

CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-02D

Tag: Date of Purging: 4/1/11 Start Time: 10:25 Finish Time: 11:00 Weather: LT RAIN

Well Status:

Good <input checked="" type="checkbox"/>	Grout	_____
Good <input checked="" type="checkbox"/>	Casing	_____
Good _____	Lock	_____
Good _____	Obstructions	_____

Diameter of Well Casing (inches)	<u> 2 </u>
Depth Measurements Performed (PVC/Metal)	<u> PVC </u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u> 22.37 </u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u> - </u>
Depth of Water in the Well (gallon)	<u> - </u>
Volume of water in the Well (gallon)	<u> - </u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u> 22.51 </u>

	<u> 0 </u>	<u> 3 </u>	<u> 6 </u>	<u> 9 </u>	<u> 12 </u>	Sample Reading <u> 15 </u>
Number of minutes purged						
Temperature (°C)	<u>11.6</u>	<u>11.9</u>	<u>12.2</u>	<u>12.2</u>	<u>12.1</u>	<u>12.1</u>
pH	<u>3.06</u>	<u>3.03</u>	<u>3.03</u>	<u>3.03</u>	<u>3.03</u>	<u>3.03</u>
Specific Conductance (umhos/cm)	<u>4630</u>	<u>4630</u>	<u>4630</u>	<u>4630</u>	<u>4630</u>	<u>4630</u>
Dissolved Oxygen (mg/l)	<u>0.95</u>	<u>0.99</u>	<u>0.91</u>	<u>0.93</u>	<u>0.93</u>	<u>0.93</u>
Oxidation Reduction (eH)	<u>683.1</u>	<u>714.0</u>	<u>719.6</u>	<u>719.6</u>	<u>719.6</u>	<u>719.6</u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump	Color <u>Clear</u>

Rate of Purge 150 ml/min

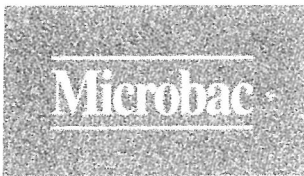
Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling / / . Tech

Sampled by: <u>[Signature]</u>	Date/Time: <u>4/1/11</u>	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp _____ Cooler Number: _____



CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: **GL-02S**

Tag: Date of Purging: 4/1/11 Start Time: 8:30 Finish Time: 10:00 Weather:

Well Status:

Good Grout
 Good Casing
 Good Lock
 Good Obstructions

Diameter of Well Casing (inches) 2
 Depth Measurements Performed (PVC/Metal) PVC
 Depth to Water from Top of Casing (0.01 ft.) prior to purging 22.37
 Depth to Bottom from Top of Casing (0.01 ft.) ~~22.37~~
 Depth of Water in the Well (gallon)
 Volume of water in the Well (gallon)
 Depth to Water from Top of Casing (0.01 ft.) after purging 22.51

Sample Reading

	0	3	6	9	12	15
Number of minutes purged						
Temperature (°C)	11.4	11.4	11.4	11.4	11.4	11.4
pH	7.96	7.91	7.90	7.87	7.87	7.87
Specific Conductance (umhos/cm)	1810	1810	1811	1807	1807	1807
Dissolved Oxygen (mg/l)	2.11	2.10	2.14	2.11	2.11	2.11
Oxidation Reduction (eH)	294	290	290	293	293	293

Purging Equipment

Peristaltic Pump A
 Bladder Pump

Well Observation

Odor Oil smell
 Color Clear

Rate of Purge 150 ml/min

Comments:

Reference SOP Field-014

Readings were performed on date of sampling 4/1/11 . Tech

Sampled by: <u> </u>	Date/Time: <u>4/1/11</u>	Received by: <u> </u>
Printed Name: <u> </u>		Printed Name: <u> </u>
Relinquished by: <u> </u>	Date/Time: <u> </u>	Received by: <u> </u>
Printed Name: <u> </u>		Printed Name: <u> </u>

Cooler Temp Cooler Number:

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>	Site: <u>Sparrows Point, MD</u>
Well I.D.: <u>G1-03 D</u>	Tag: _____
Date of Purging: <u>3/28/11</u> Start Time: <u>8:35</u> Finish Time: <u>9:30</u> Weather: <u>32°F sun</u>	
Date of Collection: <u>3/28/11</u> Time of Collection: <u>8:30</u>	
Well Status:	
Good _____	Grout _____
Good <input checked="" type="checkbox"/>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____
Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>13.90</u>
Depth to Bottom from Top of Casing (0.01 ft.)	_____
Depth of Water in the Well (gallon)	_____
Volume of water in the Well (gallon)	_____
Depth to Water from Top of Casing (0.01 ft.) after purging	_____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	<u>14.79</u>
	Sample Reading
Number of minutes purged	<u>0</u> <u>3</u> <u>6</u> <u>9</u> <u>12</u>
Temperature (°C)	<u>11.3</u> <u>11.8</u> <u>11.9</u> <u>11.9</u> <u>11.8</u> <u>11.8</u>
pH	<u>8.11</u> <u>8.10</u> <u>8.11</u> <u>8.11</u> <u>8.10</u> <u>8.10</u>
Specific Conductance (umhos/cm)	<u>1793</u> <u>1793</u> <u>1799</u> <u>1799</u> <u>1798</u> <u>1798</u>
Dissolved Oxygen (mg/l)	<u>2.41</u> <u>2.41</u> <u>2.38</u> <u>2.38</u> <u>2.35</u> <u>2.36</u>
Oxidation Reduction (eH)	<u>401.9</u> <u>401.7</u> <u>325.8</u> <u>326.9</u> <u>326.1</u> <u>326.4</u>
Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <input checked="" type="checkbox"/> <u>NONE</u>
Bladder Pump _____	Color <u>CLEAR</u>
Rate of Purge <u>150</u> milliliters / minute	
Comments: _____	
Reference SOP Field-014	
Readings were performed on date of sampling <u>3 / 28 / 11</u> . (Tech - <u>TR</u>)	

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>				
Well I.D.: <u>G1035</u>		Tag: _____				
Date of Purging: <u>3/28/11</u> Start Time: <u>9:35</u> Finish Time: <u>11:10</u> Weather: <u>32° wind</u>						
Date of Collection: <u>3/28/11</u> Time of Collection: <u>9:50</u>						
Well Status:						
Good <input checked="" type="checkbox"/>	Grout _____					
Good <input checked="" type="checkbox"/>	Casing _____					
Good _____	Lock _____					
Good _____	Obstructions _____					
Diameter of Well Casing (inches)		<u>2</u>				
Depth Measurements Performed (PVC/Metal)		<u>PVC</u>				
Depth to Water from Top of Casing (0.01 ft.) prior to purging		<u>5.55</u>				
Depth to Bottom from Top of Casing (0.01 ft.)		_____				
Depth of Water in the Well (gallon)		_____				
Volume of water in the Well (gallon)		_____				
Depth to Water from Top of Casing (0.01 ft.) after purging		_____				
Depth to Water from Top of Casing (0.01 ft.) at time of sampling		<u>6.29</u>				
			Sample Reading			
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	
Temperature (°C)	<u>9.9</u>	<u>9.9</u>	<u>9.9</u>	<u>10.1</u>	<u>10.1</u>	<u>10.1</u>
pH	<u>11.97</u>	<u>12.02</u>	<u>12.00</u>	<u>12.02</u>	<u>12.00</u>	<u>12.00</u>
Specific Conductance (umhos/cm)	<u>1409</u>	<u>1420</u>	<u>1415</u>	<u>1410</u>	<u>1410</u>	<u>1410</u>
Dissolved Oxygen (mg/l)	<u>1.31</u>	<u>1.03</u>	<u>1.10</u>	<u>1.01</u>	<u>0.98</u>	<u>0.97</u>
Oxidation Reduction (eH)	<u>162.1</u>	<u>138.0</u>	<u>137.4</u>	<u>125.1</u>	<u>125.9</u>	<u>125.1</u>
Purging Equipment		Well Observation				
Peristaltic Pump	<input checked="" type="checkbox"/>	Odor	<u>None</u>			
Bladder Pump	_____	Color	<u>clear</u>			
Rate of Purge	<u>150</u>	milliliters / minute				
Comments: _____						
Reference SOP Field-014						
Readings were performed on date of sampling <u>3 / 28 / 11</u> . (Tech <u>MA</u>)						



