**Environmental Resources Management**

The Towers at Wildwood
3200 Windy Hill Road SE, Suite 1500W
Atlanta, Georgia 30339
Phone (678) 486-2700
Fax (678) 745-0103

June 21, 2013

Mr. David Brownlee
Acting Program Manager
Response & Remediation Program
Georgia Environmental Protection Division
2 Martin Luther King Jr. Dr., SE, Suite 1462
Atlanta, Georgia 30334

***Subject:*** *Second Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant Former Dickies Industrial Services, Inc. (DISI) 2411 Sullivan Road, College Park, Fulton County, Georgia*

I have enclosed two electronic versions of Transmittal of Electronic version of the Second Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant Former Dickies Industrial Services, Inc. (DISI) 2411 Sullivan Road, College Park, Fulton County, Georgia as .pdf files on Compact Disc to accompany the hard copy report. This certification states that the electronic copy is complete, identical to the paper copy and virus free.

*I, Holly H. Mason, on June 21, 2013 made a complete electronic copy of the following document:*

*Transmittal of Electronic Version of the Second Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant Former Dickies Industrial Services, Inc. (DISI) 2411 Sullivan Road, College Park, Fulton County, Georgia*

*I then confirmed that the electronic copies did not contain a virus utilizing Symantec antivirus software.*

You can contact me at 678.486.2700 with any questions or comments.

Best regards,

Holly H. Mason

CC: Joan B. Sasine, Esq. (via email)
Tobin Clark (via email)
Teri Fields (via email)

# Letter of Transmittal

**Environmental Resources Management**

The Towers at Wildwood
3200 Windy Hill Road SE,
Suite 1500W
Atlanta, Georgia 30339
Phone (678) 486-2700
Fax (678) 745-0103

***DATE:*** June 21, 2013

***WO NUMBER: 0121103***

***To:*** *Mr. David Brownlee*
*Acting Program Manager*
*Response & Remediation Program*
*Georgia Environmental Protection Division*
*2 Martin Luther King Jr. Dr., SE, Suite 1462*
*Atlanta, Georgia 30334*

***ATTENTION: MR. DAVID BROWNLEE***

***WE ARE SENDING YOU:***

☒ Attached ☐ Under separate cover via:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples
☐ Specifications ☐ Copy of letter ☐ Change order
☐ (other) MSA

| *COPIES* | *DATE* | *NO.* | *DESCRIPTION* |
|---|---|---|---|
| 1 | 6/21/13 | | Report Hard Copy |
| 2 | 6/21/13 | | Report Electronic Copy |
| | | | |

***THESE ARE TRANSMITTED AS CHECKED BELOW***

☐ For approval ☐ Approved as submitted ☐ Resubmit ___ copies for approval
☒ For your use ☐ Approved as noted ☐ Submit ___ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Returned ___ corrected prints
☒ For review and comment ☐ **Prints returned after loan to us**
☐ **For bids due** _____ ☐(other) _____

***REMARKS: PLEASE SIGN ORIGNINAL AND SEND BACK ATTENTION TO DAVID DUNN.***

Amy Griswold, E.I.T

***COPY TO:***

***SIGNED***

Amy Griswold

cc:

*If enclosures are not as noted, kindly notify us at once.*

Environmental
Resources
Management (ERM)

3200 Windy Hill Rd., SE
Suite 1500W
Atlanta, GA 30339
(678) 486-2700
(404) 745-0103 (fax)

June 21, 2013

Mr. David Brownlee
Acting Program Manager
Response & Remediation Program
Georgia Environmental Protection Division
2 Martin Luther King Jr. Dr., SE, Suite 1462
Atlanta, Georgia 30334

**Subject:** Second Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant
Former Dickies Industrial Services, Inc. (DISI)
2411 Sullivan Road, College Park, Fulton County, Georgia

Dear Mr. Brownlee:

Environmental Resources Management, Inc. (ERM) is submitting this report on behalf of Dickies Industrial Services, Inc. (DISI) in accordance with the Environmental Covenant. Per the Environmental Covenant, DISI will sample the following 14 wells annually for five years: MW-1, MW-9, MW-10, MW-10A, MW-18D, MW-19, MW-20, MW-25, MW-28R, MW-29R, MW-37, MW-37A, MW-38, and MW-38A. Year 2013 is the second year of the five year monitoring period, and this letter is the second annual report to EPD under the Environmental Covenant.

***GROUND WATER SAMPLING***

The annual ground water sampling event was conducted on May 20-23, 2013. Ground water samples were collected from 13 of the 14 monitoring wells during the second annual sampling event. A ground water sample could not be collected from MW-28R due to residual injectant in the well.

Ground water samples were collected utilizing low flow/low volume techniques in accordance with the SESDPROC-301-R2 sampling protocol. Temperature, specific conductance, pH, and turbidity were measured in the field as the ground water samples were collected. The ground water samples and associated trip blank were analyzed for VOCs by EPA Method 8260B. Results from the ground water sampling event are summarized in the attached Table 1. Sampling results were consistent with those reported in 2012 with the exception of tetrachloroethylene (PCE) concentrations at MW-10 and MW-10A. However, we believe the increase in PCE concentrations at MW-10 and MW-10A can be attributed to fluctuating ground water levels. Ground water sampling log forms and the laboratory report are also attached.

If you have any questions or comments about this report, please contact us at 678-486-2700.

Sincerely,

Amy Griswold

Jeffrey N. Bilkert

Amy Griswold, E.I.T.
*Project Manager*

Jeffrey N. Bilkert
*Principal*

Attachments: Table 1 – 2013 Ground Water Data
Ground Water Sampling Logs
Laboratory Reports

cc: Joan B. Sasine, Esq. (via email)
Tobin Clark (via email)
Teri Fields (via email)

*Table 1*
*Ground Water Analytical Data*
*Former Dickies Industrial Services, Inc.*
*ug/L*

| Well ID | Date Sampled | Analysis Results (ug/L) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | PCE | TCE | 1,1-DCE | trans-1,2-DCE | cis-1,2-DCE | VC | 1,4-Dioxane |
| MW-1 | 5/22/2013 | 27,000 | < 2,500 | < 2,500 | < 2,500 | < 2,500 | < 1,000 | < 75,000 |
| MW-9 | 5/23/2013 | < 5 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-10 | 5/23/2013 | 1,700 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-10A | 5/23/2013 | 1,300 | 99 | < 5 | < 5 | 260 | < 2 | < 150 |
| MW-18D | 5/23/2013 | < 5 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-19 | 5/21/2013 | < 5 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-20 | 5/22/2013 | < 5 | 50 | < 5 | < 5 | 180 | 29 | < 150 |
| MW-25 | 5/21/2013 | 100 | 14 | < 5 | < 5 | 63 | < 2 | < 150 |
| MW-29/29R | 5/22/2013 | < 5 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-37 | 5/22/2013 | < 5 | < 5 | < 5 | < 5 | < 5 | < 2 | < 150 |
| MW-37A | 5/22/2013 | < 5 | < 5 | < 5 | < 5 | 310 | 7.6 | < 150 |
| MW-38 | 5/21/2013 | 17 | 11 | < 5 | < 5 | 7.3 | < 2 | < 150 |
| MW-38A | 5/21/2013 | < 5 | < 5 | 27 | 8.7 | 6500 | 32 | < 150 |

ERM

WATER LEVEL MEASUREMENT DATA SHEET

Client: Williamson-Dickies

Date: 5/20/2013

Site/Location: College Park, GA

Sampler's Name: R. MCULTON

| Well I.D. | Date | Time | Well Diameter (inches) | Depth to Water (Feet BTOC) | Total Depth (Feet BTOC) | Notes (Odor, dedicated pump present, note if lock/cap need replacment,etc.) |
|---|---|---|---|---|---|---|
| MW-1 | | | | 10.80 | | |
| MW-9 | | | | 13.28 | | |
| MW-10 | | | | 15.34 | | |
| MW-10A | | | | 13.26 | | |
| MW-18D | | | | 10.78 | | |
| MW-19 | | | | 22.32 | | |
| MW-20 | | | | 22.86 | | |
| MW-25 | | | | 27.64 | | |
| MW-28R | | | | 12.38 | | * NAS INJECTANT IN THE WELL |
| MW-29R | | | | 10.51 | | |
| MW-37 | | | | 10.63 | | * THESE WELLS ARE |
| MW-37A | | | | 10.48 | | * REVERSED ON THE |
| MW-38 | | | | 16.61 | | CAD DRAWING |
| MW-38A | | | | 16.54 | | |

