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

ERM®

DATE: June 10, 2014

WO NUMBER: 0121103

TO:
Georgia Environmental
Protection Division
2 Martin Luther King Jr. Dr., SE,
Suite 1054
Atlanta, Georgia 30334

ATTENTION:
Mr. David Brownlee
Unit Coordinator
Response & Remediation
Program

WE ARE SENDING YOU:

☒ Attached ☐ Under separate cover via:
☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples
☐ Specifications ☐ Copy of letter ☐ Change order
☐ other

COPIES	*DATE*	*NO.*	*DESCRIPTION*
1	6/10/14	Ltr	Third Annual Ground Water Monitoring Report
1	6/10/14	CD	Electronic Files - Third Annual Ground Water Monitoring Report

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

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

SIGNED:
Amy G. Hickman

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

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 10, 2014

Mr. David Brownlee
Unit Coordinator
Response & Remediation Program
Georgia Environmental Protection Division
2 Martin Luther King Jr. Dr., SE, Suite 1054
Atlanta, Georgia 30334

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

I have enclosed electronic versions of Transmittal of Electronic version Submittal of the Third Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant Industrial Laundry Services, Inc. (Former Dickies Industrial Services, Inc.) 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. McDonald, on June 10, 2014 made a complete electronic copy of the following document:

Transmittal of Electronic Version of the Submittal of the Third Annual Ground Water Monitoring Report for Compliance with the Environmental Covenant Industrial Laundry Services, Inc. (Former Dickies Industrial Services, Inc.) 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. McDonald

Holly H. McDonald

Environmental
Resources
Management (ERM)

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

June 10, 2014

Mr. David Brownlee
Unit Coordinator
Response & Remediation Program
Georgia Environmental Protection Division
2 Martin Luther King Jr. Dr., SE, Suite 1054
Atlanta, Georgia 30334

Project No. 012103

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

Dear Mr. Brownlee:

Environmental Resources Management, Inc. (ERM) is submitting this report on behalf of Industrial Laundry Services, Inc. (ILSI) (formerly known as Dickies Industrial Services, Inc.) in accordance with the Environmental Covenant. Per the Environmental Covenant, ILSI 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 2014 is the third year of the five year monitoring period, and this letter is the third annual report to EPD under the Environmental Covenant.

GROUND WATER SAMPLING

The annual ground water sampling event was conducted on May 19-22, 2014. Ground water samples were collected from 13 of the 14 monitoring wells during the third annual sampling event. A ground water sample was not collected from MW-28R due to presence of residual lactate, which was injected in the well in 2010. Monitoring well locations are shown in Figure 1.

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 blanks were analyzed for VOCs by EPA Method 8260B.

Analytical results for the ground water sampling event are summarized in Table 1. Sampling results were generally consistent with those reported in 2013 with the exception of tetrachloroethene (PCE) concentrations at MW-1, MW-10 and MW-10A; and cis-1,2-Dichloroethene (cis-1,2-DCE) concentrations at MW-10. PCE concentrations decreased in MW-1 and MW-10, but increased in MW-

10A in comparison to the 2013 sampling results. The 2014 PCE concentration in MW-10A is consistent with concentrations historically observed in this well. The concentration of cis-1,2-DCE increased at MW-10 in comparison to the 2013 sampling event; however the 2014 concentration of cis-1,2-DCE at MW-10 is consistent with those historically observed in this well. 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 G. Hickman, E.I.T.
Project Manager

Jeffrey N. Bilkert
Principal

Attachments: Table 1 – 2014 Ground Water Data
Figure 1 – 3RD Annual Ground Water Monitoring Report
Ground Water Sampling Logs
Laboratory Reports