Microbac Laboratories, Inc.

Baltimore Division
2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
Fax: 410-633-6553
www.microbac.com

CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
Project: **Greys Landfill**
Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: **GL-05 (-25)**

Tag: Date of Purging: 4/4/11 Start Time: 9:15 Finish Time: 10:15 Weather: SWW

Well Status:

Good	<input checked="" type="checkbox"/>	Grout	_____
Good	<input checked="" type="checkbox"/>	Casing	_____
Good	<input type="checkbox"/>	Lock	_____
Good	<input type="checkbox"/>	Obstructions	_____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>24.40</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>-</u>
Volume of water in the Well (gallon)	<u>-</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>24.61</u>

					Sample Reading	
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>
Temperature (°C)	<u>14.9</u>	<u>14.5</u>	<u>14.5</u>	<u>14.5</u>	<u>14.5</u>	<u>14.5</u>
pH	<u>6.12</u>	<u>6.19</u>	<u>6.19</u>	<u>6.19</u>	<u>6.19</u>	<u>6.18</u>
Specific Conductance (umhos/cm)	<u>3160</u>	<u>3160</u>	<u>3160</u>	<u>3160</u>	<u>3160</u>	<u>3160</u>
Dissolved Oxygen (mg/l)	<u>3.13</u>	<u>3.10</u>	<u>3.10</u>	<u>3.10</u>	<u>3.10</u>	<u>3.10</u>
Oxidation Reduction (eH)	<u>424.5</u>	<u>424.7</u>	<u>424.7</u>	<u>424.7</u>	<u>424.5</u>	<u>424.5</u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump	Color <u>Clear</u>

Rate of Purge 150 ml/min

Comments:

Reference SOP Field-014

Readings were performed on date of sampling 4/4/11 . Tech

Sampled by: <u>Tony H</u>	Date/Time: <u>4/4/11 1300</u>	Received by: <u>Melanie Dusinski</u>
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp _____ Cooler Number: _____



Microbac Laboratories, Inc.
 Baltimore Division
 2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
 Fax: 410-633-6553
 www.microbac.com

CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-05S

Tag: Date of Purging: 4/4/11 Start Time: 13:10 Finish Time: 15:00 Weather: LRain

Well Status:

Good <input checked="" type="checkbox"/>	Grout <input type="checkbox"/>
Good <input checked="" type="checkbox"/>	Casing <input type="checkbox"/>
Good <input type="checkbox"/>	Lock <input type="checkbox"/>
Good <input type="checkbox"/>	Obstructions <input type="checkbox"/>

Diameter of Well Casing (inches)	<u>3</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>21.68</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>-</u>
Volume of water in the Well (gallon)	<u>-</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>21.83</u>

	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	Sample Reading <u>15</u>
Number of minutes purged						
Temperature (°C)	<u>14.1</u>	<u>13.9</u>	<u>13.9</u>	<u>13.9</u>	<u>13.9</u>	<u>13.9</u>
pH	<u>6.02</u>	<u>5.51</u>	<u>5.45</u>	<u>5.41</u>	<u>5.44</u>	<u>5.41</u>
Specific Conductance (umhos/cm)	<u>1352</u>	<u>1419</u>	<u>1419</u>	<u>1419</u>	<u>1419</u>	<u>1419</u>
Dissolved Oxygen (mg/l)	<u>1.11</u>	<u>1.00</u>	<u>1.14</u>	<u>1.13</u>	<u>1.10</u>	<u>1.17</u>
Oxidation Reduction (eH)	<u>270.8</u>	<u>266.5</u>	<u>266.5</u>	<u>266.5</u>	<u>266.5</u>	<u>266.5</u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>NONE</u>
Bladder Pump	Color <u>Clear</u>

Rate of Purge 150 ml/min

Comments:

Reference SOP Field-014
 Readings were performed on date of sampling 4/4/11 . Tech MTB

Sampled by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp _____ Cooler Number: _____

Microbac Laboratories, Inc.
Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>	
Well I.D.: <u>GL-08 D</u>		Tag: _____	
Date of Purging: <u>3/23/11</u> Start Time: <u>13:20</u> Finish Time: <u>14:00</u> Weather: <u>40°⁰²LT</u>			
Date of Collection: <u>3/23/11</u> Time of Collection: <u>13:36</u>		<u>RAIN</u>	
Well Status:			
Good _____	Grout _____		
Good _____	Casing _____		
Good _____	Lock _____		
Good _____	Obstructions _____		
Diameter of Well Casing (inches)	<u>2</u>		
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>		
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>16.00</u>		
Depth to Bottom from Top of Casing (0.01 ft.)	_____		
Depth of Water in the Well (gallon)	_____		
Volume of water in the Well (gallon)	_____		
Depth to Water from Top of Casing (0.01 ft.) after purging	_____		
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	<u>17.21</u>		
		Sample Reading	
Number of minutes purged	<u>0</u> <u>3</u> <u>6</u> <u>9</u> <u>12</u>		
Temperature (°C)	<u>13.0</u> <u>13.1</u> <u>13.7</u> <u>13.7</u> <u>13.7</u>	<u>13.7</u>	
pH	<u>4.01</u> <u>4.01</u> <u>6.30</u> <u>6.32</u> <u>6.31</u>	<u>6.31</u>	
Specific Conductance (umhos/cm)	<u>41010</u> <u>3790</u> <u>3760</u> <u>3763</u> <u>3762</u>	<u>3762</u>	
Dissolved Oxygen (mg/l)	<u>3.84</u> <u>3.81</u> <u>3.81</u> <u>3.77</u> <u>3.76</u>	<u>3.76</u>	
Oxidation Reduction (eH)	<u>140.2</u> <u>142.3</u> <u>131.5</u> <u>131.6</u> <u>131.4</u>	<u>131.4</u>	
Purging Equipment	Well Observation		
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>		
Bladder Pump <input type="checkbox"/>	Color <u>n-clear</u>		
Rate of Purge _____	milliliters / minute		
Comments: _____			
Reference SOP Field-014			
Readings were performed on date of sampling _____ / _____ / _____. (Tech - _____)			