ERM

# GROUND WATER SAMPLING LOG SHEET

Client: WILLIAMSON - DICKIE
Project No.: 0121103
Site/Location: COLLEGE PARK, GA
Sampling Date: 5/22/2013
Sampler's Name: R. MILTON

Well ID: MW-1
Total Depth (ft)[1]: 20 (5-20)
Depth to Water (ft): 10.41
Well Diameter (in): 2"
Well Volume (gal) = 0.041d²h: 1.5 GAL / 5.6 LITERS
d = well diameter (inches) h = length of water column (feet)
Well Condition: GOOD

Pump Type/Model: GEO PUMP PERISTALTIC
Tubing Material: .170 x .14 LDPE
Pump Intake Depth (ft): 16ft
Start/Stop Purge Time: 1540
Purge Rate (L/min)[2]: .1 L/MIN
Total Purge Volume (L): 7.5

Sample Collection Time: 1700
Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW
Sample ID: MW-1
QA/QC Collected? YES
QA/QC I.D. DUP-01
Laboratory Analyses: VOCs EPA METHOD 8260

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1545 | 21.45 | .207 | 4.60 | 5.40 | 179.5 | 187 | .5 | 10.09 | LOW FLOW / LOW VOLUME @ .1 L/MIN |
| 1550 | 21.64 | .206 | 4.31 | 5.13 | 176.7 | 254 | 1.0 | 10.09 | |
| 1555 | 23.56 | .206 | 3.85 | 5.71 | 174.4 | 144 | 1.5 | 10.09 | |
| 1600 | 23.59 | .206 | 3.86 | 5.70 | 176.6 | 184 | 2.0 | 10.09 | |
| 1605 | 23.06 | .208 | 4.06 | 5.62 | 144.3 | 134 | 2.5 | 10.09 | |
| 1610 | 23.43 | .208 | 3.71 | 5.54 | 235.5 | 81.3 | 3.0 | 10.10 | |
| 1615 | 23.31 | .208 | 3.70 | 5.53 | 237.1 | 67.1 | 3.5 | 10.10 | |
| 1620 | 23.07 | .206 | 3.74 | 5.40 | 244.7 | 67.8 | 4.0 | 10.11 | |
| 1625 | 23.04 | .206 | 3.69 | 5.40 | 250.6 | 67.2 | 4.5 | 10.11 | |
| 1630 | 23.50 | .206 | 3.58 | 5.40 | 242.5 | 48.5 | 5.0 | 10.11 | |
| 1635 | 23.11 | .207 | 3.76 | 5.42 | 242.0 | 30.2 | 5.5 | 10.12 | |
| 1640 | 23.06 | .207 | 3.70 | 5.43 | 241.6 | 21.8 | 6.0 | 10.12 | |
| 1645 | 23.01 | .207 | 3.62 | 5.44 | 241.1 | 12.2 | 6.5 | 10.12 | |
| 1650 | 22.73 | .207 | 3.43 | 5.45 | 240.8 | 9.6 | 7.0 | 10.13 | |
| 1655 | 22.62 | .206 | 4.06 | 5.46 | 239.7 | 8.1 | 7.5 | 10.13 | |
| | | | | | | | | | |
| 1700 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[6] | (see note below)[6] | |

DUP-01 COLLECTED

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DICKIE

Project No.: 0121103

Sampling Date: 5/23/2013

Site/Location: COLLEGE PARK, GA

Sampler's Name: Ryan McJilton

Well ID: MW-9

Total Depth (ft)[1]: 15 (13.5-13.5)

Depth to Water (ft): 13.24

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: .3 GAL / 1 LITER

Pump Type/Model: GEOPUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 14 ft

Start/Stop Purge Time: 1240 / 1310

Purge Rate (L/min)[2]: .1 L/MIN

Total Purge Volume (L): 3.0 LITERS

Sample Collection Time: 1315

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-9

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Sampling Method (check all that apply): ☐ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1245 | 19.02 | .144 | 2.66 | 5.32 | 264.3 | 5.61 | .5 | 13.43 | LOW FLOW/LOW VOLUME @ .1 L/MIN |
| 1250 | 20.73 | .145 | .74 | 4.40 | 299.1 | 2.90 | 1.0 | 13.44 | |
| 1255 | 20.88 | .145 | .70 | 4.39 | 244.4 | 2.72 | 1.5 | 13.44 | |
| 1300 | 20.33 | .146 | .59 | 4.38 | 266.0 | 2.18 | 2.0 | 13.45 | |
| 1305 | 20.29 | .146 | .57 | 4.34 | 265.5 | 1.49 | 2.5 | 13.45 | |
| 1310 | 20.21 | .145 | .56 | 4.39 | 267.9 | 1.32 | 3.0 | 13.46 | |
| 1315 | PARAMETERS | STABILIZED, | SAMPLES | COLLECTED. | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DICKIE

Project No.: 0121103

Sampling Date: 5/23/2013

Sampler's Name: Ryan McJilton

Site/Location: COLLEGE PARK, GA

Well ID: MW-10

Total Depth (ft)[1]: 20 (4.5-14.5)

Depth to Water (ft): 15.35

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: .76 GAL / 2.9 LITER

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 17 ft

Start/Stop Purge Time: 1015/1045

Purge Rate (L/min)[2]: .1 L/MIN

Total Purge Volume (L): 3.0 LITERS

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1050

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-10

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1020 | 18.45 | .451 | 2.46 | 4.78 | 270.5 | 5.19 | .5 | 15.46 | LOW FLOW/LOW VOLUME @ .1 L/MIN |
| 1025 | 19.13 | .455 | .51 | 4.03 | 357.1 | 2.03 | 1.0 | 15.48 | |
| 1030 | 19.02 | .454 | .42 | 4.13 | 378.4 | 1.50 | 1.5 | 15.49 | |
| 1035 | 18.91 | .453 | .38 | 4.14 | 384.1 | 1.14 | 2.0 | 15.50 | |
| 1040 | 19.04 | .456 | .41 | 4.11 | 391.5 | .92 | 2.5 | 15.50 | |
| 1045 | 19.06 | .455 | .40 | 4.12 | 392.3 | .64 | 3.0 | 15.51 | |
| 1050 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DICILIE

Site/Location: COLLEGE PARK, GA

Project No.: 0121103

Sampling Date: 5/23/2013

Sampler's Name: Ryan McJilton

Well ID: MW-10A

Total Depth (ft)[1]: 54.5 (47.8-52.8)

Depth to Water (ft): 13.24

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 6.36GL / 12L

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEO PUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 50ft

Start/Stop Purge Time: 1125/1200

Purge Rate (L/min)[2]: .1L/MIN

Total Purge Volume (L): 3.5

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1205

Sample Purge Rate (L/min)[3]: .1L/MIN SODA STRAW

Sample ID: MW-10A

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1130 | 19.11 | .102 | 11.43 | 6.33 | 190.6 | 13.8 | .5 | 14.01 | LOW FLOW / LOW VOLUME @ .1L/MIN |
| 1135 | 19.48 | .100 | 10.32 | 6.04 | 210.1 | 12.1 | 1.0 | 14.01 | |
| 1140 | 19.39 | .095 | 9.30 | 5.64 | 237.7 | 7.46 | 1.5 | 14.02 | |
| 1145 | 19.33 | .095 | 9.75 | 5.71 | 235.2 | 5.08 | 2.0 | 14.02 | |
| 1150 | 19.34 | .095 | 9.27 | 5.80 | 228.7 | 3.24 | 2.5 | 14.03 | |
| 1155 | 19.32 | .095 | 9.36 | 5.83 | 221.0 | 3.06 | 3.0 | 14.03 | |
| 1200 | 19.27 | .095 | 9.34 | 5.84 | 220.4 | 2.97 | 3.5 | 14.04 | |
| | | | | | | | | | |
| 1205 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DIXIE