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

Tables

Attachment 1

June 10, 2014
Project No. 0121103

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

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

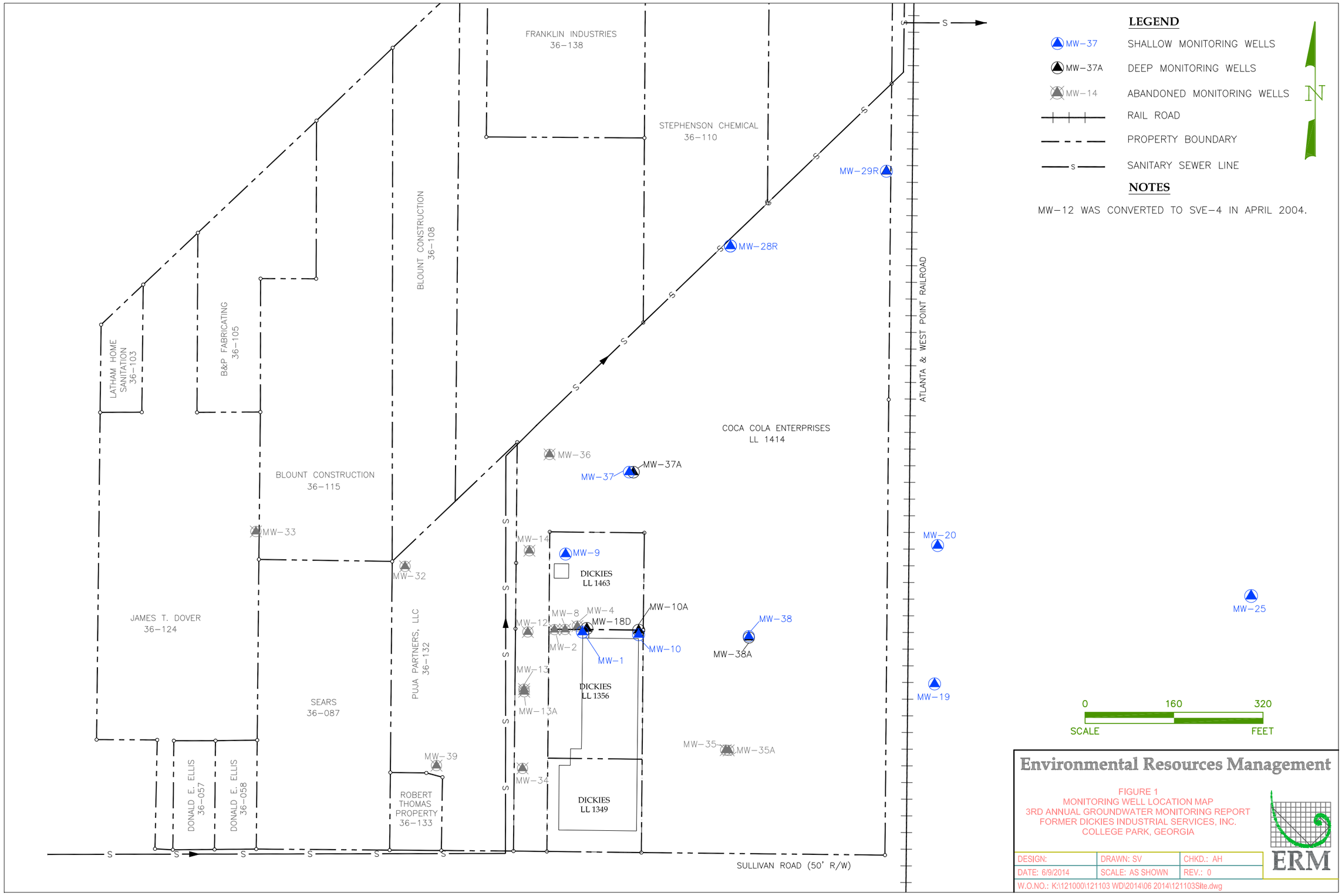
Well ID	Date Sampled	Analysis Results (ug/L)						
		PCE	TCE	1,1-DCE	trans-1,2-DCE	cis-1,2-DCE	VC	1,4-Dioxane
MW-1	6/5/2012	22000	420	< 5	17	1100	8.9	< 150
MW-1	5/22/2013	27,000	< 2,500	< 2,500	< 2,500	< 2,500	< 1,000	< 75,000
MW-1	5/19/2014	16,000	< 2,500	< 2,500	< 2,500	< 2,500	< 1,000	< 75,000
MW-9	6/5/2012	5.9	< 5	< 5	< 5	< 5	< 2	< 150
MW-9	5/23/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-9	5/19/2014	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-10	6/5/2012	460	8.5	< 5	< 5	8.3	< 2	< 150
MW-10	5/23/2013	1,700	< 5	< 5	< 5	< 5	< 2	< 150
MW-10	5/20/2014	760	36	< 5	< 5	270	< 2	< 150
MW-10A	6/5/2012	670	110	< 5	< 5	310	< 2	< 150
MW-10A	5/23/2013	1,300	99	< 5	< 5	260	< 2	< 150
MW-10A	5/20/2014	2,400	160	< 5	< 5	290	< 2	< 150
MW-18D	6/6/2012	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-18D	5/23/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-18D	5/20/2014	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-19	6/5/2012	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-19	5/21/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-19	5/21/2014	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-20	6/5/2012	30	78	< 5	< 5	260	31	< 150
MW-20	5/22/2013	< 5	50	< 5	< 5	180	29	< 150
MW-20	5/20/2014	< 5	79	< 5	< 5	190	7.7	< 150
MW-25	6/5/2012	120	12	< 5	< 5	48	< 2	< 150
MW-25	5/21/2013	100	14	< 5	< 5	63	< 2	< 150
MW-25	5/22/2014	120	8.8	< 5	< 5	79	< 2	< 150
MW-29/29R	6/5/2012	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-29/29R	5/22/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-29/29R	5/21/2014	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-37	6/5/2012	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-37	5/22/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-37	5/22/2013	< 5	< 5	< 5	< 5	< 5	< 2	< 150
MW-37A	6/5/2012	< 5	< 5	< 5	< 5	72	2.4	< 150
MW-37A	5/22/2013	< 5	< 5	< 5	< 5	310	7.6	< 150
MW-37A	5/21/2014	< 5	< 5	< 5	< 5	440	5.8	< 150
MW-38	6/5/2012	20	5.6	< 5	< 5	6.1	< 2	< 150
MW-38	5/21/2013	17	11	< 5	< 5	7.3	< 2	< 150
MW-38	5/22/2014	9.5	22	< 5	< 5	6.8	< 2	< 150
MW-38A	6/5/2012	<250	< 250	< 250	< 250	11000	< 100	< 7,500
MW-38A	5/21/2013	< 5	< 5	27	8.7	6500	32	< 150
MW-38A	5/22/2014	< 250	< 250	< 250	< 250	6300	< 100	< 7,500

Figures

Attachment 2

June 10, 2014
Project No. 0121103

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700



Environmental Resources Management

FIGURE 1
MONITORING WELL LOCATION MAP
3RD ANNUAL GROUNDWATER MONITORING REPORT
FORMER DICKIES INDUSTRIAL SERVICES, INC.
COLLEGE PARK, GEORGIA

ERM

DESIGN:	DRAWN: SV	CHKD.: AH
DATE: 6/9/2014	SCALE: AS SHOWN	REV.: 0

W.O.NO.: K:\121000\121103 WD\2014\06 2014\121103Site.dwg

Ground Water Sampling Logs Sheets

Attachment 3

June 10, 2014
Project No. 0121103

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

ERM

GROUND WATER SAMPLING LOG SHEET

Client: Williamson-Dickie
Project No.: 121103
Sampling Date: 5/19/14
Site/Location: College Park, GA
Sampler's Name: J. Mullooly

Well ID: MW-9
Pump Type/Model: Peristaltic
Sample Collection Time: 14:25
Total Depth (ft)[1]: 13.5'
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 11.46
Pump Intake Depth (ft): ~12.5' due to WL
Sample ID: MW-9
Well Diameter (in): 2"
Start/Stop Purge Time: 13:50 / 14:20
QA/QC Collected? No
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 3.0
Laboratory Analyses: VOCs EPA Method 8260 modified list
Well Condition: Good
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.)
14:00	17.00	0.139	0.58	5.58	68.2	2.10	1.0	11.60	Clear. Slight odor.
14:05	17.35	0.140	0.73	5.59	27.9	1.56	1.5	11.64	
14:10	16.89	0.133	0.59	5.59	17.4	1.54	2.0	11.67	
14:15	17.22	0.134	0.50	5.58	17.9	1.08	2.5	11.69	
14:20	17.12	0.133	0.42	5.57	2.3	0.87	3.0	11.71	Stable
									Sampled at 14:25
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.: 0121103
Sampling Date: 5/19/14
Site/Location: College Park, GA
Sampler's Name: J. Mullooly

Well ID: MW-1
Pump Type/Model: Peristaltic
Sample Collection Time: 15:25
Total Depth (ft)[1]: 20'
Tubing Material: LDPE
Sample Purge Rate (L/min)[2]: 0.2L/min
Depth to Water (ft): 9.27
Pump Intake Depth (ft): ~12-13'
Sample ID: MW-1
Well Diameter (in): 2"
Start/Stop Purge Time: 14:37/15:22
QA/QC Collected? Yes
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D. DUP-01
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 4.5L
Laboratory Analyses: VOCs, ~~1,4-dioxane~~ modified list.
Well Condition: Good
Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide)
Purge Method: Low Flow/Low stress
☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
14:47	17.60	0.158	2.92	6.09	85.0	52.6	1.0	9.47	
14:52	17.42	0.157	3.00	6.06	89.8	40.9	1.5	9.48	
14:57	17.17	0.157	2.89	6.07	91.2	34.2	2.0	9.48	
15:02	17.08	0.158	2.98	6.09	92.9	22.6	2.5	9.49	
15:07	17.18	0.160	2.90	6.09	91.8	20.4	3.0	9.50	
15:12	17.05	0.159	2.99	6.09	87.4	20.3	3.5	9.50	
15:17	16.99	0.160	2.90	6.10	87.8	20.5	4.0	9.51	
15:22	17.03	0.160	2.92	6.11	89.6	19.8	4.5	9.51	All parameters stable except turbidity, which is within 10% over 4 readings. Sampled well at 15:25.
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]	