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>				
Well I.D.: <u>GL 085</u>		Tag: _____				
Date of Purging: <u>3/23/11</u> Start Time: <u>14:10</u> Finish Time: <u>15:00</u>		Weather: <u>41° LF. RAIN</u>				
Date of Collection: <u>3/23/11</u> Time of Collection: <u>14:10 14:27</u>						
Well Status:						
Good	<input checked="" type="checkbox"/>	Grout	_____			
Good	<input checked="" type="checkbox"/>	Casing	_____			
Good	_____	Lock	_____			
Good	_____	Obstructions	_____			
Diameter of Well Casing (inches)		<u>2</u>				
Depth Measurements Performed (PVC/Metal)		<u>PVC</u>				
Depth to Water from Top of Casing (0.01 ft.) prior to purging		<u>4.09</u>				
Depth to Bottom from Top of Casing (0.01 ft.)		_____				
Depth of Water in the Well (gallon)		_____				
Volume of water in the Well (gallon)		_____				
Depth to Water from Top of Casing (0.01 ft.) after purging		_____				
Depth to Water from Top of Casing (0.01 ft.) at time of sampling		<u>4.12</u>				
			Sample Reading			
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	
Temperature (°C)	<u>10.8</u>	<u>10.8</u>	<u>10.8</u>	<u>10.7</u>	<u>10.7</u>	<u>10.7</u>
pH	<u>11.30</u>	<u>11.30</u>	<u>11.36</u>	<u>11.31</u>	<u>11.31</u>	<u>11.30</u>
Specific Conductance (umhos/cm)	<u>248</u>	<u>249</u>	<u>249</u>	<u>248</u>	<u>248</u>	<u>248</u>
Dissolved Oxygen (mg/l)	<u>3.71</u>	<u>3.79</u>	<u>3.69</u>	<u>3.63</u>	<u>3.65</u>	<u>3.66</u>
Oxidation Reduction (eH)	<u>206.2</u>	<u>206.1</u>	<u>206.7</u>	<u>206.7</u>	<u>206.7</u>	<u>206.7</u>
Purging Equipment		Well Observation				
Peristaltic Pump	<input checked="" type="checkbox"/>	Odor	<u>None GAS smell</u>			
Bladder Pump	_____	Color	<u>Clear</u>			
Rate of Purge	<u>150</u>	milliliters / minute				
Comments: _____						
Reference SOP Field-014						
Readings were performed on date of sampling <u>3 / 23 / 11</u> . (Tech - <u>TA</u>)						

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: G109D Tag: _____

Date of Purging: 3/23/11 Start Time: 11:00 Finish Time: 11:40 Weather: 41° OVERCAST
Date of Collection: 3/23/11 Time of Collection: 11:16

Well Status:

Good _____ Grout CRACKED
Good ✓ Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) _____ 2
Depth Measurements Performed (PVC/Metal) _____ PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging _____ 9.80
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling _____ 9.95

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>13.1</u>	<u>13.0</u>	<u>13.0</u>	<u>13.0</u>	<u>13.0</u>	<u>13.0</u>
pH	<u>6.74</u>	<u>6.73</u>	<u>6.73</u>	<u>6.72</u>	<u>6.75</u>	<u>6.78</u>
Specific Conductance (umhos/cm)	<u>2340</u>	<u>2340</u>	<u>2340</u>	<u>2350</u>	<u>2350</u>	<u>2350</u>
Dissolved Oxygen (mg/l)	<u>1.63</u>	<u>1.63</u>	<u>1.62</u>	<u>1.60</u>	<u>1.61</u>	<u>1.62</u>
Oxidation Reduction (eH)	<u>174.6</u>	<u>178.1</u>	<u>178.1</u>	<u>178.4</u>	<u>178.4</u>	<u>178.4</u>

Purging Equipment **Well Observation**
Peristaltic Pump ✓ Odor NONE
Bladder Pump _____ Color CLEAR

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling _____ / _____ / _____. (Tech - _____)

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: GL 095 Tag: _____

Date of Purging: 3/23/11 Start Time: 11:45 Finish Time: 12:40 Weather: 41° overcast
Date of Collection: 3/23/11 Time of Collection: 12:05

Well Status:

Good _____ Grout _____
Good _____ Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 4.54
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 4.57

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>10.4</u>	<u>10.4</u>	<u>10.3</u>	<u>10.3</u>	<u>10.3</u>	<u>10.3</u>
pH	<u>10.65</u>	<u>10.65</u>	<u>10.60</u>	<u>10.60</u>	<u>10.60</u>	<u>10.60</u>
Specific Conductance (umhos/cm)	<u>2095</u>	<u>2094</u>	<u>2093</u>	<u>2093</u>	<u>2093</u>	<u>2093</u>
Dissolved Oxygen (mg/l)	<u>1.40</u>	<u>1.45</u>	<u>1.44</u>	<u>1.44</u>	<u>1.49</u>	<u>1.49</u>
Oxidation Reduction (eH)	<u>121.6</u>	<u>124.5</u>	<u>124.1</u>	<u>124.2</u>	<u>124.2</u>	<u>124.2</u>

Purging Equipment **Well Observation**
Peristaltic Pump _____ Odor _____
Bladder Pump _____ Color _____

Rate of Purge _____ milliliters / minute

Comments: _____

Reference SOP Field-014
Readings were performed on date of sampling _____ / _____ / _____. (Tech - _____)

Microbac Laboratories, Inc.
Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>	
Well I.D.: <u>G1-10 A</u>		Tag: _____	
Date of Purging: <u>3/22/11</u>		Start Time: <u>13:06</u>	Finish Time: <u>14:10</u>
Date of Collection: <u>3/22/11</u>		Weather: <u>50° overcast</u>	
Time of Collection: <u>13:40</u>			
Well Status:			
Good <input checked="" type="checkbox"/>	Grout _____		
Good <input checked="" type="checkbox"/>	Casing _____		
Good _____	Lock _____		
Good _____	Obstructions _____		
Diameter of Well Casing (inches)	<u>2</u>		
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>		
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>20.95</u>		
Depth to Bottom from Top of Casing (0.01 ft.)	-----		
Depth of Water in the Well (gallon)	-----		
Volume of water in the Well (gallon)	-----		
Depth to Water from Top of Casing (0.01 ft.) after purging	-----		
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	<u>20.90</u>		
Number of minutes purged	0	3	6
Temperature (°C)	<u>14.8</u>	<u>14.7</u>	<u>14.7</u>
pH	<u>6.57</u>	<u>6.57</u>	<u>6.57</u>
Specific Conductance (umhos/cm)	<u>297</u>	<u>298</u>	<u>300</u>
Dissolved Oxygen (mg/l)	<u>3.40</u>	<u>3.38</u>	<u>3.15</u>
Oxidation Reduction (eH)	<u>256.3</u>	<u>241.9</u>	<u>218.1</u>
	12	15	Sample Reading
	<u>14.6</u>	<u>14.8</u>	<u>14.8</u>
	<u>6.56</u>	<u>6.56</u>	<u>6.56</u>
	<u>293</u>	<u>293</u>	<u>293</u>
	<u>3.60</u>	<u>3.60</u>	<u>3.65</u>
	<u>188.9</u>	<u>188.9</u>	<u>188.7</u>
Purging Equipment	Well Observation		
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>		
Bladder Pump _____	Color <u>Clear</u>		
Rate of Purge <u>150</u> milliliters / minute			
Comments: _____			
Reference SOP Field-014			
Readings were performed on date of sampling _____ / _____ / _____. (Tech - _____)			

