

Midway Groundwater Sampling 555-1550-052
Annual Monitoring Round 57

By Associate Environmental Analysts:
Valerie Thoma, Frank McKenzie, Randy Locke
May 3-7, 2010

The following wells were dry. No samples were taken:

MW7A, MW15A, MW20A, MW23A

The following wells and field blank were sampled:

DATE	WELL	PURGE TIME	SAMPLE TIME
5/03/10	MW29B	0735-0851	0855
5/03/10	MW31	duplicate of MW16	"0950"
5/03/10	MW16	1134-1205	1210
5/03/10	MW20B	1309-1404	1405
5/04/10	MW35*	duplicate of 21B	"0810"
5/04/10	MW17B*	0816-0921	0925
5/04/10	MW14B*	1024-1110	1115
5/04/10	MW21B*	1202-1238	1240
5/04/10	MW21A	1313-1342	1345
5/04/10	Field Blank*		1410
5/05/10	MW8B	0818-0905	0910
5/05/10	MW30C	1010-1102	1105
5/07/10	MW23B	0812-0850	0855

*Wells also being measured for Dioxane.

5/3/10: Bennett Pump SN 187-207 stopped working after purging 40+ gallons of water from MW30C. It was replaced today with Bennett Pump SN 187-208.

5/5/10: Water initially in air exhaust line at MW8B. Had to lift and shake pump to make it work.

5/5/10: MW30C sampling was re-done with no further problems. Of note, new home construction began on this property. There was a strong odor of kerosene on the boards used for foundation forms. Additionally, weeds across from the well were being sprayed with herbicides.

5/5/10: Bennett Pump SN 188-131 stopped working after purging 20+ gallons of water from MW23B. It was replaced early morning 5/6/10 with Bennett Pump SN 187-137.

5/7/10: MW23B sampling was re-done with no further problems.

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
Well # MW 29B

Project Number: 555-1550-052 Date: 5/3/10
 Project Name: Midway Landfill Location: S. 250th & Military Rd. S.
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 303.10 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 377.00 Purge Time (from/to): 0735-0851
 Reference Point (Surveyors Notch): TOC Sample Time: 0855

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2"= (0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): 59 Actual Purge Volume (gallons): 59

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
<u>0735</u>	Initial	<u>6.62</u>	<u>655</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>12.2</u>
<u>0803</u>	Gal.	<u>6.32</u>	<u>703</u>	<u> </u>	<u> </u>	<u> </u>	<u>10.1</u>
<u>0827</u>	Gal.	<u>6.23</u>	<u>704</u>	<u> </u>	<u> </u>	<u> </u>	<u>10.0</u>
<u>0851</u>	Gal.	<u>6.23</u>	<u>705</u>	<u> </u>	<u> </u>	<u> </u>	<u>10.0</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/3/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:

Signature: Thomas

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET

Well # MW 16 / 31

Project Number: 555-1550-052 Date: 5/3/10
 Project Name: Midway Landfill Location: S. 254th & 30th S.
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 124.93 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 166.90 Purge Time (from/to): 1134-1205
 Reference Point (Surveyors Notch): TOC Sample Time: 1210

Purge Volume Calculation: $(pr2h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2" = $(0.80)(h)$; 4" = $(3.26)(h)$; 6" = $(7.40)(h)$
 Calculated Purge Volume (gallons): 34 Actual Purge Volume (gallons): 34

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
<u>1134</u>	Initial	<u>6.68</u>	<u>279</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>12.2</u>
<u>1144</u>	<u>11</u> Gal.	<u>7.37</u>	<u>285</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.7</u>
<u>1154</u>	<u>22</u> Gal.	<u>7.40</u>	<u>282</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.5</u>
<u>1205</u>	<u>34</u> Gal.	<u>7.40</u>	<u>280</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.4</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/3/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: MW 31 ~~duplicate~~
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:
Field duplicate MW 31 - sample time 0950

Signature: *J. Thomas*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 20B

Project Number: 555-1550-052 Date: 5/3/10
 Project Name: Midway Landfill Location: Sunset Motel
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 255.42 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 300.00 Purge Time (from/To): 1309-1404
 Reference Point (Surveyors Notch): TOC Sample Time: 1405