DUP-01

(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 3 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: [redacted] Williams - Dickie

Project No.: [redacted] 0121103

Sampling Date: 5/20/14

Site/Location: [redacted] College Park, GA

Sampler's Name: J. Mullooly

Well ID: MW-18D

Pump Type/Model: Peristaltic - Geotech

Sample Collection Time: 09:10

Total Depth (ft)[1]: 132'

Tubing Material: LDPE

Sample Purge Rate (L/min)[2]: 0.2L/min

Depth to Water (ft): 5.51'

Pump Intake Depth (ft): ~20' (upper borehole)

Sample ID: MW-18D

Well Diameter (in): 6"

Start/Stop Purge Time: 08:40 / 09:15

QA/QC Collected? No

Well Volume (gal) = 0.041d²h: 180g / 684L

Purge Rate (L/min)[2]: 0.2L/min

QA/QC I.D.

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

Total Purge Volume (L): 3.5L

Laboratory Analyses: VOCs, [redacted] modified list

Well Condition: Good

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide)

Purge Method: Low Flow / Low Stress

☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
08:50	17.43	0.065	1.39	6.75	40.3	4.28	1.0	8.98	Clear Slight brown color. Slight odor
08:55	17.40	0.067	0.84	6.72	51.6	1.62	1.5	9.06	
09:00	17.48	0.066	0.62	6.70	52.4	1.23	2.0	9.18	Excessive drawdown - Not practical to do 3 volumes
09:05	17.50	0.066	0.51	6.70	51.8	1.22	2.5	9.27	given pump type and well volume of 180g
09:10	17.44	0.066	0.44	6.70	52.0	1.11	3.0	9.35	Took extra stabilization readings.
09:15	17.48	0.066	0.39	6.70	52.2	0.93	3.5	9.46	Stable at 09:15 - Sampled well @ 09:20
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: Magna
Project No.: 0121034-02
Sampling Date: 5/20/14
Site/Location: Newnan, Georgia
Sampler's Name: J. Mullooly

Well ID: MW-10
Pump Type/Model: Peristaltic - Geotech
Sample Collection Time: 10:20
Total Depth (ft)[1]: 20'
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 13.74
Pump Intake Depth (ft): ~16' due to WL
Sample ID: MW-10
Well Diameter (in): 2"
Start/Stop Purge Time: 09:30/10:15
QA/QC Collected? —
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D. No
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 4.5L
Laboratory Analyses: VOCs, ~~[illegible]~~ modified list
Well Condition: Good
Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide)
Purge Method: Low Flow / low stress
☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
09:40	15.77	0.196	1.02	4.72	247.5	5.31	1.0	13.89	
09:45	15.76	0.195	0.92	4.73	251.7	3.86	1.5	13.91	
09:50	15.77	0.188	0.87	4.68	250.6	2.57	2.0	13.92	
09:55	15.80	0.174	1.09	4.66	252.1	3.01	2.5	13.93	
10:00	15.80	0.169	1.12	4.65	251.7	1.69	3.0	13.93	
10:05	15.86	0.164	1.13	4.65	250.0	1.10	3.5	13.94	
10:10	15.85	0.162	1.22	4.65	249.0	1.10	4.0	13.94	
10:15	15.92	0.161	1.21	4.66	248.2	0.86	4.5	13.94	Stable
									Sampled at 10:20
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: [redacted] Williamson - Dickie
Project No.: [redacted] 0121105
Sampling Date: 5/20/14
Site/Location: [redacted] College Park, GA
Sampler's Name: J. Mullooly

Well ID: MW-10A
Pump Type/Model: Peristaltic - Geotech
Sample Collection Time: 12:30
Total Depth (ft)[1]: 52.5'
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 11.57
Pump Intake Depth (ft): ~50'
Sample ID: MW-10A
Well Diameter (in): 2"
Start/Stop Purge Time: 10:30/12:24
QA/QC Collected? No
Well Volume (gal) = 0.041d²h: 6.67 gal/25L
Purge Rate (L/min)[2]: 0.4L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 77.5L
Laboratory Analyses: VOCs, [redacted] modified list
Well Condition: Good
Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (Inorganics including cyanide)
Purge Method: Low Flow/Low Stress
☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
	10:35	17.56	0.064	9.39	6.20	170.0	4.55	0.5	11.97	Excessive drawdown, purged 3 vols at 0.75L/min
Vol1	11:08	17.79	0.062	9.16	6.62	140.0	1.34	25.5	15.45	Water has a lot of bubbles in it.
Vol2	11:41	18.11	0.070	10.02	6.67	120.3	0.90	50.5	15.94	
Vol3	12:14	18.21	0.070	10.26	6.66	115.2	0.64	75.5	16.05	slowed pump to 0.2L/min
	12:19	18.31	0.070	9.85	6.65	115.1	0.67	76.5	15.42	
	12:24	18.30	0.070	9.95	6.66	114.5	0.75	77.5	15.25	Stable
										Sampled at 12:30
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: [redacted] Williamson - Dickie

Project No.: [redacted] 0121103

Sampling Date: 5/20/14

Site/Location: ~~Newman, Georgia~~ College Park, CA

Sampler's Name: J. Mullaly

Well ID: MW-20

Pump Type/Model: Peristaltic - Geotech

Sample Collection Time: 14:55

Total Depth (ft)[1]: 33'

Tubing Material: LDPE

Sample Purge Rate (L/min)[2]: 0.2L/min

Depth to Water (ft): 21.04

Pump Intake Depth (ft): ~28'

Sample ID: MW-20

Well Diameter (in): 2"

Start/Stop Purge Time: 13:43 / 14:48

QA/QC Collected? —

Well Volume (gal) = 0.041d²h:

Purge Rate (L/min)[2]: 0.2L/min

QA/QC I.D. NO

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

Total Purge Volume (L): 6.5L

Laboratory Analyses: VOCs, ~~[illegible]~~ Modified list

Well Condition: OK Dirty casing

Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide)