Sample
18
14.8
6.56
293
3.65
188.7

Microbac Laboratories, Inc.
Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: GL-105 Tag: _____

Date of Purging: 3/22/11 Start Time: 14:15 Finish Time: 15:10 Weather: 50° overcast
Date of Collection: 3/22/11 Time of Collection: 14:35

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 8.21
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 8.31

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	12.7	12.8	12.7	12.6	12.6	12.6
pH	6.07	5.99	5.92	5.91	5.91	5.91
Specific Conductance (umhos/cm)	372	375	371	3.80	3.78	3.77
Dissolved Oxygen (mg/l)	2.71	2.76	2.76	2.69	2.65	2.67
Oxidation Reduction (eH)	292.6	284.9	280.1	267.2	266.7	266.4

Purging Equipment Well Observation
Peristaltic Pump Odor None
Bladder Pump _____ Color Clear

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 5/22/11. (Tech - LTB)

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: GL-11 D Tag: _____

Date of Purging: 3/23/11 Start Time: 9:00 Finish Time: 10:00 Weather: 41 °F overcast
Date of Collection: 3/23/11 Time of Collection: 9:25

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 19.88
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 19.90

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>12.8</u>	<u>12.8</u>	<u>12.8</u>	<u>12.8</u>	<u>12.8</u>	<u>12.8</u>
pH	<u>11.44</u>	<u>11.45</u>	<u>11.44</u>	<u>11.45</u>	<u>11.44</u>	<u>11.44</u>
Specific Conductance (umhos/cm)	<u>620</u>	<u>623</u>	<u>623</u>	<u>623</u>	<u>622</u>	<u>622</u>
Dissolved Oxygen (mg/l)	<u>2.70</u>	<u>2.70</u>	<u>2.73</u>	<u>2.73</u>	<u>2.72</u>	<u>2.72</u>
Oxidation Reduction (eH)	<u>357.6</u>	<u>357.6</u>	<u>357.8</u>	<u>356.3</u>	<u>356.4</u>	<u>356.4</u>

Purging Equipment
Peristaltic Pump
Bladder Pump _____

Well Observation
Odor NONE
Color Clear

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 3 / 23 / 11 . (Tech - TA)

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: GL115 Tag: _____

Date of Purging: 3/23/11 Start Time: 10:05 Finish Time: 10:50 Weather: 41° OVERCAST
Date of Collection: 3/23/11 Time of Collection: 10:20

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 7.88
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 7.92

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>12.2</u>	<u>12.2</u>	<u>12.0</u>	<u>12.1</u>	<u>12.2</u>	<u>12.2</u>
pH	<u>4.53</u>	<u>4.51</u>	<u>4.50</u>	<u>4.50</u>	<u>4.56</u>	<u>4.58</u>
Specific Conductance (umhos/cm)	<u>650</u>	<u>650</u>	<u>650</u>	<u>650</u>	<u>650</u>	<u>650</u>
Dissolved Oxygen (mg/l)	<u>2.39</u>	<u>2.37</u>	<u>2.37</u>	<u>2.37</u>	<u>2.37</u>	<u>2.39</u>
Oxidation Reduction (eH)	<u>490.8</u>	<u>490.6</u>	<u>490.6</u>	<u>490.7</u>	<u>490.7</u>	<u>490.9</u>

Purging Equipment
Peristaltic Pump
Bladder Pump _____

Well Observation
Odor NONE
Color Clear

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 3 / 23 / 11 (Tech - CTH)

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL _____ Site: Sparrows Point, MD
 Well I.D.: GL-12D Tag: BA 81 4617
 Date of Purging: 3/21/11 Start Time: 14:18 Finish Time: 15:10 Weather: 60 SUN
 Date of Collection: 3/21/11 Time of Collection: 14:40

Well Status:

Good Grout _____
 Good Casing _____
 Good _____ Lock _____
 Good _____ Obstructions _____

Diameter of Well Casing (inches) _____
 Depth Measurements Performed (PVC/Metal) 2 PVC
 Depth to Water from Top of Casing (0.01 ft.) prior to purging 11.96
 Depth to Bottom from Top of Casing (0.01 ft.) _____
 Depth of Water in the Well (gallon) _____
 Volume of water in the Well (gallon) _____
 Depth to Water from Top of Casing (0.01 ft.) after purging _____
 Depth to Water from Top of Casing (0.01 ft.) at time of sampling 12.20

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	15
Temperature (°C)	<u>13.2</u>	<u>12.8</u>	<u>12.7</u>	<u>12.7</u>	<u>12.5</u>	<u>12.8</u>
pH	<u>6.51</u>	<u>3.85</u>	<u>3.86</u>	<u>3.86</u>	<u>3.86</u>	<u>3.86</u>
Specific Conductance (umhos/cm)	<u>3.86</u>	<u>652</u>	<u>649</u>	<u>650</u>	<u>650</u>	<u>650</u>
Dissolved Oxygen (mg/l)	_____	_____	_____	_____	_____	_____
Oxidation Reduction (eH)	<u>656.6</u>	<u>638.5</u>	<u>634.9</u>	<u>637.1</u>	<u>636.1</u>	<u>636.4</u>

Purging Equipment Well Observation
 Peristaltic Pump Odor None
 Bladder Pump _____ Color Clear

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014
 Readings were performed on date of sampling 3 / 21 / 11 (Tech - TR)

**Microbac Laboratories, Inc.
Groundwater Monitoring Report**

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>				
Well I.D.: <u>GL-12S</u>		Tag: <u>BA 81 4628</u>				
Date of Purging: <u>3/21/11</u> Start Time: <u>1320</u> Finish Time: <u>14:15</u> Weather: <u>60 PTsun</u>						
Date of Collection: <u>3/21/11</u> Time of Collection: <u>1340</u>						
Well Status:						
Good	<input checked="" type="checkbox"/>	Grout	_____			
Good	<input checked="" type="checkbox"/>	Casing	_____			
Good	_____	Lock	_____			
Good	_____	Obstructions	_____			
Diameter of Well Casing (inches)		<u>2</u>				
Depth Measurements Performed (PVC/Metal)		<u>PVC</u>				
Depth to Water from Top of Casing (0.01 ft.) prior to purging		<u>7.16</u>				
Depth to Bottom from Top of Casing (0.01 ft.)		_____				
Depth of Water in the Well (gallon)		_____				
Volume of water in the Well (gallon)		_____				
Depth to Water from Top of Casing (0.01 ft.) after purging		_____				
Depth to Water from Top of Casing (0.01 ft.) at time of sampling		<u>7.32</u>				
		Sample Reading				
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>
Temperature (°C)	<u>11.7</u>	<u>11.5</u>	<u>11.5</u>	<u>11.5</u>	<u>11.6</u>	<u>11.5</u>
pH	<u>4.32</u>	<u>4.30</u>	<u>4.30</u>	<u>4.31</u>	<u>4.31</u>	<u>4.31</u>
Specific Conductance (umhos/cm)	<u>736</u>	<u>728</u>	<u>722</u>	<u>719</u>	<u>713</u>	<u>720</u>
Dissolved Oxygen (mg/l)	_____	_____	_____	_____	_____	_____
Oxidation Reduction (eH)	<u>563.2</u>	<u>568.9</u>	<u>563.5</u>	<u>559.5</u>	<u>547.9</u>	<u>549.1</u>
Purging Equipment		Well Observation				
Peristaltic Pump	<input checked="" type="checkbox"/>	Odor	<u>None</u>			
Bladder Pump	_____	Color	<u>clear</u>			
Rate of Purge	<u>150</u>	milliliters / minute				
Comments: _____						
Reference SOP Field-014						
Readings were performed on date of sampling <u>3 / 21 / 11</u> (Tech <u>JD</u>)						