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2"= (0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): 36 Actual Purge Volume (gallons): 36

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
<u>1309</u>	Initial	<u>7.27</u>	<u>1198</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>13.6</u>
<u>1322</u>	<u>12</u> Gal.	<u>6.70</u>	<u>1314</u>	<u> </u>	<u> </u>	<u> </u>	<u>12.5</u>
<u>1341</u>	<u>24</u> Gal.	<u>6.74</u>	<u>1302</u>	<u> </u>	<u> </u>	<u> </u>	<u>12.4</u>
<u>1404</u>	<u>36</u> Gal.	<u>6.73</u>	<u>1303</u>	<u> </u>	<u> </u>	<u> </u>	<u>12.1</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/3/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:

Signature: *J. Thomas*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 17B

Project Number: 555-1550-052 Date: 5/4/10
 Project Name: Midway Landfill Location: S. 248th & Pac Hwy S.
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter : 2" 4" 6" Other

Depth to Water (Feet): 69.05 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 133.00 Purge Time (from/to): 0816-0921
 Reference Point (Surveyors Notch): TOC Sample Time: 0925

Purge Volume Calculation: $(pr2h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2"= (0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): 51 Actual Purge Volume (gallons): 51

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
<u>0816</u>	Initial	<u>6.34</u>	<u>288</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>11.1</u>
<u>0835</u>	<u>17</u> Gal.	<u>6.16</u>	<u>309</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.4</u>
<u>0900</u>	<u>34</u> Gal.	<u>6.24</u>	<u>330</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.4</u>
<u>0921</u>	<u>51</u> Gal.	<u>6.34</u>	<u>335</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.5</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/4/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity : OK
 Comments or Note:

Signature : *Thomas*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 14B

Project Number: 555-1550-052 Date: 5/4/10
 Project Name: Midway Landfill Location: Midway Landfill
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter : 2" 4" 6" Other

Depth to Water (Feet): 233.53 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 307.50 Purge Time (from/to): 1024 - 1110
 Reference Point (Surveyors Notch): TOC Sample Time: 1115

Purge Volume Calculation: $(\pi r^2 h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2" = $(0.80)(h)$; 4" = $(3.26)(h)$; 6" = $(7.40)(h)$
 Calculated Purge Volume (gallons): 59 Actual Purge Volume (gallons): 59

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
<u>1024</u>	Initial	<u>6.52</u>	<u>676</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>17.8</u>
<u>1042</u>	<u>20</u> Gal.	<u>6.52</u>	<u>694</u>	<u> </u>	<u> </u>	<u> </u>	<u>14.2</u>
<u>1056</u>	<u>40</u> Gal.	<u>6.47</u>	<u>700</u>	<u> </u>	<u> </u>	<u> </u>	<u>13.0</u>
<u>1110</u>	<u>59</u> Gal.	<u>6.40</u>	<u>703</u>	<u> </u>	<u> </u>	<u> </u>	<u>13.1</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/4/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity : OK
 Comments or Note:

Signature : *J. Floma*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 21B / 35

Project Number: 555-1550-052 Date: 5/4/10
 Project Name: Midway Landfill Location: Al's Acres
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 85.05 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 180.40 Purge Time (from/to): 1202 - 1238
 Reference Point (Surveyors Notch): TOC Sample Time: 1240

Purge Volume Calculation: $(pr2h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2"= $(0.80)(h)$; 4"= $(3.26)(h)$; 6"= $(7.40)(h)$
 Calculated Purge Volume (gallons): 76 Actual Purge Volume (gallons): 76

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
<u>1202</u>	Initial	<u>6.82</u>	<u>681</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>11.8</u>
<u>1214</u>	<u>25 Gal.</u>	<u>6.76</u>	<u>680</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.2</u>
<u>1228</u>	<u>50 Gal.</u>	<u>6.78</u>	<u>681</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.2</u>
<u>1238</u>	<u>76 Gal.</u>	<u>6.79</u>	<u>681</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.1</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/4/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: MW 35 ~~NA~~ duplicate
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:
Field duplicate MW 35- sample time 0810