Purge Method: Low Flow / Low Stress

☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
13:53	22.44	0.126	1.06	6.07	27.6	10.9	1.0	21.19	Slightly dirty.
13:58	23.13	0.128	0.58	5.82	34.4	36.7	1.5	21.17	
14:03	23.26	0.131	0.47	5.79	26.6	42.4	2.0	21.17	Turbidity increasing
14:08	23.14	0.133	0.49	5.79	21.6	38.3	2.5	21.17	
14:13	23.04	0.137	0.35	5.78	1.0	52.3	3.0	21.17	
14:18	22.41	0.135	0.37	5.79	-6.0	39.3	3.5	21.17	
14:23	22.36	0.136	0.34	5.78	-5.1	46.9	4.0	21.17	Turbidity still not dropping
14:28	22.28	0.137	0.35	5.78	-5.3	38.1	4.5	21.17	
14:33	22.48	0.143	0.34	5.80	-1.9	39.8	5.0	21.17	
14:38	22.65	0.155	0.26	5.79	-0.5	38.7	5.5	21.17	
14:43	22.83	0.157	0.21	5.81	-27.7	38.4	6.0	21.17	
14:48	22.96	0.157	0.20	5.81	-37.7	39.7	6.5	21.17	Everything stable except turbidity, which is within 10% over 5 readings. Sampled well at 14:55
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: [redacted] Williamson - Dickie
Project No.: [redacted] 0121103
Sampling Date: 5/21/14
Site/Location: [redacted] College Park, CA
Sampler's Name: J. Mulholy

Well ID: MW-19
Pump Type/Model: Peristaltic - Geotech
Sample Collection Time: 09:20
Total Depth (ft)[1]: 75'
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 20.37
Pump Intake Depth (ft): ~70
Sample ID: MW-19
Well Diameter (in): 2"
Start/Stop Purge Time: 08:48 / 09:13
QA/QC Collected? — No
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 2.5L
Laboratory Analyses: VOCs, [redacted] modified list
Well Condition: Good
Sampling Method (check all that apply): ☒ soda straw (VOCs) ☐ vacuum jug (SVOCs) ☐ pump head discharge (inorganics including cyanide)
Purge Method: Low Flow / Low Stress ☐ 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 (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
08:58	20.01	0.076	6.28	7.13	56.4	5.77	1.0	20.59	
09:03	19.99	0.075	4.60	7.07	54.9	6.60	1.5	20.61	
09:08	19.96	0.074	4.80	6.97	65.1	4.97	2.0	20.62	
09:13	19.97	0.074	4.15	6.94	80.2	5.49	2.5	20.64	Stable
									Sampled at 09:20.
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: 5/21/14
Site/Location: College Park, GA
Sampler's Name: J. Mulhaly

Well ID: MW-29R
Pump Type/Model: Peristaltic-Geotech
Sample Collection Time: 10:55
Total Depth (ft)[1]: 35
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 10.17
Pump Intake Depth (ft): 30'
Sample ID: MW-29R
Well Diameter (in): 2"
Start/Stop Purge Time: 09:35/10:50
QA/QC Collected? No
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.2 - 0.75 L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 48.4
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.)
	09:40	18.80	0.038	4.35	5.66	199.3	6.01	0.5	10.59	
Vol 1	10:00	18.58	0.033	0.54	5.34	192.6	5.80	15.8	12.06	
Vol 2	10:20	18.75	0.032	0.48	5.31	210.3	1.73	31.1	12.18	
Vol 3	10:40	18.83	0.030	0.38	5.24	222.1	1.27	46.4	12.22	
	10:45	18.94	0.031	0.29	5.25	218.4	1.17	47.4	12.07	
	10:50	18.93	0.031	0.27	5.25	215.6	1.23	48.4	11.99	Stable
										Sampled at 10:55
	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: 5/21/14
Site/Location: College Park, GA
Sampler's Name: J. Mullooly

Well ID: MW-37
MW-37A
-AGH
06/09/14
Type/Model: Peristaltic-Geotech
Sample Collection Time: 13:25
Total Depth (ft)[1]: 35
ng Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 8.68
e Depth (ft): 30'
Sample ID: MW-37
Well Diameter (in): 2"
Start/Stop Purge Time: 12:25/13:20
QA/QC Collected? No
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D.
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 5.5
Laboratory Analyses: VOCs EPA Method 8260
Well Condition: Good
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.)
12:35	21.14	0.373	0.68	6.19	-134.4	32.2	1.0	8.89	
12:40	21.19	0.374	0.36	7.06	-132.2	29.2	1.5	8.90	
12:45	21.08	0.375	0.26	7.10	-120.5	23.1	2.0	8.92	
12:50	20.96	0.377	0.23	7.10	-121.7	18.0	2.5	8.93	
12:55	21.12	0.376	0.24	7.08	-113.0	17.0	3.0	8.94	
13:00	21.07	0.377	0.21	7.07	-127.8	15.8	3.5	8.94	
13:05	21.09	0.376	0.18	7.06	-121.1	14.3	4.0	8.94	
13:10	21.12	0.375	0.17	7.05	-116.1	12.8	4.5	8.95	
13:15	21.17	0.378	0.16	7.04	-114.9	10.6	5.0	8.95	
13:20	21.23	0.378	0.16	7.04	-120.9	9.79	5.5	8.95	Stable
									Sampled at 13:25
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

EKM

Client: Williamson-Dickie
Project No.: 121103
Sampling Date: 5/21/14
Site/Location: College Park, GA
Sampler's Name: J. Mullholy

Well ID: MW-37A
MW-37 -AGH 06/09/14
Type/Model: Peristaltic -Geotech
Sample Collection Time: 14:20
Total Depth (ft)[1]: 50
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2L/min
Depth to Water (ft): 8.65
Intake Depth (ft): 45'
Sample ID: MW-37A
Well Diameter (in): 2"
Start/Stop Purge Time: 13:30/14:15
QA/QC Collected? No
Well Volume (gal) = 0.041d²h:
Purge Rate (L/min)[2]: 0.1L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 4.5L
Laboratory Analyses: VOCs EPA Method 8260
Well Condition: Good
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.)
13:40	23.27	0.227	0.47	7.00	-66.5	31.4	1.0	8.88	
13:45	23.32	0.230	0.43	6.98	-67.4	24.0	1.5	8.88	
13:50	23.21	0.232	0.28	6.98	-60.5	20.1	2.0	8.88	
13:55	23.40	0.238	0.24	6.96	-55.2	17.4	2.5	8.88	
14:00	23.42	0.238	0.24	6.96	-60.8	15.1	3.0	8.88	
14:05	23.43	0.241	0.26	6.96	-66.3	12.8	3.5	8.88	
14:10	23.37	0.244	0.21	6.96	-66.2	10.7	4.0	8.88	
14:15	23.49	0.246	0.18	6.95	-63.2	9.32	4.5	8.88	Stable
									Sampled at 14:20
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: 5/22/14
Site/Location: College Park, GA
Sampler's Name: J. Mullooly

