	7.09	0.14		6.67	800	191.0	5.37	23.0	5.0	14.8
0843	7.09	0.13		6.67	689	196.0	5.27	21.0	6.0	15.1
0851	7.10	0.13		6.67	674	198.0	4.86	9.3	7.0	15.4
0859	7.10	0.13		6.67	664	202.0	4.8	8.2	8.0	15.5

Appearance of sample: <u>Clear</u>	Sample Time: <u>9:05</u>	Laboratory: <u>C&T</u>
Sample ID: <u>34-0157SB-B3L-PZ</u>	Dup Sample Time: <u>None</u>	
Trip blank ID: _____	Duplicate ID: <u>None</u>	Rinsate disposal: <u>55-gallon drum located in drum storage yard</u>
Sampling equipment: <u>Peristaltic Pump w/clean poly tubing and silicone tubing</u>	Sample analyses: _____	
	Sample containers: _____	Decon method: <u>Triple-rinse with alcanox solution</u>

BTOC= below top of casing

BASELINE QA/QC Peer Review Completed: _____ (initial, date)

GROUNDWATER SAMPLING FORM

Well No.: **BTSB-R3(I)**

Project No. <u>Y0239-04.A3</u>		Date: <u>3/31/2009</u>
Project name: <u>Doyle Drive</u>	Well screened interval BTOC (feet): <u>8-18</u>	Depth of well (feet) BTOC: <u>18.00</u>
Location: <u>Lincoln Blvd.</u>	Tube inlet placement BTOC (feet) : <u>13.0</u>	Well diameter (inches): <u>4</u>
Sampled and Recorded by: <u>Bill Scott</u>	Tubing Diameter ID Used (inches): <u>0.17</u>	Time: _____
Weather: <u>Sunny</u>		
Precip. past 5 days (inches): <u>0</u>	Water Level BTOC (feet): <u>12.81</u>	
Water Level Instrument: <u>Solinst Model 122, s/n 001654-1</u>	Product level BTOC (feet): <u>None</u>	

CALCULATION OF THE WATER VOLUME CONTAINED WITHIN THE LOW-FLOW SYSTEM

$$\begin{array}{l}
 \text{13.0 ft.} \times (0.0071 \text{ ft})^2 \times \pi \times 28.32 \text{ liters/ft}^3 + 0.5 \text{ L} = \underline{0.56} \text{ liters of water in tubing} \\
 \text{tubing length} \quad \text{tubing radius} \quad \text{flow cell vol} \quad \underline{1.5} \text{ total liters removed}
 \end{array}$$

CALIBRATION	Before Purging	After Purging	Standard
Time:	<u>7:40</u>	<u>13:00</u>	<u>--</u>
Temp (°C):	<u>10.0</u>	<u>13.1</u>	<u>--</u>
DO (%):	<u>100%</u>	<u>99.6</u>	<u>100%</u>
NTU:	<u>0/9.8</u>	<u>0/8.9</u>	<u>0/10</u>
ORP (mV):	<u>467</u>	<u>452</u>	<u>465</u>
pH:	<u>7.0</u>	<u>7.2</u>	<u>7.0</u>
E C (µmho/cm):	<u>1,000</u>	<u>1,050</u>	<u>1,000</u>

FIELD MEASUREMENTS

Time	Water Level BTOC (ft.)	Flow Rate (L/min)	pH	(µmho/c m):	ORP (mV):	DO (mg/l):	NTU	Cumulative Purge Vol. Removed (L)	Temp (°C)
1118	13.28		7.08	841	122.0	4.63	19.00	0.5	16.0
1123	13.73	0.10	6.98	847	187.0	3.47	24.00	1.0	16.3
1128	14.15	0.10	7.00	839	192.0	4.01	22.00	1.5	16.1

Appearance of sample: <u>Clear</u>	Sample Time: <u>11:40</u>	Laboratory: <u>C&T</u>
Sample ID: <u>BTSB-R3I</u>	Dup Sample Time: _____	
Trip blank ID: <u>Clear</u>	Duplicate ID: <u>None</u>	Rinsate disposal: <u>55-gallon drum at Site</u>
Sampling equipment: <u>Peristaltic Pump w/clean poly tubing and silicone tubing</u>	Sample analyses: <u>None</u>	
	Sample containers: <u>2-1-liter amber glass, 3-40ml VOA:</u>	Decon method: <u>55-gallon drum located in drum storage yard</u>

BTOC= below top of casing

BASELINE QA/QC Peer Review Completed: _____ (initial, date)

GROUNDWATER SAMPLING FORM

Well No.: **BTSB-R3(D)**

Project No. <u>Y0239-04.A3</u>		Date: <u>3/31/2009</u>
Project name: <u>Doyle Drive</u>	Well screened interval BTOC (feet): <u>50-70</u>	Depth of well (feet) BTOC: <u>70.00</u>
Location: <u>Lincoln Blvd.</u>	Tube inlet placement BTOC (feet) : <u>60.0</u>	Well diameter (inches): <u>4</u>
Sampled and Recorded by: <u>Bill Scott</u>	Tubing Diameter ID Used (inches): <u>0.17</u>	Time: <u>12:10</u>
Weather: <u>Sunny</u>		
Precip. past 5 days (inches): <u>0</u>	Water Level BTOC (feet): <u>15.09</u>	
Water Level Instrument: <u>Solinst Model 122, s/n 001654-1</u>	Product level BTOC (feet): <u>None</u>	