Signature: *J. Floma*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 21A

Project Number: 555-1550-052 Date: 5/4/10
 Project Name: Midway Landfill Location: Al's Acres
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 81.58 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 95.40 Purge Time (from/to): 1313-1342
 Reference Point (Surveyors Notch): TOC Sample Time: 1345

Purge Volume Calculation: $(pr2h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2" = $(0.80)(h)$; 4" = $(3.26)(h)$; 6" = $(7.40)(h)$
 Calculated Purge Volume (gallons): 11 Actual Purge Volume (gallons): 11

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
<u>1313</u>	Initial	<u>6.64</u>	<u>324</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>11.8</u>
<u>1322</u>	<u>4</u> Gal.	<u>6.54</u>	<u>328</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.7</u>
<u>1331</u>	<u>8</u> Gal.	<u>6.50</u>	<u>328</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.8</u>
<u>1342</u>	<u>11</u> Gal.	<u>6.51</u>	<u>331</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.8</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/4/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:

Signature: *J. Thomas*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET

Well # MW 8B

Project Number: 555-1550-052 Date: 5/5/10
 Project Name: Midway Landfill Location: Fred Meyer
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 139.05 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 207.97 Purge Time (from/to): 0818 - 0905
 Reference Point (Surveyors Notch): TOC Sample Time: 0910

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2"= (0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): 55 Actual Purge Volume (gallons): 55

Time (2400 Hr)	Cumulative Volume (gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
<u>0818</u>	Initial	<u>6.62</u>	<u>136</u>	<u>clear</u>	<u>clear</u>	<u>none</u>	<u>12.7</u>
<u>0834</u>	<u>18</u> Gal.	<u>6.32</u>	<u>150</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.3</u>
<u>0851</u>	<u>36</u> Gal.	<u>6.39</u>	<u>151</u>	<u> </u>	<u> </u>	<u> </u>	<u>10.9</u>
<u>0905</u>	<u>55</u> Gal.	<u>6.45</u>	<u>155</u>	<u>grey</u>	<u>cloudy</u>	<u> </u>	<u>11.0</u>
_____	Gal.	_____	_____	_____	_____	_____	_____
_____	Gal.	_____	_____	_____	_____	_____	_____

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/5/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:
Water initially in air exhaust line, had to lift and shake pump to make it work.
Small amount of sediment in sample.

Signature: Thomas

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 30C

Project Number: 555-1550-052 Date: 5/5/10
 Project Name: Midway Landfill Location: S. 253rd & 38th S.
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 267.83 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 350.00 Purge Time (from/to): 1010 - 1102
 Reference Point (Surveyors Notch): TOC Sample Time: 1105

Purge Volume Calculation: $(pr^2h)(7.48 \text{ gal/ft}^3)(5 \text{ casing volume})$
 Purge volume (gallons) for: 2" = $(0.80)(h)$; 4" = $(3.26)(h)$; 6" = $(7.40)(h)$
 Calculated Purge Volume (gallons): 66 Actual Purge Volume (gallons): 66

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec ($\mu\text{mhos/cm } 25^\circ\text{C}$)	Color (Visual)	Turbidity (Visual)	Odor	Temperature ($^\circ\text{C}$)
1010	Initial	6.65	294	clear	clear	none	10.7
1028	22 Gal.	6.48	307				9.8
1046	44 Gal.	6.53	314				9.6
1102	66 Gal.	6.57	320				9.6
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/5/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:
Construction in area surrounding well -
odor of kerosene on boards.
Herbicides being sprayed on weeds
10 feet away from well.

Signature: [Signature]

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
Well # MW 23B

Project Number: 555-1550-052 Date: 5/7/10
 Project Name: Midway Landfill Location: S. 250th & 34th S.
 Project Address: 24808 Pac Hwy S. Sampled By: VT, FM, RL
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter: 2" 4" 6" Other

Depth to Water (Feet): 270.54 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 330.30 Purge Time (from/to): 0812 - 0850
 Reference Point (Surveyors Notch): TOC Sample Time: 0855

Purge Volume Calculation: (pr2h)(7.48 gal/ft³)(5 casing volume)
 Purge volume (gallons) for: 2" = (0.80)(h); 4" = (3.26)(h); 6" = (7.40)(h)
 Calculated Purge Volume (gallons): 48 Actual Purge Volume (gallons): 48