Well ID: MW-38
Pump Type/Model: Peristaltic - Geotech
Sample Collection Time: 09:20
Total Depth (ft)[1]: 35
Tubing Material: LDPE
Sample Purge Rate (L/min)[3]: 0.2 L/min
Depth to Water (ft): 14.75'
Pump Intake Depth (ft): 30
Sample ID: MW-38
Well Diameter (in): 2"
Start/Stop Purge Time: 08:44 / 09:14
QA/QC Collected? No
Well Volume (gal) = 0.041d²h: 3.3 / 12.5 L
Purge Rate (L/min)[2]: 0.1 L/min
QA/QC I.D. —
d = well diameter (inches) h = length of water column (feet)
Total Purge Volume (L): 3.0
Laboratory Analyses: VOCs EPA Method 8260
Well Condition: Good
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.)
08:54	19.99	0.054	1.05	6.69	102.9	6.29	1.0	14.80	Clear.
08:59	19.85	0.051	0.74	6.73	98.1	4.95	1.5	14.82	
09:04	19.95	0.051	0.54	6.66	96.2	5.01	2.0	14.82	
09:09	20.06	0.052	0.50	6.67	93.2	3.39	2.5	14.82	
09:14	20.07	0.051	0.43	6.67	92.9	1.51	3.0	14.82	Stable
									Sampled at 09:20
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: 5/22/14

Site/Location: College Park, GA | Sampler's Name: J. Mullooly

Well ID: MW-38A | Pump Type/Model: Peristaltic - Geotech | Sample Collection Time: 10:25

Total Depth (ft)[1]: 49' | Tubing Material: LDPE | Sample Purge Rate (L/min)[3]: 0.2L/min

Depth to Water (ft): 14.63 | Pump Intake Depth (ft): 44' | Sample ID: MW-38A

Well Diameter (in): 2" | Start/Stop Purge Time: 09:38 / 10:18 | QA/QC Collected? No

Well Volume (gal) = 0.041d²h: 5.6g / 21.2L | Purge Rate (L/min)[2]: 0.1L/min | QA/QC I.D. —

d = well diameter (inches) h = length of water column (feet) | Total Purge Volume (L): 5.0 | Laboratory Analyses: VOCs EPA Method 8260

Well Condition: Good | 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.)
09:38	20.53	0.420	0.32	7.28	-104.0	21.0	1.0	14.83	
09:43	20.50	0.423	0.46	7.19	-108.3	17.9	1.5	14.85	
09:48	20.54	0.424	0.37	7.17	-113.0	16.2	2.0	14.86	
09:53	20.61	0.425	0.32	7.15	-113.1	16.4	2.5	14.86	
09:58	20.76	0.426	0.29	7.14	-104.8	14.7	3.0	14.87	
10:03	20.56	0.424	0.26	7.13	-120.9	15.2	3.5	14.87	
10:08	20.66	0.424	0.25	7.12	-114.3	14.2	4.0	14.87	
10:13	20.66	0.423	0.23	7.12	-125.7	15.2	4.5	14.87	
10:18	20.66	0.423	0.22	7.12	-123.6	15.3	5.0	14.87	All parameters stable except turbidity which is within 10% over 5 readings. Sampled well at 10:25.
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" SBSD Standard Operating Procedure.
(8) - ORP is not a stabilization criterion for the "Groundwater sampling" SBSD Standard Operating Procedure.

ERM

GROUND WATER SAMPLING LOG SHEET

15min

Client: Williamson-Dickie | Project No.: 121103 | Sampling Date: 5/22/14

Site/Location: College Park, GA | Sampler's Name: J. Mullooly

Well ID: MW-25 | Pump Type/Model: Peristaltic - Geotech | Sample Collection Time: 12:05

Total Depth (ft)[1]: 44' | Tubing Material: LDPE | Sample Purge Rate (L/min)[3]: 0.2L/min

Depth to Water (ft): 25.51' | Pump Intake Depth (ft): 39' | Sample ID: MW-25

Well Diameter (in): 2" | Start/Stop Purge Time: 10:52/11:57 | QA/QC Collected? No

Well Volume (gal) = 0.041d²h: 3g/11.35L | Purge Rate (L/min)[2]: 0.1L/min | QA/QC I.D. —

d = well diameter (inches) h = length of water column (feet) | Total Purge Volume (L): 37.05 | Laboratory Analyses: VOCs EPA Method 8260

Well Condition: Good | 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.)
	11:02	24.14	0.034	2.76	6.29	136.3	11.8	1.0	25.86	Clear. Excessive drawdown. Purged 3 vols @ 0.75L/min
Vol 1	11:17	22.40	0.043	0.34	6.27	142.5	3.92	12.35	26.21	
Vol 2	11:32	22.43	0.066	0.30	6.22	146.1	1.45	23.7	26.21	
Vol 3	11:47	22.51	0.069	0.20	6.13	147.7	1.17	35.05	26.21	slowed pump to 0.2L/min to stabilize
	11:52	22.73	0.070	0.19	6.14	144.3	0.05	36.05	26.03	
	11:57	22.68	0.070	0.19	6.14	148.9	0.60	37.05	26.02	stable.
										Sampled at 12:05pm
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

WATER LEVEL MEASUREMENT DATA SHEET

Client: Williamson-Dickies

Date: 5/19/14

Site/Location: College Park, GA

Sampler's Name: James Mullady

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	5/19/14	08:50	2"	9.28		PVC line in well without bag
MW-9		09:03	2"	11.48'		Behind remediation building
MW-10		09:00	2"	13.71		Stick up wells near large tree
MW-10A		08:58	2"	11.58		
MW-18D		08:53	6"	8.80		PVC line in well.
MW-19		12:05	2"	20.51		Coke other side of train tracks. Enter through truck entrance then cross tracks.
MW-20		12:12	2"	20.89'		Water meter cap instead of well casing.
MW-25		12:55	2"	25.55		Edison road gate entrance. Near liquid nitrogen tank. Recessed in ground
~~MW-28R~~						Frozen.
MW-29R		11:15	2"	10.08		
MW-37		10:40	2"	8.65		
MW-37A		10:43	2"	8.63		
MW-38		11:38	2"	14.76		employee parking lot
MW-38A		11:40	2"	14.66		

WD

Laboratory Analytical Reports

Attachment 4

June 10, 2014
Project No. 0121103

Environmental Resources Management
3200 Windy Hill Rd. Suite 1500W
Atlanta, GA 30339
(678) 486-2700

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

June 09, 2014

Amy Hickman
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 Hickman: Order No: 1405L38

Analytical Environmental Services, Inc. received 15 samples on 5/22/2014 4:30:00 PM 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 07/01/13-06/30/14.
-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 09/01/15.