Site/Location: COLLEGE PARK, GA

Project No.: 0121103

Sampling Date: 5/23/2013

Sampler's Name: Ryan McJilton

Well ID: MW-14D

Total Depth (ft)[1]: 132 (OPEN BOREHOLE

Depth to Water (ft): 10.05

Well Diameter (in): 6"

Well Volume (gal) = 0.041d²h: 16 GAL / 65 LITERS

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP ~~[illegible]~~ PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 100 FT

Start/Stop Purge Time: 0920/1000

Purge Rate (L/min)[2]: .1L/MIN

Total Purge Volume (L): 4.0

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1005

Sample Purge Rate (L/min)[3]: .1L/MIN

Sample ID: MW-14D

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 0925 | 19.22 | .091 | 4.29 | 6.43 | 74.9 | 74.5 | .5 | 10.96 | LOW FLOW/LOW VOLUME @ .1L/MIN |
| 0930 | 19.30 | .090 | .80 | 5.39 | 97.6 | 35.4 | 1.0 | 11.10 | (LOWEST PURGE RATE PUMP WILL ALLOW) |
| 0935 | 19.36 | .088 | .67 | 5.46 | 90.9 | 22.1 | 1.5 | 11.17 | |
| 0940 | 19.31 | .085 | .39 | 5.64 | 72.9 | 26.1 | 2.0 | 11.30 | EXCESSIVE DRAWDOWN, HOWEVER - PURGING |
| | | | | | | | | | 3 WELL VOLUMES UNPRACTICAL DUE |
| | | | | | | | | | TO LARGE AMOUNT OF WATER. |
| 0945 | 19.40 | .084 | .33 | 5.75 | 66.8 | 20.1 | 2.5 | 11.40 | |
| 0950 | 19.44 | .084 | .30 | 5.76 | 59.3 | 14.2 | 3.0 | 11.50 | |
| 0955 | 19.46 | .083 | .37 | 5.75 | 55.6 | 9.5 | 3.5 | 11.52 | |
| 1000 | 19.49 | .083 | .32 | 5.76 | 55.4 | 8.6 | 4.0 | 11.56 | |
| 1005 | PARAMETERS | STABILIZED, | SAMPLES | COLLECTED. | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DICKIE

Project No.: 0121103

Sampling Date: 5/21/2013

Sampler's Name: Ryan McJilton

Site/Location: COLLEGE PARK, GA

Well ID: MW-19

Total Depth (ft)[1]: ~~[illegible]~~ 75 (65-75)

Depth to Water (ft): 22.56

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 9.6 GAL / 3.3 LITERS

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GED PUMP (PERISTALTIC)

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 70 FT

Start/Stop Purge Time: 1310 / 1345

Purge Rate (L/min)[2]: 1L/MIN

Total Purge Volume (L): 3.5 LITERS

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1350

Sample Purge Rate (L/min)[3]: 1 L/MIN SODA STRAW

Sample ID: MW-19

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1315 | 21.84 | .057 | 1.92 | 5.95 | 151.0 | 29.4 | .5 | 22.75 | LOW FLOW FLOW VOLUME @ 1L/MIN |
| 1320 | 21.90 | .057 | 1.81 | 5.87 | 155.9 | 27.4 | 1.0 | 22.75 | |
| 1325 | 21.61 | .057 | 1.61 | 5.77 | 164.3 | 21.3 | 1.5 | 22.76 | |
| 1330 | 21.55 | .057 | 1.62 | 5.75 | 165.9 | 16.5 | 2.0 | 22.76 | |
| 1335 | 21.50 | .057 | 1.44 | 5.74 | 167.3 | 9.54 | 2.5 | 22.76 | |
| 1340 | 21.35 | .057 | 1.45 | 5.76 | 164.2 | 7.81 | 3.0 | 22.76 | |
| 1345 | 21.32 | .057 | 1.41 | 5.78 | 163.6 | 7.16 | 3.5 | 22.76 | |
| 1350 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[6] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON - DICKIE

Site/Location: COLLEGE PARK, GA

Project No.: 0121103

Sampling Date: 5/22/2013

Sampler's Name: Ryan McJilton

Well ID: MW-20

Total Depth (ft)[1]: 33 (23-33)

Depth to Water (ft): 22.86

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 1.7GAL / 6.5LITERS

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 24ft

Start/Stop Purge Time: 0930 / 1005

Purge Rate (L/min)[2]: .1L/MIN

Total Purge Volume (L): 3.5 LITERS

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1010

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-20

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCs EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 0935 | 21.54 | .260 | 5.16 | 6.05 | 1.7 | 6.17 | .5 | 23.10 | LOW FLOW / LOW VOLUME 0.1L/MIN |
| 0940 | 21.43 | .262 | 4.96 | 5.94 | -5.6 | 5.24 | 1.0 | 23.10 | |
| 0945 | 22.44 | .262 | 2.31 | 5.75 | -2.1 | 4.31 | 1.5 | 23.06 | |
| 0950 | 22.49 | .262 | .42 | 5.64 | .4 | 2.02 | 2.0 | 22.99 | |
| 0955 | 22.51 | .262 | .34 | 5.65 | 1.2 | 1.48 | 2.5 | 22.96 | |
| 1000 | 22.55 | .262 | .26 | 5.67 | 1.7 | 1.76 | 3.0 | 22.94 | |
| 1005 | 22.64 | .262 | .14 | 5.66 | 2.4 | 1.61 | 3.5 | 22.94 | |
| 1010 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON - DICKIE

Site/Location: COLLEGE PARK, GA

Project No.: 0121103

Sampling Date: 5/21/2013

Sampler's Name: Ryan McJilton

Well ID: MW-25

Total Depth (ft)[1]: 44 (34-44)

Depth to Water (ft): 27.63

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 2.76GAL / 10 BATCHES

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP (PERISTALTIC)

Tubing Material: .17 X 1/4 LDPE

Pump intake Depth (ft): 39ft

Start/Stop Purge Time: 1130/1215

Purge Rate (L/min)[2]: .1 L/MIN

Total Purge Volume (L): 4.5L

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

Sample Collection Time: 1220

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-25

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCS EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1135 | 22.93 | .046 | .79 | 5.18 | 203.8 | 5.94 | .5 | 28.19 | LOW FLOW/LOW VOLUME @ .1L/MIN |
| 1140 | 23.38 | .047 | .60 | 4.69 | 226.1 | 4.97 | 1.0 | 28.19 | |
| 1145 | 24.37 | .053 | .37 | 5.09 | 192.4 | 3.11 | 1.5 | 28.07 | |
| 1150 | 24.31 | .054 | .34 | 5.03 | 145.6 | 2.62 | 2.0 | 28.06 | |
| 1155 | 24.35 | .066 | .31 | 4.95 | 187.7 | 1.25 | 2.5 | 28.04 | |
| 1200 | 24.34 | .065 | .29 | 4.92 | 184.7 | 1.16 | 3.0 | 28.04 | |
| 1205 | 24.29 | .070 | .32 | 5.05 | 166.7 | 1.03 | 3.5 | 28.04 | |
| 1210 | 24.27 | .069 | .34 | 5.04 | 162.8 | .97 | 4.0 | 28.04 | |
| 1215 | 24.21 | .068 | .33 | 5.03 | 159.6 | .91 | 4.5 | 28.04 | |
| | | | | | | | | | |
| 1220 | PARAMETERS | STABILIZED, | SAMPLES | COLLECTED. | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