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: G 13 D Tag: _____

Date of Purging: 9/22/11 Start Time: 9:00 Finish Time: 10:00 Weather: 50°F overcast
Date of Collection: 9/22/11 Time of Collection: 9:35

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 18.70
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 18.90

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>13.2</u>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>	<u>13.3</u>
pH	<u>6.73</u>	<u>6.32</u>	<u>6.38</u>	<u>6.38</u>	<u>6.31</u>	<u>6.37</u>
Specific Conductance (umhos/cm)	<u>1690</u>	<u>1739</u>	<u>1740</u>	<u>1739</u>	<u>1739</u>	<u>1739</u>
Dissolved Oxygen (mg/l)	<u>4.68</u>	<u>4.42</u>	<u>4.41</u>	<u>4.40</u>	<u>4.40</u>	<u>4.40</u>
Oxidation Reduction (eH)	_____	_____	_____	_____	_____	_____

Purging Equipment Well Observation
Peristaltic Pump Odor None
Bladder Pump _____ Color Clear

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014
Readings were performed on date of sampling 3 / 22 / 11 . (Tech - TD)

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>				
Well ID.: <u>G-135</u>		Tag: _____				
Date of Purging: <u>3/22/11</u>		Start Time: <u>10:05</u>	Finish Time: <u>10:55</u>			
Date of Collection: <u>3/22/11</u>		Weather: <u>52° overcast</u>				
Time of Collection: <u>10:27</u>						
Well Status:						
Good	<input checked="" type="checkbox"/>	Grout	_____			
Good	<input checked="" type="checkbox"/>	Casing	_____			
Good	_____	Lock	_____			
Good	_____	Obstructions	_____			
Diameter of Well Casing (inches)		<u>2</u>				
Depth Measurements Performed (PVC/Metal)		<u>PVC</u>				
Depth to Water from Top of Casing (0.01 ft.) prior to purging		<u>4.40</u>				
Depth to Bottom from Top of Casing (0.01 ft.)		_____				
Depth of Water in the Well (gallon)		_____				
Volume of water in the Well (gallon)		_____				
Depth to Water from Top of Casing (0.01 ft.) after purging		_____				
Depth to Water from Top of Casing (0.01 ft.) at time of sampling		<u>4.42</u>				
			Sample Reading			
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>
Temperature (°C)	<u>9.4</u>	<u>9.10</u>	<u>8.9</u>	<u>8.9</u>	<u>8.8</u>	<u>8.9</u>
pH	<u>6.31</u>	<u>6.29</u>	<u>6.29</u>	<u>6.30</u>	<u>6.38</u>	<u>6.40</u>
Specific Conductance (umhos/cm)	<u>828</u>	<u>852</u>	<u>849</u>	<u>846</u>	<u>851</u>	<u>850</u>
Dissolved Oxygen (mg/l)	<u>4.26</u>	<u>4.26</u>	<u>4.25</u>	<u>4.26</u>	<u>4.27</u>	<u>4.55</u>
Oxidation Reduction (eH)	_____	_____	_____	_____	_____	_____
Purging Equipment			Well Observation			
Peristaltic Pump	<input checked="" type="checkbox"/>		Odor	<u>NONE</u>		
Bladder Pump	_____		Color	<u>clear</u>		
Rate of Purge	<u>150</u>		milliliters / minute			
Comments: _____						
Reference SOP Field-014						
Readings were performed on date of sampling _____/_____/_____. (Tech - _____)						

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
 Well I.D.: 6/14 D Tag: _____

Date of Purging: 3/22/11 Start Time: 12:00 Finish Time: 12:50 Weather: 50° overcast
 Date of Collection: 3/22/11 Time of Collection: 12:19

Well Status:

Good <input checked="" type="checkbox"/>	Grout _____
Good <input checked="" type="checkbox"/>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>19.20</u>
Depth to Bottom from Top of Casing (0.01 ft.)	_____
Depth of Water in the Well (gallon)	_____
Volume of water in the Well (gallon)	_____
Depth to Water from Top of Casing (0.01 ft.) after purging	_____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	19.20 <u>19.24</u>

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>14.0</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>
pH	<u>6.48</u>	<u>6.56</u>	<u>6.58</u>	<u>6.59</u>	<u>6.59</u>	<u>6.59</u>
Specific Conductance (umhos/cm)	<u>294</u>	<u>292</u>	<u>294</u>	<u>295</u>	<u>294</u>	<u>294</u>
Dissolved Oxygen (mg/l)	<u>6.30</u>	<u>6.31</u>	<u>6.30</u>	<u>6.29</u>	<u>6.29</u>	<u>6.29</u>
Oxidation Reduction (eH)	<u>524.7</u>	<u>525.9</u>	<u>540.1</u>	<u>542.1</u>	<u>542.0</u>	<u>542.5</u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump _____	Color <u>Clear</u>

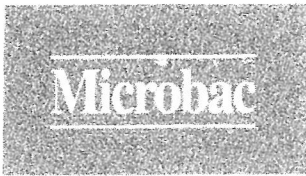
Rate of Purge _____ milliliters / minute

Comments: _____

Reference SOP Field-014
 Readings were performed on date of sampling 3/22/11 (Tech - TR)