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

Revision 6/9/2014

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1405138

Date: 5/22/14 Page 1 of 2

COMPANY: ERM
ADDRESS: 3200 Windy Hill Rd SE Suite 1500W Atlanta, GA 30339
PHONE: (678) 486-2700
FAX:
SAMPLED BY: James Mulloy
SIGNATURE:

ANALYSIS REQUESTED: * 8260 (VOCs)

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) H+I	No # of Containers	REMARKS
1	MW-9	5/19/14	14:25	X		GW	2		modified 8260 list * 1,1-Dichloroethene,
2	MW-1		15:25	X		GW	2		cis-1,2-Dichloroethene,
3	DUP-01		—	X		GW	2		trans-1,2-Dichloroethene,
4	MW-18D	5/20/14	09:20	X		GW	2		Tetrachloroethene,
5	MW-10		10:20	X		GW	2		Trichloroethene, Vinyl
6	MW-10A		12:30	X		GW	2		Chloride, 1,4-Dioxane
7	MW-20		14:55	X		GW	2		
8	MW-19	5/21/14	09:20	X		GW	2		
9	MW-29R		10:55	X		GW	2		
10	MW-37		13:25	X		GW	2		
11	MW-37A		14:20	X		GW	2		
12	MW-38	5/22/14	09:20	X		GW	2		
13	MW-38A		10:25	X		GW	2		
14	MW-25		12:05	X		GW	2		

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	5/22/14 16:30	1:	5-22-14 16:00
2:	5-22-14 16:30	2:	5/22/14 4:30PM
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Williamson-Dickie
PROJECT #: 0121103
SITE ADDRESS: College Park, GA
SEND REPORT TO: Amy.Hickman@erm.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers

Turnaround Time Request
- ⊗ 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

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
3080 Presidential Drive, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1405138

Date: 5/22/14 Page 2 of 2

COMPANY: ERM

ADDRESS: 3200 Windy Hill Rd SE Suite 1500W Atlanta, GA 30339

PHONE: (678) 486-2700

FAX:

SAMPLED BY: J. Mullooly

SIGNATURE:

ANALYSIS REQUESTED: 8260 (VOCs)*

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)	REMARKS	No # of Containers
1	TB-01	5/22/14				W	2	*modified list of VOCs on previous page	2
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	5/22/14 16:00	1:	5-22-14 16:00
2:	5-22-14 1613P	2:	5/22/14 4:30PM
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Williamson - Dickie
PROJECT #: 0121103
SITE ADDRESS: College Park, GA
SEND REPORT TO: Amy.Hickman@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

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

Client: ERM-Southeast
Project: Williamson- Dickie
Lab ID: 1405L38

Case Narrative

Volatiles Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1405L38-002A, -003A, & -013A required dilution during preparation and analysis resulting in elevated reporting limits.

Per Amy Hickman on 6/9/14, sample IDs were updated on sample 1405L38-010 and 011.