ERM

# GROUND WATER SAMPLING LOG SHEET

Client: Williamson-Dickie
Project No.: 121103
Sampling Date: 5/22/2013
Site/Location: College Park, GA
Sampler's Name: R. MELTON

Well ID: MW-26R
Pump Type/Model:
Sample Collection Time:
Total Depth (ft)[1]:
Tubing Material:
Sample Purge Rate (L/min)[3]:
Depth to Water (ft):
Pump Intake Depth (ft): N/A
Sample ID: N/A
Well Diameter (in):
Start/Stop Purge Time:
QA/QC Collected?
Well Volume (gal) = $0.041d^2h$:
Purge Rate (L/min)[2]:
QA/QC I.D.
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L):
Laboratory Analyses: VOCs EPA Method 8260
Well Condition:
Sampling Method (check all that apply): ☐ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| * | WELL | HAD | INSTANT | IN | IT | FROM | PREVIOUS | INJECTION, | DID |
| | NOT | PURGE | OR | SAMPLE- | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DICKIE

Site/Location: COLLEGE PARK, GA

Project No.: 0121103

Sampling Date: 5/22/2013

Sampler's Name: Ryan McJilton

Well ID: MW-29R

Total Depth (ft)[1]: 35 (25-35)

Depth to Water (ft): 10.74

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 4 GAL / 15 LITERS

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 30 ft

Start/Stop Purge Time: 1135/1210

Purge Rate (L/min)[2]: .1 L/MIN

Total Purge Volume (L): 3.5

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1215

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-29R

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCS EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1140 | 21.22 | .033 | 6.62 | 4.63 | 446.6 | 11.3 | .5 | 11.18 | LOW FLOW/LOW VOLUME @ .1 L/MIN |
| 1145 | 21.13 | .033 | 1.32 | 4.45 | 518.8 | 6.64 | 1.0 | 11.18 | |
| 1150 | 20.99 | .032 | .60 | 4.33 | 572.6 | 4.73 | 1.5 | 11.19 | |
| 1155 | 20.93 | .032 | .43 | 4.49 | 581.9 | 3.13 | 2.0 | 11.20 | |
| 1200 | 20.61 | .032 | .38 | 4.47 | 587.3 | 3.01 | 2.5 | 11.20 | |
| 1205 | 20.62 | .032 | .34 | 4.46 | 586.4 | 2.98 | 3.0 | 11.21 | |
| 1210 | 20.64 | .032 | .37 | 4.47 | 585.6 | 2.86 | 3.5 | 11.21 | |
| 1215 | PARAMETERS STABILIZED, SAMPLES COLLECTED. | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

ERM

# GROUND WATER SAMPLING LOG SHEET

Client: WILLIAMSON-DILLIE
Site/Location: COLLEGE PARK, GA
Project No.: 0121103
Sampling Date: 5/22/2013
Sampler's Name: R. MILLTON

Well ID: MW-37
Total Depth (ft)[1]: 39 (25-39)
Depth to Water (ft): 10.52
Well Diameter (in): 2"
Well Volume (gal) = 0.041d²h: 4 GAL / 15 LITERS
d = well diameter (inches) h = length of water column (feet)
Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC
Tubing Material: .17 X 1/4 LDPE
Pump Intake Depth (ft): 30 FT
Start/Stop Purge Time: 1330 / 1450
Purge Rate (L/min)[2]: .1 L/MIN
Total Purge Volume (L): 8.0

Sample Collection Time: 1455
Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW
Sample ID: MW-37
QA/QC Collected? NO
QA/QC I.D. N/A
Laboratory Analyses: VOCs EPA METHOD 8260

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide)
☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1335 | 27.41 | .238 | .53 | 6.02 | -15.3 | 52.2 | .5 | 10.52 | |
| 1340 | 27.60 | .239 | .40 | 6.03 | -14.6 | 44.9 | 1.0 | 10.52 | |
| 1345 | 28.18 | .253 | .29 | 6.06 | -22.9 | 62.7 | 1.5 | 10.52 | |
| 1350 | 28.34 | .292 | .21 | 6.10 | -38.8 | 56.3 | 2.0 | 10.53 | |
| 1355 | 28.06 | .318 | .17 | 6.12 | -53.4 | 42.0 | 2.5 | 10.53 | |
| 1400 | 28.23 | .337 | .17 | 6.13 | -54.7 | 34.0 | 3.0 | 10.53 | |
| 1405 | 28.34 | .341 | .15 | 6.14 | -55.2 | 38.6 | 3.5 | 11.54 | |
| 1410 | 28.63 | .348 | .15 | 6.15 | -54.6 | 33.1 | 4.0 | 10.54 | |
| 1415 | 28.72 | .351 | .15 | 6.17 | -67.9 | 27.1 | 4.5 | 10.54 | |
| 1420 | 28.13 | .353 | .16 | 6.12 | -54.5 | 22.8 | 5.0 | 10.54 | |
| 1425 | 28.56 | .354 | .14 | 6.12 | -76.1 | 20.7 | 5.5 | 10.55 | |
| 1430 | 28.49 | .357 | .15 | 6.12 | -67.4 | 16.7 | 6.0 | 10.55 | |
| 1435 | 28.76 | .359 | .14 | 6.12 | -64.1 | 14.7 | 6.5 | 10.56 | |
| 1440 | 28.61 | .357 | .16 | 6.12 | -66.2 | 10.6 | 7.0 | 10.56 | |
| 1445 | 28.52 | .357 | .15 | 6.12 | -66.9 | 8.6 | 7.5 | 10.56 | |
| 1450 | 28.65 | .357 | .15 | 6.12 | -67.3 | 7.4 | 8.0 | 10.56 | |
| | | | | | | | | | |
| 1455 | PARAMETERS | STABILIZED | SAMPLES | COLLECTED. | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[6] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.1 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

ERM

# GROUND WATER SAMPLING LOG SHEET

Client: WILLIAMSON-DICKIE
Site/Location: COLLEGE PARK, GA
Project No.: 0121103
Sampling Date: 5/22/2013
Sampler's Name: RYAN MELTON

Well ID: MW-37A
Total Depth (ft)[1]: 50 (40-50)
Depth to Water (ft): 10.56
Well Diameter (in): 2"
Well Volume (gal) = 0.041d²h: 6.5GAL/25LITER
d = well diameter (inches) h = length of water column (feet)
Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC
Tubing Material: .17x1/4 HDPE
Pump Intake Depth (ft): 45FT
Start/Stop Purge Time: 1230/1315
Purge Rate (L/min)[2]: .1L/MIN
Total Purge Volume (L): 4.5

Sample Collection Time: 1320
Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW
Sample ID: MW-37A
QA/QC Collected? NO
QA/QC I.D. N/A
Laboratory Analyses: VOCs EPA METHOD 8260

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide) ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1235 | 23.35 | .460 | .53 | 5.44 | -111.4 | 21.6 | .5 | 10.56 | |
| 1240 | 23.34 | .444 | .58 | 5.79 | -106.2 | 21.0 | 1.0 | 10.57 | |
| 1245 | 23.60 | .441 | .29 | 5.44 | -106.7 | 21.1 | 1.5 | 10.57 | |
| 1250 | 23.63 | .446 | .21 | 5.46 | -106.0 | 23.8 | 2.0 | 10.58 | |
| 1255 | 23.90 | .445 | .19 | 5.44 | -105.1 | 36.0 | 2.5 | 10.58 | |
| 1300 | 23.99 | .442 | .32 | 5.89 | -103.3 | 23.6 | 3.0 | 10.59 | |
| 1305 | 24.08 | .441 | .14 | 5.96 | -104.1 | 25.4 | 3.5 | 10.59 | |
| 1310 | 24.11 | .441 | .10 | 5.91 | -109.6 | 24.7 | 4.0 | 10.60 | |
| 1315 | 24.20 | .441 | .07 | 5.91 | -110.2 | 25.1 | 4.5 | 10.60 | |
| | | | | | | | | | |
| 1320 | PARAMETERS | STABILIZED & | | TURBIDITY | | WITHIN | 10% | | |
| | -SAMPLES | COLLECTED | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