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
<u>0812</u>	Initial	<u>6.33</u>	<u>565</u>	<u>grey</u>	<u>cloudy</u>	<u>none</u>	<u>11.7</u>
<u>0827</u>	<u>16</u> Gal.	<u>6.21</u>	<u>568</u>	<u>clear</u>	<u>clear</u>	<u> </u>	<u>11.1</u>
<u>0838</u>	<u>32</u> Gal.	<u>6.22</u>	<u>568</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.1</u>
<u>0850</u>	<u>48</u> Gal.	<u>6.23</u>	<u>569</u>	<u> </u>	<u> </u>	<u> </u>	<u>11.1</u>
	Gal.						
	Gal.						

Purging Equipment: Bennett Pump Sampling Equipment: Dedicated teflon tube

Laboratory: ARI Date Sent to Lab: 5/7/10
 Chain-of-Custody (yes/no): Yes Field QC Sample Number: NA
 Shipment Method: Hand Split with (name/organization): NA

Well Integrity: OK
 Comments or Note:
Very small amount of sediment
in sample.

Signature: *Thomas*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET
 Well # MW 15A

Project Number: 555-1550-052 Date:
 Project Name: Midway Landfill Location: S. 253rd & 32nd Pl. S.
 Project Address: 24808 Pac Hwy S. Sampled By:
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter : 2" 4" 6" Other

Depth to Water (Feet): DRY @ 230.45 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 234.30 Purge Time (from/To):
 Reference Point (Surveyors Notch): TOC Sample Time:

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2"= (0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): Actual Purge Volume (gallons):

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
	Initial						
	Gal.						
	Gal.						
	Gal.						
	Gal.						
	Gal.						

Purging Equipment: Sampling Equipment:

Laboratory: Date Sent to Lab:
 Chain-of-Custody (yes/no): Field QC Sample Number:
 Shipment Method: Split with (name/organization):

Well Integrity :
 Comments or Note:

Signature : *[Handwritten Signature]*

MIDWAY LANDFILL
GROUNDWATER COMPLIANCE MONITORING PROGRAM
KENT, WA

GROUNDWATER SAMPLING
FIELD DATA SHEET

Well # MW 20A

Project Number: 555-1550-052 Date: _____
 Project Name: Midway Landfill Location: Sunset Motel
 Project Address: 24808 Pac Hwy S. Sampled By: _____
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter : 2" 4" 6" Other

Depth to Water (Feet): DRY @ 184.00 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 195.00 Purge Time (from/To): _____
 Reference Point (Surveyors Notch): TOC Sample Time: _____

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2" = (0.80)(h); 4" = (3.26)(h); 6" = (7.40)(h)
 Calculated Purge Volume (gallons): _____ Actual Purge Volume (gallons): _____

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
	Initial						
	Gal.						
	Gal.						
	Gal.						
	Gal.						
	Gal.						

Purging Equipment: _____ Sampling Equipment: _____

Laboratory: _____ Date Sent to Lab: _____
 Chain-of-Custody (yes/no): _____ Field QC Sample Number: _____
 Shipment Method: _____ Split with (name/organization): _____

Well Integrity : _____
 Comments or Note:

Signature : Thomas

MIDWAY LANDFILL
 GROUNDWATER COMPLIANCE MONITORING PROGRAM
 KENT, WA

GROUNDWATER SAMPLING
 FIELD DATA SHEET
 Well # MW 23A

Project Number: 555-1550-052 Date: _____
 Project Name: Midway Landfill Location: _____
 Project Address: 24808 Pac Hwy S. Sampled By: _____
 Client Name: City of Seattle Purged By: Same as Above
 Casing Diameter : 2" 4" 6" Other

Depth to Water (Feet): DRY @ 239.64 Purge Volume Measurement Method: 55 Gal. Drum
 Depth of well (Feet): 240.00 Purge Time (from/To): _____
 Reference Point (Surveyors Notch): TOC Sample Time: _____

Purge Volume Calculation: (pr2h)(7.48 gal/ft3)(5 casing volume)
 Purge volume (gallons) for: 2"=(0.80)(h); 4"=(3.26)(h); 6"=(7.40)(h)
 Calculated Purge Volume (gallons): _____ Actual Purge Volume (gallons): _____

Time (2400 Hr)	Cumulative Volume(gal)	pH (Units)	Ec (µmhos/cm 25 °C)	Color (Visual)	Turbidity (Visual)	Odor	Temperature (°C)
	Initial						
	Gal.						
	Gal.						
	Gal.						
	Gal.						
	Gal.						