Analytical Environmental Services, Inc

Date: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-9
Project Name:	Williamson- Dickie	**Collection Date:**	5/19/2014 2:25:00 PM
Lab ID:	1405L38-001	**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	191665	1	05/28/2014 21:58	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/28/2014 21:58	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 21:58	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 21:58	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 21:58	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 21:58	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 21:58	GK
Surr: 4-Bromofluorobenzene	89.2	66.2-120		%REC	191665	1	05/28/2014 21:58	GK
Surr: Dibromofluoromethane	96.4	79.5-121		%REC	191665	1	05/28/2014 21:58	GK
Surr: Toluene-d8	100	77-117		%REC	191665	1	05/28/2014 21:58	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-1
Project Name:	Williamson- Dickie	**Collection Date:**	5/19/2014 3:25:00 PM
Lab ID:	1405L38-002	**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	75000		ug/L	191665	500	05/28/2014 15:43	GK
Vinyl chloride	BRL	1000		ug/L	191665	500	05/28/2014 15:43	GK
1,1-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 15:43	GK
trans-1,2-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 15:43	GK
cis-1,2-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 15:43	GK
Trichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 15:43	GK
Tetrachloroethene	16000	2500		ug/L	191665	500	05/28/2014 15:43	GK
Surr: 4-Bromofluorobenzene	87.9	66.2-120		%REC	191665	500	05/28/2014 15:43	GK
Surr: Dibromofluoromethane	98.5	79.5-121		%REC	191665	500	05/28/2014 15:43	GK
Surr: Toluene-d8	99.6	77-117		%REC	191665	500	05/28/2014 15:43	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	DUP-01
Project Name:	Williamson- Dickie	**Collection Date:**	5/19/2014
Lab ID:	1405L38-003	**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	75000		ug/L	191665	500	05/28/2014 17:03	GK
Vinyl chloride	BRL	1000		ug/L	191665	500	05/28/2014 17:03	GK
1,1-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 17:03	GK
trans-1,2-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 17:03	GK
cis-1,2-Dichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 17:03	GK
Trichloroethene	BRL	2500		ug/L	191665	500	05/28/2014 17:03	GK
Tetrachloroethene	17000	2500		ug/L	191665	500	05/28/2014 17:03	GK
Surr: 4-Bromofluorobenzene	89.5	66.2-120		%REC	191665	500	05/28/2014 17:03	GK
Surr: Dibromofluoromethane	94.8	79.5-121		%REC	191665	500	05/28/2014 17:03	GK
Surr: Toluene-d8	98.9	77-117		%REC	191665	500	05/28/2014 17:03	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-18D
Project Name:	Williamson- Dickie	**Collection Date:**	5/20/2014 9:20:00 AM
Lab ID:	1405L38-004	**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	191665	1	05/28/2014 22:25	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/28/2014 22:25	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:25	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:25	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:25	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:25	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:25	GK
Surr: 4-Bromofluorobenzene	87.8	66.2-120		%REC	191665	1	05/28/2014 22:25	GK
Surr: Dibromofluoromethane	98.4	79.5-121		%REC	191665	1	05/28/2014 22:25	GK
Surr: Toluene-d8	100	77-117		%REC	191665	1	05/28/2014 22:25	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-10
Project Name:	Williamson- Dickie	**Collection Date:**	5/20/2014 10:20:00 AM
Lab ID:	1405L38-005	**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	191665	1	05/29/2014 04:41	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/29/2014 04:41	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 04:41	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 04:41	GK
cis-1,2-Dichloroethene	270	100		ug/L	191665	20	05/28/2014 17:57	GK
Trichloroethene	36	5.0		ug/L	191665	1	05/29/2014 04:41	GK
Tetrachloroethene	760	100		ug/L	191665	20	05/28/2014 17:57	GK
Surr: 4-Bromofluorobenzene	87.5	66.2-120		%REC	191665	1	05/29/2014 04:41	GK
Surr: 4-Bromofluorobenzene	88	66.2-120		%REC	191665	20	05/28/2014 17:57	GK
Surr: Dibromofluoromethane	98.7	79.5-121		%REC	191665	1	05/29/2014 04:41	GK
Surr: Dibromofluoromethane	96.7	79.5-121		%REC	191665	20	05/28/2014 17:57	GK
Surr: Toluene-d8	101	77-117		%REC	191665	1	05/29/2014 04:41	GK
Surr: Toluene-d8	99.8	77-117		%REC	191665	20	05/28/2014 17:57	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-10A
Project Name:	Williamson- Dickie	**Collection Date:**	5/20/2014 12:30:00 PM
Lab ID:	1405L38-006	**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	191665	1	05/29/2014 05:07	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/29/2014 05:07	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:07	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:07	GK
cis-1,2-Dichloroethene	290	50		ug/L	191665	10	05/28/2014 21:04	GK
Trichloroethene	160	5.0		ug/L	191665	1	05/29/2014 05:07	GK
Tetrachloroethene	2400	100		ug/L	191665	20	05/29/2014 16:34	GK
Surr: 4-Bromofluorobenzene	89.4	66.2-120		%REC	191665	1	05/29/2014 05:07	GK
Surr: 4-Bromofluorobenzene	91.1	66.2-120		%REC	191665	10	05/28/2014 21:04	GK
Surr: 4-Bromofluorobenzene	87.2	66.2-120		%REC	191665	20	05/29/2014 16:34	GK
Surr: Dibromofluoromethane	94.2	79.5-121		%REC	191665	10	05/28/2014 21:04	GK
Surr: Dibromofluoromethane	97.5	79.5-121		%REC	191665	1	05/29/2014 05:07	GK
Surr: Dibromofluoromethane	95.4	79.5-121		%REC	191665	20	05/29/2014 16:34	GK
Surr: Toluene-d8	99.5	77-117		%REC	191665	1	05/29/2014 05:07	GK
Surr: Toluene-d8	98.8	77-117		%REC	191665	10	05/28/2014 21:04	GK
Surr: Toluene-d8	99.3	77-117		%REC	191665	20	05/29/2014 16:34	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-20
Project Name:	Williamson- Dickie	**Collection Date:**	5/20/2014 2:55:00 PM
Lab ID:	1405L38-007	**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	191665	1	05/28/2014 22:51	GK
Vinyl chloride	7.7	2.0		ug/L	191665	1	05/28/2014 22:51	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:51	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:51	GK
cis-1,2-Dichloroethene	190	5.0		ug/L	191665	1	05/28/2014 22:51	GK
Trichloroethene	79	5.0		ug/L	191665	1	05/28/2014 22:51	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 22:51	GK
Surr: 4-Bromofluorobenzene	88.1	66.2-120		%REC	191665	1	05/28/2014 22:51	GK
Surr: Dibromofluoromethane	94.7	79.5-121		%REC	191665	1	05/28/2014 22:51	GK
Surr: Toluene-d8	99.2	77-117		%REC	191665	1	05/28/2014 22:51	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-19
Project Name:	Williamson- Dickie	**Collection Date:**	5/21/2014 9:20:00 AM
Lab ID:	1405L38-008	**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	191665	1	05/28/2014 23:19	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/28/2014 23:19	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:19	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:19	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:19	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:19	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:19	GK
Surr: 4-Bromofluorobenzene	86.8	66.2-120		%REC	191665	1	05/28/2014 23:19	GK
Surr: Dibromofluoromethane	97.9	79.5-121		%REC	191665	1	05/28/2014 23:19	GK
Surr: Toluene-d8	101	77-117		%REC	191665	1	05/28/2014 23:19	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-29R
Project Name:	Williamson- Dickie	**Collection Date:**	5/21/2014 10:55:00 AM
Lab ID:	1405L38-009	**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	150		ug/L	191665	1	05/28/2014 23:45	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/28/2014 23:45	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:45	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:45	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:45	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:45	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 23:45	GK
Surr: 4-Bromofluorobenzene	86.7	66.2-120		%REC	191665	1	05/28/2014 23:45	GK
Surr: Dibromofluoromethane	96.9	79.5-121		%REC	191665	1	05/28/2014 23:45	GK
Surr: Toluene-d8	100	77-117		%REC	191665	1	05/28/2014 23:45	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-37A
Project Name:	Williamson- Dickie	**Collection Date:**	5/21/2014 1:25:00 PM
Lab ID:	1405L38-010	**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	191665	1	05/29/2014 00:12	GK
Vinyl chloride	5.8	2.0		ug/L	191665	1	05/29/2014 00:12	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:12	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:12	GK
cis-1,2-Dichloroethene	440	50		ug/L	191665	10	05/29/2014 17:00	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:12	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:12	GK
Surr: 4-Bromofluorobenzene	86.3	66.2-120		%REC	191665	10	05/29/2014 17:00	GK
Surr: 4-Bromofluorobenzene	88.7	66.2-120		%REC	191665	1	05/29/2014 00:12	GK
Surr: Dibromofluoromethane	95.8	79.5-121		%REC	191665	10	05/29/2014 17:00	GK
Surr: Dibromofluoromethane	96.4	79.5-121		%REC	191665	1	05/29/2014 00:12	GK
Surr: Toluene-d8	100	77-117		%REC	191665	1	05/29/2014 00:12	GK
Surr: Toluene-d8	101	77-117		%REC	191665	10	05/29/2014 17:00	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-37
Project Name:	Williamson- Dickie	**Collection Date:**	5/21/2014 2:20:00 PM
Lab ID:	1405L38-011	**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	191665	1	05/29/2014 05:34	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/29/2014 05:34	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:34	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:34	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:34	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:34	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 05:34	GK
Surr: 4-Bromofluorobenzene	85.1	66.2-120		%REC	191665	1	05/29/2014 05:34	GK
Surr: Dibromofluoromethane	98	79.5-121		%REC	191665	1	05/29/2014 05:34	GK
Surr: Toluene-d8	101	77-117		%REC	191665	1	05/29/2014 05:34	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-38
Project Name:	Williamson- Dickie	**Collection Date:**	5/22/2014 9:20:00 AM
Lab ID:	1405L38-012	**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	191665	1	05/29/2014 00:39	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/29/2014 00:39	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:39	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 00:39	GK
cis-1,2-Dichloroethene	6.8	5.0		ug/L	191665	1	05/29/2014 00:39	GK
Trichloroethene	22	5.0		ug/L	191665	1	05/29/2014 00:39	GK
Tetrachloroethene	9.5	5.0		ug/L	191665	1	05/29/2014 00:39	GK
Surr: 4-Bromofluorobenzene	86.6	66.2-120		%REC	191665	1	05/29/2014 00:39	GK
Surr: Dibromofluoromethane	97.1	79.5-121		%REC	191665	1	05/29/2014 00:39	GK
Surr: Toluene-d8	99.8	77-117		%REC	191665	1	05/29/2014 00:39	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-38A
Project Name:	Williamson- Dickie	**Collection Date:**	5/22/2014 10:25:00 AM
Lab ID:	1405L38-013	**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	7500		ug/L	191665	50	05/28/2014 17:30	GK
Vinyl chloride	BRL	100		ug/L	191665	50	05/28/2014 17:30	GK
1,1-Dichloroethene	BRL	250		ug/L	191665	50	05/28/2014 17:30	GK
trans-1,2-Dichloroethene	BRL	250		ug/L	191665	50	05/28/2014 17:30	GK
cis-1,2-Dichloroethene	6300	250		ug/L	191665	50	05/28/2014 17:30	GK
Trichloroethene	BRL	250		ug/L	191665	50	05/28/2014 17:30	GK
Tetrachloroethene	BRL	250		ug/L	191665	50	05/28/2014 17:30	GK
Surr: 4-Bromofluorobenzene	88.9	66.2-120		%REC	191665	50	05/28/2014 17:30	GK
Surr: Dibromofluoromethane	98.8	79.5-121		%REC	191665	50	05/28/2014 17:30	GK
Surr: Toluene-d8	100	77-117		%REC	191665	50	05/28/2014 17:30	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	MW-25
Project Name:	Williamson- Dickie	**Collection Date:**	5/22/2014 12:05:00 PM
Lab ID:	1405L38-014	**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	150		ug/L	191665	1	05/29/2014 01:05	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/29/2014 01:05	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 01:05	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/29/2014 01:05	GK
cis-1,2-Dichloroethene	79	5.0		ug/L	191665	1	05/29/2014 01:05	GK
Trichloroethene	8.8	5.0		ug/L	191665	1	05/29/2014 01:05	GK
Tetrachloroethene	120	5.0		ug/L	191665	1	05/29/2014 01:05	GK
Surr: 4-Bromofluorobenzene	89	66.2-120		%REC	191665	1	05/29/2014 01:05	GK
Surr: Dibromofluoromethane	99.3	79.5-121		%REC	191665	1	05/29/2014 01:05	GK
Surr: Toluene-d8	99.7	77-117		%REC	191665	1	05/29/2014 01:05	GK