Microbac Laboratories, Inc.
Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>	Site: <u>Sparrows Point, MD</u>
Well I.D.: <u>G-1-145</u>	Tag: _____
Date of Purging: <u>3/22/11</u> Start Time: <u>11:00</u> Finish Time: <u>11:54</u> Weather: <u>50° Clear</u>	
Date of Collection: <u>3/22/11</u> Time of Collection: <u>11:18</u> Clear	
Well Status:	
Good <input checked="" type="checkbox"/>	Grout _____
Good <input checked="" type="checkbox"/>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____
Diameter of Well Casing (inches) <u>2</u>	
Depth Measurements Performed (PVC/Metal) <u>PVC</u>	
Depth to Water from Top of Casing (0.01 ft.) prior to purging <u>5.26</u>	
Depth to Bottom from Top of Casing (0.01 ft.) _____	
Depth of Water in the Well (gallon) _____	
Volume of water in the Well (gallon) _____	
Depth to Water from Top of Casing (0.01 ft.) after purging _____	
Depth to Water from Top of Casing (0.01 ft.) at time of sampling <u>5.48</u>	
	Sample Reading
Number of minutes purged	0 3 6 9 12
Temperature (°C)	<u>9.3</u> <u>9.3</u> <u>9.0</u> <u>9.0</u> <u>8.9</u> <u>8.9</u>
pH	<u>5.53</u> <u>5.13</u> <u>5.37</u> <u>5.39</u> <u>5.40</u> <u>5.40</u>
Specific Conductance (umhos/cm)	<u>138</u> <u>138</u> <u>134</u> <u>132</u> <u>132</u> <u>132</u>
Dissolved Oxygen (mg/l)	<u>3.10</u> <u>3.05</u> <u>3.06</u> <u>3.10</u> <u>3.10</u> <u>3.10</u>
Oxidation Reduction (eH)	_____
Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump _____	Color <u>Clear</u>
Rate of Purge <u>150</u> milliliters / minute	
Comments: _____	
Reference SOP Field-014	
Readings were performed on date of sampling <u>3 / 22 / 11</u> . (Tech - <u>TK</u>)	



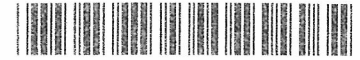
Microbac Laboratories, Inc.
 Baltimore Division
 2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
 Fax: 410-633-6553
 www.microbac.com

CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-15 D

Tag: --- Date of Purging: 4/4/11 Start Time: 11:15 Finish Time: 12:20 Weather: SUN 75°F

Well Status:

Good <input checked="" type="checkbox"/>	Grout	_____
Good <input checked="" type="checkbox"/>	Casing	_____
Good _____	Lock	_____
Good _____	Obstructions	_____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>8.38</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>-</u>
Volume of water in the Well (gallon)	<u>-</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>8.38</u>

	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	Sample Reading <u>15</u>
Number of minutes purged						
Temperature (°C)	<u>11.6</u>	<u>11.6</u>	<u>11.6</u>	<u>11.6</u>	<u>11.6</u>	<u>11.6</u>
pH	<u>9.19</u>	<u>8.67</u>	<u>8.60</u>	<u>8.60</u>	<u>8.61</u>	<u>8.61</u>
Specific Conductance (umhos/cm)	<u>2040</u>	<u>2040</u>	<u>2040</u>	<u>2040</u>	<u>2040</u>	<u>2040</u>
Dissolved Oxygen (mg/l)	<u>1.44</u>	<u>1.45</u>	<u>1.45</u>	<u>1.45</u>	<u>1.44</u>	<u>1.41</u>
Oxidation Reduction (eH)	<u>248.1</u>	<u>251.9</u>	<u>251.9</u>	<u>251.9</u>	<u>251.9</u>	<u>251.9</u>

Purging Equipment

Peristaltic Pump
 Bladder Pump _____

Well Observation

Odor None
 Color Clear

Rate of Purge 150 ml/min

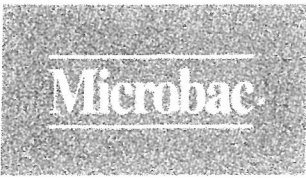
Comments:

Reference SOP Field-014

Readings were performed on date of sampling 4/4/11 Tech [Signature]

Sampled by: <u>[Signature]</u>	Date/Time: <u>4/4/11 1300</u>	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp _____ Cooler Number: _____



CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-15 S

Tag: ✓ Date of Purging: 4/4/11 Start Time: 10:20 Finish Time: ~~10:20~~ 11:11 Weather: _____

Well Status:

Good <u>✓</u>	Grout _____
Good <u>✓</u>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>8.35 5.12</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>0</u>
Volume of water in the Well (gallon)	<u>0</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>8.35 5.20</u>

	Sample Reading					
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>
Temperature (°C)	<u>14.1</u>	<u>14.2</u>	<u>14.4</u>	<u>14.4</u>	<u>14.4</u>	<u>14.4</u>
pH	<u>12.15</u>	<u>12.30</u>	<u>12.33</u>	<u>12.33</u>	<u>12.33</u>	<u>12.33</u>
Specific Conductance (umhos/cm)	<u>6640</u>	<u>6610</u>	<u>6610</u>	<u>6610</u>	<u>6610</u>	<u>6610</u>
Dissolved Oxygen (mg/l)	<u>2.11</u>	<u>2.00</u>	<u>2.04</u>	<u>2.03</u>	<u>2.05</u>	<u>2.05</u>
Oxidation Reduction (eH)	<u>349</u>	<u>350</u>	<u>317.9</u>	<u>317.5</u>	<u>317.5</u>	<u>317.5</u>

Purging Equipment	Well Observation
Peristaltic Pump <u>✓</u>	Odor <u>none</u>
Bladder Pump	Color <u>clear</u>

Rate of Purge 150 ml/min

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 4/4/11 . Tech NR

Sampled by: <u>[Signature]</u>	Date/Time: <u>4/4/11 1300</u>	Received by: _____
Printed Name: _____		Printed Name: _____
Relinquished by: _____	Date/Time: _____	Received by: _____
Printed Name: _____		Printed Name: _____

Cooler Temp _____ Cooler Number: _____



CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-16D

Tag: Date of Purging: 4/1/11 Start Time: 12:00 Finish Time: 13:00 Weather: LT. RAIN

Well Status:

Good <input checked="" type="checkbox"/>	Grout	<u> </u>
Good <input checked="" type="checkbox"/>	Casing	<u> </u>
Good <input type="checkbox"/>	Lock	<u> </u>
Good <input type="checkbox"/>	Obstructions	<u> </u>

Diameter of Well Casing (inches)	<u> 2 </u>
Depth Measurements Performed (PVC/Metal)	<u> PVC </u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u> 19.85 </u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u> - </u>
Depth of Water in the Well (gallon)	<u> - </u>
Volume of water in the Well (gallon)	<u> - </u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u> 19.85 </u>

	<u> 0 </u>	<u> 3 </u>	<u> 6 </u>	<u> 9 </u>	<u> 12 </u>	Sample Reading
Number of minutes purged	<u> 0 </u>	<u> 3 </u>	<u> 6 </u>	<u> 9 </u>	<u> 12 </u>	<u> 15 </u>
Temperature (°C)	<u> 13.2 </u>	<u> 14.2 </u>	<u> 14.2 </u>	<u> 14.2 </u>	<u> 14.2 </u>	<u> 14.2 </u>
pH	<u> 11.76 </u>	<u> 12.53 </u>	<u> 11.46 </u>	<u> 11.47 </u>	<u> 11.43 </u>	<u> 11.43 </u>
Specific Conductance (umhos/cm)	<u> 8210 </u>	<u> 8820 </u>	<u> 8820 </u>	<u> 8820 </u>	<u> 8820 </u>	<u> 8820 </u>
Dissolved Oxygen (mg/l)	<u> 1.91 </u>	<u> 1.91 </u>	<u> 1.91 </u>	<u> 1.99 </u>	<u> 1.95 </u>	<u> 1.95 </u>
Oxidation Reduction (eH)	<u> 219.3 </u>	<u> 169.1 </u>	<u> 169.1 </u>	<u> 167.1 </u>	<u> 167.3 </u>	<u> 167.3 </u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump	Color <u>Clear</u>