Purging Equipment: _____ Sampling Equipment: _____

Laboratory: _____ Date Sent to Lab: _____
 Chain-of-Custody (yes/no): _____ Field QC Sample Number: _____
 Shipment Method: _____ Split with (name/organization): _____

Well Integrity : _____
 Comments or Note:

Signature : Thomas

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: _____ Turn-around Requested: _____

ARI Client Company: City of Seattle Phone: 206-233-2629

Client Contact: Min Soon Kim

Client Project Name: Midway Lab #11

Client Project #: 555-1550-052 Suppliers: V. Thomas, McKenzie, & Locke

Page: 1 of 1

Date: 5/3/10 Ice Present?

No. of Coolers: _____ Cooler Temps: _____

Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested			Notes/Comments											
					Sulfate Chloride	TOC, CO2	Dissolved Metals Fe, Mn												
MWD 29B	5/3/10	0855	W	8	1	1	1												
MWD 31	5/3/10	0950	W	8	1	1	1												
MWD 16	5/3/10	1210	W	8	1	1	1												
MWD 20B	5/3/10	1405	W	8	1	1	1												
TRIP Blank	---	---		4															
Comments: Special Instructions					Relinquished by: <u>[Signature]</u> (Signature)					Received by: <u>[Signature]</u> (Signature)									
Relinquished by: <u>[Signature]</u> (Signature)					Received by: <u>[Signature]</u> (Signature)					Relinquished by: <u>[Signature]</u> (Signature)					Received by: <u>[Signature]</u> (Signature)				
Printed Name: <u>[Name]</u>					Printed Name: <u>[Name]</u>					Printed Name: <u>[Name]</u>					Printed Name: <u>[Name]</u>				
Company: <u>[Company]</u>					Company: <u>[Company]</u>					Company: <u>[Company]</u>					Company: <u>[Company]</u>				
Date & Time: <u>[Date & Time]</u>					Date & Time: <u>[Date & Time]</u>					Date & Time: <u>[Date & Time]</u>					Date & Time: <u>[Date & Time]</u>				

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: _____ Turn-around Requested: _____

ARI Client Company: City of Seattle Phone: 206-233-7629

Client Contact: MUN SOON LIM

Client Project Name: Mulbury Landfill

Client Project #: 555-1550-052 Samplers: N. Thomas F. ENCKENZE, R. Locke

Page: 1 of 1

Date: 5/4/10 Ice Present? Y

No. of Coolers: 2 Cooler Temps: 1.7, 3.0

Analysis Requested

Sulfate Chloride	TOC, COD	Dissolved Metals Fe, Mn	VOA	Vinyl Chloride	Dioxane
------------------	----------	-------------------------	-----	----------------	---------

Notes/Comments

Metals are field filtered

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested	Notes/Comments
MUD 35	5/4/10	0810	W	10		
MUD 17 B	5/4/10	0925	W	10		
MUD 14 B	5/4/10	1115	W	10		
MUD 21 B	5/4/10	1240	W	10		
MUD 21 A	5/4/10	1345	W	8		
Field Blank	5/4/10	1410	W	10		
Trip Blank	---	---	---	4		

Comments: Special Instructions

Retrieved by: (Signature)

Received by: (Signature)

Relinquished by: (Signature)

Received by: (Signature)