# GROUND WATER SAMPLING LOG SHEET

ERM

Client: WILLIAMSON-DILKIE

Project No.: 121 103

Sampling Date: 5/21/2013

Site/Location: COLLEGE PARK, GA

Sampler's Name: Ryan McJilton

Well ID: MW-34

Total Depth (ft)[1]: 35 (25-35)

Depth to Water (ft): 16.64

Well Diameter (in): 2"

Well Volume (gal) = 0.041d²h: 3 GAL / 11.4 LITERS

d = well diameter (inches) h = length of water column (feet)

Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC

Tubing Material: .17 X 1/4 LDPE

Pump Intake Depth (ft): 30 ft

Start/Stop Purge Time: 1010 / 1040

Purge Rate (L/min)[2]: .1 L/MIN

Total Purge Volume (L): 3.0 LITERS

Sampling Method (check all that apply): ☑ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bailer (only used if necessary) ☐ Bladder pump = pump discharge (all analytes)

Sample Collection Time: 1045

Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW

Sample ID: MW-34

QA/QC Collected? NO

QA/QC I.D. N/A

Laboratory Analyses: VOCS EPA METHOD 8260

| Time | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| 1015 | 23.91 | .035 | 2.91 | 4.70 | 206.4 | 8.12 | .5 | 16.76 | LOW FLOW / LOW VOLUME @ .1 L/MIN |
| 1020 | 24.03 | .031 | 2.07 | 4.83 | 201.4 | 7.65 | 1.0 | 16.76 | |
| 1025 | 24.10 | .031 | .62 | 4.91 | 197.2 | 6.44 | 1.5 | 16.76 | |
| 1030 | 24.39 | .031 | .38 | 4.95 | 187.3 | 1.37 | 2.0 | 16.76 | |
| 1035 | 24.46 | .031 | .39 | 4.99 | 184.1 | .79 | 2.5 | 16.76 | |
| 1040 | 24.51 | .031 | .40 | 4.99 | 183.2 | .65 | 3.0 | 16.76 | |
| | | | | | | | | | |
| 1045 | PARAMETERS | | STABILIZED, | | SAMPLES | | COLLECTED. | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

ERM

# GROUND WATER SAMPLING LOG SHEET

Client: Williamson-Dickie
Project No.: 121103
Sampling Date: 5/21/2013
Site/Location: College Park, GA
Sampler's Name: R. MCILTON

Well ID: MW-34A
Total Depth (ft)[1]: 49 (39-49)
Depth to Water (ft): 16.65
Well Diameter (in): 2"
Well Volume (gal) = 0.041d²h: 5.36GAL / 20 LITERS
d = well diameter (inches) h = length of water column (feet)
Well Condition: GOOD

Pump Type/Model: GEOPUMP PERISTALTIC
Tubing Material: .17 x 1/4 LDPE
Pump Intake Depth (ft): 44 ft
Start/Stop Purge Time: 0900 / 0955
Purge Rate (L/min)[2]: .1 L/MIN
Total Purge Volume (L): 5.5 LITERS

Sample Collection Time: 1000
Sample Purge Rate (L/min)[3]: .1 L/MIN SODA STRAW
Sample ID: MW-34A
QA/QC Collected? NO
QA/QC I.D. N/A
Laboratory Analyses: VOCs EPA Method 8260

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide) ☐ Bladder pump = pump discharge (all analytes) ☐ Bailer (only used if necessary)

| Time 0905 | Temp. (°C) | Spec. Cond. (mS/cm) | DO (mg/L) | pH (SU) | ORP (mV) | Turbidity (NTUs) | Purge Volume (L) | $H_2O$ Depth (ft) | Notes (Water clarity, odor, purge rate, issues with pump/well/weather/etc.) |
|---|---|---|---|---|---|---|---|---|---|
| | 23.36 | .450 | 3.34 | 7.04 | -106.2 | 13.4 | .5 | 16.44 | LOW FLOW / LOW VOLUME @ .1L/MIN |
| 0910 | 23.64 | .447 | 1.45 | 6.87 | -104.2 | 11.6 | 1.0 | 16.44 | |
| 0915 | 23.66 | .446 | 1.10 | 6.81 | -104.2 | 11.1 | 1.5 | 16.44 | |
| 0920 | 23.74 | .446 | .94 | 6.78 | -104.0 | 11.7 | 2.0 | 16.44 | |
| 0925 | 23.93 | .444 | .77 | 6.70 | -110.4 | 10.2 | 2.5 | 16.44 | |
| 0930 | 24.04 | .438 | .50 | 6.66 | -109.4 | 16.2 | 3.0 | 16.45 | |
| 0935 | 24.14 | .428 | .35 | 6.63 | -119.4 | 18.2 | 3.5 | 16.45 | |
| 0940 | 24.22 | .427 | .30 | 6.63 | -120.0 | 15.4 | 4.0 | 16.45 | |
| 0945 | 24.31 | .425 | .28 | 6.61 | -120.2 | 15.5 | 4.5 | 16.46 | |
| 0950 | 24.12 | .423 | .21 | 6.62 | -120.2 | 11.1 | 5.0 | 16.46 | |
| 0955 | 23.76 | .422 | .20 | 6.62 | -120.2 | 9.9 | 5.5 | 16.46 | |
| | | | | | | | | | |
| 1000 | PARAMETERS | | STABILIZED, | | SAMPLES | | COLLECTED. | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Stabilizing Criteria[5] | +/- 1°C | +/- 3% | +/- 10% (see note below)[7] | +/- 0.1 unit | +/- 10 mV (see note below)[8] | +/- 10% or <10 NTUs | (see note below)[4] | (see note below)[6] | |

(1) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
(2) - Purge rate to be 0.5 lpm or less.
(3) - Sampling rate to be 0.25 lpm or less.
(4) - Field parameter measurements to be recorded every 3 to 5 minutes.
(5) - Stabilization criteria based on three most recent consecutive measurements.
(6) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft.
(7) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

May 31, 2013

Amy Griswold
ERM-Southeast
3200 Windy Hill Rd., Suite 1500 W
Atlanta GA 30339

TEL: (770) 590-8383
FAX: (770) 590-9164

RE: Williamson Dickie

Dear Amy Griswold: Order No: 1305L37

Analytical Environmental Services, Inc. received 15 samples on 5/24/2013 11:35:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

Mirzeta Kararic

Mirzeta Kararic
Project Manager

3785 PRESIDENTIAL PARKWAY • ATLANTA, GEORGIA 30340 • TEL: (770) 457-8177 • FAX: (770)457-8188

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

# CHAIN OF CUSTODY

Work Order: 1305L37

Date: 5/24/13 Page 1 of 2

COMPANY: ERM

ADDRESS: 3200 WINDY HILL ROAD SE SUITE 1500 WEST ATLANTA, GA 30339

PHONE: 678-486-2700

FAX: 404-745-0103

SAMPLED BY: RYAN MCILTON

SIGNATURE: [signature]