Rate of Purge ml/min

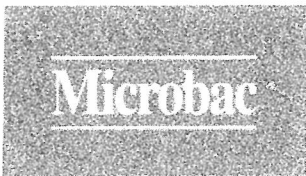
Comments:

Reference SOP Field-014

Readings were performed on date of sampling / / . Tech

Sampled by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp Cooler Number:



CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: GL-16S

Tag: Date of Purging: 4/1/11 Start Time: 11:05 Finish Time: 11:55 Weather: Lt Rain

Well Status:

Good <input checked="" type="checkbox"/>	Grout	_____
Good <input checked="" type="checkbox"/>	Casing	_____
Good _____	Lock	_____
Good _____	Obstructions	_____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>14.70</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>-</u>
Volume of water in the Well (gallon)	<u>-</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>14.70</u>

	Sample Reading					
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>
Temperature (°C)	<u>13.4</u>	<u>13.4</u>	<u>13.2</u>	<u>13.2</u>	<u>13.2</u>	<u>13.2</u>
pH	<u>4.30</u>	<u>4.30</u>	<u>4.27</u>	<u>4.27</u>	<u>4.27</u>	<u>4.27</u>
Specific Conductance (umhos/cm)	<u>1330</u>	<u>1330</u>	<u>1333</u>	<u>1330</u>	<u>1330</u>	<u>1330</u>
Dissolved Oxygen (mg/l)	<u>2.16</u>	<u>2.16</u>	<u>2.16</u>	<u>2.16</u>	<u>2.16</u>	<u>2.16</u>
Oxidation Reduction (eH)	<u>530.1</u>	<u>530.1</u>	<u>530.1</u>	<u>530.1</u>	<u>530.1</u>	<u>530.1</u>

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump	Color <u>Clear</u>

Rate of Purge 150 ml/min

Comments:

Reference SOP Field-014

Readings were performed on date of sampling 4/1/11 . Tech GR

Sampled by:	Date/Time:	Received by:
Printed Name:		Printed Name:
Relinquished by:	Date/Time:	Received by:
Printed Name:		Printed Name:

Cooler Temp _____ Cooler Number: _____

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>	Site: <u>Sparrows Point, MD</u>
Well I.D.: <u>G/17 A</u>	Tag: _____
Date of Purging: <u>3/31/11</u> Start Time: <u>12:05</u> Finish Time: <u>13:05</u> Weather: <u>16 RAIN 46</u>	
Date of Collection: <u>3/31/11</u> Time of Collection: <u>12:20</u>	
Well Status:	
Good <input checked="" type="checkbox"/>	Grout _____
Good <input checked="" type="checkbox"/>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____
Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>20.61</u>
Depth to Bottom from Top of Casing (0.01 ft.)	-----
Depth of Water in the Well (gallon)	-----
Volume of water in the Well (gallon)	-----
Depth to Water from Top of Casing (0.01 ft.) after purging	-----
Depth to Water from Top of Casing (0.01 ft.) at time of sampling	<u>20.61</u>
	Sample Reading
Number of minutes purged	<u>0</u> <u>3</u> <u>6</u> <u>9</u> <u>12</u>
Temperature (°C)	<u>12.1</u> <u>12.1</u> <u>12.1</u> <u>12.1</u> <u>12.1</u> <u>12.1</u>
pH	<u>8.28</u> <u>8.28</u> <u>8.20</u> <u>8.21</u> <u>8.21</u> <u>8.21</u>
Specific Conductance (umhos/cm)	<u>6650</u> <u>6650</u> <u>6650</u> <u>6650</u> <u>6650</u> <u>6650</u>
Dissolved Oxygen (mg/l)	<u>1.41</u> <u>1.40</u> <u>1.41</u> <u>1.41</u> <u>1.41</u> <u>1.41</u>
Oxidation Reduction (eH)	<u>291.1</u> <u>291.1</u> <u>291.3</u> <u>291.1</u> <u>291.1</u> <u>291.1</u>
Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor <u>None</u>
Bladder Pump _____	Color <u>Color</u>
Rate of Purge <u>150</u> milliliters / minute	
Comments: _____	
Reference SOP Field-014	
Readings were performed on date of sampling <u>3 / 31 / 11</u> . (Tech <u>TR</u>)	

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: <u>SEVERSTAL</u>		Site: <u>Sparrows Point, MD</u>				
Well I.D.: <u>G-175</u>		Tag: _____				
Date of Purging: <u>3/31/11</u>		Start Time: <u>11:05</u>	Finish Time: <u>12:00</u>			
Date of Collection: <u>3/31/11</u>		Weather: <u>40 16, Rain</u>				
Time of Collection: <u>11:20</u>						
Well Status:						
Good	<input checked="" type="checkbox"/>	Grout	_____			
Good	<input checked="" type="checkbox"/>	Casing	_____			
Good	_____	Lock	_____			
Good	_____	Obstructions	_____			
Diameter of Well Casing (inches)		<u>2</u>				
Depth Measurements Performed (PVC/Metal)		<u>PVC</u>				
Depth to Water from Top of Casing (0.01 ft.) prior to purging		<u>13.17</u>				
Depth to Bottom from Top of Casing (0.01 ft.)		_____				
Depth of Water in the Well (gallon)		_____				
Volume of water in the Well (gallon)		_____				
Depth to Water from Top of Casing (0.01 ft.) after purging		_____				
Depth to Water from Top of Casing (0.01 ft.) at time of sampling		<u>13.21</u>				
			Sample Reading			
Number of minutes purged	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	
Temperature (°C)	<u>12.5</u>	<u>12.0</u>	<u>12.0</u>	<u>12.0</u>	<u>12.0</u>	<u>12.0</u>
pH	<u>10.84</u>	<u>10.60</u>	<u>10.60</u>	<u>10.57</u>	<u>10.55</u>	<u>10.55</u>
Specific Conductance (umhos/cm)	<u>2920</u>	<u>2910</u>	<u>2910</u>	<u>2911</u>	<u>2911</u>	<u>2911</u>
Dissolved Oxygen (mg/l)	<u>0.34</u>	<u>0.35</u>	<u>0.34</u>	<u>0.31</u>	<u>0.31</u>	<u>0.31</u>
Oxidation Reduction (eH)	<u>187.1</u>	<u>181.1</u>	<u>186.3</u>	<u>181.1</u>	<u>181.1</u>	<u>181.1</u>
Purging Equipment		Well Observation				
Peristaltic Pump	<input checked="" type="checkbox"/>	Odor	<u>NONE</u>			
Bladder Pump	_____	Color	<u>Clear</u>			
Rate of Purge <u>150</u> milliliters / minute						
Comments: _____						
Reference SOP Field-014						
Readings were performed on date of sampling _____ / _____ / _____. (Tech - _____)						

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: G118D Tag: _____

Date of Purging: 3/28/11 Start Time: 12:30 Finish Time: _____ Weather: 32°F sun
Date of Collection: 3/28/11 Time of Collection: 12:45

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) _____
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 19.20
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 19.25