CALCULATION OF THE WATER VOLUME CONTAINED WITHIN THE LOW-FLOW SYSTEM

$$60.0 \text{ ft.} \times (0.0071 \text{ ft})^2 \times \pi \times 28.32 \text{ liters/ft}^3 + 0.5 \text{ L} = \underline{0.77} \text{ liters of water in tubing}$$

tubing length
tubing radius
flow cell vol
total liters removed

CALIBRATION

	Before Purging	After Purging	Standard
Time:	<u>7:40</u>	<u>12:48</u>	<u>--</u>
Temp (°C):	<u>10.0</u>	<u>17.9</u>	<u>--</u>
DO (%):	<u>100%</u>	<u>102.5</u>	<u>100%</u>
NTU:	<u>0/9.8</u>	<u>0/10</u>	<u>0/10</u>
ORP (mV):	<u>467</u>	<u>452</u>	<u>465</u>
pH:	<u>7.0</u>	<u>7.3</u>	<u>7.0</u>
E C (µmho/cm):	<u>1,000</u>	<u>1,070</u>	<u>1,000</u>

FIELD MEASUREMENTS

Time	Water Level (ft.)	BTOC (L/min)	Flow Rate (L/min)	pH	EC (µmho/cm):	ORP (mV):	DO (mg/l):	NTU	Cumulative Purge Vol. Removed (L)	Temp (°C)
1218	16.25	0.33		8.26	691	17.0	0.22	8.5	2.6	16.2
1222	16.38	0.33		7.87	704	22.0	0.17	4.9	3.9	16.2
1226	16.50	0.33		7.55	722	32.0	0.14	2.1	5.2	16.5
1230	16.68	0.33		7.38	727	42.0	0.14	1.8	6.5	16.3

Appearance of sample: <u>Clear</u>	Sample Time: <u>12:40</u>	Laboratory: <u>C&T</u>
Sample ID: <u>BTSB-R3D</u>	Dup Sample Time: _____	
Trip blank ID: <u>Clear</u>	Duplicate ID: <u>None</u>	Rinsate disposal: <u>55-gallon drum at Site</u>
Sampling equipment: <u>Peristaltic Pump w/clean poly tubing and silicone tubing</u>	Sample analyses: <u>None</u>	
	Sample containers: <u>2-1-liter amber glass, 3-40ml VOAs</u>	Decon method: <u>55-gallon drum located in drum storage yard</u>

BTOC= below top of casing

BASELINE QA/QC Peer Review Completed: _____ (initial, date)

GROUNDWATER SAMPLING FORM

Well No.: **BTSB-R1(I)**

Project No. <u>Y0239-04.A3</u>	Well screened interval BTOC (feet): <u>23.5-33.5</u>	Date: <u>3/31/2009</u>
Project name: <u>Doyle Drive</u>	Tube inlet placement BTOC (feet): <u>28.5</u>	Depth of well (feet) BTOC: <u>33.50</u>
Location: <u>Lincoln Blvd.</u>	Tubing Diameter ID Used (inches): <u>0.17</u>	Well diameter (inches): <u>2</u>
Sampled and Recorded by: <u>Bill Scott</u>	Water Level BTOC (feet): <u>18.6</u>	Time: <u>10:09</u>
Weather: <u>Sunny</u>	Product level BTOC (feet): <u>None</u>	
Precip. past 5 days (inches): <u>0</u>		
Water Level Instrument: <u>Solinst Model 122, s/n 001654-1</u>		

CALCULATION OF THE WATER VOLUME CONTAINED WITHIN THE LOW-FLOW SYSTEM

$$\begin{array}{l}
 \text{tubing length} \times (\text{tubing radius})^2 \times \pi \times 28.32 \text{ liters/ft}^3 + 0.5 \text{ L} = \underline{0.63} \text{ liters of water in tubing} \\
 \text{flow cell vol} \quad \underline{1.8} \text{ total liters removed}
 \end{array}$$

CALIBRATION

	Before Purging	After Purging	Standard
Time:	<u>7:40</u>	<u>13:00</u>	<u>--</u>
Temp (°C):	<u>10.0</u>	<u>13.1</u>	<u>--</u>
DO (%):	<u>100%</u>	<u>99.6</u>	<u>100%</u>
NTU:	<u>0/9.8</u>	<u>0/8.9</u>	<u>0/10</u>
ORP (mV):	<u>467</u>	<u>452</u>	<u>465</u>
pH:	<u>7.0</u>	<u>7.2</u>	<u>7.0</u>
E C (µmho/cm):	<u>1,000</u>	<u>1,050</u>	<u>1,000</u>

FIELD MEASUREMENTS

Time	Water Level (ft.)	BTOC (L/min)	Flow Rate	pH	(µmho/c m):	ORP (mV):	DO (mg/l):	NTU	Cumulative Purge Vol. Removed (L)	Temp (°C)
1020	18.60			6.70	970	-103	1.36	9.50	0.6	16.0
1028	19.58	0.08		6.73	980	-97	0.85	12.00	1.2	16.3
1036	19.72	0.08		6.72	986	-128	0.50	8.70	1.8	16.6

Appearance of sample: <u>Clear</u>	Sample Time: <u>10:40</u>	Laboratory: <u>C&T</u>
Sample ID: <u>BTSB-R1I</u>	Dup Sample Time: <u>12:55</u>	
Trip blank ID: <u>Clear</u>	Duplicate ID: <u>ST11MW02FD-03192008</u>	Rinsate disposal: <u>55-gallon drum at Site</u>
Sampling equipment: <u>Peristaltic Pump w/clean poly tubing and silicone tubing</u>	Sample analyses: <u>None</u>	
	Sample containers: <u>2-1-liter amber glass, 3-40ml VOA:</u>	Decon method: <u>55-gallon drum located in drum storage yard</u>

BTOC= below top of casing

BASELINE QA/QC Peer Review Completed: _____ (initial, date)