ANALYSIS REQUESTED: VOCs 8260 X

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

| # | SAMPLE ID | SAMPLED DATE | SAMPLED TIME | Grab | Composite | Matrix (See codes) | PRESERVATION (See codes) HCl | REMARKS | No # of Containers |
|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-34A | 5/21/13 | 1000 | X | | GW | 2 | *SPECIALIZED | |
| 2 | MW-34 | 5/21/13 | 1045 | | | | | REPORTING LIST: | |
| 3 | MW-25 | 5/21/13 | 1220 | | | | | 1,1-DICHLOROETHENE | |
| 4 | MW-19 | 5/21/13 | 1350 | | | | | CIS-1,2-DICHLOROETHENE | |
| 5 | MW-20 | 5/22/13 | 1010 | | | | | TRANS-1,2-DICHLOROETHENE | |
| 6 | MW-21R | 5/22/13 | 1215 | | | | | TETRACHLOROETHENE | |
| 7 | MW-37A | 5/22/13 | 1320 | | | | | TRICHLOROETHENE | |
| 8 | MW-37 | 5/22/13 | 1455 | | | | | VINYL CHLORIDE | |
| 9 | MW-1 | 5/22/13 | 1700 | | | | | 1,4-DIOXANE | |
| 10 | MW-18 | 5/23/13 | 1005 | | | | | | |
| 11 | MW-10 | 5/23/13 | 1050 | | | | | | |
| 12 | MW-10A | 5/23/13 | 1205 | | | | | | |
| 13 | MW-9 | 5/23/13 | 1315 | | | | | | |
| 14 | DUP-01 | 5/22/13 | 2400 | | | | | | |

| RELINQUISHED BY | DATE/TIME | RECEIVED BY | DATE/TIME |
|---|---|---|---|
| 1: [signature] | 5/24/2013 @ 1135 | 1: [signature] | 5/24/13 1135 |
| 2: | | 2: | |
| 3: | | 3: | |

PROJECT INFORMATION
PROJECT NAME: WILLIAMSON-DIXIE
PROJECT #: 0121103
SITE ADDRESS: 2411 SULLIVAN RD. COLLEGE PARK, GA
SEND REPORT TO: AMY.BRISWOLD@ERM.COM
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

Turnaround Time Request
- X Standard 5 Business Days
- O 2 Business Day Rush
- O Next Business Day Rush
- O Same Day Rush (auth req.)
- O Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER GREYHOUND OTHER

**SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.**

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

# CHAIN OF CUSTODY

Work Order: 1305L37

Date: 5/24/2013 Page 2 of 2

COMPANY: ERM

ADDRESS: 3200 WINDY HILL ROAD SUITE 1500 W. ATLANTA, GA 30339

PHONE: 678-446-2700

FAX: 404-745-0103

SAMPLED BY: RYAN MCILTON

SIGNATURE: RMA

ANALYSIS REQUESTED: VOCs 8260 *

PRESERVATION (See codes): HCl

| # | SAMPLE ID | SAMPLED DATE | SAMPLED TIME | Grab | Composite | Matrix (See codes) | No # of Containers | REMARKS |
|---|---|---|---|---|---|---|---|---|
| 1 | TRIP BLANK | 5/21/13 | 0800 | X | | GW | 2 | * SPECIALIZED REPORTING LIST: 1,1-DICHLOROETHENE; CIS-1,2-DICHLOROETHENE; TRANS-1,2-DICHLOROETHENE; TETRACHLOROETHENE; TRICHLOROETHENE; VINYL CHLORIDE; 1,4-DIOXANE |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

| RELINQUISHED BY | DATE/TIME | RECEIVED BY | DATE/TIME |
|---|---|---|---|
| 1: RMA | 5/24/2013 RMA ~~5/23/2013~~ @1135 | 1: Stephen Mayfield | 5/24/13 11:35 AM |
| 2: | | 2: | |
| 3: | | 3: | |

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: WILLIAMSON-DICKIE
PROJECT #: 0121103
SITE ADDRESS: 7411 SULLIVAN RD. COLLEGE PARK, GA
SEND REPORT TO: AMY. BRISWOLD@ERM.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #:_____ PO#:_____

RECEIPT
Total # of Containers

Turnaround Time Request
- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same Day Rush (auth req.)
- [ ] Other _____

STATE PROGRAM (if any): _____
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

**SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.**

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

# Analytical Environmental Services, Inc

**Date:** 31-May-13

**Client:** ERM-Southeast
**Project:** Williamson Dickie
**Lab ID:** 1305L37

## Case Narrative

Volatile Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1305L37-009A and -014A required dilution during preparation and/or analysis resulting in elevated reporting limits.

**Analytical Environmental Services, Inc** **Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-38A |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/21/2013 10:00:00 AM |
| **Lab ID:** | 1305L37-001 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| Vinyl chloride | 32 | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| 1,1-Dichloroethene | 27 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| trans-1,2-Dichloroethene | 8.7 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| cis-1,2-Dichloroethene | 6500 | 500 | | ug/L | 176691 | 100 | 05/28/2013 18:50 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:46 | NP |
| Surr: 4-Bromofluorobenzene | 85.3 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 15:46 | NP |
| Surr: 4-Bromofluorobenzene | 85.7 | 64.6-123 | | %REC | 176691 | 100 | 05/28/2013 18:50 | NP |
| Surr: Dibromofluoromethane | 101 | 76.6-133 | | %REC | 176691 | 100 | 05/28/2013 18:50 | NP |
| Surr: Dibromofluoromethane | 105 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 15:46 | NP |
| Surr: Toluene-d8 | 97.6 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 15:46 | NP |
| Surr: Toluene-d8 | 96.4 | 77.8-120 | | %REC | 176691 | 100 | 05/28/2013 18:50 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-38 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/21/2013 10:45:00 AM |
| **Lab ID:** | 1305L37-002 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| cis-1,2-Dichloroethene | 7.3 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| Trichloroethene | 11 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| Tetrachloroethene | 17 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:39 | NP |
| Surr: 4-Bromofluorobenzene | 89.1 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 11:39 | NP |
| Surr: Dibromofluoromethane | 104 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 11:39 | NP |
| Surr: Toluene-d8 | 98.4 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 11:39 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-25 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/21/2013 12:20:00 PM |
| **Lab ID:** | 1305L37-003 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| cis-1,2-Dichloroethene | 63 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| Trichloroethene | 14 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| Tetrachloroethene | 100 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 10:38 | NP |
| Surr: 4-Bromofluorobenzene | 88.7 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 10:38 | NP |
| Surr: Dibromofluoromethane | 101 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 10:38 | NP |
| Surr: Toluene-d8 | 96.8 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 10:38 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-19 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/21/2013 1:50:00 PM |
| **Lab ID:** | 1305L37-004 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 11:09 | NP |
| Surr: 4-Bromofluorobenzene | 89.6 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 11:09 | NP |
| Surr: Dibromofluoromethane | 102 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 11:09 | NP |
| Surr: Toluene-d8 | 96.1 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 11:09 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-20 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 10:10:00 AM |
| **Lab ID:** | 1305L37-005 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| Vinyl chloride | 29 | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| cis-1,2-Dichloroethene | 180 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| Trichloroethene | 50 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:44 | NP |
| Surr: 4-Bromofluorobenzene | 85.4 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 14:44 | NP |
| Surr: Dibromofluoromethane | 104 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 14:44 | NP |
| Surr: Toluene-d8 | 97.7 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 14:44 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-29R |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 12:15:00 PM |
| **Lab ID:** | 1305L37-006 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 12:41 | NP |
| Surr: 4-Bromofluorobenzene | 87.8 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 12:41 | NP |
| Surr: Dibromofluoromethane | 104 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 12:41 | NP |
| Surr: Toluene-d8 | 98.6 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 12:41 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

**Analytical Environmental Services, Inc** **Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-37A |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 1:20:00 PM |
| **Lab ID:** | 1305L37-007 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| Vinyl chloride | 7.6 | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| cis-1,2-Dichloroethene | 310 | 50 | | ug/L | 176691 | 10 | 05/29/2013 17:19 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:12 | NP |
| Surr: 4-Bromofluorobenzene | 84.8 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 13:12 | NP |
| Surr: 4-Bromofluorobenzene | 81.3 | 64.6-123 | | %REC | 176691 | 10 | 05/29/2013 17:19 | NP |
| Surr: Dibromofluoromethane | 104 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 13:12 | NP |
| Surr: Dibromofluoromethane | 105 | 76.6-133 | | %REC | 176691 | 10 | 05/29/2013 17:19 | NP |
| Surr: Toluene-d8 | 96.1 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 13:12 | NP |
| Surr: Toluene-d8 | 96.2 | 77.8-120 | | %REC | 176691 | 10 | 05/29/2013 17:19 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