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>14.3</u>	<u>14.3</u>	<u>14.3</u>	<u>14.3</u>	<u>14.3</u>	<u>14.3</u>
pH	<u>6.51</u>	<u>6.51</u>	<u>6.50</u>	<u>6.50</u>	<u>6.50</u>	<u>6.50</u>
Specific Conductance (umhos/cm)	<u>5500</u>	<u>5510</u>	<u>5510</u>	<u>5510</u>	<u>5510</u>	<u>5510</u>
Dissolved Oxygen (mg/l)	<u>2.11</u>	<u>2.19</u>	<u>2.19</u>	<u>2.18</u>	<u>2.18</u>	<u>2.18</u>
Oxidation Reduction (eH)	<u>129.2</u>	<u>130.2</u>	<u>124.2</u>	<u>124.1</u>	<u>124.0</u>	<u>124.0</u>

Purging Equipment **Well Observation**
Peristaltic Pump Odor NONE
Bladder Pump _____ Color Clear

Rate of Purge _____ milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 3 / 28 / 11 . (Tech - we)

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: G-1185 Tag: _____

Date of Purging: 3/28/11 Start Time: 11:40 Finish Time: 12:27 Weather: 32°f clear
Date of Collection: 3/28/11 Time of Collection: 11:55

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) _____
Depth Measurements Performed (PVC/Metal) 2 PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 1029.9 7.13
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 7.46

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>12.1</u>	<u>12.3</u>	<u>12.1</u>	<u>12.1</u>	<u>12.1</u>	<u>12.1</u>
pH	<u>10.99</u>	<u>11.00</u>	<u>11.00</u>	<u>11.00</u>	<u>11.00</u>	<u>11.00</u>
Specific Conductance (umhos/cm)	<u>2,280</u>	<u>2,280</u>	<u>2,281</u>	<u>2,281</u>	<u>2,281</u>	<u>2,281</u>
Dissolved Oxygen (mg/l)	<u>3.41</u>	<u>3.41</u>	<u>3.45</u>	<u>3.46</u>	<u>3.45</u>	<u>3.45</u>
Oxidation Reduction (eH)	<u>160</u>	<u>171</u>	<u>140</u>	<u>160</u>	<u>161</u>	<u>161</u>

Purging Equipment

Peristaltic Pump
Bladder Pump _____

Well Observation

Odor yes Gas smell / 0.1
Color _____

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 3/28/11. (Tech TRD)



Microbac Laboratories, Inc.
 Baltimore Division
 2101 Van Deman Street • Baltimore, MD 21224

Phone: 410-633-1800
 Fax: 410-633-6553
 www.microbac.com

CHAIN OF CUSTODY

Client: **Severstal Sparrows Point**
 Project: **Landfill**
 Project Number: **Landfill**

11C1255



Date Scheduled: 03/21/11

Client Sample ID: **GL-20**

Tag: _____ Date of Purging: 4/6/11 Start Time: 9:50 Finish Time: _____ Weather: _____

Well Status:

Good <input checked="" type="checkbox"/>	Grout _____
Good <input checked="" type="checkbox"/>	Casing _____
Good _____	Lock _____
Good _____	Obstructions _____

Diameter of Well Casing (inches)	<u>2</u>
Depth Measurements Performed (PVC/Metal)	<u>PVC</u>
Depth to Water from Top of Casing (0.01 ft.) prior to purging	<u>- 13.99</u>
Depth to Bottom from Top of Casing (0.01 ft.)	<u>-</u>
Depth of Water in the Well (gallon)	<u>-</u>
Volume of water in the Well (gallon)	<u>-</u>
Depth to Water from Top of Casing (0.01 ft.) after purging	<u>14.08</u>

	<u>0</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>12</u>	Sample Reading
Number of minutes purged						
Temperature (°C)	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>	<u>14.1</u>
pH	<u>10.39</u>	<u>10.39</u>	<u>10.32</u>	<u>10.30</u>	<u>10.30</u>	<u>10.30</u>
Specific Conductance (umhos/cm)	<u>600</u>	<u>611</u>	<u>605</u>	<u>600</u>	<u>600</u>	<u>600</u>
Dissolved Oxygen (mg/l)	<u>3.16</u>	<u>3.00</u>	<u>3.01</u>	<u>3.01</u>	<u>3.00</u>	<u>3.80</u>
Oxidation Reduction (eH)						

Purging Equipment	Well Observation
Peristaltic Pump <input checked="" type="checkbox"/>	Odor _____
Bladder Pump _____	Color _____

Rate of Purge 150 ml/min

Comments:

Reference SOP Field-014

Readings were performed on date of sampling 4/6/11 . Tech ME

Sampled by: <u>[Signature]</u>	Date/Time: <u>4/6/11 12:25</u>	Received by: _____
Printed Name: _____		Printed Name: _____
Relinquished by: _____	Date/Time: <u>4-6-11</u>	Received by: <u>[Signature]</u>
Printed Name: _____		Printed Name: <u>mu</u>

Cooler Temp 6.8 Cooler Number: 626

Report # _____

Microbac Laboratories, Inc. Groundwater Monitoring Report

Client: SEVERSTAL Site: Sparrows Point, MD
Well I.D.: T3 01 PD Tag: _____

Date of Purging: 3/31/11 Start Time: 9:47 Finish Time: 11:00 Weather: 41 H RAIN
Date of Collection: 3/31/11 Time of Collection: 10:02

Well Status:

Good Grout _____
Good Casing _____
Good _____ Lock _____
Good _____ Obstructions _____

Diameter of Well Casing (inches) 2
Depth Measurements Performed (PVC/Metal) PVC
Depth to Water from Top of Casing (0.01 ft.) prior to purging 18.79
Depth to Bottom from Top of Casing (0.01 ft.) _____
Depth of Water in the Well (gallon) _____
Volume of water in the Well (gallon) _____
Depth to Water from Top of Casing (0.01 ft.) after purging _____
Depth to Water from Top of Casing (0.01 ft.) at time of sampling 18.85

	0	3	6	9	12	Sample Reading
Number of minutes purged	0	3	6	9	12	
Temperature (°C)	<u>13.4</u>	<u>13.2</u>	<u>13.0</u>	<u>13.0</u>	<u>13.0</u>	<u>13.0</u>
pH	<u>11.49</u>	<u>11.40</u>	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>	<u>11.37</u>
Specific Conductance (umhos/cm)	<u>12.30</u>	<u>12.21</u>	<u>12.22</u>	<u>12.21</u>	<u>12.21</u>	<u>12.21</u>
Dissolved Oxygen (mg/l)	<u>4.30</u>	<u>4.26</u>	<u>4.00</u>	<u>4.01</u>	<u>4.00</u>	<u>4.00</u>
Oxidation Reduction (eH)	<u>23.8</u>	<u>23.0</u>	<u>22.9</u>	<u>22.8</u>	<u>22.9</u>	<u>22.9</u>

no dec 1221

Purging Equipment

Peristaltic Pump
Bladder Pump _____

Well Observation

Odor NONE
Color CLEAR

Rate of Purge 150 milliliters / minute

Comments: _____

Reference SOP Field-014

Readings were performed on date of sampling 3/31/11 (Tech STH)