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: 9-Jun-14

Client:	ERM-Southeast	**Client Sample ID:**	TB-01
Project Name:	Williamson- Dickie	**Collection Date:**	5/22/2014
Lab ID:	1405L38-015	**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	191665	1	05/28/2014 20:38	GK
Vinyl chloride	BRL	2.0		ug/L	191665	1	05/28/2014 20:38	GK
1,1-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 20:38	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 20:38	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 20:38	GK
Trichloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 20:38	GK
Tetrachloroethene	BRL	5.0		ug/L	191665	1	05/28/2014 20:38	GK
Surr: 4-Bromofluorobenzene	89	66.2-120		%REC	191665	1	05/28/2014 20:38	GK
Surr: Dibromofluoromethane	98.1	79.5-121		%REC	191665	1	05/28/2014 20:38	GK
Surr: Toluene-d8	99.5	77-117		%REC	191665	1	05/28/2014 20:38	GK

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 1405L36

Checklist completed by [signature] 5/23/14
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 3.2°C 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: 1405L38

ANALYTICAL QC SUMMARY REPORT

BatchID: **191665**

Sample ID: **MB-191665** Client ID: Units: **ug/L** Prep Date: **05/28/2014** Run No: **268511**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **191665** Analysis Date: **05/28/2014** Seq No: **5663313**

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									
1,4-Dioxane	BRL	150									
cis-1,2-Dichloroethene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
Trichloroethene	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	44.17	0	50.00		88.3	66.2	120				
Surr: Dibromofluoromethane	48.12	0	50.00		96.2	79.5	121				
Surr: Toluene-d8	50.22	0	50.00		100	77	117				

Sample ID: **LCS-191665** Client ID: Units: **ug/L** Prep Date: **05/28/2014** Run No: **268511**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **191665** Analysis Date: **05/28/2014** Seq No: **5663311**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	42.68	5.0	50.00		85.4	63.1	140				
Trichloroethene	55.32	5.0	50.00		111	71.2	135				
Surr: 4-Bromofluorobenzene	47.26	0	50.00		94.5	66.2	120				
Surr: Dibromofluoromethane	48.71	0	50.00		97.4	79.5	121				
Surr: Toluene-d8	50.80	0	50.00		102	77	117				

Sample ID: **1405L38-002AMS** Client ID: **MW-1** Units: **ug/L** Prep Date: **05/28/2014** Run No: **268511**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **191665** Analysis Date: **05/28/2014** Seq No: **5664547**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	19650	2500	25000		78.6	60.2	159				
Trichloroethene	27000	2500	25000		108	70.1	144				
Surr: 4-Bromofluorobenzene	23950	0	25000		95.8	66.2	120				

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: 1405L38

ANALYTICAL QC SUMMARY REPORT

BatchID: 191665

Sample ID: **1405L38-002AMS** Client ID: **MW-1** Units: **ug/L** Prep Date: **05/28/2014** Run No: **268511**
SampleType: **MS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **191665** Analysis Date: **05/28/2014** Seq No: **5664547**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	24930	0	25000		99.7	79.5	121				
Surr: Toluene-d8	25340	0	25000		101	77	117				

Sample ID: **1405L38-002AMSD** Client ID: **MW-1** Units: **ug/L** Prep Date: **05/28/2014** Run No: **268511**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **191665** Analysis Date: **05/28/2014** Seq No: **5664558**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	19660	2500	25000		78.6	60.2	159	19650	0.076	19.2	
Trichloroethene	25980	2500	25000		104	70.1	144	27000	3.85	20	
Surr: 4-Bromofluorobenzene	23670	0	25000		94.7	66.2	120	23950	0	0	
Surr: Dibromofluoromethane	24820	0	25000		99.3	79.5	121	24930	0	0	
Surr: Toluene-d8	25250	0	25000		101	77	117	25340	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		