**Analytical Environmental Services, Inc** **Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-37 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 2:55:00 PM |
| **Lab ID:** | 1305L37-008 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 13:43 | NP |
| Surr: 4-Bromofluorobenzene | 83 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 13:43 | NP |
| Surr: Dibromofluoromethane | 102 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 13:43 | NP |
| Surr: Toluene-d8 | 96.8 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 13:43 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-1 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 5:00:00 PM |
| **Lab ID:** | 1305L37-009 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 75000 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| Vinyl chloride | BRL | 1000 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| 1,1-Dichloroethene | BRL | 2500 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| trans-1,2-Dichloroethene | BRL | 2500 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| cis-1,2-Dichloroethene | BRL | 2500 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| Trichloroethene | BRL | 2500 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| Tetrachloroethene | 27000 | 2500 | | ug/L | 176691 | 500 | 05/28/2013 17:30 | NP |
| Surr: 4-Bromofluorobenzene | 87.7 | 64.6-123 | | %REC | 176691 | 500 | 05/28/2013 17:30 | NP |
| Surr: Dibromofluoromethane | 103 | 76.6-133 | | %REC | 176691 | 500 | 05/28/2013 17:30 | NP |
| Surr: Toluene-d8 | 98.3 | 77.8-120 | | %REC | 176691 | 500 | 05/28/2013 17:30 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-18 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/23/2013 10:05:00 AM |
| **Lab ID:** | 1305L37-010 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 15:15 | NP |
| Surr: 4-Bromofluorobenzene | 87.8 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 15:15 | NP |
| Surr: Dibromofluoromethane | 105 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 15:15 | NP |
| Surr: Toluene-d8 | 98.1 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 15:15 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-10 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/23/2013 10:50:00 AM |
| **Lab ID:** | 1305L37-011 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:48 | NP |
| Tetrachloroethene | 1700 | 50 | | ug/L | 176691 | 10 | 05/28/2013 20:24 | NP |
| Surr: 4-Bromofluorobenzene | 87 | 64.6-123 | | %REC | 176691 | 10 | 05/28/2013 20:24 | NP |
| Surr: 4-Bromofluorobenzene | 88.4 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 16:48 | NP |
| Surr: Dibromofluoromethane | 102 | 76.6-133 | | %REC | 176691 | 10 | 05/28/2013 20:24 | NP |
| Surr: Dibromofluoromethane | 104 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 16:48 | NP |
| Surr: Toluene-d8 | 97.9 | 77.8-120 | | %REC | 176691 | 10 | 05/28/2013 20:24 | NP |
| Surr: Toluene-d8 | 102 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 16:48 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-10A |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/23/2013 12:05:00 PM |
| **Lab ID:** | 1305L37-012 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 16:17 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 16:17 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:17 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:17 | NP |
| cis-1,2-Dichloroethene | 260 | 50 | | ug/L | 176691 | 10 | 05/28/2013 20:54 | NP |
| Trichloroethene | 99 | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 16:17 | NP |
| Tetrachloroethene | 1300 | 50 | | ug/L | 176691 | 10 | 05/28/2013 20:54 | NP |
| Surr: 4-Bromofluorobenzene | 85.4 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 16:17 | NP |
| Surr: 4-Bromofluorobenzene | 88.4 | 64.6-123 | | %REC | 176691 | 10 | 05/28/2013 20:54 | NP |
| Surr: Dibromofluoromethane | 102 | 76.6-133 | | %REC | 176691 | 10 | 05/28/2013 20:54 | NP |
| Surr: Dibromofluoromethane | 105 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 16:17 | NP |
| Surr: Toluene-d8 | 97.4 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 16:17 | NP |
| Surr: Toluene-d8 | 99.8 | 77.8-120 | | %REC | 176691 | 10 | 05/28/2013 20:54 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | MW-9 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/23/2013 1:15:00 PM |
| **Lab ID:** | 1305L37-013 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176691 | 1 | 05/29/2013 14:14 | NP |
| Surr: 4-Bromofluorobenzene | 85.9 | 64.6-123 | | %REC | 176691 | 1 | 05/29/2013 14:14 | NP |
| Surr: Dibromofluoromethane | 101 | 76.6-133 | | %REC | 176691 | 1 | 05/29/2013 14:14 | NP |
| Surr: Toluene-d8 | 99.9 | 77.8-120 | | %REC | 176691 | 1 | 05/29/2013 14:14 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

## Analytical Environmental Services, Inc

**Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | DUP-01 |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/22/2013 11:59:00 PM |
| **Lab ID:** | 1305L37-014 | **Matrix:** | Groundwater |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 75000 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| Vinyl chloride | BRL | 1000 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| 1,1-Dichloroethene | BRL | 2500 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| trans-1,2-Dichloroethene | BRL | 2500 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| cis-1,2-Dichloroethene | BRL | 2500 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| Trichloroethene | BRL | 2500 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| Tetrachloroethene | 25000 | 2500 | | ug/L | 176694 | 500 | 05/28/2013 14:40 | NP |
| Surr: 4-Bromofluorobenzene | 83.7 | 64.6-123 | | %REC | 176694 | 500 | 05/28/2013 14:40 | NP |
| Surr: Dibromofluoromethane | 113 | 76.6-133 | | %REC | 176694 | 500 | 05/28/2013 14:40 | NP |
| Surr: Toluene-d8 | 99 | 77.8-120 | | %REC | 176694 | 500 | 05/28/2013 14:40 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

**Analytical Environmental Services, Inc** **Date:** 31-May-13

| | | | |
|---|---|---|---|
| **Client:** | ERM-Southeast | **Client Sample ID:** | TRIP BLANK |
| **Project Name:** | Williamson Dickie | **Collection Date:** | 5/21/2013 8:00:00 AM |
| **Lab ID:** | 1305L37-015 | **Matrix:** | Aqueous |

| Analyses | Result | Reporting Limit | Qual | Units | BatchID | Dilution Factor | Date Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by GC/MS SW8260B** | | | | **(SW5030B)** | | | | |
| 1,4-Dioxane | BRL | 150 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| Vinyl chloride | BRL | 2.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| 1,1-Dichloroethene | BRL | 5.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| trans-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| cis-1,2-Dichloroethene | BRL | 5.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| Trichloroethene | BRL | 5.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| Tetrachloroethene | BRL | 5.0 | | ug/L | 176694 | 1 | 05/28/2013 15:08 | NP |
| Surr: 4-Bromofluorobenzene | 87.3 | 64.6-123 | | %REC | 176694 | 1 | 05/28/2013 15:08 | NP |
| Surr: Dibromofluoromethane | 113 | 76.6-133 | | %REC | 176694 | 1 | 05/28/2013 15:08 | NP |
| Surr: Toluene-d8 | 101 | 77.8-120 | | %REC | 176694 | 1 | 05/28/2013 15:08 | NP |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds maximum contaminant level | E | Estimated (value above quantitation range) |
| BRL | Below reporting limit | S | Spike Recovery outside limits due to matrix |
| H | Holding times for preparation or analysis exceeded | Narr | See case narrative |
| N | Analyte not NELAC certified | NC | Not confirmed |
| B | Analyte detected in the associated method blank | < | Less than Result value |
| > | Greater than Result value | J | Estimated value detected below Reporting Limit |

**Analytical Environmental Services, Inc.**

Sample/Cooler Receipt Checklist

Client ERM Work Order Number 1305L37

Checklist completed by [signature] 5/24/13
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.1° Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