Printed Name: Valerie Thomas

Printed Name: A. Vognardson

Printed Name: _____

Printed Name: _____

Company: City of Seattle

Company: ARCF

Company: _____

Company: _____

Date & Time: 5/4/10 1617

Date & Time: 5/4/10 1613

Date & Time: _____

Date & Time: _____

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 1								
ARI Client Company: City of Seattle	Phone: 206-233-2629	Date: 5/7/10								
Client Contact: Min Soom Kim		Ice Present? <input checked="" type="checkbox"/>								
Client Project Name: Midway Landfill		Cooler Temps: 0:4								
Client Project #: 555-1550-052	Samples: V. Thoma, Emmerize, R. Locke	Analysis Requested								
Sample ID	Date	Time	Matrix	No. Containers	Sulfate, Chloride	TOC, COD	Dissolved Metals Fe, Mn	VOA	Vinyl Chloride	Notes/Comments
MW 23B	5/7/10	0855	W	8	1	1	1	3	2	metals are field filtered
TRIP BLANK	—	—	—	4				2	2	
Comments/Special Instructions	Received by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>						
	Printed Name: <i>[Name]</i>	Printed Name: <i>[Name]</i>	Printed Name: <i>[Name]</i>	Printed Name: <i>[Name]</i>						
	Company: <i>[Company]</i>	Company: <i>[Company]</i>	Company: <i>[Company]</i>	Company: <i>[Company]</i>						
	Date & Time: 5/7/10 1351	Date & Time: 5/7/10 1351	Date & Time: 5/7/10 1351	Date & Time: 5/7/10 1351						



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

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Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

FLUID LEVEL MEASUREMENTS

Date: 4/26/2010

Job No: 555-1550-052

Present at Site: F. McKenzie, R. Locke

Location: Midway Landfill

DATE	WELL NO.	DEPTH TO WATER	WELL DEPTH	MEASURING POINT	COMMENTS
04/26/10	MW-2	Dry @	136.40	TOC	
04/26/10	MW-4	Dry @	91.59	TOC	4 th POLE / CRACK IN ROAD
04/26/10	MW-7A	Dry @	197.30	TOC	
04/26/10	MW-7B	209.66	N.M.	TOC	LOWER CASING
04/26/10	MW-8A	112.90	N.M.	TOC	
04/26/10	MW-8B	139.05	N.M.	TOC	LOWER CASING
04/26/10	MW-9A	No ACCESS		TOC	FENCE LOCKED
04/26/10	MW-11A	117.20	N.M.	TOC	
04/26/10	MW-13A	108.18	N.M.	TOC	USE OLD CASING FOR TOC
04/26/10	MW-13B	132.50	N.M.	TOC	SAME AS ABOVE - REMOVE TUBE
04/26/10	MW-14B	233.53	N.M.	TOC	251.22 - (7.67 x 2.307) ^{1.769} = 233.53
04/26/10	MW-15A	Dry @	230.45	TOC	
04/26/10	MW-16	124.93	N.M.	TOC	
04/26/10	MW-17A	67.62	N.M.	TOC	
04/26/10	MW-17B	69.05	N.M.	TOC	LOWER CASING
04/26/10	MW-18A	76.25	N.M.	TOC	
04/26/10	MW-20A	Dry @	184.00	TOC	
04/26/10	MW-20B	255.42	N.M.	TOC	
04/26/10	MW-21A	81.58	N.M.	TOC	
04/26/10	MW-21B	85.05	N.M.	TOC	
04/26/10	MW-23A	Dry @	239.64	TOC	
04/26/10	MW-23B	270.54	N.M.	TOC	289.53 - (8.23 x 2.307) ^{18.44} = 270.54
04/26/10	MW-24A	199.95	N.M.	TOC	
04/26/10	MW-24B	259.18	N.M.	TOC	WITH GREEN TOP - LOWER ONE
04/26/10	MW-25C	4.05	N.M.	TOC	
04/26/10	MW-26	93.05	N.M.	TOC	
04/26/10	MW-27A	48.47	N.M.	TOC	
04/26/10	MW-28	90.01	N.M.	TOC	1 st POLE DOWN w/ WATER
04/26/10	MW-29A	194.20	N.M.	TOC	
04/26/10	MW-29B	303.10	N.M.	TOC	335.81 - (14.18 x 2.307) ^{32.71} = 303.10
04/26/10	MW-30A	168.50	N.M.	TOC	
04/26/10	MW-30C	267.83	N.M.	TOC	290.92 - (10.01 x 2.307) ^{33.09} = 267.83

Copies to PMX

Signed: 