**See Case Narrative for resolution of the Non-Conformance.**

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

**Client:** ERM-Southeast
**Project Name:** Williamson Dickie
**Workorder:** 1305L37

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 176691

Sample ID: **MB-176691** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244785**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176691** Analysis Date: **05/28/2013** Seq No: **5127747**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1,4-Dioxane | BRL | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| cis-1,2-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tetrachloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| trans-1,2-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Trichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Vinyl chloride | BRL | 2.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 46.90 | 0 | 50.00 | 0 | 93.8 | 64.6 | 123 | 0 | 0 | 0 | |
| Surr: Dibromofluoromethane | 50.61 | 0 | 50.00 | 0 | 101 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 48.64 | 0 | 50.00 | 0 | 97.3 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **LCS-176691** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244785**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176691** Analysis Date: **05/28/2013** Seq No: **5127746**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 55.77 | 5.0 | 50.00 | 0 | 112 | 61.1 | 142 | 0 | 0 | 0 | |
| Trichloroethene | 51.03 | 5.0 | 50.00 | 0 | 102 | 70 | 135 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 47.49 | 0 | 50.00 | 0 | 95.0 | 64.6 | 123 | 0 | 0 | 0 | |
| Surr: Dibromofluoromethane | 49.78 | 0 | 50.00 | 0 | 99.6 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 48.47 | 0 | 50.00 | 0 | 96.9 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **1305L71-003AMS** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244785**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176691** Analysis Date: **05/28/2013** Seq No: **5127749**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 69.20 | 5.0 | 50.00 | 0 | 138 | 60 | 168 | 0 | 0 | 0 | |
| Trichloroethene | 60.17 | 5.0 | 50.00 | 0 | 120 | 71.1 | 154 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 48.59 | 0 | 50.00 | 0 | 97.2 | 64.6 | 123 | 0 | 0 | 0 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| > | Greater than Result value | < | Less than Result value | B | Analyte detected in the associated method blank |
| BRL | Below reporting limit | E | Estimated (value above quantitation range) | H | Holding times for preparation or analysis exceeded |
| J | Estimated value detected below Reporting Limit | N | Analyte not NELAC certified | R | RPD outside limits due to matrix |
| Rpt Lim | Reporting Limit | S | Spike Recovery outside limits due to matrix | | |

**Client:** ERM-Southeast
**Project Name:** Williamson Dickie
**Workorder:** 1305L37

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 176691

Sample ID: **1305L71-003AMS** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244785**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176691** Analysis Date: **05/28/2013** Seq No: **5127749**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: Dibromofluoromethane | 51.52 | 0 | 50.00 | 0 | 103 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 49.80 | 0 | 50.00 | 0 | 99.6 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **1305L71-003AMSD** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244785**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176691** Analysis Date: **05/28/2013** Seq No: **5127750**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 66.16 | 5.0 | 50.00 | 0 | 132 | 60 | 168 | 69.20 | 4.49 | 18.6 | |
| Trichloroethene | 58.46 | 5.0 | 50.00 | 0 | 117 | 71.1 | 154 | 60.17 | 2.88 | 20 | |
| Surr: 4-Bromofluorobenzene | 47.26 | 0 | 50.00 | 0 | 94.5 | 64.6 | 123 | 48.59 | 0 | 0 | |
| Surr: Dibromofluoromethane | 50.92 | 0 | 50.00 | 0 | 102 | 76.6 | 133 | 51.52 | 0 | 0 | |
| Surr: Toluene-d8 | 49.21 | 0 | 50.00 | 0 | 98.4 | 77.8 | 120 | 49.80 | 0 | 0 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| > | Greater than Result value | < | Less than Result value | B | Analyte detected in the associated method blank |
| BRL | Below reporting limit | E | Estimated (value above quantitation range) | H | Holding times for preparation or analysis exceeded |
| J | Estimated value detected below Reporting Limit | N | Analyte not NELAC certified | R | RPD outside limits due to matrix |
| Rpt Lim | Reporting Limit | S | Spike Recovery outside limits due to matrix | | |

**Client:** ERM-Southeast
**Project Name:** Williamson Dickie
**Workorder:** 1305L37

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 176694

Sample ID: **MB-176694** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244791**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176694** Analysis Date: **05/28/2013** Seq No: **5126827**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1,4-Dioxane | BRL | 150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| cis-1,2-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Tetrachloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| trans-1,2-Dichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Trichloroethene | BRL | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Vinyl chloride | BRL | 2.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 44.15 | 0 | 50.00 | 0 | 88.3 | 64.6 | 123 | 0 | 0 | 0 | |
| Surr: Dibromofluoromethane | 55.62 | 0 | 50.00 | 0 | 111 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 49.22 | 0 | 50.00 | 0 | 98.4 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **LCS-176694** Client ID: Units: **ug/L** Prep Date: **05/28/2013** Run No: **244791**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176694** Analysis Date: **05/28/2013** Seq No: **5126825**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 58.25 | 5.0 | 50.00 | 0 | 116 | 61.1 | 142 | 0 | 0 | 0 | |
| Trichloroethene | 49.12 | 5.0 | 50.00 | 0 | 98.2 | 70 | 135 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 51.22 | 0 | 50.00 | 0 | 102 | 64.6 | 123 | 0 | 0 | 0 | |
| Surr: Dibromofluoromethane | 55.35 | 0 | 50.00 | 0 | 111 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 51.18 | 0 | 50.00 | 0 | 102 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **1305K84-001AMS** Client ID: **INFLUENT** Units: **ug/L** Prep Date: **05/28/2013** Run No: **244791**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176694** Analysis Date: **05/28/2013** Seq No: **5126830**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 683400 | 50000 | 500000 | 0 | 137 | 60 | 168 | 0 | 0 | 0 | |
| Trichloroethene | 554700 | 50000 | 500000 | 0 | 111 | 71.1 | 154 | 0 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 523000 | 0 | 500000 | 0 | 105 | 64.6 | 123 | 0 | 0 | 0 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| > | Greater than Result value | < | Less than Result value | B | Analyte detected in the associated method blank |
| BRL | Below reporting limit | E | Estimated (value above quantitation range) | H | Holding times for preparation or analysis exceeded |
| J | Estimated value detected below Reporting Limit | N | Analyte not NELAC certified | R | RPD outside limits due to matrix |
| Rpt Lim | Reporting Limit | S | Spike Recovery outside limits due to matrix | | |

**Client:** ERM-Southeast
**Project Name:** Williamson Dickie
**Workorder:** 1305L37

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 176694

Sample ID: **1305K84-001AMS** Client ID: **INFLUENT** Units: **ug/L** Prep Date: **05/28/2013** Run No: **244791**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176694** Analysis Date: **05/28/2013** Seq No: **5126830**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: Dibromofluoromethane | 564000 | 0 | 500000 | 0 | 113 | 76.6 | 133 | 0 | 0 | 0 | |
| Surr: Toluene-d8 | 525600 | 0 | 500000 | 0 | 105 | 77.8 | 120 | 0 | 0 | 0 | |

Sample ID: **1305K84-001AMSD** Client ID: **INFLUENT** Units: **ug/L** Prep Date: **05/28/2013** Run No: **244791**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **176694** Analysis Date: **05/28/2013** Seq No: **5126831**

| Analyte | Result | RPT Limit | SPK value | SPK Ref Val | %REC | Low Limit | High Limit | RPD Ref Val | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 637300 | 50000 | 500000 | 0 | 127 | 60 | 168 | 683400 | 6.98 | 18.6 | |
| Trichloroethene | 534700 | 50000 | 500000 | 0 | 107 | 71.1 | 154 | 554700 | 3.67 | 20 | |
| Surr: 4-Bromofluorobenzene | 516600 | 0 | 500000 | 0 | 103 | 64.6 | 123 | 523000 | 0 | 0 | |
| Surr: Dibromofluoromethane | 564100 | 0 | 500000 | 0 | 113 | 76.6 | 133 | 564000 | 0 | 0 | |
| Surr: Toluene-d8 | 530100 | 0 | 500000 | 0 | 106 | 77.8 | 120 | 525600 | 0 | 0 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| > | Greater than Result value | < | Less than Result value | B | Analyte detected in the associated method blank |
| BRL | Below reporting limit | E | Estimated (value above quantitation range) | H | Holding times for preparation or analysis exceeded |
| J | Estimated value detected below Reporting Limit | N | Analyte not NELAC certified | R | RPD outside limits due to matrix |
| Rpt Lim | Reporting Limit | S | Spike Recovery outside limits due to matrix | | |